

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Form 20-F

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934
OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2019

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Date of event requiring this shell company report

Commission file number 1-14406

Perusahaan Perseroan (Persero)
PT Telekomunikasi Indonesia Tbk
(Exact name of Registrant as specified in its charter)

Telecommunications Indonesia
(a state-owned public limited liability company)
(Translation of Registrant's name into English)

Republic of Indonesia
(Jurisdiction of incorporation or organization)

Jl. Japati No. 1, Bandung 40133, Indonesia
(Address of principal executive offices)

Investor Relations Unit
Telkom Landmark Tower, Jl. Jend. Gatot Subroto No. 52, 39th Floor, Jakarta 12710, Indonesia
(62) (22) 452-7101
(62) (21) 521-5109

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

<u>Title of Each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
American Depositary Share representing 100 Series B Shares, par value 50 Rupiah per share	TLK	New York Stock Exchange
Series B Shares, par value 50 Rupiah per share		New York Stock Exchange*

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the Annual Report:

Series A Dwiwarna Share, par value 50 Rupiah per share 1
Series B Shares, par value 50 Rupiah per share 99,062,216,599

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act.:

Large accelerated filer Accelerated filer Non-accelerated filer
Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to the extended transition period for complying with any new or revised financial accounting standard provided pursuant to Section 13(a) of the Exchange Act.

The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012

Indicate by checkmark which basis of accounting the registrant has used to prepare the financial statements included in this filing:
U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If "Other" has been checked in response to the previous question, indicate by checkmark which financial statement item the registrant has elected to follow.

Item 17 Item 18

If this is an Annual Report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

*The Series B Shares were registered in connection with the registration of American Depositary Shares ("ADSs"). The Series B Shares are not listed for trading on the New York Stock Exchange

RELIANCE ON SEC ORDER

As we previously reported in our current report on Form 6-K as filed with the U.S. Securities and Exchange Commission (the "SEC") on April 29, 2020, the filing of this Annual Report for the period ended December 31, 2019 was delayed due to circumstances related to COVID-19 and we are relying on the SEC Order (as defined below).

On March 4, 2020, the SEC issued an order under Section 36 (Release No. 34-88318) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), granting exemptions from specified provisions of the Exchange Act and certain rules thereunder. On March 25, 2020, the order was modified and superseded by a new SEC order (Release No. 34-88465) which provides conditional relief to public companies that are unable to timely comply with their filing obligations as a result of the novel coronavirus ("COVID-19") outbreak (the "SEC Order").

Since March 31, 2020, the central government and regional governments of Indonesia have taken containment measures described at Item 5 "Operating and Financial Review and Prospects — Trend Information" and in compliance with these initiatives, we also implemented protocols for safeguarding the health of its employees, preventing contagion and supporting our business continuity. These measures resulted in limited access to our head office and other significant regional offices from where we operate and store our records. All such offices were thinly staffed, and our accounting personnel, who have been generally working remotely, have only had limited access to our financial and other records. Consequently, our finance team could not carry out their work as previously scheduled and were therefore unable to complete the preparation of our consolidated financial statements as of and for the year ended December 31, 2019, and this annual report in time to meet the SEC's original deadline of April 30, 2020. This situation has also affected the auditors' overall on-site audit schedules which has slowed down the overall audit process.

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DEFINITIONS

3G

The generic term for third generation mobile telecommunications technology. 3G offers high speed connections to cellular phones and other mobile devices, enabling video conference and other applications requiring broadband connectivity to the internet.

3.5G

A grouping of disparate mobile telephony and data technologies designed to provide better performance than 3G systems, as an interim step towards deployment of full 4G/LTE capability.

4G/LTE

A fourth generation super fast internet network technology based on IP that makes the process of data transfer much faster and more stable.

5G

A fifth generation of cellular mobile communications which targets high data rate, reduced latency, energy saving, cost reduction, higher system capacity and massive device connectivity.

ADS

American Depositary Share (also known as an American Depositary Receipt or an "ADR"), a certificate traded on a U.S. securities market (such as the New York Stock Exchange) representing a number of foreign shares. Each of our ADS represents 100 shares of common stock.

APMK

Alat Pembayaran Menggunakan Kartu or card-based payment instruments, a payment instrument in the form of credit cards, ATM and/or debit cards.

ARPU

Average Revenue per User, a measure used primarily by telecommunications and networking companies which states how much revenue is generated by the user on average. It is defined as the total revenue from specified services divided by the number of users of such services.

ATM

Automated Teller Machine.

Backbone

The main telecommunications network consisting of transmission and switching facilities connecting several network access nodes. The transmission links between nodes and switching facilities include microwave, submarine cable, satellite, fiber optic and other transmission technology.

Bandwidth

The capacity of a communication link.

Bapepam-LK

Badan Pengawas Pasar Modal dan Lembaga Keuangan or the Indonesian Capital Market and Financial Institution Supervisory Agency, the predecessor to the OJK.

BRAS

Broadband Remote Access Server, a network element that routes Internet Protocol traffic to and from broadband remote access devices through an Internet Access Provider's network to the Internet and that facilitates the convergence of multiple Internet traffic sources.

Brexit

On June 23, 2016, the United Kingdom held a referendum in which a majority of voters voted in favor of the United Kingdom leaving the European Union (commonly referred to as "Brexit").

As a result of the referendum, the United Kingdom Government has negotiated and may further negotiate the terms of the United Kingdom's withdrawal from the European Union and of the United Kingdom's future relationship with the European Union. The effects of Brexit will depend on any agreements arising out of such negotiations or the absence of such agreements (commonly referred as "no-deal Brexit").

Broadband

A signaling method that includes or handles a relatively wide range (or band) of frequencies.

BTS

Base Transceiver Station, equipment that transmits and receives radio telephony signals to and from other telecommunication systems.

Business process as-a-service

Business process as-a-service is the delivery of business process outsourcing services employing a cloud computing service model built to serve various tenants simultaneously.

BWA

Broadband Wireless Access, a technology that provides high speed wireless internet access or computer networking access over a wide area.

CDMA

Code Division Multiple Access, a transmission technology where each transmission is sent over multiple frequencies and a unique code is assigned to each data or voice transmission, allowing multiple users to share the same frequency spectrum.

Common stock

Our Series B Shares having a par value of Rp50 per share.

CFU

Customer Facing Unit, similar to a strategic business unit, it is an organizational unit that interacts with specific customer segments, with responsibility for their respective profit and loss, and which regroup subsidiaries and business portfolios relevant to the specific business segments they are in charge of interacting with.

CPE

Customer Premises Equipment, any handset, receiver, set-top box or other equipment used by the consumer of wireless, fixed line or broadband services, which is the property of the network operator and located on the customer's premises.

DCS

Digital Communication System, a cellular system using GSM technology operating in the 1.8 GHz frequency.

Defined Benefit Pension Plan or DBPP

A type of pension plan in which an employer promises a specified monthly benefit on retirement that is predetermined by a formula based on the employee's earnings history, tenure of service and age, rather than depending on investment returns. It is considered 'defined' in the sense that the formula for computing the retirement benefits is known in advance.

Defined Contribution Pension Plan or DCPP

A type of retirement plan in which the amount of the employer's annual contribution is specified. Individual accounts are set up for participants and benefits are based on the amounts credited to these accounts (through the employer's contributions and, if applicable, the employee's contributions) plus any investment earnings on the money in the account. Only the employer's contributions to the account are guaranteed, not future benefits. In defined contribution plans, future benefits fluctuate on the basis of investment earnings.

DLD

Domestic Long Distance, a long distance call service designed for customers who live in different areas within one country. These areas generally have different area codes.

DTH

Direct-to-Home satellite broadcasting, the distribution of television signals from high-powered geostationary satellites to small dish antennas and satellite receivers in homes across the country.

Dwiwarna Share

The Series A Dwiwarna Share having a par value of Rp50 per share. The Dwiwarna Share is held by the Government and provides special voting rights and veto rights over certain matters related to our corporate governance. For more information, see Item 7 "Major Shareholders and Related Party Transactions — Major Shareholders — Relationship with the Government and Government Agencies."

E-Commerce

Electronic Commerce, the buying and selling of products or services over electronic systems such as the internet and other computer networks.

e-Money

Electronic Money, money or script that is only exchanged electronically.

Earth Station

The antenna and associated equipment used to receive or transmit telecommunication signals via satellite.

EDGE

Enhanced Data rates for GSM Evolution, a digital mobile phone technology that allows improved data transmission rates as a backward-compatible extension of GSM.

Edutainment

Education and entertainment.

Fiber Optic

Cables using optical fiber and laser technology through which modulating light beams representing data are transmitted through thin filaments of glass.

Fixed Line

Fixed wireline and fixed wireless.

Fixed Wireless

The local wireless transmission link using a cellular, microwave, or radio technology to connect customers at a fixed location to the local telephone exchange.

Fixed Wireline

A fixed wire or cable path linking a subscriber at a fixed location to a local exchange, usually with an individual phone number.

Gateway

A peripheral that bridges a packet based network (IP) and a circuit based network (PSTN).

Gb

Gigabyte, a unit of information used, for example, to quantify computer memory or storage capacity.

Gbps

Gigabyte per second, the average number of bits, characters, or blocks per unit time passing between equipment in a data transmission system. This is typically measured in multiples of the unit bit per second or byte per second.

GHz

Gigahertz. The hertz (symbol Hz), is the international standard unit of frequency defined as the number of cycles per second of a periodic phenomenon.

GMS

General Meeting of Shareholders, which may be an annual general meeting of shareholders ("AGMS") or an extraordinary general meeting of shareholders ("EGMS").

GPON

Gigabyte-Passive Optical Network, the most widely deployed type of passive optical network system that brings fiber optic cabling and signals all or most of the way to end users.

GPRS

General Packet Radio Service, a data packet switching technology that allows information to be sent and received across a mobile network and only utilizes the network when there is data to be sent.

GSM

Global System for Mobile Telecommunication, a European standard for digital cellular telephone.

IDD

International Direct Dialing, a service that allows a subscriber to make an international call without the assistance or intervention of an operator from any telephone terminal.

IMS

IP multimedia subsystem, a service which combines wireless and fixed line technologies for voice and data communications.

Installed Lines

Complete lines fully built-out to the distribution point and ready to be connected to subscribers.

Interconnection

The physical linking of a carrier's network with equipment or facilities not belonging to that network.

Internet of Things (or "IoT")

Infrastructure which interconnects physical and virtual things using interoperable information and communication technologies.

IP

Internet Protocol, the method or protocol by which data is sent from one computer to another on the internet.

IP Core

A block of logic data that is used in making a field-programmable gate array or application-specific integrated circuit for a product.

IPTV

Internet Protocol Television, a system through which television services are delivered using the Internet Protocol suite over a packet-switched network such as the internet, instead of being delivered through traditional terrestrial, satellite signal, and cable television formats.

ISP

Internet Services Provider, an organization that provides access to the internet.

KPPU

Komisi Pengawasan Persaingan Usaha or Commission for the Supervision of Business Competition.

Leased Line

A dedicated telecommunications transmissions line linking one fixed point to another, rented from an operator for exclusive use.

Mbps

Megabytes per second, a measure of speed for digital signal transmission expressed in millions of bits per second.

Metro Ethernet

Bridge or relationship between locations that are apart geographically, this network connects LAN customers at several different locations.

MHz

Megahertz, a unit of measure of frequency equal to one million cycles per second.

Mobile Broadband

The marketing term for wireless internet access through a portable modem, mobile phone, USB Wireless Modem or other mobile devices.

MPLS

Multi-Protocol Label Switching, an advanced routing method used within service provider network infrastructures to speed up and shape traffic flows as data travels from one node to the next.

MoCI

The Ministry of Communication and Informatics of the Republic of Indonesia, to which regulatory responsibility over telecommunications was transferred from the Ministry of Communication and Information in February 2005.

MRTG

The Multi-Router Traffic Grapher is a free software for monitoring and measuring the traffic load on network links. It allows users to visualize in graphical format the traffic load of a network over a specific period of time.

MSOE

Kementerian Badan Usaha Milik Negara or the Ministry of State-Owned Enterprises of the Republic of Indonesia.

Network Access Point

A public network exchange facility where ISPs connect with one another in peering arrangements.

Next Generation Network

A packet-based network able to provide multiple services, including telecommunication services, and to make use of multiple broadband and quality-of-service-enabled technologies, in which service-related functions are independent from underlying transport-related technologies. Such a network is able to handle multiple types of traffic (such as voice, data, and multimedia) by encapsulating these into packets, similar to how packets are transmitted over the internet.

OJK

Otoritas Jasa Keuangan or the Indonesian Financial Services Authority, the successor of Bapepam-LK, an independent institution with authority to regulate and supervise financial services activities in the banking sector, capital market sector as well as non-bank financial industry sector.

OSS

The Online Single Submission; an electronic platform administered by the Investment Coordinating Board of the Republic of Indonesia to facilitate business licensing in Indonesia.

OTN

Optical Transport Network, a technology for sending various types of data traffic over optical fiber networks based on optical wavelengths that enables more efficient transmission for multi-service traffic by relying on multiplexing capability.

Over The Top

A generic term commonly used to refer to the delivery of audio, video and other media over the internet without the involvement of a multiple-system operator in the control or distribution of the content.

Payment switching service

A payment switching service is a service that allows members of a particular network to make payments through cards, digital money (for example through the use of digital applications that allow money transfers), and/or fund transfers between different financial institutions. Such payments can be made between members of the same network or between members and non-members.

Pay TV

Pay Television, premium television, or premium channels, subscription-based television services, usually provided by both analog and digital cable and satellite, but also increasingly via digital terrestrial and internet television.

PKLN

Tim Pinjaman Komersial Luar Negeri, or Foreign Commercial Loan Coordinating Team, an inter-agency team of the Government charged with, among others, considering requests of Indonesian SOEs such as us for consent to obtain foreign commercial loans.

Point of presence

An access point, location or facility that connects to and helps other devices establish a connection with the Internet, which may consist of a router, switches, servers and other data communication devices. We operate two layers of points of presence, namely main and primary points of presence. A "main point of presence" is the transport backbone that aggregates national traffic. A "primary point of presence" is the aggregate regional transport backbone which has the capability of creating services.

PCEF

Policy and Charging Enforcement Function, provides user traffic handling and quality of service (QoS) at the gateway and responsible for providing service data flow detection and counting, along with online and offline charging interactions. PCRF and PCEF are closely related functional entities, which include policy control decision making and flow based charging control functionalities.

PCRF

Policy and Charging Rules Function, a node which operates in real time in order to determine policy rules in multimedia network. It operates at the core of the network and has access to subscriber databases and other specialized functions, *e.g.* charging system, so that to allocate broadband network resources and manage flow-based charges for subscribers and services.

PSTN

Public Switched Telephone Network, a telephone network operated and maintained by us that provides infrastructure and services for public telecommunication. Originally only an analog system, the PSTN is now almost entirely digital, even though most subscribers are connected via analog circuits. It now includes mobile phones in addition to fixed-line phones.

Radio Frequency Spectrum

The part of the electromagnetic spectrum corresponding to radio frequencies, *i.e.* frequencies lower than around 300 GHz (or, equivalently, wavelengths longer than about 1 mm).

RIO

Reference Interconnection Offer, a regulatory term covering all facilities, including interconnection tariffs, technical facilities and administrative issues offered by one telecommunications operator to other telecommunications operator for interconnection access.

RMJ

Regional Metro Junction, an inter-city cable network installation service in one region (region/province).

Roaming

A general term referring to the extension of connectivity service in a location that is different from the home location where the service was registered.

Satellite Transponder

Radio relay equipment embedded in a satellite that receives signals from Earth and amplifies and transmits the signal back to the Earth.

SCCS

Submarine Communications Cable System, a cable laid on the seabed between land-based stations to carry telecommunication signals across the ocean.

SDN

Software Defined Networking, a network architecture that aims to make networks agile and centrally programmable through software to improve control by enabling companies, operators and service providers to respond quickly to changing business requirements.

SLG

Service Level Guarantee or service level agreement is an agreement between us and our customers regarding the level of the quality of service.

SME

Small and Medium Enterprise.

SMS

Short Messaging Service, a technology allowing the exchange of text messages between mobile phones and between fixed wireless phones.

SOE

State-Owned Enterprise, a Government-owned corporation, state-owned company, state-owned entity, state enterprise, publicly owned corporation, Government business enterprise, or parastatal, a legal entity created by a Government to undertake commercial activities on behalf of a Government owner.

Softswitch

A central device in a telephone network that connects calls from one phone line to another, entirely by means of software running on a computer system. This work was formerly carried out by hardware, with physical switchboards to route the calls.

Switch

A mechanical, electrical or electronic device that opens or closes circuits, completes or breaks an electrical path, or selects paths or circuits, used to route traffic in a telecommunications network.

TIMES

Telecommunication, Information, Media, Edutainment and Service.

TPE

A normalized way to refer to transponder bandwidth, which means how many transponders would be used if the same total bandwidths used only 36 MHz transponder (1 TPE = 36 MHz).

USO

Universal Service Obligation, the service obligation imposed by the Government on all telecommunications services providers for the purpose of providing public services in Indonesia.

VoIP

Voice over Internet Protocol, a means of sending voice information using the IP.

VPN

Virtual Private Network, a secure private network connection, built on top of publicly-accessible infrastructure, such as the internet or the public telephone network. VPNs typically employ some combination of encryption, digital certificates, strong user authentication and access control to secure the traffic they carry. VPNs provide connectivity to many machines behind a gateway or firewall.

VSAT

Very Small Aperture Terminal, a relatively small antenna, typically 1.5 to 3.0 meters in diameter, placed in the user's premises and used for two-way communications by satellite.

CERTAIN DEFINITIONS, CONVENTIONS AND GENERAL INFORMATION

Unless the context otherwise requires, the terms "Company," "Telkom," "Group," "Telkom Group," "we," "us," and "our" refers to Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk and its subsidiaries. "Indonesia" refers to the Republic of Indonesia. "Government" refers to the Government of the Republic of Indonesia. "United States," "U.S." or "US" refers to the United States of America. "United Kingdom" or the "UK" refers to the United Kingdom of Great Britain and Northern Ireland. "HK\$" refers to the Hong Kong Dollar, the lawful currency of Hong Kong. "MYR" refers to the Malaysian Ringgit, the lawful currency of Malaysia. "Rupiah," "Indonesian Rupiah" or "Rp" refers to the lawful currency of Indonesia. "SG\$" refers to the Singapore Dollar, the lawful currency of Singapore. "U.S. Dollar" or "US\$" refers to the lawful currency of the United States. "TW\$" refers to the Taiwan Dollar, the lawful currency of Taiwan.

Our audited consolidated financial statements as of December 31, 2018 and 2019 and for the years ended December 31, 2017, 2018 and 2019 included in this Form 20-F (the "Consolidated Financial Statements") have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

Solely for the convenience of the reader, certain Indonesian Rupiah amounts have been converted into U.S. Dollar at specified rates. Unless otherwise indicated, the U.S. Dollar equivalent information for amounts in Indonesian Rupiah are converted at the Reuters Rate for December 31, 2019 at 04.00 PM Jakarta time, which was Rp13,882.5 to US\$1.00. The exchange rate of Indonesian Rupiah for U.S. Dollar on December 31, 2019 was Rp13,901 to US\$1.00 based on the middle exchange which is calculated based on the Bank Indonesia buying and selling rate. The Federal Reserve Bank of New York does not certify for customs purposes a noon buying rate for cable transfers in Indonesian Rupiah. No representation is made that the Indonesian Rupiah or U.S. Dollar amounts shown herein could have been or could be converted into U.S. Dollar or Indonesian Rupiah, as the case may be, at any particular rate or at all. See Item 3 "Key Information — Selected Financial Data — Exchange Controls" for further information regarding rates of exchange between the Indonesian Rupiah and the U.S. Dollar.

Certain numerical figures set out herein, including financial data, have been subject to rounding adjustments and, as a result, the totals of the data disclosed herein may vary slightly from the actual arithmetic totals of such information. Percentages and amounts reflecting changes over time periods relating to financial and other data under Item 5 " — Operating and Financial Review and Prospects" are calculated using the rounded numerical data in the narrative description under Item 5 " — Operating and Financial Review and Prospects" and not the numerical data in our Consolidated Financial Statements.

FORWARD-LOOKING STATEMENTS

This Form 20-F contains "forward-looking statements" as defined in Section 27A of the U.S. Securities Act of 1933, as amended ("Securities Act") and Section 21E of the U.S. Securities Exchange Act of 1934, as amended ("Exchange Act"), within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding our expectations and projections for our future operating performance and business prospects. The words "believe," "expect," "anticipate," "estimate," "project," and similar words identify forward-looking statements. In addition, all statements other than statements of historical facts included in this Form 20-F are forward-looking statements. Although we believe that the expectations reflected in the forward-looking statements herein are reasonable, we can give no assurance that such expectations will prove to be correct. These forward-looking statements are subject to a number of risks and uncertainties, including changes in the economic, social and political environments in Indonesia. This Form 20-F discloses, under Item 3 "Key Information — Risk Factors" and elsewhere, important factors that could cause actual results to differ materially from our expectations.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. SELECTED FINANCIAL DATA

The following tables present our selected consolidated financial information and operating statistics as of the dates and for each of the periods indicated. The selected financial information as of and for the years ended December 31, 2015, 2016, 2017, 2018, and 2019 presented below is based upon our Consolidated Financial Statements prepared in conformity with IFRS as issued by the IASB. The selected financial information as of and for the years ended December 31, 2015, 2016, 2017, 2018, and 2019 should be read in conjunction with and is qualified in its entirety by reference to, our Consolidated Financial Statements, including the notes thereto, and the other information included elsewhere in this Form 20-F and in our previous Form 20-F filed with the SEC on May 21, 2019.

The Public Accountant Firm ("KAP") Purwanto, Sungkoro & Surja (formerly Purwanto, Suherman & Surja) (a member firm of Ernst & Young Global Limited) ("Purwanto, Sungkoro & Surja") audited our Consolidated Financial Statements, prepared as of and for the years ended December 31, 2015, 2016, 2017, 2018, and 2019.

KEY CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME DATA

IFRS

	Years Ended December 31,					(US\$ million)
	2015	2016	2017	2018	2019	
	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	
	except for per share and per ADS amount					
Revenues	102,470	116,333	128,256	130,788	135,557	9,765
Expenses ⁽¹⁾	70,103	77,073	84,293	92,202	92,901	6,692
Operating Profit	32,369	39,172	43,902	38,533	43,994	3,169
Profit before Income Tax	31,293	38,166	42,628	36,077	38,299	2,759
Net Income Tax Expense	(8,023)	(9,017)	(9,958)	(9,366)	(10,439)	(752)
Profit for the Year	23,270	29,149	32,670	26,711	27,860	2,007
Attributable to owners of the parent company	15,451	19,333	22,120	17,802	19,068	1,374
Attributable to non-controlling interests	7,819	9,816	10,550	8,909	8,792	633
Other Comprehensive Income (Losses) - Net	493	(2,099)	(2,332)	4,954	(2,189)	(157)
Total Comprehensive Income for the Year	23,763	27,050	30,338	31,665	25,671	1,850
Attributable to owners of the parent company	16,003	17,312	19,927	22,631	17,029	1,227
Attributable to non-controlling interests	7,760	9,738	10,411	9,034	8,642	623
Weighted average number of shares outstanding (in millions after stock split)	98,177	98,638	99,062	99,062	99,062	-
Basic and Diluted Earnings per Share (in full amount)						
Profit per share ⁽²⁾	157.38	195.99	223.30	179.71	192.49	0.01
Profit per ADS (100 Series B Shares per ADS)	15,738.00	19,599.85	22,329.40	17,970.52	19,248.51	1.39
Dividend relating to the period (accrual basis, in full amount)						
Dividends declared per share	94.63	136.75	167.66	163.82	-	-
Dividends declared per ADS	9,463	13,675	16,766	16,382	-	-
Dividend paid in the period (cash basis, in full amount) ⁽³⁾						
Dividends declared per share	89.46	94.63	136.75	167.66	163.82	0.01
Dividends declared per ADS	8,946	9,463	13,675	16,766	16,382	1.18

Notes

- (1) Expenses are calculated as the sum of the following expenses: operation, maintenance, and telecommunication service, depreciation and amortization, personnel, interconnection, general and administrative, marketing, gains (losses) on foreign exchange - net, share in profit (loss) of associated companies - net, impairment of long term investment in associated companies and other income (expense) - net.
- (2) Using Indonesian Financial Accounting Standards ("IFAS") results, our profit for the year attributable to owners of the parent company was Rp15,489 billion, Rp19,352 billion, Rp22,145 billion, Rp18,032 billion, and Rp18,663 billion for 2015, 2016, 2017, 2018, and 2019, and our net income per share would be Rp157.77, Rp196.19, Rp223.55, Rp182.03, and Rp188.4 for 2015, 2016, 2017, 2018, and 2019. We distribute dividends based on profit attributable to owners of the parent company and net income per share determined in reliance on IFAS.

- (3) In 2015, we paid a cash dividend for 2014 of Rp89.46 per share. In 2016, we paid a cash dividend for 2015 of Rp94.63 per share. In 2017, we paid a cash dividend for 2016 of Rp136.75 per share. In 2018, we paid a cash dividend for 2017 of Rp167.66 per share. In 2019, we paid a cash dividend for 2018 of Rp163.82 per share.

KEY CONSOLIDATED STATEMENTS OF FINANCIAL POSITION DATA

IFRS

	As of December 31,					
	2015	2016	2017	2018	2019	
	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
	except for per share					
Cash and cash equivalents	28,117	29,767	25,145	17,435	18,241	1,314
Trade and other receivables	7,872	7,900	9,564	9,928	11,272	812
Prepaid other taxes	2,657	2,621	2,833	3,325	3,251	234
Other current assets	5,839	5,246	7,183	7,280	5,502	396
Total Current Assets	47,912	47,701	47,561	42,843	40,917	2,946
Property and equipment	103,455	114,230	129,872	142,912	153,174	11,034
Right-of-use assets	-	-	-	-	20,893	1,505
Intangible assets	3,056	3,089	3,530	5,032	6,446	464
Deferred tax assets - net	201	769	2,804	2,477	2,779	200
Total Non-Current Assets	118,016	131,642	150,624	163,057	194,140	13,985
Total Assets	165,928	179,343	198,185	205,900	235,057	16,931
Trade and other payables	14,284	13,690	15,791	15,214	14,324	1,032
Current income tax liabilities	1,802	1,236	801	404	1,545	111
Accrued expenses	8,247	11,283	12,630	12,769	12,761	919
Contract liabilities	4,360	5,563	5,427	5,252	7,430	535
Short-term bank loans and current maturities of long-term borrowings	4,444	5,432	7,498	10,339	22,114	1,593
Total Current Liabilities	35,413	39,762	45,376	46,322	61,349	4,419
Deferred tax liabilities - net	2,110	745	933	1,197	1,204	87
Pension benefits and other post-employment benefit obligations	4,171	6,126	10,195	5,555	8,078	582
Long-term loans and other borrowings	30,168	26,367	27,974	33,743	44,843	3,230
Total Non-Current Liabilities	37,332	34,305	40,978	42,572	56,484	4,069
Total Liabilities	72,745	74,067	86,354	88,894	117,833	8,488
Capital stock ⁽¹⁾	5,040	5,040	5,040	4,953	4,953	357
Net equity attributable to owners of the parent company	74,934	84,163	92,467	98,739	99,796	7,188
Non-controlling interests	18,249	21,113	19,364	18,267	17,428	1,255
Total Equity	93,183	105,276	111,831	117,006	117,224	8,443
Net Debt	6,495	2,032	10,327	26,647	48,716	3,509
Net Working Capital	12,499	7,939	2,185	(3,479)	(20,432)	(1,473)
Issued and fully paid shares (in shares)	100,799,996,400	100,799,996,400	100,799,996,400	99,062,216,600	99,062,216,600	-

Note:

- (1) As of December 31, 2019, our issued and fully paid-up capital consisted of one Dwiwarna Share and 99,062,216,599 shares of common stock and our authorized capital stock consisted of one Dwiwarna Share and 399,999,999,999 shares of common stock.

Exchange Controls

The Consolidated Financial Statements are stated in Indonesian Rupiah. The conversion of Indonesian Rupiah amounts into U.S. Dollar are included solely for the convenience of the readers and have been made using the average of the market bid and offer rates of Rp13,882.5 to US\$1.00 published by Reuters on December 31, 2019.

On March 31, 2020, the Reuters bid and offer rates were Rp16,300 and Rp16,320 to US\$1.00.

Foreign Exchange Controls

Indonesia has limited foreign exchange controls. The Indonesian Rupiah has been, and in general is, freely convertible. A number of regulations, however, have an impact on the exchange system. For example, only banks are authorized to deal in foreign exchange and execute exchange transactions related to the import and export of goods. In addition, Indonesian banks (including branches of foreign banks in Indonesia) are required to report to Bank Indonesia any fund transfers exceeding US\$10,000. Based on the decree of the Head of the PKLN, we are required to obtain an approval from the PKLN prior to acquiring foreign commercial loans. We are also required to submit periodical reports to PKLN during the term of the loans.

B. CAPITALIZATION AND INDEBTEDNESS

Not applicable.

C. REASON FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

D. RISK FACTORS

Risks Related to Our Business

Operational Risks

A material failure in the continuing operations of our network, certain key systems, gateways to our network or the networks of other network operators could adversely affect our business, financial condition, results of operations and prospects

We depend to a significant degree on the uninterrupted operation of our network to provide our services. For example, we depend on access to our fixed wireline network for the operation of our fixed line network and the termination and origination of cellular telephone calls to and from fixed line telephones, and a significant portion of our cellular and international long distance call traffic is routed through the PSTN. We also depend on access to an internet and broadband network and a cellular network. Our integrated network includes a copper access network, fiber optic access network, BTSs, switching equipment, optical and radio transmission equipment, an IP Core network, satellites and application servers.

In addition, we also rely on interconnection to the networks of other telecommunications operators to carry calls and data from our subscribers to the subscribers of operators both within Indonesia and overseas. We also depend on certain technologically sophisticated management information systems and other systems, such as our customer billing system, to enable us to conduct our operations. Our network, including our information systems, IT and infrastructure and the networks of other operators with whom our subscribers are interconnected, are vulnerable to damage or interruptions in operation from a variety of sources including earthquake, fire, flood, power loss, equipment failure, network software flaws, transmission cable disruption or similar events. For example, during 2018 and 2019, a number of submarine cables that we rely on to provide services across the Indonesian archipelago were damaged mostly as a result of earthquakes. As a result, services in east Indonesia faced slowdowns and disruptions as we had to redirect affected traffic through satellites until the submarine cables could be restored.

Although we have implemented a business continuity plan and a disaster recovery plan, which we test regularly, we cannot guarantee that the implementation of such plans will be completely or partially successful should any portion of our network be severely damaged or interrupted. Any failure that results in an interruption of our operations or of the provision of any service, whether from operational disruption, natural disaster or otherwise, could adversely affect our business, financial condition, results of operations and prospects.

We may, in the future, be required to share our network infrastructure and capacity with our competitors

In November 2016, the Government announced its intention to amend certain regulations, as a result of which we may, in the future, be required to share our network infrastructure and capacity with our competitors. In particular, the draft revision to Government Regulation No.52/2000 on Telecommunications ("Draft Revision to GR No.52/2000") contemplates providing the Government with the authority to require telecommunication operators such as our Company to share network capacity with other telecommunication operators in Indonesia. Draft Revision to GR No.52/2000 may also require telecommunication operators such as our Company to share proprietary network transmission equipment when the Government deems this to be necessary in order to maintain market competition and network efficiency and sustainability.

In addition, the Government also announced its intention to amend Government Regulation No.53/2000 on the Utilization of Radio Frequency Spectrum and Satellite Orbit ("Draft Revision to GR No.53/2000"). Draft Revision to GR No.53/2000 may require telecommunication operators such as our Company to share network with other telecommunication operators and service providers.

If these draft regulations are enacted by the Government in their current form, we would be required to share our network infrastructure and capacity with our competitors. This may allow our competitors to expand without significant capital expenditure outlay in areas where we operate. In addition, we cannot assure you that we will have sufficient network capacity to maintain our current business, product offerings and quality of service due to the additional traffic that we would need to service as a result of our competitors' access to our network. Our ability to service any increase in traffic within our network may consequently be limited, which may adversely affect our ability to increase our revenues through the expansion of our services.

Neither the Draft Revision to GR No.52/2000 nor the Draft Revision to GR No.53/2000 provide the details of the terms under which we may be required to share our network infrastructure and capacity with our competitors. We cannot assure you that the Government will adopt terms which we consider to be commercially reasonable. For example, we cannot assure you that any subsequent regulations will allow us to charge competitors who lease our network capacity with fees at rates which we consider to be commercially acceptable.

If the Draft Revision to GR No.52/2000 and the Draft Revision to GR No.53/2000 are adopted, and the terms under which such proposed regulations are implemented are not commercially reasonable, it could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our operations may be adversely affected by an outbreak of an infectious disease, such as the novel coronavirus (COVID-19) or other epidemics

An outbreak of any severe infectious disease such as diseases caused by the novel coronavirus (COVID-19), Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), the H5N1 avian flu or the human swine flu (H1N1) or a similar communicable diseases, if uncontrolled, or restrictions or containment measures taken by the governments of affected countries, including Indonesia, could have a material adverse effect on the overall business sentiment in Indonesia and in economies where we carry out our business, on Indonesian and international consumers' confidence and purchasing behavior, and in turn, on demand for our products and services. Most recently, in January 2020, an outbreak of COVID-19 believed to have started in Wuhan, Hubei, China, spread aggressively in multiple countries, including Indonesia, other countries in Southeast Asia, Europe and North America. The World Health Organization (the "WHO") declared the outbreak to be a pandemic on March 11, 2020.

Various measures have been implemented to contain the outbreak resulting, in certain regions and countries, in extensive government-imposed restrictions and containment measures, including restrictions on domestic and international travel, restrictions on public gatherings, and local or general "stay at home" or quarantine orders. As at the date hereof, there are early indications that the COVID-19 outbreak and such measures have had a significant impact on national economies, including Indonesia, and may cause a global downturn. In response to the COVID-19 outbreak or other epidemics or outbreak of infectious diseases, similar or more stringent measures could be taken that may further worsen the Indonesian economy and the global economy.

If the current COVID-19 outbreak or other epidemics or outbreak of infectious diseases were to develop and persist, customers may delay, suspend or decrease orders for our products and services, and demand for certain of our products and services may decrease. Our distribution network and retail outlets may also experience significant disruption due to physical distancing measures and other containment measures. Regardless of enhanced hygiene and precautionary measures to safeguard the safety and health of our employees and customers, we could be subject to labour shortage or suspension of work if certain of our personnel, in Indonesia or elsewhere, were to become infected with the disease or restrictions and containment measures described above were to affect their ability to reach our offices and outlets. Our operations may also be significantly and adversely affected if government-imposed restrictions or other containment measures require us to suspend our operations, partially or entirely. Finally, the negative impact of the outbreak on the global economy may increase counterparty risks, increased difficulties in collecting fees, which may negatively impact our cash flows, delay certain of our projects, and reduce our ability to access capital or increase financing costs.

As at the date hereof, the potential economic impact on Indonesia and the global economy brought by, and the duration of, the COVID-19 pandemic is highly uncertain, subject to change and difficult to estimate or predict. There is no assurance that the outbreak of COVID-19 in Indonesia or elsewhere can be effectively controlled, or that another disease outbreak will not happen in the future. Whereas we are closely monitoring the current situation and potential developments, there is still uncertainty as to the full extent of the potential delays and disruptions above described on our business, operations, prospects and results of operations.

Our networks face both potential physical and cyber security threats, such as theft, vandalism and acts intended to disrupt our operations, which could adversely affect our operating results

Our networks and equipment, particularly our wireline access network, face both potential physical and cyber security threats. Physical threats include theft and vandalism of our equipment and organized attacks against key infrastructure intended to disrupt operations. In addition, telecommunications companies worldwide face increasing cyber security threats as businesses become increasingly dependent on telecommunication and computer networks, and adopt cloud technologies. Cyber security threats include gaining unauthorized access to our systems or inserting computer viruses or malicious software in our systems to misappropriate consumer data and other sensitive information, corrupt our data or disrupt our operations. Unauthorized access may also be gained through traditional means such as the theft of computers, portable data devices or mobile phones and intelligence gathering on employees with access to our systems.

Although we have not experienced any material successful cyberattacks to date that have affected our operations, our network and website are frequently targeted by cyberattacks. For example, in October 2018, PT Telkom Satelit Indonesia's ("Telkomsat") corporate website was defaced. The content on the homepage was altered, which left customers unable to access the site for part of one day, before the site was restored. In 2019, we detected no defacement attack but we detected 351.3 million cyber threats to the server which is a significant increase from 29.9 million cyber threats in 2018. However, out of the 351.3 million non-disruptive cyber threats, only 18 raised to the level of issues we needed to specifically address, which we did successfully and quickly. While none of these cyberattacks have caused significant losses to date, a successful cyberattack may lead us to incur substantial costs to repair damage or restore data, implement substantial organizational changes and training to prevent future similar attacks and lost revenues and litigation costs due to misused sensitive information, liabilities for information loss, breach of confidentiality of private information, and cause substantial reputational damage. Cyberattacks may also cause equipment failures, loss of information, including sensitive information or information stored in our customers' computer systems and mobile phone systems, failure or perceived failure to comply with applicable privacy, security or data protection laws, as well as disruption to our operations or our customers' operations. Furthermore, it might be difficult to calculate the economic costs caused by potential cyber security incidents and maintain sufficient insurance coverage relating to them at commercially reasonable rates and terms. Eliminating computer viruses and other security problems may also require interruptions, delays or suspension of our services, reduce our customer satisfaction and cause us to incur additional costs. Due to the evolving nature of cyber security threats, the scope and impact of any future incident cannot be precisely predicted. We take preventive and remedial measures with respect to our systems, including enhanced cooperation with the police, particularly in areas prone to criminal activity and regular updates of our information system security measures. While we believe that we have taken appropriate measures to protect our network, there is no assurance that these physical and cyber security measures will be successful. Damage to our network, equipment or data and the need to repair such damage resulting from a physical or cyberattack may materially and adversely affect our business, financial condition and operating results.

We face a number of risks relating to our internet-related services

In addition to cyber security threats, since we provide connections to the internet and host websites for customers and develop internet content and applications, we may be perceived as being associated with the content carried over our network or displayed on websites that we host. For example, in the past, due to an escalation in spam messages generated from email addresses on the Telkom network, Telkom was placed on certain DNS blacklists which blocked all email generated from Telkom addresses for almost a week until remedial measures could be put into place. This did not occur in 2019 as we deployed anti-spam tools into our systems which have significantly mitigated the effect of cyberattacks on our systems in 2019. While we have made certain administrative and technical adjustments to identify and combat spam, we cannot assure you that such measures will always be effective and that we would not be placed on certain DNS blacklists again in the future. In addition, the content carried over our network or the websites that we host may contain materials or information which may be illegal, defamatory, impermissible or infringe on third party copyrights. We cannot and do not screen all of this content and may face litigation claims due to a perceived association with such content. These types of claims can be costly to defend, divert management resources and attention, and may damage our reputation.

A revenue leakage might occur due to internal weaknesses or external factors and if this risk were to materialize, it could have an adverse effect on our operating results

We may face revenue leakage or problems with collecting all the revenues to which we may be entitled, due to the possibility of inaccurate billing, delays in transaction processing, dishonest customers or other factors. Further, our services might be susceptible to piracy and unauthorized usage. Such piracy and unauthorized usage may lead to a loss of revenue for our Group which may affect our financial conditions and results of operations. For example, in recent years the use of simboxes, which are electronic boxes that use cell phone antennae or a BTS on which local operator SIM cards are installed so that international calls can be fraudulently terminated through local numbers so that the fraudster can bypass interconnection rates in the destination country, have led to a loss of revenue for our Group.

We have taken certain preventive measures to mitigate the possibility of revenue leakage by increasing control functions in all of our existing business processes, implementing revenue assurance methods, employing adequate policies and procedures as well as implementing information systems applications to minimize revenue leakages. Nonetheless, there is no assurance that in the future there will be no significant revenue leakages or that any such leakages will not have a material adverse effect on our operating results.

New technologies may adversely affect our ability to remain competitive

The telecommunications industry is characterized by rapid and significant changes in technology. We may face increasing competition due to technologies under development or which may be developed in the future. Future development or application of new or alternative technologies, services or standards could require significant changes to our business model, the development of new products, the provision of additional services and substantial new investments by us. New products and services may be expensive to develop and may result in the introduction of additional competitors into the marketplace. We cannot accurately predict how emerging and future technological changes will affect our operations or the competitiveness of our services. Furthermore, we cannot guarantee that we will be able to effectively integrate new technologies into our existing business model.

One of the main challenges faced by the telecommunications industry in Indonesia is the increasing use of Over The Top services that has become a substitute for voice and SMS services, in line with the growing number of smartphone users. In particular, the percentage contribution from cellular phone services to our consolidated revenues has declined from 29.0% for 2017 to 20.6% for 2019. This has happened not only in Indonesia, but also in developed countries where smartphone penetration is high. In addition, we face a continuing risk of market entry by new operators and service providers (including non-telecommunication players and Over The Top players) who, by using newer or lower cost technologies, may succeed in rapidly attracting customers away from established market participants such as ourselves. This may result in a loss of market share and could have a material adverse effect on our business, financial condition and results of operations. In particular, the rapid development of new technologies, new services and products, and new business models has resulted in distinctions between local, long distance, wireless, cable and internet communication services entry barriers being lessened and has brought new competitors into the telecommunications market. For example, the increased availability of high-throughput satellite capacity in Indonesia has had increased competition, and adversely affected pricing, for our satellite business.

We cannot assure you that our technologies will not become obsolete, or be subjected to competition from new technologies in the future, or that we will be able to acquire new technologies necessary to compete in changed circumstances on commercially acceptable terms. Our failure to react to rapid technological changes could adversely affect our business, financial condition, results of operations and prospects.

Expected benefits from investment in new networks and technologies may not be realized

We may pursue new growth opportunities in the communications industry in the future, including introducing services and products employing new technologies, such as next generation mobile technologies, virtualization, software-defined networking, cloud based technologies, new video and content delivery platforms and digital marketing. The implementation of these new technologies depends on a number of factors, including developing our network and the launch of new and commercially viable products and services involving these technologies. We may have to incur substantial expenditure to develop our network, services and products and to gain access to related or enabling technologies in order to successfully implement these new technologies. We may not be successful in modifying our network infrastructure in a timely and cost-effective manner to facilitate such implementation, which could adversely affect our quality of service, financial condition and results of operations.

Further, we may face the risk of unforeseen complications in the deployment of new technologies. Any newly adopted technology may not perform as expected, and we may not be able to successfully or on a timely basis to develop the new technology to effectively and economically deliver services based on such technology.

Our satellites have limited operational life and they may be damaged or destroyed during in-orbit operation or suffer launch delays or failures. The loss or reduced performance of a satellite, whether caused by equipment failure or its license being revoked, may adversely affect our financial condition, results of operations and ability to provide certain services

We operate three satellites, namely Telkom-2, Telkom-3S and the Merah Putih Satellite. These satellites have limited operational lives, with their design lives will end approximately in 2020, 2032 and 2033, respectively. A number of factors affect the operational lives of satellites, including the quality of their construction, the durability of their systems, subsystems and component parts, on-board fuel reserves, accuracy of their launch into orbit, exposure to micrometeorite storms, or other natural events in space, collision with orbital debris, or the manner in which the satellite is monitored and operated. We use satellite transponder capacity on our satellites in connection with many aspects of our business, including direct leasing of such capacity and routing for our international long distance and cellular services.

International Telecommunication Union regulations specify that a designated satellite orbital slot has been allocated for Indonesia and the Government has the right to determine which party is licensed to use such slot. While we hold a license to use the designated satellite orbital slot, in the event any of our satellites experience technical problems or failure, the Government may determine that we have failed to optimize the existing slot under our license, which may result in the Government withdrawing our license. We cannot assure you that we will be able to maintain use of the designated satellite orbital slot in a manner deemed satisfactory by the Government.

Our acquisition activities expose us to various risks

We have in the past pursued, and may continue to pursue, acquisitions of complementary assets and businesses. For instance, in 2019, our wholly-owned subsidiary PT Dayamitra Telekomunikasi ("Dayamitra" or "Mitratel") purchased 2,100 telecommunications towers from PT Indosat Tbk, a telecommunications operator company in Indonesia. The success of these acquisitions will depend, in part, on our ability to realize the anticipated growth opportunities and synergies from combining the acquired businesses with our existing businesses. Based on the size and complexity of certain businesses, integrating them into our existing business could require substantial time, expense and effort from our management. The process of integrating an acquired business may also involve unforeseen costs and delays or other operational, technical and financial difficulties that may require a disproportionate amount of management attention as well as financial and other resources. If our management's attention is diverted or there are any difficulties associated with integrating these businesses, our results of operations could be adversely affected.

Even if we are able to successfully integrate these businesses, it may not be possible to realize the full benefits we expect to result from such acquisitions and strategic transactions or realize these benefits within the time frame that we expect. Moreover, such businesses generally remain subject to unforeseeable factors outside of our control. Our acquisitions and strategic transactions, including those entered into in recent periods, may turn out to be unprofitable. Any failure to successfully incorporate the acquired businesses and assets into our existing operations, to enhance operating efficiencies from consolidation savings, minimize any unforeseen operational difficulties and realize the anticipated benefits on time, or at all, could materially and adversely affect our business, financial condition, results of operations, prospects and cash flows.

Risks Related to our Fixed and Cellular Telecommunication Business

Competition from existing cellular service providers may adversely affect our cellular services business

The Indonesian cellular services business is highly competitive. Competition among cellular services providers in Indonesia is based on various factors, including pricing, network quality and coverage, the range of services, features offered and customer service. With the increasing popularity of smart phones in Indonesia, we believe that data network quality and coverage, including 4G/LTE coverage, will increasingly become an intense area of competition. In recent years, competitors have offered promotions such as bonus data packages in order to attract customers, which has generally made the pricing environment in Indonesia less profitable. Although, in 2019, the intensity of downward pressure on selling prices has decreased. This competition is likely to continue, particularly as telecommunications companies are affected by increased competition from Over The Top providers. In 2019, a number of our competitors also increased their coverage by expanding outside Java, in particular, in Sumatra.

Our cellular services business, operated through our majority-owned subsidiary, PT Telekomunikasi Selular ("Telkomsel"), competes primarily with Indosat and XL Axiata. However, we are also facing increased competition from smaller operators that provide cellular services in Indonesia, including PT Hutchison 3 Indonesia ("Hutchison"), which is part of the Hutchison Asia Telecom Group and operates under the "3" or "Tri" brand and PT Smartfren Telecom Tbk ("Smartfren Telecom"), which is part of the Sinar Mas Group.

XL Axiata completed the acquisition of a majority interest in and merged with PT Axis Telekom in 2014, which resulted in XL Axiata acquiring additional frequency allocations to provide 4G/LTE services as well as acquiring the customers of PT Axis Telekom.

Additional consolidation among cellular services providers may occur which may be driven by competitive factors as well as efforts to reduce operating costs and obtain wider spectrum allocation. In addition, the Government tends to encourage consolidation, and we believe that it is the policy of the MoCI to support industry consolidation by not issuing additional or new licenses for cellular services providers.

Consolidation of competitors for cellular services may allow them to expand the geographic coverage of their integrated network infrastructure. In recent years, both Telkomsel and its competitors have acquired wider spectrum allocation as part of the Government's spectrum refarming initiative. In 2019, we entered into a refarming arrangement with Indosat which was approved by the Government. This has allowed them to improve the quality of their cellular services as well as to expand the amount of traffic that they can service through their network, which may allow them to expand their services and increase revenues. Furthermore, the Government has proposed a draft regulation which would require telecommunication companies to share network infrastructure and capacity. See "— We may, in the future, be required to share our network infrastructure and capacity with our competitors." As the telecommunications operator with the most extensive network infrastructure in Indonesia, this regulation, if it were to become effective, would allow our competitors to take advantage of our existing infrastructure without significant capital expenditure, which would have a significant impact on competition.

As a result, any of these developments may present challenges for Telkomsel in maintaining its market position and could adversely affect our results of operations, financial condition and prospects.

We may further lose wireline telephone subscribers and revenues derived from our wireline voice services may continue to decline, which may materially adversely affect our results of operations, financial condition and prospects

Revenues derived from our wireline voice services have declined during the past several years mainly due to the increasing popularity of mobile voice services and other alternative means of communication. Tariffs for mobile services have declined in recent years which has further accelerated substitution of mobile for wireline voice services. The number of our fixed wireline subscribers decreased by 15.7% in 2019 and revenues from our wireline voice services decreased by 9.2% in 2019. The percentage of revenues derived from our wireline voice services out of our total revenues was 2.2% in 2019.

Since the beginning of 2015, we have taken various steps to stabilize our revenues from wireline voice services by seeking to migrate subscribers to IndiHome, a service which bundles fixed broadband internet, fixed wireline phone and interactive TV services. However, we cannot assure you that we will be successful in mitigating the adverse impact of the substitution of mobile voice services and other alternative means of communication for wireline voice services or in reducing the rate of decline in our revenues generated from wireline voice services. Migration from wireline voice services to mobile services and other alternative means of communication may further intensify in the future, which may affect the financial performance of our wireline voice services and thus materially and adversely affect our results of operations, financial condition and prospects as a whole.

Our data and internet services are facing increasing competition, and we may experience declining margins and/or market share from such services as such competition intensifies

Our data and internet services are facing increased competition from other data and internet operators, including mobile operators. The number of mobile broadband subscribers have increased with the increasing popularity of smart phones in Indonesia, which adversely affects our market share and revenues from our fixed line data and internet services.

In addition, with the increasing popularity of smart phones in Indonesia, data and internet services have become an intense area of competition in our industry. We have been taking various measures in order to mitigate the impact of intense competition in our data and internet businesses. However, we cannot assure you that we will be successful in mitigating such adverse impact. Competition may further intensify in the future, which may affect the financial performance of our data and internet services and thus materially and adversely affect our results of operations, financial condition and prospects as a whole.

Cellular network congestion and limited spectrum availability could limit our cellular subscriber growth and cause reductions in our cellular service quality

We expect to continue to offer promotional plans to attract subscribers and increase usage of our network by our cellular subscribers. We also expect to continue to promote our data services and fixed broadband services. While we believe that we have sufficient spectrum allocation to support our current business, we may in the future need to acquire additional spectrum allocation to accommodate future growth in subscribers and traffic. As a result, we may experience increased network congestion, which may affect our network performance and damage our reputation with our subscribers. The Government occasionally conducts auctions for unused spectrum allocation. We cannot assure you that we will be successful in acquiring any additional spectrum allocation in future auctions.

Moreover, the increase in smartphone applications that rely on data services has resulted in the significant amount of data traffic and cellular network congestion. To support such additional demands on our network, we may be required to make significant capital expenditures to improve our network coverage. Such additional capital expenditures, together with the possible degradation of our cellular services, could materially and adversely affect our competitive position, results of operations, financial condition and prospects.

Continuing growth in and the converging nature of wireless and broadband services will require us to deploy increasing amounts of capital and require ongoing access to spectrum in order to provide attractive services to customers

Telecommunications services are undergoing rapid and significant technological changes and a dramatic increase in usage, in particular, the demand for faster and seamless usage of video and data across mobile and fixed devices. We continually invest in our networks in order to improve our wireless and broadband services to meet this increasing demand and remain competitive. Improvements in these services depend on many factors, including continued access to and deployment of adequate spectrum and the capital needed to expand our network to support transport of these services. We must maintain and expand our network capacity and coverage for transport of video, data and voice between cell and fixed landline sites. To this end, we have participated in spectrum auctions, at increasing financial cost, and continue to deploy technology advancements in order to further improve our network. Further, we must pay an annual right of usage fee for the license in case of our winning additional spectrum, such as the additional 30 MHz spectrum at 2.3 GHz frequency we won at an auction in October 2017.

Network service enhancements and product launches may not occur as scheduled or at the cost expected due to many factors, including delays in determining equipment and wireless handset operating standards, supplier delays, increases in network equipment and handset component costs, regulatory permitting delays for tower sites or enhancements, or labor-related delays. Deployment of new technology also may adversely affect the performance of the network for existing services. If we cannot acquire the required spectrum or deploy the services customers desire on a timely basis and at a reasonable price, then our ability to attract and retain customers, and therefore maintain and improve our operating margins, could be materially adversely affected.

Our continued investments in the construction of our infrastructure network may not adequately address the issues resulting from the substantial increases in data traffic or otherwise achieve the desired economic returns

Our wireless data traffic business has experienced significant growth in recent years, which contributed to the growth of our operating revenue and provides our business with further opportunities for development. In addition, we expect our 4G/LTE services, launched in 2014, will drive further growth in data traffic. The continued substantial increase in data traffic resulting from the growth of our wireless data traffic business, our 4G/LTE business and the proliferation of smartphones significantly strains the existing capacity of our telecommunications network infrastructure. As a result, we have made and will continue to make substantial investments in the construction of our infrastructure network, including our 4G/LTE infrastructure, to carry the increasing data traffic. We cannot assure you that these investments would successfully address the issues resulting from the substantial increases in data traffic or otherwise achieve the desired economic returns.

We are subject to the control of the Government

The Government, through the MSOE, owns 52.09% of our issued share capital. Consequently, the Government effectively controls the outcome of matters requiring the vote of our shareholders, including the composition of our boards of Directors and Commissioners, and determining the timing and amount of dividend payments. The Government has historically influenced, and is likely to continue to influence, our strategy and operations. In addition, the Government owns a Dwiwarna Share in our Company which gives the Government, represented by the MSOE, certain rights such as the right to veto with regards to the nomination, appointment and removal of our Directors and Commissioners, the issuance of new shares and any amendments to our Articles of Association. The rights of the Government attached to this Dwiwarna Share limit the ability of public shareholders to influence certain matters relating to our Company. Under our Articles of Association, the Government cannot transfer the Dwiwarna Share. The Government's rights with respect to the Dwiwarna Share will not terminate unless our articles of association are amended, which would require the approval of the Government as holder of the Dwiwarna Share. See "Relationship with the Government and Government Agencies — The Government as Shareholder."

There can be no assurance that the Government will exercise its control and influence to our benefit. For example, the Government may request us to enter into transactions which are not in our best interests. In addition, there can also be no assurance that we will ever become independent of our Government shareholder or even if we do become independent, that we will be able to exercise any such independence effectively in making decisions concerning our business and prospects, including decisions concerning compensation from the Government when we act in the public interest. If we agree to act in the public interest and are not adequately compensated by the Government, our business, prospects, financial condition, liquidity and result of operations may be materially and adversely affected, which would limit our ability to compete effectively and expand our business.

Financial Risks

We are exposed to interest rate risk and risks inherent to potential changes in relevant benchmarks and indices

Our debt includes bank borrowings used to finance our operations. In order to reduce our exposure to interest rate fluctuations, we aim to balance the share of our fixed rate loans and floating rate loans in our bank borrowings. We try to achieve this where there are opportunities to increase the share of fixed-rate loans in our overall loan portfolio in light of prevailing interest rates available in the market at any given time and based on market and our expectations as to future floating and fixed interest rates. As of December 31, 2019, a majority (based on aggregate outstanding principal) of our total bank borrowings were floating rate loans.

Changes in the economic situation in the United States may also have an impact on Southeast Asia and Indonesia. In part, in an effort to support the Indonesian Rupiah, Bank Indonesia decreased its benchmark interest rate four times in 2019 to 5.00%.

Moreover, reference rates and indices, including interest rate benchmarks (such as the London Interbank Offered Rate ("LIBOR"), the Euro Interbank Offered Rate ("EURIBOR"), or JIBOR), which are used to determine the amounts payable under financial instruments or the value of such financial instruments ("Benchmarks"), have, in recent years, been the subject of political and regulatory scrutiny as to how they are created and operated. This has resulted, particularly in the United Kingdom, in regulatory reform and changes to existing Benchmarks, with further changes anticipated. This could increase the costs and risks of complying with any such regulations or requirements.

For example, LIBOR has been questioned as a result of the absence of relevant active underlying markets and possible disincentives for market participants to continue contributing to such benchmarks. On July 27, 2017, the United Kingdom Financial Conduct Authority, which regulates LIBOR, announced that it does not intend to continue to persuade, or use its powers to compel, panel banks to submit rates for the calculation of the LIBOR benchmark to the administrator of LIBOR after 2021 (the "FCA Announcement"). The FCA Announcement indicated that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. Subsequent speeches by FCA officials have emphasized that market participants should not rely on the continued publication of LIBOR after 2021. In addition, on November 29, 2017, the Bank of England and the FCA announced that, from January 2018, its Working Group on Sterling Risk-Free Rates has been mandated with implementing a broad-based transition to the Sterling Overnight Index Average ("SONIA") over the next four years across sterling bond, loan and derivative markets, so that SONIA is established as the primary sterling interest rate benchmark by the end of 2021.

Following the implementation of any such changes, reforms or potential reforms, the manner of administration of LIBOR, EURIBOR or other benchmark indices such as JIBOR may change, with the result that it may perform differently than in the past or benchmarks could be eliminated entirely. Any of the above changes or any other consequential changes as a result of international or national reforms or other initiatives or investigations could have a material adverse effect on the interest paid on our floating-rate loans that are linked to, reference or otherwise are dependent (in whole or in part) upon a benchmark. As of December 31, 2019, we had loans whose outstanding principal amount, in aggregate represented approximately US\$93.2 million in aggregate that were denominated in U.S. Dollar and had LIBOR as a reference rate.

We may not be able to successfully manage our foreign currency exchange risk

Changes in exchange rates have affected and may continue to affect our financial condition and results of operations. Most of our debt obligations are denominated in Indonesian Rupiah and a majority of our capital expenditures are denominated in U.S. Dollar. Most of our revenues are denominated in Indonesian Rupiah, although a portion is denominated in U.S. Dollar (for example, from international services). We may also incur additional long-term indebtedness in currencies other than the Indonesian Rupiah, including the U.S. Dollar, to finance further capital expenditures. Depreciation of the Indonesian Rupiah against the U.S. Dollar may materially affect our results of operation because, among other things, it would cause an increase in the amount of Indonesian Rupiah required by us to make interest and principal payments on U.S. Dollar debt, and increase, in Indonesian Rupiah terms, the cost of equipment that we purchase from overseas and pay for in U.S. Dollar.

From 2015 to 2019, the Indonesian Rupiah per U.S. Dollar exchange rate ranged from a high of Rp12,444 per U.S. Dollar to a low of Rp15,253 per U.S. Dollar. As a result, we recorded foreign exchange gains of Rp51 billion in 2017 and Rp71 billion in 2018, and foreign exchange loss of Rp89 billion in 2019. As of December 31, 2019, the Indonesian Rupiah per U.S. Dollar exchange rate stood at Rp13,901 per U.S. Dollar, compared to Rp14,481 per U.S. Dollar as of December 31, 2018. To the extent that the Indonesian Rupiah depreciates further from the exchange rate as of December 31, 2019, our U.S. Dollar-denominated obligations under our accounts payable and procurements payable, as well as payments for foreign currency-denominated loans payable and bonds payable, would increase in Indonesian Rupiah terms. A depreciation of the Indonesian Rupiah would also increase the Indonesian Rupiah cost of our capital expenditures as most of our capital expenditures are priced in or with reference to foreign currencies, mainly U.S. Dollar and Euro, while a substantial majority of our revenues are in Indonesian Rupiah. Such depreciation of the Indonesian Rupiah would result in losses on foreign exchange translation and significantly affect our total expenses and net income, and may consequently have a material adverse effect on our business, financial condition and results of operations. We can give no assurance that we will be able to control or manage our exchange rate risk successfully in the future or that we will not be adversely affected by our exposure to exchange rate risk.

Although we have a financial risk management program and a written policy for foreign currency risk management which mainly uses time deposits placements and hedging to cover foreign currency risk exposure for periods ranging from three to 12 months, we can give no assurance that we will be able to manage our exchange rate risk successfully or that our business, financial condition or results of operations will not be adversely affected by our exposure to exchange rate risk.

We may be unable to fund the capital expenditures needed for us to remain competitive in the telecommunications industry in Indonesia

The delivery of telecommunications services is capital intensive. In order to be competitive, we must continually expand, modernize and update our telecommunication infrastructure technology, which involves substantial capital investment. For the years ended December 31, 2017, 2018 and 2019, our consolidated capital expenditures totaled Rp33,154 billion, Rp33,620 billion and Rp36,485 billion (US\$2,628 million), respectively. Our ability to fund capital expenditures in the future will depend on our future operating performance, which is subject to prevailing economic conditions, levels of interest rates and financial, business and other factors, many of which are beyond our control, and upon our ability to obtain additional external financing. We cannot assure you that additional financing will be available to us on commercially acceptable terms, or at all. In addition, we can only incur additional financing in compliance with the terms of our debt agreements. Accordingly, we cannot assure you that we will have sufficient capital resources to improve or expand our telecommunication infrastructure technology or update our other technologies to the extent necessary to remain competitive in the Indonesian telecommunications market. Our failure to do so could have a material adverse effect on our business, financial condition, results of operations and prospects.

Legal and Compliance Risks

If we are found liable for anti-competitive practices, we may be subjected to substantial liability which could have an adverse effect on our reputation, business, financial condition, results of operations and prospects

We are subject to laws and regulations relating to anti-competitive practices and anti-monopoly. Law No.5 of 1999 on Prohibition of Monopolistic Practice and Unfair Business Competition (the "Business Competition Law") prohibits agreements and activities which amount to unfair business competition and an abuse of a dominant market position. Pursuant to the Business Competition Law, the KPPU was established as Indonesia's antitrust regulator with the authority to enforce the provisions of the Business Competition Law.

In 2016, our Company, Telkomsel, and five other local operators were found to have violated the Business Competition Law for price-fixing practices related to SMS services. We and Telkomsel have paid penalties to the treasury fund in the amount of Rp18 billion and Rp25 billion, respectively.

In 2017, it was alleged that we had violated the Business Competition Law by selling our bundling program which is marketed under the retail brand "IndiHome." This product allows customers to choose one or more of our services, which consist primarily of broadband Internet, fixed wireline phone and interactive TV services, at a competitive price. Although KPPU held that we did not violate the provisions in the Business Competition Law, the case highlights the risk that our business strategy could be challenged by our customers or regulators.

In November 2018, we received a summons from the KPPU regarding unspecified allegations of violations of Business Competition Law. We are in the process of gathering information for further discussion with KPPU, but we have not received any information on the exact subject matter of or reason for such investigation. Our policy is to collaborate fully with KPPU and their investigation. Based on communication with KPPU, we do not expect KPPU to further investigate such allegations and, as at the date hereof, we are expecting a formal written confirmation from them that such process has been terminated.

In November 2019, we received a summons from the KPPU regarding alleged violations of the Business Competition Law relating to Telkom and Telkomsel's policy on blocking access to Netflix. Telkom has provided information in response to the investigation conducted by the KPPU and conveyed that Telkom found itself obliged to take such temporary measures to protect consumers from potential losses (e.g. despite the subscription payment, consumers are exposed to potential risk of not being able to enjoy Netflix's services if Netflix, and/or access from Indonesia to all or part of the contents they provide is banned by the Government, and also, the content Netflix provides may not be suitable for Indonesian viewers) as Telkom considers that as at the date hereof, Netflix has not yet fully complied with Indonesian regulations regarding media content, especially in relation to censorship laws. We have not received any further response from KPPU and, as at the date hereof, we are still waiting for the official statement from the KPPU regarding any further developments relating to the investigation process.

In November 2019, we also received a summons from the KPPU regarding alleged violations of the Business Competition Law relating to Telkom's Internet Protocol Transit Business in Papua. In December 2019, we provided clarifications regarding this matter as requested by the KPPU. The KPPU has not yet initiated any investigation process. As at the date hereof, we have not received any further response from KPPU on this matter and there has been no further official confirmation regarding this matter.

We cannot assure you that any new or existing governmental regulators will not, in the future, find our business practices to have an anti-competitive effect, nor can we assure you that we will not be found to have violated the relevant laws and regulations relating to anti-competition and anti-monopoly in the future. If we are found to have violated any laws and regulations relating to anti-competition and anti-monopoly, we may be subjected to substantial liability such as payments of fines, the amount of which will be subject to the discretion of the courts, which could have a material adverse effect on our reputation, business, financial condition, results of operations, and prospects.

Regulation Risks

We operate in a legal and regulatory environment that is undergoing significant change. These changes may result in increased competition, which may result in reduced margins and operating revenue, among other things. These changes may also directly reduce our margins or reduce the costs of our competitors. These adverse changes resulting from regulation may have a material adverse effect on us

Reform of Indonesian telecommunications regulations initiated by the Government in 1999 have, to a certain extent, resulted in the industry's liberalization, including removal of barriers to entry and the promotion of competition. However, in recent years, the volume and complexity of regulatory changes has created an environment of considerable regulatory uncertainty. In addition, as the legal and regulatory environment of the Indonesian telecommunications sector continue to change, competitors, potentially with greater resources than us, may enter the Indonesian telecommunications sector and compete with us in providing telecommunications services. Furthermore, it is impossible to anticipate the regulatory policies that will be applied to new technologies.

We derive substantial revenue from interconnection services because we have the largest network in Indonesia and our competitors must pay tariffs to connect to our network. As regulated by the MoCI, although SMS interconnection rates increased from Rp23 to Rp24, as a result of ITRB No.60/BRTI/III/2014 and No.125/BRTI/IV/2014 effective April 2014, through December 31, 2015, SMS interconnection rates have been decreasing in recent years and may decrease again in the future. As a result, our revenue from interconnection services may decrease in the future if SMS interconnection rates, as regulated by the MoCI, continue to decrease.

The Government has socialized its plan (and has already circulated a white paper) to gradually shift the existing interconnection services regime to be an internet protocol-based. It is expected that, in 2025, all interconnection services will be IP-based and existing interconnection services (e.g. SMS) would only be part of the value added service. If this government initiative is realized, we may need to significantly change our existing infrastructure (which our competitors rely on in carrying out conventional interconnection services and pay tariffs to us) with the new technologies. Consequently, our revenue from interconnection services may decrease, and we may need to reserve costs to procure new infrastructures.

In the future, the Government may announce or implement other regulatory changes which may adversely affect our business or our existing licenses. We cannot assure you that we will be able to compete successfully with other domestic or foreign telecommunications operators, that regulatory changes will not disproportionately reduce our competitors' costs or disproportionately reduce our revenues, or that regulatory changes, amendments or interpretations of current or future laws and regulations will not have a material adverse effect on our business and operating results.

In addition to Indonesian laws and regulations, due to the nature of our business and the services we provide, we may be subject to the laws and regulations of other jurisdictions where we operate or have customers. In particular, regulators in various jurisdictions are increasingly scrutinizing how companies collect, process, use and analyze, store, share and transmit personal data. This increased scrutiny may result in new interpretations of existing laws, thereby further impacting our business. Recent regulations, such as the General Data Protection Regulation ("**GDPR**"), which went into effect in the European Union ("**EU**") on May 25, 2018, apply to the collection, use, retention, security, processing, and transfer of personally identifiable information of residents of certain countries, such as EU member states in the case of the GDPR. The GDPR created a range of new compliance obligations, and imposes significant fines and sanctions for violations. In Indonesia, the draft data protection bill, which has adopted the contents of the GDPR, has been submitted to the House of Representatives of Indonesia (*Dewan Perwakilan Rakyat* or "**DPR**"). As our subsidiary Telin has expanded its international infrastructure into Europe and its overseas operations and cooperation with foreign parties have developed and may further develop, certain of our operations may fall within the scope of the GDPR. Although we have not been subject to any GDPR sanctions, it is possible that the GDPR or other emerging regulations may be interpreted or applied in a manner that is adverse to us. Any failure, or perceived failure, by us to comply with any applicable regulatory requirements or orders, including but not limited to privacy, data protection, information security, or consumer protection related privacy laws and regulations, could result in proceedings or actions against us by governmental entities or individuals, subject us to fines, penalties, and/or judgments, or otherwise adversely affect our business, as our reputation could be negatively impacted.

Regulatory changes may adversely affect our business and results of operations

We operate in a regulated environment, and our telecommunication operations are mainly regulated by the MoCI. We are also required to comply with applicable information and technology, and consumer data protection laws and regulations in carrying out our activities. Future regulatory changes, particularly with respect to telecommunication network, telecommunication service provisions, and data protection may generate incremental costs and delays, thereby adversely affecting our business, prospects, financial condition and results of operations.

In December 2018, the OJK issued two draft regulations to replace BAPEPAM-LK Regulation No. IX.E.1 on Affiliated Party Transactions and Conflicts of Interest in Certain Transactions, as attached to Decision of the Chairman of Bapepam-LK No. Kep-412/BL/2009 ("Draft OJK Regulation on Affiliated Party Transaction") and Bapepam-LK Regulation No. IX.E.2 on Material Transactions and Change of Main Business Activities, as attached to Decision of the Chairman of Bapepam-LK No. Kep-614/BL/2011 ("Draft OJK Regulation on Material Transaction"). On April 21, 2020, OJK issued the new material transaction rule derived from the Draft OJK Regulation on Material Transaction, as provided under OJK Regulation No. 17/POJK.04/2020 on Material Transactions and Change of Business Activity ("New Material Transaction Rule"). The New Material Transaction Rule differs substantially from the previous regulation in a few instances, among other things, it expands the scope of what is considered a "material transaction." The New Material Transaction Rule also provides a new method for calculating whether a transaction falls under the definition of material transaction (previously it was only defined as a transaction of which value equals or is in excess of 20% of the equity value of the public company). The New Material Transaction Rule itself will be effective six months from its issuance date. As provided under the New Material Transaction Rule and the Draft OJK Regulation on Affiliated Party Transaction, the new rule and the draft rule introduce a wider coverage of transactions that are subject to stricter requirements than the previous regulation. If the New Material Transaction Rule is illustrative of a trend and if the Draft OJK Regulation on Affiliated Party Transaction is enacted by the Government in its current form, certain actions that used to be exempted will now be subject to public disclosure requirements, and we would be subject to a more stringent and stricter supervision from the Government, especially the OJK.

In addition, licenses obtained by us under applicable Indonesian laws and regulations may be subject to conditions, compliance with which may be expensive, difficult or impossible. It is possible that Governmental authorities could take enforcement actions against us for our failure to comply with such regulations, including the aforementioned conditions. These enforcement actions could result, among other things, in the imposition of fines or the revocation of our licenses. Compliance with such regulations could require us to make substantial capital expenditures and consequently divert funds from our planned construction projects. We could also experience delays in our business schedules as a result of such compliance efforts. Each of the above could adversely affect our business, prospects, financial condition and results of operations.

Applicable regulations on tariffs and their implementation as supervised by the Indonesian Telecommunication Regulatory Authority ("ITRA") may affect our revenues and earnings

The Government does not set a fixed amount or specified range of tariff that must be charged by telecommunication operators to their customers. However, the Government does set out formulas that telecommunication operators like us must refer to in determining the tariff for our services. MoCI Regulation No.15/PER/M.KOMINFO/4/2008 on Guidelines for Tariff Determination on Basic Telephony Service Distributed through Fixed Line ("MoCI Regulation No.15/2008") and MoCI Regulation No.09/PER/M.KOMINFO/04/2008 on Guidelines for Tariff Determination on Telecommunication Service Distributed through Mobile Cellular Network ("MoCI Regulation No.09/2008") are the applicable regulations for tariff calculation and determination relating to basic telephony and cellular services. Tariff formulation for our internet telephony services for retail customers is subject to MoCI Regulation No.8 of 2017 on Provision of Internet Telephony Service for Public ("MoCI Regulation No.8/2017"). In October 2019, MoCI issued new regulation MoCI Regulation No.13 of 2019 on Provision of Telecommunication Services ("MoCI Regulation No.13/2019") that will revoke and replace MoCI Regulation No.8/2017 from April 25, 2020. Further, MoCI Regulation No. 13/2019 ("MoCI Regulation No.2/2020") amended MoCI Regulation No.13/2019 which postponed the effectiveness of MoCI Regulation No.13 of 2019 until January 31, 2021.

Neither MoCI Regulation No.8/2017 nor MoCI Regulation No.13/2019 discuss at length the formula that we must apply in determining the tariff for internet telephony services as the operator. While MoCI Regulation 13/2019 requires operators to follow the relevant MoCI guidelines, as of the date hereof, MoCI has not yet published such guidelines. MoCI Regulation No. 8/2017 requires operators to determine the internet telephony services tariff following a cost-based calculation in a manner that (i) accounts for investments in the telecommunications network, (ii) accounts for investments in infrastructure relating to internet telephony services, and (iii) ensures the tariff for internet telephony services corresponds to the applicable tariff for basic telephony services. We understand that, pending publication of the expected MoCI guidelines on the tariff for internet telephony services for retail customers in accordance with MoCI Regulation No.13/2019, operators are expected to follow the existing tariff determination process based on MoCI Regulation No.8/2017.

The formulas set out in MoCI Regulation No.15/2008 and MoCI Regulation No.09/2008 comprise numerous variables, such as cost of capital, cost of equity, cost of debt, annuity factor, traffic data and fee cost. These variables are accounted for based on, among other things, our annual financial reports and statements. Although this may seem to give us flexibility in tariff formulation, the Government is still authorized to supervise the implementation of tariff formulation through (i) ITRA, for basic telephony and cellular services, and (ii) Directorate General on Post and Informatics ("DGPI"), for internet telephony services for the public. Based on its supervision, ITRA may take further action as it sees fit if any of our actions is deemed to potentially disrupt fair competition in the telecommunication market. Our promotional tariff must be carefully planned and calculated to avoid any possible "predatory pricing" claim, as the Government does not fix an amount for the lowest tariff that we may charge to our customers.

If we violate the tariff formulation as governed under these tariff regulations, we will be subject to fines (relating to MoCI Regulation No.15/2008) and examination by ITRA (relating to MoCI Regulation No.09/2008). Both regulations allow the public to participate in the supervision process by submitting complaints, e.g. regarding unfavorable fees charged by us. Meanwhile, the lack of clarity and MoCI Regulation 09/2008 with respect to non-compliance with the applicable internet telephony services tariff could lead to unpredictable action that may be taken by DGPI. We cannot assure you that there will be no actions taken by either ITRA or DGPI against us or complaints alleged by our customers against us. If these risks were to materialize, it could have an adverse effect on our business, financial condition, results of operations and prospects.

Regulations for the configuration of BTS towers may delay the set up of new BTS towers or changes in the placement of existing towers, and may erode our leadership position by requiring us to share our towers with our competitors

In 2008, MoCI issued MoCI Regulation No. 02/PER/M.KOMINFO/3/2008 relating to the construction, utilization and sharing of BTS towers ("MoCI Regulation No.02/2008"). In 2009, MoCI (jointly with the Minister of Home Affairs, Minister of Public Works and Head of Capital Investment Coordinating Board) issued a joint regulation ("Joint Ministries Regulation") that supplemented MoCI Regulation No.02/2008. The purpose of this new regulation was essentially to harmonize central, local and sectoral administrative procedures and functions for granting BTS tower construction permits. MoCI Regulation No.02/2008 was revoked in 2018. Consequently, as at the date hereof, the only relevant regulation governing the construction of BTS towers is the Joint Ministries Regulation.

Based on the Joint Ministries Regulation, the construction of BTS towers requires permits from the local government. This may adversely affect us in the allocation, development or expansion plan of our new BTS towers as setting up of our new towers will become more complicated. We may be prohibited from setting up new BTS towers in certain local areas thereby restricting our expansion as well. It may also adversely affect our existing BTS towers if local governments require any changes in the placement of the existing towers. For instance, in the Jakarta area, the Governor of Jakarta, by virtue of Governor Regulation No.106 of 2019 on Guideline on the Provision of Utility Network Infrastructures, requires established utility networks (such as telecommunications cable networks) to be relocated underground where Government-owned facilities that are in compliance with the Jakarta's planning masterplan can be used and leased by operators who have obtained the relevant governmental permit. Such relocation must be completed within 12 months from the date such governmental facilities are made available to operators, subject to exemptions that may be granted by the Government. As of the date hereof, the Government's underground facilities have been made available to operators in certain areas following the Government's gradual implementation of its relocation plan for utility networks in the Jakarta area. Operators who do not comply with this new requirement could be subject to sanctions (such as written warnings, forced cable cutting or pole/infrastructure retraction). A governmental initiative is only being implemented in Jakarta and Surabaya but it could be expanded to other cities by local governments, which could adversely impact our tower business. Most operators object to the high lease tariffs that are being introduced by the local governments in both Jakarta and Surabaya. As a result, the local governments are still discussing this issue with all stakeholders and evaluating the tariffs taking into account the potential impact they may have on end-consumers. Although we have been communicating with the local governments, the extent of financial exposure and the concrete implementation of this initiative remain unclear. However, we believe that the Government will likely proceed with the 12-month transition period in accordance with the regulation.

In addition, this regulation requires us to allow other telecommunication operators to lease space on and utilize our telecommunications towers in a manner that provides equal opportunity to and without any discrimination among such other telecommunication operators. This allows our competitors to expand their networks by leasing space on and utilizing our telecommunications towers without having to expend capital expenditures to build their own telecommunications towers. As a result, our competitors may be able to expand their network quickly and grow their business quickly, particularly in urban areas where new space for additional towers may be difficult to obtain.

In order to operate our telecommunications towers, Indonesian regulations allow local governments to impose fees which are determined on a cost basis subject to a formula provided by the Ministry of Finance and the location of the telecommunications towers. While the local governments that have yet begun to impose such fees have not charged material amounts, we cannot assure you that such fees will not be material in the future. In addition, we cannot assure you that there will be no material difference in the amount of fees that we would be liable to pay to the relevant local governments. If these risks were to materialize, it could have an adverse effect on our operating results.

We may experience local community opposition to some of our tower sites

We have experienced, and may in the future experience, local community opposition to our existing sites or the construction of new tower sites for various reasons, including aesthetic and alleged health concerns. As a result of such opposition, we could be required by the local authorities to dismantle and relocate certain towers. If we are required to relocate a material number of our towers and cannot locate replacement sites that are acceptable to our customers, it could materially and adversely affect our business, prospects, results of operations and financial condition.

We are subject to numerous non-tax state revenue payments and a Universal Service Obligation Contribution ("USO Contribution")

We are subject to multiple rules and regulations authorizing the Government to collect non-tax state revenue from us. Pursuant to Government Regulation No.80 of 2015 on Applicable Types and Tariff on Non-Tax State Revenue for MoCI ("GR No.80/2015"), the Government's non-tax revenue may be derived from, among other things, tests for telecommunication devices, telecommunications operations and use of radio frequency spectrum. MoCI Regulation No.17 of 2016 on Tariff Implementation Guidelines on Non-Tax State Revenue Collected from Telecommunication Operation Rights Fee (*Biaya Hak Penyelenggaraan*, or "BHP") and USO Contribution, as amended by MoCI Regulation No.19 of 2016 ("MoCI Regulation No.19/2016") specifies that every licensed telecommunication operator must pay the Telecommunication BHP and USO Contribution. Government Regulation No.53 of 2000 on Use of Radio Frequency Spectrum and Satellite Orbit ("GR No.53/2000") and MoCI Regulation No.21 of 2014 also specifies the obligation for telecommunication operators that use a slot in the orbit for their satellite to pay a satellite orbit operation right fee.

Under the Telecommunications Law, telecommunication operators must participate in USO Contribution. Further, according to MoCI Regulation No.10 of 2018 on Implementation of Telecommunication and Informatics USO ("MoCI Regulation No.10/2018"), the USO Contribution will be one of the sources of funding for provision of information and communication technology infrastructure. This infrastructure provision is targeted to (i) remote areas needing access to information and telecommunication technology, (ii) groups of citizens with disabilities or economic limitations and/or (iii) other areas that still require access to information and telecommunication technology.

According to the Telecommunications Law, failure to make the non-tax state revenue payment and participate in USO Contribution will be subject to administrative sanctions; the most adverse one of which is revocation of license (which should be preceded by written warnings). While we have not previously failed to make the requisite payments, any failure by us to pay these obligations may cause our licenses to be revoked. Any revocation of licenses could have a material adverse effect on our financial condition, results of operations and liquidity.

The interpretation and application of the anticipated enactment of a new consumer data protection regulation are uncertain and may adversely affect our business, financial condition, results of operations and prospects

Law No.11 of 2008 on Electronic Information and Transactions Law as amended by Law No.19 of 2016 ("EIT Law") first came into effect on April 21, 2008. The EIT Law sets forth general principles to be further implemented through a series of Government regulations, presidential decrees and ministerial decrees, some of which have not yet been promulgated. In general, the provisions of the law are broad, and few sources of interpretive guidance are available. A number of implementing regulations to the EIT Law have been enacted, among others, Government Regulation No. 71 of 2019 on Implementation of Electronic System and Transaction ("GR No.71/2019") and MoCI Regulation No.20 of 2016 on Protection of Personal Data in an Electronic System ("MoCI Regulation No.20/2016"). These regulations are new and subject to interpretation by the regulatory authorities. Pending clear instances of the application of such regulations, it is uncertain how these regulations will affect us.

GR No.71/2019 has implemented a number of significant changes, including (i) a new definition of public and private electronic system operators, (ii) new data localization requirements for public electronic system operators, (iii) further elaboration on the deletion of electronic data, (iv) the provision of electronic certificates and electronic reliability certificates, and (v) a new scope of electronic certification services. The new rule also defines "public electronic system operators" as governmental institutions that organize, manage or operate an electronic system or any person, state apparatus or business entities appointed by any such governmental institution to organize, manage or operate an electronic system. The other electronic system operators that do fall within the foregoing category will be considered "private electronic system operators." Under GR No.71/2019, private electronic system operators can place their electronic systems and data in or outside Indonesia, unless otherwise regulated. However, private electronic system operators must allow "supervision" by government agencies, including granting access to the electronic systems and data for monitoring and law enforcement purposes. Under this regulation, there is a one-year transitional period for electronic system operators to comply with their obligation to register with MOCI and a two-year transitional period for public electronic system operators to comply with the data localization requirements, which is the obligation to manage, process and store the electronic systems and data within Indonesia. As a positive development from the previous rule, GR No.71/2019 has clarified the data localization requirements (which now comprise "managing," "processing," and "storing" electronic systems and data) and removed the uncertainty about the "public services" definition under the prior applicable rule. The previous rule only stipulated that electronic system operators for "public services" were obliged to, among others, maintain data centers within Indonesia. GR No. 71/2019 removed all references to "public services" and instead uses the concept of "public electronic system operators", which clarifies which parties are required to comply with the additional requirements under GR No. 71/2019.

Not all of the implementing regulations to the EIT Law, however, have been issued and some have only been recently enacted. Accordingly, the full impact of the EIT Law, the related implementing regulations and any change in Indonesian consumer data protection regulations on our financial and operational status cannot be determined at this time. There is no assurance that we would be able to comply with the EIT Law, or that the compliance would not require us to make substantial capital expenditure or delays in our business schedules.

Our electronic money business activity is highly regulated

We are subject to multiple rules and regulations in respect of our electronic money (e-money) business activities. The practice of e-money in Indonesia is mainly governed by Bank Indonesia ("BI") Regulation No.20/6/PBI/2018 on Electronic Money ("BI Regulation No.20/2018"). Any party which wishes to carry out e-money activities in Indonesia must first obtain an e-money license granted by BI. Although we, through our subsidiary Telkomsel, have obtained an e-money license from BI, we are still subject to evaluation conducted by BI. Under BI Regulation No.20/2018, BI is authorized to take further action based on the evaluation as it sees fit, among others, to revoke a license, to accelerate the license period or to limit the license holder's activity. Subject to evaluation, if BI takes the view that there are reasons to impose any of those further actions on Telkomsel, our ability to conduct business in the usual course would be limited, which may adversely affect our business, financial condition and results of operations.

BI Circular Letter No.16/11/DKSP dated July 22, 2014 on Electronic Money Operations which was most recently amended by BI Circular Letter No.18/21/DKSP dated September 27, 2016, further implements the obligation for e-money license holders to report any change in the type or name, developments or addition of facilities to the e-money product. See Item 4 "Information on the Company — Licensing — Payment Method Using e-Money." The amendment of this circular specifies that an e-money product with a different type and/or name, developments and/or additional facilities can only be issued after obtaining approval from BI. Further, BI Regulation No.20/2018 is also implemented by BI's Board of Governor Members Regulation No.20/21/PADG/2018 dated August 20, 2018 on the Report on the Implementation of Payment Using Card and Electronic Money Activities by Smallholder Credit Banks and Non-Bank Institutions ("BI BOG Regulation No.20/2018"). BI BOG Regulation No.20/2018 regulates the reporting obligation that must be satisfied by any party practicing e-money activity.

We must comply with these regulations as we are carrying out a business which is highly regulated. If we, through Telkomsel, fail to comply with any of these obligations, we will be subject to administrative sanctions. Any sanction imposed on Telkomsel could materially and adversely affect our business, financial condition, results of operations and prospects.

Risks Related to Development of New Businesses

We may not succeed in our efforts to develop new businesses

We believe that efforts to develop new businesses other than the telecommunication business such as digital life and smart platform and enterprise digital businesses, as well as international expansion are necessary to ensure continuing business growth. Risks related to new business development include competition from established players, suitability of business model, competition from disruptive new technologies or business models, the need to acquire new expertise in the new areas of operation, and risks related to online media which include intellectual property, consumer protection and confidentiality of customer data. Further, we have to focus on securing new enterprise customers. If we are unable to secure new contracts, or we are unable to renew our existing contracts with similar contract value, size or margins to existing ones, this may adversely affect our business, results of operations and financial condition.

Focusing on international expansion is one of our strategic business initiatives. In particular, we have expanded into a number of jurisdictions in telecommunications or data related areas, namely Singapore, Hong Kong, Timor Leste, Australia, Myanmar, Malaysia, Taiwan, the United States, Saudi Arabia and New Zealand. Expanding our operations internationally exposes us to a number of risks associated with operating in new jurisdictions. For example, our international operations could be adversely affected by political or social instability and unrest, regulatory changes (such as an increase in taxes applicable to our operations), macroeconomic instability, limitations on or controls on the foreign exchange trade, competition from local operators, difference in consumer preference and a lack of expertise in the local markets in which we will operate. Any of these factors could limit our expected returns from our expansion and materially and adversely affect our business, results of operations and financial condition.

Other Risks

We are dependent on our subsidiary, Telkomsel

We derived 70.2%, 65.3% and 65.1% of our revenue in 2017, 2018 and 2019, respectively, from our mobile business through our 65.0% majority-owned subsidiary, Telkomsel. The remaining 35.0% interest in Telkomsel is held by Singapore Telecom Mobile Pte Ltd ("Singtel"). Singtel may seek to influence the management, operation and performance of Telkomsel. In the event that there are differences between us and Singtel regarding the business, strategy and operations of Telkomsel, these issues may take time to resolve, or may not result in a positive outcome for our Group. These factors could adversely affect our business, financial condition and operating results.

Our financial results are reported to the OJK in conformity with IFAS, which differs in certain significant respects from IFRS, and we distribute dividends based on profit for the year attributable to owners of the parent company and net income per share determined in reliance on IFAS

In accordance with the regulations of the OJK and the Indonesia Stock Exchange ("IDX"), we are required to report our financial results to the OJK in conformity with IFAS. We have provided the OJK with our financial results for the year ended December 31, 2019 on May 26, 2020, which we furnished to the SEC on a Form 6-K dated May 27, 2020, which contains our Consolidated Financial Statements as of and for the year ended December 31, 2019, and prepared in conformity with IFAS. IFAS differs in certain significant respects from IFRS and, as a result, there are differences between our financial results as reported under IFAS and IFRS, including profit for the year attributable to owners of the parent company and net income per share. We distribute dividends based on profit for the year attributable to owners of the parent company and net income per share determined in reliance on IFAS.

Based on IFAS financial statements, our profit for the year attributable to owners of the parent company would be Rp18,032 billion in 2018 and Rp18,663 billion in 2019 and our net income per share would be Rp182.03 in 2018 and Rp188.40 in 2019. Dividends declared per share were Rp163.82 for 2018. The dividend for 2019 will be decided at the 2020 AGMS, scheduled for June 19, 2020.

We are established in Indonesia and it may not be possible for investors to effect service of process or enforce judgments, on us within the United States or to enforce judgments of a foreign court against us in Indonesia

We are a state-owned limited liability company established in Indonesia, operating within the framework of Indonesian laws governing companies with limited liability, and all of our significant assets are located in Indonesia. In addition, all of our Commissioners and Directors reside in Indonesia and a substantial portion of the assets of such persons are located outside the United States. As a result, it may be difficult for investors to effect service of process, or enforce judgments on us or such persons within the United States, or to enforce against us or such persons in the United States, judgments obtained in United States courts.

We have been advised by Hadiputranto, Hadinoto & Partners, our Indonesian legal advisor, that judgments of United States courts, including judgments predicated upon the civil liability provisions of the United States federal securities laws or the securities laws of any state within the United States, are not enforceable in Indonesian courts, although such judgments could be admissible as non-conclusive evidence in a proceeding on the underlying claim in an Indonesian court. They have also advised that there is doubt as to whether Indonesian courts will enter judgments in original actions brought in Indonesian courts predicated solely upon the civil liability provisions of the United States federal securities laws or the securities laws of any state within the United States. As a result, the claimant would be required to pursue claims against us or such persons in Indonesian courts.

Our controlling shareholder's interest may differ from those of our other shareholders

The Government has a controlling equity interest of 52.09% of our issued and outstanding shares of common stock and the ability to determine the outcome of all actions requiring the approval of our shareholders. The Government also holds our one Dwiwarna Share, which has special voting rights and veto rights over certain matters, including the election and removal of our Directors and Commissioners. The Government may also use its powers as a majority shareholder or under the Dwiwarna Share to cause us to issue new shares, amend our Articles of Association or bring about actions to merge or dissolve us, increase or decrease our authorized capital or reduce our issued capital, or veto any of these actions. One or more of these may result in the delisting of our securities from certain exchanges. In addition, the Government regulates the Indonesian telecommunications industry through the MoCI.

As of December 31, 2019, the Government had a 14.29% equity interest in PT Indosat Tbk ("Indosat"), which competes with us in cellular services, data center services, IT solutions, system integration services and fixed IDD telecommunications services. The Government's equity interest in Indosat also includes a Dwiwarna Share which has special voting rights and veto rights over certain strategic matters under Indosat's articles of association, including decisions on dissolution, liquidation and bankruptcy, and also permits the Government to nominate one director to its board of directors and one commissioner to its board of commissioners. As a result, there may be instances where the Government's interests will conflict with ours. There is no assurance that the Government will not direct opportunities to Indosat or favor Indosat or any other telecommunication operator when exercising regulatory powers over the Indonesian telecommunications industry. If the Government were to give priority to the business of Indosat or any other telecommunication operator over ours, or to expand its equity interest in Indosat or acquire an equity interest in any other telecommunication operator, our business, financial condition, and results of operations and prospects could be materially and adversely affected.

Forward-looking statements may not be accurate

This Annual Report incorporates forward-looking statements that include announcements regarding our current goals and projections of our operational performance and future business prospects. The words "believe," "expect," "anticipate," "estimate," "project" and similar words identify forward-looking statements. In addition, all statements, other than statements that contain historical facts, are forward-looking statements. While we believe that the expectations contained in these statements are reasonable, we cannot give an assurance that they will be realized. These forward-looking statements are subjected to a number of risks and uncertainties, including changes in the economic, social and political situation in Indonesia and other risks described in this section "Risk Factors." All forward-looking statements, written or verbal, made by us or by persons on behalf of us are deemed to be subject to those risks.

Risks Related to Indonesia

Political and Social Risks

Current political and social events in Indonesia may adversely affect our business

Since 1998, Indonesia has experienced a process of democratic change, resulting in political and social events that have highlighted the unpredictable nature of Indonesia's changing political landscape. In 1999, Indonesia conducted its first free elections for representatives in parliament. In 2004, 2009, 2014 and most recently, in 2019, elections were held in Indonesia to elect the President, Vice-President and representatives in parliament. Indonesia also has many political parties, without any one party holding a clear majority. Due to these factors, Indonesia has, from time to time, experienced political instability, as well as general social and civil unrest. For example, since 2000, thousands of Indonesians have participated in demonstrations in Jakarta and other Indonesian cities both for and against former presidents Abdurrahman Wahid, Megawati Soekarnoputri and Susilo Bambang Yudhoyono and current President Joko Widodo as well as in response to specific issues, including fuel subsidy reductions, privatization of state assets, anti-corruption measures, decentralization and provincial autonomy, and the American-led military campaigns in Afghanistan and Iraq. Although these demonstrations were generally peaceful, some turned violent. Indonesia announced in November 2014, and implemented with effect from January 1, 2015, a fixed diesel subsidy of Rp1,000 per liter and scrapped the gasoline subsidy. Although the implementation did not result in any significant violence or political instability, the announcement and implementation also coincided with a period where crude oil prices had dropped very significantly from 2014. Currently, the Government reviews and adjusts the price for fuel on monthly basis and implements the adjusted fuel price in the following month. There can be no assurance that future increases in crude oil and fuel prices will not result in political and social instability.

President Joko Widodo won the Indonesian presidential elections which took place in 2014, and was sworn in as President on October 20, 2014. Although the 2014 elections were conducted in a peaceful manner, President Joko Widodo's governing coalition did not hold a majority of seats in parliament. Between November 2016 and February 2017, significant demonstrations took place in central Jakarta against the governor of Jakarta. These demonstrations occurred during the closely fought Jakarta gubernatorial elections which took place in February 2017 and continued through the subsequent run-off election in April 2017. Each of the foregoing events, as well as political campaigns in Indonesia generally, may be indicative of the degree of political and social division in Indonesia. The latest presidential election took place on April 17, 2019, and incumbent President Joko Widodo won the presidential polls with 55.5% of the total votes. The result triggered allegations of electoral fraud. Thousands of supporters of the opposing party Prabowo Subianto held a rally in front of the Elections Supervisory Agency's (Bawaslu) headquarters on Jl. Thamrin in Central Jakarta on May 21, 2019, calling for the disqualification of Joko Widodo from the presidential election. The rally ended with a riot on May 22, 2019, in Central Jakarta. The opposing party also filed a lawsuit to the Constitutional Court to challenge the election result, alleging fraud. The Constitutional Court on July 27, 2019, rejected the lawsuit challenging the presidential election result. There can be no assurance that this situation or future sources of discontent will not lead to further political and social instability.

Separatist movements and clashes between religious and ethnic groups have also resulted in social and civil unrest in parts of Indonesia, such as Aceh in the past and in Papua. There have been clashes between supporters of those separatist movements and the Indonesian military, including continued activity in Papua by separatist rebels that has led to violent incidents. There have also been inter-ethnic conflicts, for example in Kalimantan, as well as inter-religious conflict such as in Maluku and Poso.

In August 2019, after the arrest of Papuan students for allegedly vandalizing the Indonesian flag, riots broke out in Papua. The riots caused a Telkom customer service building to be damaged in 2019, but this did not result in significant issues, service interruption or damages,

Labor issues have also come to the fore in Indonesia. In 2003, the Government enacted a new labor law that gave employees greater protections. Occasional efforts to reduce these protections have prompted an upsurge in public protests as workers responded to policies that they deemed unfavorable.

There can be no assurance that social and civil disturbances will not occur in the future and on a wider scale, or that any such disturbances will not, directly or indirectly, materially and adversely affect our business, financial condition, results of operations and prospects.

Terrorist activities in Indonesia could destabilize Indonesia, which would adversely affect our business, financial condition and results of operations, and the market price of our securities

There have been a number of terrorist incidents in Indonesia in the past two decades, including the May 2005 bombing in Central Sulawesi, the Bali bombings in October 2002 and October 2005 and the bombings at the JW Marriot and Ritz Carlton hotels in Jakarta in July 2009, which resulted in deaths and injuries. On January 14, 2016, several coordinated bombings and gun shootings occurred in Jalan Thamrin, a main thoroughfare in Jakarta, resulting in a number of deaths and injuries. On May 24, 2017, a bombing at a bus station in Jakarta resulted in multiple deaths and injuries. In May 2018, three churches were bombed in Surabaya, killing at least 28 people and injuring at least 50 others. On October 10, 2019, Wiranto, Indonesia's Coordinating Minister for Political, Legal and Security Affairs at that time was stabbed several times by a member of Jamaah Ansharut Daulah, an extremist group, during his visit in Java.

Although the Government has successfully countered some terrorist activities in recent years and arrested several of those suspected of being involved in these incidents, terrorist incidents may continue and, if serious or widespread, might have a material adverse effect on investment and confidence in, and the performance of, the Indonesian economy and may also have a material adverse effect on our business, financial condition, results of operations and prospects and the market price of our securities.

Macro-Economic Risks

Negative changes in global, regional or Indonesian economic activity could adversely affect our business

Changes in the Indonesian, regional and global economies can affect our performance. Two significant events in the past that impacted Indonesia's economy were the Asian economic crisis of 1997 and the global economic crisis which started in 2008. The 1997 crisis was characterized in Indonesia by, among others, currency depreciation, a significant decline in real gross domestic product, high interest rates, social unrest and extraordinary political developments. Indonesia entered a recessionary phase with relatively low levels of growth between 1999 and 2002. The rate of growth has stabilized at relatively higher levels in subsequent years, though there has been a moderate slowdown in growth from 2012 to 2016 with slight development over the past three years. In addition, the Government continues to have a modest fiscal deficit and a high level of sovereign debt, its foreign currency reserves are modest, the Indonesian Rupiah continues to be volatile and has poor liquidity, and the banking sector is weak and suffers from high levels of non-performing loans. Accordingly, there is no assurance that the current Indonesian economic situation would not deteriorate, which could have an adverse effect on our business, financial condition, results of operations and prospects.

While the global economic crisis that arose from the subprime mortgage crisis in the United States did not affect Indonesia's economy as severely as in 1997, it still put Indonesia's economy under pressure. The global financial markets have also experienced volatility as a result of expectations relating to monetary and interest rate policies of the United States, concerns over the debt crisis in the Eurozone, Brexit, the United States and China trade disputes, concerns over China's economic health and economic protectionism, and most recently, the ongoing outbreak of the novel coronavirus (COVID-19). Uncertainty over the outcome of the Eurozone governments' financial support programs and worries about sovereign finances generally are ongoing. The economic and social impact of the COVID-19 spread, further escalation of trade and geopolitical tensions, uncertainties around the conditions of the future trade relationship between the United Kingdom and the European Union at the end of the transition period following the Brexit withdrawal, and persistently weak economic data pointing to a protracted slowdown in global growth are among the possible triggers that could result in a major deterioration in financial market sentiment.

Trade tensions between the U.S. and major trading partners, most notably China, continue to escalate following the introduction of a series of tariff measures in both countries. Although China is the primary target of U.S. trade measures, value chain linkages mean that other emerging markets, primarily in Asia, may also be impacted. China's policy response to these trade measures also presents a degree of uncertainty. There is some evidence of China's monetary policy easing and the potential for greater fiscal spending, which could result in imbalances in the Chinese economy. This could undermine efforts to address already high debt levels and increase medium-term risks.

In Europe, (i) uncertainties around the conditions of the future trade relationship between the United Kingdom and the European Union at the end of the transition period following the Brexit withdrawal, (ii) the possible exit of Scotland, Wales or Northern Ireland from the United Kingdom, (iii) the possibility that other European Union countries could hold similar referendums to the one held in the United Kingdom and/or call into question their membership of the European Union, (iv) the possibility that one or more countries that adopted the Euro as their national currency might decide, in the long term, to adopt an alternative currency, or (v) prolonged periods of uncertainty connected to these eventualities could have significant negative impacts on international markets. These could include greater volatility of foreign exchange and financial markets in general due to the increased uncertainty. Market and economic disruptions have affected, and may continue to affect, consumer confidence levels and spending, personal bankruptcy rates, levels of incurrence and default on consumer debt, among other factors. There can be no assurance that the market disruptions in Europe, including the increased cost of funding for certain governments and financial institutions, will not spread, nor can there be any assurance that future financial support packages will be made available or, even if provided, will be sufficient to stabilise the affected countries and markets in Europe or elsewhere.

If the current global uncertainties become protracted, we can provide no assurance that they will not have a material and adverse effect on Indonesia's economic growth and consequently on our business.

Adverse economic conditions could result in less business activity, less disposable income available for consumers to spend and reduced consumer purchasing power, which may reduce demand for communication services, including our services, which in turn would have an adverse effect on our business, financial condition, results of operations and prospects. There is no assurance that there will not be a recurrence of economic instability in future, or that, should it occur, it will not have an impact on the performance of our business.

Fluctuations in the value of the Indonesian Rupiah may materially and adversely affect us

Our functional currency is the Indonesian Rupiah. One of the most important impacts the Asian economic crisis had on Indonesia was the depreciation and volatility in the value of the Indonesian Rupiah as measured against other currencies, such as the U.S. Dollar. The Indonesian Rupiah continues to experience significant volatility.

In addition, while the Indonesian Rupiah has generally been freely convertible and transferable, from time to time, Bank Indonesia has intervened in the currency exchange markets in furtherance of its policies, either by selling Indonesian Rupiah or by using its foreign currency reserves to purchase Indonesian Rupiah. We can give no assurance that the current floating exchange rate policy of Bank Indonesia will not be modified or that the Government will take additional action to stabilize, maintain or increase the Indonesian Rupiah's value, or that any of these actions, if taken, will be successful. Modification of the current floating exchange rate policy could result in significantly higher domestic interest rates, liquidity shortages, capital or exchange controls, or the withholding of additional financial assistance by multinational lenders. This could result in a reduction of economic activity, an economic recession, loan defaults or declining subscriber usage of our services, and as a result, we may also face difficulties in funding our capital expenditures and in implementing our business strategy. Any of the foregoing consequences could materially and adversely affect our business, financial condition, results of operations and prospects.

Downgrades of credit ratings of the Government or Indonesian companies could adversely affect our business

As of the date of this Annual Report, Indonesia's sovereign foreign currency long-term debt was rated "Baa2" by Moody's, "BBB" by Standard & Poor's and "BBB" by Fitch Ratings. Indonesia's short-term foreign currency debt is rated "A-2" by Standard & Poor's and "F2" by Fitch Ratings.

We can give no assurance that Moody's, Standard & Poor's or Fitch Ratings will not change or downgrade the credit ratings of Indonesia. Any such downgrade could have an adverse impact on liquidity in the Indonesian financial markets, the ability of the Government and Indonesian companies, including us, to raise additional financing, and the interest rates and other commercial terms at which such additional financing is available. Interest rates on our floating rate Rupiah-denominated debt would also likely increase. Such events could materially and adversely affect our business, financial condition, results of operations, prospects and/or the market price of our securities.

Disaster Risks

Indonesia is vulnerable to natural disasters and events beyond our control, which could adversely affect our business and operating results

Many parts of Indonesia, including areas where we operate, are prone to natural disasters such as floods, lightning strikes, typhoons, earthquakes, tsunamis, volcanic eruptions, fires, droughts, power outages and other events beyond our control. The Indonesian archipelago is one of the most volcanically active regions in the world as it is located in the convergence zone of three major lithospheric plates. It is subject to significant seismic activity that can lead to destructive earthquakes, tsunamis or tidal waves. Flash floods and more widespread flooding also occur regularly during the rainy season from November to April. Cities, especially Jakarta, are frequently subject to severe localized flooding which can result in major disruption and, occasionally, fatalities. Landslides regularly occur in rural areas during the wet season. From time to time, natural disasters have killed, affected or displaced large numbers of people and damaged our equipment. These events in the past have disrupted, and may in the future, disrupt our business activities, cause damage to equipment, and adversely affect our financial performance and profit.

For example, on September 2, 2009, an earthquake in West Java caused damage to our assets. On September 30, 2009, an earthquake in West Sumatra disrupted the provision of telecommunications services in several locations and caused severe damage to our assets. In June 2016, underwater volcanic activity caused disturbances to submarine fiber optic cable, causing disruption in services and loss of revenue. On August 5, 2018 a large earthquake hit Lombok and on September 28, 2018, a large earthquake triggered a tsunami which impacted Central Sulawesi, both of which caused operational disruptions and damage to our assets. In January 2020, landslides and floods triggered by torrential downpours in and around Jakarta, Bekasi and Bogor resulted in approximately 50 deaths and 400,000 displaced. Floodwater reached up to six meters in certain areas, making it the worst rainfall in over a decade. The extreme weather also submerged at least 169 neighborhoods. The landslides and floods caused damage to our civil mechanical, and electrical equipment, production equipment and buildings. This resulted in the congestion of data traffic when transferring data to our backup network and therefore, several hours of service disruption at various automatic telephone center (*Sentral Telepon Otomat* or "STO"). The estimated loss from the damages caused by the landslides and floods is Rp4.7 billion and we have submitted a claim to our insurance provider for reimbursement of such loss.

Given the geography of Indonesia, we are highly reliant on the use of submarine cables to provide services across the Indonesian archipelago. These submarine cables may be damaged by volcanic activity or friction with the ocean floor caused by earthquake tremors or otherwise, which may disrupt our ability to provide services to customers.

Although we have implemented a business continuity plan and a disaster recovery plan, which we test regularly, and we have insured certain of our assets to protect from any losses attributable to natural disasters or other phenomena beyond our control, there is no assurance that the insurance coverage will be sufficient to cover the potential losses, that the premium payable for these insurance policies upon renewal will not increase substantially in the future, or that natural disasters would not significantly disrupt our operations.

We cannot assure you that future natural disasters will not have a significant impact on us, or Indonesia or its economy. A significant earthquake, other geological disturbance or weather-related natural disaster in any of Indonesia's more populated cities and financial centers could severely disrupt the Indonesian economy and undermine investor confidence, thereby materially and adversely affecting our business, financial condition, results of operations and prospects.

We may be affected by uncertainty in the balance of power between local governments and the central government in Indonesia

Law No.25 of 1999 regarding Fiscal Decentralization and Law No.22 of 1999 regarding Regional Autonomy were passed by the Indonesian parliament in 1999 and further implemented by Government Regulation No.38 of 2007. Law No.22 of 1999 has been revoked by and replaced by the provisions on regional autonomy of Law No.32 of 2004 as amended by Law No.8 of 2005 and Law No.12 of 2008. Law No.32 of 2004 and its amendments were revoked and replaced by Law No.23 of 2014 regarding Regional Autonomy as amended by Government Regulation in Lieu of Law No.2 of 2014, Law No.2 of 2015 and Law No.9 of 2015. Law No.25 of 1999 has been revoked and replaced by Law No.33 of 2004 regarding the Fiscal Balance between the Central and the Regional Governments respectively. Currently, there is uncertainty in respect of the balance between the local and the central governments and the procedures for renewing licenses and approvals and monitoring compliance with environmental regulations. In addition, some local authorities have sought to levy additional taxes or obtain other contributions. There can be no assurance that a balance between local governments and the central government will be effectively established or that our business, financial condition, results of operations and prospects will not be adversely affected by dual compliance obligations and further uncertainty as to legal authority to levy taxes or promulgate other regulations affecting our business.

ITEM 4. INFORMATION ON THE COMPANY

A. HISTORY AND DEVELOPMENT OF THE COMPANY

Profile of Telkom Indonesia

Telkom is the largest telecommunication company in Indonesia, in terms of revenue and number of subscribers, providing fixed and mobile telecommunication services and solutions and ancillary services. We are innovative and seek to develop synergies among all of our products, services and solutions. Our long-term vision, which reflects our aspirations to be a more significant player in the digital space, is to be the preferred digital telecommunication company in Indonesia that provides society with the tools of its empowerment. Our missions are to rapidly build sustainable digital infrastructure and smart platforms that are affordable and accessible to all, nurture best-in-class digital talents to help develop Indonesia's digital capabilities and increase the penetration of digital technology and services in Indonesia, as well as orchestrate a comprehensive digital ecosystem to deliver superior customer experience up to international standards.

In order to achieve our vision and missions, we continue to work to transform key aspects of our business: technology, organization, operation, people, and culture.

Company Name	: Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk.
Abbreviated Name	: PT Telkom Indonesia (Persero) Tbk.
Commercial Name	: Telkom
Line of Business	: Telecommunication and informatics networks and services
Tax Identification Number	: 01.000.013.1-093.000
Certificate of Company Registration	: 101116407740
Business License	: 0029/IUP-UB/X/2017/DPMPSTSP
Domicile	: Bandung, West Java
Address	: Jl. Japati No. 1, Bandung 40133, Indonesia
Telephone	: +62-22-4521404
Facsimile	: +62-22-7206757

Call Center	: +62-21-147
Website	: www.telkom.co.id The information found on our website does not form part of this Form 20-F and is not incorporated by reference herein
E-mail	: corporate_comm@telkom.co.id; investor@telkom.co.id
Ratings	: <i>International Ratings</i> : "Baa1 (Stable)" by Moody's and "BBB (Stable)" Fitch Ratings for 2018 <i>Domestic Rating</i> : "idAAA" by Pefindo for 2018
Date of Legal Establishment	: November 19, 1991
Legal Basis of Establishment	: Based on Government Regulation No. 25 of 1991, the status of our Company was converted into a state-owned limited liability corporation ("Persero"), based on the Notarial Deed of Imas Fatimah, S.H. No.128 dated September 24, 1991, as approved by the Ministry of Justice of the Republic of Indonesia by virtue of Decision Letter No. C2-6870.HT.01.01.Th.1991 dated November 19, 1991 and as announced in the State Gazette of the Republic of Indonesia No. 5 dated January 17, 1992, Supplement to the State Gazette No.210
Ownership	: – Government of the Republic of Indonesia – 52.09% – Public – 47.91%
Listing on Stock Exchanges	: Our shares of common stock were listed on the IDX and the New York Stock Exchange ("NYSE") on November 14, 1995
Stock Codes	: – "TLKM" on the "IDX" – "TLK" on the "NYSE"
Authorized Capital	: 1 Dwiwarna Share and 399,999,999,999 shares of common stock
Issued and Fully Paid Capital	: 1 Dwiwarna Share and 99,062,216,599 shares of common stock
Offices	: – 1 Head Office – 7 Telkom Regional Offices and 61 Telecommunication Areas
Service Centers	: – 408 Plasa Telkom outlets – 9 Global Offices in Australia, Hong Kong, Malaysia, Myanmar, New Zealand, Singapore, Taiwan, Timor Leste, and the United States – 5 International GraPARI centers across Saudi Arabia, Hong Kong, and Taiwan – 422 GraPARI centers in Indonesia (including 7 GraPARI Telkom Group in Jakarta, Tangerang, Bandung, Medan, and those managed by third parties) – 324 GraPARI mobile units – 1,078 IndiHome sales car units
Other Information	: – Public Accountant KAP Purwantono, Sungkoro & Surja (a member firm of Ernst & Young Global Limited) Indonesia Stock Exchange Building, Tower 2, 7 th Floor, Jl. Jend. Sudirman Kav. 52–53, Jakarta 12190, Indonesia

- **Securities Administration Bureau**
PT Datindo Entrycom
Jl. Hayam Wuruk No.28, 2th Floor, Jakarta 10120, Indonesia
- **Trustee**
PT Bank Tabungan Negara (Persero) Tbk
Menara BTN, 18th Floor, Jl. Gajah Mada No.1, Jakarta 10130, Indonesia

PT Bank Permata Tbk
Gedung WTC II, 28th Floor, Jl. Jend. Sudirman Kav. 29-31, Jakarta 12920, Indonesia
- **Custodian**
PT Kustodian Sentral Efek Indonesia
Indonesia Stock Exchange Building, Tower 1, 5th Floor, Jl. Jend. Sudirman Kav. 52–53, Jakarta 12190, Indonesia
- **Rating Agencies**
PT Pemeringkat Efek Indonesia
Panin Tower Senayan City, 17th Floor, Jl. Asia Afrika Lot. 19, Jakarta 10270

Moody's Investors Service Singapore Pte. Ltd.
50 Raffles Place #23-06, Singapore Land Tower, Singapore 048623

Fitch Hong Kong Ltd.
19/F Man Yee Building, 68 Des Voeux Rd, Hong Kong
- **ADR Depository**
The Bank of New York Mellon Corporation
240 Greenwich Street, NY, USA – 10286
- **Authorized Agent for Service of Process in the United States**
Puglisi and Associates
850 Library Ave # 204, Newark, DE 19711, USA

Employee Union : The Telkom Employees Union (*Serikat Karyawan Telkom* or "SEKAR")

Information about the legislation under which we operate and a description, including the amount invested, of our principal capital expenditures and divestitures (including interests in other companies), since the beginning of our last three financial years, is contained elsewhere in this Form 20-F.

Telkom Indonesia Milestones

1856-1884

On October 23, 1856, the Dutch Colonial Government deployed the first electromagnetic telegraph service operation in Indonesia, which connected Jakarta (Batavia) and Bogor (Buitenzorg). We consider this event to be part of the beginning of Telkom's history and have thus adopted October 23 as the anniversary of our "founding."

In 1884, the Dutch Colonial Government established a private entity, "*Post en Telegraafdienst*" to provide postal and telegraph services.

1906-1965

In 1906, the Dutch Colonial Government established a government agency named Jawatan Pos, Telegraf dan Telepon (*Post, Telegraph en Telephone Dienst*) to assume control over postal services and telecommunications in Indonesia. In 1961, its status was changed to newly-established state-owned company, Perusahaan Negara Pos dan

Telekomunikasi ("PN Postel"). In 1965, the Government separated postal and telecommunications services by dividing PN Postel into Perusahaan Negara Pos dan Giro and Perusahaan Negara Telekomunikasi ("PN Telekomunikasi").

1974

PN Telekomunikasi became Perusahaan Umum Telekomunikasi Indonesia ("Perumtel"), which provided domestic and international telecommunications services, and subsequently spun-off PT Industri Telekomunikasi Indonesia, which manufactured telecommunications equipment, into an independent company.

1991

Perumtel became a state-owned limited liability company and rebranded to Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia under Government Regulation No.25 of 1991. Our business operations were then divided into 12 telecommunications regions, which were later reorganized in 1995 into seven Regional Divisions, namely Regional Division I Sumatra, Regional Division II Jakarta and the surrounding areas, Regional Division III West Java, Regional Division IV Central Java and Yogyakarta, Regional Division V East Java, Regional Division VI Kalimantan, and Regional Division VII Eastern Indonesia.

1995

On May 26, 1995, we and Indosat established Telkomsel. We then conducted our initial public offering ("**IPO**") on November 14, 1995, with our shares listed on the Jakarta Stock Exchange and the Surabaya Stock Exchange (which have since merged to become the IDX). Our shares were also listed on the NYSE and the LSE in the form of ADSs, and were publicly offered without listing on the Tokyo Stock Exchange.

1999

Law No.36 of 1999 on Telecommunications (the "Telecommunications Law"), came into effect in September 2000 and allowed the entry of new market participants in order to foster competition in the telecommunications industry.

We launched the Telkom-1 satellite.

2001

We and Indosat eliminated joint ownership and cross-ownership in certain companies as part of the restructuring of the telecommunications industry in Indonesia. We acquired Indosat's 35.0% shareholding in Telkomsel, increasing our shareholding to 77.7%. We divested our 22.5% shareholding in PT Satelit Palapa Indonesia, or Satelindo, and 37.7% shareholding in PT Lintasarta Aplikanusa. At the same time, we lost our exclusive rights as the sole operator of fixed line services in Indonesia.

2002

We divested a 12.72% shareholding in Telkomsel to Singapore Telecom Mobile Pte Ltd ("SingTel Mobile"), decreasing our shareholding in Telkomsel to 65.0%.

2004

We launched an international direct dialing service for fixed lines with the access code of 007.

2005

We launched the Telkom-2 satellite.

2009

We underwent a transformation from an information telecommunication company to become a Telecommunication, Information, Media and Edutainment ("TIME") company. Our new image was introduced to the public with a new corporate logo and the slogan of "the world in your hand."

2010

We completed the JaKaLaDeMa submarine fiber optic cable project in April 2010 which connected Java, Kalimantan, Sulawesi, Denpasar and Mataram.

2011

We commenced the reformation of our telecommunication infrastructure through the completion of the Telkom Nusantara Super Highway project, which unites the Indonesian archipelago from Sumatra to Papua, as well as the True Broadband Access project to provide internet access with a capacity of 20 Mbps to 100 Mbps to customers throughout Indonesia.

2012

We increased broadband penetration through the development of Indonesia Wi-Fi as part of our "Indonesia Digital Network" (IDN) program. We also reconfigured our business portfolio from TIME to TIMES to increase our ability to create business value.

2014

We became the first operator in Indonesia to commercially launch 4G/LTE services in December 2014.

2015

We launched IndiHome, which bundles all-in-one packages services consisting primarily of broadband internet, fixed wireline phone and interactive TV services.

2016

We completed the construction of our new headquarters in Jakarta which we designed as a "smart office" with open office layout and smart building features in order to provide an inspirational working environment for our employees.

In December 2016, we completed the construction of the submarine cable systems Southeast Asia-Middle East-Western Europe 5 (SEA-ME-WE-5).

2017

The Telkom 3S satellite was launched in February 2017 and fully commenced operations on schedule, starting in April 2017.

In August 2017, we completed the Southeast Asia-United States (SEA-US) submarine fiber cable connecting Manado, Indonesia to California, United States. The SEA-US cable is built, owned, and operated by a consortium of seven companies.

In October 2017, Telkomsel secured an additional 30 MHz spectrum at 2.3 GHz frequency, after winning the auction held by MoCI.

2018

We launched the Telkom Merah Putih satellite, which began providing coverage for all of Indonesia, Southeast Asia and South Asia in August 2018.

We inaugurated The Telkom Hub, a hub for developing digital entrepreneurs, digital infrastructure and solutions, and fostering a culture of digital. This hub also serves as a social and technology education center that provides digital customer care services. It is a center of excellence and it intended to facilitate the Government's digital initiatives such as "Making Indonesia 4.0," "2020 Go Digital Vision," and "One Data Indonesia."

In December 2018, we completed the construction of the Indonesia Global Gateway (IGG) submarine cable, which connects two major submarine cable systems: the South East Asia-Middle East-Western Europe 5 (SEA-ME-WE 5) and the Southeast Asia- United States (SEA-US) Submarine Cable Systems.

The number of IndiHome subscribers reached 5.1 million.

2019

We sold 654,804 shares, representing 67.0%, of PT Jalin Pembayaran Nusantara ("Jalin") to PT Danareksa (Persero), a state-owned enterprise, for the value of Rp394,569,700,000.00. As at the date hereof, we hold 33.0% interest in Jalin.

On February 19, 2019, we acquired 95.0% of the share capital in PT Persada Sokka Tama, a company engaged in the telecommunications tower business with 1,017 towers located throughout Indonesia. In December 2019, we completed the acquisition of 2,100 telecommunications towers from PT Indosat Tbk in Indonesia.

We reconfigured our business portfolio from TIMES to a five-segment portfolio (Mobile, Consumer, Enterprise, Wholesale, International Business, and Others) to reflect our customer-centric mindset and enhance and create value to our customers.

Telkomsel added 23,162 BTS towers to its BTS network, representing a 12.25% increase compared to the previous year.

The number of IndiHome subscribers increased by 1.9 million, or 37.2%, from 5.1 million subscribers in 2018 to 7.0 million subscribers.

In November 2019, Telkom was awarded the "2019 Indonesia IoT Services Provider of the Year" by Frost and Sullivan at the Asia Pacific Best Practice Awards.

B. BUSINESS OVERVIEW

Strategy

As the largest telecommunication company in Indonesia, we intend to become the preferred digital telecommunications company in Indonesia that contributes to the prosperity and competitiveness of Indonesia while creating and delivering value to our stakeholders. We intend to rapidly build sustainable digital infrastructure and smart platforms that will be competitively priced, affordable and accessible to a wide range of customers. We also nurture best-in-class digital talents who will contribute to the development of Indonesia's digital capabilities and increase the penetration of digital technologies and services, and improve our customers' experience through the development of a comprehensive digital ecosystem.

We continue to understand and anticipate customers' needs to deliver the best customer experience and exceed our customers' expectations by facilitating customers' interactions with us, including through digital interfaces (for the purchase of products and service, making payments, submitting requests for service upgrades or submitting complaints for instance). Such interactions are supported by digitalized processes. We also maximize our engagement with customers through our customer relationship management through our CFUs. We aim to become more agile as an organization and foster a digital culture, for instance by eliminating manual processes, encouraging a start-up model and work methods, optimizing business processes to facilitate faster development of products and services in accordance with customers' needs and expectations, shorten time-to-market, allocate resources more efficiently, and encourage and nurture digital talents sourced internally or externally. This enables us to maintain or improve our cost competitiveness while focusing on operational excellence to deliver quality products and services to our customers.

We have been strengthening our digital capabilities and intend to further expand our leadership in connectivity-driven business and provide end-to-end digital experience to our customers. We have been enhancing our digital connectivity offering to businesses, invested in our digital platform, and diversified our digital service offering as we pursue maximizing value to our customers and stakeholders through cashflow optimization, value creation and the enhancement of synergies. To that end, we have been expanding the backbone network infrastructure and broadband network access throughout Indonesia and expanded and improved our offering of digital services. For instance, in the mobile segment, we have developed digital advertising, mobile banking and financial services and the IoT, in addition to digital lifestyle services that focus on providing cellular technology-based entertainment experiences such as music, video streaming, games, and other value added mobile service platforms. In the Enterprise segment, we provide end-to-end digital solutions for corporate customers, small and medium business and government institutions that require digital connectivity, IT services, data center and cloud, business process outsourcing and other support services. In the Consumer segment, we offer more high-speed package options, TV/Video channels, games, and improved the monetization of digital inventory for digital advertising. In the Wholesale and International Business segment, we provide digital connectivity including data centers for service providers and digital players, both domestically and globally.

We also engage in inorganic growth to enhance our digital capabilities and strengthen our digital services ecosystem, through acquisitions and collaborations or partnerships with other parties who have superior digital capabilities. For instance, in 2018, our subsidiaries acquired equity interests in various companies such as Cellum Global Zrt's, PT Swadharma Sarana Informatika and PT Collega Inti Pratama to improve our digital payment capabilities and platform and increase our knowledge of digital services dedicated to banking and insurance financial customers. In 2019, our subsidiary Dayamitra acquired an equity interest in PT Persada Sokka Tama and acquired 2,100 telecommunications towers from PT Indosat Tbk in Indonesia, which increased our telecommunications tower network throughout Indonesia. While we expand and diversify our businesses, we intend to maintain our high corporate governance standards and enhance our risk management and compliance functions.

Business Portfolios

Our business portfolios are organized through business lines that can be categorized into three digital domains: digital connectivity, digital platform and digital service, along with our legacy services comprising voice and SMS services. Our product portfolios are operated under the following five key segments to create, enhance and deliver value to our customers:

- mobile segment comprises mobile broadband services, mobile digital services that include financial services, video on demand (VOD), music, gaming, IoT solutions, big data analytics, digital ads, and mobile legacy services such as mobile voice and SMS;
- consumer segment comprises fixed voice services, fixed broadband services, IPTV, and related consumer digital services;
- enterprise segment mainly comprises ICT and digital platform that covers enterprise-grade connectivity services, including satellite, IT services, data center and cloud, business process outsourcing, and other adjacent services;

- wholesale and international business segment comprises wholesale telecommunication carrier services, international business, tower business, and infrastructure and network management services; and
- other segment comprises digital services offerings such as digital platform, digital content, and e-commerce to support other segments, and property management as our effort to leverage Telkom's property assets across Indonesia.

Historically, we generated the largest share of our revenue from services relating to digital connectivity. Our business has not experienced significant seasonality.

The following is a brief overview of our product portfolios.

1. Mobile Segment

Our mobile segment portfolio comprises mobile voice, SMS, mobile data services, and mobile digital services. We provide mobile and cellular communications services with GSM, 3G and 4G/LTE technology through our subsidiary, Telkomsel. Mobile services (including mobile data services) remained the largest contributor to our consolidated revenues in 2019.

Our prepaid services, used by 96.3% of our cellular subscribers as of December 31, 2019, are marketed under the brands *simPATI*, Kartu As, and Loop, our postpaid mobile services, used by 3.7% of our cellular subscribers as of December 31, 2019, are marketed under the brand *kartuHalo*.

Our total cellular subscriber base increased by 5.0% or 8.1 million subscribers, from 163.0 million subscribers (comprising 157.6 million prepaid subscribers and 5.4 million postpaid subscribers) as of December 31, 2018, to 171.1 million subscribers (comprising 164.7 million prepaid subscribers and 6.4 million postpaid subscribers), as of December 31, 2019. The increase in our total cellular subscriber base was primarily driven by effective marketing campaigns and initiatives to retain existing customers supported by prepaid SIM registration (as mandated by Indonesian regulations), which lead to lower leakage of customers to competitors.

Our mobile broadband services for all of our customers are supported by 4G/LTE/HSDPA/3G/EDGE/GPRS technology. As of December 31, 2019, we had 110.3 million Telkomsel data users, compared to 106.6 million data users as of December 31, 2018, an increase of 3.5% or 3.7 million data users. This increase was primarily a result of our successful promotion of mobile package options which offered lower tariffs that incentivized our customers to migrate from the pay-as-you-use usage model.

In addition to our digital connectivity business, we established several digital service offerings within our mobile segment with a specific focus on: financial services, video on demand, music, gaming, and IoT. Our mobile segment comprises a financial payment platform, T-Cash, that pioneered digital payment when it started in 2007. In 2019, T-Cash became LinkAja under PT Fintek Karya Nusantara ("**Finarya**"). As at the date hereof, Telkomsel owns a 26.6% equity interest in Finarya. We also offer video on demand under VideoMAX, a bundling of broadband data packages and access to Over The Top video services. We provide music and gaming services, that offer a mobile entertainment experience by targeting various consumer segments and leveraging Telkomsel's trusted billing system. We have applications for music (e.g., LangitMusik, MusicMax and Ring Back Tone) and GameMax, which combines game content data for several games and game vouchers. We launched online games and started developing gaming communities to expand our customer experience in that area in 2019. We expect to further develop this type of offering in 2020.

2. Consumer Segment

Our consumer segment portfolio comprises fixed voice, fixed broadband services, and IP-TV including consumer digital services. It is marketed under the retail brand "IndiHome," a product that allows customers to choose one or more of such services.

In 2019, we continued to actively promote our "more for less" program, which aims to provide customers with more relevant benefits at a competitive price through bundling services. These services consisted of broadband Internet, fixed wireline phone and interactive TV services. We offered promotions for IndiHome products during festive campaigns and offered year-end and seasonal packages at a promotional price. Such offers were intended to increase revenue from upselling and cross-selling our products and services. In addition, we continue to develop products and technologies to meet our customers' aspirations and needs. In 2019, we launched IndiHome with 200 Mbps, 300 Mbps and 1 Gbps bandwidth speeds. We also launched IndiBox, Over The Top services based on Android TV Box devices, that allow customers to access streaming TV, music, games, various applications and video-on-demand (VOD). We have also continued to enrich the variety of our UseeTV channels with new channels such as Warner Bros TV, tvN Movies, IDX Channel, and Champions TV which broadcasts UEFA Champions League games. We offer customers the ability to upgrade internet speed and Over The Top content such as iflix, HOOQ and CATCHPLAY to enhance customer experience. Our IP-TV services include TV-on-demand and video-on-demand. IP-TV services are comprised within our IndiHome service offering. As of December 31, 2019, we had approximately 9.0 million fixed broadband customers (including 7.0 million IndiHome customers) and captured 86.5% of the market share of fixed broadband customers in Indonesia.

We also offer wifi.id services to our IndiHome customers, an add-on service which allows such customers to enjoy unlimited internet access at all Indonesia wifi.id access points. Wifi.id stands for Indonesia Wi-Fi, our wireless public internet network that provides user facilities to enjoy high-speed internet services and various other multimedia services.

3. Enterprise Segment

Our enterprise segment comprises mainly ICT and platform services that cover enterprise-grade connectivity services (including satellite services), data center and cloud, IT services, business process outsourcing, and other ancillary services.

For enterprise connectivity, we offer fixed broadband, Wi-Fi, Ethernet, and data communication services, including leased channels such as metro Ethernet, VPN-IP, high-capacity data network solutions giving point-to-point connection with high capacity bandwidth, and fixed voice services, among others. We also provide satellite services as part of enterprise connectivity offering, and continue to strengthen our presence in this sector through our providing of transponder capacity leasing, satellite secondary product lines and other satellite support solutions. Our satellite operations consist primarily of leasing satellite transponder capacity to broadcasters and operators of VSAT, cellular services, and ISPs, as well as providing earth station satellite up-link and down-link services for domestic and international users.

To address the significant increase in demand, we continue to enhance our data center facilities and cloud services. Our offering includes the providing of enterprise data center, collocation, hosting, disaster recovery centers, managed operation, data center consulting, and various cloud services such as private cloud, hybrid cloud and public cloud.

We provide system integration and IT service management, together with related business process management, business process as-a-service and customer relationship management services. We aspire to digitalize our service offering further, therefore, we are relentlessly focusing on strengthening our IT capabilities to reinforce our offerings going forward.

We also provide smart enabler platform services to promote innovation with next-generation technology solution, integrated industry ecosystems and to foster changes in consumer behavior in Indonesia. Our adjacent services comprise diverse services relating to software, devices and hardware (including IT hardware) sales and certain related services such as IT support services. Moreover, we offer financial services which consist of bill payment aggregators, electronic payment platform services, online payment solutions, payment switching services. We also offer digital advertising solutions such as media placement services and creative solutions, integrated digital media services such as digital out-of-home, mobile advertising, online advertising, and digital printing services. Big data and data analytics in the form of platform services that generate insights for customers to analyze consumer behavior and create more efficient marketing campaigns are also included in our service portfolio. We also provide smart enablers platform services and assist with customer relationship management, among other things: IoT services which offer IoT solutions for buildings, IoT applications for smart energy monitoring and management, fleet management, unified communication and collaboration services, IT security services, and other adjacent services. Lastly, our e-Health solutions provide a simplified procedure and standardized healthcare claim process between healthcare providers, patients, and insurance providers that leverages our digital and IT service capabilities.

4. Wholesale and International Segment

Our wholesale and international business segment includes wholesale telecommunications carrier services, tower business, infrastructure services, and international business.

Our telecommunications carrier services comprise primarily network services, data and internet, as well as interconnection services, value added services, voice hubbing, data center, platform, and solutions. We earn revenue from interconnection services from other telecommunications operators that utilize our network and infrastructure in Indonesia, both for calls that terminate at or transit via our network. Similarly, we also pay interconnection fees to other telecommunications operators when we use their networks to connect a call from our customers. Interconnection services that we provide to other telecommunications operators comprise domestic and international interconnection services.

With regards to our tower business, we lease out space to other operators to place their telecommunications equipment on these towers, for which we receive a fee. As of December 31, 2019, we had approximately 33,592 towers, comprising approximately 15,892 towers owned by Dayamitra and approximately 18,000 towers owned by Telkomsel. We aim to consistently expand our tower business, as we believe this is a strategic business in the telecommunications industry and intend to increase our tower rental revenues. We also seek to improve our operation and maintenance efficiency by utilizing renewable energy solutions and digitizing our internal business processes. In March 2019, we, through Dayamitra, acquired 95.0% of the share capital in PT Persada Sokka Tama, a company engaged in the telecommunications tower business with 1,017 towers located throughout Indonesia. We have pursued this acquisition to strengthen Dayamitra's position in the Indonesian telecommunication tower industry. In December 2019, Dayamitra completed the acquisition of 2,100 telecommunications towers for Rp4,443.9 billion from PT Indosat Tbk, a telecommunications operator company in Indonesia. This acquisition will strengthen Dayamitra's business and is in line with Dayamitra's long term strategy.

We provide managed infrastructure and network services by performing network construction and maintenance including laying and maintaining submarine cable, and energy solutions for telecommunication infrastructure ecosystems. We accomplish this through leveraging existing business in our portfolio and developing in-house capabilities and innovative solutions. As part of our infrastructure portfolio, we have developed energy management solutions. As such, we completed the delivery and installation of diesel power plants in the Kalimantan and Sulawesi regions in 2018; after completion of this project we were engaged by a State-Owned Enterprise to manage the maintenance of the diesel engines we had delivered and installed in Kalimantan and other eastern regions of Indonesia up to 2021. We have also completed the construction of the Southeast Asia-United States (SEA-US) submarine fiber cable in 2018, connecting Manado, Indonesia to California and the IGG submarine fiber cable, which has enhanced connectivity among major cities in Indonesia while directly connecting Indonesia to South East Asia, the Middle East, Western Europe and the United States.

We also have limited operations and/or interests in a number of jurisdictions outside Indonesia in telecommunications and data related areas. Our subsidiary, PT Telekomunikasi Indonesia Internasional ("**Telin**"), manages our international operations in the following jurisdictions:

- Singapore, through Telekomunikasi Indonesia International Pte. Ltd. ("**Telin Singapore**"), where we operate as an end-to-end information and communication technology provider, providing cloud and connectivity, wholesale voice services and data center and managed services;
- Hong Kong, through Telekomunikasi Indonesia International Ltd. ("**Telin Hong Kong**"), where we provide wholesale voice services, wholesale data services, satellite transponder services, retail mobile services (MVNO) and operate a GraPARI center;
- Timor Leste, through Telekomunikasi Indonesia International S.A. ("**Telin Timor Leste**"), where we provide mobile cellular services, enterprise solutions and wholesale and international services;
- Australia, through Telekomunikasi Indonesia International Pty. Ltd. ("**Telin Australia**") and its subsidiary, Contact Centres Australia Pty. Ltd. ("**OneContact**"), where we provide business process outsourcing services;
- Taiwan, through Telin Taiwan Limited, where we provide MVNO services and operate a GraPARI center;
- Malaysia, through Telekomunikasi Indonesia International Sdn. Bhd. ("**Telin Malaysia**"), where we have a majority ownership interest in a joint venture that provides MVNO services, international airtime services and support and wholesale voice services. We also provide VSAT services to corporate customers through TS Global Network Sdn Bhd.;
- The United States, through Telekomunikasi Indonesia International Inc. ("**Telin USA**"), where we provide data services, internet connectivity (locating and operating PoP, peering, transit) services and wholesale voice services;
- Myanmar, through a branch office, where we provide IP transit services and dedicated internet access;
- Saudi Arabia, through a digital business aimed at Indonesian diaspora in the country, in collaboration with Telin Hong Kong through a mobile app called "As2in1," which targets Indonesian diaspora and provides benefits such as discounted call rates for calls to Indonesia. As2in1 has the slogan "Reaching to Diaspora & get us closer to our Home Land" (*Mendekatkan Tanah Air*). Operating this business is handled by our staff from Indonesia; and
- New Zealand, through Contact Centres New Zealand Limited ("**OneContact**"), where we provide business process outsourcing services.

5. Other segment

Digital Services

Our digital services portfolio primarily comprises media and edutainment services targeted to digital consumers. Our diverse digital portfolio is clustered into smart platform, and gives access to digital contents and e-commerce. We also manage a venture capital fund through our subsidiary, PT Metra Digital Innovation which is also known as MDI Ventures, to invest in digital startups.

Our smart platform business line consists of digital advertising, intelligent applications, big data, IoT, and financial services. Our financial services offering focuses on creating a digital financial ecosystem by offering digital payment solutions. For example, LinkAja (formerly known as T-CASH) is an electronic money service provided by Telkomsel, that provides a digital solution that enables Telkomsel consumers to perform banking activities in a safe, easy and simple manner. With LinkAja, activities such as paying bills, transferring funds, and making online and offline retail payments can be done easily on our consumers' smartphones and/or feature phones. In January 2018, we acquired a 30% equity interest in Cellum, a financial technology company which provides a digital wallet platform to strengthen our financial technology capability. On February 22, 2019, T-CASH changed its brand name to LinkAja after Telkomsel entered into a non-cash share subscription for shares in Finarya. The comprehensive financial services offered by LinkAja are expected to further accelerate financial inclusion and foster the development of a cashless society as envisioned by the Government in its Non-Cash National Movement Program. As at the date hereof, Telkomsel owns a 26.6% equity interest in Finarya.

Our big data and smart platform is a business we carry out by acting as a platform enabler providing common horizontal solution components that can be used across industries and market segments. We provide an IoT platform for the enterprise segment that can be used in multiple environments and industries such as for smart connected airports or smart manufacturing. Developers can also use the platform to create and test IoT products. In 2018, we introduced Xsight, a new product that helps developers to increase productivity and efficiency with ready-to-use application programming interfaces.

Our digital advertising services cover digital advertising and mobile banking solutions. Our digital advertising business provides digital advertising media solutions for marketers. Our mobile banking solution business provides mobile functions for the banking industry, such as SMS and user menu browser services. We also operate an ad exchange platform that brings publishers, advertisers, and agencies together to be able to carry out digital advertising activities effectively and efficiently by linking buyers to sellers in one advertisement marketplace. We also deliver services such as digital advertising agency, integrated digital media, and big data analytics.

Our digital content portfolio comprises music and gaming. We manage our digital content portfolio across the Group and also manage the relevant value chains which mainly consists of sourcing content, providing the content platform, dealing with payments and marketing. Our digital content portfolio focuses on providing consumers with a mobile entertainment experience. It targets different consumer segments and leverages Telkomsel's trusted billing system to facilitate transactions. It offers applications for music (e.g., LangitMusik, MusicMax and Ring Back Tone) and GameMax, which combines game content data for several games and game vouchers. We launched online games and started developing gaming communities to expand our customer experience in that area in 2019 and expect to further develop this type of offering in 2020. Our e-Commerce business operates under the brand of BLANJA.com, an online marketplace that facilitates consumer-to-consumer and business-to-consumer sales. Consumers can sell and buy products through their TV by accessing our IndiHome Store and Alfamidi @ IndiHome, which is a partnership between the Alfa retail store and Indihome. We also introduced a business-to-business marketplace called Xooply in 2018 which is providing our e-commerce business with opportunities growth.

Property Management

Our property management aims to provide efficient space allocation for our network equipment and enjoyable work ambience for employees and partners by leveraging our significant property assets portfolio. Such assets are in the form of buildings for our network nodes, offices, and other businesses, landbank, and landed residential properties. However, network engineering improvements coupled with reduced human capital growth has opened up opportunities for asset leveraging initiatives. We execute this leveraging process through our subsidiary, PT Graha Sarana Duta ("Telkom Property"), and offer services such as property development (planning, development and construction of property area), property leasing (property rent and leasing), property facilities (business line engaged in retail and leasing, transportation management system) and property management (building management, mall, apartment and security services). These services contribute to the increase of our property assets utilization and contributes to the diversification of our digital ecosystem.

We leverage idle property assets through "retail and strategic partnership projects." As of December 31, 2019, we have already collaborated with notable local and global players, in particular in the food, hospitality and retail industry within the framework of these projects. We seek to maximize revenue and profit in implementing these projects in addition to covering our regular maintenance costs on the assets. We also incorporate our digital competence and product solutions to our offering. For example, we provide network connectivity or internet access to our tenants or their customers as additional amenities. These digital features contribute to the increased value of our assets offering and help to diversify our digital ecosystem. We also create partnerships with digital workplace enterprise through a co-working space business initiative. Some of our future projects include office lease, restaurant or food and beverage retail chain, and retail building rent.

Aside from generating income from our property business, our property management also serve internal customers by providing efficient space allocation for our network equipment and an enjoyable work environment for our employees and partners, which fall under our "group synergy projects." Such property assets come in the form of buildings that function as our network nodes, sales points, customer service centers, headquarter or branch offices, other businesses, land bank, and landed residential properties. Our goals for these projects are to achieve economies of scale and cost efficiency.

We carry out this property management initiative through our subsidiary, Telkom Property, by offering services such as property development (planning, development and construction of property area), property leasing (property rental and leasing), property facilities (business line engaged in retail and leasing, transportation management system) and property management (building management, mall, apartment and security services).

In 2019, Telkom Property successfully delivered several commercial property projects in accordance to Telkom's strategic guidance and performance indicators, such as hotel and fast food restaurant chains. In the following years, we will seek to expand our ability to leverage revenue generated by external parties outside of Telkom Group and subsidiaries. We aspire to develop a number of mixed-use property development and diversify our property business by evaluating penetration to the health industry. Aside from that, Telkom will also ramp up efforts to enter into education partnerships through our education foundation by providing idle land or buildings to universities so that they may develop such land or buildings into university campuses in exchange for monetary compensation. Other strategies also include harnessing the captive market of SOE and other government institutions to provide branch or sales offices throughout Indonesia.

Network Infrastructure and Development

In line with our vision and mission, we classify our network infrastructure into two categories, namely: (i) our national network infrastructure, to support our Indonesia Digital Network program, which we discuss in greater detail below and (ii) our international network infrastructure, to support our international expansion program.

National Network

We believe infrastructure development and the provision of connectivity are crucial aspects in our vision to become the "King of Digital." We continue to pursue development of our network infrastructure to offer more efficient and cost-competitive services, in line with the Government's Indonesia Broadband Plan which lays out its aspirations to accelerate and expand broadband penetration in Indonesia. In addition, we aim to continue to develop and improve our network infrastructure with a view to developing a high-quality, efficient and competitive infrastructure in terms of costs for delivery of services.

As a result, we plan to continue to actualize digitization in Indonesia through our Indonesia Digital Network program which comprises three components, namely id-Convergence ("id-Con"), id-Ring and id-Access, described below:

- id-Con: represents our aim to realize the convergence of various elements of our network infrastructure into an integrated multi-service and multi-device Next Generation Network. id-Con is a strategic initiative that focuses on providing a platform for the design, development and delivery of the services and solutions we offer. In order to develop such platform and ensure the reliability and scalability of the services and solutions we offer, we intend to continue utilizing our data center facilities and our cloud management platform. In addition, we are focused on securing the integrity of our platforms. We aim to continue designing and developing industry-specific smart enabler platforms for certain industries in Indonesia, such as the transportation, healthcare and public sectors.
- id-Ring: represents our aim to develop a resilient nationwide fiber optic backbone and establishing our domestic network infrastructure as a hub for international broadband traffic. In order to implement this strategy, we are developing the IGG cable system, which we completed in December 2018. It will leverage Indonesia's strategic geographic location and provide an alternative direct broadband connection between Europe, Asia and America. In addition, we have developed a nationwide infrastructure network with a fiber optic backbone, which covers 458 cities in Indonesia as of December 31, 2019. In 2019, we continued to increase the number of our access points and points of presence. We also continued to re-engineer and reinforce the network for future service readiness programs that require huge capacity, ultra-low latency and massive connectivity by more efficient total cost development. Furthermore, our Merah Putih Satellite was launched in August 2018 and began commercial operations in September 2018. This satellite has a capacity of 60 TPE, which consists of 48 C-Band transponders and 12 extended C-Band transponders and will cover the Southeast Asia and South Asia regions. With three satellites in operation, we will be less dependent on foreign satellite operators for capacity going forward, and will be able to provide better information and communications technology ("ICT") services to remote areas within Indonesia.
- id-Access: represents our strategy to increase nationwide fixed and mobile broadband access penetration. We are focused on expanding our fiber optic network and modernizing our current access network infrastructure in order to realize cost efficiencies and deliver new services. Under this program, we intend to continue replacing copper cable network with fiber optic cables and terminating legacy node service networks. We intend to continue laying out fiber optic cables which are able to serve multi-segment customers, including home and enterprise customers as well as the BTS network of Telkomsel and the network infrastructure of other operators. We believe that this may provide us with opportunities to expand our sources of revenue. In addition, we intend to continue improving the cross-operability of our and Telkomsel's broadband networks.

Fixed Wireline Network

As of December 31, 2019, we managed approximately 9.4 million fixed wireline (fixed voice) connections. The following table sets forth data related to our fixed wireline network as of the dates indicated.

Operating Statistics	As of December 31,				
	2015	2016	2017	2018	2019
Exchange capacity ⁽¹⁾	14,946,076	15,738,803	13,253,971 ⁽³⁾	13,829,115	12,145,069
Installed lines ⁽¹⁾	14,946,076	15,738,803	13,253,971 ⁽³⁾	13,829,115	12,145,069
Lines in service ⁽²⁾	10,276,887	10,663,000	10,957,118	11,111,056	9,368,744

- (1) Exchange capacity and installed lines since December 31, 2015 includes capacity and lines from TDM-based, softswitch and IMS technologies, which leads to the exchange capacity being equal to the installed lines.
- (2) Lines in service are subscriber lines and public telephone lines, including the lines in service that we operate under revenue-sharing arrangements.
- (3) Due to node modernization program, our TDM and softswitch customers were migrated to IMS, and we will not expand the exchange capacity and installed lines for those technologies anymore.

Cellular Network

Our cellular services, which are operated by our subsidiary, Telkomsel, provide the most extensive network coverage of any cellular operator in Indonesia. Telkomsel operates on the GSM/DCS, GPRS, EDGE, 3.5G, and 4G/LTE networks. Telkomsel has a wide spectrum with 15 MHz on the 800/900 MHz frequency, 22.5 MHz of contiguous spectrum on the 1.8 GHz frequency, 15 MHz of contiguous spectrum on the 2.1 GHz frequency and 30 MHz of contiguous spectrum on the 2.3 GHz frequency. All spectrum are already using a neutral technology which is able to accommodate GSM/DCS, 3G, and 4G network based on Telkomsel needs. The range of cellular services on the GSM network provided by Telkomsel extends to all cities and districts in Indonesia. In 2019, Telkomsel added approximately 23,162 BTS representing a 12.25% increase compared to the previous year. As of December 31, 2019, Telkomsel's digital network was supported by 212,235 BTS (consisting of 79,834 4G/LTE BTS, 82,104 3G BTS and 50,297 2G BTS).

Data and Internet Network

In 2019, we continued to improve the quality of our data network by installing additional capacity and coverage. As of December 31, 2019, we provided broadband access using fiber optics to more than 26.6 million homes. As of December 31, 2019, our metro ethernet network expanded to 1,134,397 Mbps, which is able to provide broadband services throughout Indonesia. The metro ethernet is also used as the main link for IndiHome broadband services, softswitches and integrated multimedia subsystems ("**IMS**") related to voice services, video services, enterprise VPN services and GPON broadband services related to mobile backhaul and corporate business solutions.

As of December 31, 2019, we have extended the capacity of our internet gateway to reach an installed capacity of 7,100 Gbps. This ensures the adequacy of the internet gateway capacity in anticipation of the expected growth for both fixed and mobile broadband traffic. In 2019, operated content delivery networks ("**CDN**") with an aggregate capacity of 6,525 Gbps in collaboration with Google, Facebook, Akamai, Edgecast, Level3, ChinaNet, Yahoo and Over The Top video content providers such as iFlix and HOOQ.

As of December 31, 2019, we maintained 12 main points of presence in Batam (at Batam Center and Bukit Dangas), Jakarta (at Jatinegara and Cikupa), Surabaya (at Rungkut and Kebalen), Manado (at Manado Centrum and Manado Paniki), Makasar (at Pettarani and Balaikota) and Banjarmasin (Banjarmasin and Ulin). In addition, we maintained 44 primary and secondary points of presence, including ten primary points of presence in East Java (at Pasuruan and Jember), Central Java (at Pekalongan and Purwokerto) and Sumatra (at Aceh, Lhokseumawe, Lampung, Bengkulu, Padang and Bukittinggi) that we completed in 2019. As of December 31, 2019, we had 56 points of presence in 46 cities in Indonesia.

Throughout 2019, we consistently deployed additional access points across Indonesia, while also choosing to dismantle certain access points which provided Wi-Fi services in locations where there was low utilization. Dismantled access points were redeployed in more suitable locations. As of December 31, 2019, a total of 386,420 access points has been installed (consisting of 140,169 managed access points and 246,251 home spots).

Data Center

As of December 31, 2019, we operated 22 data centers (17 local data centers and five international data centers). PT Telekomunikasi Indonesia International ("**Telin**") operated five overseas data centers which consisted of three locations in Singapore (Telin-1, Telin-2, Telin-3) with a total capacity of 9,300 KWH, one location in Timor Leste (250 kVA) and one location in Hong Kong (500 kVA). In Indonesia, our 17 local data centers had an aggregate capacity of 4,523 racks and we had established and operated 14 neuCentIX data centers in Balikpapan, Bandung (at Lembong), Batam (at Bukit Dangas and Batam center), Jakarta (at Karet Tengsin and Jatinegara), Yogyakarta, Makassar, Manado (at Paniki), Medan (at Centrum), Semarang (at Banyumanik) and Surabaya (at Kebalen, Kaliadem and Gubeng). Telkom Sigma also managed three data centers with a specification of tier 3 and 4 in Indonesia (at Serpong, Sentul, and Surabaya). These data centers provide carrier neutral connectivity and multiple services custom made for enterprise clients throughout the Asia Pacific region. With the capabilities of this network, we are able to provide integrated data storage solutions to companies in Indonesia, Hong Kong, Singapore and Timor Leste.

Transmission Network

In 2019, we focused on the development of our broadband network, which serves as the backbone for our entire network infrastructure. Our backbone telecommunication network consists of transmission networks, switching facilities and core routers, which connect multiple access nodes. The transmission links between nodes and switching facilities comprise a terrestrial transmission network, in particular fiber optic, microwave and submarine cable systems, as well as satellite transmission networks and other transmission technologies.

Communications Cable System

Our transmission network had 27 backbone rings in Indonesia with an aggregate capacity of 129,600 Gbps as of December 31, 2019. As of December 31, 2019, we operated a fiber optic backbone network totaling 100,069 km.

Throughout 2019, we worked to deploy several submarine cable systems in order to strengthen our fiber optic backbone. In the west of Indonesia, we have completed the deployment of the SLM (Sabang-Lhokseumawe-Medan), a submarine cable system which connects the Sabang-Lhokseumawe cable system and the Lhokseumawe-Medan cable system, with a total length of 632.12 km, while in the east of Indonesia we are deploying the PATARA (Papua Utara) submarine cable system which will connect Sentani and Sarmi with a total length of 283 km. In Kalimantan, we have completed the deployment of the MATANUSA (Mangkajang-Tawao-Nunukan-Sangatta) cable system with a total length 673 km. These three additional submarine cable systems (SLM, PATARA and MATANUSA) are fully operational. We continue to progress on the deployment of our fiber optic backbone in eastern Indonesia. We are progressing on the deployment of our PATARA-2 submarine cable which will connect Sarmi and Waisei, with a total length of 1,126 km. In Sulawesi, we are progressing on the deployment of the LUMORI (Luwuk-Morowali-Kendari) submarine cable which will connect Luwuk, Bonepute, Kolaka and Kendari, with a total length of 436 km. The deployment of the PATARA-2 and LUMORI submarine cables will improve the transportation network and is expected to be ready for service by the end of the first quarter of 2021.

We also intend to leverage Indonesia's strategic geographic location and to provide an alternative direct broadband connection between Europe, Asia and America by developing the IGG cable system. The IGG cable system is intended to connect two major submarine cable systems, namely the South East Asia-Middle East-Western Europe 5 (SEA-ME-WE 5) and, the Southeast Asia-United States (SEA-US) submarine cable systems. The IGG cable system is also planned to connect 12 major cities within Indonesia, including Batam, Jakarta, Surabaya and Manado, spanning a length of 5,403 km. We expect this cable system to increase our domestic traffic capacity and ability to offer broadband services. We completed the construction of this cable system in December 2018, and it is already operational.

Satellites

We operate three satellites, namely Telkom-2, Telkom-3S and Merah Putih satellite.

The Telkom-2 satellite operates at orbital slot 157 E. We expect to operate the Telkom-2 satellite at such orbital slot for its remaining estimated operational life which ends in 2020. The Telkom-2 satellite has a capacity of 24 standard C-band transponders (which is equivalent to an aggregate of 24.00 TPE) with coverage over Indonesia and South Asia. Upon reaching the end of its estimated operational life, we may optimize Telkom Group's existing capacity to accommodate the traffic from Telkom-2 or increase lease capacity from other satellites.

The Telkom-3S satellite was launched in February 2017 and began operations in April 2017. We have located the Telkom-3S satellite at orbital slot 118 E to replace the Telkom-2 satellite and transferred all of the Telkom-2 satellite's transmission services to the Telkom-3S satellite. The Telkom-3S satellite has a capacity of 42 transponders (which is equivalent to an aggregate of 49.00 TPE) consisting of: (i) 24 standard C-band transponders; (ii) 8 extended C-band transponders; and (iii) 10 Ku-band transponders, which would have coverage over Indonesia.

In addition, we have launched the Merah Putih satellite in August 2018 as a replacement for the Telkom-1 satellite. It began commercial operations in September 2018, and has a capacity of 60 transponders (which is equivalent to an aggregate of 60.00 TPE) consisting of: (i) 24 standard C-band transponders which have coverage over South East Asia; (ii) 24 standard C-band transponders which would have coverage over South Asia; and (iii) 12 extended C-band transponders, which would have coverage over South East Asia.

All of our satellites are controlled from a main control station in Cibinong, Bogor in West Java. To ensure the continuity of services, we operate a backup control station in Banjarmasin, South Kalimantan.

We also leased 62.25 TPE (transponder equivalent to 36 MHz) from the following satellites: Apstar-5C HTS (138 E) in the amount of 30.3 TPE, Apstar-6C (134 E) in the amount of 0.9 TPE, Apstar-9/MySat-1 (142 E) in the amount of 10.7 TPE, Chinasat-11 (98 E) in the amount of 1.9 TPE, Eutelsat 172A (172 E) in the amount of 2.0 TPE, JCSAT 4B (124 E) in the amount of 1.5 TPE, JCSAT 5A (132 E) in the amount of 2.8 TPE, Measat (91.4 E) in the amount of 8.0 TPE, NUSANTARA SATU (146 E) in the amount of 2.0 TPE, and other satellites in the amount of 2.1 TPE.

International Networks

We continue to develop our international network infrastructure in order to support our international expansion strategy and vision to be the "King of Digital in the Region." We operate international gateways in Batam, Jakarta and Surabaya to route outgoing and incoming calls on our IDD service ("007" and "01017"). We also operate a voice gateway in Singapore and Hong Kong to offer voice services from or to any countries. As of December 31, 2019, we operated an international fiber optic backbone network totaling 64,700 km.

We own global submarine cable infrastructure that connects Europe, Asia and America through submarine cable system such as the Thailand-Indonesia-Singapore (TIS), two routes of the Batam-Singapore Cable System (BSCS), Dumai-Malacca Cable System (DMCS), Asia-America Gateway (AAG), Southeast Asia-Japan Cable System (SJC), the South East Asia-Middle East-Western Europe 5 (SEA-ME-WE 5) submarine cable system, and the Southeast Asia-United States (SEA-US). We also operate the IGG submarine cable system (completed in December 2018) to connect major cities in Indonesia with Asia, Europe and USA. The IGG also provides direct and fast connection (or "express connection") to connect our existing submarine cable system of SEA-ME-WE 5 to SEA-US.

To support our international services for both voice and data, Telin operates 63 points of presence in various parts of the world, including 24 points of presence in Asia and Australia (nine points of presence in Indonesia used for supporting the international network, four points of presence in Singapore, four points of presence in Hong Kong, one point of presence in each of Dili, Kuala Lumpur, Tokyo, Taipei, Bangkok, Yangon and Sydney), 23 points of presence in Europe and the Middle East (one point of presence in each of London, Manchester, Leeds, Amsterdam, Frankfurt, Marseille, Paris, Stockholm, Luxemburg, Zurich, Milan, Palermo, Warsaw, Moscow, St. Petersburg, Madrid, Sofia, Vienna, Dublin, Bucharest, Prague, Scotland, and Dubai), 16 points of presence in the United States and Canada (one point of presence in each of Montreal and Toronto, two points of presence in Los Angeles and one point of presence in each of Palo Alto, Ashburn, San Jose, New York, Guam, Hawaii, Seattle, Santa Clara, Miami, San Francisco, Dallas, and Atlanta).

Geographic Distribution of Revenues

International expansion has become a necessity for us to be able to maintain a high and sustainable growth rate. We are developing and expanding our business outside of Indonesia to broaden and diversify our market. The following table sets forth the distribution of our revenues by geographic markets for the periods indicated.

	Years Ended December 31,			
	2017	2018	2019	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
External Revenues				
Indonesia	125,970	127,442	130,979	9,435
Foreign Countries	2,286	3,346	4,578	330
Total	128,256	130,788	135,557	9,765

Overview of Telecommunication Services Rates

Under the Telecommunications Law and Government Regulation No.52/2000, tariffs for operating telecommunications network and/or services are determined by providers based on the tariff type, structure and with respect to the price cap formula set by the Government.

a. Fixed line telephone tariffs

Under MoCI Regulation No.15/2008, the tariff structure for basic telephony services connected through fixed line network comprised the following fees:

- activation fee;
- monthly subscription charges;
- usage charges; and
- additional facilities fee.

b. Mobile cellular telephone tariffs

On April 7, 2008, the MoCI issued Regulation No.09/PER/M.KOMINFO/04/2008, (on mechanism to determine tariffs of telecommunication services connected through mobile cellular network) ("MoCI Regulation No.9/2008") which provides guidelines to determine cellular tariffs with a formula consisting of network element cost and retail services activity cost. Under MoCI Regulation No.9/2008, cellular tariffs for the operation of telecommunication services connected through mobile cellular network consist of the following:

- basic telephony services tariff;
- roaming tariff; and/or
- multimedia services tariff

with the following traffic structure:

- activation fee;
- monthly subscription charges;
- usage charges; and
- additional facilities fee.

c. Interconnection tariffs

Based on letter No.118/KOMINFO/DJPPI/PI.02.04/01/2014 of the DGPI, the DGPI required our Company and Telkomsel to submit Reference Interconnection Offer ("RIO") proposals to the Indonesian Telecommunication Regulatory Body ("ITRB") for evaluation on an annual basis. Subsequently, the ITRB in its letters No.60/BRTI/III/2014 and No.125/BRTI/IV/2014 approved our Company's and Telkomsel's RIO revisions and approved an SMS interconnection tariff at Rp24 per SMS. On January 18, 2017, ITRB in its letters No.20/BRTI/DPI/I/2017 and No.21/BRTI/DPI/I/2017, decided to use the interconnection tariff based on the Company and Telkomsel's RIO in 2014 until the new interconnection tariff is set.

d. Network lease tariffs

Through MoCI Regulation No.03/PER/M.KOMINFO/1/2007 on Network Lease ("MoCI Regulation No.03/2007"), the Government regulated the form, type, tariff structure and tariff formula for services related to network leases. Pursuant to MoCI Regulation No.03/2007, the Director General of Post and Telecommunication issued Decree No.115 of 2008 which stated its agreement on Agreement on Network Lease Service Type Document, Network Lease Service Tariff, Available Capacity of Network Lease Service, Quality of Network Lease Service, and Provision Procedure of Network Lease Service in 2008 Owned by Dominant Network Lease Service Provider in conformity with the Company's proposal.

e. Tariffs for other services

The tariffs for satellite lease, telephony services, and other multimedia are determined by the service provider by taking into account the expenditures and market price. The Government only determines the tariff formula for basic telephony services. There is no stipulation for the tariff of other services.

Marketing, Sales and Distribution

We have implemented a comprehensive marketing and promotional strategy to bolster our brand and to increase sales, including through marketing communication activities and product and service distribution channel development. To increase sales, we also use above and below the line marketing channels to promote our services to certain parties and communities. We also continue to place advertisement in printed and electronic media and implement marketing methods such as point of sales broadcasting as well as promotion and sponsorship events.

We continue to implement our marketing and promotional strategy as well as our customer service to be in line with the characteristics of our businesses, products and services as well as customer preferences. The following provides a description of our marketing and promotional strategies by each customer segment.

Mobile Customers

For our mobile customer segment, in 2019 we focused our marketing strategy on targeting specific customer segments and personalizing offerings delivered through digital channels for efficient implementation. Telkomsel also focused on improving payload growth and acquiring new data users while continuing to support legacy product usage. In order to stimulate higher data and digital products usage, Telkomsel partnered with several parties to enrich contents available from existing platforms and continued to offer its "more for more" program whereby customers who subscribe for more expensive data packages get attractive add-ons and features, which we expect will ultimately drive value creation and ARPU uplift. We also launched our OMG (Oh My Gigabyte!) program which enable customer to access popular applications. Our efforts to increase our ARPU include providing digital lifestyle and digital payment services which we provide as mobile-based digital life services.

In 2019, we continued to introduce new products and to revamp our mobile package options in order to appeal to our various groups of customers. For example, we launched our prepaid service offering By.U. This service bundle targets young users and offers a "customer-centric" experience to customers as they are free to choose from a wide variety of services. To strengthen the positioning of our MAXStream video platform in the video streaming industry, we partner with video content providers to enrich our contents available from our video streaming platform. We published our second video game, Lord of Estera, in 2019 which is available from Telkomsel and Langitmusik, a streaming service. We also increased opportunities for customers to use LinkAja, including extending ability to use LinkAja to non-subscribers and collaborating with additional partners such as taxi services, petrol stations and food and beverage operators for the use of LinkAja as payment. As of December 31, 2019, we had 171.1 million cellular subscribers, comprising 164.7 million prepaid subscribers and 6.4 million postpaid subscribers and 110.3 million mobile broadband customers.

Consumer Customers

In 2019, IndiHome was our main product targeting the consumer customer market. In 2019, our consumer segment began focusing on apartment and premium customers, which used to fall under the enterprise unit, in addition to its traditional purely residential customer base. Through the carrying out of a variety of marketing strategies from discount to value innovation, we are able to consistently offer products which we believe offer attractive values. We offer these products through various sales channels, including digital channels, and carry out campaigns and year-round promotions, especially during festive campaigns. Our promotions and campaigns included the following:

- **Sensasi Ekstra Akhir Tahun** campaign: IndiHome's campaign to celebrate the New Year of 2019 whereby IndiHome provided promotions for its customers in terms of entertainment, connectivity, and telephone services.
- **Semarak Kebahagiaan** campaign: IndiHome's campaign to celebrate the month of Ramadhan whereby IndiHome provided promotions such as providing free additional content (IndiSport, IndiMovie 1, and bonus myIndiHome points), a discount of 30% from regular prices when customers subscribe for the minipack upgrade essential, IndiSport, or IndiMovie 1, bundling services (internet, phone, television, Over The Top content such as iflix, HOOQ and CATCHPLAY) at special prices, and giving the chance to win prizes.
- **Wujudkan Rumah Ceria 2020** campaign: IndiHome's campaign to celebrate the New Year of 2020 whereby IndiHome provided promotions for its customers in terms of entertainment, connectivity, and telephone services.

In 2019, we had a sales strategy which focused on implementing a dynamic pricing allowing prices to better reflect local conditions in different areas of Indonesia, while providing superior bundled products to consumers and faster and better service for our customers. We also introduced a points program for our salespeople to incentivize greater sales activity on weekends and holidays to improve convenience to our customers.

We also intensified our efforts to provide tailored service to customers by using customer profiles created through the compilation of customer data in order to personalize service and offer products which may be attractive to customers based on their profile. We have also developed an end-to-end traceable customer relationship management process, which allows us to identify and rectify problems as they happen, rather than waiting for customers to alert us to such issues, allowing us to proactively solve problems before customers are inconvenienced. As of December 31, 2019, we had 9.4 million fixed wireline subscribers out of which 9.0 million subscribers were fixed broadband subscribers (including 7.0 million IndiHome subscribers).

Enterprise Customers

For our enterprise customers, we implemented a marketing strategy to attract high-end market enterprise customers using strategic managing of accounts with the aim of improving our relationship with customers through focused services customized to the strategic account. We also implemented a transformative digital marketing strategy which comprises: (i) a government initiative that seeks to foster the use of digital technologies, under which we aim to become the Government's strategic ICT partner by collaborating with government on strategic ICT mega-deals that focus on the digital customer experience; (ii) an end-to-end digital ecosystem initiative targeting companies, under which we market end-to-end digital ICT solutions to our enterprise customers which provide customized solutions for each of our customers and (iii) the build-the-nation digital SME initiative, under which we market basic ICT solutions for connectivity services and solution-oriented packages to SMEs in Indonesia through crafting the best-fit digital market platform and SME customer experience.

In 2019, our sales strategy comprised providing access to: (i) Account Managers for the large enterprise segment (the Account Manager is meant to serve as a single point of interaction to provide end-to-end service to customers, from initiation of the relationship to after-sales services), (ii) Government Relationship Officers for government customers to manage a close relationship with such customers for the whole year and to encourage contract renewal, and (iii) Business Account Managers for medium sized SME customers Tele Account Management (TAM) for small sized SME customers, and for micro SME segment served by value added reseller method, which provides additional products or services with the purchase of an initial or qualifying item.

Wholesale and International Business Customers

Our wholesale and international business customers are mainly domestic other license operators (OLO's), service providers, digital player, global wholesaler and carrier, and enterprises that are related to our product or services such as international data center or international connectivity (IPLC) besides retail customers in our international operation of mobile network operator (MNO) and mobile virtual network operator (MVNO).

For our wholesale and international business customers, we focus on: (i) offering attractive business schemes for our voice traffic portfolio to leverage such benefits to increase retail traffic, through the bundling of voice traffic products at competitive prices that are compatible with the quality of the service offered; (ii) improving services, such as quality and coverage, for international data center and connectivity customers; (iii) offering an end-to-end tower solution to customers both for core tower services such as "built to suit" (a tower rental service tailored to the preferred location and specifications of the first tenant or anchor tenant for the relevant tower), co-location and adjacent tower services such as site maintenance, and other related services; and (iv) exploring our regional market by providing submarine cable laying and maintenance services.

We also provide customer service management for wholesale and international customers through account managers, wholesale digital touch point applications, and 24-hour customer care support. We keep developing the capability and competency of our account management team to improve our capability to deliver excellent service and strong engagement with our customers. To get a better understanding of our customers' needs and feedback, we conduct surveys periodically and their outcome generally result in new improvement programs.

Digital Service Customers

For our digital service customers, our marketing strategy focuses on strengthening and improving digital innovation, including by:

- enriching digital content;
- creating digital services with unique features;
- improving brand, platform, operational, and customer experiences;

- building digital business models to support Indonesia's digital economics;
- leveraging our assets and inventory to obtain increasing insight into digital services and customer experience; and
- growing the portfolio of our digital business through investment in digital startups in order to be a part of Indonesia's digital ecosystem.

We tailor our sales strategy to each particular digital business and our digital customers' needs. We offer customer care and channel management, including through contact centers, dedicated account management for large enterprises, websites, and social media.

For instance, we offer E-Commerce services through BLANJA.com, an online marketplace that facilitates the sale of consumer-to-consumer and business-to-consumer digital content through MelOn, a digital content provider for music database and digital music content online application.

Distribution Channels

The following are our primary distribution channels for our products and services:

- **Face-to-face customer service points** include walk-in customer service points and mobile units, where customers have access to the full range of Telkom and Telkomsel's products and services, including billing, payment, subscription cancellation, promotion and complaint handling. Plasa Telkom outlets generally provide access to Telkom products and services and GraPARI centers generally provide access to Telkomsel products and services. In recent years, we have been introducing Telkomsel products at certain Plasa Telkom outlets and have established nine digital GraPARI outlets as of December 31, 2019, which offer both Telkom and Telkomsel products. As of December 31, 2019, we managed 408 Plasa Telkom outlets and 422 GraPARI centers in Indonesia (including GraPARI centers which are managed by third party business partners), five international GraPARI centers (in Saudi Arabia, Hong Kong, and Taiwan) and nine GraPARI Telkom Group centers, which provide the most comprehensive services for both retail and corporate customers of Telkom and Telkomsel. Several of our GraPARI centers operate on a 24-hour basis. As of December 31, 2019, we also operated 324 GraPARI mobile units and 1,078 IndiHome sales car units which are sales points located in vehicles which can travel to reach customers across the country.
- **Authorized dealers, retail outlets and modern channels** are distribution outlets for Telkomsel products such as starterpacks, prepaid SIM cards and top-up vouchers. We operate an extensive network of authorized dealers and retail outlets across Indonesia. These dealers are non-exclusive, and they receive a discount on all of the products they receive.
- **Partnership Stores** are extensions of our distribution channels, in cooperation with a variety of third party marketing outlets such as computer or electronic stores, banks through their ATM networks and others.
- **Contact centers** are call centers that support our customers' ability to access certain of our products and services, including making billing enquiries, submitting complaints and accessing certain promotions and service features. We operate 24-hour contact center facilities in Jakarta, Semarang, Bandung, Surabaya and Malang.
- **Account Management Teams** are teams that manage relationships and account portfolios of large enterprises, Government agencies, medium-scale businesses and wholesale customers.
- **Sales Specialists** have deep product and technical knowledge in order to provide appropriate and effective recommendations and solutions to corporate customers who work together with our Account Managers.

- **Channel Partners** serve as value added resellers that conduct sales and marketing activities to our enterprise customers to seek their specific requirements and to our retail customers to offer retail packages. We also engage third parties to conduct sales activities for retail customers at certain events.
- **Digital Touch Points** are web and mobile application-based services which we provide to our IndiHome subscribers and corporate customers. We operate myIndiHome, a self-care mobile application-based service for IndiHome customers, which allows customers to register new subscriptions, manage payments and billing, report and monitor network problems, access video-on-demand services and manage customer reward programs. Telkomsel also offers MyTelkomsel, which is a self-care mobile application-based service for Telkomsel subscribers which provides information on services, allows purchase of packages and products as well as account management. For enterprise customers, we offer My Telkom Digital Solution (MyTDS), user-centric digital touch points that digitize and simplify business processes to increase our productivity and performance in providing services to our customers. MyTDS also enhances user experience for our Corporate Customers. Users interact with us on mobile applications and web platform. MyTDS gives access to our product catalog, generates a digital quotation, tracks delivery tickets, and allows customers to ask for support as they can report service disruptions using MyTDS to generate release tickets which create a record of the disruptions. Corporate Customers can also access SLG and MRTG.
- **Websites**, we operate www.telkom.co.id, www.telkomsel.com and www.telin.net, which enable our customers to access certain of our products and services. Available services include e-Billing, registration, collective billing registration and submission of complaints.
- **Social Media**, we use social media, primarily Facebook, Instagram and Twitter, to enable customers to interact with us regarding our products and services.
- **LinkAja Wallet**, a digital wallet application which allows customers to buy data or voice services, pay bills or buy products with LinkAja.

Licensing

To provide national telecommunications services, we have a number of product and service licenses that are consistent with applicable laws, regulations or decrees.

We have secured licenses that have been adjusted as required, which are as follows:

Cellular

Telkomsel holds licenses to operate a nationwide mobile cellular telephone network using 15 MHz of spectrum allocation in the 800/900 MHz frequency, 22.5 MHz of spectrum allocation in the 1.8 GHz frequency and 15 MHz of spectrum allocation in the 2.1 GHz frequency and 30 MHz additional spectrum in the 2.3 GHz frequency which was won at an auction in October 2017. The licenses do not have a set expiry date, but will be evaluated every ten years. In addition, Telkomsel holds permits and licenses from and registrations with certain regional governments and/or governmental agencies, primarily in connection with its operations in such regions, the properties it owns and/or the construction and use of its BTSs.

Fixed Network and Basic Telephony Services

We have the following licenses to operate local fixed network, fixed DLD network, fixed international call and fixed closed network:

- MoCI Decree No.839 of 2016 (on license to operate fixed DLD network);
- MoCI Decree No.844 of 2016 (on license to operate fixed closed network) ("MoCI Decree No.844/2016");

- MoCI Decree No.846 of 2016 (on license to operate fixed international network) ("MoCI Decree No.846/2016"); and
- MoCI Decree No.948 of 2016 (on license to operate circuit switched based local fixed line network).

These licenses do not have a set expiry date, but will be evaluated every five years.

International Calls

We have a license to operate a fixed network to provide international call services pursuant to MoCI Decree No.846/2016.

We have a license to operate a fixed closed network pursuant to MoCI Decree No.844/2016. This license allows us to lease installed fixed closed network to, among others, telecommunication network and service operators, and to provide an international telecommunication transmission facility through a SCCS directly to Indonesia for overseas telecommunication operators.

According to MoCI Regulation No.16/PER/M.KOMINFO/9/2005 (on the provision of international telecommunications transmission facilities through SCCS) ("MoCI Regulation No.16/2005"), overseas telecommunications operators wishing to provide international telecommunications facilities through the SCCS directly to Indonesia are required to set up a partnership with a fixed network of international call services or closed fixed network provider. In line with MoCI Regulation No.16/2005, the international telecommunication transmission facilities provided through SCCS are served by us on the basis of landing rights attached to our license to operate fixed network of international call services. We have also secured landing rights based on the landing right Letter No.006-OS/DJPT.6/HLS/3/2010 from the MoCI.

The DGPI Decree No.93 of 2016 (on limited fixed network license) granted our subsidiary, Telin, a license to operate a fixed closed line network which enables Telin to provide international infrastructure services. Separately, Telin secured landing rights in Indonesia from the DGPI to provide international telecommunications transmission facilities through the Submarine Cable System ("SCS").

The foregoing licenses do not have a set expiry date, but they will be evaluated every five years.

VoIP

We are licensed to provide internet telephony services for public utilization for commercial use as provided under DGPI Decree No.127 of 2016 (on internet telephony services for public utilization). Telkomsel is also licensed to provide public VoIP services based on DGPI Decree No.65 of 2015 (internet telephony services for public utilization). These licenses do not have a set expiry date, but they will be evaluated every five years.

ISP

We are licensed as an ISP under MoCI Decree No.2176 of 2016 (on internet access services). Telkomsel is also licensed to provide multimedia internet access services with nation-wide coverage under DGPI Decree No.19 of 2016 (on internet access services). These licenses do not have a set expiry date, but they will be evaluated every five years.

Internet Interconnection Service

We hold a license to provide internet interconnection services pursuant to MoCI Decree No.1004 of 2018 (on internet interconnection service (network access point)). This license does not have a set expiry date, but it will be evaluated every five years.

Data Communication System ("SISKOMDAT")

We have a license to provide data communication system services pursuant to DGPI Decree No.191 of 2016 (on data communication system services). This license does not have a set expiry date, but it will be evaluated every five years.

Payment Method Using e-Money

Following the implementation of Bank Indonesia Regulation No.11/11/PBI/2009, as amended by PBI No.14/2/PBI/2012, and Circular Letter of Bank Indonesia No.11/10/DASP dated April 13, 2009, which was last amended by Circular Letter of Bank Indonesia No.18/33/DKSP dated December 2, 2016 (on the usage of card-based payment instruments ("APMK")) and BI Regulation No.20/2018 on e-Money, Bank Indonesia has redefined the meaning of "principal" and "acquirer" in operating APMK and e-Money business.

In light of these regulations, Bank Indonesia confirmed our status as an issuer of e-Money based on letter of Directorate of Accounting and Payment System of Bank Indonesia No.11/432/DASP. We operate our e-Money business under the brand name "LinkAja" (formerly known as "T-CASH"). With the issuance of Bank Indonesia Circular Letter No.9/9/DASP, Telkomsel is also permitted to conduct APMK activities, with the launch of Telkomsel *Tunai* prepaid card. These permits do not have a set expiry date or a period of adjustment as long as: (i) we and Telkomsel continue to conduct the relevant businesses and we do not violate any applicable regulation; and (ii) the Government does not amend or revoke such permits.

Remittance Service

We and Telkomsel have licenses to operate as money transfer services providers pursuant to Bank Indonesia letters No.11/23/Bd/8 of 2009 and No.12/48/DASP/13 of 2009. These permits do not have a set expiry date or a period of adjustment as long as: (i) as we and Telkomsel continue to conduct the relevant businesses; (ii) we do not violate any applicable regulation; and (iii) the Government does not amend or revoke such permits.

IPTV

On April 27, 2011, we and PT Indonusa Telemedia, formerly known as TelkomVision ("Indonusa") as a consortium obtained a license to operate IPTV services through MoCI Decree No.MCIT.160/KEP/M.KOMINFO/04/2011 of 2011.

Construction Services Business License ("IUJK")

Certain of our subsidiaries possess a IUJK (which permits us to conduct national telecommunication-related construction services), which allows us to conduct our construction services business, including the installation of telecommunications equipment and for the wiring of buildings

Content Provider Services

We obtained a content provider services license in 2017 through MoCI Decree No. 1040 of 2017 dated May 16, 2017.

Trademarks, Copyrights, Industrial Designs and Patents

We constantly seek to develop product and service innovations in line with a dynamic business portfolio. To provide both protection for and recognition of creativity and innovation, we have registered a number of intellectual property rights, including trademarks, copyrights, and patents with the Directorate General of Intellectual Property Rights at the Ministry of Law and Human Rights.

The intellectual property rights we have registered include: (i) trademarks for our products and services, corporate logo and name; (ii) copyrights on our corporate name and logo, product and service logos, computer programs, research and songs; and (iii) patents on technological inventions in the form of telecommunications products, systems and methods.

Telecommunications Industry in Indonesia

The Indonesian economy recorded a 5.02% GDP growth in 2019 according to the Indonesian Central Bureau of Statistics while GDP attributable to the information and communication sector recorded a 9.41% growth. This growth demonstrates the evolving digital economy, including broadband connectivity in line with telecommunication spending driven by an increase in purchasing power.

Indonesia's telecommunications industry has been experiencing advancement in recent years, primarily driven by growth in fixed and mobile broadband subscriptions. The main drivers behind the growth are increased data usage with greater affordability, service improvement and smartphone penetration. The shifting trend from legacy services (such as voice and SMS) to data services has been continuing, supported by cheaper smartphones as well as a growing youth segment. Data traffic has grown, however, SMS and voice service traffic has decreased significantly. Over The Top applications have become part of Indonesian life (including voice and video calls) as due to advances in such applications, they are now easier to use and offer improved quality of service. As a result, customers have replaced the usage of legacy SMS and voice services with Over The Top applications, which has resulted in a steeper decline of the legacy business. The rise of the digital economy has been embraced by Indonesian people across the socioeconomic spectrum and thus has continued to cause profound change in economic activities.

The telecommunications industry, especially the mobile segment, has been characterized by increased competition in recent years, particularly as operators have been offering promotions which include bonus data allowances in order to attract new customers. Customers have become sensitive to data pricing, which has led to lower margins for telecommunications operators. The ensuing price war for data services in Indonesia during the first half of 2019 brought significant adverse financial consequences for telecommunications operators, leading to a subtle decline of pricing for a more reasonable level by the end of 2019.

Based on our internal computation and publicly available data, the penetration of SIM cards in the cellular industry in Indonesia is quite high, at well over 100%, making continued growth in penetration increasingly limited. By subscriber numbers, based on publicly available data disclosed by market players and our own internal data, the three largest cellular operators in Indonesia are Telkomsel, Indosat and XL Axiata, which collectively accounted for more than 80% of the market share based on the estimated number of total subscribers as of December 31, 2019. The SIM card registration requirements that ended March 31, 2018 resulted in a significant decrease in the number of mobile subscribers at the end of 2018 of 21.8%, leading to a small growth in the number of subscribers in 2019. As of December 31, 2019, Telkomsel remained the largest cellular provider in Indonesia, with 171.1 million cellular subscribers, which represented a 5% increase in the number of cellular subscribers from December 31, 2018, and a market share of approximately 59.6%.

Data consumption in the mobile segment continued to increase, and it is expected that the consumption level per user will continue to grow from the current average data consumption per user. Such growth in data consumption will require significant capital expenditure in order to provide the necessary increase in capacity and coverage to accommodate such growth. During 2018, several operators began using additional frequencies which were acquired through a public auction process. The 30 MHz block on the 2,300 MHz band that Telkom won in October 2017 has been fully utilized for intra-city signalling. Two other operators (Indosat and Tri) that won auctions for 2,100 MHz frequency have also fully utilized the band in their network. This additional spectrum empowered the MNOs to strengthen and maximize the quality of 4G LTE services to their respective customers, especially in areas where data service capacity is dense. Wider additional spectrum allows more efficient signal transmission for better coverage with fewer transmitters. However, it also enables MNOs to provide higher speed and capacity to deliver a better digital lifestyle experience to all Indonesians.

Data is the main revenue driver for telecommunication companies, with significant increases in traffic volumes projected for the near future, driven primarily by streaming of HD/Ultra HD video, video on demand, gaming and an increase in network-connected devices that need fixed and mobile connections. To support the expected increase in traffic, telecommunication companies will need to invest in rollout of additional BTS and will thus require supplemental tower infrastructure, either in the form of macro or micro towers. Data traffic growth will be supported by 4G technology and telecommunication companies have begun deploying 4G BTS throughout Indonesia. Telecommunication companies have widespread 3G/4G coverage across Java and adjacent islands, where they typically build a wide thin layer of coverage and then invest in capacity to meet demand as subscriber adoption and usage increases. As a result of lower margins for telecommunication companies caused by the shift in focus to data business from legacy services, cost savings have become imperative, and as a result tower lease rates have come under pressure from telecommunication companies requesting lower lease rates.

The demand for fixed broadband services in Indonesia continued to increase in 2019, especially in the large cities, marked by an increase in total broadband subscribers, despite the geographic challenge of connecting a population dispersed across the Indonesian archipelago with fixed lines. Indonesian users increasingly expect high-quality Internet connectivity to their homes as evidenced by the level of investment made by the Government and private enterprises for the development of fiber optic networks. Currently, the national fixed broadband market is still dominated by a limited number of companies. We and First Media are the leading companies in the fixed broadband industry, followed by PT Link Net Tbk ("Link Net"), PT Supra Primatama Nusantara ("BizNet Networks"), PT MNC Kabel Mediacom ("MNC Vision") and PT Eka Mas Republik (an affiliate of Smartfren Telecom which operates under the "MyRepublic" brand), based on the number of subscribers and our internal estimates and information published by these companies. Given that obtaining licences and "right of way" access to lay cables from local municipal governments remains time-consuming in Indonesia, barriers to entry in the market remain high. As of December 31, 2019, we had more than 9.0 million fixed broadband subscribers. However, given the low penetration of fixed broadband services in Indonesia, smaller players are aggressively expanding their coverage regions with intention of having an impact in selected targeted regions. In order to entice new subscribers, other operators have been offering pay-TV and TV-on-demand bundles, as well as packages with other value added services to further monetize their active subscribers. These offerings include services such as home security and smart home.

Competition

Business Competition Law

The Indonesian telecommunications sector is regulated by the Telecommunications Law, which became effective on September 8, 2000. The Telecommunications Law sets guidelines for industry reforms, including industry liberalization, to facilitate the entry of new operators as well as to increase transparency and competition. The Telecommunications Law abolished the concept of "organizing entities" in the industry, which terminated the special status of Telkom and Indosat as the organizing bodies responsible for coordinating telecommunication services domestically and internationally. In order to increase competition, the Telecommunications Law prohibits monopolistic practices and unfair competition among fellow telecommunication operators.

The Telecommunications Law is implemented through various Government regulations and ministerial regulations, including Government Regulation No.52/2000, MoCI Regulation No.1/PER/M.KOMINFO/01/2010 (on provision of telecommunication networks), as lastly amended by MoCI Regulation No.7 of 2015 on Implementation of Telecommunication Network and MoCI Regulation No.7 of 2018 on Electronic Integrated Business Licensing Services in the Sector of Communications and Informatics, and amended further by MoCI Regulation No. 7 of 2019 ("MoCI Regulation No.7/2018, as amended") ("MoCI Regulation No.1/2010, as amended"), Decree of the Minister of Transportation No.KM33 of 2004 (on monitoring of fair competition of the fixed network and basic telephone service operations) ("Minister of Transportation Decree No.33/2004") and Decree of the Minister of Transportation No.KM.4 of 2001 (on the national basic technical plan 2000 for the national telecommunications development) ("National Technical Telecommunications Plan"). The National Technical Telecommunications Plan has been amended several times, most recently by MoCI Regulation No.14 of 2018 on Fundamental Technical Plan of National Telecommunications Plan ("MoCI Regulation No.14/2018"). Along with the Telecommunications Law, the National Technical Telecommunications Plan determines the basic vision for the development of Indonesia's telecommunications regulator.

The government encourages healthy competition and transparency in the telecommunications sector, even though the government does not prevent operators from obtaining a dominant position or increasing their dominance in the market through specific regulations. Nevertheless, the government prohibits market leading operators from abusing their dominant position.

Competition in the telecommunications sector, like all Indonesian business sectors, is also governed more generally by the Business Competition Law. The Business Competition Law prohibits agreements and activities which amount to unfair business competition and an abuse of a dominant market position. Pursuant to the Business Competition Law, the KPPU was established as Indonesia's antitrust regulator with the authority to enforce the provisions of the Business Competition Law.

The Business Competition Law is implemented by various regulations, including Government Regulation No.57/2010 (on mergers and acquisitions potentially causing monopolistic practices or unfair business practices) ("GR No.57/2010"). GR No.57/2010 permits voluntary consultation with the KPPU prior to a merger or acquisition, which will result in the KPPU issuing a non-binding opinion. GR No.57/2010 also requires that a mandatory report be made to the KPPU after a merger or acquisition is completed if the transaction exceeds certain asset or sales value thresholds. Further, on October 14, 2019, KPPU issued Regulation No. 3 of 2019 on Assessment of Merger or Consolidation of Business Entities or Share Acquisitions of Companies ("KPPU Regulation No.3/2019"). Under KPPU Regulation No.3/2019, asset acquisitions which meet the set regulatory threshold must be reported to KPPU.

Cellular

We operate our cellular service business through our 65% majority-owned subsidiary, Telkomsel.

As of December 31, 2019, Telkomsel remained the largest cellular provider in Indonesia, with approximately 171.1 million cellular subscribers and a market share of approximately 59.6% based on our internal estimate of number of total subscribers. We believe the next largest providers were Indosat and XL Axiata, based on number of subscribers as of December 31, 2019. Several other smaller operators also provide cellular services in Indonesia, including Hutchison, which is part of the Hutchison Asia Telecom Group and operates under the "3" or "Tri" brand, and Smartfren Telecom, which is part of the Sinar Mas Group.

The penetration of SIM cards in the cellular industry in Indonesia is quite high, at well over 100%, making continued growth in penetration increasingly limited. There were approximately 341 million cellular subscribers in Indonesia as of December 31, 2019, a 6.6% increase from approximately 320 million as of December 31, 2018. The increase was primarily due to effective marketing campaigns used in the cellular industry with initiatives to gain and retain customers. Telkomsel expects to see a reduction in the customer base and the number of starterpacks as a result of the government's reinforcement of the prepaid SIM registration policy, based on our observations, as customers no longer have the freedom of accumulating several numbers provided by various operators, customers will have to select their preferred operator and number, leading to fewer sales of starterpacks. Consequently, we expect customers will tend to remain with their respective chosen operators for a longer period of time as a result of this policy. The Government's registration policy, however, has resulted in a better-quality customer base with a higher proportion of active subscribers and improved ARPU as well as more efficient SIM card production costs. Due to a reduction in the number of starterpacks, operators can provide better quality services to customers. Additionally, operators are focusing more on offering renewal promotions than on new starterpack promotions. We believe the registration policy, assuming continued implementation, will also have positive long-term impact and support the emergence of healthier competition in the industry.

The shifting trend from legacy services (such as voice and SMS) to data services continues to develop, driven by cheaper prices of smartphones as well as the rapidly growing youth customer segment. Data traffic has grown significantly, while SMS service traffic has decreased. Since 2017, Telkomsel has seen a steep decrease in voice usage. Minutes of usage per mobile subscriber also started to decrease in the second half of 2017. These trends continued in 2019 and are likely to continue in the foreseeable future, as they are attributable to the substitution of traditional voice and SMS services to Over the Top based calling and messaging services as smartphone penetration in Indonesia has risen.

The following table sets out information as of December 31, 2019 for Telkomsel:

	Unit	Telkomsel
Launch date	year	1995
Neutral - 2G, 3G and/or 4G spectrum allocation (GSM 900 MHz)	MHz	15
Neutral - 2G, 3G and/or 4G spectrum allocation (GSM 1.8 GHz)	MHz	22.5
Neutral - 2G, 3G and/or 4G spectrum allocation (2.1 GHz)	MHz	15
Time Division Duplex (TDD) technology (2.3 GHz)	MHz	30 ⁽¹⁾
Subscriber	million	171.1

(1) Comprises additional spectrum in the 2.3 GHz frequency that Telkomsel won following an auction process.

Fixed Services

We compete with other major fixed broadband service providers with brands such as First Media, BizNetHome, MNC Play and MyRepublic. Of our major competitors, First Media has the largest number of customers. In recent years, it has been facing competition from MNC Play and MyRepublic which primarily target the affluent household market in Greater Jakarta. BizNet is competitive in the corporate segment, particularly in Java and Bali. On the other hand, our IndiHome service focuses on the mass market across Indonesia, and our focus in recent years has been to upgrade DSL customers to fiber based broadband in order to deliver better quality of service and expand our digital services. We have faced increased competition in 2019, including from a new entrant, a subsidiary of the electricity company Perusahaan Perseroan (Persero) PT Perusahaan Listrik Negara (PLN) which started offering Internet and TV services in 2019 through its ICON+ subsidiary. Supported by PLN, this new market entrant benefits from a wide coverage outside Java. Furthermore, we expect further consolidation as MNC Vision announced its planned acquisition of Link Net at the end of 2019.

Data Center

We are committed to providing the highest quality of data centre solutions to our customers in Indonesia and the Asia Pacific. Supported by our proprietary self-owned submarine cable network, our comprehensive colocation services are designed to be flexible, modular, seamless and scalable in order to meet our customers' business needs. A number of other companies, including DCI Indonesia, Indosat Ooredoo, Moratelindo, IDC Indonesia, NTT Communication, Global Access System, Biznet, Centrin Online, Cyber TechTonic Pratama, and JupiterDC also provide data center solutions in Indonesia. In the Asia Pacific, our subsidiary, Telin, competes with other major data center providers such as Equinix, Global Switch, SGX, and Epsilon in Singapore. In Hong Kong, Telin competes with other major data center providers such as SUNeVision, Equinix, OneAsia Network, HKCOLO, HK Exchange and Clearing.

International Direct Dialing (IDD)

We compete in traditional IDD services (non-VoIP) in Indonesia primarily with Indosat. However, in line with development of digital technology, our IDD services also face competition from VoIP and other Over The Top voice services such as Skype, WhatsApp and Line.

Voice over Internet Protocol (VoIP)

We have operated our voice service through VoIP technology since 2002. VoIP uses data communications to transfer voice traffic over the internet, which usually provides substantial cost savings to subscribers. A number of other companies, including XL Axiata, Indosat, PT Atlasat Solusindo, PT Gaharu Sejahtera, PT Satria Widya Prima, PT Primedia Armoekadata Internet, PT Jasnita Telekomindo and IP Telecom also provide licensed VoIP services in Indonesia.

Satellite

The Asia Pacific region, and especially Southeast Asia, continues to need satellites for both telecommunications and broadcasting infrastructure, due to the characteristics of the region as an archipelago. The capabilities provided by satellites include cellular backhaul, broadband backhaul, enterprise network, occasional usage TV, military and government network, video distribution, DTH television, flight communication and disaster recovery.

We compete with a number of other satellite operators with satellites covering Southeast Asia and South Asia, and several operators are in the process of developing satellites with coverage over these regions. The Telkom-3S satellite became operational in April 2017 and the Merah Putih Satellite became operational in September 2018. The Telkom-3S satellite, operates at orbital slot 118 E, the Telkom-2 satellite operates at orbital slot 157 E and the Merah Putih Satellite operates at orbital slot 108 E.

Tower

The tower market experienced demand disruption during 2017-2019 as a result of mobile industry consolidation and spectrum reallocation. XL acquired Axis in 2014 while Flexi effectively ceased its operations in the same year. Bakrie Telecom ceased its operations gradually from January 1, 2016. The four largest mobile network operators also reallocated the 1,800 MHz spectrum band in anticipation of 4G LTE technology rollout. As the mobile network industry reconfigured its network requirements, tower market demand experienced setbacks in 2015-2016. As a result, new market opportunities opened for tower operators that allowed co-location by multiple telecommunications providers in the following year. In 2019, tenancy demand was more stable as a result of mobile broadband expansion.

As of December 31, 2019, we had approximately 33,892 towers, including 15,892 towers owned by Dayamitra and 18,000 towers owned by Telkomsel. A number of other companies, including PT Tower Bersama, Infrastructure Tbk, PT Profesional Telekomunikasi Indonesia and PT Solusi Tunas Pratama Tbk also provide tower business in Indonesia

Others

The dynamic development of the telecommunications sector has opened up new opportunities, particularly with the increasing growth of Over The Top services which provide substitute services to basic telecommunications services such as voice and SMS. Certain Over The Top service providers are particularly popular, including WhatsApp, Facebook, and Line, among others. The presence of these Over The Top services has affected the use of legacy services, which resulted in decreasing traffic in the past two to three years.

Legal Basis and Regulation

The framework for the telecommunications industry comprises specific laws, government regulations, ministerial regulations and ministerial decrees enacted and issued from time to time.

Telecommunications Law

The telecommunications sector is primarily governed by the Telecommunications Law, which became effective on September 8, 2000. The Telecommunications Law sets guidelines for industry reforms, including industry liberalization, facilitation of new entrants, and enhanced transparency and competition.

The Telecommunications Law eliminated the concept of "organizing entities" thereby ending our and Indosat's responsibility for coordinating domestic and international telecommunications services, respectively. To enhance competition, the Telecommunications Law prohibits monopolistic practices and unfair competition among telecommunications operators.

The Telecommunications Law was implemented through several Government Regulations, Ministerial Regulations and Ministerial Decrees. The most important of such regulations include:

- Government Regulation No.52/2000 (on telecommunications services).
- MoCI Regulation No.1/2010 on operation of telecommunications networks that was amended by MoCI Regulation No.38/2014 and MoCI Regulation No.7/2015.
- Minister of Transportation Decree No.KM.21/2001 (on the provision of telecommunications services) that was amended by MoCI Regulation No.8/2015 ("Minister of Transportation Decree No. KM.21/2001, as amended").
- Minister of Transportation Decree No.33/2004 (on the supervision of healthy competition in the provision of fixed network and basic telephony services).
- Minister of Transportation Decree No.KM.4/2001 (on the determination of fundamental technical plan national 2000 for national telecommunications development) that was most recently amended by MoCI Regulation No.14/2018.

On October 18, 2019, MoCI issued MoCI Regulation No.13/2019 on Implementation of Telecommunication Services, which harmonizes several aspects in the telecommunication services regime. This new rule amends MoCI Regulation No.8/2015 and was initially planned to be effective in six months after its promulgation on October 25, 2019 (i.e., on April 25, 2020). However, due the COVID-19 pandemic in Indonesia, MoCI has decided to postpone the effectiveness of MoCI Regulation No.13/2019 by issuing MoCI Regulation No.2/2020 until January 31, 2021.

Telecommunications Regulators

The authority to regulate the telecommunications industry is held by the MoCI. Pursuant to authorities assigned to him under the Telecommunications Law, the Minister of Communication and Informatics sets policies, regulates, supervises and controls the telecommunications industry in Indonesia. The DGPI regulates the postal and telecommunications sectors in Indonesia, including with respect to licensing, numbering, interconnection, universal service obligation and business competition. The Directorate General of Posts and Informatics Resources and Equipment of the MoCI ("**DGRE**") regulates matters relating to radio frequency spectrum and standardization of telecommunications equipment in Indonesia.

On July 11, 2003, MoCI promulgated the Telecommunications Regulatory Authority Regulation, in which, it delegated its authority to regulate, supervise and control the Indonesian telecommunications sector to the ITRA, while maintaining the authority to formulate policies for the industry. The ITRA is chaired by the DGPI and comprises nine members, including six members of the public and three members selected from Government institutions (a representative member from DGRE, the DGPI and a government representative appointed by MoCI).

Classification and Licensing of Telecommunications Providers

The Telecommunications Law organized telecommunication services into following three categories: (i) provision of telecommunication networks; (ii) provision of telecommunication services; and (iii) provision of special telecommunications services.

Licenses issued by MoCI are required for each category of telecommunications services. MoCI Regulation No.1/2010 and Minister of Transportation Decree No.KM.21/2001, which was last amended by MoCI Regulation No.8/2015, (on operation of telecommunications services), are the principal implementing regulations governing licensing.

On MoCI Regulation No.1/2010 classified network operations into fixed and mobile networks. Minister of Transportation Decree No.KM.21/2001, as amended, categorized the provision of services into basic telephony services, value added telephony services, and multimedia services.

IDD Services

We have a license to provide IDD services under MoCI Decree No.846/2016. We offer IDD fixed line services to customers using the "007" IDD access code.

Cellular

Cellular telephone service is provided in Indonesia on radio frequency spectrum in the 1.8 GHz (neutral technology), 2.1 GHz (neutral technology), 900 MHz (neutral technology) and 2.3 GHz (BWA/TDD). The MoCI regulates the use and allocation of radio frequency spectrum for mobile cellular networks. Telkomsel has obtained frequency allocation for cellular services on the 800 MHz, 900 MHz, 1.8 GHz, 2.1 GHz and 2.3 GHz frequencies. The allocation of frequency is regulated by:

- MoCI Decree No.549 of 2019 (on the determination of Radio Frequency Bands as a Result of Rearrangement of Radio Frequency Bands of 800 MHz and 900 MHz for the Implementation of Cellular Mobile Networks);
- MoCI Decree No.1164 of 2015 (on the Stipulation of the Use of the 1800 MHz Radio Frequency Band in the 1762.5 - 1785 MHz Radio Frequency Range Paired with 1857.5 - 1880 MHz for PT Telekomunikasi Selular);
- MoCI Decree No.615 of 2019 (on the Correct Amount and Payment Due Date for Radio Frequency Spectrum Usage Fees in the Tenth Year for Radio Frequency Band Licensing for the Operation of Cellular Mobile Networks on the 800 MHz, 900 MHz and 1800 MHz Radio Frequency Bands by PT Telekomunikasi Selular);
- MoCI Decree No.356 of 2018 (on the Determination of Radio Frequency Bands Resulting from the Refarming of 2.1 GHz Radio Frequency Bands for the Implementation of Cellular Mobile Networks);
- MoCI Decree No.806 of 2019 (on the Extension of the Determination of the 2.1 GHz Radio Frequency Band in the 1935 - 1940 MHz Range paired with 2125 - 2130 MHz Range of PT Telekomunikasi Selular); and
- MoCI Decree No.1896 of 2017 (on the Establishment of PT Telekomunikasi Selular as the Winner of 2.3 GHz Radio Frequency Band User Selection in 2017 for the Implementation of Cellular Mobile Networks).

Interconnection

The Telecommunications Law expressly prohibits monopolistic and unfair business practices and requires network providers to allow users to access other users or obtain services from other networks by paying interconnection fees agreed upon by each network operator. Government Regulation No.52/2000 (on telecommunications services) provides that interconnection charges between two or more network operators must be transparent, mutually agreed upon and fair.

On February 8, 2006, the MoCI issued Regulation No.8/PER/M.KOMINFO/02/2006 on Interconnection ("MoCI Regulation No.8/2006"), which mandated a cost-based interconnection tariff scheme for all network and services operators and replaced the previous revenue-sharing scheme. Under the new scheme, interconnection charges are determined by the network operator which terminates the call based on a long-run incremental cost formula. MoCI Regulation No.8/2006 requires operators to submit to the ITRA annual RIO proposals containing proposed interconnection tariffs for the coming year. Operators are required to use the cost-based methodology in preparing RIO proposals, and the ITRA and MoCI are required to use the same methodology in evaluating the RIO proposals and approving interconnection tariffs.

Pursuant to MoCI Regulation No.8/2006 and ITRA Letter No.246/BRTI/VIII/2007, we submitted an RIO proposal to the ITRA in October 2007, which covered adjustments for operational, configuration, technical and service offerings. In December 2007, we and all other network operators signed new interconnection agreements that superseded previous interconnection agreements between us and other network operators, and also amended all interconnection agreements signed in December 2006.

On February 5, 2008, the ITRA required that we and other operators begin implementing the cost-based interconnection tariff regime. New interconnection charges were implemented as stipulated in ITRA Letter No.227/BRTI/XII/2010 (on the implementation of interconnection charges) in 2011. This was the result of interconnection charges recalculation conducted in 2010 by MoCI that was agreed upon by all operators and outlined in a memorandum of understanding.

On December 12, 2011, the ITRA changed the SMS interconnection fee basis from a "Sender Keep All" basis to a cost basis interconnection fee calculation, which required certain amendments to RIOs agreed upon in 2011. MoCI Regulation No.8/2006 stipulates that the RIO of telecommunications network operators generating operating revenue that is equal to or more than 25% of the combined revenues of all telecommunication operators that serve the same respective segment, must obtain the ITRA's approval, necessitating changes in our and Telkom's RIOs which were approved on June 20, 2012. ITRB in its letters No.60/BRTI/III/2014 and No.125/BRTI/IV/2014 approved our and Telkom's revisions of RIOs regarding the interconnection tariff. Based on the letter, ITRB also approved the changes to the SMS interconnection tariff to Rp24 per SMS. As of the date of this Annual Report, no recalculation of interconnection fees for 2014 had been carried out as doing so would have been preceded by an evaluation on interconnection charges in 2013.

VoIP

In January 2007, the Government implemented interconnection regulations and a five-digit access code system for VoIP services pursuant to MoCI Decree No.06/P/M.KOMINFO/5/2005 ("MoCI Decree No.6/2005"). Under MoCI Decree No.6/2005, the prefix for VoIP, which was originally 01X, was changed to 010XY. On April 27, 2011, the MoCI issued Regulation No.14/PER/M.KOMINFO/04/2011, as partly revoked by MoCI Regulation No.11 of 2014 and MoCI Regulation No.7/2018, as amended, which imposed quality control standards in relation to VoIP services on VoIP providers and this became effective three months thereafter, to which we and other operators must adhere.

IPTV

IPTV business is regulated under MoCI Regulation No.7/2018, as amended. MoCI Regulation No.7/2018, as amended, regulates the requirement and commitment due to the introduction of the OSS system. MoCI Regulation No.7/2018, as amended, regulates the use of domestic independent content providers as one of the commitment that needs to be fulfilled by new applicants of IPTV licenses. Government Regulation No.52/2005 (on broadcasting implementation of the broadcasting subscription institute) provides that subscription based broadcasting can be conducted using satellites, cables and terrestrial transmitters. Broadcasting using satellite could have a nationwide range, while cables and terrestrial transmitters have a range of a particular region.

We obtained our IPTV license under MoCI Regulation No.6 of 2017 on Implementation of Internet Protocol Television Services ("MoCI Regulation No.6/2017"), in which, as stipulated under MoCI Regulation No.7/2018, as amended, IPTV licenses that are obtained based on MoCI Regulation No.6/2017 are still valid. As it is no longer elaborated in MoCI Regulation No. 7/2018, the previous rule, being MoCI Regulation No.6/2017 recognizes IPTV as a convergence of telecommunications, broadcasting, multimedia and electronic transactions and provides that only a consortium comprising at least two Indonesian entities may be licensed as an IPTV provider. Referring to MoCI Regulation No.6/2017, the licenses that we needed, among others, included: (a) local fixed network license, mobile cellular network or fixed closed network license, (b) operating Internet access/ISP license, and (c) broadcasting operation of subscription television broadcasting services institution license.

Satellite

Our international satellite business is highly regulated. In addition to being subject to domestic licensing requirements and regulation for the use of orbital slots and radio frequencies, as stipulated in MoCI Regulation, our satellite operations are also regulated by the Radio Communications Bureau of the International Telecommunications Union.

Furthermore, in Indonesia, the use of radio spectrum frequency for satellite is governed under MoCI Regulation No.21 of 2014 on the Use of Radio Frequency Spectrum for Satellite Service and Satellite Orbit ("MoCI Regulation No.21/2014"). MoCI Regulation No.21/2014 requires foreign satellite operators to obtain a landing right license to operate in Indonesia which requires such foreign satellite operators to coordinate with domestic satellite operators, including us, to ensure that no Indonesian satellite and terrestrial systems will be disrupted by their operation.

Consumer Protection

Under the Telecommunications Law, each network provider is required to protect consumer rights in relation to, among others, quality of services, tariffs and compensation. Customers injured or damaged by negligent operations may file claims against negligent providers. Telecommunications consumer protection regulations provide service standards for telecommunication operators.

USO

All telecommunications operators, whether network or service providers, are bound by a USO regulation that requires them to assist in providing telecommunication facilities and infrastructure for the interest of offering equal access to telecommunications throughout all regions of Indonesia, which telecommunications operators generally do by way of financial contribution. MoCI Regulation No.10/2018 stipulated, among others, that when selecting a provider of telecommunication access and services in rural areas (as part of the Government's USO program), the selection process would be conducted by the Rural Telecommunications and Informatics Center (*Balai Telekomunikasi dan Informatika Pedesaan* or "BTIP"). Subsequent regulations renamed BTIP the Telecommunications and Information Accessibility Agency (*Badan Aksesibilitas Telekomunikasi dan Informasi* or "BAKTI").

USO payment requirements are calculated as a percentage of our and Telkomsel's unconsolidated gross revenues, net of bad debts and/or interconnection charges and/or connection charges. Pursuant to GR No.80/2015, the USO tariff rate as of the date hereof is 1.25% of gross revenue, net of bad debts and/or interconnection charges and/or connection charges. In September 2016, the MoCI issued MoCI Regulation No.17/2016 (on guideline of the implementation of tariffs for non-tax state revenue applicable to the USO), as amended by MoCI Regulation No.19/2016, effective as of November 4, 2016 ("MoCI Regulation No.19/2016"). Pursuant to such regulation, certain revenues are excluded from the computation of the gross revenues used for purposes of assessing the USO charged to telecommunications operators.

Telecommunication Regulatory Charges

On November 9, 2015, the Government issued GR No.80/2015 which sets the types of non-tax state revenues that apply to the MoCI derived from various services, including telecommunications.

Based on GR No.80/2015, an upfront fee is paid at twice the amount of the offering price submitted by each bidding process winner, while an annual license fee for telecommunication operations is paid based on the amount of the lowest offering price from the bidding process winner. The MoCI stipulates the amount and timing of payment for the radio frequency spectrum right of use.

Further, telecommunications equipment and devices for research, development, education and disaster handling purposes can be used after obtaining a utilization period statement letter. After the utilization period as set out in the statement letter has expired, the respective equipment and devices which will be re-used for its original purposes must be certificated, subject to a 50% certification fee. Telecommunication equipment and devices with a local content in excess of 50% are charged a certification fee equal to 50% of the regular certification fee and a testing fee as set out in GR No.80/2015.

Under GR No. 80/2015, the following amounts can be deducted from the gross revenue used as the basis for assessing the telecommunication right of use fee: (i) receivables which have been written off in connection with telecommunications operations and (ii) interconnection fee obligation and/or the interconnectedness received by the telecommunication operator, which is the right of use of another party. These deductions are further governed by a MoCI regulation.

Telecommunications Towers

The operations of telecommunications towers involves a number of relevant Government bodies. On March 30, 2009, the Minister of Home Affairs Regulation No.18/2009, Minister of Public Works Regulation No.07/PRT/M/2009, MoCI Regulation No.19/PER.M.KOMINFO/03/2009 and Head of the Investment Coordinating Board Regulation No.3/P/2009 (on guidelines for the construction and shared use of telecommunications towers) (together, "Tower Construction Joint Decree") were issued effectively representing a joint regulation.

Based on the Tower Construction Joint Decree, the construction of telecommunication towers requires construction permits from the relevant governmental authorities. The Tower Construction Joint Decree also stipulates that the construction of telecommunication towers must observe the zoning and spatial planning applicable in the relevant region of Indonesia. The Tower Construction Joint Decree states that the license for telecommunication tower construction is to be issued by regents or mayors, and for Jakarta Province, its Governor. The Tower Construction Joint Decree also provides for tower construction standards and requires that telecommunications towers be made generally available for shared use by telecommunications service providers. The owner of a telecommunications tower is allowed to collect a fee, which is determined by reference to investment and operational costs, return on investment and profits earned. Monopolistic practices in the ownership and management of telecommunications towers are prohibited. The Tower Construction Joint Decree stipulates that telecommunications providers that own telecommunication towers and other tower owners are obligated to allow other telecommunication operators to utilize their telecommunication towers without discrimination, with due regards to the technical capacity of the respective tower.

Content Provider Service

Content provider service is regulated by MoCI through Regulation No.9/2017 (on the management of content provider services on cellular mobile networks) as partly revoked by MoCI Regulation No.7/2018, as amended.

C. ORGANIZATIONAL STRUCTURE

We have adopted a strategic control approach to the management of our Group, which we believe provides productive flexibility throughout our business entities in accordance with the characteristics of each CFU.

In implementing this strategic control approach:

1. the role of the corporate office is focused on providing, creating and implementing our overall corporate strategy (*i.e.* directing overall strategy and portfolio strategy).
2. we seek to empower each CFU and Regional Business Unit in line with their respective particular characteristics.

In order to synchronize our organizational structure with our business characteristics as well as with the dynamic business challenges we face, our parenting strategy based on customer segmentation and geography in order to achieve structural and operational alignment with our business portfolios. As a result of this transformation, our strategic control over our subsidiaries is mapped into five CFUs, each being a unit that manages subsidiaries that operate business portfolios in a particular customer segment, as discussed in greater detail below:

- Our *mobile customer facing unit* is responsible for relationships and interactions with mobile customers.

- Our *consumer customer facing unit* is responsible for relationships and interactions with consumer customers.
- Our *enterprise customer facing unit* is responsible for relationships and interactions with small medium enterprises, government institutions and corporate customers.
- Our *wholesale and international business customer facing unit* is responsible for relationship and interactions with wholesale customers and other licensed operators.
- Our *digital services customer facing unit* is responsible for supporting digital services for all of our customers.

In order to support our parenting strategy, we have four functional units which perform certain specified internal corporate functions. Our functional units are discussed in greater detail below:

- Our *strategic portfolio functional unit* is responsible for creating corporate value through the optimization and harmonization of functional business units and corporate management, realize synergies within each CFU and subsidiaries, maximize cross-CFU and subsidiaries synergies and optimize synergies among SOEs, merger and acquisition planning and execution.
- Our *network and IT solutions functional unit* is responsible for promoting integrated network and IT infrastructure across our CFUs and subsidiaries.
- Our *finance functional unit* is responsible for implementation cost and capital efficiency program and maximizing the value of our assets.
- Our *human capital management functional unit* is responsible for talent management upgrading human resources capabilities, organization structure and workforce planning, design, and implementation, industrial relation, learning, assessment and community development.

The table below sets forth our operating companies and significant subsidiaries organized under the relevant CFU, including those subsidiaries that hold our principal telecommunications licenses, our percentage ownership interest, direct and indirect, and our voting power in each subsidiary as of December 31, 2019.

Subsidiary	Customer Facing Unit	Country of Incorporation	Percentage of Ownership Interest	
			(Direct and Indirect) (%)	Voting Power (%)
PT Telekomunikasi Selular (Telkomsel)	Mobile	Indonesia	65	65
PT Telkom Akses (Telkom Akses)	Consumer	Indonesia	100	100
PT Finnet Indonesia (Finnet)	Enterprise	Indonesia	60	60
PT Infomedia Nusantara (Infomedia)	Enterprise	Indonesia	100	100
PT Multimedia Nusantara (Metra)	Enterprise	Indonesia	100	100
PT Telkom Satelit Indonesia (Telkomsat)	Enterprise	Indonesia	100	100
PT PINS Indonesia (PINS)	Enterprise	Indonesia	100	100
PT Sigma Cipta Caraka (Sigma)	Enterprise	Indonesia	100	100
PT Metra Digital Media (MD Media)	Enterprise	Indonesia	100	100
PT Administrasi Medika (Ad Medika)	Enterprise	Indonesia	100	100
PT Dayamitra Telekomunikasi (Mitratel)	Wholesale and International	Indonesia	100	100
PT Infrastruktur Telekomunikasi Indonesia (Telkom Infratel)	Wholesale and International	Indonesia	100	100
PT Telekomunikasi Indonesia International (Telin)	Wholesale and International	Indonesia	100	100
PT Melon Indonesia (Melon)	Digital Services	Indonesia	100	100
PT Metraplasa (Metraplasa)	Digital Services	Indonesia	60	60
PT Metranet (Metranet)	Digital Services	Indonesia	100	100

A complete list of our subsidiaries and investments in associated companies, and our ownership percentage of each entity, as of December 31, 2019, is contained in Notes 1d and 11 to our Consolidated Financial Statements included elsewhere in this report.

D. PROPERTY AND EQUIPMENT

Our property and equipment are primarily used for telecommunication operations, which mainly consist of transmission and installation equipment, cable network and switching equipment. A description of these is contained in Note 12 to our Consolidated Financial Statements and "Business Overview — Network Infrastructure and Development." See Item 5 "Operating and Financial Review and Prospects — Liquidity — Capital Expenditures" for material plans to construct, expand or improve our property and equipment.

Except for ownership rights granted to individuals in Indonesia, reversionary rights to land rests with the Government, pursuant to Agrarian Law No.5 of 1960. Land title is designated through land rights, including Right to Build (*Hak Guna Bangunan* or "HGB") and Right of Use (*Hak Guna Usaha* or "HGU"). Land title holders enjoy full use of the land for a specified period, subject to renewal and extensions. In most instances, land rights are freely tradable and may be placed as security under loan agreements.

We lease several pieces of land located throughout Indonesia together with rights to build and use such land for periods varying from 10 to 50 years, which will expire between 2020 and 2069. We hold registered rights to build and right to use for most of our properties. Pursuant to Government Regulation No.40 of 1996 on Right to Cultivate, Right to Build and Right to Use, the maximum initial period for the right to build is 30 years and is extendable for an additional 20 years. The right to build can further be renewed for an additional period of 30 years. We are not aware of any environmental issues that could affect the utilization of our property and equipment.

All assets owned by our Company have been pledged as collateral for bonds. Please refer to Note 20b.(i) to our Consolidated Financial Statements. Certain property and equipment of our subsidiaries with gross carrying value amounting to Rp11,147 billion as of December 31, 2019 have been placed as collateral for loan agreements. Please refer to Notes 19, 20c and 20d to our Consolidated Financial Statements.

Insurance

As of December 31, 2019, our property and equipment (excluding land rights), with net carrying amount of Rp150,891 billion were insured against fire, theft, earthquake and other specified risks, under blanket policies totaling Rp18,190 billion, US\$74 million, HK\$8 million, SG\$269 million, TW\$21 million and MYR39 million and first loss basis amounted to Rp2,760 billion. Management believes that the insurance coverage is adequate to cover potential losses from the insured risks.

Additionally, in 2019, we obtained proceeds from an insurance claim on lost and broken property and equipment, with a total value of Rp197 billion.

Disclosure of Iranian Activities under Section 13(r) of the Exchange Act

Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 added Section 13(r) to the Exchange Act. Section 13(r) requires an issuer to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with designated natural persons or entities involved in terrorism or the proliferation of weapons of mass destruction. Disclosure is required even where the activities, transactions or dealings are conducted outside the United States by non-United States affiliates in compliance with applicable law, and whether or not the activities are sanctionable under U.S. law.

As of the date of this report, we are not aware of any activity, transaction or dealing by us or any of our affiliates in 2019 that requires disclosure in this report under Section 13(r) of the Exchange Act, except as set forth below.

Our subsidiary, Telkomsel, is party to international roaming agreements with Mobile Telecommunication Company of Iran and Irancell Telecommunications Services Company, which are or may be government-controlled entities. In 2019, we recorded gross revenues of US\$1,148 from total transactions (inbound and outbound) under these agreements. The amount of our net profits earned under these agreements is not determinable, but it does not exceed our gross revenues from these agreements. The purpose of these agreements is to provide Telkomsel's customers with coverage in areas where Telkomsel does not own networks, and for this reason Telkomsel intends to continue the activities covered by these agreements.

We also provide telecommunications services in the ordinary course of business to the Embassy of Iran in Jakarta, Indonesia. We recorded gross revenue of approximately Rp30.2 million from these services in 2019. The amount of our net profits earned under these services is not determinable, but it does not exceed our gross revenues from these services. As one of the primary providers of telecommunications services in Indonesia, we intend to continue providing such services, as we provide to the embassies of many other nations.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion and analysis should be read in conjunction with our Consolidated Financial Statements included elsewhere in this Form 20-F. These Consolidated Financial Statements were prepared in accordance with IFRS as issued by the IASB.

A. OPERATING RESULTS

We are the principal provider of local, domestic and international telecommunications services in Indonesia, as well as the leading provider of mobile cellular services through our majority-owned subsidiary, Telkomsel. Our objective is to become the preferred digital telecommunications company in the region. As of December 31, 2019, we had approximately 171.1 million mobile cellular subscribers through Telkomsel, 9.4 million subscribers on our fixed wireline network, and 119.3 million broadband subscribers (consisting of 110.3 million mobile broadband subscribers and 9 million fixed broadband subscribers). We also provide a wide range of other communication services, including telephone network, interconnection services, multimedia, data and internet communication-related services, satellite transponder leasing, leased line, intelligent network and related services, cable television and VoIP services. We also operate multimedia businesses such as content and applications. We intend to continue to cope with market and industry challenges that may arise from time to time by leveraging our customer base, network quality, brand name and strategic execution capabilities.

Growth of the Indonesian economy slightly decreased in 2019 as growth of the Indonesian gross domestic product decreased from an average of 5.04% between 2015 and 2018 to 5.02% in 2019, and inflation decreased from an average of 3.28% between 2015 and 2018 to 3.03% in 2019, according to the Indonesia Central Bureau of Statistics. The Rupiah depreciated from an average of Rp13,392 to one U.S. Dollar in 2015 to an average of Rp14,146 to one U.S. Dollar in 2019 and reached its lowest value against the U.S. Dollar in 2018 at Rp15,253 to one U.S. Dollar, according to data from Bank Indonesia. Though the exposure of our Company and our subsidiaries to foreign exchange rates is not material, we are exposed to foreign exchange risk on sales, purchases and borrowings that are primarily denominated in U.S. Dollar and Japanese Yen.

See Item 11 "Quantitative and Qualitative Disclosure about Market Risk – Foreign Exchange Rate Risk".

The growth in our revenues in 2019 compared with 2018 was largely driven by increases in revenues from data, internet and information technology services that increased by 13.6% and from IndiHome that increased by 27.7%.

Our operating results in 2019 compared with 2018 also reflected an increase in expenses. This increase was mainly driven by an increase in depreciation and amortization expenses of 26.9% as a result of our infrastructure development to better serve our customers, particularly for internet and data services. The adoption of IFRS 16 (Amortization of Right-of-use Assets) also contributed to the increase in depreciation and amortization expense. See Note 2.aa to our Consolidated Financial Statements.

Principal Factors Affecting our Financial Condition and Results of Operations

Increase in Data, Internet, and Information Technology Services

In Indonesia mobile phones have become the primary tool for telecommunication, both for voice calls as well as in terms of internet usage. The growing popularity of smartphones has contributed to the growth of traffic and led to an increase in our ARPU from approximately Rp41,000 in 2018 to Rp46,000 in 2019 approximately.

Data, internet and information technology services revenues accounted for 51.6% of our consolidated revenues for 2019, increase from 47.1% for 2018. Revenues from our data, internet and information technology services increased by 13.6% from 2018 to 2019. The increase in data, internet and information technology services revenues in 2019 was primarily due to a 28.8% increase in revenue from cellular internet and data, from Rp41,036 billion in 2018 to Rp52,858 billion in 2019.

We expect that revenue from cellular internet and data will continue to increase and contribute to a larger portion of our consolidated revenues in line with an expected continued increase in the prevalence of smartphone usage in Indonesia. We also intend to increase such revenues by focusing our marketing efforts to encourage customers who only utilize mobile voice and SMS services to commence utilizing mobile broadband services. We also intend to continue our promotion of mobile package options in order to encourage existing mobile broadband services customers to increase their use of such services. In addition, we believe there is opportunity for growth in non-cellular internet, data communication and internet technology revenue, particularly through greater adoption of broadband internet at homes in Indonesia through our IndiHome service, as penetration of broadband internet at homes in Indonesia is still relatively low.

Increase in revenue generated by IndiHome

Since launch in 2015, the number of IndiHome subscribers has increased significantly. The number of IndiHome subscribers increased by 37.2% from 5.1 million subscribers in 2018 to 7.0 million subscribers in 2019. Revenue generated by IndiHome accounted for 12.0% of our consolidated revenues in 2019, compared with 9.7% in 2018. Revenue from IndiHome subscription increased by 27.7% from Rp12,728 billion in 2018 to Rp16,255 billion in 2019.

We believe there is opportunity for further growth in revenue generated by IndiHome, particularly due to an increase in the use of broadband internet at home in Indonesia, as penetration of broadband internet at home in Indonesia is still relatively low. We seek to continue to increase such revenue as we continue to invest in improving our broadband infrastructure. We also continue to have promotions to encourage customers to buy various additional services, such as speed upgrades, additional set-top boxes, and the minipack package upgrade.

Declining Legacy Cellular Telephone Revenues

The rapid development of new technologies, new services and products, and new business models has resulted in distinctions between local, long-distance, wireless, cable and internet communication services being lessened and has brought new competitors into the telecommunications market. Traditional cellular services, such as voice and SMS services, are subject to increasing competition from non-traditional telecommunication services, such as Over The Top products including instant voice, messaging services and other mobile services. As a result, our cellular telephone revenues, which comprise usage charges and monthly subscription charges for mobile voice and SMS services, have flattened in recent years, and in 2017 began to decline. We expect that such revenues will continue to decline in the future. Our cellular telephone revenues decreased by 18.7% from Rp34,338 billion in 2018 to Rp27,907 billion 2019. In addition, we also expect that the contribution of revenues from cellular phone services to our consolidated revenues will continue to decrease in the future, as we expect that contribution from data, internet and information technology services will continue to grow and comprise a greater percentage of our consolidated revenues in the future. Our revenues from cellular phone services accounted for 20.6% of our consolidated revenues for 2019 compared to 26.3% for 2018. See Item 3 "Key Information – Risk Factors – Risks Related to our Business – Risks Related to our Fixed and Cellular Telecommunication Business."

Decrease in operation and maintenance expenses

In 2019, our operations and maintenance expenses decreased. However, we expect that our operation and maintenance expenses will remain relatively stable or increase slightly in the future in line with our expected growth in subscribers and traffic as well as the investments that we intend to make to continue developing our network infrastructure, particularly for internet and data service, in order to increase in our network capacities to better serve our customers. Our operation and maintenance expenses decreased by 20.1%, from Rp25,215 billion in 2018 to Rp20,153 billion in 2019. This decrease in operation and maintenance expenses was primarily due to the impact of adopting IFRS 16 (Amortization of Right-of-use Assets). See Note 2.aa to our Consolidated Financial Statements for additional information. Our operation and maintenance expenses primarily comprise expenses associated with network maintenance to improve our mobile cellular and fixed broadband services and accounted for 21.7% of our total expenses for 2019.

Increase in Depreciation and Amortization Expenses

The telecommunications industry is characterized by rapid and significant changes in technology. Our technology can become obsolete faster than expected. We also need to acquire new technologies necessary to compete under rapidly evolving circumstances on commercially acceptable terms. The adoption of IFRS 16 (Amortization of Right-of-use Assets) also contributed to the increase in depreciation and amortization expenses. See Note 2.aa to our Consolidated Financial Statements.

In 2019, depreciation and amortization expenses increased by Rp5,762 billion, or 26.9%, from Rp21,442 billion in 2018 to Rp27,204 billion in 2019. These expenses accounted for 29.3% of our total expenses for 2019. We expect depreciation and amortization expenses will increase in the future due to the development of our network for improving broadband services we provide for both mobile and fixed broadband.

Telkom's Consolidated Statements of Profit or Loss and Other Comprehensive Income

The following table sets out our Consolidated Statements of Profit or Loss and Other Comprehensive Income For the Years ended December 31, 2017, 2018 and 2019. Each item is expressed as a percentage of total revenues or expenses.

	2017		2018		2019		(US\$million)
	(Rp billion)	%	(Rp billion)	%	(Rp billion)	%	
REVENUES							
Telephone revenues							
Cellular	37,144	29.0	34,338	26.3	27,907	20.6	2,010
Fixed line	3,861	3.0	3,304	2.5	3,000	2.2	216
Total telephone revenues	41,005	32.0	37,642	28.8	30,907	22.8	2,226
Interconnection revenues							
	5,174	4.0	5,462	4.2	6,290	4.6	453
Data, internet, and information technology service revenues							
Cellular internet and data	37,954	29.6	41,036	31.4	52,858	39.0	3,808
Internet, data communication, and information technology services	8,642	6.7	10,387	8.0	9,072	6.7	653
Short Messaging Service ("SMS")	13,192	10.3	9,298	7.1	6,954	5.1	501
Others	334	0.3	820	0.6	1,026	0.8	74
Total data, internet and information technology service revenues	60,122	46.9	61,541	47.1	69,910	51.6	5,036
Network revenues	1,856	1.4	1,719	1.3	1,845	1.4	133
IndiHome revenues	11,328	8.8	12,728	9.7	16,255	12.0	1,171
Other revenues							
Manage service and terminal	535	0.4	1,449	1.1	1,684	1.2	121
Sales of peripherals	2,292	1.8	1,852	1.4	1,109	0.8	80
Call center service	970	0.8	1,052	0.9	799	0.7	57
E-payment	506	0.4	449	0.3	566	0.4	41
E-health	470	0.4	563	0.4	523	0.4	38
Tower lease rental	796	0.6	—	—	—	—	—
Others	3,202	2.5	3,844	2.9	2,369	1.7	171
Total other revenues	8,771	6.9	9,209	7.0	7,050	5.2	508
Total revenues from contract with customer	—	—	128,301	98.1	132,257	97.6	9,527
Revenues from other source	—	—	2,487	1.9	3,300	2.4	238
Total revenues	128,256	100.0	130,788	100.0	135,557	100.0	9,765
EXPENSES							
Operation, maintenance, and telecommunication service expenses							
Operation and maintenance	19,929	23.6	25,215	27.3	20,153	21.7	1,452
Radio frequency usage charges	4,276	5.1	5,473	5.9	5,736	6.2	413
Leased lines and CPE	5,255	6.2	5,125	5.6	4,709	5.1	339
Concession fees and USO charges	2,249	2.7	2,297	2.5	2,370	2.6	171
Cost of sales of handset	1,544	1.8	1,860	2.0	1,109	1.2	80
Electricity, gas, and water	1,037	1.2	1,051	1.0	1,102	1.1	79
Cost of SIM cards and vouchers	914	1.1	866	1.0	645	0.8	46
Vehicles rental and supporting facilities	301	0.4	413	0.4	386	0.4	28
Tower leases	472	0.6	480	0.5	264	0.3	19
Insurance	294	0.3	193	0.2	246	0.3	18

	2017		2018		2019		
	(Rp billion)	%	(Rp billion)	%	(Rp billion)	%	(US\$million)
Others	332	0.4	920	1.0	733	0.8	53
Total operation, maintenance, and telecommunication service expenses	36,603	43.4	43,893	47.5	37,453	40.2	2,698
Depreciation and amortization	20,477	24.3	21,442	23.3	27,204	29.3	1,960
Personnel expenses							
Salaries and related benefits	7,821	9.3	8,077	8.8	7,945	8.6	572
Vacation pay, incentives, and other benefits	3,339	4.0	3,292	3.6	3,538	3.8	255
Pension benefit cost	1,700	2.0	1,120	1.2	840	0.9	61
LSA expense	255	0.3	161	0.2	290	0.3	21
Net periodic post-employment health care benefit cost	276	0.3	335	0.4	167	0.2	12
Other employee benefit cost	62	0.1	113	0.1	136	0.1	10
Other post-employment benefit cost	42	0.0	32	0.0	33	0.0	2
Others	34	0.0	48	0.1	63	0.1	5
Total personnel expenses	13,529	16.0	13,178	14.4	13,012	14.1	937
Marketing expenses	5,268	6.2	4,001	4.3	3,416	3.7	246
General and administrative expenses							
Allowance for expected credit losses	1,494	1.8	2,208	2.4	1,899	2.0	137
General expenses	1,449	1.7	1,792	1.9	1,651	1.8	119
Professional fees	498	0.6	823	0.9	793	0.9	57
Training, education, and recruitment	531	0.6	463	0.5	461	0.5	33
Travelling	475	0.6	415	0.5	410	0.4	30
Meeting	241	0.3	233	0.3	276	0.3	20
Social contribution	197	0.2	181	0.2	200	0.2	14
Collection expenses	135	0.2	157	0.2	176	0.2	13
Others	240	0.3	322	0.3	341	0.4	25
Total general and administrative expenses	5,260	6.2	6,594	7.2	6,207	6.7	447
Interconnection expenses	2,987	3.5	4,283	4.6	5,077	5.5	366
Losses (gains) on foreign exchange - net	(51)	(0.1)	(71)	(0.1)	89	0.1	6
Other expenses (income) - net	281	0.3	(1,065)	(1.2)	(895)	(1.0)	(64)
Total expenses	84,293	100.0	92,202	100.0	92,901	100.0	6,692
Operating profit	43,902		38,533		43,994		3,169
Finance income	1,434		1,014		1,095		79
Finance costs	(2,769)		(3,523)		(5,452)		(393)
Share in profit (loss) of associated companies - net	61		53		(166)		(12)
Impairment of long-term investment in associated companies	—		—		(1,172)		(84)
Profit before income tax	42,628		36,077		38,299		2,759
Income tax (expense) benefit	(9,958)		(9,366)		(10,439)		(752)
Profit for the year	32,670		26,711		27,860		2,007
Other comprehensive income (losses) - net	(2,332)		4,954		(2,189)		(157)
Total comprehensive income for the year	30,338		31,665		25,671		1,850
Profit for the year attributable to owners of the parent company	22,120		17,802		19,068		1,374
Total comprehensive income for the year attributable to owners of the parent company	19,927		22,631		17,029		1,227
Basic and diluted earnings per share (in full amount)							
Profit per share	223.30		179.71		192.49		0.01
Profit per ADS (100 Series B Shares per ADS)	22,329.40		17,970.52		19,248.51		1.39

Please note that the above table should be read in conjunction with the below discussion on comparability of financial information of and for the financial years ended December 31, 2018 and 2019. See "— Financial Overview — Year ended December 31, 2019 compared to year ended December 31, 2018," and "— New Standards and Interpretations."

Financial Overview

Year ended December 31, 2019 compared to year ended December 31, 2018

Revenues

Total revenues increased by Rp4,769 billion, or 3.6%, from Rp130,788 billion in 2018 to Rp135,557 billion (US\$9,765 million) in 2019. The increase was primarily due to an increase in data, internet and information technology service revenues, IndiHome revenues, and interconnection revenues. The increase was offset by a decrease in cellular telephone revenues, fixed line telephone revenues and other revenues.

a. Cellular Telephone Revenues

Cellular telephone revenues represented 20.6% of our 2019 consolidated revenue. Cellular revenues decreased by Rp6,431 billion, or 18.7%, from Rp34,338 billion in 2018 to Rp27,907 billion (US\$2,010 million) in 2019. The decrease was primarily due to a decrease in usage of voice services because customers increasingly choose to use non-traditional telecommunications services, such as Over the Top services, as an alternative to voice services.

b. Fixed Line Telephone Revenues

Fixed lines revenues decreased by Rp304 billion, or 9.2%, from Rp3,304 billion in 2018 to Rp3,000 billion (US\$216 million) in 2019. The decrease in fixed lines revenues was primarily due to the decrease in voice service usage due to the competition of other cellular services.

c. Interconnection Revenues

Interconnection revenues comprised interconnection revenues from our fixed line network and interconnection revenues from Telkomsel's mobile cellular network, including incoming international long-distance revenues from our IDD service (TIC-007).

Interconnection revenues increased by Rp828 billion, or 15.2%, from Rp5,462 billion in 2018 to Rp6,290 billion (US\$453 million) in 2019 primarily due to increase in voice traffic between countries, a niche market within the global transit market that we targeted.

d. Data, Internet and Information Technology Service Revenues

Our data, internet and information technology service revenues accounted for 51.6% of our consolidated revenues in 2019, compared to 47.1% in 2018. Data, internet and information technology service revenues increased by Rp8,369 billion, or 13.6%, from Rp61,541 billion in 2018 to Rp69,910 billion (US\$5,036 million) in 2019. This increase was primarily due to an:

- increase in cellular internet and data revenues by Rp11,822 billion, or 28.8%, from Rp41,036 billion in 2018 to Rp52,858 billion in 2019 was primarily driven by an increase in mobile broadband subscribers from 106.6 million subscribers as of December 31, 2018 to 110.3 million subscribers as of December 31, 2019. For additional information on factors driving the growth of our cellular internet and data revenues, see "— Principal Factors Affecting our Financial Condition and Results of Operations — Increase in Data, Internet, and Information Technology Services;" and
- increase in other data and internet revenues by Rp206 billion, or 25.1%, from Rp820 billion in 2018 to Rp1,026 billion in 2019 primarily due to an increase in volume of collocation data center and value added services.

These increase were partially offset by a:

- decrease in internet, data communication and information technology service revenues by Rp1,315 billion, or 12.7%, from Rp10,387 billion in 2018 to Rp9,072 billion in 2019, primarily due to a decrease in revenue generated by the enterprise business. This decrease is a result of the change in our business policy to focus on business lines which tend to generate recurring revenue streams and to be profitable, especially those that provide enterprise solutions services such as enterprise connectivity, data center and cloud services, and accordingly, we selectively reduced the size of businesses that carried lower margins and fewer or no recurring revenue streams; and
- decrease in SMS revenues of Rp2,344 billion, or 25.2%, from Rp9,298 billion in 2018 to Rp6,954 billion in 2019. This decrease was primarily due to increasing competition from non-traditional telecommunication services, such as Over The Top products including instant voice, messaging services and other mobile services.

e. Network Revenues

Network revenues increased by Rp126 billion, or 7.3%, from Rp1,719 billion in 2018 to Rp1,845 billion (US\$133 million) in 2019, primarily due to an increase in VSAT revenue from the enterprise segment.

f. IndiHome Revenues

IndiHome revenues increased by Rp3,527 billion, or 27.7%, from Rp12,728 billion in 2018 to Rp16,255 billion (US\$1,171 million) in 2019. The increase was primarily due to an increase in the number of fixed broadband subscribers from 5.1 million as of December 31, 2018 to 7.0 million as of December 31, 2019.

g. Other Revenues

In 2019, revenues from other telecommunication services decreased by Rp2,159 billion, or 23.4%, from Rp9,209 billion in 2018 to Rp7,050 billion (US\$508 million) in 2019. The decrease was primarily due to a:

- decrease in others revenues by Rp1,475 billion, or 38.4%, from Rp3,844 billion in 2018 to Rp2,369 billion in 2019, primarily due to a decrease in sales of device and construction revenue from Telkom Infratel; and
- decrease in other revenues from sales of peripherals by Rp743 billion, or 40.1%, from Rp1,852 billion in 2018 to Rp1,109 billion in 2019. This decrease was in line with our business strategies to adapt our product mix so as to reduce the share of our revenue sourced from the sale of lower margin products such as hardware products.

These decreases were partially offset by an:

- increase in manage service and terminal revenues by Rp235 billion, or 16.2%, from Rp1,449 billion in 2018 to Rp1,684 billion in 2019, primarily due to an increase in manage service revenues from the enterprise segment; and
- increase in e-payment revenues by Rp117 billion, or 26.1%, from Rp449 billion in 2018 to Rp566 billion in 2019.

h. Revenues from Other Source

Revenues from other source increased by Rp813 billion or 32.7% from Rp2,487 billion in 2018 to Rp3,300 billion (US\$238 million) in 2019. This increase resulted from an increase in revenue from tower lease rentals, which was in line with an increase in the number of tenants.

Expenses

Total expenses increased by Rp699 billion, or 0.8%, from Rp92,202 billion in 2018 to Rp92,901 billion (US\$6,692 million) in 2019. The increase in expenses was attributable primarily to increases in interconnection and depreciation and amortization.

a. Operation, Maintenance, and Telecommunication Service Expenses

Operation, maintenance, and telecommunication service expenses decreased by Rp6,440 billion, or 14.7%, from Rp43,893 billion in 2018 to Rp37,453 billion (US\$2,698 million) in 2019.

The decrease in operation, maintenance and telecommunication service expenses was primarily attributable to a:

- decrease in operation and maintenance expenses by Rp5,062 billion, or 20.1%, from Rp25,215 billion in 2018 to Rp20,153 billion in 2019. The decrease was primarily due to the impact of adopting IFRS 16 (Amortization of Right-of-use Assets), see"— Principal Factors Affecting our Financial Condition and Results of Operations — Decrease in operation and maintenance expense";
- decrease in the cost of sales of handsets by Rp751 billion, or 40.4%, from Rp1,860 billion in 2018 to Rp1,109 billion in 2019, primarily due to a decrease in sales of handsets by PT PINS Indonesia ("PINS");
- decrease in leased line and CPE expenses by Rp416 billion or 8.1%, from Rp5,125 billion in 2018 to Rp4,709 billion in 2019 in line with the decrease in the enterprise segment revenue in providing end-to-end IT Solutions; and
- decrease in cost of SIM cards and vouchers expenses by Rp221 billion or 25.5%, from Rp866 billion in 2018 to Rp645 billion in 2019, due to a decrease in demand for new SIM cards. The decrease was primarily due to the Government's introduction of SIM card registration requirements.

b. Depreciation and Amortization

Depreciation and amortization increased by Rp5,762 billion, or 26.9%, from Rp21,442 billion in 2018 to Rp27,204 billion (US\$1,960 million) in 2019 in line with the network infrastructure development both in mobile and fixed businesses and also, as a result of the adoption of IFRS 16 (Amortization of Right-of-use Assets).

c. Personnel Expenses

Personnel expenses decreased by Rp166 billion, or 1.3%, from Rp13,178 billion in 2018 to Rp13,012 billion (US\$937 million) in 2019. This decrease was primarily due to a decrease in pension benefit cost of Rp280 billion, or 25.0%, from Rp1,120 billion in 2018 to Rp840 billion in 2019, mainly as a result of a decrease in net defined pension benefit obligations.

The decrease in personnel expenses was partially offset by an increase in vacation pay, incentives and other benefits to our employees totaling Rp246 billion, or 7.5%, from Rp3,292 in 2018 to Rp3,538 billion in 2019, primarily due to incentive and insurance payments for employees amounting to Rp152 billion and Rp51 billion, respectively.

d. Marketing Expenses

Marketing expenses decreased by Rp585 billion, or 14.6%, from Rp4,001 billion in 2018 to Rp3,416 billion (US\$246 million) in 2019. This decrease mainly reflected increased efficiencies in our marketing strategy, in particular in connection with the marketing of cellular services as we changed our focus from sales of starterpacks to credit top-up packages.

e. General and Administrative Expenses

General and administrative expenses decreased by Rp387 billion, or 5.9%, from Rp6,594 billion in 2018 to Rp6,207 billion (US\$447 million) in 2019, primarily due to a decrease in the allowance for expected credit losses of Rp309 billion, or 14.0%, from Rp2,208 billion in 2018 to Rp1,899 billion in 2019. This decrease in the allowance for expected credit losses is primarily due to a decrease in the allowance for expected credit losses of trade and other receivables amounting to Rp367 billion.

f. Interconnection Expenses

Interconnection expenses increased by Rp794 billion, or 18.5%, from Rp4,283 billion in 2018 to Rp5,077 billion (US\$366 million) in 2019, reflecting our focus on increasing interconnection revenue.

g. Losses (Gains) on Foreign Exchange - net

We had a loss on foreign exchange-net of Rp89 billion (US\$6 million) in 2019 compared with a gain of Rp71 billion in 2018.

h. Other Expenses (Income) - net

Other income decreased by Rp170 billion, or 16.0%, from Rp1,065 billion in 2018 to Rp895 billion (US\$64 million) in 2019, primarily due to a provision made in 2019 of Rp136 billion relating to 2015 corporate income tax assessments matters.

Operating Profit and Operating Profit Margin

As a result of the foregoing, operating profit increased by Rp5,461 billion, or 14.2%, from Rp38,533 billion in 2018 to Rp43,994 billion (US\$3,169 million) in 2019. Our operating profit margin increased from 29.5% in 2018 to 32.5% in 2019.

Finance Income

Finance income increased by Rp81 billion or 8.0%, from Rp 1,014 billion in 2018 to Rp1,095 billion (US\$79 million) in 2018, in line with an increase in time deposits by Rp631 billion.

Finance Costs

Finance costs increased by Rp1,929 billion or 54.8%, from Rp3,523 billion in 2018 to Rp5,452 billion (US\$393 million) in 2019, in line with an increase in short-term and long-term bank loans by Rp8,043 billion for use as working capital and capital expenditure.

Impairment of Long-term Investment in Associated Companies

We had an impairment of long-term investment in associated companies of Rp1,172 billion (US\$84 million) in 2019 due to a decrease in the fair value of our investment in PT Tiphone Mobile Indonesia Tbk from Rp1,649 billion in 2018 to Rp526 billion in 2019.

Profit before Income Tax and Pre-tax Profit Margin

As a result of the foregoing, profit before income tax increased by Rp2,222 billion, or 6.2%, from Rp36,077 billion in 2018 to Rp38,299 billion (US\$2,759 million) in 2019. Our pre-tax margin increased from 27.6% in 2018 to 28.3% in 2019.

Income Tax (Expense) Benefit

Income tax expense increased by Rp1,073 billion, or 11.5%, from Rp9,366 billion in 2018 to Rp10,439 billion (US\$752 million) in 2019, in line with the increase in profit before income tax.

Other Comprehensive Income (Losses) – Net

We recorded other comprehensive expenses of Rp2,189 billion (US\$157 million) for 2019 compared to other comprehensive income of Rp4,954 billion for 2018, primarily due to actuarial losses of Rp2,109 billion recognized in 2019 relating to our Defined Benefit Pension Plan. These losses were partially offset by our share of other comprehensive income of associated companies that represented an income of Rp16 billion compared to an expense of Rp14 billion in 2018.

Total Comprehensive Income for the Year

As a result of the foregoing, total comprehensive income for the year decreased by Rp5,994 billion, or 18.9%, from Rp31,665 billion in 2018 to Rp25,671 billion (US\$1,850 million) in 2019.

Profit for the Year Attributable to Owners of the Parent Company

Profit for the year attributable to owners of the parent company increased by Rp1,266 billion, or 7.1%, from Rp17,802 billion in 2018 to Rp19,068 billion (US\$1,374 million) in 2019.

Total Comprehensive Income for the Year Attributable to Owners of the Parent Company

Total comprehensive income for the year attributable to owners of the parent company decreased by Rp5,602 billion, or 24.8%, from Rp22,631 billion in 2018 to Rp17,029 billion (US\$1,227 million) in 2019.

Profit per Share

Profit per share increased by Rp12.78 or 7.1%, from Rp179.71 in 2018 to Rp192.49 in 2019.

Year ended December 31, 2018 compared to year ended December 31, 2017

Revenues

Total revenues increased by Rp2,532 billion, or 2.0%, from Rp128,256 billion in 2017 to Rp130,788 billion in 2018. The increase was primarily due to an increase in data, internet and information technology service revenues, other revenues, and interconnection revenues.

a. Cellular Telephone Revenues

Cellular telephone revenues represented 26.3% of our 2018 consolidated revenue. Cellular revenues decreased by Rp2,806 billion, or 7.6%, from Rp37,144 billion in 2017 to Rp34,338 billion in 2018. The decrease was primarily due to a decrease in usage of voice services because customers increasingly choose to use non-traditional telecommunications services, such as Over the Top services, as an alternative to voice services.

b. Fixed Line Telephone Revenues

Fixed lines revenues decreased by Rp557 billion, or 14.4%, from Rp3,861 billion in 2017 to Rp3,304 billion in 2018. The decrease in fixed lines revenues was primarily due to the decrease in voice service usage due to the competition of other cellular services.

c. Interconnection Revenues

Interconnection revenues comprised interconnection revenues from our fixed line network and interconnection revenues from Telkomsel's mobile cellular network, including incoming international long-distance revenues from our IDD service (TIC-007).

Interconnection revenues increased by Rp288 billion, or 5.6%, from Rp5,174 billion in 2017 to Rp5,462 billion in 2018 primarily due to increase in voice traffic between countries, a niche market within the global transit market that we targeted.

d. Data, Internet and Information Technology Service Revenues

Our data, internet and information technology service revenues accounted for 47.1% of our consolidated revenues in 2018. Data, internet and information technology service revenues increased by Rp1,419 billion, or 2.4%, from Rp60,122 billion in 2017 to Rp61,541 billion in 2018. This increase was primarily due to an:

- increase in internet, data communication and information technology service revenue by Rp1,745 billion, or 20.2%, from Rp8,642 billion in 2017 to Rp10,387 billion in 2018, primarily due to an increase in revenue generated by the enterprise segment, particularly an increase in revenue generated by IT services;
- increase in cellular internet and data revenues by Rp3,082 billion, or 8.1%, from Rp37,954 billion in 2017 to Rp41,036 billion in 2018 was primarily driven by an increase in mobile broadband subscribers from 105.8 million subscribers as of December 31, 2017 to 106.6 million subscribers as of December 31, 2018. For additional information on factors driving the growth of our cellular internet and data revenues, see "— Principal Factors Affecting our Financial Condition and Results of Operations — Increase in Data, Internet, and Information Technology Services;"and
- increase in other data and internet revenues by Rp486 billion, or 145.5%, from Rp334 billion in 2017 to Rp820 billion in 2018 primarily due to an increase in volume of collocation data center and value added services.

These increase were partially offset by a decrease in SMS revenues of Rp3,894 billion, or 29.5%, from Rp13,192 billion in 2017 to Rp9,298 billion in 2018. This decrease was primarily due to increasing competition from non-traditional telecommunication services, such as Over The Top products including instant voice, messaging services and other mobile services.

e. Network Revenues

Network revenues decreased by Rp137 billion, or 7.4%, from Rp1,856 billion in 2017 to Rp1,719 billion in 2018, primarily due to a decrease in leased lines and satellite transponders leases revenues.

f. IndiHome Revenues

IndiHome revenues increased by Rp1,400 billion, or 12.4%, from Rp11,328 billion in 2017 to Rp12,728 billion in 2018, primarily due to an increase in the number of IndiHome subscribers from 2.9 million as of December 31, 2017 to 5.1 million as of December 31, 2018.

g. Other Revenues

In 2018, revenues from other services increased by Rp438 billion, or 5.0%, from Rp8,771 billion in 2017 to Rp9,209 billion in 2018. The increase was primarily due to:

- increase in manage service and terminal revenues by Rp914 billion, or 170.8%, from Rp535 billion in 2017 to Rp1,449 billion in 2018, primarily resulting from increasing demand for CPE such as computers and modems from our customers;
- increase in others revenues by Rp642 billion, or 20.0%, from Rp3,202 billion in 2017 to Rp3,844 billion in 2018 primarily due to increased volume of ATM management services; and
- increase in e-health revenues by Rp93 billion, or 19.8%, from Rp470 billion in 2017 to Rp563 billion in 2018.

These increases were partially offset by :

- a decrease in revenue from tower lease rental by Rp796 billion due to the effect of IFRS 15 adoption. Under IFRS 15, we are required to disclose revenues from other source (for example, leases), separately from revenue from contracts with customers. Revenues from tower lease rental which are previously disclosed as other revenues are disclosed as revenues from other source in 2018.
- a decrease in revenues from sales of peripherals by Rp440 billion, or 19.2%, from Rp2,292 billion in 2017 to Rp1,852 billion in 2018, primarily reflecting lower selling price due to the bundling of sales of peripherals with other services, especially for enterprise customers.

h. Revenues from Other Source

Revenues from other source amounted to Rp2,487 billion in 2018, and was resulted from the adoption of IFRS 15. Under IFRS 15, we are required to disclose revenues from other source, such as leases, separately from revenue from contracts with customers. Revenues from other source were previously classified as data, internet, and information technology and other revenues.

Expenses

Total expenses increased by Rp7,909 billion, or 9.4%, from Rp84,293 billion in 2017 to Rp92,202 billion in 2018. The increase in expenses was attributable primarily to increases in operation, maintenance and telecommunication service expenses, interconnection and depreciation.

a. Operation, Maintenance and Telecommunication Service Expenses

Operation, maintenance and telecommunication service expenses increased by Rp7,290 billion, or 19.9%, from Rp36,603 billion in 2017 to Rp43,893 billion in 2018.

The increase in operation, maintenance and telecommunication service expenses was primarily attributable to:

- increase in operation and maintenance expenses by Rp5,286 billion, or 26.5%, from Rp19,929 billion in 2017 to Rp25,215 billion in 2018, primarily due to an increase in expenses associated with network maintenance to improve our mobile cellular and IndiHome service;
- increase in radio frequency expenses of Rp1,197 billion, or 28.0%, from Rp4,276 billion in 2017 to Rp5,473 billion in 2018 due to the annual performance bond payment by Telkomsel of Rp20 billion and Rp1,030 each for 2.1 GHz and 2.3 GHz frequencies.

- increase in other expenses of Rp588 billion, or 177.1%, from Rp332 billion in 2017 to Rp920 billion in 2018, primarily due to an increase in project management expense in the amount of Rp433 billion; and
- increase in cost of sales of handsets by Rp316 billion, or 20.5%, from Rp1,544 billion in 2017 to Rp1,860 billion in 2018, primarily due to an increase in the sales of handset by PINS.

b. Depreciation and Amortization

Depreciation and amortization increased by Rp965 billion, or 4.7%, from Rp20,477 billion in 2017 to Rp21,442 billion in 2018 in line with the network infrastructure development both in mobile and fixed businesses.

c. Personnel Expenses

Personnel expenses decreased by Rp351 billion, or 2.6%, from Rp13,529 billion in 2017 to Rp13,178 billion in 2018. This decrease was primarily due to a decrease in pension benefit cost of Rp580 billion, or 34.1%, from Rp1,700 billion in 2017 to Rp1,120 billion in 2018, mainly because no past service cost was incurred in 2018, compared to the Rp657 billion incurred in 2017.

The decrease in personnel expenses was partially offset by an increase in salaries and related benefits expenses of Rp256 billion, or 3.3%, from Rp7,821 in 2017 to Rp8,077 billion in 2018, primarily due to an increase in vacation pay expenses in line with the increase in salaries.

d. Marketing Expenses

Marketing expenses decreased by Rp1,267 billion, or 24.1%, from Rp5,268 billion in 2017 to Rp4,001 billion in 2018. This decrease mainly reflected increased efficiencies in our marketing strategy, in particular in connection with the marketing of cellular services as we changed our focus from sales of starterpacks to credit top-up packages.

e. General and Administrative Expenses

General and administrative expenses increased by Rp1,334 billion, or 25.4%, from Rp5,260 billion in 2017 to Rp6,594 billion in 2018, primarily due to an:

- increase in allowance for expected credit losses of Rp714 billion, or 47.8%, from Rp1,494 billion in 2017 to Rp2,208 billion in 2018 primarily due to an increase in the allowance of expected credit losses of trade receivables and other receivables amounting to Rp614 billion and Rp151 billion, respectively;
- increase in general expenses of Rp343 billion, or 23.7%, from Rp1,449 billion in 2017 to Rp1,792 billion in 2018; and
- increase in professional fees of Rp325 billion, or 65.3%, from Rp498 billion in 2017 to Rp823 billion in 2018, primarily due to an increase in management consultant fee in connection with the implementation of the new IFRS standards.

f. Interconnection Expenses

Interconnection expense increased by Rp1,296 billion, or 43.4%, from Rp2,987 billion in 2017 to Rp4,283 billion in 2018, reflecting our focus on increasing interconnection revenue.

g. Losses (Gains) on Foreign Exchange - net

Gain on foreign exchange-net by Rp71 billion in 2018 compared with Rp51 billion in 2017.

h. Other Expenses (Income) - net

Other income – net was Rp1,065 billion in 2018. We had other expense – net of Rp281 billion in 2017. The other income – net in 2018 primarily resulted from an increase in proceeds from our insurance claim for lost and broken property and equipment.

Operating Profit and Operating Profit Margin

As a result of the foregoing, operating profit decreased by Rp5,369 billion, or 12.2%, from Rp43,902 billion in 2017 to Rp38,533 billion in 2018. Our operating profit margin decreased from 34.2% in 2017 to 29.5% in 2018.

Finance Income

Finance income decreased by Rp420 billion or 29.3%, from Rp 1,434 billion in 2017 to Rp1,014 billion in 2018, in line with a decrease in time deposits by Rp7,489 billion.

Finance Costs

Finance costs increased by Rp754 billion or 27.2%, from Rp2,769 billion in 2017 to Rp3,523 billion in 2018, in line with an increase in short-term and long-term bank loans by Rp8,610 billion.

Profit before Income Tax and Pre-tax Profit Margin

As a result of the foregoing, profit before income tax decreased by Rp6,551 billion, or 15.4%, from Rp42,628 billion in 2017 to Rp36,077 billion in 2018. Our pre-tax margin decreased from 33.2% in 2017 to 27.6% in 2018.

Income Tax (Expense) Benefit

Income tax expense decreased by Rp592 billion, or 5.9%, from Rp9,958 billion in 2017 to Rp9,366 billion in 2018, in line with the decrease in profit before income tax.

Other Comprehensive Income (Losses) – Net

We recorded other comprehensive income of Rp4,954 billion for 2018 compared to other comprehensive expense of Rp2,332 billion for 2017, primarily due to actuarial gains of Rp4,820 billion recognized in 2018 relating to our Defined Benefit Pension Plan. These gains were partially offset by our share of other comprehensive income of associated companies that represented an expense of Rp14 billion compared to an expense of Rp1 billion in 2017.

Total Comprehensive Income for the Year

As a result of the foregoing, total comprehensive income for the year increased by Rp1,327 billion, or 4.4%, from Rp30,338 billion in 2017 to Rp31,665 billion in 2018.

Profit for the Year Attributable to Owners of the Parent Company

Profit for the year attributable to owners of the parent company decreased by Rp4,318 billion, or 19.5%, from Rp22,120 billion in 2017 to Rp17,802 billion in 2018.

Total Comprehensive Income for the Year Attributable to Owners of the Parent Company

Total comprehensive income for the year attributable to owners of the parent company increased by Rp2,704 billion, or 13.6%, from Rp19,927 billion in 2017 to Rp22,631 billion in 2018.

Profit per Share

Profit per share decreased by Rp43.59 or 19.5%, from Rp223.30 in 2017 to Rp179.71 in 2018.

Segment Overview

In 2019, we realigned our operating segments for financial reporting purposes to align with our new parenting strategy which is based on customer segmentation. As such, we have adopted five main operating segments, described in more details as follows:

- Our *mobile segment* includes operating results of customer-facing lines of business that provide cellular services, which consists of Telkomsel.
- Our *consumer segment* includes operating results of customer-facing lines of business that provide services to individual and residential-based customers.
- Our *enterprise segment* includes operating results of customer-facing lines of business that provide services to corporations and institutional-based customers.
- Our *wholesale and international business segment* includes operating results of customer-facing lines of business that provide interconnection and other types of licensing services for OLO and international customers.
- Our *other segment* includes operating results of customer-facing lines that provide digital services.

For more detailed information regarding our segment information, see Note 33 to our Consolidated Financial Statements. Our segment results for 2017, 2018 and 2019 were as follows:

Telkom's Results of Operation by Segment

	Years Ended December 31,				
	2017	2018	2019	2019-2018	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)	(%)
Mobile					
Revenues					
External revenues	90,073	85,338	87,897	6,331	3.0
Inter-segment revenues	3,086	3,880	3,163	228	(18.5)
Total segment revenues	93,159	89,218	91,060	6,559	2.1
Total segment expenses	(53,834)	(55,449)	(56,864)	(4,096)	2.6
Segment results	39,325	33,769	34,196	2,463	1.3
Depreciation and amortization	(13,560)	(13,095)	(13,829)	(996)	5.6
Provision recognized in current period	(291)	(438)	(521)	(38)	18.9
Consumer					
Revenues					
External revenues	11,105	13,891	17,706	1,275	27.5
Inter-segment revenues	287	2,290	786	57	(65.7)
Total segment revenues	11,392	16,181	18,492	1,332	14.3
Total segment expenses	(11,923)	(15,531)	(15,904)	(1,146)	2.4
Segment results	(531)	650	2,588	186	298.2
Depreciation and amortization	(2,839)	(3,060)	(3,438)	(248)	12.4
Provision recognized in current period	(385)	(438)	(665)	(48)	51.8
Enterprise					
Revenues					
External revenues	19,130	21,054	18,701	1,347	(11.2)
Inter-segment revenues	16,801	17,995	16,834	1,213	(6.5)

	Years Ended December 31,				2019-2018 (%)
	2017 (Rp billion)	2018 (Rp billion)	2019 (Rp billion)	(US\$ million)	
Total segment revenues	35,931	39,049	35,535	2,560	(9.0)
Total segment expenses	(35,680)	(37,833)	(36,768)	(2,649)	(2.8)
Segment results	251	1,216	(1,233)	(89)	(201.4)
Depreciation and amortization	(2,136)	(2,128)	(2,737)	(197)	28.6
Provision recognized in current period	(668)	(764)	(973)	(70)	27.4
Wholesale and International Business					
Revenues					
External revenues	7,439	10,084	10,609	764	5.2
Inter-segment revenues	15,305	16,678	16,265	1,172	(2.5)
Total segment revenues	22,744	26,762	26,874	1,936	0.4
Total segment expenses	(17,944)	(20,634)	(21,111)	(1,521)	2.3
Segment results	4,800	6,128	5,763	415	(6.0)
Depreciation and amortization	(2,382)	(3,146)	(3,262)	(235)	3.7
Provision recognized in current period	(127)	(71)	(121)	(9)	70.4
Other					
Revenues					
External revenues	126	130	197	14	51.5
Inter-segment revenues	602	886	1,289	93	45.5
Total segment revenues	728	1,016	1,486	107	46.3
Total segment expenses	(1,049)	(1,073)	(1,546)	(111)	44.1
Segment results	(321)	(57)	(60)	(4)	5.3
Depreciation and amortization	(22)	(21)	(21)	(2)	-
Provision recognized in current period	(2)	(5)	(13)	(1)	160.0

Please note that the above table should be read in conjunction with the below discussion on comparability of financial information of and for the financial years ended December 31, 2019 and 2018. See "— Financial Overview — Year ended December 31, 2019 compared to year ended December 31, 2018," and "— New Standards and Interpretations."

Year ended December 31, 2019 compared to year ended December 31, 2018

Mobile Segment

Our mobile segment revenues increased by Rp2,559 billion, or 3.0%, from Rp85,338 billion in 2018 to Rp87,897 billion in 2019. The increase was primarily due to an increase in data, internet and information technology services revenue, resulting from an increase in cellular and data revenues by Rp11,825 billion, or 28.8%. This increase in cellular and data revenues is primarily due to an increase in the number of mobile broadband subscribers from 106.6 million subscribers as of December 31, 2018, to 110.3 million subscribers as of December 31, 2019.

This revenue increase was partially offset by a decrease in:

- SMS revenues by Rp2,491 billion, or 27.5% due to increasing competition from non-traditional telecommunication services, such as Over The Top products including instant voice, messaging services and other mobile services;
- cellular service revenues by Rp6,431 billion, or 18.7% due to a decrease in revenue from voice services due to customers choosing to use non-traditional telecommunications services, such as Over the Top services, as an alternative to voice services; and
- Interconnection revenues by Rp353 billion, or 37.8% due to a decrease in volume of cellular voice services.

Our mobile segment expenses increased by Rp978 billion, or 2.4% from Rp40,041 billion in 2018 to Rp41,019 billion in 2019. The increase was primarily due to an increase in:

- depreciation and amortization expenses by Rp734 billion, or 5.6%; and
- personnel expenses by Rp745 billion, or 17.8%, mainly related to an increase in salary and allowance.

The increase in our mobile segment expenses was partially offset by a decrease in marketing expenses by Rp617 billion, or 22.2%, mainly related to the implementation of a more cost-effective and efficient marketing strategy, especially for the marketing of cellular services as we prioritized the sale of credit top-up packages over the sale of starterpacks.

Consumer Segment

Our consumer segment revenues increased by Rp3,815 billion, or 27.5%, from Rp13,891 billion in 2018 to Rp17,706 billion in 2019 primarily due to an increase in:

- IndiHome revenues by Rp3,385 billion, or 31.5%, resulting from an increase in the number of IndiHome subscribers from 5.1 million as of December 31, 2018 to 7.0 million as of December 31, 2019; and
- revenue from other source by Rp523 billion or 37.0%, primarily from rental revenues from the rental of IndiHome's devices.

Our consumer segment expenses decreased by Rp162 billion, or 1.4%, from Rp11,739 billion in 2018 to Rp11,577 billion in 2019. The decrease was primarily due to a decrease in personnel expenses by Rp443 billion, or 20.0%, primarily due to an increase in the number of retired employees.

The decrease in our consumer segment expenses was partially offset by an increase in depreciation and amortization by Rp378 billion, or 12.4% due to an increase in property and equipment and intangible assets in 2019.

Enterprise Segment

Our enterprise segment revenues decreased by Rp2,353 billion, or 11.2%, from Rp21,054 billion in 2018 to Rp18,701 billion in 2019, primarily due to a decrease in:

- data, internet and information technology services revenues by Rp1,382 billion, or 13.7% due to a decrease in internet, data communication and information technology services revenues by Rp1,603 billion, or 17.2%;
- other telecommunication services revenues by Rp1,082 billion, or 15.9%, due to a decrease in sales of peripheral revenues by Rp743 billion, or 40.1%; and
- fixed line telephone revenues by Rp207 billion, or 15.3%, primarily due to the decrease in the usage of voice service due to the competition of other cellular services.

The decrease in enterprise segment revenues was partially offset by an increase in network revenues by Rp201 billion, or 28.9%.

Our enterprise segment expenses decreased by Rp935 billion, or 4.3%, from Rp21,717 billion in 2018 to Rp20,782 billion in 2019. The decrease was primarily due to a decrease in:

- operation, maintenance and telecommunication service expenses by Rp547 billion, or 5.2%, primarily due to a decrease in sales of handsets by PINS and a decrease revenue generated by sales of end-to-end IT solutions comprised within the enterprise segment; and

- personnel expenses by Rp453 billion, or 8.5%, due to an increase in the number of retired employees.

The decrease in enterprise segment expenses was partially offset by an increase in depreciation and amortization expenses by Rp609 billion, or 28.6%, primarily due to an increase in property and equipment and intangible assets in 2019.

Wholesale and International Business Segment

Our wholesale and international business segment revenues increased by Rp525 billion, or 5.2%, from Rp10,084 billion in 2018 to Rp10,609 billion in 2019, mainly due to an increase in:

- interconnection revenues by Rp1,181 billion, or 26.1%, primarily due to an increase in voice traffic reflecting primarily an increase in traffic between countries, which constitutes a niche market within the global transit market;
- data, internet and information technology services revenue by Rp498 billion, or 40.7%, primarily due to an increase in internet, data communication and information technology services by Rp324 billion or 31.9%; and
- revenue from other source by Rp333 billion or 36.6%, primarily due to an increase in revenue from tower lease rental which is in line with an increase in the number of tenants.

The increase in wholesale and international business segment revenues was partially offset by a decrease in other telecommunications services revenues by Rp1,395 billion, or 65.6%. This decrease in other telecommunications services revenues was primarily due to a decrease in other revenues by Rp1,378 billion. This decrease was primarily due to a decrease in sales of device and construction revenue from TelkomInfra.

Our wholesale and international business segment expenses increased by Rp1,067 billion, or 7.3% from Rp14,624 billion in 2018 to Rp15,691 billion in 2019. The increase was primarily due to an increase in interconnection expenses by Rp1,235 billion, or 50.4%, in line with an increase in interconnection revenues.

Other Segment

Our other segment revenues increased by Rp67 billion, or 51.5%, from Rp130 billion in 2018 to Rp197 billion in 2019. This increase was primarily due to an increase in data, internet and information technology service revenues resulting from an increase in e-payment revenues of Rp113 billion.

Our other segment expenses increased by Rp442 billion, or 42.4% from Rp1,042 billion in 2018 to Rp1,484 billion to 2019 primarily due to an increase in operation, maintenance and telecommunication services expenses by Rp421 billion, or 51.4%.

Year ended December 31, 2018 compared to year ended December 31, 2017

Mobile Segment

Our mobile segment revenues decreased by Rp4,735 billion, or 5.3%, from Rp90,073 in 2017 to Rp85,338 billion in 2018. The decrease was primarily due to a decrease in:

- SMS revenues by Rp4,045 billion, or 30.9%, due to increasing competition from non-traditional telecommunication services, such as Over The Top products including instant voice, messaging services and other mobile services;

- cellular service revenues by Rp2,806 billion, or 7.6%, due to a decrease in revenue from voice services due to customers choosing to use non-traditional telecommunications services, such as Over the Top services, as an alternative to voice services; and
- Interconnection revenues by Rp739 billion, or 44.2%, due to a decrease in volume of cellular voice services.

The revenue decrease was partially offset by an increase in data, internet and information technology services revenue, resulting from an increase in cellular internet and data revenues by Rp3,082 billion, or 8.1%, primarily due to an increase in mobile broadband subscribers from 105.8 million subscribers as of December 31, 2017 to 106.6 million subscribers as of December 31, 2018.

Our mobile segment expenses increased by Rp589 billion, or 1.5% from Rp39,452 billion in 2017 to Rp40,041 billion in 2018. The increase was primarily due to an increase in operation, maintenance and telecommunication service expenses by Rp1,952 billion, or 12.7% due to an increase in expenses associated with network maintenance to improve our mobile network.

Our increase in mobile segment expenses was partially offset by a decrease in:

- marketing expenses by Rp1,103 billion, or 28.5%, mainly related to the implementation of a more cost-effective and efficient marketing strategy, especially for the marketing of cellular services as we prioritized the sale of credit top-up packages over the sale of starterpacks; and
- depreciation and amortization expenses by Rp465 billion, or 3.4%.

Consumer Segment

Our consumer segment revenues increased by Rp2,786 billion, or 25.1%, from Rp11,105 billion in 2017 to Rp13,891 billion in 2018 primarily due to:

- an increase in IndiHome revenues by Rp2,376 billion, or 28.3%, primarily due to an increase in the number of IndiHome broadband subscribers from 2.9 million subscribers as of December 31, 2017 to 5.1 million subscribers as of December 31, 2018; and
- an increase in revenue from other source by Rp1,414 billion, primarily due to the effect of the adoption of a new accounting standard (IFRS 15) which requires the Company to disclose revenues from other source, such as leases, separately from revenue from contracts with customers. Revenues from other source were previously classified as data, internet, and information technology service revenues and other revenues.

The increase in consumer segment revenues was partially offset by a decrease in fixed line telephone revenues by Rp349 billion, or 17.3% due to the decrease in voice service usage as a result of increased usage of other cellular services.

Our consumer segment expenses increased by Rp1,379 billion, or 13.3%, from Rp10,360 billion in 2017 to Rp11,739 billion in 2018. The increase was primarily due to an increase in:

- operation, maintenance and telecommunication service expenses by Rp1,648 billion, or 58.7%;
- marketing expenses by Rp514 billion, or 316.5%; and
- depreciation and amortization expenses by Rp221 billion, or 7.8%.

The increase in consumer segment expenses was partially offset by a decrease in personnel expenses by Rp1,388 billion, or 38.1%, primarily due to an increase in the number of retired employees.

Enterprise Segment

Our enterprise segment revenues increased by Rp1,924 billion, or 10.1%, from Rp19,130 billion in 2017 to Rp21,054 billion in 2018, primarily due to an increase in:

- data, internet and information technology services revenues by Rp2,773 billion, or 38.1%, due to an increase in internet, data communication and information technology services revenues by Rp2,306 billion, or 32.9%; and
- other telecommunication services revenues by Rp636 billion, or 10.3%, due to an increase in manage service and terminal revenue by Rp914 billion, or 170.8% and a decrease in revenue from sales of peripheral by Rp440 billion, or 19.2%.

The increase in enterprise segment revenues was partially offset by a decrease in:

- fixed line telephone revenues by Rp239 billion, or 15.0%, primarily due to the decrease in the usage of voice service due to the competition of other cellular services; and
- network revenues by Rp464 billion, or 40.0%.

Our enterprise segment expenses increased by Rp1,090 billion, or 5.3%, from Rp20,627 billion in 2017 to Rp21,717 billion in 2018. The increase was primarily due to an increase in:

- operation, maintenance and telecommunication service expenses by Rp1,113 billion, or 10.2% due to an increase in expenses associated with network maintenance; and
- personnel expenses by Rp363 billion, or 8.7%.

The increase in enterprise segment expenses was partially offset by a decrease in marketing expenses by Rp324 billion, or 45.1%, primarily due to the implementation of our cost optimization program which led to a fewer marketing activities that were considered to be less effective.

Wholesale and International Business Segment

Our wholesale and international business segment revenues increased by Rp2,645 billion, or 35.6%, from Rp7,439 billion in 2017 to Rp10,084 billion in 2018, mainly due to an increase in:

- interconnection revenues by Rp1,027 billion, or 29.3% primarily due to an increase in voice traffic reflecting primarily an increase in traffic between countries, which constitutes a niche market within the global transit market;
- revenue from other source by Rp909 billion, primarily due to the effect of the adoption of a new accounting standard (IFRS 15) which requires the Company to disclose revenues from other source, such as leases, separately from revenues from contract with customers. Revenues from other source were previously classified as in other telecommunication service revenues and other revenues;
- network revenues by Rp330 billion, or 47.8%, primarily due to an increase in leased line and satellite lease revenues; and
- data, internet and information technology services revenues by Rp203 billion, or 19.9%.

Our wholesale and international business segment expenses increased by Rp2,291 billion, or 18.6% from Rp12,333 billion in 2017 to Rp14,624 billion in 2018. The increase was primarily due to an increase in:

- interconnection expenses by Rp1,436 billion, or 141.4%; and
- depreciation and amortization expenses by Rp764 billion, or 32.0% in line with our network infrastructure development such as tower and submarine cable system.

The increases in wholesale and international business segment expenses was partially offset by a decrease in personnel expenses by Rp171 billion, or 11.9%.

Other Segment

Our other segment revenues increased by Rp4 billion, or 3.2%, from Rp126 billion in 2017 to Rp130 billion in 2018. This increase was primarily due to an increase in data, internet and information technology service revenues by Rp12 billion, or 9.5% resulting from an increase in e-business revenues.

Our other segment expenses increased by Rp63 billion, or 6.4% from Rp979 billion in 2017 to Rp1,042 billion to 2018 primarily due to an increase in operation, maintenance and telecommunication service expenses by Rp278 billion, or 51.5%. The increase was partially offset by a decrease in marketing expenses by Rp242 billion, or 82.5%.

B. LIQUIDITY

Liquidity Sources

The main source of our corporate liquidity is cash provided by operating activities and long-term debt through the capital markets as well as long-term and short-term loans through bank facilities. We aim to maintain a strong financial position and have enough liquidity for our operations and to support our growth. We seek to keep optimizing our balance sheet and financing capabilities.

We divide our liquidity sources into internal and external liquidity.

A. Internal Liquidity Sources

To fulfill our obligations we rely primarily on our internal liquidity. As of December 31, 2019, we had Rp18,241 billion (US\$1,314 million) in cash and cash equivalents available, an increase of Rp806 billion, or 4.6%, from Rp17,435 billion as of December 31, 2018.

Cash receipts from revenues comprised primarily cash receipts from revenues from customer, which amounted to Rp135,372 billion (US\$9,751 million) in 2019, and are used for payment of operating expenses, acquisition of property and equipment, intangible assets, long-term investment and business, placement in time deposits, payment of cash dividends and repayment of loans and other borrowings.

Our internal liquidity strength is reflected in our current ratio, which we calculate as current assets divided by current liabilities. As of December 31, 2019, our current ratio was 0.67 compared to 0.93 as of December 31, 2018.

B. External Liquidity Sources

Our primary external sources of liquidity are short and long-term bank loans, bonds and notes, other borrowings and two-step loans. We had external liquidity from loans and other borrowings of Rp66,957 billion as of December 31, 2019.

External Liquidity Sources

As of December 31, 2019, we had undrawn loan facilities which included the following sources of unused liquidity:

- BNI loan facility in the amount of Rp4,949 billion;
- Bank Mandiri loan facility in the amount of Rp2,119 billion;
- Bank BRI loan facility in the amount of Rp1,300 billion;
- BCA loan facility in the amount of Rp693 billion;
- DBS Bank loan facility in the amount of Rp992 billion;
- ANZ Bank loan facility in the amount of Rp60 billion;
- MUFG Bank loan facility in the amount of Rp761 billion;
- Bank CIMB Niaga loan facility in the amount of Rp132 billion;
- Bank BTPN loan facility in the amount of Rp231 billion;
- HSBC Bank loan facility in the amount of Rp671 billion; and
- PT Sarana Multi Infrastruktur loan facility in the amount of Rp1,206 billion.

Cash Flows

The following table sets out information concerning our consolidated cash flows, as set out in (and prepared on the same basis as) our Consolidated Financial Statements:

	Years Ended December 31,			
	2017	2018	2019	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
Net cash flows:				
provided by operating activities	49,405	45,671	58,966	4,247
used in investing activities	(33,007)	(35,090)	(35,875)	(2,585)
used in financing activities	(21,052)	(18,458)	(22,175)	(1,596)
Net increase in cash and cash equivalents	(4,654)	(7,877)	916	66
Effect of exchange rate changes on cash and cash equivalents	32	171	(109)	(8)
Allowance for expected credit losses on cash and cash equivalents	—	(4)	(1)	(0)
Cash and cash equivalents at beginning of year	29,767	25,145	17,435	1,256
Cash and cash equivalents at end of year	25,145	17,435	18,241	1,314

Year ended December 31, 2019 compared to year ended December 31, 2018

As of December 31, 2019, total cash and cash equivalent amounted to Rp18,241 billion, an increase of Rp806 billion, or 4.6%, from Rp17,435 billion as of December 31, 2018.

In 2019, operating activity accounted for the largest cash receipts which amounted to Rp138,761 billion, or 82.2% of total cash receipts, followed by financing activity which amounted to Rp26,583 billion, or 15.8% of total cash receipts, and investing activity which amounted to Rp3,333 billion, or 2.0% of total cash receipts. In total, cash receipts increased by Rp848 billion, or 0.5%, compared to 2018.

In 2019, cash used for operating activities amounted to Rp79,795 billion, or 47.6% of total cash disbursements, followed by financing activities which amounted to Rp48,758 billion, or 29.0% of total cash disbursements, and investing activities which amounted to Rp39,208 billion, or 23.4% of total cash disbursements. Compared to 2018, cash disbursements decreased by Rp7,945 billion, or 4.5%.

Cash Flows from Operating Activities

Net cash provided by operating activities in 2019 was Rp58,966 billion (US\$4,247 million), compared to Rp45,671 billion in 2018, representing an increase of Rp13,295 billion, or 29.1%.

Cash receipts from operating activities in 2019 amounted to Rp138,761 billion, an increase of Rp7,292 billion, or 5.5%, compared to 2018. The cash receipts originated from:

- cash receipts from customers and other operators of Rp135,372 billion;
- cash receipts from tax refund of Rp1,446 billion;
- cash receipts from finance income of Rp1,093 billion; and
- cash receipts from other – net of Rp850 billion.

Cash disbursements from operating activities in 2019 amounted to Rp79,795 billion, a decrease of Rp6,003 billion, or 7.0%, compared to 2018. The cash disbursements were used for:

- cash payments for expenses of Rp47,499 billion;
- cash payments to employees of Rp11,370 billion;
- cash payments for corporate and final income taxes of Rp10,348 billion
- cash payments for finance costs of Rp4,358 billion;
- cash payments for short-term lease and low-value assets of Rp5,359 billion; and
- cash payments for Value Added Taxes-net of Rp861 billion.

Cash Flows used in Investing Activities

Net cash flows used in investing activities in 2019 was Rp35,875 billion (US\$2,585 million), compared to Rp35,090 billion in 2018, representing a decrease of Rp785 billion, or 2.2%.

Cash receipts from investing activities amounted to Rp3,333 billion, an increase of Rp2,371 billion, or 246.5%, compared to 2018. The cash receipts originated from:

- proceeds from sale of property and equipment of Rp1,496 billion;
- proceeds from other current financial assets - net of Rp1,147 billion;
- proceeds from divestment of subsidiary of Rp395 billion;

- proceeds from insurance claims of Rp197 billion;
- increase in advance and other assets - net of Rp87 billion; and
- dividend received from associated companies of Rp11 billion.

Cash disbursements from investing activities in 2019 amounted to Rp39,208 billion, an increase of Rp3,156 billion, or 8.8%, compared to 2018. The cash disbursements were used for:

- purchases of property and equipment of Rp35,302 billion;
- purchases of intangible assets of Rp2,008 billion;
- acquisition of businesses, net of acquired cash of Rp1,166 billion; and
- additional contribution on long-term investments of Rp732 billion.

Cash Flows used in Financing Activities

Net cash flows used in financing activities in 2019 was Rp22,175 billion (US\$1,596 million), compared to Rp18,458 billion in 2018, representing a decrease of Rp3,717 billion, or 20.1%.

Cash receipts from financing activities amounted to Rp26,583 billion in 2019, a decrease of Rp8,815 billion, or 24.9%, compared to 2018. The cash receipts originated from:

- proceeds from loans and other borrowings of Rp26,524 billion; and
- capital contribution of non-controlling interest of subsidiaries of Rp59 billion.

Cash disbursements from financing activities amounted to Rp48,758 billion in 2019, a decrease of Rp5,098 billion, or 9.5%, compared to 2018. The cash disbursements were used for:

- repayments of loans and other borrowings of Rp18,176 billion;
- cash dividends paid to the Company's stockholders of Rp16,229 billion;
- cash dividends paid to non-controlling interests of subsidiaries of Rp9,618 billion; and
- payments of principal portion of lease liabilities of Rp4,735 billion.

Year ended December 31, 2018 compared to year ended December 31, 2017

As of December 31, 2018, total cash and cash equivalent amounted to Rp17,435 billion, a decrease of Rp7,710 billion, or 30.7%, from Rp25,145 billion as of December 31, 2017.

In 2018, operating activity accounted for the largest cash receipts which amounted to Rp131,469 billion, or 78.3% of total cash receipts, followed by financing activity which amounted to Rp35,398 billion, or 21.1% of total cash receipts, and investing activity which amounted to Rp962 billion, or 0.6% of total cash receipts. In total, cash receipts increased by Rp26,391 billion, or 18.7%, compared to 2017.

In 2018, cash used for operating activities amounted to Rp85,798 billion, or 48.8% of total cash disbursements, followed by financing activities which amounted to Rp53,856 billion, or 30.7 of total cash disbursements, and investing

activities which amounted to Rp36,052 billion, or 20.5% of total cash disbursements. Compared to 2017, cash disbursements increased by Rp29,614 billion, or 20.3%.

Cash Flows from Operating Activities

Net cash provided by operating activities in 2018 was Rp45,671 billion, compared to Rp49,405 billion in 2017, representing a decrease of Rp3,734 billion, or 7.6%.

Cash receipts from operating activities amounted to Rp131,469 billion, an increase of Rp3,800 billion, or 3.0%, compared to 2017. The cash receipts originated from:

- cash receipts from customers and other operators of Rp127,855 billion;
- cash receipts from tax refund of Rp2,578 billion; and
- cash receipts from finance income of Rp1,036 billion.

Cash disbursements from operating activities amounted to Rp85,798 billion, an increase of Rp7,534 billion, or 9.6%, compared to 2017. The cash disbursements were used for:

- cash payments for expenses of Rp54,099 billion;
- cash payments to employees of Rp12,657 billion;
- cash payments for corporate and final income taxes of Rp10,375 billion
- cash payments for finance costs of Rp3,735 billion;
- cash payments for Value Added Taxes - net of Rp3,434 billion; and
- cash payments for others – net of Rp1,498 billion.

Cash Flows used in Investing Activities

Net cash flows used in investing activities in 2018 was Rp35,090 billion, compared to Rp33,007 billion in 2017, representing a decrease of Rp2,083 billion, or 6.3%.

Cash receipts from investing activities amounted to Rp962 billion, a decrease of Rp588 billion, or 37.9%, compared to 2017. The cash receipts originated from:

- proceeds from sale of property and equipment of Rp629 billion;
- placement in other current financial assets - net of Rp171 billion;
- proceeds from insurance claims of Rp153 billion; and
- dividend received from associated companies of Rp9 billion.

Cash disbursements from investing activities amounted to Rp36,052 billion, an increase of Rp1,495 billion, or 4.3%, compared to 2017. The cash disbursements were used for:

- purchases of property and equipment of Rp31,562 billion;
- purchases of intangible assets of Rp2,972 billion;

- decrease in advance and other assets - net of Rp761 billion;
- acquisition of businesses, net of acquired cash of Rp420 billion;
- additional contribution on long-term investments of Rp337 billion; and

Cash Flows used in Financing Activities

Net cash flows used in financing activities in 2018 amounted to Rp18,458 billion, compared to Rp21,052 billion in 2017, representing an increase of Rp2,594 billion, or 12.3%.

Cash receipts from financing activities amounted to Rp35,398 billion, an increase of Rp23,179 billion, or 189.7%, compared to 2017. The cash receipts originated from:

- proceeds from loans and other borrowings of Rp35,364 billion; and
- capital contribution of non-controlling interest of subsidiaries of Rp34 billion.

Cash disbursements from financing activities amounted to Rp53,856 billion, an increase of Rp20,585 billion, or 61.9%, compared to 2017. The cash disbursements were used for:

- cash dividends paid to the Company's stockholders of Rp16,609 billion;
- repayments of loans and other borrowings of Rp27,113 billion; and
- cash dividends paid to non-controlling interests of subsidiaries of Rp10,134 billion.

Current Assets

As of December 31, 2019, our current assets were Rp40,917 billion (US\$2,946 million) compared to Rp42,843 billion as of December 31, 2018, a decrease of Rp1,926 billion, or 4.5%. This decrease was primarily due to:

- a decrease in other current assets of Rp1,778 billion, or 24.4%, from Rp7,280 billion as of December 31, 2018 to Rp5,502 billion as of December 31, 2019, primarily due to a decrease in advances by Rp1,156 billion and prepaid rental of Rp754 billion;
- a decrease in contract assets by Rp931 billion or 59.7% from Rp1,560 billion as of December 31, 2018 to Rp629 billion as of December 31, 2019, primarily due to a decrease in Telkomsel's contract assets amounting to Rp1,298 billion. The decrease was offset by an increase in Telkom's other contract assets of Rp366 billion;
- a decrease in other current financial assets by Rp760 billion, or 57.8% from Rp1,314 billion as of December 31, 2018 to Rp554 billion as of December 31, 2019, primarily due to a decrease in our investments in mutual funds of Rp399 billion and current financial assets other than investments in mutual funds of Rp379 billion. The decrease was offset by an increase in the escrow account of Rp23 billion;
- a decrease in contract costs by Rp390 billion or 42.2% from Rp924 billion as of December 31, 2018 to Rp534 billion as of December 31, 2019, primarily due to a decrease in costs to fulfill of our contracts of Rp385 billion; and
- a decrease in assets held for sale by Rp301 billion, or 88.5% from Rp340 billion as of December 31, 2018 to Rp39 billion as of December 31, 2019, primarily due to the replacement of assets for purposes of an upcoming upgrade.

This decrease was partially offset by:

- an increase in trade and other receivables by Rp1,344 billion, or 13.5%, from Rp9,928 billion as of December 31, 2018 to Rp11,272 billion as of December 31, 2019, due to an increase in trade receivables from third parties; and
- an increase in our cash and cash equivalents of Rp806 billion, or 4.6%, from Rp17,435 billion as of December 31, 2018 to Rp18,241 billion as of December 31, 2019, primarily due to an increase in time deposits of Rp631 billion.

Current Liabilities

As of December 31, 2019, our current liabilities were Rp61,349 billion (US\$4,419 million) compared to Rp46,322 billion as of December 31, 2018, an increase of Rp15,027 billion, or 32.4%. The increase was primarily due to:

- an increase in short-term bank loans and current maturities of long-term liabilities of Rp11,775 billion, or 113.9%, from Rp10,339 billion as of December 31, 2018 to Rp22,114 billion as of December 31, 2019, primarily due to an increase in short-term bank loans of Rp4,662 billion and an increase in current maturities of long-term liabilities of Rp7,113 billion. We primarily increased our short-term bank loans to have additional funds to use for working capital purposes, as necessary. The increase in current maturities of long term liabilities is primarily due to an increase in lease liabilities of Rp4,663 billion and bonds and notes with maturity dates falling in 2020. Bonds and notes with maturity dates falling in 2020 are Telkom Bonds 2010 Series B (with an original principal value of Rp1,995 billion), MTN I Telkom 2018 Series B (with an original principal value of Rp200 billion) and MTN Syariah Ijarah I Telkom 2018 Series B (with an original principal value of Rp296 billion);
- an increase in contract liabilities of Rp2,178 billion, or 41.5%, from Rp5,252 billion as of December 31, 2018 to Rp7,430 billion as of December 31, 2019, primarily due to an increase in others and in prepaid pulse reload vouchers of Rp1,330 billion and Rp837 billion, respectively;
- an increase in current income tax liabilities of Rp1,141 billion, or 282.4%, from Rp404 billion as of December 31, 2018 to Rp1,545 billion as of December 31, 2019, due to an increase in corporate income tax by Rp1,059 billion; and
- an increase in other tax liabilities of Rp1,110 billion, or 143.0%, from Rp776 billion as of December 31, 2018 to Rp1,886 billion as of December 31, 2019, due to an increase in VAT payable from subsidiaries by Rp866 billion.

This increase was partially offset by:

- a decrease in trade and other payable of Rp890 billion, or 5.8%, from Rp15,214 billion as of December 31, 2018 to Rp14,324 billion as of December 31, 2019 due to a decrease in trade payables to third parties; and
- a decrease in advances from customers of Rp279 billion, or 17.8%, from Rp1,568 billion as of December 31, 2018 to Rp1,289 billion as of December 31, 2019, primarily due to a decrease in incidental deposits from customers of Telkomsel amounting to Rp236 billion.

Working Capital

As of December 31, 2019, our working capital, defined as the difference between current assets and current liabilities as of the same date, decreased by Rp16,953 billion compared to our working capital as of December 31, 2018. As at December 31, 2019, our current assets were lower than our current liabilities, resulting in a current ratio, defined as our current assets divided by our current liabilities, was 0.67 as of December 31, 2019. We closely monitor our working capital and generally try to lower it to maintain it at an optimal level so that we may manage our working capital efficiently, without restricting our ability to meet our current liabilities. This decrease in working capital was primarily due to:

- a decrease in current assets of Rp1,926 billion, or 4.5% from Rp42,843 billion as of December 31, 2018 to Rp40,917 billion as of December 31, 2019. See "— Current Assets."
- an increase in current liabilities of Rp15,027 billion, or 32.4% from Rp46,322 billion as of December 31, 2018 to Rp61,349 billion as of December 31, 2019. See "—Current Liabilities."

We believe that our available cash, working capital, cash generated by future operations, and borrowings from banks and other financial institutions are sufficient for our present requirements. We expect that our working capital requirements will continue to be addressed by various funding sources, including cash from operating activities, bank loans and potential offerings of debt securities in the capital markets.

Capital Structure

Our capital structure as of December 31, 2019 is described as follows:

	Amount (Rp billion)	Portion (%)
Short-term debt	8,705	5.2
Long-term debt	58,252	34.9
Total debt	66,957	40.1
Equity attributable to owners of the parent company	99,796	59.8
Total	166,753	100.0

As of December 31, 2019, our net debt to equity ratio was 0.49 and our debt service coverage ratio was 3.1 times, indicating our strong ability to meet our debt obligations. Our debt levels are primarily driven by our plans to develop our existing and new strategic businesses. In determining our optimum debt levels, we also consider our debt ratios with reference to regional peers in the telecommunications industry.

For further information on our Company's management policies related to capital, see Note 36 to our Consolidated Financial Statements.

Indebtedness

Consolidated total indebtedness (consisting of short-term bank loans, long-term liabilities, current maturities of long-term liabilities and other borrowings) as of December 31, 2017, 2018 and 2019 were as follows:

	As of December 31,			
	2017 (Rp billion)	2018 (Rp billion)	2019 (Rp billion)	(US\$ million)
Indonesian Rupiah	33,623	41,722	65,085	4,687
U.S. Dollar ⁽¹⁾	1,027	1,631	1,315	96
Japanese Yen ⁽²⁾	648	602	491	35
Malaysian Ringgit ⁽³⁾	174	127	66	5
Total	35,472	44,082	66,957	4,823

- (1) The amounts as of December 31, 2017, 2018 and 2019 translated into Rupiah at Rp13,567.5, Rp14,380, and Rp13,882.5 = US\$1, respectively, being the Reuters average rates for U.S. Dollar at each of those dates.
- (2) The amounts as of December 31, 2017, 2018 and 2019 translated into Rupiah at Rp120.52, Rp130.63, and Rp127.79 = Yen 1, respectively, being the Reuters average rates for Yen at each of those dates.
- (3) The amount as of December 31, 2017, 2018 and 2019 translated into Rupiah at Rp3,352.07, Rp3,476.39, and Rp3,391.77 = Ringgit 1, being the Reuters average rates for Ringgit.

Of our total indebtedness, as of December 31, 2019, Rp22,114 billion, Rp21,720 billion, Rp13,427 billion, and Rp9,696 billion were scheduled for repayment in 2020, 2021-2022, 2023-2024 and thereafter, respectively.

For further information on our Company's indebtedness, see Notes 19 and 20 to our Consolidated Financial Statements.

Capital Expenditures

In 2019, we incurred capital expenditures of Rp36,485 billion (US\$2,628 million). Our capital expenditures are grouped into the following categories for planning purposes:

- Broadband services, which consist of mobile (4G) and fixed broadband access;
- Network infrastructure, which consists of core transmission network, metro-ethernet and Regional Metro Junction ("RMJ") and IP backbone;
- Data centers, IT, applications and content, as well as service node; and
- Capital expenditure supports, such as capital expenditure for the construction or maintenance of telecommunication towers.

Of our Rp36,485 billion capital expenditure in 2019, Telkom, as parent company, incurred capital expenditures of Rp16,956 billion (US\$1,221 million), Telkomsel incurred capital expenditures of Rp11,849 billion (US\$854 million) and our other subsidiaries incurred capital expenditures of Rp7,680 billion (US\$553 million). The following table set forth our capital expenditure breakdown between Telkom as a parent company, Telkomsel and our other subsidiaries for the periods indicated.

	Years Ended December 31,			
	2017	2018	2019	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
Telkom (parent company)	11,572	13,186	16,956	1,221
Subsidiaries				
Telkomsel	15,080	13,885	11,849	854
Others	6,502	6,549	7,680	553
Subtotal for subsidiaries	21,582	20,434	19,529	1,407
Total for Telkom Group	33,154	33,620	36,485	2,628

Material Commitments for Capital Expenditures

As of December 31, 2019, we had material commitments for capital expenditures under contractual arrangements totaling Rp10,648 billion (US\$767 million), principally relating to procurement and installation of data, internet and information technology, cellular, transmission equipment and cable network in Indonesia. We also have capital expenditure planned for investments outside Indonesia, in particular, in relation to Telin.

The following table sets forth information on our committed capital expenditures under contractual arrangements as of December 31, 2019.

Currencies	Amounts in Foreign Currencies	Equivalent in Rupiah
	(in millions)	(in billions)
Rupiah	—	9,412
U.S. Dollar	87.78	1,219
Euro	1.06	16
HK\$	0.77	1
Total		10,648

For a more detailed discussion regarding our material commitments for capital expenditures, see Note 34a to our Consolidated Financial Statements.

Source of Funds

We have historically funded our capital expenditures primarily with cash generated from operations. In 2020, we expect that our capital expenditure to revenue ratio will be approximately 25%. We expect that the most significant proportions of capital expenditure will be allocated to the development of infrastructure to support broadband services, both for mobile and fixed line broadband services. A portion of our capital expenditure is allocated to our subsidiaries, primarily to Telkomsel. We expect to fund the above commitments with our internal and external source of funds.

The realization and use of future capital expenditures may differ from the amounts indicated above due to various factors, including but not limited to changes in the Indonesian and global economy, the Rupiah/U.S. Dollar or other applicable foreign exchange rates, the availability of supply or vendor or other financing on terms acceptable to us, and also any technical or other problems in the implementation.

Critical Accounting Policies, Estimates and Judgments

For a complete discussion of our critical accounting policies, estimates and judgments, see Note 2.ac to our Consolidated Financial Statements.

New Standards and Interpretations

We have applied IFRS 16 (Leases) ("IFRS 16") on January 1, 2019, we have also applied IFRS 9 (Financial Instruments) ("IFRS 9") on January 1, 2018, and we adopted IFRS 15 (Revenue from Contracts with Customers) ("IFRS 15") on January 1, 2018, using the modified retrospective approach. Previous financial periods, in particular the financial years ended December 31, 2017, have not been restated following these changes in accounting policies. See Note 2.aa to the Consolidated Financial Statements included in this Form 20-F. As a result, our Consolidated Financial Statements as of and for the year ended December 31, 2017 are not directly and fully comparable to our consolidated financial statements as of and for the years ended December 31, 2018 and 2019. See "— Operating and Financial Review and Prospects."

IFRS 16 sets out a comprehensive model for identification of lease agreements and their treatment in the financial statements of both lessees and lessors. IFRS 16 introduces a control model for the identification of leases, distinguishing between leases and service contracts on the basis of whether there is an identified asset controlled by the customer.

IFRS 16 supersedes a number of existing standards and interpretations, including IAS 17 (Leases), IFRIC 4 (Determining whether an Arrangement contains a Lease), SIC 15 (Operating Leases - Incentives), and SIC 27 (Evaluating the Substance of Transactions Involving the Legal Form of a Lease). We elected to apply IFRS 16 by using the modified retrospective approach. Therefore, we recognize the cumulative effect of adopting IFRS 16 as an adjustment to the opening balance of retained earnings at January 1, 2019, with no restatement of comparative information.

Under IAS 17 (Leases), lessees recognized a periodic lease expense over the lease term for operating leases. The adoption of IFRS 16 resulted in our consolidated future minimum lease payments under noncancelable operating leases to

be recognized as lease liabilities with corresponding right-of-use assets. These amounts are adjusted for the effects of discounting and of the practical expedients available under the transition guidance for IFRS 16 that we selected.

We elected the package of practical expedients permitted under the transition guidance for IFRS 16, which among other things, allows us to carryforward the historical lease assessments. This allowed us not to reassess our prior conclusions on lease identification, lease classification, and initial direct costs.

IFRS 9 has been effective for financial years starting from January 1, 2018. IFRS 9 replaces IAS 39 (Financial Instruments: Recognition and Measurement) ("IAS 39"). The standard promulgates a revised model for recognition and measurement of financial instruments and a single, forward-looking "expected loss" impairment model. In general, the main changes introduced by IFRS 9 relate to the classification and measurement of financial assets, the introduction of a new impairment model based on expected credit losses (instead of losses incurred under IAS 39) and the accounting treatment of hedges. IFRS 9 comprises mainly: (i) the classification and measurement of financial assets and financial liabilities; (ii) the new impairment model for the recognition of expected credit losses; and (iii) the new hedge accounting model.

We classify our financial assets as at amortized cost, at Fair Value through Profit or Loss ("FVTPL") and Fair Value through Other Comprehensive Income ("FVTOCI"). Previously under IAS 39, financial assets were classified as loan and receivables trading and available for sale. The classification is based on two criteria: the Group's business model for managing the assets; and whether the instruments' contractual cash flows represent solely payments of principal and interest on the principal amount outstanding.

The classification and measurement requirements of IFRS 9 have an impact on some of the Group's available-for-sale financial assets as they have to be measured at FVTPL as the instruments' contractual cash flow do not represent solely payment of principal and interest. The Group continued to use amortized cost to measure all financial assets previously classified as loans and receivables under IAS 39.

The adoption of IFRS 9 has fundamentally changed our accounting for impairment losses using expected credit loss ("ECL") approach. IFRS 9 requires us to recognise an allowance for ECLs for all debt instruments not held at fair value through profit or loss and contract assets.

IFRS 15 has been effective for financial years starting from January 1, 2018. IFRS 15 replaces a number of existing revenue standards, including IAS 18 (Revenue), IAS 11 (Construction Contracts) and IFRIC 13 (Customer Loyalty Programmes.) IFRS 15 establishes a comprehensive framework to determine how, when and how much revenue is to be recognized. The standard provides a principles-based five-step model for the determination and recognition of revenue for all contracts with customers requiring that an entity: (1) identify the contract with customer; (2) identify performance obligations related to that contract; (3) determine the transaction price of the contract; (4) assigning said transaction price among the performance obligations; and (5) recognize income when (or as) the performance obligations are met. In addition to recognition and measurement, IFRS 15 also provides new requirements in the presentation and disclosures.

The standard also provides specific guidance requiring certain types of costs incurred to obtain and/or fulfil a contract to be capitalized and amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the capitalized cost relates. We have elected to use a modified retrospective approach when adopting this standard. We have also elected to apply the following practical expedients on the transition date:

- Completed contracts - we have applied IFRS 15 only to customer contracts that are not completed on January 1, 2018; and
- Contract modifications - instead of applying a retrospective approach to quantify the cumulative effects of contract modifications from the time each modification was made; we have reflected the aggregate effect of all contract modifications that occurred before January 1, 2018 in order to: (i) identify satisfied and unsatisfied performance obligations; (ii) determine the transaction price of the latest modified contract; and

(iii) allocate the transaction price to the satisfied and unsatisfied performance obligations as of January 1, 2018.

- Some other key changes from adopting IFRS 15 that have impacted us include the following:
- Contract assets and contract liabilities have been added as new lines in the consolidated statements of financial position as required under IFRS 15. Previously, contract assets were reported as trade receivables and contract liabilities were reported as unearned income.
- Contract costs that consist of costs to obtain and fulfil the contract have been added as a new line item in the consolidated statement of financial position. Previously, these contract costs were reported as expenses and were expensed as incurred or amortized with systematic basis that is inconsistent with the recognition of related revenue.
- Revenues from contracts with customers which are measured under IFRS 15 are separately presented from revenues from other source.

Please see Note 2.ac to our Consolidated Financial Statements for a detailed discussion of IFRS 9, IFRS 15 and IFRS 16 for other new standards, amendments to standards and interpretations not yet adopted in 2019 which have not been applied in preparing the Consolidated Financial Statements, see Note 39 to our Consolidated Financial Statements.

C. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.

As a technology-based company, we continue to focus on product and service innovation through ongoing research and development. The changing landscape of the telecommunications industry, particularly with competition from Over The Top services and other digital-based services, necessitate innovations on our part in order to improve the customer experience and remain competitive and transform into a digital telecommunications company.

We are conducting access network infrastructure research in order to find access technologies capable of delivering data to customers at higher speeds, better performance and with lower delays, through technologies such as Next Generation PON 2, Fixed Wireless Broadband, Wi-Fi Giga, and 5G. We also conduct joint innovation activities that aim to enhance our current products and services and create new business models to produce new revenue generators. For example, we have been conducting research on access network virtualization with NTT and Cisco in order to facilitate management of new services and research network slicing on node access for support open access implementation.

We are also conducting infrastructure research on service nodes for voice-based voice/multimedia, high-speed Internet service infrastructure and smart transport technology based on packet and optical technologies. For voice services and voice control services, we conduct research on IMS technology. As for control of high-speed Internet services, we do research on BRAS technology, PCRF, and PCEF. These service node technologies evolved by adopting virtualization technology that seeks to improve speed, flexibility, deployment and operation efficiency. For smart transport technologies we are exploring several technologies and techniques such as metro ethernet, OTN, and MPLS for offering and implementing efficient, robust, and quality network solutions. Moreover, we are now in the assessment phase of SDN as we seek to deploy this technology for network automation and control.

We believe that our assessment and testing of future technologies and the IoT will contribute to our long-term success, particularly in terms of updating our knowledge developing our human capital. This may create opportunities for additional revenues and cost savings in the future. The Low Power Wide Area Network (LPWAN), Narrow Band - IoT (NB-IoT) and 5G technology are among the technologies that we have begun to explore in relation to the IoT. The aim of our research is to pave the way towards a future in which smart factories, intelligent machines and networked processes are brought together to implement "Industry 4.0" initiatives. Our research has shown that the provision of space telecommunications infrastructure is increasingly important and therefore, we are studying non-geostationary orbit (NGSO) satellite technology, high altitude platform stations (HAPs), drones and balloons.

As the main connectivity provider in the region, we are also concerned about cyber security and Distributed Denial of Service (DDoS) attacks that have been massively targeting ISPs and business customers in recent years. To mitigate the risk and to protect our valuable business customers from DDoS attacks, we have conducted research on and guided the implementation of carrier grade anti-DDoS solutions that can detect DDoS attacks and divert the traffics to a scrubbing system that will scrub the DDoS traffic and re-route clean traffic to our customers. As one of the main broadband internet service provider in Indonesia based on the number of subscribers and coverage, especially through our retail high-speed internet provider, IndiHome, we have conducted research on endpoint security, including Internet Protocol version 6 (IPv6). We are also researching security mechanisms that can be deployed within our digital factory, so that security will be inherent in our DevSecOps (Development-Security-Operation) methodology in providing our digital applications for enriching our customer's digital lifestyle in a secured manner as smartphone use increases.

Our research and development activities include our open innovation program where we aim to leverage the creativity of Indonesian digital technology entrepreneurs with the aim of integrating the products and services that they develop into our business. In practice, our products and services are designed and developed according to the needs of consumers in the current digital era. In connection with our efforts to develop such products and services, in 2019, we continued our Digital Amoeba and Indigo Creative Nation programs. Digital Amoeba aims to capture and accelerate innovation internally at Telkom and its subsidiaries. Indigo Creative Nation is Telkom's open innovation program in collaboration with digital startups to develop Indonesia's digital creative industry while developing Telkom's digital business portfolio. Our subsidiary, PT Metra Digital Innovation, also known as MDI Ventures, manages and invests venture funds in potential digital startups. We also provide office facilities for nurturing creativity such as shared meeting rooms, classrooms and common areas for entrepreneurs which are known as Digital Innovation Lounges ("**DILo**") at 17 locations in Indonesia.

We conduct incubation and acceleration activities and provide mentorships to assist startups to develop and validate their customer, product, business model, and market validation. We occasionally provide seed financing in the form of equity to startups which we believe are commercially viable. We also support startups to commercialize their products and services and obtain follow-on funding. At the end of 2019, 41 teams were actively validating new products and new processes, with 12 projects prioritized for accelerated development to potentially integrate our business portfolio. Since 2013, Indigo Creative Nation has incubated 153 startups. As of December 31, 2019, 60 startups had started commercial operations and an additional 23 startups had received funding from domestic and foreign investors. A number of startups have synergized with Telkom in providing digital products and solutions such as eTab, PrivyID, Kofera, Run System, Opsigo, Goers, Nodeflux, and Sonar. Examples of the synergies include the development of the Indonesia Tourism Exchange (ITX) using Opsigo, the development of Chat Aja applications using the Qiscus messaging platform, and the development of Jasa Marga's video analytics using Nodeflux products.

With regards to MDI Venture, as of December 31, 2019 it had invested in 35 startups in 11 countries, two of which, Whispir Limited and Geniee, Inc., were listed on the Australian Securities Exchange and the Tokyo Stock Exchange, respectively. In 2019, MDI Ventures, together with KB Financial Group from South Korea, launched the Centauri Fund Venture Capital Company ("**Centauri Fund**"). Centauri Fund aims to develop the experience of the two companies in the technology ecosystem in Southeast Asia, including through the support of Indonesian and regional startups.

D. TREND INFORMATION

We believe favorable external factors will support our ability to continue to drive revenue growth from both cellular and non-cellular data, internet and information technology services. Indonesia has shown GDP growth in the past two decades. Mostly due to the growing and large working age group, Indonesia is expected to benefit from a demographic dividend in the next decade which should have a positive impact on economic growth. Consequently, this should help Indonesia to maintain GDP growth as the working population ratio will continue to increase and economic growth should remain strong. Moreover, the growing working population should also result in an improvement in Indonesia's Purchasing Power Parity (PPP) growth. The expected availability of a higher disposable income together with spending behavior that is increasingly leaning towards digital channels should contribute to the growth of the fast-changing digital economy, including the growth of broadband connectivity and more generally of digital and telecommunication services. Indonesia continues to move towards more digitalization. While Indonesia is expected to benefit from digitalization, it will face key challenges in implementing its digitalization projects across multiple sectors such as logistics, education, healthcare, government administration, finance and insurance. The government of Indonesia expects that the improvement in digital technology will create job opportunities, increase efficiency in business operations, better services and unlock various markets by making them more accessible through digitalization.

The government of Indonesia has established several national digitalization projects. The three main digitalization projects that have an impact on Telkom are the following:

- Making Indonesia 4.0: This project offers an opportunity for Telkom to enter into partnerships with various manufacturing companies to provide IoT solutions.
- 2020 Go Digital Vision: This project enables Telkom to leverage its incubation program to develop start-ups through the Indigo Creative Nation program.
- One Data Indonesia: This project will enable the public sector to make data driven decisions. Therefore, we expect that this will provide opportunities for Telkom to propose and provide high volume data storage through data centers and cloud solutions with big data and analytic solutions.

In the shorter run, the ongoing COVID-19 pandemic is expected to have an effect on our results of business operations and financial condition in the financial year ending December 31, 2020. As at the date hereof, the potential economic impact on Indonesia and the global economy brought by, and the duration of, the COVID-19 pandemic is highly uncertain, subject to change and difficult to estimate or predict. Whereas we are closely monitoring the current situation and potential developments, there is still uncertainty as to the full extent of the potential impact on our business, operations, prospects and results of operations.

Governments of many countries, including Indonesia, have imposed lock-down measures and travel restrictions in response to the pandemic. On March 31, 2020, by virtue of Presidential Decree No. 11 of 2020, the President of Indonesia declared COVID-19 a Public Health Emergency (*Darurat Kesehatan Masyarakat*). Under certain conditions, regional governments are allowed to impose enhanced measures they consider necessary within the respective territory under their authority. For example, the regional government of the Jakarta Province (classified as a "red zone area", having been identified as an area of high COVID-19 transmission, and where Telkom's head office is located) has implemented enhanced PSBB measures, including restrictions on travel, transportation and use of public facilities, quarantines and work-from-home orders, as well as other social and physical distancing measures. In compliance with these initiatives, we also implemented protocols for safeguarding the health of our employees, preventing contagion and supporting our business continuity, including, among others, stopping non-essential travels, limiting gatherings in our corporate offices and branches, assigning teams to alternate work schedules or sites, and establishing work-from-home protocols.

Government measures such as those described above have had a severe impact on economic activities and we expect that this will cause a decline in revenue in various business segments. In its projections dated April 2020, taking into account the anticipated negative impact of the COVID-19 outbreak and related containment measures, the IMF adjusted its initial projection of Indonesia's GDP growth from 5.1% to 0.5% for the financial year ending December 31, 2020. We believe that consumer services and mobile services may prove resilient even in the context of economic downturns. We have witnessed that lock-down measures including travel restrictions and work-from-home orders have increased the use of our fixed and mobile broadband services as businesses and consumers carry out more online activities and transactions. However, we expect that the slowdown in overall economic growth will eventually have an effect on our results of operations and financial condition and we are in the process of implementing measures to address any changes in consumption. Our measures include managing network load and configuration to adapt to changes in traffic pattern, supply chain stabilization to ensure sufficient capacity, and providing support to customers to address their increasing demand for working collaboration, learning activities and entertainment.

E. OFF-BALANCE SHEET ARRANGEMENTS

As of December 31, 2019, we had no off-balance sheet arrangements that were reasonably likely to have a current or future material effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

F. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table sets forth information on certain of our material contractual obligations as of December 31, 2019:

Contractual Obligation	By Payment Due Date				
	Total	Less Than 1 Year ⁽⁶⁾	1-3 years ⁽⁶⁾	3-5 years ⁽⁶⁾	More than 5 years ⁽⁶⁾
	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)
Long-Term Debts ⁽¹⁾⁽⁴⁾	41,035	8,746	15,308	9,709	7,272
Lease Liabilities ⁽²⁾	17,217	4,663	6,412	3,718	2,424
Interest on Long-Term Debts and Lease Liabilities ⁽⁵⁾	15,980	3,120	5,444	2,511	4,905
Unconditional Purchase Obligations ⁽³⁾	10,648	10,648	--	--	--
Total	84,880	27,177	27,164	15,938	14,601

Notes:

- (1) See Notes 19 and 20 to our Consolidated Financial Statements.
- (2) Related to the lease of the slot site of the tower, transmission installation and equipment, power supply, data processing equipment, office equipment, vehicles, and CPE assets.
- (3) Capital expenditure committed under contractual arrangements.
- (4) Excludes the related contractually committed interest obligations.
- (5) See Item 3 "Key Information - Business Overview - Risk Factors - Risk Related to Our Business - Financial Risk - We are exposed to interest rate risk."
- (6) Less than 1 year = 2020, 1-3 years = 2021-2022, 3-5years = 2023-2024, more than 5 years = 2025, and thereafter.

See Note 34 to our Consolidated Financial Statements for further details on our contractual commitments. In addition to the above contractual obligations, we had long-term liabilities for defined pension benefits and post-employment health care benefit plan. In 2019, we contributed Rp233 billion to our defined benefit pension plan and post-employment health care benefit plan. See Note 30 to our Consolidated Financial Statements.

G. SAFE HARBOR

All information that is not historical in nature disclosed under "Off-Balance Sheet Arrangements" and "Tabular Disclosure of Contractual Obligations" is deemed to be a forward-looking statement. See "Forward-Looking Statements."

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. DIRECTORS AND SENIOR MANAGEMENT

In accordance with Law No.40 of 2007 on Limited Liability Companies and OJK Rule No.33/POJK.04/2014 on the Board of Directors and the Board of Commissioners of Issuers or Public Companies ("OJK Rule No.33/2014"), we have a Board of Commissioners and a Board of Directors. These boards are separate and no individual may be a member of both boards.

The members of the Board of Commissioners and Board of Directors are elected and dismissed by shareholders' resolutions at a GMS. As stated in our Articles of Association, to be elected, candidates must be nominated and approved by the Government as the holder of the Dwiwarna Share. The term of office for each Commissioner and Director commences at the closing of the GMS which appoints such Commissioner or Director or such other time as specified by such GMS, and terminates at the closing of the fifth AGMS held after his/her appointment. Shareholders, through a GMS, have the right to discharge a Commissioner or Director at any time before the expiration of his/her term of office.

Board of Commissioners

Our Board of Commissioners is responsible for supervising and advising the Board of Directors. Our Board of Commissioners consists of five members, one of whom is designated as the President Commissioner.

As of December 31, 2019, the Board of Commissioners consisted of six members as listed below:

Name	Age	Date of Birth	Commissioner Since	Position
Rhenald Kasali	59	August 13, 1960	2019	President Commissioner
Ismail	50	August 10, 1969	2019	Commissioner
Marcelino Rumambo Pandin	53	March 23, 1966	2019	Commissioner
Margiyono Darsasumarja	43	September 14, 1976	2015	Independent Commissioner
Cahyana Ahmadjayadi	64	July 12, 1955	2017	Independent Commissioner
Marsudi Wahyu Kisworo	61	October 29, 1958	2019	Independent Commissioner

Each of our Commissioners was a citizen of and domiciled in Indonesia as of December 31, 2019. In accordance with OJK Rule No.33/2014 which requires 30% of our Board of Commissioners to be independent, three Commissioners have been designated as Independent Commissioners. Our Independent Commissioners are Margiyono Darsasumarja, Cahyana Ahmadjayadi and Marsudi Wahyu Kisworo. The principal duty of our Independent Commissioners, in addition to exercising supervision, is to represent the interests of minority shareholders.

Set forth below is a brief biography of each of our Commissioners:

Rhenald Kasali assumed the role of President Commissioner in May 2019. He has also served as a Professor of Economics, Indonesia University, since 2009. Previously, Prof. Kasali also served as President Commissioner of Angkasa Pura II (2015-2019), and he is a founder of Yayasan Rumah Perubahan (2007). Prof. Kasali holds his Ph.D. from University of Illinois at Urbana, Champaign (1998), a master of science in business administration from University of Illinois at Urbana, Champaign (1993), and a bachelor degree in economy from Indonesia University, Jakarta (1985).

Ismail assumed the role of Commissioner in May 2019. Dr. Ismail has also served as Director General of Post and Information Technology Devices Resources, Ministry of Communication and Information Technology since 2016. Previously, he served as Director of Broadband Development, Ministry of Communication and Information Technology (2015-2016), Director of Special Telecommunications, Public Broadcasting, and Universal Obligations, Ministry of Communication and Information Technology (2014-2015), Director of Telecommunications, Ministry of Communication and Information Technology (2012-2014), Director of IT System Operations, Financial Transaction Reports and Analysis Center, Ministry of Communication and Information Technology (2008-2012). Dr. Ismail holds a doctorate in electrical and informatics engineering from the Bandung Institute of Technology, Bandung (2010), a master degree in electrical engineering from Indonesia University, Jakarta (1999) and a bachelor degree in physics engineering from the Bandung Institute of Technology, Bandung (1993).

Marcelino Rumambo Pandin assumed the role of Commissioner in May 2019. Previously, Dr. Pandin served as a member of the Committee of the World Observatory on Subnational Government Finance and Investment initiative of the OECD, Paris (2018-2019), and Senior Policy Adviser at United City and Local Government (UCLG) Asia Pacific, Jakarta (2017-2019). He holds his Ph.D in Technology and Innovation from University of Queensland, Australia (2007), a master degree in philosophy from Judge Business School University of Cambridge, Cambridge (1999), and a bachelor degree in architecture from the Bandung Institute of Technology, Bandung (1991).

Margiyono Darsasumarja assumed the role of Independent Commissioner in April 2015. He previously served as coordinator of advocacy and partnership for government reform for the Bureaucracy Reform Project (2012-2015), lecturer in law and media ethics at Bakrie University, Jakarta (2012-2014) and Media Development Manager at Voice of Human Rights Media, a radio program in Indonesia (2001-2011). Mr. Darsasumarja holds a master degree of cyber law from the University of Leeds, England (2012) and a bachelor of law from the University of Indonesia, Jakarta (2008).

Cahyana Ahmadjayadi assumed the role of Independent Commissioner in April 2017. Previously, he served as Commissioner of PT Bank Mandiri (Persero) (2010-2013), an expert at MoCI in Indonesia (2011), Founder of Pengelola Nama Domain Internet Indonesia (PANDI) (2006,) Directorate General for Telematics Application at MoCI in Indonesia (2005), Deputy for Communication and Information Networks at MoCI in Indonesia (2002) and Head of Telkom's Regional V Division, West Java (1993). Dr. Ahmadjayadi holds a doctorate in cyber law from the University of Padjajaran, Bandung (2010), a master degree in technology law/ business law from the University of Padjajaran, Bandung (2004) and a bachelor degree in industrial engineering from Bandung Institute of Technology, Bandung (1980).

Marsudi Wahyu Kisworo assumed the role of Independent Commissioner in May 2019. Prof. Kisworo has served as a professor in computer science at Prasetya Mulya University, Jakarta, and Bina Darma University, Sumatra, since 2019, an expert staff of telematics and cyber defense at the Ministry of Defense since 2017, a supervisor of the team of Movement Towards 100 Smart City of MoCI since 2016, a member of Balai Pertimbangan Pemasyarakatan at the Ministry of Law and Human Rights since 2015. Previously, Prof. Kisworo also served as a member of the board of advisors of the Indonesian Association of Islamic Economist (2015), Chairman of Creative Industry at the Indonesian Association of Professors (2013), Chancellor at Perbanas Institute Jakarta (2010-2018), Pro- Chancellor at Swiss German University Asia (2005-2010), and Chancellor Deputy at Paramadina University (1998-2004). He holds a Ph.D. in computer science from Curtin University of Technology, Australia (1992), a post graduate diploma in computer science from Curtin University of Technology, Australia (1990), and a bachelor degree in electrical engineering from Bandung Institute of Technology, Bandung (1983).

Board of Directors

Our Board of Directors is responsible for our overall management and day-to-day operations under the supervision of the Board of Commissioners. The Board of Directors consists of nine members, including a President Director.

The following table sets forth the functions and authority of our Directors.

Role	Functions and Authority
Director of Consumer Services	<ol style="list-style-type: none"> 1. Responsible for the business strategy to drive disruptive competitive growth through winning competition and growing the fixed and digital life and smart platform segment business portfolio. 2. Oversees our parenting strategy by implementing strategic control, coordination and subsidiary performance management over the consumer CFU, in order to create company value through optimizing and harmonizing relations between our Company and our subsidiaries and managing the operations of subsidiaries under the consumer CFU.
Director of Enterprise and Business Service	<ol style="list-style-type: none"> 1. Responsible for the business strategy to drive disruptive competitive growth through winning competition and growing the enterprise digital segment business portfolio (enterprise, government and business). 2. Oversees our parenting strategy by implementing strategic control, coordination and subsidiary performance management over the enterprise CFU, in order to create company value through optimizing and harmonizing relations between our Company and our subsidiaries and managing the operations of subsidiaries under the enterprise CFU.
Director of Wholesale and International Service	<ol style="list-style-type: none"> 1. Responsible for the business strategy to drive disruptive competitive growth through winning competitions and growing the wholesale and international segment business portfolio. 2. Oversees our parenting strategy by implementing strategic control, coordination and subsidiary performance management over the wholesale and international CFU, in order to create company value through optimizing and harmonizing relations between our Company and our subsidiaries and managing the operations of subsidiaries under the wholesale and international CFU.
Director of Digital Business	Responsible for the formulation and availability of an innovation strategy to optimize the digital services business and explore digital business opportunities.
Director of Network and IT Solution	<ol style="list-style-type: none"> 1. Responsible for the business strategy to leverage our existing resources in order to develop and exploit our established businesses and services by utilizing infrastructure and IT solutions to support our business portfolio synergistically. 2. Oversees our parenting strategy over the network, IT and solutions functional unit in order to create company value through optimizing and harmonizing the functional management of network and IT solutions within our Group.
Director of Strategic Portfolio	Responsible for the formulation and availability of the corporate level strategy, including directional strategy, portfolio strategy and parenting strategy, and exploring new sources of growth through alliances and acquisitions and synergies.
Director of Finance	<ol style="list-style-type: none"> 1. Responsible for the formulation and availability of the corporate level strategy, including portfolio strategy and parenting strategy with regard to financial operations and procurement in order to encourage optimal financial performance and assets supply in realizing disruptive strategic growth within our Group. 2. Unless otherwise stipulated by the Board of Directors, the Director of Finance is acting as Telkom's representative at shareholders' general meeting of Telkom's subsidiaries. 3. Oversees our parent company's strategy over the financial functional unit for controlling asset management and asset leverage by implementing strategic control, coordination and subsidiary performance management, with the ultimate goal of creating company value through optimizing and harmonizing relations between our Company and our subsidiaries.
Director of Human Capital Management	<ol style="list-style-type: none"> 1. Responsible for disseminating our corporate strategy, including directional strategy, portfolio strategy and parenting strategy on aspects related to the development of human capital, employee organization, corporate culture, leadership architecture and industrial relations.

Role	Functions and Authority
	2. Oversees human capital management within the Telkom Group and supervises the Pension Fund and Telkom Foundation (<i>Yayasan Telkom</i>) by implementing strategic control, coordination and foundation performance management in order to create Company value through optimizing and harmonizing relations between our Company and our subsidiaries and managing the operations of subsidiaries under the human capital management functional unit.

As of December 31, 2019, the Board of Directors consisted of nine members as listed below:

Name	Age	Date of Birth	Director Since	Position
Ririek Adriansyah	56	September 2, 1963	2019	President Director ⁽¹⁾
Harry Mozarta Zen	50	January 9, 1969	2016	Director of Finance ⁽²⁾
Zulhelfi Abidin	57	January 1, 1962	2017	Director of Network and IT Solution
Siti Choiriana	49	May 28, 1970	2018	Director of Consumer Service
Faizal Rochmad Djoemadi	52	December 12, 1967	2019	Director of Digital Business
Achmad Sugiarto	54	August 22, 1965	2019	Director of Strategic Portfolio
Edwin Aristiawan	50	October 14, 1969	2019	Director of Wholesale and International Service
Edi Witjara	47	November 17, 1972	2019	Director of Human Capital Management
Bogi Witjaksono	52	February 8, 1967	2019	Director of Enterprise and Business Service

(1) This position is of the same level as Chief Executive Officer ("CEO").

(2) This position is of the same level as Chief Financial Officer ("CFO").

Each of our Directors was a citizen and domiciled in Indonesia as of December 31, 2019. Set forth below is a brief biography of each of our Directors:

Ririek Adriansyah assumed the role of President Director in May 2019. He previously served as President Director of Telkomsel (2015-2019), Director of Wholesale and International Service (2014), Director of Compliance and Risk Management (2012-2013), President Director of Telin (2011-2012), Director of Marketing and Sales of Telin (2010-2011), and Director International Carrier Service of Telin (2008-2010). Mr. Adriansyah holds a bachelor degree in electrical engineering from Bandung Institute of Technology, Bandung (1989).

Harry Mozarta Zen assumed the role of Director of Finance in April 2016. He has also served as President Commissioner of Telkom Property since 2016 and as a commissioner of Telkomsel since 2016. Prior to his appointment as our Director, Mr. Zen served as President Director of PT Credit Suisse Securities Indonesia (2008-2015), Director of Barclays Capital (2007-2008), Co-Head of investment banking at PT Bahana Securities (2001-2007), Assistant Vice President Global Corporate Banking at Citibank Co (1996-2001) and an Official Assistant Global Consumer Banking at Citibank Co (1993-1994). Mr. Zen holds an MBA in corporate finance and financial institutions and markets from the State University of New York, Buffalo (1996) and a bachelor degree in metallurgical engineering from the University of Indonesia, Jakarta (1993).

Zulhelfi Abidin assumed the role of Director of Network and IT Solution in April 2017. He also served as President Commissioner of PT Infrastruktur Telekomunikasi Indonesia ("Telkom Infratel") since 2019. Mr. Abidin previously served as President Commissioner of Telkom Sigma (2018-2019), and President Commissioner of PT Infrastruktur Telekomunikasi Indonesia (2017-2018). Prior to his appointment as Director, Mr. Abidin served as Director of Bank Rakyat Indonesia (2015-2017), Senior Executive Vice President of Bank Rakyat Indonesia (2014-2015), Commissioner of Bank BRI Syariah (2012-2015) and Head of Information Systems Technology of Bank Rakyat Indonesia (2007-2014). Mr. Abidin holds a master degree in computer science from the University of Wollongong, Australia (1996) and a bachelor degree in informatics engineering from Bandung Institute of Technology, Bandung (1987).

Siti Choiriana assumed the role of Director of Consumer Service of Telkom in April 2018. She has also served as President Commissioner of PT Telkom Akses ("Telkom Akses") since 2018. Prior to her appointment as Director, she served as Commissioner of Telkom Sigma (2017-2018), Executive Vice President of our Enterprise Service Division

(2013-2018), President Commissioner of Patrakom (2016-2017), Commissioner of AdMedika (2016), Commissioner of Finnet (2013-2015), and Deputy Executive Vice President of our Enterprise Service Division (2012-2013). She holds a master degree in technology management from Surabaya Institute of Technology, Surabaya (2005) and a bachelor degree in electrical engineering from Surabaya Institute of Technology, Surabaya (1993).

Faizal Rochmad Djoemadi assumed the role of Director of Digital Business in May 2019. He also served as President Commissioner of Telkom Sigma since 2019 and President Commissioner of PT Metra-Net since 2019. Previously, he served as President Director of Telin (2016-2019), Executive Vice President of our Wholesale Service Division (2015-2016), and Deputy Executive General Manager of our Wholesale Service Division (2012-2014). Dr. Djoemadi holds a doctorate in management from Brawijaya University, Malang (2019), a master degree in electrical engineering from University of Sasakatchewan, Canada (1998) and a bachelor degree in electrical telecommunications engineering from Surabaya Institute of Technology, Surabaya (1991).

Achmad Sugiarto assumed the role of Director of Strategic Portfolio in May 2019. Previously, he served as Director of Telkom Sigma (2017-2019), Senior Vice President Synergy and Portfolio (2015-2017), and Executive General Manager of our Digital Business Division (2014-2015). Mr. Sugiarto holds a master degree in management from Airlangga University, Surabaya (1998) and a bachelor degree in industrial engineering from Trisakti University, Jakarta (1984).

Edwin Aristiawan assumed the role of Director of Wholesale and International Service in May 2019. He has also served as President Commissioner of Mitratel since 2019 and President Commissioner of Telin since 2019. Prior to his appointment as Director, he served as Executive Vice President of Telkom's Regional Division III, Bandung (2019), Executive Vice President of Telkom's Regional Division VI, Balikpapan (2016-2019), Deputy Executive Vice President of Infrastructure of Telkom's Regional Division II Jakarta (2015-2016), and Deputy Executive General Manager of our Telkom's Regional Division IV Semarang (2014-2015). Mr. Aristiawan holds a master degree in management from Sekolah Tinggi Manajemen Bisnis, Bandung (2002) and a bachelor degree in electrical engineering from Surabaya Institute of Technology, Surabaya (1993).

Edi Witjara assumed the role of Director of Human Capital Management in May 2019. He has also served as President Commissioner of PT Multimedia Nusantara ("Metra") since 2019 and President Commissioner of Infomedia since 2019. Previously, he held various positions at Telkom: he served as Senior Vice President of Financial Planning Analysis and Control (2018-2019), Chief of Business Program Shared Service Organization (2017-2018), Senior Vice President Financial Planning and Analysis (2016-2018), Commissioner of Telkom Akses (2013-2016), and Vice President of Management Accounting (2013-2016). Dr. Witjara holds doctorate in strategic business management from Padjajaran University, Bandung (2018), a master degree in business law from Padjajaran University, Bandung (2009) and a bachelor degree in electrical engineering from Sekolah Tinggi Teknologi Telkom, Bandung (1995).

Bogi Witjaksono assumed the role of Director of Enterprise and Business Service in May 2019. He has also served as President Commissioner of PT Teltranet Aplikasi Solusi ("Telkom Telstra") since 2019, President Commissioner of Telkomsat since 2019 and Commissioner of Telkom Metra since 2019. Prior to his appointment as Director, he served as Deputy President Director of Telkom Satellite (2018-2019), President Director of Patrakom (2015-2019), and Managing Director of Metrasat (2012-2019). Mr. Witjaksono holds a master degree in telecommunications engineering (mobile communications) from Bandung Institute of Technology, Bandung (1995) and a bachelor degree in electrical engineering from Surabaya Institute of Technology, Surabaya (1989).

Other than as provided for under our Articles of Association, none of our Commissioners or Directors has any arrangement or understanding with any major shareholder, customer, supplier or with us pursuant to which such person was selected as a Commissioner or Director, nor are any such arrangements, understanding or contracts proposed or is under consideration. There is no family relationship between or among any of the Commissioners or Directors listed above. The business address of our Commissioners and Directors is Jl. Jend. Gatot Subroto Kav.52 Jakarta - 12710, Indonesia.

B. COMPENSATION

Compensation of Commissioners and Directors

Compensation of Commissioners and Directors are determined by the shareholders at the GMS, who grant authority and authorization to the Board of Commissioners, with prior approval from the holder of the Dwiwarna Share, to decide on the amount of *tantiem* which will be given to the members of Board of Directors and Board of Commissioners for the 2019 financial year and also as to the amount of the salary or honorarium, including facilities and allowances for the members of Board of Directors and Board of Commissioners for the 2019 financial year. The Nomination and Remuneration Committee is responsible for formulating the honorarium of our Commissioners and Directors, which is further discussed in a joint meeting of our Board of Directors and Board of Commissioners for approval.

Each Commissioner is entitled to monthly remuneration and benefits. They are also entitled to bonuses based on our business performance and achievements.

Each Director is entitled to a remuneration consisting of a monthly salary and other allowances. Directors also receive an annual bonus based on our business performance and achievements. The bonus and incentive are budgeted every year based on a formula prepared by the Nomination and Remuneration Committee and confirmation from the Board of Commissioners before being considered by shareholders at the GMS.

In accordance with regulations relating to SOEs in Indonesia, all of our Commissioners and Directors are entitled to post-employment benefits, including an insurance scheme into which we are required to contribute up to 25% of the salary of our Commissioners and Directors. There are no service contracts providing for benefits to be provided for our Directors or Commissioners upon their termination as Directors or Commissioners. We also provide our Commissioners and Directors with long-term incentives in the form of shares or for our Independent Commissioners in the form of cash.

We budgeted incentives for the current year but will distribute such incentives in the following year after the publication of our Consolidated Financial Statements and having the approval in a GMS. We only distribute cash incentives if we achieve certain performance targets.

For 2019, the total remuneration paid to the entire Board of Commissioners was Rp92.7 billion. Taxes from remuneration borne by our Company amounted to Rp27.0 billion. The table below sets forth the remuneration that our Board of Commissioners received in 2019:

Board of Commissioners	Honorarium and	Tantiem, THR ⁽¹⁾ , Long-	Total
	Allowance	Post-employment Benefit	
	(Rp million)		
Rhenald Kasali ⁽²⁾	2,475	—	2,475
Marsudi Wahyu Kisworo ⁽²⁾	2,220	—	2,220
Margiyono Darsasumarja	3,421	10,233	13,654
Cahyana Ahmadjayadi	3,422	10,233	13,655
Edwin Hidayat Abdullah ⁽⁴⁾	3,165	6,990	10,155
Isa Rachmatarwata ⁽⁵⁾	3,413	6,990	10,403
Ismail ⁽²⁾	2,214	—	2,214
Marcelino Rumambo Pandin ⁽²⁾	2,214	—	2,214
Hendri Saparini ⁽³⁾	1,097	11,370	12,467
Rinaldi Firmansyah ⁽³⁾	1,388	10,233	11,621
Pamijati Pamela Johanna Waluyo ⁽³⁾	1,392	10,233	11,625

Notes:

- (1) "THR" refers to *Tunjangan Hari Raya* or religious holiday allowance.
- (2) Since May 24, 2019.
- (3) Up to May 24, 2019.
- (4) Up to November 18, 2019.
- (5) Up to December 23, 2019.

For 2019, the total remuneration of the entire Board of Directors was Rp163.3 billion. Taxes from remuneration borne by our Company amounted to Rp67.7 billion. The table below sets forth the remunerations that our Board of Directors received in 2019:

Board of Directors	Honorarium	Tantiem and THR ⁽¹⁾	Allowance	Total
	(Rp million)			
Ririek Adriansyah ⁽²⁾	2,549	—	1,081	3,630
Harry Mozarta Zen	3,732	15,107	933	19,772
Siti Choiriana	3,732	10,344	933	15,009
Bogi Witjaksono ⁽²⁾	2,194	—	949	3,143
Zulhelfi Abidin	3,732	15,107	935	19,774
Edwin Aristiawan ⁽²⁾	2,194	—	949	3,143
Edi Witjara ⁽²⁾	2,323	—	993	3,316
Faizal Rochmad Djoemadi ⁽²⁾	2,190	—	949	3,139
Achmad Sugiarto ⁽²⁾	2,193	—	949	3,142
Alex Janangkih Sinaga ⁽³⁾	1,870	17,773	523	20,166
David Bangun ⁽³⁾	1,590	15,107	741	17,438
Dian Rachmawan ⁽³⁾	1,590	15,107	464	17,161
Abdus Somad Arief ⁽³⁾	1,590	15,107	464	17,161
Herdy Rosadi Harman ⁽³⁾	1,698	15,107	464	17,269

Note:

- (1) "THR" refers to *Tunjangan Hari Raya* or religious holiday allowance.
- (2) Since the AGMS on May 24, 2019.
- (3) Up to May 24, 2019.

The total accrued remuneration of Board of Commissioners and Directors for 2019 was Rp286.4 billion consisting of tantiem. Neither our Directors nor the directors of our subsidiaries will receive benefits upon the termination of their respective employment with our subsidiaries.

C. BOARD PRACTICES

Our Board of Commissioners acts as our overall supervisory and monitoring body with principal functions including planning and development, operations and budgeting in compliance with our Articles of Association, and to carry out the mandate and resolutions of the AGMS and EGMS. The Board of Commissioners does not have the authority to run or manage our Company, except in the exceptional situation when all members of the Board of Directors are suspended for any reason. The Board of Commissioners provides advice and opinions to the AGMS with respect to financial reporting, business development, appointment of auditors, and other important and strategic matters related to corporate actions. The Board of Commissioners also reviews our work plan and budget, keeps abreast of our progress, and in case our Company gives an indication of any decline in the growth of our business immediately requests the Board of Directors to notify the shareholders and provides recommendations on measures for mitigation. Finally, the Board of Commissioners ensures that our corporate governance program is properly applied and maintained in accordance with the applicable regulations.

The Board of Commissioners is obliged to carry out its duties and responsibilities in accordance with our Articles of Association, decisions made during any AGMS and EGMS and applicable laws and regulations.

The Board of Commissioners is assisted by a Board of Commissioners Secretary as well as the Audit Committee, the Nomination and Remuneration Committee and the Planning and Risk Evaluation and Monitoring Committee. As necessary, the Board of Commissioners may seek assistance from professional advisors.

Meetings of the Board of Commissioners are held at least once every two months. The Board of Commissioners must hold joint meetings with the Board of Directors at least once every four months. Decisions at Board of Commissioners meetings are taken through a process of deliberation and consensus. If consensus cannot be reached, decisions are based on a majority vote of the Commissioners in attendance or who are represented at the meeting. The quorum for all Board of Commissioners meetings requires attendance in person, through electronic media (such as teleconference or video

conference) or by proxy granted to another Commissioner, which shall represent more than one-half of the total number of Commissioners.

The Board of Directors is generally responsible for managing our business in accordance with applicable laws, our Articles of Association and the policies and directives issued by the GMS and the Board of Commissioners. The Board of Directors also is authorized to act for and on our behalf, inside or outside a court of law, on any matter and for any event, with another party.

Meetings of the Board of Directors are held at least once a month and may be convened at any time deemed necessary or at the request of one or more members of the Board of Directors, or at the request of the Board of Commissioners.

Meetings of the Board of Directors are chaired by the President Director. In the event that the President Director is unavailable or absent for any reason, the meeting will be chaired by the Vice President Director. If the Vice President Director is unavailable, the meeting will be chaired by any Director appointed by the President Director. In the absence of the President Director and the Vice President Director and no appointment has been made, any director who has the longest tenure will chair the meeting.

Decisions at Board of Directors meetings are taken through a process of deliberation and consensus. If consensus cannot be reached, decisions are based on a majority vote of the Directors in attendance at the meeting. In the event of a tie, the proposed resolution will be decided by a Director who chairs such Board of Directors meeting. The quorum for all Board of Directors meeting requires attendance in person, or through video conference or by proxy granted to another Director, of Directors representing more than one-half of the total number of Directors. Each Director who is present at a Board of Directors meeting is entitled to cast one vote (and one vote for each other Director represented by proxy).

Individual Directors are charged with specific responsibilities. For more detailed information regarding the functions and authority of each of our Directors, see "— Directors and Senior Management — Board of Directors."

Audit Committee

The Audit Committee operates under the authority of the Audit Committee Charter, which was adopted under a Decree of the Board of Commissioners No.10/KEP/DK/2018 dated October 31, 2018 in relation to the Charter of the Telkom Group Audit Committee. The Audit Committee Charter is regularly evaluated and, if necessary, amended to ensure compliance with OJK and SEC requirements and other relevant regulations.

The Audit Committee Charter outlines the Audit Committee's purpose, function and responsibilities. It provides that the Audit Committee is responsible for, among other things:

- assisting the Board of Commissioners with the appointment of independent auditors;
- conducting oversight of the integrated audit process;
- providing an independent opinion in the event of differences of opinion between our management and independent auditors;
- approving non-audit services to be performed by our independent auditors;
- reviewing our Consolidated Financial Statements and the effectiveness of internal controls over financial reporting (ICOFR);
- monitoring the effectiveness of our internal audit;
- monitoring compliance with laws and regulations (including capital market laws) relating to our business;

- monitoring the effectiveness of management;
- monitoring the steps taken by Directors to follow up on the findings of our internal auditors;
- analyzing and providing advice to the Board of Commissioner relating to potential conflicts of interest;
- maintaining confidentiality of documents, data, and information; and
- carrying out additional tasks that are assigned by the Board of Commissioners, especially on financial and accounting related matters as well as other obligations required by the Sarbanes-Oxley Act of 2002.

Subject to the written approval from the Board of Commissioners, the Audit Committee may engage an independent consultant or other professional advisors to assist in carrying out its functions. In addition, the Audit Committee receives and handles complaints.

Audit Committee Independence

OJK Rule No.55/POJK.04/2015 on Establishment and Code of Conduct for Audit Committees (the "OJK Audit Committee Regulation") requires the board of commissioners of a public company to establish an audit committee which is chaired by an independent commissioner. In addition, the OJK Audit Committee Regulation requires each member of such audit committee to be either an independent commissioner or external independent member, with the audit committee comprised of at least three members with at least one independent commissioner presiding over the audit committee as chairman and one external independent member and at least one member of the audit committee having expertise in accounting or finance. We also require at least one external independent member to have expert knowledge (in the context of Item 16A of Form 20-F) in the field of accounting or finance.

In order to be considered independent under the prevailing Indonesian rules, the members of the audit committee may not, among other things:

- be an insider of a public accountant firm, law firm, appraisal firm or other firm that has provided assurance, non-assurance, appraising or consultation services to us within six-month period prior to his or her appointment as an audit committee member;
- have been our executive officer within six-month period prior to his or her appointment as an audit committee member;
- be affiliated with our principal shareholder (owner of at least 20% of its share capital);
- have a family relationship (affiliated) with any member of the board of commissioners or board of directors;
- own, directly or indirectly, any of our shares; and
- have any business relationship, directly or indirectly, that relates to our businesses.

Currently, the Audit Committee consists of five members: (i) Margiyono Darsasumarja (Independent Commissioner and Chairman of the Audit Committee); (ii) Tjatur Purwadi (Secretary of the Audit Committee and External Independent Member); (iii) Marcelino Rumambo Pandin (Commissioner); (iv) Marsudi Wahyu Kisworo (Independent Commissioner); and (v) Sarimin Mietra Sardi (External Independent Member).

Audit Committee Financial Expert

See Item 16A "Audit Committee Financial Expert."

Exemption From U.S. Listing Standards For Audit Committees

See Item 16D "Exemptions from the Listing Standards for Audit Committees."

Nomination and Remuneration Committee

Our Nomination and Remuneration Committee was formed pursuant to Board of Commissioner's decree No.08/KEP/DK/2019 dated June 10, 2019 regarding the Establishment of the Nomination and Remuneration Committee.

The objective of the Nomination and Remuneration Committee is to establish, administer and enforce corporate governance principles in the process of nomination for strategic management positions and the determination of the Board of Directors remuneration. The duties of the Nomination and Remuneration Committee include the following:

- to establish our organizational structure one level below the Board of Directors, with reference to the principles of good corporate governance.
- to assist the Board of Commissioners who are engaged with the Directors in selecting candidates for strategic positions in our Company.
- to give recommendations to the Board of Commissioners to be conveyed to the holder of series A Dwiwarna shares regarding:
 - the composition of the Board of Directors.
 - candidates for the Board of Directors and Board of Commissioners of our subsidiaries.
 - candidates for the President Director and President Commissioner of all of Company's subsidiaries.
- provide recommendations to the Board of Commissioners to be submitted to the General Meeting of Shareholders through the holder of the series A Dwiwarna share concerning the policies, amount and / or structure for the remuneration of the Board of Directors and Board of Commissioners.
- determine remuneration of the Board of Directors and Board of Commissioners in the form of fixed salary or honorarium, allowances and facilities and variable incentives.
- review the employment contract and/or performance statement of each member of the Board of Directors.

Currently, our Nomination and Remuneration Committee consists of five members: (i) Cahyana Ahmadjayadi (Independent Commissioner and Chairman of the Nomination and Remuneration Committee), (ii) Ario Guntoro (Secretary of the Committee), (iii) Ismail (Commissioner), (iv) Marcelino Rumambo Pandin (Commissioner), and (v) Marsudi Wahyu Kisworo (Independent Commissioner). In the execution of their tasks, members of the Nomination and Remuneration Committee have to act independently.

D. EMPLOYEES

We had a total of 24,272 employees as of December 31, 2019, consisting of 11,059 Telkom employees and 13,213 employees of our subsidiaries. As of December 31, 2019, 24,033 of our employees were located in Indonesia and 239 of our employees were located overseas.

As of December 31, 2019, we had 310 senior management employees, compared with 403 senior management employees as of December 31, 2018. The total number of middle management employees increased from 6,093 employees as of December 31, 2018 to 6,377 employees as of December 31, 2019. The number of supervisor level employees increased from 11,050 employees as of December 31, 2018 to 12,950 employees as of December 31, 2019. Other

employees decreased from 6,525 employees as of December 31, 2018 to 4,635 employees as of December 31, 2019. We did not employ a significant number of temporary employees in 2019. The following table shows our employee profile by position.

Position	As of December 31, 2019			
	Telkom	Subsidiaries	Telkom Group	Percentage (%)
Senior Management	128	182	310	1.3
Middle Management	3,383	2,994	6,377	26.3
Supervisors	5,969	6,981	12,950	53.3
Others	1,579	3,056	4,635	19.1
Total	11,059	13,213	24,272	100.0

Our employee profile based on educational background as of December 31, 2019 was dominated by university graduates which accounted for 57.6% of our total employees. This reflects our focus to recruit highly educated candidates with the right qualifications to support our growth. The following table shows our employee profile by educational background.

Level of Education	As of December 31, 2019			
	Telkom	Subsidiaries	Telkom Group	Percentage (%)
Pre University	2,185	3,100	5,285	21.8
Diploma Graduates	1,492	535	2,027	8.4
University Graduates	5,602	8,386	13,988	57.6
Post Graduates	1,780	1,192	2,972	12.2
Total	11,059	13,213	24,272	100.0

Retirement Program

The retirement age for all our employees is 56 years. We have two pension schemes: (a) Defined Benefit Pension Plan ("DBPP"), which is applicable to permanent employees who were permanent prior to July 1, 2002 (other than our Directors) and (b) Defined Contribution Pension Plan ("DCPP") which is applicable to permanent employees (other than our Directors) who were permanent on or after July 1, 2002.

a. Defined Benefit Pension Plan

DBPP is calculated for participants based on years of service, salary level at retirement and is transferable to dependent families if the respective employee passes away. Telkom Pension Fund administers the program while the main source of pension fund comes from us and employee contributions. Employees participate in the program with 18% of their basic salary (before March 2003, the employee contribution rate was 8.4%) while we contribute the remaining balance. The minimum monthly pension benefit for retired employees is approximately Rp600,000 per month, or minimum Rp450,000 per month for spouses of the retired employees. We did not make any contribution to the DBPP for 2017 and 2018. In 2019, we contributed Rp233 billion to the DBPP.

Telkomsel operates its own DBPP for its employees. With this program, employees are entitled to retirement benefits calculated based on their latest basic salary or take-home pay and years of services. PT Asuransi Jiwasraya (Persero) manages this program under annuity insurance contracts. Up to 2004, employees would contribute 5% of their monthly basic salaries to the program, while Telkomsel would contribute the remaining balance. Since 2005, Telkomsel has contributed the entire amount to the program, which totaled Rp131 billion, Rp125 billion for 2017 and 2018, respectively, and was Rp207 billion in 2019.

b. Defined Contribution Pension Plan

We operate a DCPP for permanent employees other than Directors who were permanent on or after July 1, 2002. DCPP is managed by several appointed financial institutions pension fund from which employees can choose. Our contribution to the financial institutions pension fund is determined by the portion taken from participating employee's

basic salary, which totaled Rp10 billion, Rp13 billion and Rp55 billion, for the years ended December 31, 2017, 2018 and 2019, respectively.

Management of Employee Relations

Pursuant to Law No.13 of 2003 on Manpower and Law No.21 of 2000 on Employee Union/Labor Union, our employees established SEKAR (*Serikat Karyawan*). As of December 31, 2019, SEKAR represented a total of 9,941 employees or 89.9% of our total workforce (excluding the employees of our subsidiaries).

Pursuant to Law No.13 of 2003 on Manpower and Regulation of the Minister of Manpower and No.28 of 2014 on Procedure for Drafting and Ratifying Corporate Regulation also Drafting and Registering Collective Labor Agreement, SEKAR is entitled to represent employees in the negotiation of collective labor agreements with our management. Our Company and SEKAR entered into a seventh collective labor agreement dated January 19, 2018 as lastly amended by the amendment agreement dated January 29, 2020 (the "Seventh CWA"). The Seventh CWA had an initial effective period of two years which has been extended for a period of one year until December 19, 2020.

The employees of Telkomsel, PT Infomedia Nusantara, Metra Digital Media and Graha Sarana Duta have also established employees' unions. Telkomsel employees' union (*Serikat Pekerja Telkomsel* or SEPAKAT) represented a total of 4,470 employees or 80% of Telkomsel's total employees. Infomedia Nusantara employees' union (*Serikat Pekerja Infomedia Nusantara* or SPIN) represented a total of 225 employees or 76.5% of Infomedia Nusantara's total employees. On the other hand, Metra Digital Media and Graha Sarana Duta's employees' union (*Serikat Pekerja Metra Digital* or SPMD and *Serikat Pekerja Graha Sarana Duta* or SEJAGAD) respectively represented a total of 156 employees (73.6%) and 492 employees (65.9%) of each subsidiaries total employees. Neither Telkom nor Telkom Group subsidiaries had experienced material labor action.

E. SHARE OWNERSHIP

As of March 31, 2020, none of our Commissioners, Directors or Senior Managers beneficially owned more than 1.0% of our outstanding shares of common stock. For information regarding share ownership of our Commissioners, Directors and Senior Management, see Item 7 "Major Shareholders and Related Party Transactions — Major Shareholders."

Employee Stock Ownership Program

The Employee Stock Ownership Program ("ESOP") is an employee-owner scheme that provides our employee with an ownership interest in our Company. At our initial public offering on November 14, 1995, a total of 116,666,475 shares were issued to 43,218 employees. On June 14, 2013, we transferred a portion of our treasury stock to our employees as part of the 2012 annual incentives. On such date, 59,811,400 (equal to 299,057,000 shares after stock split) shares of common stock were transferred to 24,993 employees with a total fair value of Rp661 billion. As of December 31, 2019, 113,756,710 of our shares were owned by 12,937 of our employees and our retirees. From 2015 through 2019, we did not exercise any ESOP. We also provide our Commissioners (except for Independent Commissioners) and Directors with long-term incentives in the form of shares. See "— Compensation — Compensation of Commissioners and Directors."

Stock Split and Depositary Receipt Ratio

At our GMS on April 19, 2013, a stock split with a ratio of 1:5 was approved by our shareholders. New shares of common stock were deposited into shareholders accounts on September 2, 2013 as part of the stock split. In connection with our stock split, effective September 3, 2013, we changed the ratio of our ADSs from one ADS representing 40 shares of common stock, par value Rp250 per share, to one ADS representing 200 shares of common stock, par value Rp50 per share.

On October 26, 2016, we changed the ratio of our ADSs from one ADS representing 200 shares of common stock, par value Rp50 per share, to one ADS representing 100 shares of common stock, par value Rp50 per share.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. MAJOR SHAREHOLDERS

Shareholder Composition

Our authorized capital consists of one Dwiwarna Share and 399,999,999,999 shares of common stock. Our authorized shares, 99,062,216,600 of which are issued and fully paid, consists of one Dwiwarna Share and 99,062,216,599 shares of common stock. The Dwiwarna Share is owned by the Government and carries special voting rights, such as the right to nominate, and to veto the appointment and removal of, any director or commissioner, the right to veto the issuance of new shares and amendments to our Articles of Association, including amendments to merge or dissolve us, to increase or decrease our authorized capital or to reduce our subscribed capital. The material rights and restrictions applicable to the common stock also apply to the Dwiwarna Share, except that the Government cannot transfer the Dwiwarna Share. The Government's ownership of the Dwiwarna Share gives it effective control over our Company even if it reduces its ownership of our common stock, and its rights with respect to the Dwiwarna Share may only be modified by an amendment of our Articles of Association, which the Government may veto.

The table below sets forth the composition of our shareholders as of March 31, 2020.

	Dwiwarna Share	Common Stock	Percentage of Ownership
Government	1	51,602,353,559	52.09
Public		47,459,863,040	47.91
Total	1	99,062,216,599	100

Shareholders Owning More Than 5% of Shares (Major Shareholder)

The table below sets forth the shareholding of our major shareholder which own more than 5% of our shares as of March 31, 2020.

Title of Class	Person or Group	Number of Shares	Percentage of Ownership
Dwiwarna Share	Government	1	-
Common Stock	Government	51,602,353,559	52.09

The percentage of shares held by the Government was 52.09% as of March 31, 2018, 2019 and 2020, respectively.

Shares Owned by Commissioners and Directors

The table below sets forth information regarding persons known to us to own more than 5% of each class of our shares (whether directly or beneficially through the ADSs) as of March 31, 2020. No other persons own 5% or more of our shares of common stock.

Commissioners or Directors	Number of Shares	Percentage of Ownership
Commissioners		
-	—	—
Directors		
Ririek Adriansyah	1,156,955	<0.01
Harry Mozarta Zen	977,292	<0.01
Faizal Rochmad Djoemadi	182,000	<0.01
Bogi Witjaksono	55,000	<0.01
Edi Witjara	32,500	<0.01
Siti Choiriana	540	<0.01
Total	2,404,287	<0.01

Shareholders Owning Less Than 5% of Shares

The table below sets forth the shareholding of our shareholders which owned less than 5% of our shares of common stock as of March 31, 2020.

Group	Number of Shares of Common Stock Owned	Percentage of Ownership
Foreign		
Business Entities	36,103,394,510	36.45
Individuals	20,427,455	0.02
Local		
Business Entities		
Companies	3,303,428,477	3.33
Mutual Funds	2,874,672,388	2.90
Insurance Companies	3,151,870,797	3.18
Pension Funds	1,210,479,900	1.22
Others Business Entities	87,577,050	0.08
Individuals	708,012,463	0.72
Total	47,459,863,040	47.91

Relationship with the Government and Government Agencies

Our relationship with the Government is multi-faceted. The Government is our majority and controlling shareholder. It is also our regulator as it adopts, administers and enforces relevant laws that regulate the telecommunications sector, sets tariffs and issues licenses. It is also one of our customers and one of our lenders.

As used in this section, the term "Government" includes the Government of Indonesia and its ministries, directly owned government departments and agencies, but excludes SOEs.

The Government as Shareholder

The Government is our majority and controlling shareholder and owned 52.09% of our issued and outstanding common stock as of March 31, 2020. Its ownership of the Dwiwarna Share gives it special voting and veto rights. Under the relevant laws, the "ownership" of our common stock and the single outstanding Dwiwarna Share is vested in the

Ministry of Finance. In turn, and under the authority of the Ministry of Finance, the MSOE exercises the rights vested in these securities as our "controlling shareholder."

As our majority shareholder and controlling shareholder, the Government has an interest in our performance, both in terms of the service we provide to the nation and our ability to operate on a commercial basis. The material rights and restrictions that apply to our common stock also apply to the Dwiwarna Share, except that the Government may not transfer the Dwiwarna Share, and has right of veto with regard to, among other things: (1) the nomination, appointment and removal of our Directors; (2) the nomination, appointment and removal of our Commissioners; (3) the issuance of new shares and (4) any amendments to our Articles of Association, including with respect to actions to merge or dissolve our Company, increase or reduce our authorized capital, or reduce our subscribed capital.

Accordingly, the Government effectively has control over these matters even if it owns less than a majority share of the outstanding shares of common stock. The Government's rights with respect to the Dwiwarna Share will not expire unless there is a change that requires the amendment of our Articles of Association, which would require the consent of the Government as the holder of the Dwiwarna Share.

The Government as Regulator

The Government regulates the telecommunications sector through the MoCI. The MoCI has the authority to issue regulations that implement laws, which are typically broad in scope. Through such decrees the MoCI defines the structure of the industry, determines tariff formulas, establishes our USO, and otherwise controls many factors that could influence our competitive position, operations and financial position. Through the DGPI, the MoCI regulates the allocation of frequencies and sets numbers for fixed telephone lines. We are required to obtain a license from the DGPI for each type of service offered, including licenses for the frequencies we use (as allocated by the MoCI). We and other operators are required to pay frequency usage fees. Telkomsel also holds licenses issued by the MoCI (some of which were previously issued by the Minister of Communications) for the provision of cellular services, and from the Indonesian Investment Coordinating Board in relation to Telkomsel's investments for the development of cellular phone services with national coverage, including the expansion of network coverage. The Government, through the MoCI as regulator, has the authority to issue new licenses for the establishment of new joint ventures and other new arrangements, particularly in telecommunications.

Certain licenses require us to pay a concession fee to operate. We pay concession fees for telecommunications services provided and radio frequency usage charges to the MoCI. Concession fees amounted to Rp1,812 billion in 2018 and Rp1,868 billion (US\$135 million) in 2019. Concession fees as a percentage of total expenses amounted to 1.9% in 2018 and 2.0% in 2019. Radio frequency usage charges amounted to Rp5,473 billion in 2018 and Rp5,736 billion (US\$413 million) in 2019. Radio frequency usage charges as a percentage of total expenses amounted to 5.8% in 2018 and 6.1% in 2019. USO charges to the MoCI amounted to Rp485 billion in 2018 and Rp502 billion (US\$36 million) in 2019. USO charges as a percentage of our total expenses amounted to 0.5% in 2018 and 0.5% in 2019.

The Government as Lender

In July 1994, the Government arranged a facility under which certain foreign institutions provided us with a two-step loan for certain expenditures (the "sub-loan borrowings"). The sub-loan borrowings were made through the Government and are guaranteed by it. As of December 31, 2019, we had a total of Rp736 billion (US\$53 million), in such outstanding two-step loans, including current maturities. We are required to pay the Government interest and repay the principal, which the Government then remits to the respective lenders. As of December 31, 2019, 83.0% of such sub-loan borrowings were denominated in foreign currencies, with the remaining 17.0% denominated in Rupiah. In 2019, the annual interest rates charged 8.38% on loans repayable in Rupiah, 3.85% on those denominated in U.S. Dollar and 2.95% on those denominated in Japanese Yen.

The Government as Customer

Certain Government departments and agencies purchase services from us as direct customers, the terms of which are negotiated on a commercial basis. No services are provided for free or on an in-kind basis. We deal with these departments and agencies as separate customers. In 2019, the amount of revenues from Government departments and agencies was Rp3,995 billion, which accounted for 2.9% of our consolidated revenues and did not constitute a material part of our revenues. The Government departments and agencies are treated for tariff purposes with respect to connection charges and monthly charges as "residential," which tariffs are lower than the business service rates. This does not apply to the tariffs for local, long distance and IDD calls. In addition, we provide enterprise digital services and solutions to SOEs, including ATM switching, payment gateway and E-Commerce platform services.

It is our policy not to enter into any transactions with affiliates unless the terms are on an arm's length basis as though such transactions are made with a third party. The MSOE has advised us that it would not cause us to enter into transactions with other entities under its control unless the terms were consistent with our policy as referred to above.

Pursuant to OJK regulations, because we are listed on the IDX, any transaction where there is an inherent conflict of interest (as defined below) must be approved by a majority of the holders of our shares of common stock who do not have a conflict of interest in the proposed transaction (i.e. the independent shareholders), unless such conflict of interest existed before listing and was fully disclosed in the offering documents.

OJK regulations define a conflict of interest as a conflict between our economic interests and the shareholders' interests on the one hand and, on the other, the personal economic interests of members of the Board of Commissioners, Board of Directors or other principal shareholders (defined as a holder of 20% or more of our shares of common stock) or their affiliates, either jointly or individually, which may cause losses to us. A conflict of interest also exists if a member of the Board of Commissioners or Board of Directors or a principal shareholder or their respective affiliates is involved in a transaction in which its personal interests may be in conflict with ours and may cause losses to us. The OJK has the authority to enforce these rules regarding conflicts of interest and holders of our shares of common stock are also entitled to bring a suit to enforce these.

Under OJK regulations, transactions between us and other state-owned or state-controlled enterprises may cause a conflict of interest. In such cases, the approval of the independent shareholders must be obtained if a conflict of interest arises. We believe that many transactions conducted with state-owned or state-controlled enterprises are on an arms-length, commercial basis and do not constitute conflict of interest transactions that would require an independent shareholders vote. Such transactions include our sale of telephone services to state-owned or state-controlled enterprises and our purchase of electricity from an SOE. We expect that from time to time, in connection with the development and growth of our business, we would enter into joint ventures, agreements or transactions with such enterprises. Under such circumstances, we may consult with the OJK to determine whether a proposed joint venture, agreement or transaction would require a vote of independent shareholders under OJK rules. If the OJK is of the view that such transaction would not require such a vote, we would proceed without seeking the independent shareholders' approval. Otherwise, we would seek the requisite approval or abandon the proposed action.

Proportion of Common Stock Held in Indonesia and Abroad

As of March 31, 2020, we had 85,341 holders of shares of common stock (including the Government). This total includes 36,123,821,965 shares of common stock held by 2,218 holders of common stock located outside Indonesia. As of the same date, there were 78 ADS shareholders who owned 44,487,666 ADSs.

Change in Control

As of the date of this Annual Report, we are not aware of any plans or developments that could result in a change of control over us, including changes that are still at the planning stage.

B. RELATED PARTY TRANSACTIONS

We are party to certain agreements and engage in transactions with certain parties that are related to us, such as cooperatives and foundations. Such parties include the Government and entities related to or owned or controlled by the Government, such as other SOEs. For further details on our related party transactions, see Note 32 to our Consolidated Financial Statements.

C. INTEREST OF EXPERTS AND COUNSEL

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

See Item 18 "Financial Statements" for our Consolidated Financial Statements filed as part of this Form 20-F.

MATERIAL LITIGATION

In the ordinary course of business, we have been named as defendant in various legal actions in relation with land disputes, monopolistic practice and unfair business competition, and SMS cartel practices.

DIVIDEND POLICY

An AGMS has the authority to determine the amount of dividends we pay. Our dividend payout ratio for 2019 will be decided at the AGMS scheduled for 2020.

Dividend Year	Date of AGMS	Payout Ratio (%) ⁽¹⁾	Amount of Dividends (Rp million)	Dividend per Share After Stock Split (Rp)
2014	April 17, 2015	60	8,782,812 ⁽²⁾	89.46
2015	April 22, 2016	60	9,293,184 ⁽³⁾	94.64
2016	April 21, 2017	70	13,546,411 ⁽⁴⁾	136.75
2017	April 27, 2018	75	16,608,751 ⁽⁵⁾	167.66
2018	May 24, 2019	90	16,228,619 ⁽⁶⁾	163.82

(1) Represents the percentage of profit attributable to owners of the parent paid to shareholders in dividends.

(2) Consists of cash dividend amounting to Rp7,319,010 million and special cash dividend amounting to Rp1,463,802 million.

(3) Consists of cash dividend amounting to Rp7,744,304 million and special cash dividend amounting to Rp1,548,880 million.

(4) Consists of cash dividend amounting to Rp11,611,211 million and special cash dividend amounting to Rp1,935,200 million.

(5) Consists of cash dividend amounting to Rp13,286,997 million and special cash dividend amounting to Rp3,321,754 million.

(6) Consists of cash dividend amounting to Rp10,819,080 million and special cash dividend amounting to Rp5,409,540 million.

TELKOMSEL DIVIDEND

Pursuant to its AGMS on May 29, 2019, Telkomsel approved, the payment of cash dividends in the amount of Rp24,259 billion, which represented 95% of Telkomsel's net profits in 2018. We are entitled to receive 65% of any dividends approved for payment by Telkomsel by virtue of our shareholding therein.

B. SIGNIFICANT CHANGES

See Note 39 to our Consolidated Financial Statements.

ITEM 9. THE OFFER AND LISTING

A. OFFER AND LISTING DETAILS

Our common stock is listed and traded on the IDX under the symbol "TLKM." Our ADSs are also listed and traded on the NYSE under the symbol "TLK" with one ADS representing 100 shares of common stock.

Our Articles of Association do not contain any limitations on the right of any person to own our Series B Shares or to exercise their right to vote. Indonesian capital market regulations do not contain any limitation on the right of any person, whether Indonesian or foreign, to own shares in a company listed on the IDX.

B. PLAN OF DISTRIBUTION

Not applicable.

C. MARKETS

Our common stock is listed and traded on the IDX. Our ADSs are also listed and traded on the NYSE with one ADS representing 100 shares of common stock.

The Indonesian Stock Market

Indonesia Stock Exchange, known as the IDX, emerged out of the December 1, 2007 merger of two stock exchanges operating in two different locations in Indonesia, namely the Jakarta Stock Exchange which was located in Jakarta, the capital city of Indonesia, and the Surabaya Stock Exchange which was located in Surabaya in East Java.

As of December 31, 2019, the IDX had 668 issuers for equity and 106 active brokerage houses. In 2019, IDX recorded a trading volume of around 3,562 billion shares. As of December 31, 2019, the total market capitalization was valued at approximately Rp7,265 trillion (approximately US\$520 billion).

Trading is divided into three segments: the regular market, negotiated market and cash market (except for rights issues, which can only be traded on the cash market and the negotiated market for the first session). The regular market is the mechanism for trading stock in standard lots on a continuous auction basis during exchange hours. Auctions on the IDX on regular market and cash market take place according to the price and time priorities. Price priority refers to giving priority to buying orders at a higher price or selling orders at a lower price. If buying or selling orders are placed at the same price, priority is given to the earlier placed buying or selling order (time priority). Trading on the negotiated market is conducted through direct negotiation between (i) IDX members, (ii) clients through one IDX member, (iii) a client and an IDX member, or (iv) an IDX member and the PT Kliring Penjaminan Efek Indonesia ("KPEI"). KPEI provides clearing and guarantee services of stock exchange transactions settlement. It also improves efficiency and certainty of transactions settlement on the IDX.

IDX Rule No. II A on Trading of Equity Securities as attached to the Decree of the Board of Directors of the IDX No. Kep-00025/BEI/03-2020 ("IDX Trading Rule") provides that, the trading sessions of the IDX is as follows:

Trading Session	Market	Day	Trading Hours
Pre-opening	Regular	Monday-Friday	08.45.00-08.55.00
1 st	Regular	Monday-Thursday	09.00.00-12.00.00
	Cash and Negotiated	Friday	09.00.00-11.30.00
2 nd	Regular	Monday-Thursday	13.30.00-15.49.59
		Friday	14.00.00-15.49.59
	Negotiated	Monday-Thursday	13.30.00-16.15.00
		Friday	14.00.00-16.15.00
Pre-closing	Regular	Monday-Friday	15.50.00-16.00.00
Post Trading	Regular	Monday-Friday	16.05.00-16.15.00

The IDX Trading Rule, changed the group price, tick price and maximum share price movement to the following:

Group Price	Tick Price	Maximum Share Price Movement
≤Rp200	Rp1	Rp10
Rp200 – ≤Rp500	Rp2	Rp20
Rp500-≤Rp2,000	Rp5	Rp50
Rp2,000-≤Rp5,000	Rp10	Rp100
≥Rp5,000	Rp25	Rp250

Transactions on the IDX regular market must be settled no later than the second trading day (T+2) after the transaction. Transactions on the negotiated market are settled on the basis of the agreement between the selling exchange members and the buying exchange members, on a transaction-by-transaction basis. Transactions on the IDX cash market must be settled on the day of the transaction (T+0) and reported to the IDX. If an exchange member defaults on the settlement of a transaction, the securities can be traded by direct negotiation on cash and carry terms. Each exchange member is required to pay a transaction fee as stipulated by the IDX. Any delay in payment of the transaction fee is subject to a fine of 1.0% of the outstanding amount of the payment for each day of delay. The IDX may impose sanctions on its members for any violation of exchange rules, which may include fines, written warnings, suspension or revocation of licenses.

When conducting share transactions on the IDX, each exchange member is required to pay a transaction cost for transactions on the regular market and cash market of 0.018% of the transaction value and VAT and other tax obligation. For the negotiated market, a transaction cost as stipulated by the IDX is applicable. A minimum monthly transaction fee of Rp20 million is applied as a contribution for the provision of exchange facilities and continues in effect for members who are suspended or whose Exchange Member Approval is revoked.

Since the global financial crisis in the last quarter of 2008, there has been typical share price movements. Hence, the IDX has applied a policy of auto rejection, a mechanism whereby share trading can be halted automatically in order to maintain orderly, fair and efficient trading. Following changes made by the IDX in October 2008 and January 2009 the auto rejection trigger levels are 35% above or below the reference price for stocks in the Rp50 to Rp200 price range, 25% for stocks in the Rp200 to Rp5,000 price range, and 20% for stocks priced more than Rp5,000. The auto rejection level in the case of an initial public offering is determined at a level which is twice as high as for normal trading. Auto rejection also arises when selling offer or buying request volume reaches over 5 billion shares or 5% of total shares listed, whichever is smaller.

The IDX Trading Rule also stipulates the change of auto rejection policy. The Jakarta Automated Trading System (JATS) will automatically reject price orders input into the JATS at the Regular and Cash Markets if (i) the selling or buying order is smaller than Rp50; (ii) the selling or buying orders input into the JATS are more than 35% above or 7% below the reference price for stock prices ranging from Rp50 to Rp200; (iii) the selling or buying orders input into the JATS are more than 25% above or 7% below the reference price for stock price ranging from Rp200 to Rp5,000; and (iv) the selling or buying orders input into the JATS are more than 20% above or 7% below the reference price for stock price that is more than Rp5,000. Auto rejection also arises when the selling offer or buying request volume reaches over 50,000 lot of equity securities or 5% of total securities listed, whichever is smaller. Stock trading as a result of initial public offering is determined one fold wider than auto rejection percentage as mentioned above.

Amid anxiety over the spread of the novel coronavirus (COVID-19) and disagreement between Saudi Arabia and Russia relating to oil production volumes and prices, IDX has experienced a challenging first quarter of 2020. As a result, the Jakarta Composite Index ("JCI") decreased by more than 29% over the same period. On March 12, 2020, the IDX imposed an unprecedented 30-minute trading halt. A few days before the trading halt, the IDX had taken various measures in an effort to calm the markets. These measures included, among others, the following decrees issued by the board of directors of the IDX: (i) Decree No. Kep-0024/BEI/03-2020 on Changes to the Guidelines on Handling Trading Continuity on the IDX in an Emergency Situation to, among other things, relax trading halt requirements, and (ii) that the new IDX Trading Rule that, among other things, sets the limits beyond which JATS will auto-reject transactions on the IDX regular and cash markets when selling offers and/or buying orders for equity securities at exceed such price limits or amounts set by the IDX. With the new rules, the lower limit of auto-rejection is set at 7%, meaning that transactions with a selling offer or purchase price of shares entered into the JATS that is more than 7% percent below the price reference for such shares will not be effected.

Trading on the NYSE

See Item 12 "Description of Securities Other Than Equity Securities."

B. SELLING STOCKHOLDERS

Not applicable.

C. DILUTION

Not applicable.

D. EXPENSES OF THE ISSUE

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. SHARE CAPITAL

Not applicable.

B. MEMORANDUM AND ARTICLES OF ASSOCIATION

Description of Articles of Association

Our Articles of Association are registered in accordance with Law No.1 of 1995 on Limited Liability Companies, and approved by Ministerial Decree No.C2-7468.HT.01.04.Th.97 of 1997. Following the enactment of the Indonesian Company Law which revoked Law No.1 of 1995 on Limited Liability Companies, we amended our Articles of Association which were approved by the Ministry of Law and Human Rights of the Republic of Indonesia pursuant to the Decree of

the Ministry of Justice and Human Rights No.AHU.46312.AH.01.02 of 2008 dated July 31, 2008 and registered in the State Gazette of the Republic of Indonesia No.84 dated October 17, 2008, Supplement to State Gazette No.20155.

Our Articles of Association have been amended several times, the latest amendment of which primarily related to increasing the flexibility and independence of our Board of Commissioners to approve actions of the Board of Directors that exceed certain value limits, and our need to change provisions regarding issued and paid-up capital, as well as authorized capital due to the transfer of shares through withdrawal by reducing capital. The latest amendments were accepted and approved by the Ministry of Law and Human Right in its decrees No.AHU-AH.01.03.0289820 dated June 24, 2019 and No.AHU-0032595.AH.01.02 TAHUN 2019 dated June 24, 2019.

In accordance with Article 3 of our Articles of Association, the scope of our activities is to provide telecommunication network and telecommunication and information services, as well as to optimize our Company's resources in producing high quality and competitive products and services to enhance profitability and increase the value of our Company. On June 24, 2019, our Articles of Association were amended to expand the scope of our main and supporting businesses provided for in Article 3 to cover other specified categories of activities that we engage in in connection with the telecommunication and informatics networks and services as specified in 1(d) and 2(d) below. In order to achieve the aforementioned objectives, we may undertake business activities that incorporate, among others, the following:

1. Main Business

- a. Planning, constructing, providing, developing, operating, marketing/selling/leasing and maintaining telecommunication and informatics networks to the widest extent in accordance with prevailing laws and regulations.
- b. Planning, developing, providing, marketing/selling and improving telecommunication and informatics networks to the widest extent in accordance with prevailing laws and regulations.
- c. Investing, including through capital participation, in other companies whose businesses align with, and in order to achieve, our purposes and objectives.
- d. Other businesses in connection with the businesses specified in 1(a) and 1(b) above, including but not limited to construction of core telecommunication infrastructures, construction of other electrical and telecommunications networks (including any related equipment), wholesale trading (for example, of office and industrial machineries), retail trading (for example, of telecommunications equipment, computers, computer equipment and accessories, video games, and office machineries), publication of directories, creation of software, production of films, private videos and television programs, activities relating to wired, wireless and satellite telecommunications, provision of premium call and short message services, provision of other value added telephony services, provision of internet services, provision of communication system services, provision of internet telephony services for public use, provision of internet interconnection services, provision of content provider services through cellular mobile networks or local fixed networks with limited mobility and other multimedia services, video game, trading applications and other computer programming activities, information security and other computer consultation and computer management services, data processing, hosting, web portals and/or digital platforms, and other information and telecommunications activities. Please see Article 3 of the Articles of Association in Exhibit 1.1 for further details.

2. Supporting Business

- a. Providing payment transactions and money transferring services through telecommunications and informatics networks.
- b. Performing other activities and undertakings in connection with the optimization of our resources which include, among other things, the utilization of fixed assets and current assets, information system facilities, education and training facilities, maintenance and repair facilities.
- c. Collaborating with other parties to optimize the informatics, communication or technology resources owned by other parties as a service provider in the informatics, communication and technology industry in line with and in order to realize our purposes and objectives.
- d. Other businesses in connection with the businesses specified in 2(a) and 2(b) above, including but not limited to general printing industry, construction of buildings, facilities and infrastructure, installation of facilities systems, interior decoration, wholesale trading (for example, of various printed materials and publishing, laboratory, pharmaceuticals and medical equipment), retail trading (for example, of laboratory, pharmaceuticals and medical equipment), voice recording activities, special telecommunications activities for defense and security purposes, publication of music and music books, other monetary intermediary services, transportation consultancy activities, other management consultancy activities, provision of certification services, provision of laboratory testing services, provision of technical inspection, provision of advertising services, provision of reservation services, provision of tourism information services, call center services, other business support services activities, organizing events, meetings, incentive trips, conferences and exhibitions, private tutoring and counseling, and repair and maintenance of computers and similar equipment. Please see Article 3 of the Articles of Association in Exhibit 1.1 for further details.

In accordance with Indonesian Company Law, we have a Board of Commissioners and a Board of Directors. These boards are separate and no individual may be a member of both boards. Each Director receives a bonus if we surpass certain financial and operating targets, the amounts of which are determined by the shareholders at the AGMS. Each Director receives compensation, the amount of which is determined by the shareholders at the GMS, although such authority may be delegated to the Board of Commissioners, in which case compensation shall be determined based on a resolution of the Board of Commissioners.

Our Articles of Association state that any transaction involving a conflict of interest between our Company and our Directors, Commissioners and principal shareholders which may cause losses to us should be approved by a majority of the independent shareholders through a GMS.

A member of the Board of Directors shall have no right to represent our Company if such member has a conflict of interest with our Company. To take any legal actions in the form of transactions in which a conflict of interests exists between the personal economic interest of a Director, a Commissioner or a principal shareholder and our Company's economic interest, the Board of Directors must obtain the approval of a GMS. Such GMS must be attended by independent shareholders (i.e. those shareholders having no conflict of interest) who hold more than one-half of the total number of shares with valid voting rights held by all independent shareholders and the resolution must be passed by the affirmative votes of independent shareholders holding more than one-half of the total number of shares with valid voting rights. In passing any resolutions, the principal shareholders, the Directors and Commissioners who have conflicts of interests in the transaction that is being decided are not entitled to give any recommendation or opinion. Any resolution passed by independent shareholders shall be confirmed by the entire quorum of the meeting to be followed by all shareholders present in the meeting, including those having conflicts of interest.

Our Articles of Association require our Board of Directors to obtain the written approval of our Board of Commissioners in order to, among other things:

- disposing, transferring and/or collateralizing the assets of the Company with a value exceeding the amount stipulated by the Board of Commissioners, except for assets recorded as supplies, in accordance with applicable capital market regulations in Indonesia;
- establishing cooperation with other business entities or parties, in the form of operational cooperation (KSO), business cooperation (KSU), licensing cooperation, Build, Operate and Transfer (BOT), Build, Transfer and Operate (BTO), Build, Operate and Own (BOO) and other agreements of similar nature for a term and value not exceeding the term and value stipulated by the Board of Commissioners.
- selecting and changing the logo of the Company;
- stipulating the organizational structure one level below the Board of Directors;
- certain acts of making capital participations, divesting capital participations, as well as effecting changes to the capital structure of other companies, subsidiaries or joint venture companies, including capital participations in other companies through subsidiaries whose funding originates from the Company, in an amount stipulated by the Board of Commissioners, in accordance with applicable capital market regulations in Indonesia;
- establishing subsidiaries and/or joint venture companies by investing an amount as stipulated by the Board of Commissioners in accordance with applicable capital market regulations in Indonesia;
- nominating candidates to the Board of Directors or Board of Commissioners of our subsidiaries which provide a significant contribution (based on contribution to Telkom's consolidated total assets or consolidated revenue) to Telkom and/or its strategic goals, among other factors, as stipulated by our Board of Commissioners;
- merging, consolidating, acquiring, divesting or dissolving subsidiaries and joint venture companies, such operations representing amounts not exceeding the limit stipulated by the Board of Commissioners in accordance with applicable capital market regulations in Indonesia;
- giving a guarantee with our Company acting as guarantor (as a *borg* or *avalist* under Indonesian law) for an amount stipulated by the Board of Commissioners in accordance with applicable capital market regulations in Indonesia;
- taking or granting medium/long-term loans in amounts stipulated by the Board of Commissioners in accordance with applicable capital markets regulations in Indonesia;
- granting non-operational short/medium/long-term loans, excluding loans provided to subsidiaries, that are reported to the Board of Commissioners;
- writing-off uncollectible receivables and unused inventory in an amount not exceeding the limit stipulated by the Board of Commissioners;
- undertaking activities that are categorized as material transactions according to the prevailing laws and regulations in the capital market sector in an amount stipulated by the Board of Commissioners, unless such activities are included in the material transactions which are exempted by prevailing laws and regulations in the capital market sector; and
- undertaking activities which are not yet stipulated in the work plan and budget of the Company.

With regards to the matters referred to in paragraphs (a), (b), (e), (f), (g), (h), (i), (j), (k), and (l) above, the stipulation of limits or criteria by the Board of Commissioners must be approved by the Series A Dwiwarna shareholder and the approval by the Board of Commissioners will be granted after being approved by the Series A Dwiwarna shareholder. Additionally, with regards to matters referred to in paragraph (b), approval from the Board of Commissioners and/or the GMS will not be required if the relevant activity is (i) part of the main business activities of the Company or (ii) is entered into with the subsidiaries or affiliates whose financials are consolidated with the Company's financials provided that this still has to be reported to the Board of Commissioners. The nomination of candidates referred to in paragraph (g) will not require approval from the Board of Commissioners as long as such nominated candidate is also a director of the Company, provided that this is reported to the Board of Commissioners.

Actions of the Board of Directors to transfer or collateralize the assets of the Company (whether in one or a series of transactions) the value of which exceed 50% of the total net assets of our Company (based on our Consolidated Financial Statements) would require approval of an GMS, except for those that are business activities of the Company as stipulated in the Articles of Association.

The Board of Directors is responsible for leading and managing our Company in accordance with our objectives and purposes and to control, preserve and manage the assets of our Company.

Our Articles of Association do not contain any requirement for our Directors to: (i) retire by a specified age; or (ii) to own any or a specified number of shares of our Company. The rights, preferences and restrictions attaching to each class of the shares of our Company in respect of specified matters are set forth below:

- *Dividend rights.* Dividends are to be paid based upon our financial condition and in accordance with the resolution of the shareholders in a GMS, which will also determine the form of and time of payment of the dividend;
- *Voting rights.* The holder of each voting share is entitled to one vote at a GMS;
- Rights to share in our Company's profits. See "— Dividend rights" above;
- *Rights to share in any surplus in the event of liquidation.* Stockholders are entitled to surplus in the event of liquidation in accordance with their proportion of shareholding, provided the nominal value of the common stock that they hold is fully paid-up;
- *Redemption provisions.* There are no stock redemption provisions in our Articles of Association. However, based on Article 37 of the Indonesian Company Law, we may buy back up to 10% of our issued and outstanding shares;
- *Reserved fund provisions.* We are required to set aside retained earnings in the amount of at least 20% of our issued capital to cover potential losses. If the amount in the reserved fund exceeds 20% of our issued capital, a GMS may authorize us to utilize such excess funds for the purposes of our Company;
- *Liability for further capital calls.* Our shareholders may be asked to subscribe for new shares in our Company from time to time. Such rights are to be offered to shareholders prior to being offered to third parties and may be transferred at the option of the shareholder. Our Board of Directors is authorized to offer the new shares to third parties in the event that an existing shareholder is unable or unwilling to subscribe for such new shares; and
- Our Articles of Association do not contain any provisions discriminating against any existing or prospective holder of such securities because of such shareholder owning a substantial number of shares. Additionally, our Articles of Association do not provide for staggered boards, cumulative voting or sinking a fund.

In order to change the rights of shareholders, an amendment to the relevant provisions of our Articles of Association is required. Any amendment to our Articles of Association requires the approval of the holder of the Dwiwarna Share and the other shareholders or their authorized proxies jointly representing at least two thirds of the total number of votes cast in the meeting.

Any GMS may only be convened upon the issuance of the requisite announcement by us. In addition, the Board of Directors may issue such announcement and convene an EGMS based on a written request by the Board of Commissioners or one or more shareholders holding at least 10% of our shares. The announcement is to be published in at least one newspaper in Indonesia (in Bahasa Indonesia) having general circulation within Indonesia and on the website of our Company (in Bahasa Indonesia and/or other languages as determined by regulations) and the IDX. Such announcement of a GMS is required to be given to shareholders at least 14 days (without counting the notice date and the invitation date) prior to the invitation for the GMS. The invitation for the GMS is also required to be published in the same manner as with the announcement of the notice at least 21 days (without counting the invitation date and the meeting date) prior to the GMS. Unless otherwise specified by law or the Articles of Association, the quorum for AGMS or EGMS requires shareholders representing more than one-half of the total shares with voting rights issued by us and binding resolutions may be passed if approved by more than one-half of the shareholders attending the GMS with valid voting rights. In case the quorum is not reached, then invitation to a second meeting can be made without prior announcement that an invitation to a meeting will be made. Such invitation to the meeting is required to be served at least seven days prior to the second meeting (without counting the invitation date and the meeting date). The second meeting will be valid if attended by shareholders representing at least one-third of the total shares with valid voting rights and may pass binding resolutions if approved by more than one-half of the attended shareholders with valid voting rights. In case the quorum is not reached at the second meeting, a third meeting may be held, at our Company's request, with the quorum of attendance and voting requirements to be determined by the OJK in accordance with the provisions of the laws.

Stockholders may vote by proxy. All resolutions are to be passed by consensus and deliberation. If consensus cannot be reached, resolutions are passed by simple majority, unless a larger majority is required by our Articles of Association. Our Articles of Association do not contain any limitations on the right of any person, to own our shares or to exercise their right to vote. Indonesian capital market regulations do not contain any limitation on the right of any person, whether local or foreign, to own shares in a company listed on the IDX.

Any takeover of our Company is required to be approved by the holder of the Dwiwarna Share and a majority constituting at least three-fourths of the total number of shares at a GMS that must be attended by the holder of the Dwiwarna Share. There are no other provisions in our Articles of Association that would have the effect of delaying, deferring or preventing a change in control of our Company.

Each Director and Commissioner has an obligation to report to the OJK with regard to their ownership and any changes in their ownership of our Company, and this obligation also applies to shareholders who, directly and indirectly, have an ownership stake of 5% or more in our paid up capital. Those shareholders would also have to report to OJK changes in their ownership of or in excess of 0.5% of our paid up capital. We believe that our Articles of Association are not significantly different from those generally prevailing in Indonesia in respect of companies listed on the IDX (other than with respect to provisions and rights relating to the Dwiwarna Share, which are common for SOEs listed on the IDX). We also believe that the provisions in our Articles of Association relating to changes in our capital are not more stringent than that required by Indonesian law.

Differences in the law

The laws of Indonesia applicable to Indonesian limited liability companies differ from the laws applicable to U.S. corporations and their shareholders in certain respects. Set forth below is a summary of certain differences between the provisions of Indonesian laws applicable to us and the Delaware General Corporation Law relating to shareholders' rights and protections.

This summary is not intended to be a complete discussion of the respective rights under either Delaware General Corporation law or Indonesian law.

Delaware Law	Indonesian Law
<p><i>Mergers and similar arrangements</i></p> <p>Under the Delaware General Corporation Law, with certain exceptions, a merger, consolidation, sale, lease or transfer of all or substantially all of the assets of a corporation must be approved by the board of directors and a majority of the outstanding shares entitled to vote thereon. A shareholder of a Delaware corporation participating in certain major corporate transactions may, under certain circumstances, be entitled to appraisal rights pursuant to which such shareholder may receive cash in the amount of the fair value of the shares held by such shareholder (as determined by a court) in lieu of the consideration such shareholder would otherwise receive in the transaction. The Delaware General Corporation Law also provides that a parent corporation, by resolution of its board of directors, may merge with any subsidiary, of which it owns at least 90.0% of each class of capital stock without a vote by the shareholders of such subsidiary. Upon any such merger, dissenting shareholders of the subsidiary would have appraisal rights.</p>	<p>Under Law No. 40 of 2007 on Limited Liability Companies ("Indonesian Company Law"), a merger or consolidation may only be completed if a merger/consolidation plan, containing the prescribed elements together with the draft deed of merger or draft deed of consolidation, is approved by a general meeting of shareholders of each of the companies involved. A three-quarters vote cast at the meeting is required at a general meeting of shareholders where a quorum of three-quarters of the shares with valid voting rights is present. Before the transaction is submitted for approval to the general meeting of shareholders, the directors must publish a summary of the merger/consolidation plan in one national newspaper and make an announcement in writing to the employees at least 30 days prior to "calling" the general meeting of shareholders.</p> <p>Shareholders who do not agree with the proposed merger or consolidation will have the right to require the company to purchase their shares at the fair market value (appraisal rights).</p> <p>Additional requirements are applicable for mergers or consolidations involving public companies.</p>
<p><i>Shareholder's suits</i></p> <p>Class actions and derivative actions generally are available to shareholders of a Delaware corporation for, among other things, breach of fiduciary duty, corporate waste and actions not taken in accordance with applicable law. In such actions, the court has discretion to permit the winning party to recover attorneys' fees incurred in connection with such action.</p>	<p>Under Indonesian Company Law, any shareholder has a right to file a lawsuit with the district court whose jurisdiction covers the domicile of the company if the company's actions have caused damage to the shareholder on the ground that such actions, undertaken by virtue of a GMS, board of directors or board of commissioners resolution, were unfair and with no reasonable ground. Such actions must have resulted from resolutions of a general meeting of shareholders, board of directors meetings or board of commissioners meetings. Additionally, one or more shareholders holding at least 10% of the total number of issued shares with lawful voting rights are entitled to file a lawsuit with the relevant district court on behalf of the company against the board of directors or members of the board of directors and the board of commissioners or members of the board of commissioners, whose fault or negligence caused losses to the company.</p>

Delaware Law	Indonesian Law
<p><i>Shareholder vote on board and management compensation</i></p> <p>Under the Delaware General Corporation Law, the board of directors has the authority to fix the compensation of directors, unless otherwise restricted by the certificate of incorporation or bylaws.</p>	<p>Under Indonesian Company Law, the salaries and allowances of members of the board of directors are determined by the general meeting of shareholders. The general meeting of shareholders may delegate its authority to approve such salaries and allowances to the board of commissioners.</p> <p>The salaries and allowances of members of the board of commissioners are determined by the general meeting of shareholders.</p> <p>For Indonesian public companies, a remuneration and nomination committee (in practice, a committee under the board of commissioners) can assist the general meeting of shareholders in determining the amount of the remuneration of the members of the board of directors and board of commissioners. If a committee has not been formed for this purpose, the board of commissioners shall determine the remuneration of the board of directors and board of commissioners in accordance with the prevailing capital market rules. Any such amount, however, must be approved by the general meeting of shareholders.</p>
<p><i>Annual vote on board renewal</i></p> <p>Unless directors are elected by written consent in lieu of an annual meeting, directors are elected in an annual meeting of stockholders on a date and at a time designated by or in the manner provided in the bylaws. Re-election is possible.</p> <p>Classified boards are permitted.</p>	<p>A member of the board of directors or board of commissioners is appointed by a general meeting of shareholders for a fixed duration. If the term of office has lapsed, the relevant director or commissioner can be re-appointed at a general meeting of shareholders</p> <p>Specifically for public companies, directors and commissioners may not be appointed for a term of more than five years. Re-election is possible except that for an independent commissioner who has served two consecutive terms, he/she can only be reappointed if he/she submits a statement of independency to the general meeting of shareholders.</p>

Delaware Law	Indonesian Law
<i>Indemnification of directors and executive management and limitation on liability</i>	
<p>The Delaware General Corporation Law provides that a certificate of incorporation may contain a provision eliminating or limiting the personal liability of directors (but not other controlling persons) of the corporation for monetary damages for breach of a fiduciary duty as a director, except no provision in the certificate of incorporation may eliminate or limit the liability of a director for:</p> <ul style="list-style-type: none"> • any breach of a director's duty of loyalty to the corporation or its shareholders; • acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; • statutory liability for unlawful payment of dividends or unlawful stock purchase or redemption; or • any transaction from which the director derived an improper personal benefit. <p>A Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any proceeding, other than an action by or on behalf of the corporation, because the person is or was a director or officer, against liability incurred in connection with the proceeding if the director or officer acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation; and the director or officer, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.</p> <p>Unless ordered by a court, any foregoing indemnification is subject to a determination that the director or officer has met the applicable standard of conduct:</p> <ul style="list-style-type: none"> • by a majority vote of the directors who are not parties to the proceeding, even though less than a quorum; • by a committee of directors designated by a majority vote of the eligible directors, even though less than a quorum; 	<p>Under Indonesian Company Law, a member of the board of directors cannot be held liable for the company's losses if he/she can prove that:</p> <ul style="list-style-type: none"> • the losses were not caused by his/her own fault or negligence; • he/she acted in good faith, prudently, and in furtherance of and in accordance with the purposes of the company; • he/she does not have any direct or indirect conflict of interest in connection with the management action which caused the loss; and • he/she has taken actions to prevent such losses or the continuation thereof. <p>Under Indonesian Company Law, the term "<i>take actions to prevent such losses or the continuation thereof</i>" includes obtaining sufficient information with regard to the management action that may cause the losses, including through convening a meeting of the board of directors.</p>

Delaware Law	Indonesian Law
<ul style="list-style-type: none"> • by independent legal counsel in a written opinion if there are no eligible directors, or if the eligible directors so direct; or • by the shareholders. <p>Moreover, a Delaware corporation may not indemnify a director or officer in connection with any proceeding in which the director or officer has been adjudged to be liable to the corporation unless and only to the extent that the court determines that, despite the adjudication of liability but in view of all the circumstances of the case, the director or officer is fairly and reasonably entitled to indemnity for those expenses which the court deems proper.</p>	
<p><i>Directors' fiduciary duties</i></p>	
<p>A director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components:</p> <ul style="list-style-type: none"> • the duty of care; and • the duty of loyalty. <p>The duty of care requires that a director act in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, a director must inform himself of and disclose to shareholders, all material information reasonably available regarding a significant transaction. The duty of loyalty requires that a director act in a manner he reasonably believes to be in the best interests of the corporation. He must not use his corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interest of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, a director must prove the procedural fairness of the transaction, and that the transaction was of fair value to the corporation.</p>	<p>Under Indonesian Company Law, the board of directors is responsible for the management of the company and must act in good faith. The board of directors must act in the best interest of the company and in accordance with the company's purposes and objectives.</p>

Delaware Law	Indonesian Law
<i>Shareholder action by written consent</i>	
A Delaware corporation may, in its certificate of incorporation, eliminate the right of shareholders to act by written consent.	Shareholders of an Indonesian limited liability company may only exercise their voting rights in a general meeting of shareholders and may not act by written consent.
<i>Shareholder proposals</i>	
A shareholder of a Delaware corporation has the right to put any proposal before the annual meeting of shareholders, provided it complies with the notice provisions in the governing documents. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.	Under Indonesian Company Law, one or more shareholders holding at least 10% of the total number of issued voting shares, unless the company's articles of association call for a smaller number of voting shares, are entitled to request that a general meeting of shareholders be convened by the board of directors. If the board of directors fails to convene the general meeting of shareholders, shareholders are entitled to request the board of commissioners to convene a general meeting of shareholders. If the board of directors or the board of commissioners (as the case may be) fails to convene a general meeting of shareholders as explained above, the shareholders may file an application with the district court having jurisdiction over the domicile of the company to allow them to call and convene a general meeting of shareholders.
<i>Cumulative voting</i>	
Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation provides for it.	Under Indonesian Company Law, cumulative voting is not permitted for the election of directors.
<i>Removal of directors</i>	
A Delaware corporation with a classified board may be removed only for cause with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise.	Under Indonesian Company Law, any dismissal (with or without cause) of a member of the board of directors must be approved by a general meeting of shareholders. Such a general meeting of shareholders must be attended by the holders of more than one-half of the total number of the company's issued voting shares, and the decision must be approved by the holders of more than one-half of the total votes validly cast at the meeting.

Delaware Law**Indonesian Law***Transactions with interested shareholders*

The Delaware General Corporation Law generally prohibits a Delaware corporation from engaging in certain business combinations with an "interested shareholder" for three years following the date that such person becomes an interested shareholder. An interested shareholder generally is a person or group who or which owns or owned 15.0% or more of the corporation's outstanding voting stock within the past three years.

For Indonesian public companies, affiliated party transaction and conflict of interest transaction rules may apply to transactions between public companies and any of their principal shareholders (where a "principal shareholder" is defined as the owner, directly or indirectly, of at least 20% of the outstanding shares in a public company).

Affiliated Party Transaction

An affiliated party transaction is defined as a transaction conducted by a public company or a controlled company with an affiliate (a category defined under Indonesian capital market rules which includes principal shareholders) of the public company or an affiliate of a member of the board of directors, the board of commissioners or a principal shareholder of such public company.

Affiliated party transactions must be, among other things, disclosed to the public, reported to the relevant authority and appraised by an independent appraiser, unless exempted.

Conflict of Interest Transaction

A conflict of interest is defined as the difference between the economic interests of a public company and the personal economic interests of its directors, commissioners or principal shareholders, which may cause losses to such company. In practice, fairness opinions by independent appraisers are used to assess whether a transaction may be impacted by a conflict of interest.

If the transaction between the public company and a principal shareholder is deemed a conflict of interest transaction, the public company needs to, among other things, obtain the approval of its independent shareholders in a general meeting of shareholders, unless exempted. Independent shareholders are defined as shareholders having no conflict of interest in respect of the transaction, and the independent shareholders must make a declaration to that effect.

Delaware Law	Indonesian Law
<p><i>Dissolution; Winding up</i></p> <p>Unless the board of directors of a Delaware corporation approves the proposal to dissolve, dissolution must be approved by shareholders holding 100.0% of the total voting power of the corporation. Only if the dissolution is initiated by the board of directors may it be approved by a simple majority of the corporation's outstanding shares. Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board.</p>	<p>Dissolution of a company must be approved by a general meeting of shareholders; such meeting has to be attended by shareholders holding at least three-quarters of the total number of outstanding shares in the company carrying valid voting rights. The approval must be obtained by a majority of at least three-quarters of the total votes validly cast at the meeting.</p>
<p><i>Variation of rights of shares</i></p> <p>A Delaware corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise.</p>	<p>Indonesian Company Law allows companies to issue different classes of shares. Varying rights of existing shares or issuing new classes of shares with different rights requires amending the company's articles of association. Such amendment must be approved by a general meeting of shareholders.</p>
<p><i>Amendment of governing documents</i></p> <p>A Delaware corporation's governing documents may be amended with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise.</p>	<p>To amend the articles of association of an Indonesian limited liability company, a general meeting of shareholders is required. Unless the existing articles of association stipulate a higher quorum, a general meeting of shareholders can be held if attended by shareholders representing at least two-thirds of the total issued voting shares. The general meeting of shareholders may adopt valid resolutions with affirmative votes of at least two-thirds of the total votes validly cast at the meeting. For public companies, affirmative votes representing more than two-thirds of the total votes validly cast in the meeting are required.</p>
<p><i>Inspection of books and records</i></p> <p>Shareholders of a Delaware corporation, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose and to obtain copies of list(s) of shareholders and other books and records of the corporation and its subsidiaries, if any, to the extent the books and records of such subsidiaries are available to the corporation.</p>	<p>Examination of documents and information pertaining to the company may be requested for the purpose of obtaining data or information if a director's or a commissioner's unlawful act is suspected to have caused losses to the company, its shareholders or third parties. An application must be made to the district court having jurisdiction over the domicile of the company. The application requesting the right to examine the company must be made in good faith and based on fair reasoning.</p> <p>Such application can be made by:</p>

Delaware Law	Indonesian Law
	<ul style="list-style-type: none"> • one or more shareholders holding at least 10% of the total number of issued voting shares; • any other party that, pursuant to prevailing regulations, the company's articles of association or an agreement with the company, is granted such authority to submit the request for examination; or • the State Attorney, for public order purposes.
<p><i>Payment of dividends</i></p> <p>The board of directors may approve a dividend without shareholder approval. Subject to any restrictions contained in its certificate of incorporation, the board may declare and pay dividends upon the shares of its capital stock either:</p> <ul style="list-style-type: none"> • out of its surplus; or • in case there is no such surplus, out of its net profits for the fiscal year in which the dividend is declared or the preceding fiscal year. <p>Stockholder approval is required to authorize capital stock in excess of that provided in the charter. Directors may issue authorized shares without stockholder approval.</p>	<p>Indonesian Company Law provides that dividends can be paid to shareholders from the company's cumulative net profits (after deductions for allocation to the reserve fund). If a loss is booked by the company in a preceding financial year and cannot be covered by the reserve fund, such loss should be carried forward and in the current financial year, the company will still be deemed to be making a loss if this carried over loss cannot be covered by the current financial year's profit. Under such circumstances, the company is not be able to distribute dividends from profits it earned in the current financial year.</p> <p>Before the company pays dividends, the company must reserve its profits until it reaches an amount equal to at least 20% of the company's subscribed and paid-up capital. This means that if the company already has a compulsory reserve, the rest of the accumulated net profit can be distributed as dividends.</p> <p>Interim dividends may also be distributed, provided that:</p> <ul style="list-style-type: none"> • the company's articles of association allow it; • the amount of the company's net profit exceeds the amount of the issued and paid-up capital plus the reserve fund; and • the distribution of the interim dividends will neither cause the company to be unable to pay its obligations to its creditors, nor disrupt the company's operations.

Delaware Law	Indonesian Law
<i>Creation and issuance of new shares</i>	
All creation of shares requires the board of directors to adopt a resolution or resolutions, pursuant to authority expressly vested in the board of directors by the provisions of the company's certificate of incorporation.	<p>Issuance of new shares must be approved by a general meeting of shareholders (with different quorum and voting requirements applicable depending on whether the company seeks to increase its authorized capital or not).</p> <ul style="list-style-type: none"> • Issuance of new shares in an amount that is still within the company's authorized capital must be approved by a general meeting of shareholders attended by shareholders representing more than one-half of the total number of issued voting shares in the company, and the decision must be approved by shareholders representing more than one-half of the total votes validly cast at the meeting. • Issuance of new shares in an amount that exceeds the company's authorized capital must be approved by a general meeting of shareholders attended by shareholders representing at least two-thirds of the total number of issued voting shares. The general meeting of shareholders may adopt valid resolutions with affirmative votes representing at least two-thirds of the total votes validly cast at the meeting (or more than two-thirds for public companies).

C. MATERIAL CONTRACTS

On October 14, 2019, Mitratel and Indosat entered into a sale and purchase agreement for the acquisition of 2,100 of Indosat's telecommunication towers (the "Telecommunication Towers Agreement") for Rp4,443,861,000,000. After Mitratel and Indosat obtained all necessary consents and internal approvals, the transfer of these assets completed on December 20, 2019. The acquisition of 2,100 telecommunication towers will strengthen and add value to Mitratel's business in line with Mitratel's long-term strategy.

In 2018, we did not enter into any new material contracts nor did we amend any existing material contracts, other than contracts entered into or amended in the ordinary course of business as disclosed in Note 34 of our Consolidated Financial Statements.

D. EXCHANGE CONTROLS

See Item 3 'Key Information — Selected Financial Data — Exchange Controls' included elsewhere in this Form 20-F.

E. TAXATION

The following summary contains a description of the principal Indonesian and United States federal income tax consequences of the purchase, ownership and disposition of ADSs or shares of common stock. This summary does not purport to be a complete description of all of the tax considerations that may be relevant to a decision to acquire, own or dispose of ADSs or shares of common stock.

Investors should consult their tax advisors about the Indonesian and United States federal, state and local tax consequences to them of the acquisition, ownership and disposition of ADSs or shares of common stock.

Indonesian Taxation

The following is a summary of the principal Indonesian tax consequences of the ownership and disposition of common stock or ADSs to a non-resident individual or non-resident entity that holds common stock or ADSs (a "Non-Indonesian Holder"). A "non-resident individual" is a foreign national individual who does not reside or intend to reside in Indonesia and is not physically present in Indonesia for more than 183 days within a 12-month period, during which period such non-resident individual receives income in respect of the ownership or disposition of common stock or ADSs and a "non-resident entity" is a corporation or a non-corporate body that is established, domiciled or organized under the laws of a jurisdiction other than Indonesia and does not have a fixed place of business or otherwise conducts business or carries out activities through a permanent establishment in Indonesia during an Indonesian tax year in which such non-resident entity receives income in respect of the ownership or disposition of common stock or ADSs. In determining the residency of an individual or entity, consideration will be given to the provisions of any applicable double taxation treaty to which Indonesia is a party.

Dividends

Dividends declared by us out of retained earnings and distributed to a Non-Indonesian Holder in respect of common stock or ADSs are subject to Indonesian withholding tax, which, as of the date of this Annual Report, is at the rate of 20%, on the amount of the distribution (in the case of cash dividends) or on the shareholders proportional share of the value of the distribution. A lower rate provided under double taxation treaties may be applicable, provided the recipient is able to comply with the following strict requirements:

1. If the provisions under the tax treaty is different from those under Indonesian Income Tax Law.
2. The income recipient is not an Indonesian tax resident.
3. The non-resident income recipient is an individual or an entity who is a tax resident of the country under the concerned tax treaty partner.
4. The non-resident income recipient submits a certificate of domicile that meets with the following administrative requirements and certain other requirements:
 - a. The administrative requirements to be fulfilled by the non-resident income recipient in order to apply the tax treaty are as follows:
 1. Uses Form DGT;
 2. the form must be filled in correctly, completely and clearly by the non-resident income recipient;
 3. the form must be signed by the non-resident income recipient or equivalent mark/stamp as normally used in its country;

4. the form must be signed by the authorized official of the treaty country where the non-resident income recipient resides or equivalent mark/stamp as normally used;
 5. there is a statement made by the non-resident income recipient stating that there is no tax treaty abuse;
 6. there is a statement that the non-resident income recipient is the Beneficial Owner in case it is required by the tax treaty;
 7. the form must be used for the period stated in Form DGT; and
 8. the signing and marking by the competent tax authority officer must be done in Part II of Form DGT.
- b. Certain other requirements are that the certificate of domicile must explain the following information:
1. There are relevant economic motives in relation to the establishment of the entity;
 2. the entity has its own management to conduct business and the management has independent discretion;
 3. the entity has sufficient assets to conduct business other than the assets generating income from Indonesia;
 4. the entity has sufficient and qualified personnel to conduct business; and
 5. the entity has business activities other than receiving dividends, interests and/or royalties from Indonesia.
5. There is no tax treaty abuse. To meet this condition, the non-resident income recipient shall comply with the requirements below:
- a. If the non-resident income recipient is an individual, he or she does not act as an agent or nominee; or
 - b. If the non-resident income recipient is an entity, it is required to:
 1. have economic substance in the establishment of the entity or the execution of the transaction;
 2. have a legal form that is the same as the economic substance in the establishment of the entity or the execution of the transaction;
 3. have business activities which are managed by its own management and the management has sufficient authority to carry out the transactions;
 4. have fixed assets and non-fixed assets (other than the assets generating income from Indonesia), which are adequate and sufficient to conduct business activities in that treaty partner country;
 5. have sufficient employees with the expertise and certain skills in accordance with its line of business; and
 6. have activities or an active business other than only receiving income in the form of dividends, interests or royalties from Indonesia.

7. there is no arrangement of transactions either directly or indirectly with the objective to obtain benefits from implementation of a tax treaty, such as:
 - reduction of tax burden; and/or
 - double non-taxation in any country or jurisdiction;which contradicts the purpose and objectives of the double tax avoidance agreement
6. The non-resident income recipient is the beneficial owner of the income as required by the concerned tax treaty. The requirements for a beneficial owner are as follows:
 - a. If the non-resident income recipient is an individual, he or she does not act as an agent or nominee; or
 - b. If the non-resident income recipient is an entity, it should comply with the following requirements:
 - 1) It does not act as an agent, nominee, or conduit;
 - 2) It must have control in using or enjoying funds, assets, or rights that can generate income from Indonesia;
 - 3) No more than 50% of the total non-consolidated income is used to fulfill obligations to other parties;
 - 4) It bears the risks of assets, capital, and/or liabilities; and
 - 5) It does not have written or unwritten obligation to provide part or all of the income derived from Indonesia to another party.

Capital Gains

The sale or transfer of common stock through the IDX is subject to a final withholding tax at the rate of 0.1% of the gross value of the transaction. The broker executing the transaction is obligated to withhold such tax. The sale or transfer of founder shares through the IDX under current Indonesian tax regulations, be subject to additional income tax if the 0.5% final income tax has not been settled after the initial public offering.

Subject to the promulgation of implementing regulations, the estimated net income received or accrued from the sale of movable assets in Indonesia, which may include common stock not listed on the IDX or ADSs, by a Non-Indonesian Holder (with the exception of the sale of assets under Article 4 paragraph (2) of the Indonesian Income Tax Law) may be subject to Indonesian withholding tax at the rate of 20%.

There is no specific tax regulation on the sale of listed shares outside the IDX. If the transfer of listed shares outside the IDX by a non-resident taxpayer is considered as the transfer of unlisted shares by a non-resident taxpayer, then general tax regulation will be applied, which is, withholding tax of 5% of the sales price (or may be subject to the double taxation treaty) will be applicable.

Under Indonesian Tax Laws, a purchaser or Indonesian broker is required to withhold tax on payment of the purchase price for common stock or ADSs through the IDX. Theoretically, that payment may be exempt from Indonesian withholding or other Indonesian income tax under applicable double taxation treaty to which Indonesia as a party (including the United States-Indonesia double taxation treaty). However, except for the sale or transfer of shares in a non-public company, the current Indonesian tax regulations do not provide specific procedures for the application of the tax treaty from the proceeds of such sale. To take advantage of the double taxation treaty relief, Non-Indonesian Holders may need to fulfill certain requirements including making a specific application accompanied by a specific form which is set by the Indonesian Tax Office as a Certificate of Residency and filled in by the recipient of the income and validated by the competent authority of the country where the recipients are resident. The original Certificate of Residency that has been validated by the competent authority must be provided to the custodian that will forward it to the withholding tax agent.

Stamp Duty

Stock transactions in Indonesia are subject to stamp duty. Pursuant to Government Regulation No.24 of 2000, the nominal amount of the Indonesian stamp duty is Rp6,000 for transactions having a value greater than Rp1 million and Rp3,000 for transactions having a value of up to Rp1 million. Generally, the stamp duty is due at the time the document is executed. Stamp duty is payable by the party that benefits from the executed document unless both parties state otherwise.

Certain Considerations Regarding U.S. Federal Income Tax

The following is a summary of certain material U.S. federal income tax considerations to U.S. Holders, as defined below, of ADSs or common stock that are held as "capital assets" (generally, property held for investment) under section 1221 of the U.S. Internal Revenue Code of 1986, as amended, (the "Code"). This summary is based upon the Code, its legislative history, final, temporary and proposed U.S. Treasury regulations promulgated thereunder, published rulings and court decisions, as well as the Convention between the Government of the United States and the Government of the Republic of Indonesia for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income (the "Treaty"), each as in effect on the date hereof, all of which are subject to change, or changes in interpretation, possibly with retroactive effect. In addition, this discussion is based in part upon representations of the depository and the assumption that each obligation in the deposit agreement and any related agreements will be performed according to its terms.

This summary does not discuss all aspects of U.S. federal income taxation which may be relevant to particular investors in light of their individual investment circumstances, including investors subject to special tax rules (including, but not limited to, a person who directly, indirectly or constructively owns 10% or more of the stock of the company, a person who acquires ADSs or common stock pursuant to the exercise of any employee share option or otherwise as compensation, banks and other financial institutions, insurance companies, broker or dealers in securities, a trader in securities who elects to use a mark-to-market method of accounting for its securities holdings, a person that may have been liable for alternative minimum tax, regulated investment companies, real estate investment trusts, partnerships and their partners, individual retirement and other tax-deferred accounts, certain former U.S. citizens or long-term residents, and tax-exempt organizations (including private foundations)), holders who are not U.S. Holders, investors that will hold ADSs or common stock as part of a straddle, hedge, conversion, constructive sale, or other integrated transaction for U.S. federal income tax purposes, investors subject to special tax accounting rules as a result of any item of gross income with respect to the ADSs or common stock being taken into account in an applicable financial statement, or investors that have a functional currency other than the U.S. Dollar, all of whom may be subject to tax rules that differ significantly from those summarized below. In addition, this summary does not address U.S. federal estate, gift or alternative minimum taxes, the U.S. federal Medicare tax on net investment income, or state, local, or non-U.S. tax considerations. Each holder is urged to consult its tax advisor regarding the U.S. federal, state, local and non-U.S. income, and other tax considerations of their investment in the ADSs or common stock.

For purposes of this summary, a "U.S. Holder" is a beneficial owner of ADSs or common stock that is, for U.S. federal income tax purposes:

- (i) an individual who is a citizen or resident of the United States;
- (ii) a corporation, created in, or organized under the laws of, the United States or any state thereof or the District of Columbia;
- (iii) an estate the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- (iv) a trust (A) the administration of which is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (B) that has made a valid election to be treated as a U.S. person under the Code.

If a partnership (or other entity or arrangement that is treated as a partnership for U.S. tax purposes) is the beneficial owner of ADSs or common stock, the tax treatment of a partner in the partnership (or interest holder in the "tax transparent" entity) will generally depend on the status of the partner (or interest holder) and the activities of the partnership (or "tax transparent" entity). In general, for U.S. federal income tax purposes, U.S. Holders of ADSs will be treated as the beneficial owners of the underlying common stock represented by the ADSs.

Prospective purchasers should consult their own tax advisors concerning the U.S. federal, state, local, foreign and other tax consequences of acquiring, owning and disposing of ADSs or common stock, in light of their particular circumstances.

Distributions on the Common Stock or ADSs

Subject to the discussion below under "Passive Foreign Investment Company," the gross U.S. Dollar amount of any distribution of cash or property (without deduction for any tax withheld), other than certain pro rata distributions of common stock, we make on the common stock or ADSs out of our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes) will generally be includible in a U.S. Holder's gross income as ordinary dividend income when the distribution is actually or constructively received by you, or by the depositary in the case of ADSs. We do not calculate earnings and profits in accordance with U.S. tax principles. Accordingly, all distributions by us to U.S. Holders will generally be treated as dividends. Any dividend will not be eligible for the dividends-received deduction generally granted to U.S. corporations in respect of dividends received from U.S. corporations. The amount of any distribution of property other than cash will be the fair market value of such property on the date of such distribution.

The U.S. Dollar amount of dividends received by certain non-corporate U.S. Holders will generally be taxable at favorable rates as opposed to being taxable at ordinary income rates if the dividends are "qualified dividends." Dividends paid on ADSs or common stocks will be treated as qualified dividends if (i) certain holding period requirements are met, (ii) either the Treaty is a qualified treaty for the purposes of the "qualified dividend" rules, or the dividends are with respect to ADSs readily tradable on a U.S. securities market, and (iii) we were not, in the taxable year prior to the year in which the dividend was paid, and are not, in the year in which the dividend is paid, a "passive foreign investment company," or PFIC. The Treaty has been approved for the purposes of the qualified dividend rules, and we expect to qualify for benefits under the Treaty so long as there is substantial and regular trading in our common stock on the IDX. We are considered a qualified foreign corporation with respect to the ADSs because our ADSs are listed on the New York Stock Exchange.

Based on our Consolidated Financial Statements and relevant market data, we believe that we did not satisfy the definition for PFIC status for U.S. federal income tax purposes with respect to our 2019 taxable year. In addition, based on our Consolidated Financial Statements and our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market data, we do not anticipate we will be a PFIC for the current taxable year or any future taxable year. However, our status in the current year and future years will depend on our income and assets (which for this purpose depends in part on the market value of the ADSs or common shares) in those years. See the discussion below under "Passive Foreign Investment Company."

U.S. Holders of ADSs or common stock should consult their own tax advisors regarding the availability of the reduced dividend tax rate in light of their own particular circumstances.

The amount of the dividend distribution paid in any foreign currency that a U.S. Holder must include in its income will be the U.S. Dollar value of the foreign currency payments made, determined at the spot rate on the date the dividend distribution is actually or constructively received, regardless of whether the payment is in fact converted into U.S. Dollar. Generally, any gain or loss resulting from currency exchange fluctuations during the period from the date the U.S. Holder includes the dividend payment in income to the date it converts the payment into U.S. Dollar will be treated as ordinary income or loss from U.S. sources.

Subject to certain complex limitations, including the PFIC rules discussed below, any Indonesian tax withheld from distributions to a U.S. Holder in accordance with the Treaty generally will be deductible or creditable, at such U.S. Holder's option, against such U.S. Holder's U.S. federal income tax liability. If a U.S. Holder elects to claim a deduction, rather than a foreign tax credit, for a particular taxable year, such election will apply to all foreign taxes paid or accrued by or on behalf of the U.S. Holder in the particular year. Dividends paid by us generally will constitute income from sources outside the United States for U.S. foreign tax credit limitation purposes and will be categorized as "passive category income" or, in the case of certain U.S. Holders, as "general category income" for U.S. foreign tax credit purposes.

A U.S. Holder may not be able to claim a foreign tax credit (and instead may claim a deduction) for non-U.S. taxes imposed on dividends paid on the ADSs or common stock if such U.S. Holder (i) held the ADSs or common shares for less than a specified minimum period during which such U.S. Holder was not protected from risk of loss with respect to such shares, or (ii) is obligated to make payments related to the dividends (for example, pursuant to a short sale). The rules relating to the U.S. foreign tax credit are complex and U.S. Holders may be subject to various limitations on the amount of foreign tax credits that are available. U.S. Holders should consult their own tax advisors regarding the effect of these rules in their particular circumstances.

In the event we are required to withhold Indonesian income tax on dividends paid to U.S. Holders on the ADSs or common stock (see discussion under "Indonesian Taxation"), a U.S. Holder may be able to claim a reduced rate of Indonesian withholding tax if such U.S. Holder is eligible for benefits under the Treaty. U.S. Holders should consult their own tax advisors about the eligibility for reduction of Indonesian withholding tax.

Sale or Other Disposition of ADSs or Common Stock

Subject to the discussion below under "Passive Foreign Investment Company," upon a sale, exchange or other disposition of the ADSs or common stock, a U.S. Holder will generally recognize capital gain or loss for U.S. federal income tax purposes in an amount equal to the difference between the U.S. Dollar value of the amount realized and the U.S. Holder's adjusted tax basis, determined in U.S. Dollar, in such ADSs or common stock. Gain or loss recognized upon the sale or other disposition of ADSs or common stock will generally be long-term capital gain or loss if the U.S. Holder's holding period for such ADSs or common stock exceeds one year. The deductibility of capital losses is subject to limitations.

A U.S. Holder that receives foreign currency from a sale or disposition of ADSs or common stock generally will realize an amount equal to the U.S. Dollar value of the foreign currency determined on (i) the date of receipt of payment in the case of a cash-basis U.S. Holder and (ii) the date of disposition in the case of an accrual-basis U.S. Holder. If our ADSs or common stock are treated as traded on an "established securities market," a cash-basis taxpayer or, if it so elects, an accrual-basis taxpayer, will determine the U.S. Dollar value of the amount realized by translating the amount received at the spot rate of exchange on the settlement date of the sale. A U.S. Holder will have a tax basis in the foreign currency received equal to the U.S. Dollar amount realized. Any currency exchange gain or loss realized on a subsequent conversion of the foreign currency into U.S. Dollar for a different amount generally will be treated as ordinary income or loss from sources within the United States. However, if such foreign currency is converted into U.S. Dollar on the date received by the U.S. Holder, a cash-basis or electing accrual-basis U.S. Holder should not recognize any gain or loss on such conversion.

Any gain or loss will generally be U.S. source gain or loss for foreign tax credit limitation purposes and as a result of the U.S. foreign tax credit limitation, foreign taxes, if any, imposed upon capital gains in respect of the ADSs or common stock may not be creditable. U.S. Holders should consult their own tax advisors regarding the tax consequences if a foreign tax is imposed on a disposition of ADSs or common stock, including the availability of a foreign tax credit or deduction in respect of any foreign tax imposed on a sale or other disposition of ADSs or common stock.

Passive Foreign Investment Company

The Code provides special, generally adverse, rules regarding certain distributions received by U.S. persons with respect to, and sales, exchanges and other dispositions, including pledges, of shares of stock of, a PFIC. In general, a foreign corporation is a PFIC for any taxable year in which, after applying relevant look-through rules with respect to the income and assets of subsidiaries:

- 75% or more of its gross income for such year consists of passive income, such as dividends, interest, rents, royalties, and gains from the sale of assets that give rise to passive income; or
- 50% or more of the average quarterly value of its gross assets during such year consists of assets that produce, or are held for the production of, passive income.

"Passive income" for this purpose includes, for example, dividends, interest, royalties, rents and gains from commodities and securities transactions and the excess of gains over losses from the disposition of assets which produce passive income. Passive income does not include rents and royalties derived from the active conduct of a trade or business. If the stock of a non-U.S. corporation is publicly traded for the taxable year, the asset test is applied using the fair market value of the assets for purposes of measuring such corporation's assets. If we own, directly or indirectly, at least 25% (by value) of the stock of another corporation, we will be treated, for purposes of the PFIC tests, as owning our proportionate share of the other corporation's assets and receiving our proportionate share of the other corporation's income for purposes of the PFIC income and asset tests.

We do not believe we were a PFIC for prior taxable years, and based on the current and anticipated composition of our assets and income and the current expectations regarding the price of the ADSs and common stock, we do not believe that we are a PFIC for the current taxable year and we do not expect to become a PFIC for future taxable years. Changes in the nature of our income or assets or a decrease in the trading price of the ADSs or common stock may cause us to be considered a PFIC in the current or any subsequent year.

If we were a PFIC in any taxable year that a U.S. Holder held the ADSs or common stock, such U.S. Holder generally would be subject to special rules with respect to "excess distributions" made by us on the ADSs or common stock and with respect to gain from a U.S. Holder's disposition of the ADSs or common stock. An "excess distribution" generally is defined as the excess of the distributions you receive with respect to the ADSs or common stock in any taxable year over 125% of the average annual distributions you have received from us during the shorter of the three preceding years, or your holding period for the ADSs or common stock. Generally, a U.S. Holder would be required to allocate any excess distribution or gain from the disposition of the ADSs or common stock ratably over your holding period for the ADSs or common stock. The portion of the excess distribution or gain allocated to a prior taxable year, other than a year prior to the first year in which we became a PFIC, would be taxed at the highest U.S. federal income tax rate on ordinary income in effect for such taxable year, and you would be subject to an interest charge (at the rate generally applicable to an underpayment of tax) on the resulting tax liability, determined as if the tax liability had been due with respect to such particular taxable year. The portion of the excess distribution or gain that is not allocated to prior taxable years, together with the portion allocated to the years prior to the first year in which we became a PFIC, would be included in your gross income for the taxable years of the excess distribution or disposition and taxed as ordinary income.

If we were a PFIC in any year during a U.S. Holder's holding period, we would generally continue to be treated as a PFIC with respect to such U.S. Holder's investment unless the U.S. Holder has made certain elections under the PFIC rules, such as a mark-to-market election or a "qualified electing fund" ("QEF") election. Prospective investors should assume, however, that a QEF election will not be available because we do not expect to provide U.S. Holders with the information needed to make such an election. U.S. Holders should consult with their own tax advisors concerning the

consequences to them if we are or become a PFIC, including but not limited to any reporting requirements and the availability and applicability of any election that may be available to mitigate adverse consequences, in light of such U.S. Holders' particular circumstances.

If we were regarded as a PFIC, a U.S. Holder of ADSs or common stock generally would be required to file an information return on IRS Form 8621 for any year in which the U.S. Holder received a direct or indirect distribution with respect to the ADSs or common stock, recognized gain on a direct or indirect disposition of the ADSs or common stock, or made an election with respect to the ADSs or common stock, reporting distributions received and gains realized with respect to the ADSs or common stock. In addition, if we were regarded as a PFIC, a U.S. Holder would be required to file an annual information return (also on IRS Form 8621) relating to the U.S. Holder's ownership of the ADSs or common stock. This requirement would be in addition to other reporting requirements applicable to ownership in a PFIC.

The rules applicable to owning stock of a PFIC are complex. We encourage U.S. Holders to consult their own tax advisors concerning the U.S. federal income tax consequences of holding the ADSs or common stock that would arise if we were considered a PFIC.

Backup Withholding Tax and Information Reporting Requirements

U.S. backup withholding tax and information reporting requirements generally apply to certain payments made to certain non-corporate holders of stock. Information reporting generally will apply to payments of dividends on and to proceeds from the sale or redemption of ADSs or common stock made within the United States or by a U.S. payor or U.S. middleman to a holder of ADSs or common stock (other than an "exempt recipient," including a corporation, a payee that is not a U.S. person that provides an appropriate certification, and certain other persons).

A payor will be required to withhold backup withholding tax from any payments of dividends on, or the proceeds from the sale or redemption of, ADSs or common stock within the United States or by a U.S. payor or U.S. middleman to a U.S. Holder, other than an exempt recipient, if such U.S. Holder fails to furnish its correct taxpayer identification number or otherwise fails to comply with, or establish an exemption from, such backup withholding tax requirements. The backup withholding tax is not an additional tax and may be credited against a U.S. Holder's regular U.S. federal income tax liability or, if in excess of such liability, refunded by the IRS if a timely refund claim is filed with the IRS.

Information With Respect To Foreign Financial Assets

Certain U.S. Holders may be required to report information with respect to such holder's interest in "specified foreign financial assets" (as defined in Section 6038D of the Code), including stock of a non-U.S. corporation that is not held in an account maintained by certain financial institutions, if the aggregate value of all such assets exceeds certain dollar thresholds. Persons who are required to report specified foreign financial assets and fail to do so may be subject to substantial penalties. U.S. Holders are urged to consult their own tax advisors regarding the foreign financial asset reporting obligations and their possible application to the holding of the ADSs or common stock.

The discussion above is a general summary only. It is not intended to constitute a complete analysis of all tax considerations applicable to an investment in ADSs or common stock. You should consult with your own tax advisor concerning the tax consequences to you of an investment in ADSs or common stock in light of your particular circumstances.

F. DIVIDENDS AND PAYING AGENTS

Not applicable.

G. STATEMENT BY EXPERTS

Not applicable.

H. DOCUMENTS ON DISPLAY

Any material which is filed as an exhibit to this Annual Report on Form 20-F with the U.S. Securities and Exchange Commission is available for inspection at our offices. See Item 4 "Information on the Company — History and Development of the Company — Profile of Telkom Indonesia."

I. SUBSIDIARY INFORMATION

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

We are exposed to market risks that arise from changes in foreign exchange rates and interest rates risk, each of which will have an impact on us. We do not generally hedge our long-term liabilities in foreign currencies but hedge our obligations for the current year. As of December 31, 2019, assets in foreign currencies reached 129% against our liabilities denominated in foreign currencies. Our exposure to interest rate risk is managed through a mix of fixed and variable rate liabilities and assets, including short-term fixed rate assets. Our exposure to such market risks fluctuated during 2017, 2018 and 2019 as the Indonesian economy was affected by changes in the U.S. Dollar to Indonesian Rupiah exchange rate and interest rates themselves. We are not able to predict whether such conditions will continue during 2020 or thereafter.

Foreign Exchange Rate Risk

We are exposed to foreign exchange risk on sales, purchases and borrowings that are denominated in foreign currencies, primarily in U.S. Dollar and Japanese Yen. Our exposures to other foreign exchange rates are not material. The foreign currency exchange rate risks on our obligations are expected to be offset by time deposits and receivables, which are maintained to be more than our short term obligations.

The information presented in the following table is based on assumptions of bid and offer rates in U.S. Dollar, as well as other currencies, which were quoted by Reuters on December 31, 2019 and applied respectively to monetary assets and liabilities. The bid and offer rates as of December 31, 2019 were Rp13,880 and Rp13,885 to US\$1.00, respectively.

However, we believe these assumptions and the information described in the following table may be influenced by a number of factors, including a fluctuation and/or depreciation of the Indonesian Rupiah in the future.

Foreign Exchange Risk	Outstanding Balance as of December 31, 2019		Expected Maturity Date						Fair Value
	Foreign Currency (million)	Rp Equivalent (Rp billion)	2020	2021	2022	2023	2024	Thereafter	
			(Rp billion)						
ASSETS									
Cash and Cash Equivalents									
U.S. Dollar	179	2,489	2,489	—	—	—	—	—	2,489
Japanese Yen	1	0	0	—	—	—	—	—	0
Others ⁽¹⁾	9	123	123	—	—	—	—	—	123
Other Current Financial Assets									
U.S. Dollar	14	197	197	—	—	—	—	—	197
Others ⁽¹⁾	2	24	24	—	—	—	—	—	24
Trade Receivables									
Related Parties									
U.S. Dollar	0	2	2	—	—	—	—	—	2
Others ⁽¹⁾	—	—	—	—	—	—	—	—	—
Third Parties									
U.S. Dollar	165	2,296	2,296	—	—	—	—	—	2,296
Others ⁽¹⁾	9	111	111	—	—	—	—	—	111
Other Receivables									
U.S. Dollar	0	4	4	—	—	—	—	—	4
Others ⁽¹⁾	0	1	1	—	—	—	—	—	1
Other Current Assets									
U.S. Dollar	—	—	—	—	—	—	—	—	—
Others ⁽¹⁾	1	12	12	—	—	—	—	—	12
Other Non-current Assets									

Foreign Exchange Risk	Outstanding Balance as of December 31, 2019		Expected Maturity Date						Fair Value	
	Foreign Currency (million)	Rp Equivalent (Rp billion)	2020	2021	2022			2024		Thereafter
					2023	2024	2025			
U.S. Dollar	63	879	879	—	—	—	—	—	879	
Japanese Yen	49	6	6	—	—	—	—	—	6	
Others ⁽¹⁾	12	159	159	—	—	—	—	—	159	
LIABILITIES										
Trade Payables										
Related Parties										
U.S. Dollar	0	1	1	—	—	—	—	—	1	
Others ⁽¹⁾	—	—	—	—	—	—	—	—	—	
Third Parties										
U.S. Dollar	131	1,822	1,822	—	—	—	—	—	1,822	
Japanese Yen	4	1	1	—	—	—	—	—	1	
Others ⁽¹⁾	5	45	45	—	—	—	—	—	45	
Other Payables										
U.S. Dollar	4	58	58	—	—	—	—	—	58	
Others ⁽¹⁾	14	193	193	—	—	—	—	—	193	
Accrued Expenses										
U.S. Dollar	47	647	647	—	—	—	—	—	647	
Japanese Yen	153	19	19	—	—	—	—	—	19	
Others ⁽¹⁾	2	24	24	—	—	—	—	—	24	
Advances from Customers										
U.S. Dollar	0	3	3	—	—	—	—	—	3	
Short-term Bank Loans										
U.S. Dollar	1	16	16	—	—	—	—	—	16	
Current Maturities of Long-term Liabilities										
U.S. Dollar	22	310	310	—	—	—	—	—	310	
Japanese Yen	768	98	98	—	—	—	—	—	103	
Others ⁽¹⁾	4	61	61	—	—	—	—	—	61	
Other Liabilities										
U.S. Dollar	14	194	10	46	46	46	46	—	194	
Others ⁽¹⁾	0	—	—	—	—	—	—	—	—	
Long-term Liabilities⁽²⁾										
U.S. Dollar	71	988	—	308	262	218	148	51	988	
Japanese Yen	3,072	393	—	98	98	98	98	—	412	
Others ⁽¹⁾	0	5	—	3	2	—	—	—	5	

Notes:

- (1) Asset and liabilities denominated in other foreign currencies are presented as U.S. Dollar equivalent using the Reuters bid and offer rates prevailing at the end of the reporting period.
- (2) Long-term liabilities for the purpose of this table consist of loans denominated in foreign currencies from two-step loans and long-term bank loans.

Interest Rate Risk

Our exposure to interest rate fluctuations results primarily from changes to the floating rate applied for long-term debt. Borrowings at variable interest rates expose our Company and our subsidiaries to interest rate risk. In order to reduce our exposure to interest rate fluctuations, we aim to balance the share of our fixed rate loans and floating rate loans in our bank borrowings. We try to achieve this where there are opportunities to increase the share of fixed-rate loans in our overall loan portfolio in light of prevailing interest rates available in the market at any given time and based on market and our expectations as to future floating and fixed interest rates. To measure market risk fluctuations in interest rates, our Company and our subsidiaries primarily use the interest margin and maturity profile of the financial assets and liabilities based on the changing schedule of the interest rate.

The actual cash flows from our debt are denominated in Indonesian Rupiah, U.S. Dollar, Malaysian Ringgit and Japanese Yen, as appropriate and as indicated in the table. The information presented in the table has been determined based on the following assumptions: (i) fixed interest rates on Indonesian Rupiah time deposits are based on average interest rates offered for three-month placements in effect as of December 31, 2019 by the banks where such deposits were located; (ii) variable interest rates on Indonesian Rupiah denominated long-term liabilities are calculated as of December 31, 2019 and are based on contractual terms setting interest rates based on average rates for the preceding six months on three-month certificates issued by Bank Indonesia or based on the average three-month deposit rate offered by the lenders; (iii) fixed interest rates on U.S. Dollar deposits are based on average interest rates offered for three-month placements by the various lending institutions where such deposits are located as of December 31, 2019; and (iv) the value of marketable securities is based on the value of such securities on December 31, 2019. However, these assumptions may change in the future. These assumptions are different from the rates used in our Consolidated Financial Statements; accordingly, amounts shown in the table may differ from the amounts shown in our Consolidated Financial Statements.

Interest Rate Risk	Outstanding Balance as of December 31, 2019									Fair Value	
	Original Currency (in millions)	Rupiah Equivalent (in billions)	Rate (%)	Expected Maturity Date							
				2020	2021	2022	2023	2024			Thereafter
				(Rp billion)							
ASSETS											
Fixed Rate											
Cash and Cash Equivalent											
Time Deposit											
Rupiah	11,990,586	11,991	4.00% - 9.25%	11,991	—	—	—	—	—	—	11,991
U.S. Dollar	125	1,724	0.50% - 3.30%	1,724	—	—	—	—	—	—	1,724
Malaysian Ringgit	9	30	0.50% - 3.30%	30	—	—	—	—	—	—	30
Other Current Financial Assets											
Time Deposit											
Rupiah	18,000	18	6.50%	18	—	—	—	—	—	—	18
U.S. Dollar	13	182	1.20% - 2.51%	182	—	—	—	—	—	—	182
Malaysian Ringgit	—	—	—	—	—	—	—	—	—	—	—
Mutual Funds											
Rupiah	71,000	71	—	71	—	—	—	—	—	—	71
LIABILITIES											
Short-term Bank Loans											
Variable Rate											
Rupiah											
Principal	7,410,947	7,411	—	7,411	—	—	—	—	—	—	7,411
Interest	—	—	—	—	—	—	—	—	—	—	—
U.S. Dollar											
Principal	—	—	—	—	—	—	—	—	—	—	—
Interest	—	—	—	—	—	—	—	—	—	—	—
Fixed Rate											
Rupiah											
Principal	1,277,991	1,278	—	1,278	—	—	—	—	—	—	1,278
Interest	—	—	—	—	—	—	—	—	—	—	—
U.S. Dollar											
Principal	1.15	16	—	16	—	—	—	—	—	—	16
Interest	—	—	—	—	—	—	—	—	—	—	—
Long-term Liabilities⁽¹⁾											
Variable Rate											
Rupiah											
Principal	20,173,706	20,174	—	4,424	6,417	2,897	2,341	1,938	2,156	—	20,239
Interest	3,874,660	3,875	6.04% - 9.49%	1,313	916	593	404	232	417	—	—
U.S. Dollar											
Principal	85	1,178	—	248	264	248	218	148	51	—	1,180
Interest	6	88	3.03% - 3.16%	33	25	17	10	4	1	—	—
Malaysian Ringgit											
Principal	19	66	—	61	3	2	0	0	0	—	66
Interest	1	3	5.70% - 6.20%	3	0	0	0	0	0	—	—
Fixed Rate											
Rupiah											
Principal	19,010,463	19,010	—	3,853	1,828	3,396	4183	636	5,115	—	19,784
Interest	9,686,747	9,687	2.18% - 13.30%	1,666	1,380	1,130	739	560	4,212	—	—
U.S. Dollar											
Principal	9	120	—	61	45	14	0	—	—	—	119
Interest	0	4	3.85%	3	1	0	0	0	0	—	—
Japanese Yen											
Principal	3,839	491	—	98	98	98	98	98	0	—	515
Interest	307	39	2.95%	14	11	8	5	2	0	—	—

Interest Rate Risk	Outstanding Balance as of			Expected Maturity Date						Fair Value
	Original Currency (in millions)	Rupiah Equivalent (in billions)	Rate (%)	December 31, 2019						
				2020	2021	2022	2023	2024	Thereafter	
Lease Liabilities										
Rupiah										
Principal	17,217,000	17,217	—	4,663	3,453	2,959	2,281	1,437	2,424	17,217
Interest	2,285,000	2,285	—	89	794	570	355	202	275	—

Note:

- (1)
(1) Long-term liabilities consist of loans which are subject to interest; namely two-step loans, bonds and notes, long-term bank loans and other borrowings, which in each case include their maturities

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

American Depository Shares

Bank of New York Mellon Corporation (previously "The Bank of New York") serves as the "Depository" for our ADSs, which are traded on the NYSE.

Investors pay a depository fee directly, or through a broker acting on their behalf, for the delivery or surrender of ADSs for the purpose of withdrawal. The Depository also collects fees for making distributions to investors by deducting the fee from the amount distributed or by selling a portion of the distributable property to pay the fee. The Depository may collect its annual fee for depository services by making a deduction from the cash distributions or by directly billing investors or charging the book-entry system accounts of the parties acting on their behalf. The Depository may refuse to provide fee-generating services until its bills for such services are paid.

Deposit, Withdrawal and Cancellation

Shares or evidence of the right to receive shares may be deposited by delivery to the custodian, accompanied by the required documentation and certification and, if the Depository requires, together with a written order directing the Depository to execute and deliver to, or upon the written order of, the person or persons stated in such order, an ADR or ADRs for the number of ADS representing such deposit. The deposited securities, which shall consist of the deposited shares and any and all other securities, property and cash deposited with the Depository or the custodian (the "Deposited Securities") shall be held by the Depository or by a custodian for the account and to the order of the Depository or at such other place or places as the Depository shall determine.

Upon receipt by the custodian of any deposit, together with the other documents required, the custodian shall notify the Depository and the person or persons to whom or upon whose written order an ADR or ADRs are deliverable. Upon receiving such notice from the custodian, or upon the receipt of shares by the Depository, and upon the receipt of the payment of applicable fees, taxes and charges, the Depository will execute and deliver to or upon the order of the person or persons entitled to the ADRs the appropriate number of ADRs registered in the name or names and evidencing any authorized number of ADS requested by such person.

Holders of ADRs may surrender their ADRs at the depositary's corporate trust office. Upon such surrender and the payment of applicable fees, taxes and charges, the Depositary shall deliver to such holders or upon their order the amount of Deposited Securities at the time represented by the ADS evidenced by the ADR. Delivery of such Deposited Securities may be made by the delivery of (a) certificates in the name of such person in whose name an ADR is registered (an "ADR Holder") or as ordered by him or certificates properly endorsed or accompanied by proper instruments of transfer to such owner or as ordered by him and (b) any other securities, property and cash to which such owner is then entitled in respect of such ADRs. The Deposited Securities are to be delivered at the corporate trust office of the Depositary, if feasible.

Rights of the ADR Holders to Inspect the Books of the Depositary and the List of ADR Holders

The Depositary will make available for inspection by ADR Holders the books for the registration and transfers of ADRs at its corporate trust office, provided that such inspection shall not be for the purpose of communicating with the ADR Holders in the interest of a business or object other than our business or a matter related to the Deposit Agreement or the ADRs.

Voting Rights

Upon receipt of notice of any meeting of shareholders or other Deposited Securities, the Depositary shall provide ADR Holders with a notice of such meeting. Such notice shall contain the same information as is contained in such notice of meeting and a statement that the ADR Holders as of the close of business on a specified record date will be entitled to instruct the Depositary as to the exercise of the voting rights, if any, pertaining to the amount of shares represented by their respective ADS and a statement as to the manner in which such instructions may be given. Upon the ADR Holder's request on such record date, received on or before the date specified by the Depositary, the Depositary shall endeavor, in so far as practicable, to vote or cause to be voted the amount of shares or other Deposited Securities represented by the ADS evidenced by such ADR in accordance with the ADR Holder's instructions.

If no such instructions are received by the Depositary on or before the date specified by the Depositary, the Depositary shall deem that such holder of ADRs to have instructed the Depositary to give a discretionary proxy to a person designated by us with respect to such Deposited Securities and, if and to the extent permitted under Indonesian laws and our Articles of Association, the Depositary shall give a direction proxy to a person designated by us to vote such Deposited Securities, except where we have informed the Depositary that we do not wish such proxy to be given or that such matter materially and adversely affects the rights of the holders of the shares.

Dividends and Other Distributions

An ADR Holder generally has the right to receive the distributions we make on the Deposited Securities. Such ADR Holder's receipt of these distributions may be limited, however, by practical considerations and legal limitations. ADR Holders will receive such distributions under the terms of the Deposit Agreement in proportion to the number of ADSs held as of a specified record date, after deduction the applicable fees, taxes and expenses.

Cash Distributions

Whenever the Depositary receives any cash dividend or other cash distribution on any Deposited Securities, the Depositary shall convert such dividend or distribution into U.S. Dollar and distribute the amount so received to the entitled ADR Holders in proportion to the number of ADS representing such Deposited Securities held by them. Where we are or the Depositary is required to withhold from such cash dividend or such other cash distribution an amount on account of taxes or other governmental charges, and such amount is so withheld, the amount distributed to the relevant ADR Holders shall be reduced accordingly.

Distributions of Shares

When a distribution upon any Deposited Securities consists of a dividend in, or free distribution of, shares, the Depositary may distribute to the entitled ADR Holders, in proportion to the number of ADS representing such Deposited Securities held by them respectively, additional ADRs evidencing an aggregate number of ADS representing the amount of shares received as dividend or free distribution, subject to the terms and conditions of the Deposit Agreement and the withholding or any tax or other governmental charge. If we have not provided satisfactory assurances that such distribution would not require registration under the United States Securities Act of 1933, as amended (the "Securities Act") or is exempt from registration under the Securities Act, the Depositary may withhold the distribution of ADRs.

In lieu of delivering receipts for fractional ADS, the Depositary shall sell the amount of share represented by the aggregate of such fractions and distribute the net proceeds as in the case of a cash distribution.

Distributions of Rights

In the event that we offer or cause to be offered to the holders of any Deposited Securities, any rights to subscribe for additional shares or any rights of any other nature, the Depositary, after having consulted with us, shall have discretion as to the procedure to be followed in making such rights available to any ADR Holders or in disposing of such rights on behalf of any ADR Holders. If, by the terms of such rights offering or for any other reason, the Depositary may not either make such rights available to any ADR Holders, or dispose of such rights and make the net proceeds available to such ADR Holders in U.S. Dollar, the Depositary shall allow the rights to lapse.

If at the time of the offering of any rights the Depositary determines in its discretion that it is lawful and feasible to make such rights available to all or certain ADR Holders but not to other ADR Holders, the Depositary may, after consultation with us, distribute to any ADR Holder to whom it determines the distribution to be lawful and feasible, in proportion to the number of ADS held by such ADR Holder, warrants or other instruments in such form as it deems appropriate.

In circumstances in which rights would otherwise not be distributed, if an ADR Holder requests the distribution of warrants or other instruments in order to exercise the rights allocable to the ADS of such ADR Holder, the Depositary will make such rights available to such ADR Holder upon written notice from us to the Depositary. ADRs so distributed shall be legended in accordance with applicable U.S. laws and all be subject to the appropriate restrictions on sale, deposit, cancellation, and transfer under such laws.

If the Depositary has distributed warrants or other instruments for rights to all or certain ADR Holders, upon instruction from such ADR Holder pursuant to such warrants or other instruments to the Depositary to exercise such rights, upon payment by such ADR Holder to the Depositary for the account of such ADR Holder of an amount equal to the purchase price of the shares to be received upon the exercise of the rights, and upon payment of the fees of the Depositary and any other applicable charges, the Depositary shall, on behalf of such ADR Holder, exercise such rights and purchase the shares. The shares will then be deposited and the Depositary shall execute and deliver the ADRs to the ADR Holder.

If the Depositary determines that it is not lawful and feasible to make such right available to all or certain ADR Holders, it may sell the rights, warrants or other instruments in proportion to the number of ADS held by the ADR Holders to whom it has determined may not lawfully or feasibly make such rights available, and allocate the net proceeds of such sales (net of the fees of the Depositary and all taxes and governmental charges), upon averaged or other practical basis without regard to any distinctions among such ADR Holders because of exchange restrictions or the date of deliver of any ADR or otherwise and distribute the net proceeds to the extent possible as in the case of a cash distribution.

The Depositary will not offer rights to ADR Holders having an address in the United States unless both the rights and the securities to which such rights relate are either exempt from registration under the Securities Act with respect to a distribution to all ADR Holders or are registered under the Securities Act.

Distributions Other than Cash, Shares or Rights

When the Depositary receives distributions other than cash, shares or rights, the Depositary shall cause the securities or property received by it to be distributed to the ADR Holders entitled thereto, after reduction or upon payment of any applicable fees, expense, taxes or other charges, in proportion to the number of ADS representing such Deposited Securities held by them respectively; provided, however, that if in the opinion of the Depositary such distribution cannot be made proportionately among the entitled ADR Holders, or if for any other reason, the Depositary deems such distribution not to be feasible, the Depositary may adopt such method as it may deem equitable and practicable for the purpose of effecting such distribution, including, but not limited to the public or private sale of the securities or property thus received, or any part thereof, and the net proceeds of such sales (net of the fees) shall be distributed by the Depositary to the entitled ADR Holders as in the case of a cash distribution.

Procedures for transmitting notices, reports and proxy soliciting material

We shall provide to the Depositary and the custodian, on or before the first date on which we give notice of any meeting of shareholders or other Deposited Securities, or of any adjourned meeting of such holders, or of the taking of any action in respect of any cash or other distributions or the offering of any rights, a copy of such notice and a translation of such notice and any other reports and communications which are generally made available by us to the holders of our shares. The Depositary will arrange for the mailing of copies of such notices, reports and communications to all ADR Holders at our request.

Reclassification, Recapitalization and Mergers

In circumstances not considered to be distribution of shares, upon any change in nominal value, change in par value, split-up, consolidation, or any other reclassification of the Deposited Securities, or upon any recapitalization, reorganization, merger or consolidation, or sale of assets affecting us or to which we are a party, any securities which shall be received by the Depositary or a custodian in exchange for or in conversion of or in respect of the Deposited Securities shall be treated as new Deposited Securities under the Deposit Agreement, and the ADS shall represent, in addition to the existing Deposited Securities, the right to receive the new Deposited Securities received in exchange or conversion. The Depositary may also or, if requested by us, shall execute and deliver additional receipts as in the case of a dividend in shares, or call for the surrender of outstanding ADRs to be exchanged for new ADRs specifically describing such new Deposited Securities.

If the Depositary determines that any such adjustment, delivery or exchange is not lawful or practicable, the Depositary may sell such securities or property at a public or private sale and distribute the net proceeds to the entitled ADR Holders as in the case of a cash distribution.

Depositary Payments

We entered into a new agreement with the Depositary in 2016 pursuant to which the Depositary agreed to reimburse us up to US\$1.0 million in 2016 and up to US\$850,000 in each of the subsequent six years for certain expenses we incur in relation to the administration and maintenance of the ADS facility, including, but not limited to, investor relations expenses, legal fees and disbursements and other ADS program-related expenses. The reimbursement will be adjusted if the Depositary's collection of dividend fees and the number of ADSs outstanding falls below a stipulated minimum. In 2019, we received reimbursement of approximately US\$825,468.29 from the depositary for such expenses.

The Depositary did not waive, or pay directly to third parties on our behalf, any expenses relating to the year ended December 31, 2019.

Payment of Taxes

ADR Holders are responsible for any taxes or other governmental charges payable on their ADSs or on the deposited securities represented by any of their ADSs. The Depositary may refuse to register any transfer of the ADR Holders' ADRs or allow such ADR Holders to withdraw the Deposited Securities represented by their respective ADRs until such taxes or other charges are paid and may withhold any dividends or other distributions. It may apply payments owed to the ADR Holders or sell Deposited Securities represented by such ADR Holders' ADRs to pay any taxes owed and such ADR Holders will remain liable for any deficiency.

Costs Related to ADS Issue and Handling

Shareholders depositing or withdrawing ordinary shares or ADS must pay:	For:
US\$5 (or less) per 100 ADS (or part of 100 ADS).	Issuance of ADSs, including issuance resulting from a distribution of shares or rights or other property. Cancellation of ADSs for the purpose of withdrawal, including in case of termination of the deposit agreement.
US\$0.02 (or less) per ADS.	Any cash payment to registered ADS shareholders.
Up to US\$0.05 per ADS.	Receiving or distributing dividends.
A fee equivalent to the fee payable if the securities distributed to shareholders had been shares and those shares had been deposited for the issuance of ADS.	Delivery of securities by the Depositary to registered ADS shareholders.
US\$0.02 (or less) per ADS per calendar year.	Depositary services.
Registration or transfer fees.	Transfer or registration of shares on the share register to or from the name of the Depositary or its agent when shareholders deposit or withdraw ordinary shares.
Depositary fees.	Telegram, telex and fax transmissions (if provided for in the deposit agreement). Converting foreign currency to U.S. Dollar.
Taxes and other duties levied by the government, the Depositary or the custodian upon payment of the ADSs or other shares underlying the ADSs, such as share transfer tax, stamp duty or income tax.	As necessary.
Any costs incurred by the Depositary or its agent for servicing the securities deposited.	As necessary.

Amendment

We may agree with the Depositary to amend the Deposit Agreement and the ADRs without the consent of ADR Holders. Any amendment which shall add or increase fees or charges (except for taxes and other governmental charges or registration fees, cable, telex or facsimile transmission costs, delivery charges or similar items), or which shall prejudice a substantial existing right of ADR Holders, shall, however, not become effective as to outstanding ADRs until thirty (30) days after the Depositary notifies ADR Holders of such amendment. Every ADR Holder at the time any amendment so becomes effective shall be deemed, by continuing to hold such ADRs, to consent and agree to such amendment and to be bound by the ADRs and the Deposit Agreement as amended thereby.

Restrictions on the Right to Transfer or Withdraw the Underlying Securities/Limitations on Execution and Delivery, Transfer and Surrender of ADRs

As a condition precedent to any execution and delivery, registration of transfer, split-up, combination or surrender of any ADR or withdrawal of any Deposited Securities, the Depositary, custodian, registrar or we may require payment by the presenter of the ADRs of a sum sufficient to reimburse any of them for any applicable taxes or governmental charges, fees and expenses and the production of proof satisfactory to it as to the identity and genuineness of any signature and may also require compliance with such regulations, if any, as we or the Depositary may establish consistent with the provisions of the Deposit Agreement.

During the period when the transfer books of the Depositary are closed or when we or the Depositary deem necessary and advisable or to comply with a requirement of law or any government or governmental body or commission, or for any other reason, the delivery of ADRs may be suspended, the transfer of ADRs in certain instance may be refused, or the registration of transfer of outstanding ADRs generally may be suspended, subject to certain exceptions.

Without limitation of the foregoing, the Depositary will not knowingly accept for deposit under the Deposit Agreement any shares required to be registered under the provisions of the Securities Act, unless a registration statement is in effect as to such shares.

Prior to delivery, transfer or surrender of ADRs or withdrawal of shares or other Deposited Securities, an indemnity bond may be required if the Depositary deems that fees, taxes or other charges will be payable following such transactions.

Limitations on Obligations and Liability

The Deposit Agreement expressly limits our obligations and liability and the obligations and liability of the Depositary. We and the Depositary are only obligated to take the actions in good faith and without being negligent as specifically set forth in the Deposit Agreement.

Neither we nor the Depositary have any obligation to become involved in a lawsuit or other proceeding related to the ADRs or the Deposit Agreement on behalf of ADR Holders or on behalf of any other person unless we or the Depositary, as applicable, have been provided with satisfactory indemnity against all expense and liabilities.

Neither we nor the Depositary shall be liable for any of our or the Depositary's action or nonaction in reliance on the advice or information from legal counsel, accountants, any person presenting shares for deposit, any ADR Holder or any other person we or the Depositary believed in good faith to be competent to give such advice or information.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

There are no defaults, dividend arrearages and delinquencies to which this Item applies.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES

A. DISCLOSURE CONTROLS AND PROCEDURES

Our management, with the participation of our chief executive officer and chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act) as of December 31, 2019, as required by Rule 13a-15(b) under the Exchange Act.

Our management has concluded that, as of December 31, 2019, our disclosure controls and procedures were effective. Controls and procedures conducted by management include controls and procedures that are designed to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

B. MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). The internal control over financial reporting is a process designed by, or under the supervision of, the CEO and CFO, and executed by the Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS as issued by the IASB, and includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of our Company (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with IFRS as issued by the IASB, and that receipts and expenditures of our Company's are being made only in accordance with authorizations of our management and Board of Directors, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our Company's assets that could have a material effect on the Consolidated Financial Statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") (2013 framework). Based on this assessment, management concluded that as of December 31, 2019, our internal control over financial reporting was effective.

C. ATTESTATION REPORT OF THE REGISTERED PUBLIC ACCOUNTING FIRM

The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by KAP Purwanto, Sungkoro & Surja, an independent registered public accounting firm, as stated in their report which is included in the Consolidated Financial Statements.

D. CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There have been no significant changes in our internal control over financial reporting during the most recently completed fiscal year that would materially affect or are reasonably likely to materially affect, our internal control over financial reporting.

We are committed to continual improvements in internal control processes, and will continue to review and monitor the control over financial reporting and its procedures in order to ensure compliance with the requirements of the Sarbanes-Oxley Act of 2002 and related regulations as stipulated by COSO. We will also continue to assign significant company resources from time to time to improve our internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

In May 29, 2019, the Board of Commissioners has determined that Mr. Sarimin Mietra Sardi, the member of the Audit Committee, qualifies as an Audit Committee Financial Expert in accordance with the requirements of Item 16A of Form 20-F and as an "independent" member in accordance with the provisions of Rule 10A-3 under the Exchange Act. Mr. Sardi has been a member of our Audit Committee since March 31, 2016. Previously, Mr. Sardi held a number of strategic positions including Deputy SGM Finance Operation and Director of Finance and Human Resources of Telkom Pension Fund (1982-2014).

ITEM 16B. CODE OF ETHICS

In compliance with Section 406 of the Sarbanes-Oxley Act of 2002, our code of ethics applies equally to our Commissioners, our President Director and our Director of Finance (positions equivalent to Chief Executive Officer and Chief Financial Officer, respectively), Directors and other key officers as well as all of our employees. You may view our code of ethics on our website at https://www.telkom.co.id/sites/about-telkom/en_US/page/code-of-ethics-and-corporate-culture. Amendments to or waivers from the code of ethics will be posted on our website as well. Information contained on that website is not a part of this annual report on Form 20-F. Copies of our code of ethics may also be obtained at no charge by writing to our Investor Relations Unit at Telkom Landmark Tower, 39th Floor, Jl. Gatot Subroto No.52, Jakarta 12710, Indonesia.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

In line with existing procedures and taking into consideration the independence and qualifications of independent auditors, at our AGMS on May 24, 2019, we appointed KAP Purwantono, Sungkoro & Surja (formerly Purwantono, Suherman & Surja) (a member firm of Ernst & Young Global Limited), a registered KAP with the OJK, to perform the audit on our Consolidated Financial Statements for the year ended December 31, 2019 and on the effectiveness of internal control over financial reporting as of December 31, 2019. The fee for the audit for 2019 was agreed at Rp59.1 billion (excluding VAT).

KAP Purwantono, Sungkoro & Surja has been our public accountant since 2012.

KAP Purwantono, Sungkoro & Surja is also assigned to perform an audit of funds utilization of the Partnership and Community Development Program ("PKBL") for 2019.

FEES AND SERVICES OF THE EXTERNAL AUDITOR

The following table summarizes the fees for audit services in 2017, 2018 and 2019:

	For Years Ended on December 31,		
	2017	2018	2019
	(Rp million)	(Rp million)	(Rp million)
Audit Fee	41,618	51,826	57,055
All Other Fees	2,042	2,819	2,055

AUDIT COMMITTEE PRE-APPROVAL POLICIES AND PROCEDURES

We have adopted pre-approval policies and procedures under which all non-audit services provided by our independent registered public accounting firm must be pre-approved by our Audit Committee, as set forth in the Audit Committee Charter. Pursuant to the charter, permissible non-audit services may be performed by our independent registered public accounting firm provided that: (i) our Board of Directors must deliver to the Audit Committee (through the Board of Commissioners) a detailed description of the non-audit service that is to be performed by the independent public accounting firm, and (ii) the Audit Committee will determine whether the proposed non-audit service will affect the independence of our independent public accounting firm or would give rise to any conflict of interest.

Pursuant to Section 10(i)(1)(B) of the Exchange Act and paragraph (c)(7)(i)(C) of Rule 2-01 of Regulation S-X issued there under, our Audit Committee Charter waives the pre-approval requirement for permissible non-audit services where: (i) the aggregate amount of the fees for such non-audit services constitutes no more than 5% of the total amount of fees paid by us to our independent registered public accounting firm during the year in which the services are provided; or (ii) the proposed services are not regarded as non-audit services at the time the contract to perform the engagement is signed. In addition to these two requirements, the performance of non-audit services must be approved prior to the completion of the audit by a member of the Audit Committee who has been delegated pre-approval authority by the full Audit Committee, or by the full Audit Committee itself.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

The NYSE listing standards require that a United States listed company must have an audit committee, a nominating/corporate governance committee and a compensation committee. Each of these committees must consist solely of independent directors and must have a written charter that addresses certain matters specified in the listing standards.

The Indonesian Company Law does not require Indonesian public companies to form any of the committees described in the NYSE listing standards. However, the OJK Audit Committee Regulation requires the board of commissioners of a public company to establish an audit committee which is chaired by an independent commissioner. In addition, the OJK Audit Committee Regulation requires each member of such audit committee to be either an independent commissioner or external independent member, with the audit committee comprised of at least three members with at least one independent commissioner and one external independent member and at least one member of the audit committee having expertise in accounting or finance.

The NYSE listing standards, as required by Rule 10A-3(c)(3) of the Exchange Act require foreign private issuers whose shares are listed on the NYSE to have an audit committee comprised of independent directors. However, such foreign private issuers may be exempted from the independence requirement if: (i) the home country government or stock exchange requires the company to have an audit committee; (ii) the audit committee is separate from the board of directors and includes non-board members as in our case, members from the Board of Commissioners; (iii) the audit committee members are not selected by management and no executive officer of the company is a member of the audit committee; (iv) the home country government or stock exchange requires the audit committee to be independent of the company's management; and (v) the audit committee is responsible for the appointment, retention and oversight of the work of external auditors. We avail ourselves of this exemption and document this on our Section 303A Annual Written Affirmations submitted to the NYSE. However, unlike the NYSE listing standards requirements, according to the current regulations relating to audit committees in Indonesia, our Audit Committee does not have direct responsibility for the appointment, compensation and retention of an external auditor. Our Audit Committee may only recommend the appointment of an external auditor to the Board of Commissioners and the Board of Commissioner's decision must have the approval of the shareholders.

Our Audit Committee has five members: two Independent Commissioners, one Commissioner and two external independent members who are not affiliated with our Company.

Not all members of our Audit Committee are independent directors as required by Rule 10A-3 of the Exchange Act. We rely on the general exemption under Rule 10A-3(c)(3) regarding the composition of our Audit Committee. We believe that our reliance on this exemption does not materially and adversely affect the ability of our Audit Committee to act independently.

Further, we believe that the intent of the provision which requires each member of an audit committee to be an independent director is to ensure that the audit committee is independent from influence by management and provides a forum separate from management in which auditors and other interested parties can candidly discuss concerns. The OJK Audit Committee Regulation requires each member of an audit committee to be either an independent commissioner or external independent member. Such external independent member(s) is/are, in effect, independent not only of management but also of the Board of Commissioners, the Board of Directors and our Company as a whole. We therefore believe that the standard established by the OJK Audit Committee Regulation is at least equally effective in ensuring the ability of an audit committee to act independently.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

Not applicable.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

The following is a summary of significant differences between the corporate governance practices followed by Indonesian companies and those required by NYSE listing standards for domestic United States issuers.

A. OVERVIEW OF INDONESIAN LAW

Indonesian public companies are required to observe and comply with certain good corporate governance practices. The requirements and the standards for good corporate governance practices for public companies are embodied in the following regulations: the Indonesian Company Law; the Indonesian Capital Market Law; the Indonesian Law on SOEs; Regulation of the Minister of State-Owned Enterprises No.PER-09/MBU/2012 on Amendment of Regulation of the Minister of State-Owned Enterprises No.PER-01/MBU/2011 on the Implementation of Good Corporate Governance to State-Owned Enterprises; OJK regulations; and IDX rules. In addition to the above, the articles of association of public companies incorporate provisions directing the implementation of good corporate governance practices.

Similar to the laws of the United States, Indonesian laws require public companies to observe and comply with corporate governance standards that are more stringent than those applied to privately-owned companies. In Indonesia, the term "public company" does not necessarily refer to a company whose shares are listed on a securities exchange. Under the Indonesian Capital Markets Law, a non-listed company may be deemed a public company, and subjected to the laws and regulations governing public companies, if such company meets or exceeds the capital and number of shareholder requirements applicable to a public company.

On November 30, 2004, the National Committee on Governance Policy (*Komite Nasional Kebijakan Governance*, "KNKG") was established pursuant to the Decree of the Coordinating Minister for Economic Affairs No.KEP.49/M.EKONOM/1/2004 ("KEP.49"), which was formed to revitalize the former National Committee on Good Corporate Governance established in 1999. The KNKG aims to enhance the comprehension and implementation of good governance in Indonesia and advises the Government on governance issues, both in public and corporate sectors. KEP.49 was lastly amended and revoked by the Decree of the Coordinating Minister for Economic Affairs No. 117 of 2016.

The KNKG formulated the Code for Good Corporate Governance 2006 (the "GCG Code") which recommended setting more stringent corporate governance standards for Indonesian companies, such as the appointment of independent commissioners and nomination and remuneration committees by the board of commissioners, as well as increasing the scope of disclosure obligations for Indonesian companies. Although the KNKG recommended that the GCG Code be adopted by the Government as a basis for legal reform, as of the date of this Annual Report, the Government has not enacted regulations that fully implement the provisions of the GCG Code.

In 2014, the OJK issued the Indonesia Corporate Governance Roadmap, which provides for recommendations for Indonesian issuers and public companies to implement certain corporate governance standards, such as procedures with respect to conduct of EGMS and nominations of directors and commissioners.

B. COMPOSITION OF INDEPENDENT BOARD OF DIRECTORS AND BOARD OF COMMISSIONERS

The NYSE listing standards provide that the board of directors of a United States listed company must consist of a majority of independent directors and that certain committees must consist solely of independent directors. A director qualifies as independent only if the board affirmatively determines that the director has no material relationship with the company, either directly or indirectly.

Unlike companies incorporated in the United States, the management of an Indonesian company consists of two organs of equal stature, the board of directors and the board of commissioners. Generally, the board of directors is responsible for the day-to-day business activities of the company and is authorized to act for and on behalf of the company, while the board of commissioners has the authority and responsibility to supervise the board of directors and is statutorily mandated to provide advice to the board of directors by the Indonesian Company Law.

The Indonesian Company Law requires the board of commissioners of a public company to have at least two members. Although the Indonesian Company Law is silent as to the composition of the board of commissioners, OJK Rule No.33/2014 states that at least 30% of the members of the board of commissioners of a public company (such as our Company) must be independent.

The Indonesian Company Law provides that the board of directors of a publicly listed company has the authority to manage the daily operations of the company and must have at least two members, each of whom must meet the minimum qualification requirements set forth in the Indonesian Company Law and the capital market laws.

Given the difference between the role of the members of the board of directors in an Indonesian company and that of their counterparts in a United States company, Indonesian law does not require that certain members of the board of directors must be independent and neither does it require the creation of certain committees composed entirely of independent directors.

C. COMMITTEES

See Item 16D "Exemptions from the Listing Standards for Audit Committees."

D. DISCLOSURE REGARDING CORPORATE GOVERNANCE

The NYSE listing standards require United States companies to adopt, and post on their websites, a set of corporate governance guidelines. The guidelines must address, among other things: director qualification standards, director responsibilities, director access to management and independent advisors, director compensation, director orientation and continuing education, management succession, and an annual performance evaluation itself. In addition, the CEO of a United States company must certify to the NYSE annually that he or she is not aware of any violations by the company of the NYSE's corporate governance listing standards. The certification must be disclosed in our Annual Report to shareholders. Indonesian law does not have disclosure requirements similar to NYSE listing standards. However, the Indonesian Capital Markets Law generally requires Indonesian public companies to disclose certain types of information to shareholders, and to the OJK and the IDX, e.g: information relating to changes in the public company's shareholdings and material information or facts that may affect the decision of shareholders to maintain their share ownership in the public company or investment decision of potential third party investors.

E. CODE OF BUSINESS CONDUCT AND ETHICS

The NYSE listing standards require each United States listed company to adopt, and post on its website, a code of business conduct and ethics for its directors, officers and employees. There is no similar requirement under Indonesian law. However, companies that are required to file or furnish reports to the SEC must disclose in their Annual Reports whether they have adopted a code of ethics for their senior financial officers. Although the requirements as to the contents of the code of ethics under SEC rules are not identical to those set forth in the NYSE listing standards, there are significant similarities in which under SEC rules, the code of ethics must be designed to promote: (a) honest and ethical conduct, including the handling of conflicts of interest between personal and professional relationships; (b) full, fair, accurate and timely disclosure in reports and documents filed with or submitted to the SEC; (c) compliance with applicable laws and regulations; (d) prompt internal reporting of violations of the code and (e) accountability for adherence to the code. Furthermore, shareholders must be given access to physical or electronic copies of the code.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

We have responded to Item 18 in lieu of this Item.

ITEM 18. FINANCIAL STATEMENTS

See pages F-1 through F-152.

ITEM 19. EXHIBITS

The following exhibits are filed as part of this Form 20-F:

- 1.1 Articles of Association (as amended on June 21, 2019).
- 2.1 Description of securities.
- 12.1 Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 and 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 12.2 Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 and 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 13.1 Certification of the Chief Executive Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 13.2 Certification of the Chief Financial Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 101.INS XBRL Instance Document
- 101.SCH XBRL Taxonomy Extension Schema Document
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE XBRL Taxonomy Extension Presentation Label Linkbase Document

SIGNATURES

Pursuant to the requirement of Section 12 of the Securities Exchange Act of 1934, as amended, the Registrant hereby certifies that it meets all the requirement for filing on Form 20-F and that is has duly caused and authorized the undersigned to sign this Form 20-F on its behalf.

**PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA TBK**

Jakarta, June 15, 2020

By: /s/ Ririek Adriansyah
Ririek Adriansyah
President Director / Chief Executive Officer

**Perusahaan Perseroan (Persero)
PT Telekomunikasi Indonesia Tbk.
and its subsidiaries**

Consolidated financial statements
as of December 31, 2018 and 2019
and for each of the three years in the period ended December 31, 2019
with report of independent registered public accounting firm

**Statement of the Board of Directors
regarding the Board of Director's Responsibility for**

**Consolidated financial statements
as of December 31, 2019 and for the year then ended
Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk and its Subsidiaries**

On behalf of the Board of Directors, we undersigned:

- | | |
|------------------|--|
| 1. Name | : Ririek Adriansyah |
| Business address | : Jl. Japati No.1 Bandung 40133 |
| Address | : Jl. Kenanga V B-6 No. 6 Taman Duta RT 002 RW 009
Kelurahan Cisalak, Kecamatan Sukma Jaya, Depok |
| Phone | : (022) 452 7101 |
| Position | : President Director |
| 2. Name | : Harry M. Zen |
| Business address | : Jl. Japati No.1 Bandung 40133 |
| Address | : Jl. H. Namin No. 48 A Kelurahan Cipete Utara
Kecamatan Kebayoran Baru , Jakarta Selatan |
| Phone | : (022) 452 7201/ 021 520 9824 |
| Position | : Director of Finance |

We hereby state as follows:

1. We are responsible for the preparation and presentation of the consolidated financial statement of PT Telekomunikasi Indonesia Tbk (the "Company") and its subsidiaries;
2. The Company and its subsidiaries' consolidated financial statement have been prepared and presented in accordance with International Financial Reporting Standards;
3. All information has been fully and correctly disclosed in the Company and its subsidiaries' consolidated financial statement;
4. The Company and its subsidiaries' consolidated financial statement do not contain false material information or facts, nor do they omit any material information or facts;
5. We are responsible for the Company and its subsidiaries' internal control system.

This statement is considered to be true and correct.

Jakarta, June 15, 2020

/s/ Ririek Adriansyah	/s/ Harry M. Zen
Ririek Adriansyah	Harry M. Zen
President Director	Director of Finance

**PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2018 AND 2019
AND FOR EACH OF THE THREE YEARS IN THE PERIOD ENDED DECEMBER 31, 2019
WITH REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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Purwantono, Sungkoro & Surja

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Report of Independent Registered Public Accounting Firm

Report No. 00020/2.1032/NS.0/06/1007-1/1/VI/2020

To the Shareholders and the Boards of Commissioners and Directors of Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk. (the "Company") and its subsidiaries (collectively referred to as the "Group") as of December 31, 2019 and 2018, the related consolidated statements of profit or loss and other comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2019 and 2018, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Group's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated June 15, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

As discussed in Note 2aa to the consolidated financial statements, the Group has changed its method for accounting for leases since January 1, 2019 following the adoption of International Financial Reporting Standards 16, "Leases" ("IFRS 16"). As explained below, auditing the Group's adoption of IFRS 16 was a critical matter. In addition, as discussed in Notes 2q and 2t to the consolidated financial statements, the Group has also changed its methods for accounting for revenue from contracts with customers and financial instruments since January 1, 2018.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Group's consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.



Report of Independent Registered Public Accounting Firm (continued)

Report No. 00020/2.1032/NS.0/06/1007-1/1/VI/2020 (continued)

Basis for Opinion (continued)

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the Audit Committee of the Company and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements, and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing a separate opinion on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of property and equipment estimated useful lives

As of December 31, 2019, the balance of consolidated property and equipment of the Group was Rp153,174 billion. As discussed in Notes 2ac and 12 to the consolidated financial statements, the Group reviews the estimated useful lives of its property and equipment at least annually and such estimates are updated if expectations differ from previous estimates due to changes in expectation of physical wear and tear, technical, or commercial obsolescence and legal or other limitations on the continuing use of the property and equipment.

Auditing the Group's estimated useful lives of property and equipment is complex and requires significant judgment because the determination of the estimated useful lives considers a number of factors, including strategic business plans, expected future technological developments, and market behavior.



Report of Independent Registered Public Accounting Firm (continued)

Report No. 00020/2.1032/NS.0/06/1007-1/1/VI/2020 (continued)

Evaluation of property and equipment estimated useful lives (continued)

We obtained an understanding, and evaluated the design and tested the operating effectiveness, of internal controls over the Group's process of estimating the useful lives of its property and equipment. For example, we tested management's review control on checking the completeness and accuracy of the historical assets classification data and assessing the appropriateness of the judgments regarding the most relevant data to be considered in determining useful lives.

To test whether the estimated useful lives of property and equipment used by management was reasonable, our audit procedures included, among others, obtaining an understanding of management's strategy related to assets replacement and assessed the reasonableness of such assumptions by considering external sources, such as telecommunication technology growth, changes in market demand, and current economic and regulatory trends. We assessed whether there were any potential sources of contrary information by performing benchmarking analysis on the estimated useful lives of property and equipment against other public companies within the telecommunication industry. We also performed physical inspections of property and equipment and assessed the average usage period of disposed assets to evaluate whether the assets were being used in accordance with the applicable accounting policy.

Adoption of IFRS 16

As of December 31, 2019, the Group recognized a consolidated right-of-use asset and a consolidated lease liability of Rp20,893 billion and Rp17,217 billion, respectively. As discussed in Notes 2m, 2aa, and 13 to the consolidated financial statements, the Group adopted IFRS 16 effective from January 1, 2019 using the modified retrospective approach. The adoption of IFRS 16 resulted in a change in accounting policy for leases.

Auditing the Group's accounting for leases under IFRS 16 is complex and involves significant judgement to determine the lease term and the incremental borrowing rate that the Group would have to pay to borrow over a similar term to obtain an asset of similar value to the right-of-use asset. In addition, the process to adopt IFRS 16 was complex due to significant changes made to the Group's policies and system processes and controls to record its existing and new leases which required extensive audit effort due to the volume of contracts and the degree of independent auditor's judgment when performing audit procedures.

We obtained an understanding, evaluated the design and tested the operating effectiveness, of the Group's internal controls over the measurement of the lease liability. For example, we tested management's review control on verifying the completeness of the master lease database and assessing the appropriateness of the key assumptions used in determining the lease term and calculating the incremental borrowing rate.



Report of Independent Registered Public Accounting Firm (continued)

Report No. 00020/2.1032/NS.0/06/1007-1/1/VI/2020 (continued)

Adoption of IFRS 16 (continued)

To test the lease liability recognized, our audit procedures included, among others, testing the mathematical accuracy of the incremental borrowing rate model adopted by the Group and evaluating the significant assumptions used (such as the lease term, interest rates, and credit spread adjustments) and the determination of the underlying security. We assessed whether there were any potential sources of contrary information and performed sensitivity analyses over the significant assumptions to evaluate the changes in the lease liability that would result from changes in the assumptions.

/s/ Purwantono, Sungkoro & Surja

We have served as the Company's independent auditor since 2012.

Jakarta, Indonesia

June 15, 2020



Purwantono, Sungkoro & Surja

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Report of Independent Registered Public Accounting Firm

Report No. 00214/2.1032/JL.0/06/1007-1/1/VI/2020

To the Shareholders and the Boards of Commissioners and Directors of Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk.

Opinion on Internal Control over Financial Reporting

We have audited Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk. (the “Company”) and its subsidiaries (collectively referred to as the “Group”) internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the “COSO criteria”). In our opinion, the Group maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the consolidated statements of financial position of the Group as of December 31, 2019 and 2018, the related consolidated statements of profit or loss and other comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes, and our report dated June 15, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Group’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.



Report of Independent Registered Public Accounting Firm (continued)

Report No. 00214/2.1032/JL.0/06/1007-1/1/VI/2020 (continued)

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Purwantono, Sungkoro & Surja

Jakarta, Indonesia

June 15, 2020

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
As of December 31, 2018 and 2019

(Amounts in the tables expressed in billions of Indonesian Rupiah and millions of U.S. Dollar)

	Notes	2018	2019	
		Rp	Rp	US\$ (Note 3)
ASSETS				
CURRENT ASSETS				
Cash and cash equivalents	2c,2e,2t,4,32,35	17,435	18,241	1,314
Other current financial assets	2c,2e,2t,5,32,35	1,314	554	40
Trade and other receivables	2c,2g,2t,2ac,6,32,35	9,928	11,272	812
Contract assets	2q, 2t, 7, 35	1,560	629	45
Inventories	2h,8	717	585	42
Prepaid income taxes	2s,29a	20	310	22
Prepaid other taxes	2s,29b	3,325	3,251	234
Assets held for sale	2j,12	340	39	3
Contract costs	2q,10	924	534	38
Other current assets	2c,2i,2m,9,32	7,280	5,502	396
Total Current Assets		42,843	40,917	2,946
NON-CURRENT ASSETS				
Long-term investments	2f, 2t, 11, 35	2,662	2,199	158
Property and equipment	2c,2l,2z,2ac,12,32,34	142,912	153,174	11,034
Right-of-use assets	2c,2m,2aa,13	—	20,893	1,505
Intangible assets	2d,2k,2z,15	5,032	6,446	464
Deferred tax assets - net	2s,29i	2,477	2,779	200
Contract assets	2q,2t,7,35	—	315	23
Contract costs	2q,10	320	651	47
Other non-current assets	2c,2g,2i,2m,2s,2t,14,29,32,35	9,654	7,683	554
Total Non-current Assets		163,057	194,140	13,985
TOTAL ASSETS		205,900	235,057	16,931
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Trade and other payables	2c,2n,2t,16,32,35	15,214	14,324	1,032
Current income tax liabilities	2s,29c	404	1,545	111
Other tax liabilities	2s,29d	776	1,886	136
Accrued expenses	2c,2t,2y,17,32,35	12,769	12,761	919
Contract liabilities	2q,18	5,252	7,430	535
Advances from customers	2c,2g,2y,32	1,568	1,289	93
Short-term bank loans and current maturities of long-term borrowings	2c,2m,2o,2t,19,32,35	10,339	22,114	1,593
Total Current Liabilities		46,322	61,349	4,419
NON-CURRENT LIABILITIES				
Deferred tax liabilities - net	2s,29i	1,197	1,204	87
Contract liabilities	2q,18	652	805	58
Long service award provisions	2r,2ab,31	852	1,066	77
Pension benefits and other post-employment benefit obligations	2r,2ab,30	5,555	8,078	582
Long-term loans and other borrowings	2c,2m,2o,2t,20,32,35	33,743	44,843	3,230
Other liabilities	2n,2t,2y	573	488	35
Total Non-current Liabilities		42,572	56,484	4,069
TOTAL LIABILITIES		88,894	117,833	8,488
EQUITY				
Capital stock	1c,22	4,953	4,953	357
Additional paid-in capital	2u,23	1,977	1,977	142
Retained earnings		91,488	92,644	6,673
Other reserves	2f,2t,35	321	222	16
Net equity attributable to owners of the parent company		98,739	99,796	7,188
Non-controlling interest	2b,21	18,267	17,428	1,255
TOTAL EQUITY		117,006	117,224	8,443
TOTAL LIABILITIES AND EQUITY		205,900	235,057	16,931

The accompanying notes form an integral part of these consolidated financial statements.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
For each of the Three Years in the Period Ended December 31, 2019
(Amounts in the tables expressed in billions of Indonesian Rupiah and millions of U.S. Dollar,
unless otherwise stated)

	Notes	2017 Rp	2018 Rp	2019 Rp	US\$ (Note 3)
REVENUES		128,256	130,788	135,557	9,765
Operation, maintenance, and telecommunication service expenses	2c,2q,2ac,25,32	(36,603)	(43,893)	(37,453)	(2,698)
Depreciation and amortization	2k,2l,2m,2z,2ac,12,13,15	(20,477)	(21,442)	(27,204)	(1,960)
Personnel expenses	2c,2q,2r,26,30,31,32	(13,529)	(13,178)	(13,012)	(937)
Marketing expenses	2q	(5,268)	(4,001)	(3,416)	(246)
General and administrative expenses	2c,2q,28,32	(5,260)	(6,594)	(6,207)	(447)
Interconnection expenses	2c,2q,32	(2,987)	(4,283)	(5,077)	(366)
Gains (losses) on foreign exchange - net	2p	51	71	(89)	(6)
Other income (expense) - net	2l,2q	(281)	1,065	895	64
OPERATING PROFIT		43,902	38,533	43,994	3,169
Finance income	2c,2q,32	1,434	1,014	1,095	79
Finance costs	2c,2o,2q,32	(2,769)	(3,523)	(5,452)	(393)
Share in profit (loss) of associated companies - net	2f,11	61	53	(166)	(12)
Impairment of long term investment in associated companies	2ac,11	—	—	(1,172)	(84)
PROFIT BEFORE INCOME TAX		42,628	36,077	38,299	2,759
INCOME TAX (EXPENSE) BENEFIT	2s,2ac,29e				
Current		(11,357)	(9,432)	(10,619)	(765)
Deferred		1,399	66	180	13
		(9,958)	(9,366)	(10,439)	(752)
PROFIT FOR THE YEAR		32,670	26,711	27,860	2,007
OTHER COMPREHENSIVE INCOME (LOSS)					
<i>Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:</i>					
Foreign currency translation	2p	24	148	(105)	(7)
Net gain (loss) on available-for-sale financial assets	2t	20	—	9	1
Share of other comprehensive income of associated companies	2f,11	(1)	(14)	16	1
<i>Other comprehensive income (loss) not to be reclassified to profit or loss in subsequent periods:</i>					
Defined benefit plan actuarial gain (loss) - net	2r,30	(2,375)	4,820	(2,109)	(152)
Other Comprehensive Income (losses) - net		(2,332)	4,954	(2,189)	(157)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		30,338	31,665	25,671	1,850
Profit for the year attributable to:					
Owners of the parent company	24	22,120	17,802	19,068	1,374
Non-controlling interests	2b, 21	10,550	8,909	8,792	633
		32,670	26,711	27,860	2,007
Total comprehensive income for the year attributable to:					
Owners of the parent company		19,927	22,631	17,029	1,227
Non-controlling interests	2b	10,411	9,034	8,642	623
		30,338	31,665	25,671	1,850
BASIC AND DILUTED EARNINGS PER SHARE (in full amount)	2w,24				
Profit per share		223.30	179.71	192.49	0.01
Profit per ADS (100 Series B shares per ADS)		22,329.40	17,970.52	19,248.51	1.39

The accompanying notes form an integral part of these consolidated financial statements.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
For Each of the Three Years in the Period Ended December 31, 2019
(Amounts in the tables expressed in billions of Indonesian Rupiah)

Description	Notes	Attributable to owners of the parent company					Net	Non-controlling interests	Total equity
		Capital stock	Additional paid-in capital	Treasury stock	Retained earnings	Other reserves			
Balance, December 31, 2016		5,040	4,453	(2,541)	77,033	178	84,163	21,113	105,276
Net comprehensive income for the year	2b								
Profit for the year		—	—	—	22,120	—	22,120	10,550	32,670
Other comprehensive income (loss)	2f,2p,2r,2t	—	—	—	(2,241)	48	(2,193)	(139)	(2,332)
Net comprehensive income for the year		—	—	—	19,879	48	19,927	10,411	30,338
Transactions with owners recorded directly in equity									
Cash dividends	2v,22	—	—	—	(11,627)	—	(11,627)	(12,355)	(23,982)
Acquisition of businesses	1d	—	—	—	—	4	4	145	149
Capital contribution to subsidiaries	1d	—	—	—	—	—	—	50	50
Net transactions with owners		—	—	—	(11,627)	4	(11,623)	(12,160)	(23,783)
Balance, December 31, 2017		5,040	4,453	(2,541)	85,285	230	92,467	19,364	111,831

The accompanying notes form an integral part of these consolidated financial statements.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (continued)
For Each of the Three Years in the Period Ended December 31, 2019
(Amounts in the tables expressed in billions of Indonesian Rupiah)

Description	Notes	Attributable to owners of the parent company					Net	Non-controlling interests	Total equity
		Capital stock	Additional paid-in capital	Treasury stock	Retained earnings	Other reserves			
Balance, December 31, 2017		5,040	4,453	(2,541)	85,285	230	92,467	19,364	111,831
Effect of adoption of new accounting standards	2aa	—	—	—	315	(27)	288	(30)	258
Net comprehensive income for the year	2b								
Profit for the year		—	—	—	17,802	—	17,802	8,909	26,711
Other comprehensive income	2f,2p,2r,2t	—	—	—	4,695	134	4,829	125	4,954
Net comprehensive income for the year		—	—	—	22,497	134	22,631	9,034	31,665
Transactions with owners recorded directly in equity									
Cash dividends	2v,22	—	—	—	(16,609)	—	(16,609)	(10,131)	(26,740)
Cancellation of treasury stocks	2u	(87)	(2,454)	2,541	—	—	—	—	—
Acquisition of businesses	1d	—	—	—	—	—	—	65	65
Acquisition of non-controlling interest		—	(22)	—	—	(16)	(38)	(69)	(107)
Capital contribution to subsidiaries	1d	—	—	—	—	—	—	34	34
Net transactions with owners		(87)	(2,476)	2,541	(16,609)	(16)	(16,647)	(10,101)	(26,748)
Balance, December 31, 2018		4,953	1,977	—	91,488	321	98,739	18,267	117,006

The accompanying notes form an integral part of these consolidated financial statements.

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For Each of the Three Years in the Period Ended December 31, 2019
(Amounts in the tables expressed in billions of Indonesian Rupiah)

Description	Notes	Attributable to owners of the parent company					Non-controlling interests	Total equity
		Capital stock	Additional paid-in capital	Retained earnings	Other reserves	Net		
Balance, December 31, 2018		4,953	1,977	91,488	321	98,739	18,267	117,006
Net comprehensive income for the year	2b							
Profit for the year		—	—	19,068	—	19,068	8,792	27,860
Other comprehensive loss	2f,2p,2r,2t	—	—	(1,940)	(99)	(2,039)	(150)	(2,189)
Net comprehensive income (loss) for the year		—	—	17,128	(99)	17,029	8,642	25,671
Transactions with owners recorded directly in equity								
Cash dividends	2v,22	—	—	(16,229)	—	(16,229)	(9,618)	(25,847)
Entities under common control transactions	1d	—	—	257	—	257	8	265
Capital contribution from non-controlling interest		—	—	—	—	—	70	70
Capital contribution to subsidiaries	1d	—	—	—	—	—	59	59
Net transactions with owners		—	—	(15,972)	—	(15,972)	(9,481)	(25,453)
Balance, December 31, 2019		4,953	1,977	92,644	222	99,796	17,428	117,224

The accompanying notes form an integral part of these consolidated financial statements.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
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(Amounts in the tables expressed in billions of Indonesian Rupiah and millions of U.S. Dollar)

	Notes	2017 Rp	2018 Rp	2019 Rp	2019 US\$ (Note 3)
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash receipts from customers and other operators		125,111	127,855	135,372	9,751
Cash receipts from tax refund		585	2,578	1,446	104
Cash receipts from finance income		1,431	1,036	1,093	79
Cash payments for expenses		(49,604)	(54,099)	(47,499)	(3,422)
Cash payments to employees		(11,739)	(12,657)	(11,370)	(819)
Cash payments for corporate and final income taxes		(11,846)	(10,375)	(10,348)	(745)
Cash payments for finance costs		(3,133)	(3,735)	(4,358)	(314)
Cash payments for short-term and low-value lease assets	13	—	—	(5,359)	(386)
Cash payments for value added taxes - net		(1,942)	(3,434)	(861)	(62)
Cash receipts from (payments for) others - net		542	(1,498)	850	61
Net cash provided by operating activities		49,405	45,671	58,966	4,247
CASH FLOWS FROM INVESTING ACTIVITIES					
Proceeds from sale of property and equipment	12	1,367	629	1,496	108
(Placement in) proceeds from other current financial assets - net		(676)	171	1,147	83
Proceeds from divestment of subsidiary		—	—	395	28
Proceeds from insurance claims	12	155	153	197	14
Dividend received from associated company	11	28	9	11	1
Purchases of property and equipment	12,37	(32,294)	(31,562)	(35,302)	(2,543)
Purchases of intangible assets	15,37	(508)	(2,972)	(2,008)	(145)
Acquisition of businesses net of acquired cash	1d	(243)	(420)	(1,166)	(84)
Additional contribution on long-term investments	11	(269)	(337)	(732)	(53)
Increase (decrease) in advance and other assets - net	14	(567)	(761)	87	6
Net cash used in investing activities		(33,007)	(35,090)	(35,875)	(2,585)
CASH FLOWS FROM FINANCING ACTIVITIES					
Proceeds from loans and other borrowings	19,20	12,169	35,364	26,524	1,911
Capital contribution from non-controlling interests of subsidiaries		50	34	59	4
Repayments of loans and other borrowings	19,20	(9,289)	(27,113)	(18,176)	(1,309)
Cash dividends paid to the Company's stockholders	22	(11,627)	(16,609)	(16,229)	(1,169)
Cash dividends paid to non-controlling interests of subsidiaries		(12,355)	(10,134)	(9,618)	(693)
Payment of principal portion of lease liabilities		—	—	(4,735)	(340)
Net cash used in financing activities		(21,052)	(18,458)	(22,175)	(1,596)
NET INCREASE (DECREASE) OF CASH AND CASH EQUIVALENTS		(4,654)	(7,877)	916	66
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS		32	171	(109)	(8)
ALLOWANCE FOR EXPECTED CREDIT LOSSES		—	(4)	(1)	(0)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	4	29,767	25,145	17,435	1,256
CASH AND CASH EQUIVALENTS AT END OF YEAR	4	25,145	17,435	18,241	1,314

The accompanying notes form an integral part of these consolidated financial statements.

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1. GENERAL

a. Establishment and general information

Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk. (the "Company") was originally part of "*Post en Telegraafdienst*", which was established and operated commercially in 1884 under the framework of Decree No. 7 dated March 27, 1884 of the Governor General of the Dutch Indies which was published in State Gazette No. 52 dated April 3, 1884.

In 1991, the status of the Company was changed into a state-owned limited liability corporation ("Persero") based on Government Regulation No. 25/1991. The ultimate parent of the Company is the Government of the Republic of Indonesia (the "Government") (Notes 1c and 22).

The Company was established based on notarial deed No. 128 dated September 24, 1991 of Imas Fatimah, S.H. The deed of establishment was approved by the Ministry of Justice of the Republic of Indonesia in its Decision Letter No. C2-6870.HT.01.01.Th.1991 dated November 19, 1991 and was published in State Gazette No. 5 dated January 17, 1992, Supplement No. 210. The Articles of Association has been amended several times, the latest amendments of which were pertaining to the increase in the flexibility and independency of the Board Commissioners in approving the Directors' actions at a certain threshold as stated in notarial deeds No. 32 dated June 21, 2019 of Ashoya Ratam, S.H., M.Kn. Such amendments were accepted and approved by the Ministry of Law and Human Rights of the Republic of Indonesia ("MoLHR") in its letter No. AHU-0032595.AH.01.02 dated June 24, 2019.

In accordance with Article 3 of the Company's Articles of Association, the scope of its activities is to provide telecommunication network and telecommunication and information services, and to optimize the Company's resources to provide high quality and competitive goods and/or services to gain/pursue profit in order to increase the value of the Company by applying the Limited Liability Company principle. In regard to achieving its objectives, the Company is involved in the following activities:

- i. Main business:
 - (a) Planning, building, providing, developing, operating, marketing or selling or leasing, and maintaining telecommunications and information networks in a broad sense in accordance with prevailing laws and regulations.
 - (b) Planning, developing, providing, marketing or selling, and improving telecommunications and information services in a broad sense in accordance with prevailing laws and regulations.
 - (c) Investing including in the form of equity capital in other companies in line with and to achieve the purposes and objectives of the Company.
- ii. Supporting business:
 - (a) Providing payment transactions and money transferring services through telecommunications and information networks.
 - (b) Performing other activities and undertakings in connection with the optimization of the Company's resources, which among others, include the utilization of the Company's property and equipment and movable assets, information systems, education and training, and repairs and maintenance facilities.
 - (c) Collaborating with other parties in order to optimize the information, communication or technology resources owned by other parties as service provider in information, communication and technology industry, as to achieve the purposes and objectives of the Company.

The Company's head office is located at Jalan Japati No. 1, Bandung, West Java.

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The Company was granted several networks and/or services provision licenses by the Government which are valid for an unlimited period of time as long as the Company complies with prevailing laws and regulations and fulfills the obligation stated in those licenses. For every license issued by the Ministry of Communication and Information (“MoCI”), an evaluation is performed annually and an overall evaluation is performed every five years. The Company is obliged to submit reports of networks and/or services annually to the Indonesian Directorate General of Post and Informatics (“DGPI”), which replaced the previous Indonesian Directorate General of Post and Telecommunications (“DGPT”).

The reports comprise information such as network development progress, service quality standard achievement, numbers of customers, license payment and universal service contribution, while for internet telephone services for public purpose, internet interconnection service, and internet access service, there is additional information required such as operational performance, customer segmentation, traffic, and gross revenue.

Details of these licenses are as follows:

License	License No.	Type of services	Grant date/latest renewal date
License of electronic money issuer	Bank Indonesia License No. 11/432/DASP	Electronic money	July 3, 2009
License of money remittance	Bank Indonesia License No. 11/23/bd/8	Money remittance service	August 5, 2009
License to operate internet telephone services for public purpose	127/KEP/DJPPI/KOMINFO/3/2016	Internet telephone services for public purpose	March 30, 2016
License to operate fixed domestic long distance network	839/KEP/M.KOMINFO/05/2016	Fixed domestic long distance and basic telephone services network	May 16, 2016
License to operate fixed closed network	844/KEP/M.KOMINFO/05/2016	Fixed closed network	May 16, 2016
License to operate fixed international network	846/KEP/M.KOMINFO/05/2016	Fixed international and basic telephone services network	May 16, 2016
License to operate circuit switched based local fixed line network	948/KEP/M.KOMINFO/05/2016	Circuit switched based local fixed line network	May 31, 2016
License to operate data communication system services	191/KEP/DJPPI/KOMINFO/10/2016	Data communication system services	October 31, 2016
License to operate internet service provider	2176/KEP/M.KOMINFO/12/2016	Internet service provider	December 30, 2016
License to operate content service provider	1040/KEP/M.KOMINFO/16/2017	Content service provider	May 16, 2017
License for the implementation of internet interconnection services	1004/KEP/M.KOMINFO/2018	Interconnection services	December 26, 2018

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b. Company's Board of Commissioners, Directors, Audit Committee, Corporate Secretary, and Internal Audit

i. Board of Commissioners and Directors

Based on resolutions made at the Annual General Meeting ("AGM") of Stockholders of the Company as covered by notarial deed No. 54 and No. 133 of Ashoya Ratam., S.H., M.Kn., dated April 27, 2018 and May 24, 2019, the composition of the Company's Boards of Commissioners and Directors as of December 31, 2018 and 2019, respectively, were as follows:

	2018	2019
President Commissioner	Hendri Saporini	Rhenald Kasali
Commissioner*	Edwin Hidayat Abdullah	—
Commissioner*	Isa Rachmatarwata	—
Commissioner	Rinaldi Firmansyah	Ismail
Commissioner	—	Marcelino Rumambo Pandin
Independent Commissioner	Pamijati Pamela Johanna	Marsudi Wahyu Kisworo
Independent Commissioner	Cahyana Ahmadjayadi	Cahyana Ahmadjayadi
Independent Commissioner	Margiyono Darsasumarja	Margiyono Darsasumarja
President Director	Alex Janangkih Sinaga	Ririek Adriansyah
Director of Finance	Harry Mozarta Zen	Harry Mozarta Zen
Director of Digital Business	David Bangun	Faizal Rochmad Djoemadi
Director of Strategic Portfolio	—	Achmad Sugiarto
Director of Enterprise and Business Service	Dian Rachmawan	Bogi Witjaksono
Director of Wholesale and International Services	Abdus Somad Arief	Edwin Aristiawan
Director of Human Capital Management	Herdy Rosadi Harman	Edi Witjara
Director of Network, Information Technology and Solution	Zulhelfi Abidin	Zulhelfi Abidin
Director of Consumer Service	Siti Choiriana	Siti Choiriana

* Based on SK-271/MBU/11/2019 dated November 18, 2019, Edwin Hidayat Abdullah was appointed as Vice President Director of PT Angkasa Pura II (Persero) and based on SK-327/MBU/12/2019 dated December 23, 2019, Isa Rachmatarwata was appointed as Commissioner of PT Pertamina (Persero) hence their positions as Commissioners of the Company was ended by law.

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ii. Audit Committee, Corporate Secretary, and Internal Audit

The composition of the Company's Audit Committee, Corporate Secretary, and Internal Audit as of December 31, 2018 and 2019, were as follows:

	2018	2019
Chairman	Margiyono Darsasumarja	Margiyono Darsasumarja
Secretary	Tjatur Purwadi	Tjatur Purwadi
Member	Rinaldi Firmansyah	Ismail
Member	Cahyana Ahmadjayadi	Marcelino Rumambo Pandin
Member	Sarimin Mietra Sardi	Sarimin Mietra Sardi
Corporate Secretary	Andi Setiawan	Andi Setiawan
Internal Audit	Harry Suseno Hadisoebroto	Harry Suseno Hadisoebroto

c. **Public offering of securities of the Company**

The Company's number of shares prior to its Initial Public Offering ("IPO") was totalling 8,400,000,000, consisting of 8,399,999,999 Series B shares and 1 Series A Dwiwarna share, were wholly-owned by the Government. On November 14, 1995, 933,333,000 new Series B shares and 233,334,000 Series B shares owned by the Government were offered to the public through an IPO and listed on the Indonesia Stock Exchange ("IDX") and 700,000,000 Series B shares owned by the Government were offered to the public and listed on the New York Stock Exchange ("NYSE") and the London Stock Exchange ("LSE"), in the form of American Depositary Shares ("ADS"). There were 35,000,000 ADS and each ADS represented 20 Series B shares at that time.

In December 1996, the Government had a block sale of its 388,000,000 Series B shares, and in 1997, distributed 2,670,300 Series B shares as incentive to the Company's stockholders who did not sell their shares within one year from the date of the IPO. In May 1999, the Government further sold 898,000,000 Series B shares.

To comply with Law No. 1/1995 on Limited Liability Companies, at the AGM of Stockholders of the Company on April 16, 1999, the Company's stockholders resolved to increase the Company's issued share capital by the distribution of 746,666,640 bonus shares through the capitalization of certain additional paid-in capital, which was made to the Company's stockholders in August 1999. On August 16, 2007, Law No. 1/1995 on Limited Liability Companies was amended by the issuance of Law No. 40/2007 on Limited Liability Companies which became effective on the same date. Law No. 40/2007 has no effect on the public offering of shares of the Company. The Company has complied with Law No. 40/2007.

In December 2001, the Government had another block sale of 1,200,000,000 shares or 11.9% of the total outstanding Series B shares. In July 2002, the Government further sold a block of 312,000,000 shares or 3.1% of the total outstanding Series B shares.

At the AGM of Stockholders of the Company held on July 30, 2004, the minutes of which are covered by notarial deed No. 26 of A. Partomuan Pohan, S.H., LLM., the Company's stockholders approved the Company's 2-for-1 stock split for Series A Dwiwarna and Series B share. The Series A Dwiwarna share with par value of Rp500 per share was split into 1 Series A Dwiwarna share with par value of Rp250 per share and 1 Series B share with par value of Rp250 per share. The stock split resulted in an increase of the Company's authorized capital stock from 1 Series A Dwiwarna share and 39,999,999,999 Series B shares to 1 Series A Dwiwarna share and 79,999,999,999 Series B shares,

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and the issued capital stock from 1 Series A Dwiwarna share and 10,079,999,639 Series B shares to 1 Series A Dwiwarna share and 20,159,999,279 Series B shares. After the stock split, each ADS represented 40 Series B shares.

During the Extraordinary General Meeting (“EGM”) held on December 21, 2005 and the AGMs held on June 29, 2007, June 20, 2008 and May 19, 2011, the Company’s stockholders approved phase I, II, III and IV plan, respectively, of the Company’s program to repurchase its issued Series B shares.

During the period December 21, 2005 to June 20, 2007, the Company had bought back 211,290,500 shares from the public (stock repurchase program phase I). On July 30, 2013, the Company has sold all such shares.

At the AGM held on April 19, 2013 as covered by notarial deed No. 38 dated April 19, 2013 of Ashoya Ratam, S.H., M.Kn., the stockholders approved the changes to the Company’s plan on the treasury stock acquired under phase III.

At the AGM held on April 19, 2013, the minutes of which were covered by notarial deed No. 38 of Ashoya Ratam, S.H., M.Kn., the stockholders approved the Company’s 5-for-1 stock split for Series A Dwiwarna and Series B shares. Series A Dwiwarna share with par value of Rp250 per share was split into 1 Series A Dwiwarna share with par value of Rp50 per share and 4 Series B shares with par value of Rp50 per share. The stock split resulted in an increase of the Company’s authorized capital stock from 1 Series A Dwiwarna and 79,999,999,999 Series B shares to 1 Series A Dwiwarna and 399,999,999,999 Series B shares. The issued capital stock increase from 1 Series A Dwiwarna and 20,159,999,279 Series B shares to 1 Series A Dwiwarna and 100,799,996,399 Series B shares. After the stock split, each ADS represented 200 Series B shares. Effective from October 26, 2016, the Company change the ratio of Depositary Receipt from 1 ADS representing 200 Series B shares to become 1 ADS representing 100 Series B shares (Note 22). Profit per ADS information have been retrospectively adjusted in the consolidated statements of profit or loss and other comprehensive income to reflect the changes in the ratio of ADS.

On May 16 and June 5, 2014, the Company deregistered from Tokyo Stock Exchange (“TSE”) and delisted from the LSE, respectively.

As of December 31, 2019, all of the Company’s Series B shares are listed on the IDX and 46,018,374 ADS shares are listed on the NYSE (Note 22).

On June 25, 2010, the Company issued the second Rupiah bonds with a nominal amount of Rp1,005 billion for Series A, with a five-year period, and Rp1,995 billion for Series B, with a ten-year period, respectively, which are listed on the IDX (Note 20b).

On June 16, 2015, the Company issued Continuous Bonds I Telkom Phase I Year 2015, with a nominal amount Rp2,200 billion for Series A, with a seven-year period, Rp2,100 billion for Series B, with a ten-year period, Rp1,200 billion for Series C, with a fifteen-year period, and Rp1,500 billion for Series D, with a thirty-year period, respectively which are listed on the IDX (Note 20b).

On December 21, 2015, the Company sold the remaining shares of treasury shares phase III (Note 23).

On June 29, 2016, the Company sold the treasury shares phase IV.

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At the AGM held on April 27, 2018, which were covered by notarial deed No. 54 of Ashoya Ratam, S.H., M.Kn., the stockholders approved for cancellation 1,737,779,800 shares of treasury stock by reduced the Company's capital stock.

d. Subsidiaries

As of December 31, 2018 and 2019, the Company has consolidated the following directly or indirectly owned subsidiaries (Notes 2b and 2d):

i. Direct subsidiaries:

Subsidiary/place of incorporation	Nature of business	Year of commencement operations	Percentage of ownership*		Total assets before elimination	
			2018	2019	2018	2019
PT Telekomunikasi Seluler ("Telkomsel"), Jakarta, Indonesia	Telecommunication - provides telecommunication facilities and mobile cellular services using Global Systems for Mobile Communication ("GSM") technology	1995	65	65	82,219	104,621
PT Dayamitra Telekomunikasi ("Dayamitra"), Jakarta, Indonesia	Leasing of towers and other telecommunication services	1995	100	100	13,221	21,815
PT Multimedia Nusantara ("Metra"), Jakarta, Indonesia	Network telecommunication services and multimedia	1998	100	100	17,213	17,369
PT Telekomunikasi Indonesia International ("TII"), Jakarta, Indonesia	Telecommunication	1995	100	100	10,404	11,352
PT Graha Sarana Duta ("GSD"), Jakarta, Indonesia	Leasing of offices and providing building management and maintenance services, civil consultant and developer	1982	100	100	5,794	6,043
PT Telkom Akses ("Telkom Akses"), Jakarta, Indonesia	Construction, service and trading in the field of telecommunication	2013	100	100	4,244	4,463
PT Telkom Satelit Indonesia ("Telkomsat"), Jakarta, Indonesia	Telecommunication - provides satellite communication system, and the related services and infrastructures	1996	100	100	3,190	3,306
PT PINS Indonesia ("PINS"), Jakarta, Indonesia	Telecommunication construction and services	1995	100	100	4,004	3,015
PT Infrastruktur Telekomunikasi Indonesia ("Telkom Infratel"), Jakarta, Indonesia	Construction, service and trading in the field of telecommunication	2014	100	100	3,351	1,706
PT Metra-Net ("Metra-Net"), Jakarta, Indonesia	Multimedia portal service	2009	100	100	782	997
PT Napsindo Primatel Internasional ("Napsindo"), Jakarta, Indonesia	Telecommunication - provides Network Access Point ("NAP"), Voice Over Data ("VOD"), and other related services	1999; ceased operations on January 13, 2006	60	60	5	5
PT Jalin Pembayaran Nusantara ("Jalin"), ^a Jakarta, Indonesia	Payment services - principal, switching, clearing and settlement activities	2016	100	—	298	—

^a The Company sold 67% it's ownership on Jalin, and Jalin became an associated company (Note 11).

* Percentage of ownership amounting to 99.99% is presented with rounding of 100%.

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ii. Indirect subsidiaries:

Subsidiary/place of incorporation	Nature of business	Year of commencement operations	Percentage of ownership*		Total assets before elimination	
			2018	2019	2018	2019
PT Sigma Cipta Caraka (" Sigma "), Tangerang, Indonesia	Information technology service - system implementation and integration service, outsourcing and software license maintenance	1988	100	100	7,758	6,824
Telekomunikasi Indonesia International Pte. Ltd., (" Telin Singapore "), Singapore	Telecommunication	2008	100	100	3,413	3,763
PT Infomedia Nusantara (" Infomedia "), Jakarta, Indonesia	Data and information service-provides telecommunication information services and other information services in the form of print and electronic media, and call center services	1984	100	100	2,381	2,629
PT Telkom Landmark Tower (" TLT "), Jakarta, Indonesia	Property development and management services	2012	55	55	2,128	2,057
Telekomunikasi Indonesia International Ltd., (" Telin Hong Kong "), Hong Kong	Telecommunication	2010	100	100	1,185	2,026
PT Metra Digital Investama (" MDI "), Jakarta, Indonesia	Trading and/or providing service related to information and technology, multimedia, entertainment and investments	2013	100	100	1,178	1,732
PT Metra Digital Media (" MD Media "), Jakarta, Indonesia	Directory information services	2013	100	100	1,645	1,144
PT Finnet Indonesia (" Finnet "), Jakarta, Indonesia	Information technology services	2006	60	60	1,011	1,001
PT Persada Sokka Tama (" PST "), Jakarta, Indonesia	Providing telecommunication network infrastructure	2000	—	95	—	870
Telekomunikasi Indonesia International S.A. (" Telin TL ") S.A., Dili, Timor Leste	Telecommunication	2012	100	100	677	735
TS Global Network Sdn. Bhd. (" TSGN "), Petaling Jaya, Malaysia	Satellite service	1996	70	70	828	727
PT Swadharma Sarana Informatika (" SSI "), Jakarta, Indonesia	Cash replenishment services and ATM maintenance	2001	51	51	461	594
PT Melon Indonesia (" Melon "), Jakarta, Indonesia	Digital content exchange hub services	2010	100	100	457	578
PT Telkomsel Mitra Inovasi (" TMI "), Jakarta, Indonesia	Business management consulting and capital venture services	2019	—	100	—	569
PT Administrasi Medika (" Ad Medika "), Jakarta, Indonesia	Health insurance administration services	2002	100	100	346	395
PT Graha Yasa Selaras (" GYS "), Jakarta, Indonesia	Tourism service	2012	51	51	250	286
PT Nusantara Sukses Investasi (" NSI "), Jakarta, Indonesia	Service and trading	2014	100	100	286	266
PT Metraplaza (" Metraplaza "), Jakarta, Indonesia	Network and e-commerce services	2012	60	60	167	221
PT Nutech Integrasi (" Nutech "), Jakarta, Indonesia	System integrator	2001	60	60	93	177
Telekomunikasi Indonesia International Pty. Ltd. (" Telkom Australia "), Sydney, Australia	Telecommunication	2013	100	100	115	117
Telekomunikasi Indonesia International Inc. (" Telkom USA "), Los Angeles, USA	Telecommunication	2014	100	100	57	90
Telekomunikasi Indonesia Intl (Malaysia) Sdn. Bhd. (" Telin Malaysia "), Malaysia	Telecommunication	2013	70	70	76	68
PT Satelit Multimedia Indonesia (" SMI "), Jakarta, Indonesia	Satellite services	2013	100	100	16	16

* Percentage of ownership amounting to 99.99% is presented with rounding of 100%.

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e. Acquisition transactions of subsidiaries

i. Metra

SSI

Based on Shares Sales and Purchase deed of Utiék Rochmuljati Abdurachman S.H., MLI., M.Kn. No. 3, 4, and 5 dated April 2, 2018, Metra purchase 14,600 shares of SSI ownership interests from Yayasan Danar Dana Swadharma, PT Tri Handayani Utama, dan Koperasi Swadharma or equivalent to 36.50% ownership interests of SSI with purchase consideration amounting Rp220 billion.

Based on notarial deed N.M. Dipo Nusantara Pua Upa, S.H., M.Kn. No. 4 dated April 9, 2018, the Company as Metra's shareholder approved on the subscription for 11,837 new shares issued by SSI with purchase consideration amounting Rp178 billion. These acquired shares resulted in a change in composition to 51% ownership causing Company to have control over SSI as a subsidiary with total purchase consideration amounting to Rp397 billion (consideration paid on acquisition of control net of cash acquired Rp210 billion). Acquisition cost of SSI which was higher than the ownership portion of its net assets value, which amounted to Rp196 billion. As of December 31, 2018, the difference recorded as provisional goodwill. Based on purchase price allocation report, the difference between acquisition cost and fair value of net assets amounting to Rp179 billion, and as of December 31, 2019, the carrying amount of goodwill has been adjusted.

PT Collega Inti Pratama ("CIP")

Based on notarial deeds of Utiék Rochmuljati Abdurachman S.H., MLI., M.Kn. No. 151 and 152, dated December 28, 2018, Sigma purchased 2,493 shares of CIP (equal to 67% shares ownership) from PT Upperco Usaha Maxima with purchase consideration paid amounting to Rp208 billion and 111 shares (equal to 3% ownership) from PT Abdi Anugerah Persada with purchase consideration paid amounting Rp9 billion, hence Sigma owns 2,604 shares (equal to 70% ownership shares) causing Sigma to have control over CIP as a subsidiary with total purchase consideration amounting to Rp217 billion (consideration paid on acquisition of control net of cash acquired is Rp188 billion). Acquisition cost of CIP was higher than the ownership portion of its net assets value, which amounting to Rp165 billion. As of December 2018, the difference recorded as provisional goodwill. Based on purchase price allocation report, the difference between the acquisition cost and fair value of net assets amounting to Rp78 billion, and as of December 31, 2019, carrying amount of goodwill has been adjusted.

ii. TII

TSGN

On December 14, 2017, TII purchased 49% shares ownership in TSGN in exchange for MYR66,150,000 (equivalent to Rp220 billion). TSGN is engaged in providing ICT (Information and Communication Technologies) systems for satellite communication services, satellite bandwidth services and Very Small Aperture Terminal ("VSAT") services. Non-controlling interests of the acquiree are measured at fair value. Based on Sale and Subscription Agreement, TII controls TSGN with ability to place and replace of 3 out of 5 key management members that controls the overall business of TSGN. On April 25, 2018, TII purchased 21% of additional ownership through newly issued shares.

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This acquisition will enhance synergy and utilization of assets and resources between companies in order to provide more innovative services to customers.

The fair values of the identifiable assets and liabilities acquired at acquisition date were:

	Total
Assets	
Cash and cash equivalents	21
Trade receivables	18
Other current assets	57
Property and equipment	770
Other non-current assets	20
Liabilities	
Current liabilities	(422)
Non-current liabilities	(155)
Fair value of identifiable net assets acquired	309
Fair value of non-controlling interest	(157)
Goodwill (Note 15)	68
Fair value consideration transferred	220

Telin Malaysia

On April 18, 2018, TII purchased 21% additional ownership in Telin Malaysia in the exchange for contribution of MYR8,764,789 or equivalent to Rp31 billion (consideration paid on acquisition of control net of cash acquired is Rp16 billion) from Compudyne Telecommunication System Sdn., Bhd. Previously, Telin Malaysia was accounted for as an associate company with 49% ownership. In connection with the acquisition of Telin Malaysia's shares, TII recognized provisional goodwill amounting to Rp61 billion (Note 15). Based on final purchase price allocation report in 2019, there is no significant difference in the fair values of fixed assets and intangible assets, therefore, as of December 31, 2019, no adjustment on carrying amount of goodwill.

Telin Malaysia's acquisition objective is to strengthen and to grow business relationship between Malaysia and Indonesia in telecommunication sector.

iii. Dayamitra

PST

On February 19, 2019, Dayamitra purchased 95% ownership in PST from Rahina Dewayani and Rahayu based on a Conditional Stock Sale and Purchase Agreement. Based on the agreement, Dayamitra purchased 95% ownership of PST amounting to Rp1,113 billion and is required to purchase the remaining 5% ownership of PST within a maximum of 24 months from March 8, 2019, at the same price per share as the acquisition of 95% shares. In connection with such requirement, on December 31, 2019 Dayamitra recognized the liabilities to the previous shareholder of Rp80 billion.

Based on an analysis of the terms and conditions associated with the transaction, it was concluded that at the acquisition date Dayamitra had substantially held 100% ownership of PST shares and as such there were no non-controlling interests.

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PST is a company engaged in managing tower rental. This new investment is expected to strengthen the Company's business portfolio. From the acquisition date to December 31, 2019, total revenue and profit before tax recorded by PST and recognized in the consolidated statements of profit or loss and other comprehensive income amounted to Rp200 billion and Rp41 billion, respectively. This acquisition was accounted as a business combination.

Purchase of Indosat's Towers

On October 14, 2019, Dayamitra signed a Sales Purchase Agreement ("SPA") with PT Indosat, Tbk. ("Indosat") related to the purchase of Indosat's towers. The matters stipulated and agreed simultaneously with the SPA are as follows:

- (a) Transfer of ownership 2,100 telecommunication towers (3,982 tenants) and their licenses;
- (b) Transfer of 1,731 leases of lands previously leased by Indosat from third parties;
- (c) 369 leases of lands owned by Indosat; and
- (d) Transfer of the collocation contracts and the related user's details of 3,982 existing tenants in the towers being acquired.

On December 20, 2019, Dayamitra and Indosat have signed Letter Agreement (Closing Memo), as a follow-up on the SPA, amounting to Rp4,443 billion.

In addition, Dayamitra and Indosat also signed Master Tower Lease Agreement ("MTLA"), which stipulated that Indosat agreed to lease back for one each of the slot in 2,100 telecommunication towers acquired. This acquisition was accounted for as an asset acquisition.

The fair values of the identifiable assets and liabilities acquired for these two transactions were:

	Indosat's Tower	PST shares	Total
Assets			
Current assets	517	146	663
Property and equipment	3,453	634	4,087
Non-current assets	—	91	91
Liabilities	—	(610)	(610)
Net book value of net assets	3,970	261	4,231
The difference between fair value and book value of fixed assets	—	398	398
Other non-current assets	473	194	667
Deferred tax	—	(148)	(148)
Fair value of identifiable net assets acquired	4,443	705	5,148
Fair value consideration transferred	4,443	1,172	5,615
Goodwill (Note 15)	—	467	467

iv. Telkomsel

Based on notarial deed of Bonardo Nasution, S.H. No. 12 dated January 18, 2019, Telkomsel established TMI. On February 18, 2019, Telkomsel paid Rp550 billion for 549,989 shares from the total 550,000 shares of TMI.

TMI is a company engaged in innovation and strategic investment. This new investment is expected to strengthen the Company's business portfolio in order to transform to telecommunication digital company.

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f. Completion and authorization for the issuance of the consolidated financial statements

The Company's management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board which have been completed and authorized for issuance by the Board of Directors of the Company on June 15, 2020.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements of the Company and subsidiaries (collectively referred to as "the Group") have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

a. Basis of preparation of the financial statements

The consolidated financial statements, except for the consolidated statements of cash flows, are prepared on the accrual basis. The measurement basis used is historical cost, except for certain accounts which are measured using the basis mentioned in the relevant notes herein.

The consolidated statements of cash flows are prepared using the direct method and present the changes in cash and cash equivalents from operating, investing, and financing activities.

Figures in the consolidated financial statements are presented and rounded to billions of Indonesian rupiah ("Rp"), unless otherwise stated. For the figures in the consolidated financial statements which still contain values but below Rp1 billion, are presented with zeros.

The consolidated financial statements provide comparative information in respect of the previous period.

On January 1, 2019, the Group adopted new and revision of IFRS which effective from that date. Changes to the Group's accounting policies have been made as required, in accordance with the transitional requirement in each standard and interpretation.

These amendments had no material impact on the consolidated financial statements of the Group:

- IFRIC Interpretation 23: Uncertainty over Income Tax Treatments
- Amendments to IFRS 9: Prepayment Features with Negative Compensation
- Amendments to IAS 19: Plan Amendment, Curtailment, or Settlement
- Amendments to IAS 28: Long-term interests in associates and joint ventures
- Annual Improvements IFRS 3: Business Combination
- Annual Improvements IFRS 11: Joint Arrangements
- Annual Improvements IAS 12: Income Tax
- Annual Improvements IAS 23: Borrowing Costs

b. Principles of consolidation

The consolidated financial statements consist of the financial statements of the Company and the subsidiaries over which it has control. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through

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its power over the investee. Specifically, the Group controls an investee if and only if the Group has the power over the investee, exposure or rights, to variable returns from its involvement with the investee, and the ability to use its power over the investee to affect its returns.

Generally, there is a presumption that majority of voting rights results in control. To support this presumption and when the Group has less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- i. The contractual arrangement with the other vote holders of the investee,
- ii. Rights arising from other contractual arrangements, and
- iii. The Group's voting rights and potential voting rights.

The Group re-assesses whether it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control over the subsidiary. Assets, liabilities, income, and expenses, of a subsidiary acquired or disposed of during the year are included in the consolidated statements of profit or loss and other comprehensive income from the date the Group gains financial control until the date the Group ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income ("OCI") are attributed to the equity holders of the Company and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

All intra-Group assets and liabilities, equity, income, expenses, and cash flow relating to transactions within Group are eliminated in full on consolidation.

In case of loss of control over a subsidiary, the Group:

- derecognized the assets (including goodwill) and liabilities of the subsidiary at the carrying amounts on the date when it loses control;
- derecognized the carrying amounts of any non-controlling interests of its former subsidiary on the date when it loses control;
- recognized the fair value of the consideration received (if any) from the transaction, events, or condition that caused the loss of control;
- recognized the fair value of any investment retained in the subsidiary at fair value on the date of loss of control;
- recognized any surplus or deficit in profit or loss that is attributable to the Group.

c. Transactions with related parties

The Group has transactions with related parties. The definition of related parties used is in accordance with International Accounting Standards ("IAS") 24, Related Party Disclosures. The party which is considered a related party is a person or entity that is related to the entity that is preparing its financial statements.

Key management personnel are identified as the persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of the Group. The related party status extends to the key management of the subsidiaries to the extent they direct the operations of subsidiaries with minimal involvement from the Company's management.

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d. Business combinations and goodwill

Business combination is accounted for using the acquisition method. The consideration transferred is measured at fair value, which is the aggregate of the fair value of the assets transferred, liabilities incurred or assumed and the equity instruments issued in exchange for control of the acquiree. For each business combination, non-controlling interest is measured at fair value or at the proportionate share of the acquiree's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis. Acquisition-related costs are expensed as incurred. The acquiree's identifiable assets and liabilities are recognized at their fair values at the acquisition date.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed, and reviews the procedures used to measure the amounts to be recognized at the acquisition date. If the re-assessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognized in profit or loss.

When the determination of consideration from a business combination includes contingent consideration, it is measured at its fair value on acquisition date. Contingent consideration is classified either as equity or a financial liability. Amounts classified as a financial liability are subsequently remeasured to fair value with changes in fair value recognized in profit or loss when adjustments are recorded outside the measurement period. Changes in the fair value of the contingent consideration that qualify as measurement-period adjustments are adjusted retrospectively, with corresponding adjustments made against goodwill. Measurement-period adjustments are adjustments that arise from additional information obtained during the measurement period, which cannot exceed one year from the acquisition date, about facts and circumstances that existed at the acquisition date.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group shall report in its consolidated financial statements provisional amounts for the items for which the accounting is incomplete. During the measurement period, the Group shall retrospectively adjust the provisional amounts recognized at the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date and, if known, would have affected the measurement of the amounts recognized as of that date. The measurement period ends immediately after the Company receives the information about the facts and circumstances that existed at the acquisition date or learns that additional information cannot be obtained. However, the measurement period must not exceed one year from the date of acquisition.

In a business combination achieved in stages, the acquirer remeasures its previously held equity interest in the acquiree at its acquisition-date fair value and recognizes the resulting gain or loss, if any, in profit or loss.

Business combination between businesses or entities under common control does not result in a change of the economic substance of the ownership of assets, liabilities, shares or other instruments of ownership, which are exchanged, assets or liabilities transferred are recorded at book value using the pooling-of-interests method. The excess of consideration paid or received over the carrying value of interest acquired or sold, net of income tax, is directly recognized to retained earnings.

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e. Cash and cash equivalents

Cash and cash equivalents comprises cash on hand, cash in banks and all unrestricted time deposits with original maturities of three months or less at the time of placement.

Time deposits with maturities of more than three months but not more than one year are presented as part of "Other Current Financial Assets" in the consolidated statements of financial position (Note 2t).

f. Investments in associated companies

An associate is an entity over which the Group (as investor) has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but does not include control or joint control over those operating policies. The considerations made in determining significant influence are similar to those necessary to determine control over subsidiaries.

The Group's investments in its associates are accounted for using the equity method.

Under the equity method, the investment in an associate is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in the investor's share of the net assets of the associate since the acquisition date. On acquisition of the investment, any difference between the cost of the investment and the entity's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as follows:

- i. Goodwill relating to an associate or a joint venture is included in the carrying amount of the investment and is neither amortized nor individually tested for impairment.
- ii. Any excess of the entity's share of the net fair value of the investee's identifiable assets and liabilities over the cost of the investment is included as income in the determination of the entity's share of the associate or joint venture's profit or loss in the period in which the investment is acquired.

The consolidated statements of profit or loss and other comprehensive income reflect the Group's share of the results of operations of the associate. Any change in the other comprehensive income of the associate is presented as part of other comprehensive income. In addition, when there has been a change recognized directly in the equity of the associate, the Group recognizes its share of the change in the consolidated statements of changes in equity. Unrealized gain and losses resulting from transactions between the Group and the associate are eliminated to the extent of the interest in the associate.

The Group determines at each reporting date whether there is any objective evidence that the investments in associated companies are impaired. If there is, the Group calculates and recognizes the amount of impairment as the difference between the recoverable amount of the investments in the associated companies and their carrying value.

These assets are included in "Long-term Investments" in the consolidated statements of financial position.

For the reporting purpose of investment in associated companies using the equity method, the assets and liabilities as of the statement of financial position date with functional currency other than Rupiah are translated into Indonesian Rupiah using the rate of exchange prevailing at that date, while revenues and expenses are translated into Indonesian rupiah at the average rates of exchange for the year. The resulting translation adjustments are reported as part of "translation adjustment" in the equity section of the consolidated statements of financial position.

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g. Trade and other receivables

Trade and other receivables are recognized initially at fair value and subsequently measured at amortized cost, less a loss allowance based on lifetime expected credit losses at each reporting date. The Group has established a credit provision methodology that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment. Receivables are written off in the year they are determined to be uncollectible (Note 2t).

h. Inventories

Inventories consist of components, which are subsequently expensed upon use. Components represent telephone terminals, cables, and other spare parts. Inventories also include Subscriber Identification Module (“SIM”) cards, handsets, wireless broadband modems and blank prepaid vouchers, which are expensed upon sale.

The costs of inventories consist of the purchase price, import duties, other taxes, transport, handling, and other costs directly attributable to their acquisition. Inventories are recognized at the lower of cost and net realizable value. Net realizable value is the estimate of selling price less the expected costs to sell.

Cost is determined using the weighted average method.

The amounts of any write-down of inventories below cost to net realizable value and all losses of inventories are recognized as an expense in the period in which the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realizable value, is recognized as a reduction in the amount of general and administrative expenses in the year in which the reversal occurs.

Provision for obsolescence is primarily based on the estimated forecast of future usage of these inventory items.

i. Prepaid expenses

Prepaid expenses are amortized over their future beneficial periods using the straight-line method.

j. Assets held for sale

Assets (or disposal groups) are classified as held for sale when their carrying amount is to be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

Assets that meet the criteria to be classified as held for sale are reclassified from property and equipment and depreciation on such assets is ceased.

k. Intangible assets

Intangible assets mainly consist of software. Intangible assets are recognized if it is highly probable that the expected future economic benefits that are attributable to each asset will flow to the Group, and the cost of the asset can be reliably measured.

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Intangible assets are stated at cost less accumulated amortization and impairment losses, if any. Intangible assets are amortized over their estimated useful lives. The Group estimates the recoverable value of its intangible assets. When the carrying amount of an intangible asset exceeds its estimated recoverable amount, the asset is written down to its estimated recoverable amount.

Intangible assets except goodwill are amortized using the straight-line method, based on the estimated useful lives of the intangible assets as follows:

	<u>Years</u>
Software	3-6
License	3-20
Other intangible assets	1-30

Intangible assets are derecognized on disposal, or when no further economic benefits are expected, either from further use or from disposal. The difference between the carrying amount and the net proceeds received from disposal is recognized in the consolidated statements of profit or loss and other comprehensive income.

I. Property and equipment

Property and equipment are stated at cost less accumulated depreciation and impairment losses, if any.

The cost of an item of property and equipment includes: (a) purchase price, (b) any costs directly attributable to bringing the asset to its location and condition, and (c) the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. Each part of an item of property and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately.

Property and equipment are depreciated or amortized using the straight-line method based on the estimated useful lives of the assets as follows:

	<u>Years</u>
Land rights	50
Buildings	15-40
Leasehold improvements	2-15
Switching equipment	3-15
Telegraph, telex and data communication equipment	5-15
Transmission installation and equipment	3-25
Satellite, earth station and equipment	3-20
Cable network	5-25
Power supply	3-20
Data processing equipment	3-20
Vehicles	4-8
Other telecommunication peripherals	5
Office equipment	2-5
Customer Premises Equipment ("CPE") assets	4-5
Other equipment	2-5

Significant expenditures related to leasehold improvements are capitalized and depreciated over the lease term.

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The depreciation method, useful life and residual value of an asset are reviewed at least at each financial year-end and adjusted, if appropriate. The residual value of an asset is the estimated amount that the Group would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset is already of the age and in the condition expected at the end of its useful life.

Property and equipment acquired in exchange for a non-monetary asset or for a combination of monetary and non-monetary assets are measured at fair value unless, (i) the exchange transaction lacks commercial substance; or (ii) the fair value of neither the asset received nor the asset given up is measured reliably.

Major spare parts and standby equipment that are expected to be used for more than 12 months are recorded as part of property and equipment.

When assets are retired or otherwise disposed of, their cost and the related accumulated depreciation are derecognized from the consolidated statements of financial position and the resulting gains or losses on the disposal or sale of the property and equipment are recognized in the consolidated statements of profit or loss and other comprehensive income.

Certain computer hardware cannot be used without the availability of certain computer software. In such circumstance, the computer software is recorded as part of the computer hardware. If the computer software is independent from its computer hardware, it is recorded as part of intangible assets.

The cost of maintenance and repairs are charged to the consolidated statements of profit or loss and other comprehensive income as incurred. Significant renewals and betterments are capitalized.

Property under construction is stated at cost until the construction is completed, at which time it is reclassified to the property and equipment account to which it relates. During the construction period until the property is ready for its intended use or sale, borrowing costs, which include interest expense and foreign currency exchange differences incurred on loans obtained to finance the construction of the asset, as long as it meets the definition of a qualifying asset are, capitalized in proportion to the average amount of accumulated expenditures during the period. Capitalization of borrowing cost ceases when the construction is completed and the asset is ready for its intended use or sale.

m. Leases

Accounting policy for leases applied from January 1, 2019

IFRS 16 sets out a comprehensive model for identification of lease agreements and its treatment in the financial statements of both lessees and lessors. IFRS 16 introduces a control model for the identification of leases, distinguishing between leases and service contracts on the basis of whether there is an identified asset controlled by the customer.

The Group adopted IFRS 16 as at January 1, 2019 using the modified retrospective method by recognizing the cumulative effect of initially applying IFRS 16 as an adjustment to the opening balance of equity at January 1, 2019. Accordingly, the comparative information presented for 2018 has not been restated and it is presented, as previously reported, under IAS 17 and the related interpretations.

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for

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consideration. The lease term corresponds to the non-cancellable period of each contract, except in cases where the Group is reasonably certain of exercising renewal options contractually foreseen.

The Group has made use of the package of practical expedients available under the transition guidance within IFRS 16, which among other things:

- the use of a single discount rate to a portfolio of leases with reasonably similar characteristics;
- the accounting for operating leases with a remaining lease term of less than 12 months as at 1 January 2019 as short-term leases;
- the exclusion of initial direct costs for the measurement of the right-of-use asset at the date of initial application;
- the use of hindsight in determining the lease term where the contract contains options to extend or terminate the lease;
- apply IFRS 16 to leases that were previously identified under IAS 17 and IFRIC 4, and not to apply IFRS 16 to those that were not previously identified under these two standards;
- not to separate non-lease components from lease components, and instead, account for both as a single lease component; and
- not to recognize a lease liability and a Right-of-Use (“ROU”) asset for leases where the underlying assets are low-value assets (i.e. underlying assets with a maximum value of USD5,000 or IDR50 million when new).

IFRS 16 also permits the Group not to reassess the Group prior conclusions about lease identification, lease classification and the Group has elected to carry forward the historical lease assessments and relied on its assessment made applying IAS 17 and IFRIC 4 Determining whether an Arrangement contains a Lease. The Group applies the definition of a lease and related guidance set out in IFRS 16 to all lease contracts entered into or modified on or after January 1, 2019.

i. The Group as Lessee

The Group applies a single recognition and measurement approach for all leases, except for short-term leases and leases of low-value assets. The Group recognizes lease liabilities to make lease payments and ROU assets representing the right to use the underlying assets.

The Group recognizes ROU assets at the commencement date of the lease. ROU assets are measured at cost, less any accumulated amortization and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of ROU assets includes the amount of lease liabilities recognized, initial direct costs incurred, restoration costs and lease payments made at or before the commencement date less any lease incentives received.

ROU assets are amortized on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets, as follows:

	<u>Years</u>
Land rights	50
Buildings	15-40
Transmission installation and equipment	3-25
Power supply	3-20
Vehicles	4-8
Others	2-25

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If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset. The ROU assets are subject to impairment in accordance with IAS 36 Impairment of Assets.

Lease liabilities

At the commencement date of the lease, the Group recognizes lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases with a duration of less than 12 months, short-term lease ends within 12 months after January 1, 2019 and low-value leases, as well as those lease elements, partially or totally not complying with the principles of recognition defined by IFRS 16 will be treated similarly to operating leases. The Group will recognize those lease payments on a straight-line basis over the lease term in the consolidated statements of profit or loss and other comprehensive income.

ii. The Group as Lessor

Under IFRS 16, a lessor continues to classify leases as either finance leases or operating leases and account for those two types of leases differently. Leases in which the Group transfers substantially all the risks and rewards incidental to ownership of an asset are classified as finance leases, otherwise it will be classified as an operating leases. Lease classification is made at the inception date and is reassessed only if there is a lease modification.

At the commencement date, the Group recognizes assets held under a finance lease at an amount equal to the net investment in the lease and present it as finance lease receivable. The net investment in the lease include fixed payments (including in substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or a rate, and residual value guarantees provided to the lessor by the lessee. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the lessee and payments of penalties for terminating the lease, if the lease term reflects the Group exercising the option to terminate.

As required by IFRS 9, an allowance for expected credit loss has been recognized on the finance lease receivables.

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Rental income arising from operating leases is accounted for on a straight-line basis over the lease terms and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

If an arrangement contains lease and non-lease components, the Group applies IFRS 15 Revenue from Contracts with Customers to allocate the consideration in the contract.

Accounting policy for leases applied until December 31, 2018

i. As lessee

A lease is classified at the commencement date as a finance lease or operating lease. A lease that transfers substantially all the risks and benefits associated with ownership of shares to the Group is classified as a finance lease.

The finance lease is capitalized at the beginning of lease terms at the fair value of the leased assets or, if lower, present value of the minimum lease payment. Lease payments are apportioned between the finance charge and rental expenses. The finance charge is allocated to each period during the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability. Financial charges are recognized as finance costs in profit or loss.

The Group did not change the initial carrying amounts of recognized assets and liabilities at the date of initial application for leases previously classified as finance leases (i.e. the ROU assets and lease liabilities equal the lease assets and liabilities recognized under IAS 17). The requirements of IFRS 16 were applied to these leases from January 1, 2019.

Leased assets are depreciated based on the useful lives. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease terms, the leased assets are fully depreciated over the shorter of the lease terms and their economic useful lives.

Operating leases are leases other than finance leases. Payments are charged under operating leases are recognized as an expense in profit or loss on a straight-line basis over the lease period.

ii. As lessor

Leases where the Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. The initial direct costs incurred in negotiating and arranging operating leases are added to the carrying value of the leased assets and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as income in the period in which they are earned.

n. Trade payables

Trade payables are obligations to pay for goods and/or services that have been acquired from suppliers in the ordinary course of business. Trade payables are classified as current liabilities if the payment is due within one year or less. If not, they are presented as non-current liabilities.

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Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

o. Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the consolidated statements of profit or loss and other comprehensive income over the period of the borrowings using the effective interest method.

Fees paid on obtaining loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facilities will be drawn down. In this case, the fee is deferred until the drawdown occurs. To the extent there is no evidence that it is probable that some or all of the facilities will be drawn down, the fee is capitalized as a prepayment for liquidity services and amortized over the period of the facilities to which it relates.

p. Foreign currency translations

The functional currency and the reporting currency of the Group are both the Indonesian rupiah, except for the functional currency of Telekomunikasi Indonesia International Ltd., Hong Kong, Telekomunikasi Indonesia International Pte. Ltd., Singapore, Telekomunikasi Indonesia International Inc., USA, and Telekomunikasi Indonesia International S.A., Timor Leste whose functional currency is U.S. dollar, Telekomunikasi Indonesia International, Pty. Ltd., Australia whose functional currency is Australian dollar, and TS Global Network Sdn. Bhd., and Telekomunikasi Indonesia International Sdn. Bhd. whose functional currency is Malaysian ringgit. Transactions in foreign currencies are translated into Indonesian rupiah at the rates of exchange prevailing at transaction date. At the consolidated statements of financial position dates, monetary assets and liabilities denominated in foreign currencies are translated into Indonesian rupiah based on the buy and sell rates quoted by Reuters prevailing at the consolidated statements of financial position dates, as follows (in full amount):

	2018		2019	
	Buy	Sell	Buy	Sell
United States dollar ("US\$") 1	14,375	14,385	13,880	13,885
Australian dollar ("AU\$") 1	10,157	10,167	9,724	9,729
Euro ("EUR") 1	16,432	16,446	15,559	15,571
Japanese yen ("JPY") 1	130.56	130.70	127.76	127.82
Malaysian ringgit ("MYR") 1	3,474	3,480	3,390	3,394

The resulting foreign exchange gains or losses, realized and unrealized, are credited or charged to the consolidated statements of profit or loss and other comprehensive income of the current year, except for foreign exchange differences incurred on borrowings during the construction of qualifying assets which are capitalized to the extent that the borrowings can be attributed to the construction of those qualifying assets (Note 2I).

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q. Revenue and expense recognition

Accounting policy for revenue recognition applied from January 1, 2018

Revenue from contract with customers

IFRS 15 establishes a comprehensive framework to determine how, when and how much revenue is to be recognized. The standard provides a single, principles-based five-step model for the determination and recognition of revenue to be applied to all contracts with customers. The standard also provides specific guidance requiring certain types of costs to obtain and/or fulfil a contract to be capitalized and amortized on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the capitalized cost relates.

The Group adopted IFRS 15 as at January 1, 2018 using the modified retrospective method by recognizing the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at January 1, 2018.

The Group has also elected to apply the following practical expedients on the transition date:

- i. Completed contracts - the Group applied IFRS 15 only to customer contracts that had not been completed on January 1, 2018; and
- ii. Contract modifications - instead of applying a retrospective approach to quantify the cumulative effects of contract modifications from the time each modification was made; the Group aggregated the effects of all contract modifications that occurred before January 1, 2018 in order to:
 - (a) identify satisfied and unsatisfied performance obligations;
 - (b) determine the transaction price of the latest modified contract; and
 - (c) allocate the transaction price to the satisfied and unsatisfied performance obligations as of January 1, 2018.

Moreover, the Group also elected to apply practical expedient to not account for the effect of financing component when the period between the payment for a promised good or service and the transfer for such good or service to the customer is less than one year, in adopting IFRS 15.

Below is the summary of the Group's revenue recognition accounting policy for each revenue stream:

i. Mobile

Revenue from mobile primarily comprises of revenue from cellular service which among others: telephone service, interconnection service, internet and data service and Short Messaging Services ("SMS") service. Those services are offered on postpaid or prepaid basis, which for prepaid, the sales of starter packs (also known as SIM cards and start-up load vouchers) and pulse reload vouchers are recognized initially as contract liabilities. The Group recognize contract assets for provision of service from postpaid customers not yet billed.

All mobile services revenues are recognized based on output method, either per actual usage or allowance unit used (if services sold in plan basis), because the customer simultaneously receives and consumes the benefits provided by the Group.

For services sold in bundled plan, total consideration is allocated to performance obligations based on stand-alone selling price for each of product and/or service. The Group estimated the stand-

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alone selling price using the price enacted if the services are sold on a stand-alone basis. Most bundled plans sold by the Group only include services which are generally satisfied over the same period of time. Therefore the revenue recognition pattern is generally not impacted by the allocation.

As part of its marketing programme, the Group had a customer loyalty programme named "Telkomsel Poin", which allows customers to accumulate points for every certain multiple of the telecommunication service usage. The points can be redeemed in the future for free or discounted products or services, provided that other qualifying conditions are achieved.

The consideration that is received is allocated between the telecommunication services and the points issued, with the consideration allocated to points that are equal to its fair value. The fair value of the points is determined according to historical information relating to the redemption rate of award points. The fair value of the points that are issued is deferred and recognized as revenue when the points are redeemed or have expired.

ii. Consumer

Revenue from Consumer primarily comprises of revenue from fixed telephone and Indihome services. Revenues from fixed telephone service are derived from customer who subscribes to fixed telephone service only. While revenues from Indihome service are derived from customer who subscribes to internet service or to more than one retail products. Those services are offered on postpaid basis which is billed in the following month. The contracts are offered as month to month contract.

All consumer services are recognized using the output method based on the customer's actual usage or time elapsed if the service sold as plan basis as the customer simultaneously receives and consumes the benefits provided by the Group.

The Group has a bundled services plan named "Indihome". Under this bundled plan, the customer is allowed to subscribe to a combination of Consumer's service (i.e. telephone, internet and data and paid TV). Prior to 2018, the Group allocates the total contract price to the distinct performance obligations based on the stand-alone selling price of each performance obligation. The Group estimates the stand-alone selling price using the price enacted if the services are sold on a stand-alone basis. Starting from 2019, this bundled service is presented under single line item "Indihome" in note to financial statements (Note 25) in order to be more appropriate and representative of services delivered to customers.

Customers may be required to pay an upfront fee at the commencement of the contract. The upfront fee is considered to be a material right because the customer is not required to pay an upfront fee when the customer renews the service beyond the original contract period. The Group values the renewal option in the amount of the consideration received from the upfront fee for the installation service. The Group defers the amount of renewal option and recognizes it as revenue on a straight-line basis over the expected term of the customer relationships. The Group estimates the expected customer life based on the historical information and customer trends and updates the evaluation on an annual basis.

iii. Enterprise

Revenue from Enterprise primarily comprises of revenue from providing telephone service, data and internet service, information technologies service, and other services (e.g. sales of peripherals,

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manage service, call center service, e-health, e-payment, and others.). Some of the contracts with enterprise customers are bespoke in nature.

Revenues from enterprise are recognized overtime using output method based on actual usage or time elapsed if the provision of service does not depend on usage (i.e. minute of voice, kilobyte of data, etc.), except for sales of goods which are recognized as a point in time, because the customer simultaneously receives and consumes the benefits provided by the Group. Revenues for performance obligations that are satisfied at a point in time is recognized when control of goods is transferred to the customer, typically when the customer has physical possession of the goods.

Some of the arrangements in enterprise are offered as bundled arrangements. For bundled arrangements, the product and/or service in the contract is accounted for as an individual performance obligation when it is separately identifiable from other promises in the contract and the customer can benefit from the product/service on its own. The total consideration is allocated to each distinct performance obligation that has been included in the contract, based on its stand-alone selling price. The stand-alone selling price is determined according to the observable prices at which individual product and/or service are sold separately, adjusted for market conditions and normal discounts as appropriate. Alternatively, when the observable prices are not available, the expected cost plus margin approach is used to determine the stand-alone selling prices.

Certain contracts with enterprise customers may give rise to variable consideration as the contract price depends on a future event (e.g. usage based contract or revenue-share based contract). In estimating the variable consideration, the Group is required to use either the expected value method or the most likely amount method based on the method that better predicts the amount of consideration to which it will be entitled. The Group determines that the most expected value method is the appropriate method to use in estimating the variable consideration for a single contract with a large number of possible outcomes.

Before including any amount of variable consideration in the transaction price, the Group considers whether the amount of variable consideration is constrained. The Group determines the variable consideration is not constrained based on its historical experience, business forecast and the current economic conditions and only includes variable consideration to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

When another party is involved in providing products and/or services to a customer, the Group is the principal if it controls the specified products and/or services before those products and/or services are transferred to the customer. Revenues are recorded on the net amount that has been retained (the amount paid by the customer less the amount paid to the suppliers), when, in substance, the Group has acted as agent and earned commission from the suppliers of the products and/or services sold.

iv. Wholesale and International Business (“WIB”)

Revenue from WIB is mainly comprised of interconnections service for interconnection of other telecommunications carriers’ subscriber calls to the Group’s subscribers (incoming) and calls between other telecommunications carriers subscribers through the Group’s network (transit) and network service with other telecommunications carriers. All of these services are recognized based on output method using the basis of the actual recorded traffic for the month.

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Incremental cost of obtaining/fulfilling contract with customers

The incremental costs of obtaining/fulfilling contracts with customers, which principally is comprised of sales commissions and contract fulfilment costs, are initially recognized on the statement of financial position. These costs are subsequently amortized on a systematic basis that is consistent with the period and pattern of transfer to the customer of the related products or services. Costs that do not qualify as costs of obtaining/fulfilling contract with customers are expensed as incurred or in accordance with other relevant standards.

Revenue from other sources

Revenue from other sources' comprise of revenue from telecommunication tower leases and other rental. Rental income is recognized on a straight-line basis over the lease term and is included in revenue in the statement of profit or loss due to its operating nature. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized over the lease term on the same basis as rental income. Contingent rents are recognized as revenue in the period in which they are earned.

Accounting policy for revenue recognition applied until December 31, 2017

i. Cellular and fixed wireless telephone revenues

Revenues from postpaid service, which consist of usage and monthly charges, are recognized as follows:

- (a) Airtime and charges for value added services are recognized based on usage by subscribers; and
- (b) Monthly subscription charges are recognized as revenues when incurred by subscribers.

Revenues from prepaid service, which consist of the sale of starter packs (also known as SIM cards and start-up load vouchers) and pulse reload vouchers, are recognized initially as unearned income and recognized as revenue based on total of successful calls made and the value added services used by the subscribers or the expiration of the unused stored value of the voucher.

ii. Fixed line telephone revenues

Revenues from usage charges are recognized as customers incur the charges. Monthly subscription charges are recognized as revenues when incurred by subscribers.

Revenues from fixed line installations are deferred and recognized as revenue on the straight-line basis over the expected term of the customer relationships. The Group estimates the expected customer life based on the historical information and customer trends and updates the evaluation on an annual basis.

iii. Interconnection revenues

Revenues from network interconnection with other domestic and international telecommunications carriers are recognized monthly on the basis of the actual recorded traffic for the month. Interconnection revenues consist of revenues derived from other operators' subscriber calls to the

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Group's subscribers (incoming) and calls between subscribers of other operators through the Group's network (transit).

iv. Data, internet, and information technology service revenues

Revenues from data communication and internet are recognized based on service activity and performance which are measured by the duration of internet usage or based on the fixed amount of charges depending on the arrangements with customers.

Revenues from sales, installation and implementation of computer software and hardware, computer data network installation service and installation are recognized when the goods are delivered to customers or the installation takes place.

Revenue from computer software development service is recognized using the percentage-of-completion method.

v. Network revenues

Revenues from network consist of revenues from leased lines and satellite transponder leases which are recognized over the period in which the services are rendered.

vi. Other revenues

Revenues from sales of peripherals or other telecommunications equipments are recognized when delivered to customers.

Revenues from telecommunication tower leases are recognized on straight-line basis over the lease period in accordance with the agreement with the customers.

Revenues from other services are recognized when services are rendered to customers.

vii. Multiple-element arrangements

Where two or more revenue-generating activities or deliverables are sold under a single arrangement, each deliverable that is considered to be a separate unit of accounting is accounted for separately. The total revenue is allocated to each separately identifiable component based on the relative fair value of each component and the appropriate revenue recognition criteria are applied to each component as described above.

viii. Agency relationship

Revenues from an agency relationship are recorded based on the gross amount billed to the customers when the Group acts as principal in the sale of goods and services. Revenues are recorded based on the net amount retained (the amount paid by the customer less amount paid to the suppliers) when, in substance, the Group has acted as agent and earned commission from the suppliers of the goods and services sold.

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ix. Customer loyalty programme

The Group operates a loyalty programme, which allows customers to accumulate points for every certain multiple of the telecommunication services usage. The points can be redeemed in the future for free or discounted products or services, provided other qualifying conditions are achieved.

Consideration received is allocated between the telecommunication services and the points issued, with the consideration allocated to the points equal to their fair value. Fair value of the points is determined based on historical information about redemption rate of award points. Fair value of the points issued is deferred and recognized as revenue when the points are redeemed or expired.

x. Expense

Expenses are recognized as they are incurred.

r. Employee benefits

i. Short-term employee benefits

All short-term employee benefits which consist of salaries and related benefits, vacation pay, incentives and other short-term benefits are recognized as expense on undiscounted basis when employees have rendered service to the Group.

ii. Post-employment benefit plans and other long-term employee benefits

Post-employment benefit plans consist of funded and unfunded defined benefit pension plans, defined contribution pension plan, other post-employment benefits, post-employment health care benefit plan, defined contribution health care benefit plan and obligations under the Labor Law.

Other long-term employee benefits consist of Long Service Awards ("LSA"), Long Service Leave ("LSL"), and pre-retirement benefits.

The cost of providing benefits under post-employment benefit plans and other long-term employee benefits calculation is performed by an independent actuary using the projected unit credit method.

The net obligations in respect of the defined pension benefit plans and post-retirement health care benefit plan are calculated at the present value of estimated future benefits that the employees have earned in return for their service in the current and prior periods less the fair value of plan assets. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of Government bonds that are denominated in the currencies in which the benefits will be paid and that have terms to maturity approximating the terms of the related retirement benefit obligation. Government bonds are used as there are no deep markets for high quality corporate bonds.

Plan assets are assets owned by defined benefit pension plan and post-retirement health care benefits plan as well as qualifying insurance policy. The assets are measured at fair value as of reporting dates. The fair value of qualifying insurance policy is deemed to be the present value of the related obligations (subject to any reduction required if the amounts receivable under the insurance policies are not recoverable in full).

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Remeasurement, comprising of actuarial gains and losses, the effect of the asset ceiling (excluding amounts included in net interest on the net defined benefit liability (asset)) and the return on plan assets (excluding amounts included in net interest on the net defined benefit liability (asset)) are recognized immediately in the consolidated statements of financial position with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Remeasurements are not reclassified to profit or loss in subsequent periods.

Past service costs are recognized immediately in profit or loss on the earlier of:

- (a) the date of plan amendment or curtailment; and
- (b) the date that the Group recognized restructuring-related costs.

Net interest is calculated by applying the discount rate to the net defined benefit liabilities or assets.

Gains or losses on curtailment are recognized when there is a commitment to make a material reduction in the number of employees covered by a plan or when there is an amendment of defined benefit plan terms such as that a material element of future services to be provided by current employees will no longer qualify for benefits, or will qualify only for reduced benefits.

Gains or losses on settlement are recognized when there is a transaction that eliminates all further legal or constructive obligation for part or all of the benefits provided under a defined benefit plan (other than the payment of benefit in accordance with the program and included in the actuarial assumptions).

For defined contribution plans, the regular contributions constitute net periodic costs for the period in which they are due and, as such, are included in "Personnel Expenses" as they become payable.

iii. Share-based payments

The Company operates an equity-settled, share-based compensation plan. The fair value of the employees' services rendered which are compensated with the Company's shares is recognized as an expense in the consolidated statements of profit or loss and other comprehensive income and credited to additional paid-in capital at the grant date.

iv. Early retirement benefits

Early retirement benefits are accrued at the time the Group makes a commitment to provide early retirement benefits as a result of an offer made in order to encourage voluntary redundancy. A commitment to a termination arises when, and only when a detailed formal plan for the early retirement cannot be withdrawn.

s. Taxes

Income tax

Current and deferred income taxes are recognized as income or expense and included in the consolidated statements of profit or loss and other comprehensive income, except to the extent that the income tax arises from a transaction or event which is recognized directly in equity, in which case, the income tax is recognized directly in equity.

Current income tax assets and liabilities are measured at the amounts expected to be recovered or paid by using the tax rates and tax laws that have been enacted or substantively enacted at each

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reporting date. Management periodically evaluates positions taken in Annual Tax Returns ("*Surat Pemberitahuan Tahunan*" / "*SPT Tahunan*") with respect to situations in which applicable tax regulation is subject to interpretation. Where appropriate, management establishes provisions based on the amounts expected to be paid to the Tax Authorities.

Tax assessments

Amendment to taxation obligation is recorded when an assessment letter ("*Surat Ketetapan Pajak*" or "SKP") is received or, if appealed against, when the results of the appeal have been determined. The additional taxes and penalty imposed through SKP are recognized as revenue or expense in the current year profit or loss, unless objection/appeal is taken. The additional taxes and penalty imposed through SKP are deferred as long as they meet the asset recognition criteria. The changes due to an error will be accounted in accordance with IAS 8: Accounting Policies, Changes in Accounting Estimates and Error.

Deferred tax

The Group recognizes deferred tax assets and liabilities for temporary differences between the financial and tax bases of assets and liabilities at each reporting date. The Group also recognizes deferred tax assets resulting from the recognition of future tax benefits, such as the benefit of tax losses carried forward to the extent their future realization is probable. Deferred tax assets and liabilities are measured using enacted or substantively enacted tax rates and tax laws at each reporting date which are expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced if there is no longer probable that sufficient taxable profit will be available to compensate part or all of the benefits of deferred tax assets. Unrecognized deferred tax assets are re-assessed at each reporting date and recognized if it is probable that future taxable profits will be available for recovery. Tax deductions arising from the reversal of deferred tax assets are excluded from estimates of future taxable income.

Deferred tax transactions which are recognized outside profit or loss are recognized outside profit or loss. Therefore, deferred taxes on these transactions are recognized either in other comprehensive income or recognized directly in equity.

Deferred tax assets and liabilities are offset in the consolidated statements of financial position, if and only if it has a legally enforceable right to set off current tax assets and liabilities and the deferred tax assets and liabilities relate to income taxes levied by the same Tax Authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax assets or liabilities are expected to be recovered or settled.

Value added tax ("VAT")

Revenues, expenses and assets are recognized net of the VAT amount except:

- i. VAT arising from the purchase of assets or services that cannot be credited by the Tax Office, which VAT is recognized as part of the acquisition cost of the asset or as part of the applied expenses; and
- ii. Receivables and payables are presented including the amount of VAT.

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Uncertainty over income tax treatments

In accordance with IFRIC 23: Uncertainty Over Income Tax Treatments which is effective on January 1, 2019, stated that the recognition and measurement of tax assets and liabilities that contain uncertainty over income tax are determined by considering whether to be treated separately or together, the assumptions used in the examination of tax treatments by the Tax Authorities, consideration the probability that the Tax Authorities will accept uncertain tax treatment and re-consideration or estimation if there is a change in facts and circumstances.

If the acceptance of tax treatment is probable, the measurement is in line with income tax filings. If the acceptance of tax treatment is not probable, the Group uses tax amounts using the method that provides the better predict of resolution (i.e. most likely amount or expected value).

Accordingly, management believes that the interpretation did not have a significant impact on the consolidated financial statements.

Final tax

Indonesian tax regulations impose final tax on several types of transactions based on the gross value of the transaction. Therefore, final tax which is charged based on such transaction remains subject to tax even though the taxpayer incurred a loss on the transaction.

Final tax on construction services and leases are presented as part of "Other Income (Expenses) - net".

t. Financial instruments

Accounting policy for financial instruments applied from January 1, 2018

The Group classifies financial instruments into financial assets and financial liabilities. A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The group adopted IFRS 9 as at January 1, 2018

i. Financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, and subsequently measured at amortized cost, fair value through OCI ("FVTOCI"), and fair value through profit or loss ("FVTPL").

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them. With the exception of trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at FVTPL, transaction costs. Trade receivables that do not contain a significant financing component or for which the Group has applied the practical expedient are measured at the transaction price determined under IFRS 15.

In order for a financial asset to be classified and measured at amortized cost or FVTOCI, it needs to give rise to cash flows that are solely payments of principal and interest on the principal amount

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outstanding. This assessment is referred to as the solely payments of principal and interest test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to sell the asset.

Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

(a) Financial assets at amortized cost (debt instruments)

This category is the most relevant to the Group. The Group measures financial assets at amortized cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortized cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired. The Group's financial assets at amortized cost consist of cash and cash equivalents, trade and other receivables, contract assets, other current financial assets, and other non-current assets.

(b) Financial assets at FVTOCI with recycling of cumulative gains and losses (debt instruments)

The Group measures debt instruments at FVTOCI if both of the following conditions are met:

- The financial asset is held within a business model with the objective of both holding to collect contractual cash flows and selling; and
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

For debt instruments at FVTOCI, interest income, foreign exchange revaluation and impairment losses or reversals are recognized in the statement of profit or loss and computed in the same manner as for financial assets measured at amortized cost. The remaining fair value changes are recognized in OCI. Upon derecognition, the cumulative fair value change recognized in OCI is recycled to profit or loss.

The Group have no debt instruments classified at FVTOCI with recycling of cumulative gains and losses as of December 31, 2019.

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- (c) Financial assets designated at FVTOCI with no recycling of cumulative gains and losses upon derecognition (equity instruments)

Upon initial recognition, the Group can elect to classify irrevocably its equity investments as equity instruments designated at FVTOCI when they meet the definition of equity under IAS 32, Financial Instruments: Presentation and are not held for trading. The classification is determined on an instrument-by-instrument basis. Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the statement of profit or loss when the right of payment has been established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at FVTOCI are not subject to impairment assessment. There is no equity investments classified under this category as of December 31, 2018 and 2019.

- (d) Financial assets at FVTPL

Financial assets at FVTPL include financial assets held for trading, financial assets designated upon initial recognition at FVTPL, or financial assets mandatorily required to be measured at fair value. Financial assets are classified as held for trading if they are acquired for the purpose of selling or repurchasing in the near term. Derivatives, including separated embedded derivatives, are also classified as held for trading unless they are designated as effective hedging instruments. Financial assets with cash flows that are not solely payments of principal and interest are classified and measured at FVTPL, irrespective of the business model. Notwithstanding the criteria for debt instruments to be classified at amortized cost or at FVTOCI, as described above, debt instruments may be designated at FVTPL on initial recognition if doing so eliminates, or significantly reduces, an accounting mismatch.

Financial assets at FVTPL are carried in the statement of financial position at fair value with net changes in fair value recognized in the statement of profit or loss. The Group's financial assets at FVTPL consists of equity investments, other long-term investments, mutual funds, and convertible bonds.

Expected credit losses ("ECL")

The Group recognizes an allowance for ECL for all debt instruments not held at FVTPL. ECL are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECL are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECL are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECL. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECL at each reporting date. The Group has established a provision

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matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

For debt instruments at FVTOCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the debt instrument is considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the external credit rating of the debt instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group's debt instruments at FVTOCI comprise solely of quoted bonds that are graded in the top investment category (Very Good and Good) by the Good Credit Rating Agency and, therefore, are considered to be low credit risk investments. It is the Group's policy to measure ECL on such instruments on a 12-month basis. However, when there has been a significant increase in credit risk since origination, the allowance will be based on the lifetime ECL. The Group uses the ratings from the Good Credit Rating Agency both to determine whether the debt instrument has significantly increased in credit risk and to estimate ECL.

The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. Trade receivables is written off when there is low possibility of recovering the contractual cash flow, after all collection efforts have been done and have been fully provided for allowance.

ii. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, payables or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

All financial liabilities are recognized initially at fair value and, in the case of loan and borrowings and payables, net of directly attributable transaction costs

The Group classifies its financial liabilities as: (i) financial liabilities at FVTPL or (ii) financial liabilities measured at amortized cost.

The Group's financial liabilities include trade and other payables, accrued expenses, interest-bearing loans, other borrowings and other liabilities. Interest-bearing loans consist of short-term bank loans, two-step loans, bonds and notes, long-term bank loans and obligations under finance leases.

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Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

(a) Financial liabilities at FVTPL

Financial liabilities at FVTPL include financial liabilities held for trading and financial liabilities designated upon initial recognition as at FVTPL. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by IFRS 9. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognized in the statement of profit or loss.

Financial liabilities designated upon initial recognition at FVTPL are designated at the initial date of recognition, and only if the criteria in IFRS 9 are satisfied. The Group has not designated any financial liability as at FVTPL.

(b) Financial liabilities measured at amortized cost

This is the category most relevant to the Group. After initial recognition, interest-bearing loans and other borrowings are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the statement of profit or loss. This category generally applies to interest-bearing loans and other borrowings. For more information, refer to Note 20 Long-Term Loans and Other Borrowings.

iii. Offsetting financial instruments

Financial assets and liabilities are offset and the net amount is reported in the consolidated statements of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle them on a net basis, or realize the assets and settle the liabilities simultaneously. The right of set-off must not be contingent on a future event and must be legally enforceable in all of the following circumstances:

- (a) the normal course of business;
- (b) the event of default; and
- (c) the event of insolvency or bankruptcy of the Group and all of the counterparties.

iv. Derecognition of financial instruments

The Group derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or when the Group transfers substantially all the risks and rewards of ownership of the financial asset.

The Group derecognizes a financial liability when the obligation specified in the contract is discharged or cancelled or has expired.

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v. Hedge Accounting

The group does not apply hedge accounting.

Accounting policy for financial instruments applied until December 31, 2017

The Group classifies financial instruments into financial assets and financial liabilities. Financial assets and liabilities are recognized initially at fair value including transaction costs. These are subsequently measured either at fair value or amortized cost using the effective interest method in accordance with their classification.

i. Financial assets

The Group classifies its financial assets as (i) financial assets at fair value through profit or loss, (ii) loans and receivables, (iii) held-to-maturity investments or (iv) available-for-sale financial assets. The classification depends on the purpose for which the financial assets are acquired. Management determines the classification of financial assets at initial recognition.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the marketplace (regular way trades) are recognized on the trade date, i.e., the date that the Group commits to purchase or sell the assets.

The Group's financial assets include cash and cash equivalents, other current financial assets, trade and other receivables, other non-current assets, and available-for-sale investments.

(a) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are financial assets classified as held for trading. A financial asset is classified as held for trading if it is acquired principally for the purpose of selling or repurchasing it in the near term and for which there is evidence of a recent actual pattern of short-term profit taking. Gains or losses arising from changes in fair value of the trading securities are presented as other income (expenses) in consolidated statements of profit or loss and other comprehensive income in the period in which they arise.

(b) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

Loans and receivables consist of, among other assets, cash and cash equivalents, other current financial assets, trade and other receivables, and other non-current assets (long-term trade receivables and restricted cash).

These are initially recognized at fair value including transaction costs and subsequently measured at amortized cost, using the effective interest method.

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(c) Held-to-maturity investments

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities on which management has the positive intention and ability to hold to maturity, other than:

- those that the Group, upon initial recognition, designates as at fair value through profit or loss;
- those that the Group designates as available-for-sale; and
- those that meet the definition of loans and receivables.

(d) Available-for-sale financial assets

Available-for-sale investments are non-derivative financial assets that are intended to be held for indefinite periods of time, which may be sold in response to needs for liquidity or changes in interest rates, exchange rates or that are not classified as loans and receivables, held-to-maturity investments or financial assets at fair value through profit or loss. Available-for-sale investments primarily consist of mutual funds, corporate and government bonds and capital stock, which are recorded as part of "Other Current Financial Assets" and "Long-term Investments" in the consolidated statements of financial position.

Available-for-sale investments are stated at fair value. Unrealized holding gains or losses on available-for-sale investments are excluded from income of the current period and are reported as a separate component in the equity section of the consolidated statements of financial position until realized. Realized gains or losses from the sale of available-for-sale investments are recognized in the consolidated statements of profit or loss and other comprehensive income, and are determined on the specific identification basis.

Impairment of financial assets

The Group assesses the impairment of financial assets if there is objective evidence that a loss event has a negative impact on the estimated future cash flows of the financial assets. Impairment is recognized when the loss can be reliably estimated. Losses expected as a result of future events, no matter how likely, are not recognized.

For financial assets carried at amortized cost, the Group first assesses whether impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in the collective assessment of impairment.

The amount of any impairment loss identified is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account and the loss is recognized in profit or loss.

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For available-for-sale financial assets, the Group assesses at each reporting date whether there is objective evidence that an investment or a group of investments is impaired. When a decline in the fair value of an available-for-sale financial asset has been recognized in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognized in other comprehensive income is recognized in profit or loss as an impairment loss. The amount of the cumulative loss is the difference between the acquisition cost (net of any principal repayment and amortization) and current fair value, less any impairment loss on that financial asset previously recognized.

ii. Financial liabilities

The Group classifies its financial liabilities as (i) financial liabilities at fair value through profit or loss or (ii) financial liabilities measured at amortized cost.

The Group's financial liabilities include trade and other payables, accrued expenses, interest-bearing loans, other borrowings and other liabilities. Interest-bearing loans consist of short-term bank loans, two-step loans, bonds and notes, long-term bank loans and obligations under finance leases.

(a) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss are financial liabilities classified as held for trading. A financial liability is classified as held for trading if it is incurred principally for the purpose of selling or repurchasing it in the near term and for which there is evidence of a recent actual pattern of short-term profit taking.

(b) Financial liabilities measured at amortized cost

Financial liabilities that are not classified as liabilities at fair value through profit or loss fall into this category and are measured at amortized cost. Financial liabilities measured at amortized cost are trade and other payables, accrued expenses, interest-bearing loans, other borrowings and other liabilities. Interest-bearing loans consist of short-term bank loans, two-step loans, bonds and notes, long-term bank loans and obligations under finance leases.

iii. Offsetting financial instruments

Financial assets and liabilities are offset and the net amount is reported in the consolidated statements of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle them on a net basis, or realize the assets and settle the liabilities simultaneously. The right of set-off must not be contingent on a future event and must be legally enforceable in all of the following circumstances:

- (a) the normal course of business;
- (b) the event of default; and
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iv. Fair value of financial instruments

Fair value is the amount for which an asset could be exchanged, or liability settled, in an arm's length transaction.

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices, without any deduction for transaction costs.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm's length market transactions, reference to the current fair value of another instrument that is substantially the same, a discounted cash flow analysis or other valuation models.

An analysis of fair values of financial instruments and further details as to how they are measured are provided in Note 35.

v. Derecognition of financial instrument

The Group derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or when the Group transfers substantially all the risks and rewards of ownership of the financial asset.

The Group derecognizes a financial liability when the obligation specified in the contract is discharged or cancelled or has expired.

u. Treasury stock

Reacquired Company shares of stock are accounted for at their reacquisition cost and classified as "Treasury Stock" and presented as a deduction in equity. The cost of treasury stock sold/transferred is accounted for using the weighted average method. The portion of treasury stock transferred for employee stock ownership program is accounted for at its fair value at grant date. The difference between the cost and the proceeds from the sale/transfer of treasury stock is credited to "Additional Paid-in Capital".

v. Dividends

Dividend for distribution to the stockholders is recognized as a liability in the consolidated financial statements in the year in which the dividend is approved by the stockholders. The interim dividend is recognized as a liability based on the Board of Directors' decision supported by the approval from the Board of Commissioners.

w. Basic and diluted earnings per share and earnings per ADS

Basic earnings per share is computed by dividing profit for the year attributable to owners of the parent company by the weighted average number of shares outstanding during the year. Income per ADS is computed by multiplying the basic earnings per share by 100, the number of shares represented by each ADS.

The Company does not have potentially dilutive financial instruments.

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x. Segment information

The Group's segment information is presented based upon identified operating segments. An operating segment is a component of an entity:

- i. that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the same entity);
- ii. whose operating results are regularly reviewed by the Group's Chief Operating Decision Maker ("CODM") i.e., the Directors, to make decisions about resources to be allocated to the segment and assess its performance; and
- iii. for which discrete financial information is available.

y. Provisions

Provisions are recognized when the Group has present obligations (legal or constructive) arising from past events and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligations and the amount can be measured reliably.

Provisions for onerous contracts are recognized when the contract becomes onerous for the lower of the cost of fulfilling the contract and any compensation or penalties arising from failure to fulfill the contract.

z. Impairment of non-financial assets

At the end of each reporting period, the Group assesses whether there is an indication that an asset may be impaired. If such indication exists, the recoverable amount is estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, the Group determines the recoverable amount of the Cash-Generating Unit ("CGU") to which the asset belongs ("the asset's CGU").

The recoverable amount of an asset (either individual asset or CGU) is the higher of the asset's fair value less costs to sell and its value in use ("VIU"). Where the carrying amount of the asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing the value in use, the estimated net future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, the Group uses an appropriate valuation model to determine the fair value of the asset. These calculations are corroborated by valuation multiples or other available fair value indicators.

Impairment losses of continuing operations are recognized in profit or loss as part of "Depreciation and Amortization" in the consolidated statements of profit or loss and other comprehensive income.

At the end of each reporting period, the Group assesses whether there is any indication that previously recognized impairment losses for an asset, other than goodwill, may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognized impairment loss for an asset, other than goodwill, is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited such that the carrying amount of the asset does not exceed its recoverable amount, nor exceeds the carrying amount that would have been determined, net of

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depreciation, had no impairment been recognized for the asset in prior periods. Reversal of an impairment loss is recognized in profit or loss.

Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired. Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognized. Impairment loss relating to goodwill cannot be reversed in future periods.

aa. Changes in accounting policy and disclosures

The Group has applied IFRS 16 modified retrospective approach on the required effective date, January 1, 2019. The 2019 opening balances have been adjusted, but the previous periods have not been restated. Some of the key changes that impacted the Group include the following:

i. ROU assets and lease liabilities

Adoption of IFRS 16 resulted in the Group's future minimum lease payments under non-cancellable operating leases to be recognized as lease liabilities with corresponding ROU assets.

Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate as of January 1, 2019. The weighted average lessee's incremental borrowing rate applied to the lease liabilities on January 1, 2019 was 8.95%.

ii. Sublease

the Group has reclassified certain of its sublease agreements as finance leases. The portion of the ROU assets subject to sublease is de-recognized and a sublease receivable is recognized in the consolidated statements of financial position when the sublease commences.

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The impact of the changes to the current year financial statements is as follow:

	<u>IFRS 16</u>	<u>IAS 17</u>	<u>Increase (decrease)</u>
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION			
ASSETS			
Other current assets (Note 9)	5,502	8,114	(2,612)
Property and equipment (Note 12)	153,174	156,603	(3,429)
Right-of-use assets (Note 13)	20,893	—	20,893
Deferred tax assets - net (Note 29i)	2,779	2,663	116
Other non-current assets (Note 14)	7,683	9,106	(1,423)
Total Assets	<u>190,031</u>	<u>176,486</u>	<u>13,545</u>
LIABILITIES			
Accrued expenses (Note 17)	12,761	13,723	(962)
Short-term bank loans and current maturities of long-term borrowings (Note 19)	22,114	18,215	3,899
Deferred tax liabilities - net (Note 29i)	1,204	1,155	49
Long-term loans and other borrowings (Note 20)	44,843	33,865	10,978
Total Liabilities	<u>80,922</u>	<u>66,958</u>	<u>13,964</u>
CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME			
Operation, maintenance, and telecommunication services expenses (Note 25)	(37,453)	(42,246)	4,793
Depreciation and amortization	(27,204)	(23,211)	(3,993)
Finance costs	(5,452)	(4,268)	(1,184)
Net impact on profit for the year	(70,109)	(69,725)	(384)
Income tax (expense) benefit (Note 29e)	(10,439)	(10,506)	67
Net impact on profit for the year - net of tax	(80,548)	(80,231)	(317)
Profit for the year attributable to:			
Owners of the parent company	19,068	19,285	(217)
Non-controlling interests	8,792	8,892	(100)

CONSOLIDATED STATEMENTS OF CASH FLOWS

	<u>(In billions)</u>
Net cash flows from operating activities	
Operating lease payments	5,359
Net cash flows from financing activities	
Payment of principal portion of lease liabilities	4,735

ab. Current and non-current classifications

The Group presents assets and liabilities in the statement of financial position based on current/non-current classification. An asset is presented current when it is:

- i. expected to be realized or intended to be sold or consumed in the normal operating cycle;
- ii. held primarily for the purpose of trading;
- iii. expected to be realized within twelve months after the reporting period; or
- iv. cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

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Asset which do not meet above criteria, classified as non-current assets.

A liability is current when:

- i. it is expected to be settled in the normal operating cycle;
- ii. it is held primarily in the proposed of trading;
- iii. it is due to be settled within twelve months after reporting period;
- iv. there is no unconditional right after deferred the settlement of the liability for at least twelve months after the reporting period.

The terms of liability that could, at the option of counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

Liabilities which do not meet above criteria, classified as long term liabilities.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

ac. Critical accounting considerations, estimates and assumptions

The preparation of the Group's consolidated financial statements requires management to make decisions, estimates and assumptions that affect the amount of revenue, expenses, assets and liabilities reported, and the accompanying disclosures, and disclosures of contingent liabilities, at the end of the reporting period.

Uncertainty about these assumptions and estimates can produce results that require a material adjustment to the carrying amounts of assets and liabilities affected in the coming periods.

i. Consideration

The following considerations were made by management in applying the Group's accounting policies that have the most significant influence on the amounts recognized in the consolidated financial statements:

Income taxes

Significant judgment is required in determining the provision for income taxes. There are many transactions and calculations for which the ultimate tax determination is uncertain. The Group recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income tax assets and liabilities in the year in which such determination is made. Details of the nature and carrying amounts of income tax are disclosed in Note 29.

ii. Estimates and assumptions

Estimates and assumption are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and

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assumptions at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

(a) Retirement benefits

The present value of the retirement benefit obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost (income) for pensions include the discount rate and return on investment (ROI). Any changes in these assumptions will impact the carrying amount of the retirement benefit obligations.

The Group determines the appropriate discount rate at the end of each reporting period. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the obligations. In determining the appropriate discount rate, the Group considers the interest rates of Government bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related retirement benefit obligations.

If there is an improvement in the ratings of such Government bonds or a decrease in interest rates as a result of improving economic conditions, there could be a material impact on the discount rate used in determining the post-employment benefit obligations.

Other key assumptions for retirement benefit obligations are based in part on current market conditions. Additional information is disclosed in Notes 30 and 31.

(b) Useful lives of property and equipment

The Group estimates the useful lives of its property and equipment based on expected asset utilization, considering strategic business plans, expected future technological developments, and market behavior. The estimates of useful lives of property and equipment are based on the Group's collective assessment of industry practice, internal technical evaluation, and experience with similar assets.

The Group reviews its estimates of useful lives at least each financial year-end and such estimates are updated if expectations differ from previous estimates due to changes in expectation of physical wear and tear, technical or commercial obsolescence, and legal or other limitations on the continuing use of the assets. The amounts of recorded expenses for any year will be affected by changes in these factors and circumstances. A change in the estimated useful lives of the property and equipment is a change in accounting estimates and is applied prospectively in profit or loss in the period of the change and future periods.

Details of the nature and carrying amounts of property and equipment are disclosed in Note 12.

(c) Determining the lease term of contracts with renewal and termination options - Group as lessee

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised.

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The Group has several lease contracts that include extension and termination options. The Group applies judgement in evaluating whether it is reasonably certain whether or not to exercise the option to renew or terminate the lease. That is, it considers all relevant factors that create an economic incentive for it to exercise either the renewal or termination. After the commencement date, the Group reassesses the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate.

(d) Credit loss provision for financial assets

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. The Group has established a credit provision methodology that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors, and the economic environment.

For term deposits and debt instruments at fair value through OCI, the Group applies the low credit risk simplification. At every reporting date, the Group evaluates whether the deposits or debt instrument are considered to have low credit risk using all reasonable and supportable information that is available without undue cost or effort. In making that evaluation, the Group reassesses the internal credit rating of the instrument. In addition, the Group considers that there has been a significant increase in credit risk when contractual payments are more than 30 days past due.

The Group assesses whether there is objective evidence that other receivables or other financial assets have been impaired at the end of each reporting period. Provision for impairment of receivables is calculated based on a review of the current status of existing receivables and historical collection experience. Such provisions are adjusted periodically to reflect the actual and anticipated experience. Details of the nature and carrying amounts of provision for impairment of other receivables are disclosed in Note 6.

(e) Revenue

(i) Critical judgements in determining the performance obligation, timing of revenue recognition and revenue classification

The Group provides information technology services that are bespoke in nature. Bespoke products consist of various goods and/or services bundled together in order to provide integrated solution services to customers. In addition to the bespoke service, Group also provide multiple standard product as bundling product in contract with customer. Significant judgment is required in determining the number and nature of performance obligations promised to customers in those contracts. The number and nature of performance obligations will determine the timing of revenue recognition for such contract.

The Group reviews the determination of performance obligations on a contract-by-contract basis. When a contract consisting of several goods and/or service is assessed to have one performance obligations, the Group applies a single method of measuring progress for the performance obligation based on the measurement method that best depicts the economics of the contract, which in most cases is over time.

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The Group also presents the revenue classification using consistent approach. When a contract consisting of several goods and/or service is assessed to have one performance obligations, the Group presents that performance obligations in one financial statement line items which best represent the main service of the Group, which in most cases is the internet, data communication and information technology services.

(ii) Critical judgements in determining the stand-alone selling price

The Group provides wide array of products related to telecommunication and technology. To determine the stand-alone selling price for goods and/or services that do not have any readily available observable price, the Group uses the expected cost-plus margin approach.

Significant judgment is required in determining the margin for each contract that contains goods and/or services with an unobservable price. The Group currently determines the appropriate margin based on historical achievement and information from an independent party.

(f) Test for impairment of non-current assets and goodwill

The application of the acquisition method in a business combination requires the use of accounting estimates in allocating the purchase price to the fair market value of the assets and liabilities acquired, including intangible assets. Certain business acquisitions by the Group resulted goodwill, which is not amortized but is tested for impairment annually and every indication of impairment exists.

The calculation of future cash flows in determining the fair value of fixed assets and other non-current assets of entities acquired at the acquisition date with significant estimates. Although management believes that the assumptions used are appropriate, significant changes to those assumptions can materially affect the evaluation of recoverable amounts and may result in impairment according to IAS 36: Impairment of Assets.

(g) Acquisition

The Group evaluates each acquisition transaction to determine whether it will be treated as an asset or business combination. For transactions that are treated as an asset acquisition, the purchase price is allocated to the assets obtained, without the recognition of goodwill. For acquisitions that meet the business combination definition, the Group applies the accounting acquisition method for assets acquired and liabilities assumed are recorded at fair value at the acquisition date, and the results of operations are included with the Group's results from the date of each acquisition.

Any excess from the purchase price paid for the amount recognized for assets acquired and liabilities incurred is recorded as goodwill. The Group continues to evaluate acquisitions that are counted as a business combination for a period not exceeding one year after the applicable acquisition date of each transaction to determine whether additional adjustments are needed to allocate the purchase price paid for the assets acquired and liabilities assumed. The fair value of assets acquired and liabilities incurred are usually determined using either an estimated replacement cost or a discounted cash flow valuation method. When determining the fair value of tangible assets acquired, the Group estimates the cost of replacing assets with new assets by considering factors such as the age, condition, and

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economic useful lives of the assets. When determining the fair value of the intangible assets obtained, the Group estimates the applicable discount rate and the time and amount of future cash flows, including the rates and terms for the extension and reduction.

3. TRANSLATION OF INDONESIAN RUPIAH INTO UNITED STATES DOLLAR

The consolidated financial statements are stated in Indonesian Rupiah. The translation of the Indonesian Rupiah amounts into U.S. dollar amounts are included solely for the convenience of the readers and has been made using the average of the market buy and sell rates of Rp13,882.50 to US\$1 as published by Reuters on December 31, 2019. The convenience translation should not be construed as representations that the Indonesian Rupiah amounts have been, could have been, or could in the future be, converted into U.S. dollar at this or any other rate of exchange.

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4. CASH AND CASH EQUIVALENTS

The breakdown of cash and cash equivalents is as follows:

	Currency	2018 Balance		2019 Balance	
		Foreign currency (in millions)	Rupiah equivalent	Foreign currency (in millions)	Rupiah equivalent
Cash on hand	Rp		36		37
Cash in banks					
Related parties					
PT Bank Mandiri (Persero) Tbk. ("Bank Mandiri")	Rp	—	1,199	—	1,407
	US\$	10	139	9	122
	EUR	1	20	1	23
	HKD	1	1	0	1
	JPY	8	1	1	0
	AUD	0	0	0	0
PT Bank Negara Indonesia (Persero) Tbk. ("BNI")	Rp	—	791	—	1,033
	US\$	2	28	6	86
	EUR	0	0	0	0
	SGD	0	0	0	0
PT Bank Rakyat Indonesia (Persero) Tbk. ("BRI")	Rp	—	728	—	198
	US\$	2	31	3	44
PT Bank Tabungan Negara (Persero) Tbk. ("BTN")	Rp	—	342	—	51
PT Bank Pembangunan Daerah ("BPD")	Rp	—	43	—	121
Others	Rp	—	15	—	20
	US\$	0	0	0	0
Sub-total			3,338		3,106
Third parties					
PT Bank Permata Tbk. ("Bank Permata")	Rp	—	218	—	335
	US\$	2	30	4	62
PT Bank HSBC Indonesia ("HSBC")	Rp	—	1	—	3
The Hongkong and Shanghai Banking Corporation Ltd. ("HSBC Hongkong")	US\$	12	181	14	188
	HKD	5	9	6	10
Standard Chartered Bank ("SCB")	Rp	—	0	—	0
	US\$	10	148	11	150
	SGD	1	14	1	7
PT Bank Bukopin Tbk. ("Bank Bukopin")	Rp	—	6	—	76
	US\$	0	0	0	0
Others	Rp	—	165	—	358
	US\$	8	115	8	113
	EUR	1	20	1	17
	TWD	17	8	27	13
	MYR	6	21	4	12
	AUD	0	2	1	7
	SGD	2	14	0	3
	MOP	0	0	0	1
	HKD	0	0	0	0
Sub-total			952		1,355
Total cash in banks			4,290		4,461
Time deposits					
Related parties					
BNI	Rp	—	2,640	—	2,693
	US\$	58	837	32	450
BRI	Rp	—	1,911	—	2,561
	US\$	47	676	36	500
BTN	Rp	—	2,559	—	2,733
	US\$	31	446	4	49
PT Bank Pembangunan Daerah Jawa Barat dan Banten Tbk. ("BJB")	Rp	—	1,295	—	1,394
Bank Mandiri	Rp	—	611	—	1,129
	US\$	16	230	16	215
Others	Rp	—	1	—	11
Sub-total			11,206		11,735
Third parties					
PT Bank CIMB Niaga Tbk. ("Bank CIMB Niaga")	Rp	—	190	—	992
	US\$	—	—	29	398
PT Bank Mega Tbk. ("Bank Mega")	Rp	—	365	—	400
PT Bank Muamalat Indonesia Tbk.	Rp	—	40	—	20
Bank Bukopin	Rp	—	248	—	10
PT Bank Tabungan Pensiunan Nasional Tbk. ("BTPN")	Rp	—	181	—	1
	US\$	25	363	—	—
United Overseas Bank Limited ("UOB Singapore")	US\$	30	429	—	—
Others	Rp	—	52	—	46
	US\$	—	—	8	112
	MYR	11	39	9	30
Sub-total			1,907		2,009
Total time deposits			13,113		13,744
Allowance for expected credit losses			(4)		(1)
Total cash and cash equivalents			17,435		18,241

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Interest rates per annum on time deposits are as follows:

	2018	2019
Rupiah	2.60% - 9.25%	4.00% - 9.25%
Foreign currencies	0.50% - 3.75%	0.50% - 3.30%

The related parties in which the Group places its funds are state-owned banks. The Group placed the majority of its cash and cash equivalents in these banks because they have the most extensive branch networks in Indonesia and are considered to be financially sound banks, as they are owned by the State.

5. OTHER CURRENT FINANCIAL ASSETS

The breakdown of other current financial assets is as follows:

	Currency	2018 Balance		2019 Balance	
		Foreign currency (in millions)	Rupiah equivalent	Foreign currency (in millions)	Rupiah equivalent
Time deposits					
Related parties					
BNI	Rp	—	1	—	—
Third parties					
SCB	US\$	8	116	8	111
Others	Rp	—	—	—	18
	US\$	6	88	5	71
Total time deposits			205		200
Mutual funds					
Related parties					
PT Bahana TCW Investment Management ("Bahana TCW")					
	Rp	—	91	—	71
PT Mandiri Manajemen Investasi					
	Rp	—	379	—	—
Total mutual funds			470		71
Escrow accounts					
	Rp	—	136	—	142
	US\$	0	1	1	15
	MYR	5	16	6	19
Others					
	Rp	—	486	—	102
	MYR	—	—	2	5
Total other current financial assets			1,314		554

The time deposits have maturities of more than three months but not more than one year, with interest rates as follows:

	2018	2019
Rupiah	5.00%	6.50%
Foreign currency	1.35% - 2.18%	1.20% - 2.51%

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6. TRADE AND OTHER RECEIVABLES

The breakdown of trade and other receivables is as follows:

	2018	2019
Trade receivables	14,844	17,223
Allowance for expected credit losses	(5,543)	(6,207)
Net	<u>9,301</u>	<u>11,016</u>
Other receivables	782	483
Allowance for expected credit losses	(155)	(227)
Net	<u>627</u>	<u>256</u>
Total trade and other receivables	<u>9,928</u>	<u>11,272</u>

Trade receivables arise from services provided to both retail and non-retail customers, with details as follows:

a. By debtor

(i) Related parties

	2018	2019
State-owned enterprises	1,495	1,353
Indonusa	522	494
Government agencies	672	479
Indosat	219	150
Others	467	435
Total	<u>3,375</u>	<u>2,911</u>
Allowance for expected credit losses	(1,361)	(1,170)
Net	<u>2,014</u>	<u>1,741</u>

(ii) Third parties

	2018	2019
Individual and business subscribers	10,674	12,729
Overseas international carriers	795	1,583
Total	<u>11,469</u>	<u>14,312</u>
Allowance for expected credit losses	(4,182)	(5,037)
Net	<u>7,287</u>	<u>9,275</u>

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b. By age

(i) Related parties

	2018	2019
Up to 3 months	2,090	1,519
3 to 6 months	397	252
More than 6 months	888	1,140
Total	3,375	2,911
Allowance for expected credit losses	(1,361)	(1,170)
Net	<u>2,014</u>	<u>1,741</u>

(ii) Third parties

	2018	2019
Up to 3 months	6,066	8,549
3 to 6 months	1,401	1,055
More than 6 months	4,002	4,708
Total	11,469	14,312
Allowance for expected credit losses	(4,182)	(5,037)
Net	<u>7,287</u>	<u>9,275</u>

(iii) Aging of total trade receivables

	2018			2019		
	Gross	Allowance for expected credit losses	Expected credit loss rate	Gross	Allowance for expected credit losses	Expected credit loss rate
Not past due	5,912	479	8.1 %	7,490	364	4.9 %
Past due up to 3 months	2,244	377	16.8 %	2,577	528	20.5 %
Past due more than 3 to 6 months	1,798	368	20.5 %	1,308	466	35.6 %
Past due more than 6 months	4,890	4,319	88.3 %	5,848	4,849	82.9 %
Total	<u>14,844</u>	<u>5,543</u>		<u>17,223</u>	<u>6,207</u>	

The Group has made provision for expected credit losses based on the collective assessment of its customers' credit history, adjusted for forward-looking factors specific to the debtors, and the economic environment. The Group does not apply a distinction between related party and third party receivables in assessing amounts past due. As of December 31, 2018 and 2019, the carrying amounts of trade receivables of the Group considered past due but not impaired amounted to Rp3,868 billion and Rp3,890 billion, respectively. Management believes that receivables past due but not impaired, along with trade receivables that are neither past due nor impaired, are due from customers with good credit history and are expected to be recoverable.

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c. By currency

(i) Related parties

	<u>2018</u>	<u>2019</u>
Rupiah	3,368	2,909
U.S. dollar	7	2
Others	0	0
Total	3,375	2,911
Allowance for expected credit losses	<u>(1,361)</u>	<u>(1,170)</u>
Net	<u>2,014</u>	<u>1,741</u>

(ii) Third parties

	<u>2018</u>	<u>2019</u>
Rupiah	9,977	11,902
U.S. dollar	1,372	2,298
Malaysian ringgit	82	23
Others	38	89
Total	11,469	14,312
Allowance for expected credit losses	<u>(4,182)</u>	<u>(5,037)</u>
Net	<u>7,287</u>	<u>9,275</u>

d. Movements in the allowance for expected credit losses

	<u>2018</u>	<u>2019</u>
Beginning balance	4,331	5,543
Adjustment on initial application of IFRS 9	159	—
Allowance for expected credit losses	2,079	1,712
Receivables written off	<u>(1,026)</u>	<u>(1,048)</u>
Ending balance	<u>5,543</u>	<u>6,207</u>

The receivables written off relate to both related party and third party trade receivables.

Management believes that the allowance for expected credit losses of trade receivables is adequate to cover losses on uncollectible trade receivables.

As of December 31, 2019, certain trade receivables of the subsidiaries amounting to Rp6,812 billion have been pledged as collateral under lending agreements (Notes 19 and 20c).

7. CONTRACT ASSETS

The breakdown of contract assets is as follows:

	<u>2018</u>	<u>2019</u>
Contract assets	1,598	1,097
Allowance for expected credit losses	<u>(38)</u>	<u>(153)</u>
Net	1,560	944
Short term portion	<u>(1,560)</u>	<u>(629)</u>
Long term portion	<u>—</u>	<u>315</u>

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8. INVENTORIES

The breakdown of inventories is as follows:

	<u>2018</u>	<u>2019</u>
Components	429	351
SIM cards and blank prepaid vouchers	137	154
Others	218	172
Total	<u>784</u>	<u>677</u>
Provision for obsolescence		
Components	(38)	(62)
SIM cards and blank prepaid vouchers	(28)	(28)
Others	(1)	(2)
Total	<u>(67)</u>	<u>(92)</u>
Net	<u>717</u>	<u>585</u>

Movements in the provision for obsolescence are as follows:

	<u>2018</u>	<u>2019</u>
Beginning balance	53	67
Provision recognized during the year	22	25
Inventory written off	(8)	—
Ending balance	<u>67</u>	<u>92</u>

Management believes that the provision is adequate to cover losses from decline in inventory value due to obsolescence.

The inventories recognized as expense and included in operations, maintenance, and telecommunication service expenses as of 2017, 2018, and 2019 amounted to Rp2,458 billion, Rp2,726 billion, and Rp1,754 billion, respectively (Note 27).

Certain inventories of the subsidiaries amounting to Rp343 billion have been pledged as collateral under lending agreements (Note 20c).

As of December 31, 2018 and 2019, modules (part of property and equipment) and components held by the Group with book value amounting to Rp125 billion and Rp112 billion, respectively, have been insured against fire, theft, and other specific risks. Total sum insured as of December 31, 2018 and 2019 amounted to Rp176 billion and Rp155 billion, respectively.

Management believes that the insurance coverage is adequate to cover potential losses of inventories arising from the insured risks.

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9. OTHER CURRENT ASSETS

The breakdown of other current assets is as follows:

	<u>2018</u>	<u>2019</u>
Prepaid annual frequency license (Note 34c.i, 34c.ii)	3,636	3,873
Advances	1,803	647
Prepaid rental	1,382	628
Prepaid salaries	200	189
Others	259	165
Total	<u>7,280</u>	<u>5,502</u>

10. CONTRACT COSTS

Movement of contract costs for the years ended December 31, 2018 and 2019 are as follows:

	<u>2018</u>		
	<u>Cost to obtain</u>	<u>Cost to fulfill</u>	<u>Total</u>
At January 1, 2018	193	903	1,096
Addition during the year	274	1,030	1,304
Amortization during the year	(62)	(1,094)	(1,156)
At December 31, 2018	405	839	1,244
Short term portion	(85)	(839)	(924)
Long term portion	<u>320</u>	<u>—</u>	<u>320</u>
	<u>2019</u>		
	<u>Cost to obtain</u>	<u>Cost to fulfill</u>	<u>Total</u>
At January 1, 2019	405	839	1,244
Addition during the year	372	603	975
Amortization during the year	(81)	(953)	(1,034)
At December 31, 2019	696	489	1,185
Short term portion	(106)	(428)	(534)
Long term portion	<u>590</u>	<u>61</u>	<u>651</u>

There is no provision for impairment of contract costs as of December 31, 2018 and 2019.

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11. LONG-TERM INVESTMENTS

The details of long-term investments as of December 31, 2018 are as follows:

	2018								Ending balance
	Percentage of ownership	Beginning balance	Adjustment on initial application of IFRS 9	Additions (deductions)	Changes of net Fair Value	Share of net profit (loss)	Dividend	Share of other comprehensive income	
Long-term investments in associated companies:									
Tiphone ^a	24.00	1,539	—	—	—	87	(9)	(15)	1,602
Indonusa ^c	20.00	221	—	—	—	(11)	—	—	210
Teltranet ^g	51.00	18	—	—	—	(19)	—	1	0
ILCS ^h	49.00	43	—	—	—	1	0	0	44
GSN ^f	45.00	14	—	—	—	0	—	—	14
Others ^h	25.00-32.00	4	—	84	—	(5)	0	0	83
Sub-total		1,839	—	84	—	53	(9)	(14)	1,953
Other long-term investments		309	69	253	78	—	—	—	709
Total long-term investment		2,148	69	337	78	53	(9)	(14)	2,662

Summarized financial information of the Group's investments accounted for under the equity method for 2018*:

	Tiphone	Indonusa	Teltranet	ILCS	GSN	Others
<i>Statements of financial position</i>						
Current assets	7,615	449	269	132	15	223
Non-current assets	892	310	116	47	169	644
Current liabilities	(1,466)	(572)	(269)	(87)	(1)	(687)
Non-current liabilities	(3,062)	(297)	(138)	(2)	(152)	(1,883)
Equity (deficit)	3,979	(110)	(22)	90	31	(1,703)
<i>Statements of profit or loss and other comprehensive income</i>						
Revenues	29,228	824	206	164	5	117
Operating expenses	(28,337)	(583)	(264)	(162)	(5)	(279)
Other income (expenses) including finance costs - net	(391)	(39)	(13)	1	0	(43)
Profit (loss) before tax	500	202	(71)	3	0	(205)
Income tax benefit (expense)	(138)	(55)	12	(1)	—	(1)
Profit (loss) for the year	362	147	(59)	2	0	(206)
Other comprehensive income (loss)	(63)	(2)	1	—	—	—
Total comprehensive income (loss) for the year	299	145	(58)	2	0	(206)

* The summarized financial information of associated companies above were prepared under Indonesian Financial Accounting Standards

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The details of long-term investments as of December 31, 2019 are as follows:

	2019								
	Percentage of ownership	Beginning balance	Additions (deductions)	Changes of Fair Value	Share of net profit (loss)	Dividend	Share of other comprehensive income	Ending Impairment balance	
Long-term investments in associated companies:									
Tiphone ^a	24.00	1,602	—	—	88	(11)	19	(1,172)	526
Finarya ^b	26.58	—	484	—	(217)	—	—	—	267
Indonusa ^c	20.00	210	—	—	—	—	—	—	210
Jalin ^d	33.00	—	70	—	7	—	(0)	—	77
ILCS ^e	49.00	44	—	—	(13)	—	0	—	31
GSN ^f	45.00	14	—	—	(1)	—	—	—	13
Teltranet ^g	51.00	0	34	—	(24)	—	1	—	11
Others ^h	6.32-32.00	83	(2)	—	(6)	—	—	—	75
Sub-total		1,953	586	—	(166)	(11)	20	(1,172)	1,210
Other long-term investments		709	215	65	—	—	—	—	989
Total long-term investment		2,662	801	65	(166)	(11)	20	(1,172)	2,199

Summarized financial information of the Group's investments accounted for under the equity method for 2019*:

	Tiphone	Finarya	Indonusa	Jalin	ILCS	GSN	Teltranet	Others
<i>Statements of financial position</i>								
Current assets	8,165	2,382	495	100	119	17	291	629
Non-current assets	778	132	253	222	41	169	66	4,050
Current liabilities	(3,824)	(1,533)	(534)	(78)	(95)	(2)	(356)	(1,099)
Non-current liabilities	(741)	(3)	(278)	(10)	(2)	(155)	(58)	(5,128)
Equity (deficit)	4,378	978	(64)	234	63	29	(57)	(1,548)
<i>Statements of profit or loss and other comprehensive income</i>								
Revenues	28,442	38	794	205	206	7	195	797
Operating expenses	(27,621)	(877)	(738)	(148)	(212)	(9)	(242)	(840)
Other income (expenses) including finance costs - net	(321)	17	1	2	(16)	(0)	(15)	(128)
Profit (loss) before tax	500	(822)	57	59	(22)	(2)	(62)	(171)
Income tax benefit (expense)	(138)	1	(10)	(17)	(4)	(0)	(43)	(1)
Profit (loss) for the year	362	(821)	47	42	(26)	(2)	(105)	(172)
Other comprehensive income (loss)	77	—	(1)	(0)	0	—	2	—
Total comprehensive income (loss) for the year	439	(821)	46	42	(26)	(2)	(103)	(172)

* The summarized financial information of associated companies above were prepared under Indonesian Financial Accounting Standards

^a Tiphone was established on June 25, 2008 as PT Tiphone Mobile Indonesia Tbk. Tiphone is engaged in the telecommunication equipment business, such as cellular phone including spare parts, accessories, rechargeable credit vouchers, repair service, and content provider through its subsidiaries. On September 18, 2014, the Company through PINS acquired 25% ownership in Tiphone for Rp1,395 billion.

As of December 31, 2018 and 2019, the fair value of the investment were amounted to Rp1,649 billion and Rp526 billion, respectively. The fair value was calculated by multiplying the number of shares by the published price quotation as of December 31, 2018 and 2019 amounting to Rp940 and Rp300 per share, respectively.

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Reconciliation of financial information to the carrying amount of long-term investment in Tiphone as of December 31, 2018 and 2019 is as follows:

	<u>2018</u>	<u>2019</u>
Assets	8,507	8,943
Liabilities	(4,528)	(4,565)
Net assets	3,979	4,378
Group's proportionate share of net assets (24.00% in 2018 and 2019)	955	1,051
Goodwill	647	647
Impairment	—	(1,172)
Carrying amount of long-term investment	<u>1,602</u>	<u>526</u>

- b On January 21, 2019, Telkomsel established of PT Fintek Karya Nusantara ("Finarya "), a subsidiary, with an initial investment amounted to Rp25 billion and on February 22, 2019 Telkomsel transferred its assets amounted to Rp150 billion to Finarya. For this transaction, Telkomsel obtained 2,499 and 14,974 shares, respectively (equal to 100% ownership). Telkomsel with PT Mandiri Capital Indonesia, PT BRI Ventura Indonesia, PT BNI Sekuritas, PT Jasamarga Tollroad Operator, PT Dana Tabungan dan Asuransi Pegawai Negeri (Persero), PT Pertamina Retail, PT Kereta Commuter Indonesia ("KCI"), PT Asuransi Jiwasraya (Persero), and PT Danareksa Capital, entered in to shareholder agreement on July 31, 2019, October 31, 2019, and December 31, 2019 relating to the increase in issued and paid up capital made by each shareholder. On December 31, 2019, Telkomsel owned 48,530 shares or equivalent to 26.58% ownership.
- c Indonusa had been a subsidiary of the Company until 2013 when the Company disposed 80% of its shares ownership in Indonusa. On May 14, 2014, based on the Circular Resolution of the Stockholders of Indonusa as covered by notarial deed No. 57 dated April 23, 2014 of FX Budi Santoso Isbandi, S.H., which was approved by the MoLHR in its Letter No. AHU-02078.40.20.2014 dated April 29, 2014, Indonusa's stockholders approved an increase in its issued and fully paid capital by Rp80 billion. The Company waived its right to own the new shares issued and transferred it to Metra, as the result, Metra's ownership in Indonusa increased to 4.33% and the Company's ownership become 15.67%.
- d Jalin was previously a subsidiary. On June 19, 2019 the company sold 67% of its shares to PT Danareksa (Persero) ("Danareksa") amounted to Rp395 billion.
- e PT Integrasi Logistik Cipta Solusi ("ILCS") is engaged in providing E-trade logistic services and other related services.
- f On August 31, 2017, NSI and third party established PT Graha Sakura Nusantara ("GSN") which engaged in real estate, residential and apartment marketing business.
- g Investment in Teltranet is accounted for under the equity method, which covered by an agreement between Metra and Telstra Holding Singapore Pte. Ltd. dated August 29, 2014. Teltranet is engaged in communication system services. Metra does not have control to determine the financial and operating policies of Teltranet.
- h The unrecognized share of losses in other investments cumulatively as of December 31, 2019 was amounting to Rp480 billion.

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12. PROPERTY AND EQUIPMENT

The details of property and equipment are as follows :

	December 31, 2017	Business acquisitions	Additions	Deductions	Reclassifications/ translations	December 31, 2018
At cost:						
Land rights	1,519	46	39	—	22	1,626
Buildings	9,802	43	67	(1)	1,922	11,833
Leasehold improvements	1,257	—	23	(24)	119	1,375
Switching equipment	18,512	—	818	(1,920)	(2,070)	15,340
Telegraph, telex and data communication equipment	1,583	—	3	—	—	1,586
Transmission installation and equipment	139,381	—	3,287	(6,398)	10,743	147,013
Satellite, earth station and equipment	9,300	—	2,414	(3)	261	11,972
Cable network	47,354	—	5,887	(36)	(7,555)	45,650
Power supply	16,494	13	484	(277)	1,275	17,989
Data processing equipment	13,377	23	140	(622)	1,348	14,266
Other telecommunication peripherals	1,661	—	1,765	—	(1)	3,425
Office equipment	1,637	46	475	(86)	86	2,158
Vehicles	840	6	379	(1)	(5)	1,219
CPE assets	22	—	—	—	—	22
Other equipment	97	—	18	—	(21)	94
Property under construction	4,415	2	17,821	(23)	(17,339)	4,876
Total	267,251	179	33,620	(9,391)	(11,215)	280,444
Accumulated depreciation:						
Land rights		299	—	36	—	335
Buildings		2,880	—	513	(1)	3,405
Leasehold improvements		823	—	150	(24)	949
Switching equipment		14,595	—	1,309	(1,920)	10,594
Telegraph, telex and data communication equipment		802	—	518	—	1,320
Transmission installation and equipment		71,881	—	11,561	(5,579)	77,491
Satellite, earth station and equipment		4,334	—	677	(3)	5,005
Cable network		18,052	—	2,084	(36)	12,382
Power supply		11,274	—	1,375	(267)	12,389
Data processing equipment		10,312	—	1,047	(601)	10,748
Other telecommunication peripherals		603	—	428	—	1,030
Office equipment		1,116	—	334	(72)	1,382
Vehicles		292	—	122	(1)	407
CPE assets		20	—	—	—	20
Other equipment		96	—	4	—	75
Total		137,379	—	20,158	(8,504)	(11,501)
Net book value		129,872				142,912

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	December 31, 2018	Business acquisition	Additions	Deductions	Reclassifications/ translations	December 31, 2019
At cost:						
Land rights	1,626	—	—	—	(1,626)	—
Buildings	11,833	12	779	(4)	1,442	14,062
Leasehold improvements	1,375	—	37	(58)	195	1,549
Switching equipment	15,340	—	1,228	(61)	861	17,368
Telegraph, telex and data communication equipment	1,586	—	675	—	(3)	2,258
Transmission installation and equipment	147,013	686	6,768	(6,240)	3,525	151,752
Satellite, earth station and equipment	11,972	—	108	(11)	275	12,344
Cable network	45,650	—	8,197	(113)	689	54,423
Power supply	17,989	—	793	(253)	1,585	20,114
Data processing equipment	14,266	10	709	(107)	1,531	16,409
Other telecommunication peripherals	3,425	—	1,904	—	11	5,340
Office equipment	2,158	7	208	(101)	89	2,361
Vehicles	1,219	—	99	(167)	(583)	568
CPE assets	22	—	—	—	(22)	—
Other equipment	94	—	57	—	(28)	123
Property under construction	4,876	81	14,923	(20)	(17,241)	2,619
Total	<u>280,444</u>	<u>796</u>	<u>36,485</u>	<u>(7,135)</u>	<u>(9,300)</u>	<u>301,290</u>
Accumulated depreciation:						
Land rights		335	—	—	(335)	—
Buildings		3,405	—	726	(4)	(14)
Leasehold improvements		949	—	198	(56)	—
Switching equipment		10,594	—	1,488	(45)	(41)
Telegraph, telex and data communication equipment		1,320	—	260	—	—
Transmission installation and equipment		77,491	—	11,059	(5,260)	(3,294)
Satellite, earth station and equipment		5,005	—	818	(10)	(4)
Cable network		12,382	—	2,349	(102)	(392)
Power supply		12,389	—	1,454	(239)	(7)
Data processing equipment		10,748	—	1,304	(61)	(14)
Other telecommunication peripherals		1,030	—	737	—	(1)
Office equipment		1,382	—	383	(55)	(32)
Vehicles		407	—	72	(137)	(132)
CPE assets		20	—	—	—	(20)
Other equipment		75	—	1	—	(10)
Total		<u>137,532</u>	<u>—</u>	<u>20,849</u>	<u>(5,969)</u>	<u>(4,296)</u>
Net book value		<u><u>142,912</u></u>				<u><u>153,174</u></u>

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a. Gain on sale of property and equipment

	2017	2018	2019
Proceeds from sale of property and equipment	1,367	629	1,496
Net book value	(1,009)	(1)	(853)
Gain on sale of property and equipment	358	628	643

b. Others

- (i) As of December 31, 2019, the CGUs that independently generate cash inflows are fixed wireline, cellular and others. Management believes that there is no indication of impairment in the assets of such CGUs as of Desember 31, 2019.
- (ii) Interest capitalized to property under construction amounted to Rp328 billion, Rp271 billion and Rp99 billion for the years ended December 31, 2017, 2018 and 2019, respectively. The capitalization rate used to determine the amount of borrowing costs eligible for capitalization ranged from 8.15% to 11.00%, 9.68% to 11.00% and 4.12% to 11.00% for the years ended December 31, 2017, 2018 and 2019, respectively.
- (iii) No foreign exchange loss was capitalized as part of property under construction for the years ended December 31, 2017, 2018 and 2019.
- (iv) In 2017, 2018 and 2019, the Group obtained proceeds from the insurance claim on lost and broken property and equipment, with a total value of Rp155 billion, Rp153 billion and Rp197 billion, respectively, and were recorded as part of "Other Income" in the consolidated statements of profit or loss and other comprehensive income. In 2017, 2018 and 2019, the net carrying values of those assets of Rp7 billion, Rp51 billion and Rp165 billion, respectively, were charged to the consolidated statements of profit or loss and other comprehensive income.
- (v) In 2018 and 2019, Telkomsel decided to replace certain equipment units with net carrying amount of Rp341 billion and Rp267 billion, respectively, as part of its modernization program and accelerated the depreciation of such equipment units. The impact of accelerated depreciation was an increase in the depreciation expense for the year ended December 31, 2019 amounting to Rp259 billion.

In 2018 the estimated useful lives of radio software license and data processing equipment were changed from 7 to 10 years and from 3 to 5 years, respectively. The impact of reduction in depreciation expense for the year ended December 31, 2019 amounting to Rp637 billion. The impact of the changes in the estimated useful lives of the radio software license in following years is as follows:

Years	Increase (Decrease)
2020	266
2021	18
2022	(106)

- (vi) In 2018 and 2019, Telkomsel's certain equipment units with net carrying amount of Rp777 billion and Rp803 billion, respectively, were exchanged with equipment from Ericsson AB, PT Ericsson Indonesia, PT Huawei Tech Investment, PT Nokia Solutions and Networks Indonesia, and PT ZTE Indonesia. As of December 31, 2019, Telkomsel's equipment units with net carrying amount of

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Rp39 billion are going to be exchanged and, therefore, these equipment were reclassified as "Assets held for sale" in the consolidated statements of financial position.

- (vii) As of December 31, 2019, the Group's property and equipment excluding land rights, with net carrying amount of Rp150,891 billion were insured against fire, theft, earthquake and other specified risks, including business interruption, under blanket policies totalling Rp18,190 billion, US\$74 million, HK\$8 million, SG\$269 million, TW\$ 21 million, and MYR39 million and first loss basis amounted to Rp2,760 billion. Management believes that the insurance coverage is adequate to cover potential losses from the insured risks.
- (viii) As of December 31, 2019, the percentage of completion of property under construction was around 32.39% of the total contract value, with estimated dates of completion until November 2021. The balance of property under construction mainly consists of buildings, transmission installation and equipment, cable network and power supply. Management believes that there is no impediment to the completion of the construction in progress.
- (ix) All assets owned by the Company have been pledged as collateral for bonds (Note 20b.i). Certain property and equipment of the Company's subsidiaries with gross carrying value amounting to Rp11,147 billion have been pledged as collaterals under lending agreements (Notes 19, 20c, and 20d).
- (x) As of December 31, 2019, the cost of fully depreciated property and equipment of the Group that are still utilized in operations amounted to Rp60,081 billion. The Group is currently performing modernization of network assets to replace the fully depreciated property and equipment.

13. RIGHT OF USE ASSETS

The Group leases several assets including building, transmission installation and equipments, power supply, vehicles, and other equipments used in its operations, which generally have lease term between 2 and 15 years.

The Group leases several pieces of land located throughout Indonesia with Building Use Rights ("*Hak Guna Bangunan*" or "HGB") for a period of 10-50 years which will expire between 2020 and 2069. Management believes that there will be no issue in obtaining the extension of the land rights when they expire.

The Group also has certain leases with lease terms of twelve months or less and low-value leases. The Group applies the 'short-term lease' and 'lease of low-value assets' recognition exemptions for these leases. There are no lease contracts with variable lease payments. Short-term lease expense of Rp5,294 billion and low-value assets lease expense of Rp65 billion were incurred for the year ended December 31, 2019.

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The carrying amounts of right of use assets recognized and the movement during the year:

	December 31, 2018	Effect of adoption of IFRS 16	January 1, 2019	Additions	Deductions	Reclassification/ translation	December 31, 2019
At cost:							
Land rights	—	4,131	4,131	1,546	—	(6)	5,671
Buildings	—	786	786	70	—	(17)	839
Transmission installation and equipment	—	17,335	17,335	732	(576)	(4)	17,487
Power supply	—	398	398	316	—	(125)	589
Vehicles	—	646	646	188	(84)	(50)	700
Others	—	—	—	40	(4)	(8)	28
Total	—	23,296	23,296	2,892	(664)	(210)	25,314
Accumulated amortization:							
Land rights	—	—	—	(676)	—	—	(676)
Buildings	—	—	—	(238)	—	1	(237)
Transmission installation and equipment	—	—	—	(3,466)	137	—	(3,329)
Power supply	—	—	—	(86)	—	17	(69)
Vehicles	—	—	—	(194)	58	25	(111)
Others	—	—	—	(28)	3	26	1
Total	—	—	—	(4,688)	198	69	(4,421)
Net book value	—	23,296	23,296				20,893

Maturity analysis of lease payments are as follows:

Years	2018	2019
2019	1,049	—
2020	945	4,752
2021	781	4,247
2022	605	3,529
2023	254	2,636
2024	85	1,639
Thereafter	45	2,699
Total minimum lease payments	3,764	19,502
Interest	(619)	(3,350)
Net present value of minimum lease payments	3,145	16,152
Adjustment on initial application of IFRS 16	15,838	—
Accrued interest	—	1,065
Total lease liabilities	18,983	17,217
Current maturities (Note 19b)	(3,790)	(4,663)
Long-term portion (Note 20)	15,193	12,554

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Reconciliation of operating lease commitment as of December 31, 2018 and lease liabilities as of January 1, 2019 are as follows:

Operating lease commitments	21,862
<u>Less:</u>	
Commitments relating to short-term leases	(1,419)
Commitments relating to leases of low-value assets	(37)
Operating lease commitments as at January 1, 2019	20,406
Weighted average incremental borrowing rate as at January 1, 2019	8.95 %
Discounted operating lease commitments as at January 1, 2019	15,831
<u>Add:</u>	
Commitments relating to lease previously classified as finance lease	2
Adjustments as a result of a different treatment of extension and termination options	5
Lease liabilities	<u>15,838</u>

14. OTHER NON-CURRENT ASSETS

The breakdown of other non-current assets is as follows:

	<u>2018</u>	<u>2019</u>
Prepaid other taxes - net of current portion (Note 29b)	2,698	3,256
Prepaid annual frequency license - net of current portion (Note 9)	1,743	1,488
Prepaid income taxes - net of current portion (Note 29a)	894	1,088
Deferred charges - net	474	539
Advances for purchases of property and equipment	387	481
Convertible bonds	213	357
Security deposit	173	157
Restricted cash	183	53
Prepaid rental	2,662	—
Others	227	264
Total	<u>9,654</u>	<u>7,683</u>

As of December 31, 2018 and 2019, deferred charges represent deferred Indefeasible Right of Use (“IRU”) agreement charges. Total amortization of deferred charges for the years ended December 31, 2017, 2018, and 2019 amounted to Rp46 billion, Rp56 billion, and Rp60 billion, respectively.

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15. INTANGIBLE ASSETS

The details of intangible assets are as follows:

	<u>Goodwill</u>	<u>Software</u>	<u>License</u>	<u>Other intangible assets</u>	<u>Total</u>
Gross carrying amount:					
Balance, December 31, 2017	680	8,387	84	635	9,786
Additions	—	2,328	14	19	2,361
Acquisition	422	1	2	—	425
Deductions	—	(51)	(11)	—	(62)
Reclassifications/translations	(36)	15	5	33	17
Balance, December 31, 2018	<u>1,066</u>	<u>10,680</u>	<u>94</u>	<u>687</u>	<u>12,527</u>
Accumulated amortization:					
Balance, December 31, 2017	(21)	(5,714)	(71)	(450)	(6,256)
Amortization	—	(1,226)	(9)	(49)	(1,284)
Deductions	—	51	4	—	55
Reclassifications/translations	—	(7)	(5)	2	(10)
Balance, December 31, 2018	<u>(21)</u>	<u>(6,896)</u>	<u>(81)</u>	<u>(497)</u>	<u>(7,495)</u>
Net	<u>1,045</u>	<u>3,784</u>	<u>13</u>	<u>190</u>	<u>5,032</u>

	<u>Goodwill</u>	<u>Software</u>	<u>License</u>	<u>Other intangible assets</u>	<u>Total</u>
Gross carrying amount:					
Balance, December 31, 2018	1,066	10,680	94	687	12,527
Additions	—	1,942	4	511	2,457
Acquisition	467	—	—	379	846
Deductions	(104)	(166)	(12)	(14)	(296)
Reclassifications/translations	3	24	10	8	45
Balance, December 31, 2019	<u>1,432</u>	<u>12,480</u>	<u>96</u>	<u>1,571</u>	<u>15,579</u>
Accumulated amortization:					
Balance, December 31, 2018	(21)	(6,896)	(81)	(497)	(7,495)
Amortization	—	(1,165)	(357)	(145)	(1,667)
Deductions	—	71	2	14	87
Reclassifications/translations	—	(410)	343	9	(58)
Balance, December 31, 2019	<u>(21)</u>	<u>(8,400)</u>	<u>(93)</u>	<u>(619)</u>	<u>(9,133)</u>
Net	<u>1,411</u>	<u>4,080</u>	<u>3</u>	<u>952</u>	<u>6,446</u>

- (i) Goodwill resulted from the acquisition of Sigma (2008), Admedika (2010), data center PT Bina Data Mandiri ("BDM") (2012), Contact Centres Australia Pty. Ltd. (2014), PT Media Nusantara Data Global ("MNDG") (2015), Melon and PT Griya Silkindo Drajatmoerni ("GSDm") (2016), TSGN and Nutech (2017), SSI, CIP, and Telin Malaysia (2018), and PST (2019) (Note 1e).
- (ii) The amortization is presented as part of "Depreciation and Amortization" in the consolidated statements of profit or loss and other comprehensive income. The remaining amortization periods of software range from 1 to 5 years.
- (iii) As of December 31, 2019, the cost of fully amortized intangible assets that are still utilized in operations amounted to Rp5,526 billion.

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16. TRADE AND OTHER PAYABLES

This account consists of the following:

	<u>2018</u>	<u>2019</u>
Trade payables	14,766	13,875
Other payables	448	449
Total trade and other payables	<u>15,214</u>	<u>14,324</u>

The breakdown of trade payables is as follows:

	<u>2018</u>	<u>2019</u>
Related parties		
Radio frequency usage charges, concession fees, and Universal Service Obligation (“USO”) charges	1,471	1,374
Purchases of equipments, materials, and services	829	732
Payables to other telecommunication providers	189	136
Sub-total	<u>2,489</u>	<u>2,242</u>
Third parties		
Purchases of equipments, materials, and services	10,849	10,563
Payables to other telecommunication providers	1,428	1,070
Sub-total	<u>12,277</u>	<u>11,633</u>
Total	<u>14,766</u>	<u>13,875</u>

Trade payables by currency are as follows:

	<u>2018</u>	<u>2019</u>
Rupiah	11,726	12,027
U.S. dollar	2,978	1,801
Others	62	47
Total	<u>14,766</u>	<u>13,875</u>

Refer to Note 32 for details of related party transactions.

17. ACCRUED EXPENSES

The breakdown of accrued expenses is as follows:

	<u>2018</u>	<u>2019</u>
Operation, maintenance, and telecommunication services	8,013	7,521
Salaries and benefits	2,219	2,658
General, administrative, and marketing expenses	2,299	2,365
Interest and bank charges	238	217
Total	<u>12,769</u>	<u>12,761</u>

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18. CONTRACT LIABILITIES

The breakdown of contract liabilities is as follows:

a. Current

	<u>2018</u>	<u>2019</u>
Prepaid pulse reload vouchers	4,413	5,250
Material rights for contract renewal	65	76
Others	774	2,104
Total	<u>5,252</u>	<u>7,430</u>

b. Non-current

	<u>2018</u>	<u>2019</u>
IRU	258	327
Material rights for contract renewal	394	391
Others	—	87
Total	<u>652</u>	<u>805</u>

Contract liabilities at the beginning period which recognized as revenue in current year is Rp5,252 billion.

19. SHORT-TERM BANK LOANS AND CURRENT MATURITIES OF LONG-TERM BORROWINGS

This account consists of the following:

	<u>2018</u>	<u>2019</u>
Short-term bank loans	4,043	8,705
Current maturities of long-term borrowings	6,296	13,409
Total	<u>10,339</u>	<u>22,114</u>

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a. Short-term bank loans

Lenders	Currency	2018 Outstanding		2019 Outstanding	
		Foreign currency (in millions)	Rupiah equivalent	Foreign currency (in millions)	Rupiah equivalent
Related parties					
Bank Mandiri	Rp	—	—	—	2,400
BNI	Rp	—	956	—	1,238
PT Bank BNI Syariah ("BNI Syariah")	Rp	—	—	—	17
Sub-total			956		3,655
Third parties					
HSBC	Rp	—	317	—	1,754
	US\$	0	4	0	4
MUFG Bank, Ltd. ("MUFG Bank")	Rp	—	1,295	—	1,705
PT Bank DBS Indonesia ("DBS")	Rp	—	699	—	722
	US\$	1	13	1	13
PT Bank UOB Indonesia ("UOB")	Rp	—	580	—	500
SCB	Rp	—	100	—	150
PT Bank Central Asia Tbk. ("BCA")	Rp	—	—	—	124
Bank CIMB Niaga	Rp	—	78	—	78
Others	Rp	—	1	—	—
Sub-total			3,087		5,050
Total			4,043		8,705

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Other significant information relating to short-term bank loans as of December 31, 2019 is as follows:

	Borrower	Currency	Total facility (in billions)*	Maturity date	Interest payment period	Interest rate per annum	Security**
Mandiri 2019	The Company	Rp	2,400	November 21, 2020	Quarterly	3 months JIBOR + 0.6%	None
BNI 2014 - 2017	Sigma ^a , GSD	Rp	525	January 9, 2020 - November 8, 2020	Monthly	8.41% - 9.00%	Trade receivables and property and equipment
2013 - 2019	Telkom Infratel, Infomedia ^b , Sigma ^a , MD Media, Metranet	Rp	3,160	January 9, 2020 - December 19, 2020	Monthly	1 month JIBOR + 2.20% - 2.50%	Trade receivables
HSBC 2018 2018 2018 - 2019	Sigma ^{c,h} Sigma ^{c,h} Sigma, Melon, Metra, MD Media, PINS	Rp US\$ Rp	600 0.004 1,484	July 31, 2020 July 31, 2020 April 8, 2020 - August 30, 2020	Monthly Monthly Monthly, Quarterly	6.74% 4.12% 1 month JIBOR + 0.60% - 0.70% 3 months JIBOR + 1.00%	Trade receivables Trade receivables Trade receivables
MUFG Bank 2018 - 2019	The Company, Infomedia, Metra, GSD, PINS, Telkom Infratel	Rp	2,360	January 23, 2020 - October 29, 2020	Monthly, Quarterly	1 month JIBOR + 0.70% - 0.95% 3 months JIBOR + 1.00%	None
DBS 2018 2016 2016	Telkom Infratel, Infomedia Nutech Sigma ^{d,e}	Rp Rp US\$	600 4 0.02	February 26, 2020 October 18, 2020 July 31, 2020	Monthly Monthly Semi-annualy	1 month JIBOR + 0.70% 10.50% 3.25% (US\$) 10.75% (Rp)	None None Trade receivables
UOB 2016	Finnet ^f	Rp	500	December 20, 2020	Monthly	1 month JIBOR + 2.00%	None
SCB 2015	GSD ^g	Rp	150	April 16, 2020	Monthly	Cost of fund + 2.50%	None
BCA 2019	Telkom Infratel	Rp	600	April 30, 2020 - May 22, 2020	Monthly	1 month JIBOR + 1.75%	Trade receivables
Bank CIMB Niaga 2013	GSD ^h	Rp	85	January 1, 2020	Monthly	10.90% - 11.50%	Trade receivables and property and equipment

* In original currency

** Refer to Note 6 and Note 12 for details of trade receivables and property and equipment pledged as collateral.

^a Based on the latest amendment on April 23, 2019.

^b Based on the latest amendment on March 28, 2018 and July 6, 2018.

^c Based on the latest amendment on July 16, 2018.

^d Based on the latest amendment on December 5, 2018.

^e Facility in U.S. Dollar. Withdrawal can be executed in U.S. Dollar and Rupiah.

^f Based on the latest amendment on June 5, 2018.

^g Based on the latest amendment on January 18, 2019.

^h Unsettled loan will be automatically extended.

As stated in the agreements, the Group is required to comply with all covenants or restrictions such as limitation that the Company must have a majority shareholding of at least 51% of the subsidiaries in the agreement and maintaining financial ratios. As of December 31, 2019, the Group has complied with all covenants or restrictions, except for certain loans. As of December 31, 2019, the Group has obtained waiver from lenders to not demand the loan payment as a consequence of the breach of covenants, except for Telkom Infratel, the waiver from BCA was received on January 27, 2020.

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On February 26, 2018, the Company, Telkom Infratel, and Infomedia entered credit agreements with DBS amounting to Rp600 billion. As of December 31, 2019, the unused facilities was amounting to Rp125 billion.

On March 27, 2019, the Company, TII, Infomedia, and Metra entered credit agreements with MUFG Bank amounting to Rp600 billion. As of December 31, 2019, the unused facilities was amounting to Rp180 billion.

On April 8, 2019, the Company, Metra, MD Media, and Metranet entered credit agreements with HSBC amounting to Rp1,000 billion. As of December 31, 2019, the unused facilities was amounting to Rp582 billion.

On June 24, 2019, the Company, Infomedia, MD Media, and Telkom Infratel entered credit agreements with MUFG Bank amounting to Rp1,560 billion. As of December 31, 2019, the unused facilities was amounting to Rp400 billion.

On August 30, 2019, the Company, Sigma, and Melon entered credit agreements with HSBC amounting to Rp500 billion. As of December 31, 2019, the unused facilities was amounting to Rp216 billion.

On October 29, 2019, the Company and GSD entered credit agreements with MUFG Bank amounting to Rp900 billion. As of December 31, 2019, the unused facilities was amounting to Rp814 billion.

On November 21, 2019, the Company, Dayamitra, and GSD entered credit agreements with Bank Mandiri amounting to Rp2,400 billion. As of December 31, 2019, all facilities has been used.

The credit facilities were obtained by the Group for working capital purposes.

b. Current maturities of long-term borrowings

	Notes	2018	2019
Two-step loans	20a	198	194
Bonds and notes	20b	525	2,491
Bank loans	20c	4,472	5,434
Other borrowings	20d	294	627
Obligations under finance leases	13	807	—
Lease liabilities	13	—	4,663
Total		<u>6,296</u>	<u>13,409</u>

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20. LONG-TERM LOANS AND OTHER BORROWINGS

Long-term loans and other borrowings consist of the following:

	Notes	2018	2019
Two-step loans	20a	751	542
Bonds and notes	20b	9,956	7,467
Bank loans	20c	18,748	21,167
Other borrowings	20d	1,950	3,113
Obligations under finance leases	13	2,338	—
Lease liabilities	13	—	12,554
Total		33,743	44,843

Scheduled principal payments as of December 31, 2019 are as follows:

	Notes	Total	Year				
			2021	2022	2023	2024	Thereafter
Two-step loans	20a	542	178	141	125	98	—
Bonds and notes	20b	7,467	477	2,198	—	—	4,792
Bank loans	20c	21,167	7,145	3,464	5,852	2,312	2,394
Other borrowings	20d	3,113	852	853	862	460	86
Lease liabilities	13	12,554	3,453	2,959	2,281	1,437	2,424
Total		44,843	12,105	9,615	9,120	4,307	9,696

a. Two-step loans

Two-step loans are unsecured loans obtained by the Government from overseas banks which are then re-loaned to the Company. Loans obtained up to July 1994 are payable in Rupiah based on the exchange rate at the date of drawdown. Loans obtained after July 1994 are payable in their original currencies and any resulting foreign exchange gain or loss is borne by the Company.

Lenders	Currency	2018 Outstanding		2019 Outstanding	
		Foreign currency	Rupiah	Foreign currency	Rupiah
		(in millions)	equivalent	(in millions)	equivalent
Overseas banks	Yen	4,607	602	3,839	491
	US\$	13	188	9	120
	Rp	—	159	—	125
Total			949		736
Current maturities (Note 19b)			(198)		(194)
Long-term portion			751		542

Lenders	Currency	Principal payment schedule	Interest payment period	Interest rate per annum
Overseas banks	Yen	Semi-annually	Semi-annually	2.95 %
	US\$	Semi-annually	Semi-annually	3.85 %
	Rp	Semi-annually	Semi-annually	8.38 %

The loans were intended for the development of telecommunications infrastructure and supporting telecommunications equipment. The loans will be settled semi-annually and due on various dates through 2024.

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The Company had used all facilities under the two-step loans program since 2008 and the withdrawal period for the two-step loans has ended.

Under the loan covenants, the Company is required to maintain financial ratios as follows:

- i. Projected net revenue to projected debt service ratio should exceed 1.2:1 for the two-step loans originating from Asian Development Bank (“ADB”).
- ii. Internal financing (earnings before depreciation and finance costs) should exceed 20% compared to annual average capital expenditures for loans originating from the ADB.

As of December 31, 2019, the Company has complied with the above-mentioned ratios.

b. Bonds and notes

Bonds and notes	Currency	2018		2019	
		Foreign currency (in millions)	Rupiah equivalent	Foreign currency (in millions)	Rupiah equivalent
Bonds					
2010					
Series B	Rp	—	1,995	—	1,995
2015					
Series A	Rp	—	2,200	—	2,200
Series B	Rp	—	2,100	—	2,100
Series C	Rp	—	1,200	—	1,200
Series D	Rp	—	1,500	—	1,500
Medium Term Notes (“MTN”)					
MTN I Telkom 2018					
Series A	Rp	—	262	—	—
Series B	Rp	—	200	—	200
Series C	Rp	—	296	—	296
MTN Syariah Ijarah I Telkom 2018					
Series A	Rp	—	264	—	—
Series B	Rp	—	296	—	296
Series C	Rp	—	182	—	182
Total			10,495		9,969
Unamortized debt issuance costs			(14)		(11)
Total			10,481		9,958
Current maturities (Note 19b)			(525)		(2,491)
Long-term portion			9,956		7,467

(i) Bonds

2010

Bonds	Principal	Issuer	Listed on	Issuance date	Maturity date	Interest payment period	Interest rate per annum
Series B	1,995	The Company	IDX	June 25, 2010	July 6, 2020	Quarterly	10.20 %

The bonds are not secured by specific security but by all of the Company’s assets, movable or non-movable, either existing or in the future (Note 12b.ix). The underwriters of the bonds are PT Bahana Securities (“Bahana”), PT Danareksa Sekuritas, and PT Mandiri Sekuritas, and the trustee is Bank

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CIMB Niaga. Based on the General Meeting of Bondholders on September 26, 2018, the trustee was replaced by BTN.

The Company received the proceeds from the issuance of bonds on July 6, 2010.

The funds received from the public offering of bonds net of issuance costs, were used to finance capital expenditures which consisted of wave broadband (bandwidth, softswitching, datacom, information technology, and others), infrastructure (backbone, metro network, regional metro junction, internet protocol, and satellite system), and to optimize legacy and supporting facilities (fixed wireline and wireless).

As of December 31, 2019, the rating of the bonds issued by PT Pemeringkat Efek Indonesia (“Pefindo”) is idAAA (Triple A).

Based on the Indenture Trusts Agreement, the Company is required to comply with all covenants or restrictions, including maintaining financial ratios as follows:

- (a) Debt to equity ratio should not exceed 2:1.
- (b) EBITDA to interest ratio should not be less than 5:1.
- (c) Debt service coverage is at least 125%.

As of December 31, 2019, the Company has complied with the above-mentioned ratios.

2015

Bonds	Principal	Issuer	Listed on	Issuance date	Maturity date	Interest payment period	Interest rate per annum
Series A	2,200	The Company	IDX	June 23, 2015	June 23, 2022	Quarterly	9.93 %
Series B	2,100	The Company	IDX	June 23, 2015	June 23, 2025	Quarterly	10.25 %
Series C	1,200	The Company	IDX	June 23, 2015	June 23, 2030	Quarterly	10.60 %
Series D	1,500	The Company	IDX	June 23, 2015	June 23, 2045	Quarterly	11.00 %
Total	<u>7,000</u>						

The bonds are not secured by specific security but by all of the Company’s assets, movable or non-movable, either existing or in the future (Note 12b.ix). The underwriters of the bonds are Bahana, PT Danareksa Sekuritas, PT Mandiri Sekuritas, and PT Trimegah Sekuritas Indonesia Tbk. and the trustee is Bank Permata.

The Company received the proceeds from the issuance of bonds on June 23, 2015.

The funds received from the public offering of bonds net of issuance costs, were used to finance capital expenditures which consisted of wave broadband, backbone, metro network, regional metro junction, information technology application and support, and merger and acquisition of some domestic and international entities.

As of December 31, 2019, the rating of the bonds issued by Pefindo is idAAA (Triple A).

Based on the Indenture Trusts Agreement, the Company is required to comply with all covenants or restrictions, including maintaining financial ratios as follows:

- (a) Debt to equity ratio should not exceed 2:1.
- (b) EBITDA to interest ratio should not be less than 4:1.
- (c) Debt service coverage is at least 125%.

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As of December 31, 2019, the Company has complied with the above-mentioned ratios.

(ii) MTN

MTN I Telkom Year 2018

<u>Notes</u>	<u>Currency</u>	<u>Principal</u>	<u>Issuance date</u>	<u>Maturity date</u>	<u>Interest payment period</u>	<u>Interest rate per annum</u>	<u>Security</u>
Series A	Rp	262	September 4, 2018	September 14, 2019	Quarterly	7.25 %	All assets
Series B	Rp	200	September 4, 2018	September 4, 2020	Quarterly	8.00 %	All assets
Series C	Rp	296	September 4, 2018	September 4, 2021	Quarterly	8.35 %	All assets
		<u>758</u>					

Based on Agreement of Issuance and Appointment of Monitoring Agents of MTN I Telkom Year 2018 dated August 31, 2018 as covered by notarial deed No. 24 of Fathiah Helmi, S.H., the Company issued MTN with the principal amount up to Rp758 billion in series.

Bahana, PT BNI Sekuritas, PT CGS-CIMB Sekuritas Indonesia, PT Danareksa Sekuritas, and PT Mandiri Sekuritas act as the Arranger, BTN as the Monitoring Agent and PT Kustodian Sentral Efek Indonesia ("KSEI") as the Payment Agent and the Custodian. The MTN are traded in private placement programs. The funds obtained from MTN are used for access network and backbone development.

As of December 31, 2019, the rating of the MTN issued by Pefindo is idAAA (Triple A).

Under to the agreement, the Company is required to comply with all covenants or restrictions including maintaining financial ratios as follows:

- (a) Debt to equity ratio should not exceed 2:1.
- (b) EBITDA to interest ratio should not be less than 4:1.
- (c) Debt service coverage is at least 125%.

As of December 31, 2019, the Company has complied with the above-mentioned ratios.

MTN Syariah Ijarah I Telkom Year 2018

<u>Notes</u>	<u>Currency</u>	<u>Principal</u>	<u>Issuance date</u>	<u>Maturity date</u>	<u>Return period</u>	<u>Annual return payment</u>	<u>Security</u>
Series A	Rp	264	September 4, 2018	September 14, 2019	Quarterly	19	The Right to benefit of ijarah objects
Series B	Rp	296	September 4, 2018	September 4, 2020	Quarterly	24	The Right to benefit of ijarah objects
Series C	Rp	182	September 4, 2018	September 4, 2021	Quarterly	15	The Right to benefit of ijarah objects
		<u>742</u>				<u>58</u>	

Based on Agreement of Issuance and Appointment of Monitoring Agents of MTN Syariah Ijarah Telkom Year 2018 dated August 31, 2018 as covered by notarial deed No. 26 of Fathiah Helmi, S.H., the Company issued MTN Syariah Ijarah with the principal amount up to Rp742 billion in series.

Bahana, PT BNI Sekuritas, PT CGS-CIMB Sekuritas Indonesia, PT Danareksa Sekuritas, and PT Mandiri Sekuritas act as the Arranger, BTN as the Monitoring Agent and KSEI as the Payment Agent and the Custodian. The MTN Syariah Ijarah are traded in private placement programs. The funds obtained from MTN Syariah Ijarah are used for investment projects. The object of MTN

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Syariah Ijarah transaction is telecommunication network which is located in the special region of Yogyakarta, its network telecommunication involves cable network, information technology equipments, and other production tools of telecommunication services.

As of December 31, 2019, the rating of the MTN Syariah Ijarah issued by Pefindo is idAAA sy (Triple A Syariah).

Under to the agreement, the Company is required to comply with all covenants or restrictions including maintaining financial ratios as follows:

- (a) Debt to equity ratio should not exceedd 2:1.
- (b) EBITDA to interest ratio should not be less than 4:1.
- (c) Debt service coverage is at least 125%.

As of December 31, 2019, the Company has complied with the above-mentioned ratios.

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c. Bank loans

Lenders	Currency	2018 Outstanding		2019 Outstanding	
		Foreign currency (in millions)	Rupiah equivalent	Foreign currency (in millions)	Rupiah equivalent
Related parties					
Bank Mandiri	Rp	—	4,546	—	7,611
BNI	Rp	—	6,826	—	5,898
BRI	Rp	—	1,248	—	1,758
BNI Syariah	Rp	—	—	—	52
Sub-total			12,620		15,319
Third parties					
MUFG Bank	Rp	—	3,011	—	2,981
	US\$	10	144	8	108
Syndication of banks	Rp	—	1,750	—	1,250
	US\$	37	532	37	514
BCA	Rp	—	740	—	1,665
DBS	Rp	—	379	—	770
UOB Singapore	US\$	49	710	40	556
PT Bank BTPN ("BTPN") (Previously Sumitomo)	Rp	—	661	—	537
Citibank	Rp	—	1,000	—	500
HSBC	Rp	—	—	—	500
Bank of China	Rp	—	—	—	500
ANZ	Rp	—	440	—	440
Bank CIMB Niaga	Rp	—	462	—	439
UOB	Rp	—	428	—	357
PT Bank ICBC Indonesia ("ICBC")	Rp	—	204	—	159
Exim Bank of Malaysia Berhad	MYR	23	81	8	28
Japan Bank for International Cooperation ("JBIC")	US\$	3	45	—	—
Others	Rp	—	33	—	9
	MYR	13	46	11	38
Sub-total			10,666		11,351
Total			23,286		26,670
Unamortized debt issuance cost			(61)		(65)
Gain on debt restructuring			(5)		(4)
			23,220		26,601
Current maturities (Note 19b)			(4,472)		(5,434)
Long-term portion			18,748		21,167

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Other significant information relating to bank loans as of December 31, 2019 is as follows:

	Borrower	Currency	Total facility (in billions)*	Current period payment (in billions)*	Principal payment schedule	Interest payment period	Interest rate per annum	Security**
BNI								
2018 - 2019	GSD, the Company	Rp	2,342	31	2018 - 2026	Monthly, Quarterly	8.75%, 9.00%	Trade receivables and all assets
2013 - 2018	The Company, GSD, TLT, Sigma, Dayamitra, Telkom Infratel	Rp	8,112	3,779	2016 - 2033	Monthly, Quarterly	1 month JIBOR + 2.20% - 2.50%; 3 months JIBOR + 1.85% - 2.25%	Trade receivables, Inventory, and Property and equipment
Bank Mandiri								
2017 - 2018	The Company, Telkomsel ^{5,6} , Balebat	Rp	9,455	3,449	2018 - 2025	Monthly, Quarterly	8.50% - 9.00%	Trade receivables, Inventory, and Property and equipment
2017 - 2019	GSD, Dayamitra, Telkomsel	Rp	3,763	255	2019 - 2026	Quarterly	3 months JIBOR + 0.60% - 1.85%	None
BRI								
2019	The Company	Rp	2,000	48	2021 - 2026	Quarterly	9.00%	All assets
2017 - 2019	The Company, Dayamitra, GSD	Rp	1,253	195	2019 - 2025	Quarterly	3 months JIBOR + 1.85% - 2.00%	Property and equipment
MUFG Bank								
2015 - 2018	GSD, Metra, Infomedia, Dayamitra	Rp	3,950	1,980	2016 - 2025	Quarterly	3 months JIBOR + 1.43% - 2.15%	Property and equipment and lease agreement
2018	TII	US\$	0.01	0.002	2019 - 2022	Quarterly	3 months LIBOR + 1.25%	None
Syndication of Banks								
2015	The Company, GSD	Rp	3,000	500	2016 - 2022	Quarterly	3 months JIBOR + 2.00%	All Assets
2018	TII	US\$	0.09	—	2019 - 2024	Semi-annually	6 months LIBOR + 1.25%	None
Citibank								
2018	The Company	Rp	1,000	500	2019 - 2020	Quarterly	8.50%	None

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BCA								
2016 - 2018	PST	Rp	805	102	2017 - 2024	Quarterly	10.00%-10.50%	Property and equipment
2017 - 2019	Metra, Dayamitra, Telkom Infratel	Rp	1,470	117	2018 - 2026	Quarterly	3 months JIBOR + 1.50% - 1.85%	Property and equipment
UOB Singapore								
2016	TII	US\$	0.06	0.009	2019 - 2024	Monthly	1 month LIBOR + 1.25%	None
BTPN								
2015 - 2019	GSD, Metra, Infomedia, Dayamitra, TII	Rp	1.309	214	2016 - 2023	Quarterly	3 months JIBOR + 1.44% - 2.15%	None
Bank CIMB Niaga								
2011	GSD	Rp	41	7	2012 - 2021	Monthly	9.75%	Property and equipment and lease agreement
2017 - 2019	GSD, Metra	Rp	695	108	2018 - 2024	Quarterly	3 months JIBOR + 1.50%	None
ANZ								
2015 - 2017	GSD, PINS	Rp	500	—	2020	Quarterly	3 months JIBOR + 2.00%	None
UOB								
2016	Dayamitra	Rp	500	71	2018 - 2024	Quarterly	3 months JIBOR + 2.20%	Property and equipment
DBS								
2016	Nutech	Rp	6	1	2017 - 2021	Monthly		Trade receivables and Property and equipment
2017 - 2019	PINS, Dayamitra, Telkomsat	Rp	1,030	108	2018 - 2026	Quarterly	3 months JIBOR + 1.50% - 1.85%	None
ICBC								
2017	GSD	Rp	272	45	2017 - 2023	Quarterly	3 months JIBOR + 2.36%	Trade receivables and Property and equipment
Exim Bank of Malaysia Berhad								
2016	TII	MYR	0.06	0.015	2017 - 2020	Monthly	ECOF + 1.89%	None
HSBC								
2019	Telkomsel ^a	Rp	1,000	500	2019 - 2021	Monthly	1 month JIBOR + 0.60%	None
Bank of China								
2019	Telkomsel ^a	Rp	1,000	500	2019 - 2021	Monthly	1 month JIBOR + 0.60%	None

* In original currency

** Refer to Notes 6,8 and 12 for details of trade receivables, inventories, and property and equipment pledged as collaterals.

^a Telkomsel has no collateral for its bank loans, or other credit facilities. The terms of the various agreements with Telkomsel's lenders and financiers require compliance with a number of covenants and negative covenants as well as financial and other covenants, which include, among other things, certain restrictions on the amount of dividends and other profit distributions which could adversely affect Telkomsel's capacity to comply with its obligation under the facility. The terms of the relevant agreements also contain default and cross default clauses. As of December 31, 2019 Telkomsel has complied with the above covenants.

^b Based on the latest amendment on December 11, 2018.

As stated in the agreements, the Group is required to comply with all covenants or restrictions such as dividend distribution, obtaining new loans, and maintaining financial ratios. As of December 31, 2019, the Group has complied with all covenants or restrictions, except for certain loans. As of December 31, 2019, the Group obtained waiver from lenders for the non-fulfillment financial ratios except for the current ratios in Telkom Infratel. Waiver for Telkom Infratel received on January 27, 2020, as a result, as of December 31, 2019, bank loans from BCA amounting to Rp50 billion are reclassified as current liabilities.

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On March 13, 2015, the Company, GSD, Metra, and Infomedia entered into several credit facilities agreements with BTPN, MUFG Bank, ANZ, and syndication of banks (BCA and BNI) with total facilities amounting to Rp750 billion, Rp750 billion, Rp500 billion, and Rp3,000 billion, respectively. Based on amendment on August 2, 2016, Dayamitra and Telkom Akses are included as borrowers into BTPN and MUFG Bank credit facilities agreement and excluded GSD from those agreement. Based on the latest amendment on March 13, 2017, PINS is included as one of borrower into ANZ's credit facility agreement. In 2017, PINS drawn down the facility amounted to Rp200 billion. As of December 31, 2019 the unused facilities for BTPN, MUFG Bank, and ANZ amounted to Rp82.5 billion, Rp82.5 billion, and Rp60 billion, respectively.

On March, 24, 2017, the Company, Dayamitra, Sigma, GSD, and TII entered several credit agreements with BRI, BNI, and Bank Mandiri with total facilities amounting to Rp1,000 billion, Rp2,005 billion, and Rp1,500 billion, respectively. As of December 31, 2019, the unused facility for BNI and Bank Mandiri amounted to Rp68 billion and Rp5 billion, respectively.

On March 30, 2017, the Company, GSD, Metra, Dayamitra, PINS, and Telkomsat entered into several credit agreements with MUFG Bank, BTPN, DBS, Bank CIMB Niaga, and BCA with total facilities amounting to Rp400 billion, Rp400 billion, Rp850 billion, Rp495 billion, and Rp850 billion, respectively. Based on amendment on June 29, 2017, Telkom Infratel is included as one of borrower into BCA's credit facility agreement to replace PINS. As of December 31, 2019, the unused facilities for MUFG Bank, BTPN, DBS, Bank CIMB Niaga, and BCA amounted to Rp79 billion, Rp79 billion, Rp420 billion, Rp20 billion, and Rp564 billion, respectively.

On March, 27, 2018, the Company and Dayamitra entered into several credit agreements with BRI, Bank Mandiri, and MUFG Bank with total facilities amounting to Rp200 billion, Rp775 billion, and Rp800 billion, respectively. As of December 31, 2019, all facilities has been used.

On January 15, 2019, the Company, Infomedia, TII, Telkom Infratel, Telkomsat, and Sigma entered into several agreements with BTPN with total facilities amounting to Rp628 billion. As of December 31, 2019, the unused facility for BTPN amounting to Rp538 billion.

On June 19, 2019, the Company and Dayamitra entered into a credit agreement with BNI with total facilities amounting to Rp2,160 billion and Rp840 billion, respectively. As of December 31, 2019, the unused facility for BNI amounting to Rp2,800 billion.

On July 8, 2019, the Company, PINS, and GSD entered into a credit agreement with Bank CIMB Niaga with total facilities amounting to Rp500 billion, Rp300 billion, and Rp200 billion, respectively. As of December 31, 2019, the unused facility for Bank CIMB Niaga amounting to Rp908 billion.

On November 21, 2019, the Company, Dayamitra, and GSD entered into a credit agreement with Bank Mandiri with total facilities amounting to Rp1,400 billion, Rp1,113 billion, and Rp200 billion, respectively. As of December 31, 2019, the unused facility for Bank Mandiri amounting to Rp2,069 billion.

These credit facilities were obtained by the Group for working capital purposes.

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d. Other borrowings

Lenders	Currency	Outstanding	
		2018	2019
PT Sarana Multi Infrastruktur	Rp	2,250	3,748
Unamortized debt issuance cost		(6)	(8)
Total		2,244	3,740
Current maturities (Note 19b)		(294)	(627)
Long-term portion		1,950	3,113

i. Dayamitra

	Borrower	Currency	Total facility (in billions)	Current period payment (in billions)	Principal payment schedule	Interest rate per annum	Security
PT Sarana Multi Infrastruktur							
October 12, 2016	Dayamitra	Rp	700	100	Semi-annually (2018-2024)	3 months JIBOR + 1.85%	Property and equipment (Note 12)
March 29, 2017	Dayamitra	Rp	600	86	Semi-annually (2019-2025)	3 months JIBOR + 1.85%	Property and equipment (Note 12)

Under the agreement, Dayamitra is required to comply with all covenants or restrictions, including maintaining financial ratios as follows :

- (a) Debt to equity ratio should not exceed 5:1.
- (b) Net debt to EBITDA ratio should not exceed 4:1.
- (c) Debt service coverage is at least 100%.

As of December 31, 2019, Dayamitra has complied with the above-mentioned ratios.

ii. The Company

	Borrower	Currency	Total facility (in billions)	Current period payment (in billions)	Principal payment schedule	Interest rate per annum	Security
PT Sarana Multi Infrastruktur							
November 14, 2018	The Company	Rp	1,000	110	Semi-annually (2019-2023)	8.35 %	None
March 29, 2019	The Company	Rp	2,273	—	Semi-annually (2020-2024)	8.49 %	None

Under the agreement, the Company is required to comply with all covenants or restrictions, including maintaining financial ratios as follows :

- (a) Debt to equity ratio should not exceed 2:1.

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- (b) EBITDA to interest ratio should not be less than 4:1.
(c) Debt service coverage is at least 125%.

As of December 31, 2019, the Company has complied with the above-mentioned ratios.

iii. Telkomsat

	Borrower	Currency	Total facility (in billions)	Current period payment (in billions)	Principal payment schedule	Interest rate per annum	Security
PT Sarana Multi Infrastruktur							
March 29, 2019	Telkomsat	Rp	164	—	Semi-annually (2020-2024)	8.49 %	None

Under the agreement, Telkomsat is required to comply with all covenants or restrictions, including maintaining financial ratios as follows:

- (a) Debt to equity ratio should not exceed 2:1.
(b) EBITDA to interest ratio should not be less than 4:1.
(c) Minimal debt service coverage at least 125%.

As of December 31, 2019, Telkomsat has complied with the above-mentioned ratios.

On March 29, 2019, the Company, Telkomsat, and Telkom Infratel entered into a credit agreement with PT Sarana Multi Infrastruktur amounting to Rp2,273 billion, Rp164 billion, and Rp563 billion, respectively. As of December 31, 2019, the unused facility for PT Sarana Multi Infrastruktur amounting to Rp1,206 billion, included Telkom Infratel amounting to Rp563 billion.

21. NON-CONTROLLING INTERESTS

The details of non-controlling interests are as follow:

	2018	2019	
Non-controlling interests in net assets of subsidiaries:			
Telkomsel	17,770	16,962	
GSD	212	229	
Metra	174	130	
TII	111	107	
Total	18,267	17,428	
	2017	2018	2019
Non-controlling interests in net income (loss) of subsidiaries:			
Telkomsel	10,632	8,899	8,895
TII	6	7	(5)
GSD	(5)	(8)	(42)
Metra	(83)	11	(56)
Total	10,550	8,909	8,792

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Material partly-owned subsidiary

As of December 31, 2018 and 2019, the non-controlling interest holds 35% ownership interest in Telkomsel which is considered material to the Company (Note 1d).

The summarized financial information of Telkomsel below is provided based on amounts before elimination of intercompany balances and transactions.

Summarized statements of financial position

	<u>2018</u>	<u>2019</u>
Current assets	20,089	18,621
Non-current assets	62,130	86,000
Current liabilities	(20,775)	(25,137)
Non-current liabilities	(10,667)	(31,017)
Total equity	<u>50,777</u>	<u>48,467</u>
Attributable to:		
Equity holders of parent company	33,007	31,505
Non-controlling interest	17,770	16,962

Summarized statements of profit or loss and other comprehensive income

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Revenues	93,217	89,258	91,093
Operating expenses	(53,198)	(55,408)	(54,695)
Other income (expense) – net	380	124	(2,321)
Profit before income tax	<u>40,399</u>	<u>33,974</u>	<u>34,077</u>
Income tax expense – net	(10,018)	(8,546)	(8,660)
Profit for the year from continuing operations	<u>30,381</u>	<u>25,428</u>	<u>25,417</u>
Other comprehensive income (loss) – net	(392)	356	(415)
Net comprehensive income for the year	<u>29,989</u>	<u>25,784</u>	<u>25,002</u>
Profit for the year attributable to non-controlling interest	10,632	8,899	8,895
Dividend paid to non-controlling interest	12,334	10,105	8,490

Summarized statements of cash flows

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Operating activities	39,564	36,848	41,515
Investing activities	(13,984)	(16,095)	(13,448)
Financing activities	(34,720)	(24,867)	(25,943)
Net increase (decrease) in cash and cash equivalents	<u>(9,140)</u>	<u>(4,114)</u>	<u>2,124</u>

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22. CAPITAL STOCK

The details of capital stock are as follows:

Description	2018		
	Number of shares	Percentage of ownership	Total paid-in capital
Series A Dwiwarna share			
Government	1	0	0
Series B shares			
Government	51,602,353,559	52.09	2,580
The Bank of New York Mellon Corporation*	4,944,921,880	4.99	247
Commissioners (Note 1b):			
Hendri Saparini	654,505	0	0
Rinaldi Firmansyah	454,113	0	0
Directors (Note 1b):			
Alex Janangkih Sinaga	1,683,359	0	0
Dian Rachmawan	1,575,562	0	0
Abdus Somad Arief	1,515,022	0	0
Herdy Rosadi Harman	1,514,720	0	0
Harry Mozarta Zein	689,492	0	0
David Bangun	1,000	0	0
Siti Choiriana	540	0	0
Public (individually less than 5%)	42,506,852,847	42.92	2,126
Total	99,062,216,600	100.00	4,953

Description	2019		
	Number of shares	Percentage of ownership	Total paid-in capital
Series A Dwiwarna share			
Government	1	0	0
Series B shares			
Government	51,602,353,559	52.09	2,580
The Bank of New York Mellon Corporation*	4,601,837,380	4.65	230
Directors (Note 1b):			
Ririek Adriansyah	1,156,955	0	0
Harry Mozarta Zen	474,692	0	0
Faizal Rochmad Djoemadi	126,800	0	0
Bogi Witjaksono	55,000	0	0
Edi Witjara	32,500	0	0
Siti Choirina	540	0	0
Public (individually less than 5%)	42,856,179,173	43.26	2,143
Total	99,062,216,600	100.00	4,953

* The Bank of New York Mellon Corporation serves as the Depositary of the registered ADS holders for the Company's ADSs.

The Company issued only 1 Series A Dwiwarna share which is held by the Government and can not be transferred to any party, and has a veto in the General Meeting of Stockholders of the Company with respect to election and removal from the Boards of Commissioners and Directors, issuance of new shares, and amendments of the Company's Articles of Association.

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Pursuant to the AGM of Stockholders of the Company as stated in notarial deed No. 54 dated April 27, 2018 of Ashoya Ratam, S.H., M.Kn., the Company's stockholders approved the distribution of cash dividend and special cash dividend for 2017 amounting to Rp13,287 billion (Rp134.13 per share) and Rp3,322 billion (Rp33.53 per share), respectively. The Company paid cash dividend and special cash dividend on May 31, 2018.

Pursuant to the AGM of Stockholders of the Company as stated in notarial deed No. 133 dated May 24, 2019 of Ashoya Ratam, S.H., M.Kn., the Company's stockholders approved the distribution of cash dividend and special cash dividend for 2018 amounting to Rp10,819 billion (Rp109.2 per share) and Rp5,410 billion (Rp54.61 per share), respectively. The Company paid cash dividend and special cash dividend on June 27, 2019.

23. ADDITIONAL PAID-IN CAPITAL

The breakdown of additional paid-in capital is as follows

	2018	2019
Proceeds from sale of 933,333,000 shares in excess of par value through IPO in 1995	1,446	1,446
Excess of value over cost of selling 211,290,500 shares under the treasury stock plan phase I	544	544
Excess of value over cost of selling 215,000,000 shares under the treasury stock plan phase II	576	576
Excess of value over cost of treasury stock transferred to employee stock ownership program	228	228
Excess of value over cost of selling 22,363,000 shares under the treasury stock plan phase III	36	36
Excess of value over cost of selling 864,000,000 shares under the treasury stock plan phase IV	1,996	1,996
Capitalization into 746,666,640 Series B shares in 1999	(373)	(373)
Reduction additional paid in capital as a result of cancellation treasury stock	(2,454)	(2,454)
Differences from acquisition of non-controlling interest	(22)	(22)
Net	1,977	1,977

24. BASIC AND DILUTED EARNINGS PER SHARE

Basic earnings per share is computed by dividing profit for the year attributable to owners of the parent company amounting to Rp22,120 billion, Rp17,802 billion and Rp19,068 billion by the weighted average number of shares outstanding during the year totaling 99,062,216,600 shares, 99,062,216,600 and 99,062,216,600 shares for the years ended December 31, 2017, 2018 and 2019, respectively. The weighted average number of shares takes into account the weighted average effect of changes in treasury stock transactions during the year.

Basic earnings per share amounted to, Rp223.30, Rp179.71 and Rp192.49 for the years ended December 31, 2017, 2018 and 2019, respectively. The Company does not have potentially dilutive financial instruments as of December 31, 2017, 2018 and 2019.

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25. REVENUES

The Group derives revenues in the following major product lines:

2017	Mobile	Consumer	Enterprise	WIB	Others	Consolidated revenue
Telephone revenues	37,144	2,014	1,594	253	—	41,005
Interconnection revenues	1,672	—	—	3,502	—	5,174
Data, internet, and information technology service revenues						
Cellular internet and data	37,951	—	—	3	—	37,954
Internet, data communication, and information technology services	—	650	7,012	980	—	8,642
Short Messaging Services ("SMS")	13,091	—	99	2	—	13,192
Others	—	1	170	37	126	334
Total data, internet, and information technology service revenues	51,042	651	7,281	1,022	126	60,122
Network revenues	2	4	1,160	690	—	1,856
Indihome revenues	—	8,385	2,943	—	—	11,328
Other revenues						
Sales of peripherals	—	—	2,292	—	—	2,292
Manage service and terminal	—	—	535	—	—	535
Call center service	—	—	831	139	—	970
E-health	—	—	470	—	—	470
E-payment	—	—	506	—	—	506
Tower lease rental	—	—	—	796	—	796
Others	213	51	1,518	1,037	383	3,202
Total other revenues	213	51	6,152	1,972	383	8,771
Total revenues	90,073	11,105	19,130	7,439	509	128,256
Adjustments and eliminations	—	—	—	—	(383)	
Total external revenues as reported in note operating segment	90,073	11,105	19,130	7,439	126	

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2018	Mobile	Consumer	Enterprise	WIB	Others	Consolidated revenue
Telephone revenues	34,338	1,665	1,355	284	—	37,642
Interconnection revenues	933	—	—	4,529	—	5,462
Data, internet, and information technology service revenues						
Cellular internet and data	41,033	—	3	—	—	41,036
Internet, data communication, and information technology services	—	45	9,318	1,016	8	10,387
Short Messaging Services ("SMS")	9,046	0	251	1	—	9,298
Others	—	—	482	208	130	820
Total data, internet, and information technology service revenues	50,079	45	10,054	1,225	138	61,541
Network revenues	2	1	696	1,020	—	1,719
Indihome revenues	—	10,761	1,967	—	—	12,728
Other revenues						
Sales of peripherals	—	—	1,852	—	—	1,852
Manage service and terminal	—	—	1,449	0	—	1,449
Call center service	—	—	877	167	8	1,052
E-health	—	—	563	—	—	563
E-payment	—	—	449	—	—	449
Others	—	5	1,598	1,959	282	3,844
Total other revenues	—	5	6,788	2,126	290	9,209
Total revenues from contract with customer	85,352	12,477	20,860	9,184	428	128,301
Revenues from other source	—	1,414	164	909	—	2,487
Total revenues	85,352	13,891	21,024	10,093	428	130,788
Adjustments and eliminations	(14)	0	30	(9)	(298)	
Total external revenues as reported in note operating segment	85,338	13,891	21,054	10,084	130	

2019	Mobile	Consumer	Enterprise	WIB	Others	Consolidated revenue
Telephone revenues	27,907	1,565	1,148	287	—	30,907
Interconnection revenues	580	—	—	5,710	—	6,290
Data, internet, and information technology service revenues						
Cellular internet and data	52,858	—	—	—	—	52,858
Internet, data communication, and information technology services	—	17	7,715	1,340	—	9,072
Short Messaging Services ("SMS")	6,555	—	399	—	—	6,954
Others	—	—	558	383	85	1,026
Total data, internet, and information technology service revenues	59,413	17	8,672	1,723	85	69,910
Network revenues	4	1	897	943	—	1,845
Indihome revenues	—	14,146	2,109	—	—	16,255
Other revenues						
Manage service and terminal	—	—	1,683	1	—	1,684
Sales of peripherals	—	—	1,109	—	—	1,109
Call center service	—	—	650	149	—	799
E-payment	—	—	453	—	113	566
E-health	—	—	523	—	—	523
Others	—	67	1,288	581	433	2,369
Total other revenues	—	67	5,706	731	546	7,050
Total revenues from contract with customer	87,904	15,796	18,532	9,394	631	132,257
Revenues from other source	—	1,937	121	1,242	-	3,300
Total revenues	87,904	17,733	18,653	10,636	631	135,557
Adjustments and eliminations	(7)	(27)	48	(27)	(434)	
Total external revenues as reported in note operating segment	87,897	17,706	18,701	10,609	197	

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Management expects that most of the transaction price allocated to the unsatisfied contracts as of December 31, 2019 will be recognized as revenue during the next reporting period. Unsatisfied performance obligations as of December 31, 2019, which management expect to be realised within one year is Rp6,391 billion, and more than one year Rp4,409 billion.

The Group entered into non-cancelable lease agreements. The lease agreements cover leased lines, telecommunication equipment, and land and building. These leases have terms of between 1 to 10 years. All leases include a clause to enable upward revision of the rental charge on annual basis according to prevailing market conditions. These lessee is also required to provide a residual value guarantee on the properties. Rental income recognized by the Group for the years ended December 31, 2018 and 2019 are Rp2,487 billion and Rp3,300 billion, respectively.

There is no revenue from major customer with exceeds 10% of total revenues for the years ended December 31, 2019.

Refer to Note 32 for details of related party transactions.

Presentation of revenue accounts in the consolidated financial statement as of December 31, 2017 and 2018 have been adjusted in accordance with the presented accounts in the consolidated financial statement as of December 31, 2019. Summary of adjusted revenue accounts as of December 31, 2017 and 2018 are as follows:

	December 31, 2017					
	Before adjustment		Adjustment		After adjustment	
	Consumer	Enterprise	Consumer	Enterprise	Consumer	Enterprise
Telephone revenues	3,757	2,758	(1,743)	(1,164)	2,014	1,594
Data, internet, and information technology service revenues						
Internet, data communication, and information technology services	6,070	8,033	(5,420)	(1,021)	650	7,012
Pay TV	1,209	734	(1,209)	(734)	—	—
Others	14	177	(13)	(7)	1	170
Network revenues	4	1,177	0	(17)	4	1,160
Indihome revenues	—	—	8,385	2,943	8,385	2,943

Presentation of revenue accounts in the consolidated financial statement as of December 31, 2017 and 2018 have been adjusted in accordance with the presented accounts in the consolidated financial statement

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as of December 31, 2019. Summary of adjusted revenue accounts as of December 31, 2017 and 2018 are as follows (continued):

	December 31, 2018					
	Before adjustment		Adjustment		After adjustment	
	Consumer	Enterprise	Consumer	Enterprise	Consumer	Enterprise
Telephone revenues	3,328	2,298	(1,663)	(943)	1,665	1,355
Data, internet, and information technology service revenues						
Internet, data communication, and information technology services	6,872	10,247	(6,827)	(929)	45	9,318
Pay TV	2,251	75	(2,251)	(75)	—	—
Others	20	486	(20)	(4)	—	482
Network revenues	1	712	0	(16)	1	696
Indihome revenues	—	—	10,761	1,967	10,761	1,967

26. PERSONNEL EXPENSES

The breakdown of personnel expenses is as follows:

	2017	2018	2019
Salaries and related benefits	7,821	8,077	7,945
Vacation pay, incentives, and other benefits	3,339	3,292	3,538
Pension benefit cost (Note 30)	1,700	1,120	840
LSA expense (Note 31)	255	161	290
Net periodic post-employment health care benefit cost (Note 30)	276	335	167
Other employee benefit cost (Note 30)	62	113	136
Other post-employment benefit cost (Note 30)	42	32	33
Others	34	48	63
Total	13,529	13,178	13,012

Refer to Note 32 for details of related parties transactions.

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27. OPERATION, MAINTENANCE, AND TELECOMMUNICATION SERVICE EXPENSES

The breakdown of operation, maintenance, and telecommunication service expenses is as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Operation and maintenance	19,929	25,215	20,153
Radio frequency usage charges (Notes 34c.i, 34c.ii)	4,276	5,473	5,736
Leased lines and CPE	5,255	5,125	4,709
Concession fees and USO charges	2,249	2,297	2,370
Cost of sales of handset (Note 8)	1,544	1,860	1,109
Electricity, gas, and water	1,037	1,051	1,102
Cost of SIM cards and vouchers (Note 8)	914	866	645
Vehicles rental and supporting facilities	301	413	386
Tower leases	472	480	264
Insurance	294	193	246
Others	332	920	733
Total	<u>36,603</u>	<u>43,893</u>	<u>37,453</u>

Refer to Note 32 for details of related parties transactions.

28. GENERAL AND ADMINISTRATIVE EXPENSES

The breakdown of general and administrative expenses is as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Allowance for expected credit losses	1,494	2,208	1,899
General expenses	1,449	1,792	1,651
Professional fees	498	823	793
Training, education, and recruitment	531	463	461
Travelling	475	415	410
Meeting	241	233	276
Social contribution	197	181	200
Collection expenses	135	157	176
Others	240	322	341
Total	<u>5,260</u>	<u>6,594</u>	<u>6,207</u>

Refer to Note 32 for details of related parties transactions.

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29. TAXATION

a. Prepaid income taxes

The breakdown of prepaid income taxes is as follows:

	<u>2018</u>	<u>2019</u>
The Company - Corporate income tax	494	406
Subsidiaries - Corporate income tax	420	992
Total	914	1,398
Current portion	(20)	(310)
Non-current portion (Note 14)	<u>894</u>	<u>1,088</u>

b. Prepaid other taxes

The breakdown of prepaid other taxes is as follows:

	<u>2018</u>	<u>2019</u>
The Company:		
VAT	2,167	2,724
Article 22 - Withholding tax on goods delivery and import	—	6
Article 23 - Withholding tax on services delivery	63	90
Subsidiaries:		
VAT	3,792	3,628
Article 4 (2) - Final tax	—	13
Article 23 - Withholding tax on services delivery	1	46
Total	6,023	6,507
Current portion	(3,325)	(3,251)
Non-current portion (Note 14)	<u>2,698</u>	<u>3,256</u>

c. Current income tax liabilities

The breakdown of current income tax liabilities is as follows:

	<u>2018</u>	<u>2019</u>
The Company:		
Article 25 - Installment of corporate income tax	1	6
Article 29 - Corporate income tax	—	1,059
Subsidiaries:		
Article 25 - Installment of corporate income tax	14	7
Article 29 - Corporate income tax	389	473
Total	<u>404</u>	<u>1,545</u>

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d. Other tax liabilities

The breakdown of other tax liabilities is as follows:

	<u>2018</u>	<u>2019</u>
The Company:		
Article 4 (2) - Final tax	18	43
Article 21 - Individual income tax	47	101
Article 22 - Withholding tax on goods delivery and import	3	7
Article 23 - Withholding tax on services delivery	36	38
Article 26 - Withholding tax on non-resident income	3	9
VAT - Tax collector	334	487
Sub-total	<u>441</u>	<u>685</u>
Subsidiaries:		
Article 4 (2) - Final tax	75	153
Article 21 - Individual income tax	113	108
Article 22 - Withholding tax on goods delivery and import	5	3
Article 23 - Withholding tax on services delivery	110	80
Article 26 - Withholding tax on non-resident income	7	5
VAT	25	852
Sub-total	<u>335</u>	<u>1,201</u>
Total	<u>776</u>	<u>1,886</u>

e. The components of consolidated income tax expense (benefit) are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Current			
The Company	586	236	1,272
Subsidiaries	10,771	9,196	9,347
Sub-total	<u>11,357</u>	<u>9,432</u>	<u>10,619</u>
Deferred			
The Company	(1,608)	(159)	15
Subsidiaries	209	93	(195)
Sub-total	<u>(1,399)</u>	<u>(66)</u>	<u>(180)</u>
Net income tax expense	<u>9,958</u>	<u>9,366</u>	<u>10,439</u>

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f. Reconciliation of income tax expense

The details of the net income tax expense for the years ended December 31, 2017, 2018 and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Estimated taxable income (loss) of the Company	(861)	400	6,007
Corporate income tax:			
Current corporate income tax expense:			
The Company	—	80	1,201
Subsidiaries	10,766	9,193	9,344
Current income tax expense of previous year:			
The Company	—	99	1
Final tax expense:			
The Company	586	57	70
Subsidiaries	5	3	3
Total income tax expense - current	<u>11,357</u>	<u>9,432</u>	<u>10,619</u>
Income tax expense (benefit) - deferred - effect of temporary differences at enacted maximum tax rates			
The Company			
Net periodic pension and other post-employment benefits costs	(197)	(27)	70
Cost to obtain contracts	—	38	54
Leases	0	2	7
Realization of accrual (accrual) of expenses and inventory write-off (provision for inventory obsolescence)	26	(36)	4
Amortization of (addition to) deferred installation fee	1	(18)	0
Tax loss utilization (recognition)	(172)	172	—
Allowance for expected credit losses	(206)	(132)	(88)
Provision for employee benefits	(38)	32	(15)
Amortization of intangible assets, land rights and others	(10)	(10)	(10)
Depreciation and gain on disposal or sale of property and equipment	(1,012)	(180)	(7)
Net	<u>(1,608)</u>	<u>(159)</u>	<u>15</u>
Telkomsel			
Leases	177	170	90
Trade receivables write-off (allowance for expected credit losses)	(41)	(88)	88
Amortization of license	12	58	33
Provision for employee benefits	(68)	(83)	(83)
Depreciation and gain on disposal or sale of property and equipment	(55)	64	(68)
Net	<u>25</u>	<u>121</u>	<u>60</u>
Subsidiaries - others - net	184	(28)	(255)
Net income tax benefit - deferred	<u>(1,399)</u>	<u>(66)</u>	<u>(180)</u>
Income tax expense - net	<u>9,958</u>	<u>9,366</u>	<u>10,439</u>

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The reconciliation between the income tax expense calculated by applying the applicable tax rate of 20% to the profit before income tax less income subject to final tax, and the net income tax expense as shown in the consolidated statements of profit or loss and other comprehensive income is as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Profit before income tax consolidation	42,628	36,077	38,299
Less: consolidated income subject to final tax - net	(1,491)	(1,277)	(1,141)
Net	41,137	34,800	37,158
Income tax expense calculated at the Company's applicable statutory tax rate of 20%	8,228	6,960	7,432
Difference in applicable statutory tax rate for subsidiaries	2,046	1,753	1,531
Non-deductible expenses	767	423	827
Final income tax expense	591	60	73
Unrecognized deferred tax	4	(2)	323
Deferred tax assets on fixed assets revaluation for tax purpose	(1,796)	—	—
Others	118	172	253
Net income tax expense	9,958	9,366	10,439

Tax Law No. 36/2008 with implementing rules under Government Regulation No. 56/2015 stipulates a reduction of 5% from the top rate applicable to qualifying listed companies, for those whose stocks are traded in the IDX which meet the prescribed criteria that the public owns 40% or more of the total fully paid and traded shares, and such shares are owned by at least 300 parties, with each party owning less than 5% of the total paid-up shares. These requirements must be met by a company for a period of 183 days in one fiscal year. The Company has met all of the required criteria; therefore, for the purpose of calculating income tax expense and liabilities for the financial reporting years ended December 31, 2017, 2018, and 2019, the Company has reduced the applicable tax rate by 5%.

The Company applied the tax rate of 20% for the years ended December 31, 2017, 2018, and 2019. The subsidiaries applied the tax rate of 25% for the years ended December 31, 2017, 2018, and 2019.

The Company will submit the above taxable income and current income tax expense computation in its Annual Tax Return for fiscal year 2019 that will be reported to the Tax Office based on prevailing regulations. The amount of corporate income tax for the year ended December 31, 2018, is different with what was reported in the annual tax return due to adjustment of fiscal correction from tax assessment for fiscal year 2017.

g. Tax assessments

(i) The Company

VAT fiscal year 2007

On November 15, 2013, the Company received Tax Underpayment Assessment Letters ("SKPKBs") for the underpayment of VAT for the fiscal period January to September and November 2007 amounting to Rp142 billion.

On January 20, 2014, the Company filed its objection to the Tax Authorities, and in December 2014, Tax Authorities issued a decision which rejected the objections. The Company accepted the assessment on the underpayment of VAT amounting to Rp22 billion (including penalty of Rp10

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billion). The accepted portion was charged to the 2014 consolidated statements of profit or loss and other comprehensive income. The portion of VAT international incoming call interconnection amounting to Rp120 billion (including penalty of Rp39 billion) is recognized as claim for tax refund.

On March 12, 2015, the Company has filed an appeal to the Tax Court on the rejection of its objection to the assessment of VAT international incoming call interconnection.

On August 1 and 2, 2017, the Tax Court issued a verdict regarding to VAT international incoming call interconnection appeal process. The verdict stated that the international incoming call interconnection transaction is the taxable services and categorized as export service that subject to 0% VAT and granted all the Company's appeal. In September 2017, the Company received tax refund amounting to Rp116 billion and for remaining balance amounting to Rp5 billion has been compensated to Tax Collection Letter ("STP") for withholding tax article 21 and SKPKBs of VAT on tax collected and self-assessed offshore VAT for fiscal year 2012. On October 26 and November 23, 2017, the Company received a notification from Tax Court that Tax Authorities filed a request for judicial review. On November 23 and December 21, 2017, to response the judicial review from Tax Authorities, the Company filed the contra memorandum for judicial review to Supreme Court ("SC") regarding to VAT international incoming call interconnection.

In September and November 2018, the Company received the verdicts from the SC, which were decided in April and October 2018, as the result of the tax audit for fiscal period June to August and November 2007. Based on the verdict, the SC rejected the Tax Authorities' judicial review and strengthen the Tax Court's verdict.

In January, February and March 2019, the Company received the SC's verdicts, which were decided in October and December 2018, as the result of the tax audit for fiscal period January to April and September 2007. On September 19, 2019, the Company received the verdict from the SC, which was decided on May, 8, 2019, as the result of the tax audit for fiscal period May 2007. Based on the verdict, the SC rejected the Tax Authorities' judicial review and strengthen the Tax Court's verdict. Accordingly, the Company has received all the SC's verdicts as the result of the assessment regarding to VAT international incoming call interconnection for fiscal period January to September and November 2007 that strengthen the Company's tax treatment regarding to the VAT for international incoming call interconnection transactions.

Income tax and VAT fiscal year 2011

On October 21, 2014, the Company received SKPKBs from the Tax Authorities as the result of the tax audit for fiscal year 2011. Based on SKPKBs, the Company received VAT underpayment assessment for the fiscal period January to December 2011 amounting to Rp182.5 billion (including penalty of Rp60 billion) and corporate income tax underpayment amounting to Rp2.8 billion (including penalty of Rp929 million). The accepted portion of SKPKBs amounting to Rp4.7 billion (including penalty of Rp2 billion) was charged to the 2014 consolidated statements of profit or loss and other comprehensive income. The portion of VAT international incoming call interconnection amounting to Rp177.9 billion (including penalty of Rp58 billion) is recognized as claim for tax refund.

VAT fiscal year 2011

On January 7, 2015, the Company filed an objection and on October 20, 2015, Tax Authorities issued a rejection regarding this objection.

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On January 20, 2016, the Company filed an appeal on the Tax Court on the rejection of its objection to the assessment of VAT international incoming call interconnection.

On April 4 and 5, 2017, the Tax Court issued a verdict which were decided on March 20, 2017, regarding to VAT international incoming call interconnection appeal process. The verdict stated that the international incoming call interconnection transaction is the taxable services and categorized as export service that subject to 0% VAT and granted the Company's appeal for the fiscal period January and September to December 2011 amounting to Rp73.9 billion. Tax Court rejected the Company's appeal for the fiscal period February to August 2011 amounting to Rp104 billion, since the Company did not meet the administrative requirement. Regarding this rejection, on June 19 and 21, 2017, the Company filed a request for judicial review. In May 2017, the Company received tax refund for the fiscal period January and September to December 2011 amounting to Rp73.9 billion which compensated with STP for fiscal year 2013 and 2014 amounting to Rp59.9 billion and Rp14 billion, respectively.

On October 15, 2018, the Company received a notification from Tax Court that Tax Authorities filed a request for judicial review for the fiscal period January and September to December 2011. On November 13, 2018, to response the judicial review from Tax Authorities, the Company filed contra memorandum for judicial review to SC for the fiscal period January and September to December 2011. In April and November 2018, the Company received a notification from Tax Court that Tax Authorities filed a contra memorandum for judicial review for the fiscal period February to August 2011.

In May to September, and November, 2019, the Company has received the SC's verdicts, which were decided in March, April, May, July, August, and September 2019, wherein the SC has granted the Company's judicial review for fiscal period February, March, and May to August 2011 and rejected the Tax Authorities judicial review for the fiscal period January and September to December 2011. On August 21, 2019, the Company received tax refund for fiscal period March, May, and June 2011 amounting to Rp44 billion. Regarding the verdict for the fiscal period April 2011, which was decided in April 2019, the SC granted the Company's appeal request and the verdict has been uploaded through the SC's website. Accordingly, as of the date of approval and authorization for the issuance of these consolidated financial statements, the appeal process for fiscal period January to December 2011 has obtained the legal force from the SC.

Income tax and VAT fiscal year 2012

On May 3, 2016, the Tax Authorities issued Field Tax Audit Notification Letter for fiscal period January to December 2012. On November 3, 2016, Tax Authorities issued SKPKBs for fiscal year 2012, wherein the Company was liable for underpayment of corporate income tax amounting to Rp991.6 billion (including penalty of Rp321.6 billion), VAT underpayment amounting to Rp467 billion (including penalty of Rp153.5 billion), self-assessed offshore VAT underpayment amounting to Rp1.2 billion (including penalty of Rp392 million), VAT on tax collected underpayment amounting to Rp57 billion (including penalty of Rp18.5 billion). The Company also received STP for VAT amounting to Rp37.5 billion, withholding tax article 21 underpayment amounting to Rp16.2 billion (including penalty of Rp5.3 billion), final withholding tax article 21 underpayment amounting to Rp1.2 billion (including penalty of Rp407 million), withholding tax article 23 underpayment amounting to Rp63.5 billion (including penalty of Rp20.6 billion), withholding tax article 4(2) underpayment amounting to Rp25 billion (including penalty of Rp8.1 billion), and withholding tax article 26 underpayment amounting to Rp197.6 billion (including penalty of Rp64 billion). The Company has agreed to the recalculation of input tax credit on international incoming call interconnection services amounting to Rp35.2 billion, corporate income tax amounting to Rp613.3

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million, and withholding tax article 26 amounting to Rp311.5 million that have been charged in the 2016 consolidated statements of profit or loss and other comprehensive income. On November 16, 2016, the Company filed an objection regarding to the remaining assessments.

On March 1, 2017 and May 9, 2017, the Company received the decision letter from Tax Authorities for the underpayment of self-assessed offshore VAT amounting to Rp1.8 million (including penalty of Rp0.6 million) and the underpayment of VAT on tax collected amounting to Rp4.4 billion (including penalty of Rp1.4 billion). Based on the decision letter, the Company decided to accept the decision from Tax Authorities.

On October 19, 2017, the Tax Authorities issued decision letter on Company's objections, wherein the Tax Authorities has decreased the Company's underpayment for corporate income tax and increased of the Company's underpayment for withholding tax article 21, final withholding tax article 21, withholding tax article 23, withholding tax article 4 (2), and withholding tax article 26. Based on decision letter, the Company was liable for underpayment of withholding tax article 21 amounting to Rp20.7 billion (including penalty of Rp6.7 billion), underpayment of final withholding tax article 21 amounting to Rp23.8 billion (including penalty of Rp7.7 billion), underpayment of withholding tax article 23 amounting to Rp115.7 billion (including penalty of Rp37.5 billion), underpayment of withholding tax article 4(2) amounting to Rp25 billion (including penalty of Rp8.1 billion), underpayment of withholding tax article 26 amounting to Rp197.6 billion (including penalty of Rp64.1 billion), and underpayment of corporate income tax amounting to Rp496.4 billion (including penalty of Rp161 billion). On October 30 and 31, 2017, the Tax Authorities issued decision letter on Company's objection, wherein the Tax Authorities has decreased and increased the Company's underpayment of VAT for the fiscal period January to December 2012 amounting to Rp429.3 billion (including penalty of Rp141.2 billion).

On January, 17 and 26, 2018, the Company filed an appeal on the rejection of its objection. In September 2018, the Tax Authorities issued the revision of decision letter on Company's objection, wherein the Tax Authorities has decreased the Company's underpayment of VAT for fiscal period March, April, September, and December 2012 amounting to Rp9.9 billion (including penalty of Rp3.2 billion). Therefore, as of December 31, 2018, the underpayment of VAT fiscal period January to December 2012 amounting to Rp419.4 billion (including penalty of Rp138 billion).

On December 16, 2019, the Company received the Tax Court's verdict regarding tax dispute for all taxes for fiscal year 2012. The Tax Court granted the several Company's request regarding withholding tax. Therefore, the amount should be paid by the Company for withholding tax article 21 amounting to Rp52.4 million (including penalty of Rp17 million), withholding tax article 23 amounting to Rp1.4 billion (including penalty of Rp0.4 billion), withholding tax article 26 amounting to Rp802.6 million (including penalty of Rp260.3 million), and withholding tax article 4 (2) amounting to Rp1.3 million (including penalty of Rp0.4 million). Regarding appeal request for final withholding tax article 21, the Tax Court granted all the Company's appeal. Furthermore, the Tax Court granted the several Company's appeal regarding corporate income tax and VAT. Therefore, the amount should be paid by the Company for corporate income tax amounting to Rp29.6 billion (including penalty of Rp9.6 billion) and VAT amounting to Rp51.1 billion (including penalty of Rp17.5 billion). As of the date of approval and authorization for the issuance of these consolidated financial statements, the Company has received all copies of the verdicts and agreed to paid the underpayment for withholding tax article 21, withholding tax article 23, withholding tax article 26, withholding tax article 4 (2), corporate income tax and VAT.

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VAT fiscal period November and December 2014

On September 11, 2017 and January 9, 2018, the Tax Authorities issued Field Tax Audit Notification Letter for fiscal period December and November 2014 regarding claim for tax refund overpayment of VAT correction for fiscal period November and December 2014 amounting to Rp129 billion and Rp86.7 billion, respectively. On July 25 and September 7, 2018, the Company received SKPLBs for fiscal period December and November 2014 amounting to Rp122.5 billion and Rp84.4 billion, respectively. On August 24, 2018, the Company received tax refund amounting to Rp122.5 billion for December 2014 period. In October 2018, the Company received tax refund amounting to Rp80.8 billion and for the remaining balance amounting to Rp3.6 billion for fiscal period November 2014 has been compensated to SKPKBs for self- assessed offshore VAT for fiscal period March, April, and June 2015, STP for VAT for fiscal period November 2014, and other tax assessment letters. As of the date of approval and authorization for the issuance of these consolidated financial statements, the Company did not received tax assessment letter for fiscal period January to October 2014.

Income tax and VAT fiscal year 2015

On August 23, 2016, the Tax Authorities issued Field Tax Audit Notification Letter for fiscal period January to December 2015.

On April 25, 2017, the Tax Authorities issued Tax Overpayment Assessment Letter (“SKPLB”) for overpayment of corporate income tax amounting to Rp147 billion, and SKPKBs for underpayment of VAT amounting to Rp13 billion (including penalty of Rp4.1 billion), underpayment of VAT on tax collected amounting to Rp6 billion (including penalty of Rp1.5 billion), underpayment of self-assessed offshore VAT amounting to Rp55.3 billion (including penalty of Rp16.8 billion). The Company also received STP for VAT amounting to Rp34 billion, VAT on tax collected amounting to Rp7 billion, and self-assessed offshore VAT amounting to Rp8 billion. The Company accepted tax audit decision amounting to Rp17 billion for corporate income tax, to transfer deductible temporary differences related to provision for incentives to fixed wireless (Flexi) subscribers’ migration amounting to Rp42 billion from Annual Tax Return of corporate income tax fiscal year 2015 to Annual Tax Return of corporate income tax fiscal year 2016. The Company also accepted underpayment of VAT, underpayment of VAT on tax collected, and STP for VAT on tax collected amounting to Rp13 billion, Rp5.9 billion, and Rp7.7 billion, respectively. The accepted portion was charged to the 2017 consolidated statements of profit or loss and other comprehensive income. On July 24, 2017, the Company filed Objection Letter to the Tax Authorities for corporate income tax amounting to Rp210.5 billion and self-assessed offshore VAT amounting to Rp55 billion.

On May 3 and 22, 2018, the Tax Authorities issued decision letter on Company’s objections for SKPLB of self-assessed offshore VAT amounting to Rp54.6 billion, wherein Tax Authorities has decreased the Company’s underpayment and granted all the Company’s objection. The Company has agreed with the Tax Authorities’s decision regarding SKPLB of self-assessed offshore VAT amounting to Rp793 million and has been charged in the 2018 consolidated statements of profit or loss and other comprehensive income. On July 18, 2018, the Tax Authorities issued Decision Letter on Company’s objections for SKPLB of corporate income tax, wherein the Tax Authorities has granted the several Company’s objection and additional amount of overpayment which should be received amounting to Rp76 billion. On October 10, 2018, the Company filed an appeal. As of the date of approval and authorization for the issuance of these consolidated financial statements, the appeal is still in process.

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Income tax and VAT fiscal year 2016

On August 25, 2017, the Tax Authorities issued Field Tax Audit Notification Letter for fiscal periods January to December 2016.

On June 7, 2018, Tax Authorities issued SKPLB of corporate income tax amounting to Rp15.3 billion, SKPKB of withholding tax article 26 amounting to Rp556.7 million (including penalty of Rp180.5 million), and SKPLB of VAT amounting to Rp922.7 billion. The Company accepted the assessment on the overpayment of corporate income tax amounting to Rp15.3 billion and for the remaining balance amounting to Rp99.1 billion was charged as current income tax expense on tax assesment, underpayment of withholding tax article 26 amounting to Rp557 million, and correction of VAT In amounting to Rp10.5 billion, STP for VAT on tax collected amounting to Rp7.1 billion, VAT on free gifts amounting to Rp7.3 billion, VAT on transfer asset amounting to Rp1.2 billion, and STP for VAT amounting to Rp1.7 billion. The accepted portion was charged to the 2018 consolidated statements of profit or loss and other comprehensive income. In July 2018, the Company received tax refund amounting to Rp882.7 billion and for the remaining balance amounting to Rp39.9 billion has been compensated to STP for VAT amounting to Rp31.9 billion, VAT on tax collected amounting to Rp7.1 billion, withholding tax article 23 amounting to Rp556 million, and withholding tax article 21 amounting to Rp300 million. On August 31, 2018, the Company filed an objection to the Tax Authorities for VAT international incoming call interconnection services amounting to Rp151.7 billion and STP for VAT amounting to Rp30.3 billion.

On March 11 and May 27, 2019, the Tax Authorities issued decision letter on Company's objections, wherein the Tax Authorities granted all objections from the Company and increased the amount of overpayment for the fiscal period January to December 2016. In April and July 2019, the Company received tax refund amounting to Rp151.7 billion and amounting to Rp1.9 million has been compensated to withholding tax article 21 for several fiscal periods.

Income tax and VAT fiscal year 2017

On November 6, 2018, the Tax Authorities issued Field Tax Audit Notification Letter for fiscal period January to December 2017.

On November 13 and 14, 2019, the Tax Authorities issued SKPLB of corporate income tax amounting to Rp294.4 billion from overpayment amounting to Rp294.5 billion, SKPLB of VAT amounting to Rp746.9 billion from overpayment amounting to Rp748.3 billion, and SKPKB of withholding tax article 21 amounting to Rp1.8 billion (including penalty of Rp0.5 billion). The Company accepted the tax corrections amounting to Rp1.5 billion which consists of corporate income tax amounting to Rp0.1 billion and input VAT which cannot be credited amounting to Rp1.4 billion. Furthermore, the Company received STP and SKPKB regarding VAT on tax collected amounting to Rp1.2 billion and Rp957 million (including penalty of Rp0.3 billion), respectively. On November 14, 2019, the Tax Authorities issued Notice of Nil Tax Assessment ("SKPN") regarding self-assessed offshore VAT, withholding tax article 21 final, withholding tax article 22, withholding tax article 26, withholding tax article 4 (2). The accepted portion has been charged in the consolidated statements of profit or loss and other comprehensive income. As of the date of approval and authorization for the issuance of these consolidated financial statements, the Company has received corporate income tax refund amounting to Rp292.3 billion and amounting to Rp2.1 billion has been compensated to SKPKB and STP of VAT on tax collected.

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Income tax fiscal year 2018

In December 2019, the Company reported overpayment and claim for tax refund on Annual Corporate Income Tax Return for fiscal year 2018 amounting to Rp102.7 billion. As of the date of approval and authorization for the issuance of these consolidated financial statements, the Company has not yet receive Field Tax Audit Notification Letter from Tax Authorities, as a follow up of the claim of tax refund.

(ii) **Telkomsel**

Income tax and VAT fiscal year 2006

In December 2013, the Tax Court accepted Telkomsel's appeal on the 2006 VAT and withholding taxes totaling Rp116 billion.

In February 2014, Telkomsel received the refund.

On July 3, 2015, in response to Telkomsel's letter claiming for interest income related to favorable 2006 VAT and withholding tax verdicts, the Tax Authorities informed Telkomsel that the claim cannot be granted since the Tax Authorities filed a request for judicial review to the SC.

On August 19, 2016, Telkomsel received a notification from the Tax Court that the Tax Authorities filed a request for judicial review to SC for the fiscal year 2006 VAT amounting to Rp108 billion. Telkomsel filed a contra memorandum for judicial review to the SC on September 14, 2016.

In April 2017, Tax Authorities has granted Telkomsel's claim for interest income which subsequently compensate with the corporate income tax installment for the period of April 2017.

In July 2018, Telkomsel received the official verdict from the SC which stated that the SC has rejected the Tax Authorities judicial review.

Income tax and VAT fiscal year 2010

In May and June 2012, Telkomsel received the refund of the penalty on the underpayment of income tax article 25 for fiscal year 2010 amounting to Rp15.7 billion based on the Tax Court's verdict. On July 17, 2012, the Tax Authorities filed a judicial review to the SC on the Tax Court's Verdict. On September 14, 2012, Telkomsel filed a contra memorandum for judicial review to the SC. On May 24, 2012, Telkomsel filed an objection to the Tax Authorities for the 2010 underpayment of VAT amounting to Rp290.6 billion (including penalty of Rp67 billion) and recorded it as a claim for tax refund.

On May 2, 2016, Telkomsel received a notification from the Tax Court that the Tax Authorities filed a request for judicial review for 2010 underpayment of VAT amounting to Rp290.6 billion. On May 27, 2016, Telkomsel filed a contra memorandum for judicial review to the SC. In July 2016, conservatively, Telkomsel recognized the tax penalty amounting to Rp15.7 billion as expense based on its previous experience on a similar income tax case.

On May 9, 2017, Telkomsel received the official verdict from the SC which rejected Telkomsel's judicial review, therein Telkomsel paid the underpayment on July 10, 2017. On July 19, 2017, Telkomsel filed the second judicial review to contest against the SC's verdict.

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On August 8, 2018, the SC accepted Telkomsel's judicial review.

On February 18, 2019, Telkomsel received "Surat Pelaksanaan Putusan Peninjauan Kembali" ("SP2PK") from the Tax Authorities regarding the VAT for fiscal year 2010 amounting to Rp290.6 billion. On March 25, 2019, Telkomsel received tax refund from the Tax Authorities regarding the VAT for fiscal year 2010 amounting to Rp290.6 billion.

Income tax and VAT fiscal year 2011

On February 15, 2016, Telkomsel filed an appeal to the Tax Authorities for the underpayment of corporate income tax for fiscal year 2011 amounting to Rp250 billion (including penalty of Rp81.1 billion). Subsequently, on March 17, 2016, Telkomsel also filed an appeal to the Tax Court for the underpayment of VAT for fiscal year 2011 amounting to Rp1.2 billion (including penalty of Rp392 million).

On February 6, 2017, Telkomsel received the Tax Court's verdict for VAT cases of Rp1.2 billion in favor of Telkomsel. Subsequently, Telkomsel received the tax refund in March and June 2017. On March 2, 2017, Telkomsel received the Tax Court's verdict for the underpayment of corporate income tax which partially accepted Telkomsel's appeal amounting to Rp247.6 billion and recorded the amount as part of claim for tax refund. On August 31, 2017, Telkomsel received the tax refund. In July and October 2017, Telkomsel received notification that the Tax Authorities filed a request for judicial review to the SC for corporate income tax and VAT amounting to Rp62 billion and Rp1.2 billion, respectively. Telkomsel submitted the contra memorandum for judicial review in August and November 2017.

As of December 31, 2018, Telkomsel has received partial official verdicts from the SC which rejected the Tax Authorities's judicial review for VAT case amounting to Rp1.1 billion.

On October 17, 2019, Telkomsel filed a letter to Tax Court requesting the remaining official verdicts regarding VAT which have been announced by SC in favor of Telkomsel. In October 2019, Telkomsel has received the official verdict from the SC which rejected the Tax Authorities' judicial review for corporate income tax amounting to Rp62 billion.

Income tax and VAT fiscal year 2014

On May 31, 2019, Telkomsel received the SKPKB and STP for the fiscal year 2014 amounting to Rp150.6 billion (including penalty of Rp54.6 billion). Telkomsel accepted and paid the portion of Rp16.5 billion on June 27, 2019 and recorded as other expense. On August 20, 2019, Telkomsel has paid amounting to Rp99.1 billion and recorded as claim for tax refund. Subsequently, on August 23, 2019, Telkomsel filed an objection to the Tax Authorities amounting to Rp134.1 billion. As of the date of approval and authorization for the issuance of these consolidated financial statements, the objection is still in process.

Income tax and VAT fiscal year 2015

On August 1, 2019, Telkomsel received the SKPKB and STP for fiscal year 2015 amounting to Rp384.8 billion (including penalty of Rp128.6 billion). On August 28, 2019, Telkomsel has paid the underpayment amount (including the penalty). For the amount of Rp34.6 billion was charged to the statement of profit or loss and other comprehensive income and for the remaining portion amounting to Rp350.2 billion was recorded as claim for tax refund. On September 24, 2019, Telkomsel filed an objection to the Tax Authorities amounting to Rp350.2 billion. As of the date of

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approval and authorization for the issuance of these consolidated financial statements, the objection is still in process.

h. Tax incentives

In December 2015, the Company took advantage of the Economic Policy Package V in the form of tax incentives for fixed assets revaluation as stipulated in the Ministry of Finance Regulation ("PMK") No. 191/PMK.010/2015 juncto PMK No. 233/PMK.03/2015 juncto PMK No. 29/PMK.03/2016. In accordance with the PMK, the Company is allowed to revalue its fixed assets for tax purposes and will obtain lower income tax when the application of the revaluation is submitted to Directorate General of Taxes ("DGT") during the period between the effective date of PMK and December 31, 2016. The final income tax is determined at a rate ranging from 3%-6% on the excess of the revalued amount of fixed assets over its original net book value depending on the timing of submission of application to the DGT.

On December 29, 2015, the Company filed an application for fixed assets revaluation using self-assessed revaluation amount and has paid the related final income tax amounting to Rp750 billion. Based on the PMK, the self-assessed revaluation amount should be evaluated by a Public Independent Appraiser ("KJPP") or valuation specialist, which is registered with the Government before December 31, 2016. Upon verification of the completeness and accuracy of the application, the DGT may issue approval letter within 30 days after the receipt of complete application. The Company has appointed a KJPP to perform fixed assets revaluation of the Company.

The Company submitted the fixed asset revaluation documents phase 1 to DGT on September 29, 2016. On November 10, 2016, DGT issued approval regarding fixed assets revaluation amounting to Rp7,078 billion with related final income tax amounting to Rp212 billion.

On December 15, 2016, the Company submitted its fixed assets revaluation application for Phase 2 to DGT and expects to be eligible for 6% tax rate. In its application, the Company estimated a revaluation increment of Rp8,961 billion with estimated final income tax of Rp538 billion. In 2017, the Company received fixed asset revaluation report from KJPP. Based on the report, the value of fixed asset increased amounting to Rp8,982 billion with related final income tax amounting to Rp540 billion. The Company has paid final income tax amounting to Rp2 billion as addition on September 22, 2017 and November 15, 2017. On November 21, 2017, DGT issued approval regarding fixed assets revaluation amounting to Rp8,982 billion with related final income tax amounting to Rp540 billion.

A deductible temporary difference arose on this fixed assets revaluation for tax purposes since the tax base of the fixed assets is higher than their carrying amount. The deductible temporary difference results in a deferred tax asset since the economic benefits will flow to the Company in a form of reduction of taxable income in the future periods when the assets are recovered.

In 2016 and 2017, the Company recognized deferred tax assets amounting to Rp1,415 billion and Rp1,796 billion, respectively, on the phase 1 and phase 2 revaluation increment on fixed assets as approved by the DGT.

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i. Deferred tax assets and liabilities

The details of the Group's deferred tax assets and liabilities are as follows:

	December 31, 2017	Effect of Adoption of new accounting standards	(Charged) credited to profit or loss	Charged to other comprehensive income	Charged to equity	December 31, 2018
The Company						
Deferred tax assets:						
Net periodic pension and other post-employment benefit costs	1,102	—	27	(466)	—	663
Allowance for expected credit losses	594	(40)	132	—	—	686
Provision for employee benefits	247	—	(32)	—	—	215
Difference between accounting and tax bases of property and equipment	240	—	180	—	—	420
Deferred installation fee	74	—	18	—	—	92
Accrued expenses and provision for inventory obsolescence	43	—	36	—	—	79
Land rights, intangible assets, and others	(1)	—	10	—	—	9
Fiscal loss	172	—	(172)	—	—	—
Total deferred tax assets	2,471	(40)	199	(466)	—	2,164
Deferred tax liabilities:						
Cost to obtain contracts	—	(42)	(38)	—	—	(80)
Valuation of long-term investment	(11)	—	—	—	—	(11)
Leases	1	—	(2)	—	—	(1)
Total deferred tax liabilities	(10)	(42)	(40)	—	—	(92)
Deferred tax assets of the Company - net	2,461	(82)	159	(466)	—	2,072
Deferred tax assets of the other subsidiaries - net	343	0	75	(8)	(5)	405
Total deferred tax assets - net	2,804	(82)	234	(474)	(5)	2,477
Telkomsel						
Deferred tax assets:						
Provision for employee benefits	677	—	83	(119)	—	641
Allowance for expected credit losses	184	98	88	—	—	370
Total deferred tax assets	861	98	171	(119)	—	1,011
Deferred tax liabilities:						
Leases	(726)	—	(170)	—	—	(896)
Difference between accounting and tax bases of property and equipment	(552)	—	(64)	—	—	(616)
License amortization	(60)	—	(58)	—	—	(118)
Total deferred tax liabilities	(1,338)	—	(292)	—	—	(1,630)
Deferred tax liabilities of Telkomsel - net	(477)	98	(121)	(119)	—	(619)
Deferred tax liabilities of the other subsidiaries - net	(456)	(16)	(47)	(5)	(54)	(578)
Total deferred tax liabilities - net	(933)	82	(168)	(124)	(54)	(1,197)

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	December 31, 2018	(Charged) credited to profit or loss	Credited to other comprehensive income	Charged to equity	December 31, 2019
The Company					
Deferred tax assets:					
Net periodic pension and other post-employment cost	663	(70)	244	—	837
Allowance for expected credit losses	686	88	—	—	774
Difference between accounting and tax bases of property and equipment	420	7	—	—	427
Provision for employee benefits	215	15	—	—	230
Deferred installation fee	92	0	—	—	92
Accrued expenses and provision for inventory obsolescence	79	(4)	—	—	75
Land rights, intangible assets, and others	9	10	—	—	19
Total deferred tax assets	2,164	46	244	—	2,454
Deferred tax liabilities:					
Cost to obtain contracts	(80)	(54)	—	—	(134)
Valuation of long-term investment	(11)	—	—	—	(11)
Leases	(1)	(7)	—	—	(8)
Total deferred tax liabilities	(92)	(61)	—	—	(153)
Deferred tax assets of the Company - net	2,072	(15)	244	—	2,301
Deferred tax assets of the other subsidiaries - net	405	155	10	(92)	478
Total deferred tax assets - net	2,477	140	254	(92)	2,779
Telkomsel					
Deferred tax assets:					
Provision for employee benefits	641	83	141	—	865
Allowance for expected credit losses	370	(88)	—	—	282
Total deferred tax assets	1,011	(5)	141	—	1,147
Deferred tax liabilities:					
Leases	(896)	(90)	—	—	(986)
Difference between accounting and tax bases of property and equipment	(616)	68	—	(9)	(557)
License amortization	(118)	(33)	—	—	(151)
Total deferred tax liabilities	(1,630)	(55)	—	(9)	(1,694)
Deferred tax liabilities of Telkomsel - net	(619)	(60)	141	(9)	(547)
Deferred tax liabilities of the other subsidiaries - net	(578)	100	16	(195)	(657)
Total deferred tax liabilities - net	(1,197)	40	157	(204)	(1,204)

As of December 31, 2018 and 2019, the aggregate amounts of temporary differences associated with investments in subsidiaries and associated companies, for which deferred tax liabilities have not been recognized were Rp31,296 billion and Rp29,118 billion, respectively.

Realization of the deferred tax assets is dependent upon the Group's capability in generating future profitable operations. Although realization is not assured, the Group believes that it is probable that these deferred tax assets will be realized through reduction of future taxable income when temporary differences reverse. The amount of deferred tax assets is considered realizable; however, it can be reduced if actual future taxable income is lower than estimates.

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j. Administration

From 2008 to 2019, the Company has been consecutively entitled to income tax rate reduction of 5% for meeting the requirements in accordance with the Government Regulation No. 81/2007 as amended by Government Regulation No. 77/2013 and the latest by Government Regulation No. 56/2015 in conjunction with PMK No. 238/PMK.03/2008. On the basis of historical data, for the year ended December 31, 2018 and 2019, the Company calculates the deferred tax using the tax rate of 20%.

The taxation laws of Indonesia require that the Company and its local subsidiaries submit individual tax returns on the basis of self-assessment. Under prevailing regulations, the DGT may assess or amend taxes within a certain period. For fiscal years 2007 and earlier, the period is within ten years from the time the tax became due, but not later than 2013, while for fiscal years 2008 and onwards, the period is within five years from the time the tax became due.

The Ministry of Finance of the Republic of Indonesia has issued Regulation No. 85/PMK.03/2012 dated June 6, 2012 as amended by PMK No. 136/ PMK.03/2012 dated August 16, 2012 concerning the appointment of State-Owned Enterprises ("SOEs") to withhold, deposit and report VAT and Sales Tax on Luxury Goods ("PPnBM") according to the procedures outlined in the Regulation which is effective from July 1, 2012. The Ministry of Finance of the Republic of Indonesia also has issued Regulation No. 224/PMK.011/2012 dated December 26, 2012 concerning the appointment of SOEs for withholding tax article 22 as amended by PMK No. 34/PMK.010/2017 dated March 1, 2017. The Company has withheld, deposited, and reported the VAT, PPnBM and also withholding tax article 22 in accordance with the Regulations.

In May 2019, the Company was appointed as Low Risk Taxable Entrepreneur through DGT Decree No.KEP-00080/WPJ.19/KP.04/2019. In accordance with the Ministry of Finance Regulation No. 39/PMK.03/2018 dated April 12, 2018 as amended by PMK No. 117/PMK.03/2019 dated August 16, 2019, the Company was given the preliminary return on tax overpayment as referred to the taxation laws.

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30. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

The details of pension and other post-employment benefit liabilities are as follows:

	Notes	2018	2019
Pension benefit and other post-employment benefit obligations			
Pension benefit			
The Company - funded	30a.i.a		
Defined pension benefit obligation	30a.i.a.i	1,057	2,338
Additional pension benefit obligation	30a.i.a.ii	6	—
The Company - unfunded	30a.i.b	1,830	1,479
Telkomsel	30a.ii	1,541	2,209
Telkomsat		0	0
MD Media		0	0
Infomedia		—	0
Projected pension benefit obligations		4,434	6,026
Net periodic post-employment health care benefit	30b	195	996
Other post-employment benefit	30c	419	366
Obligation under the Labor Law	30d	507	690
Total		<u>5,555</u>	<u>8,078</u>

The details of net pension benefit expense recognized in the consolidated statements of profit or loss and other comprehensive income is as follows:

	Notes	2017	2018	2019
Pension benefit cost				
The Company - funded	30a.i.a			
Defined pension benefit obligation	30a.i.a.i	557	511	362
Additional pension benefit obligation	30a.i.a.ii	657	69	1
The Company - unfunded	30a.i.b	239	198	163
Telkomsel	30a.ii	247	342	314
MD Media		0	0	0
Infomedia		0	0	0
Telkomsat		0	0	0
Total periodic pension benefit cost	26	1,700	1,120	840
Net periodic post-employment health care benefit cost	26,30b	276	335	167
Other post-employment benefit cost	26,30c	42	32	33
Obligation under the Labor Law	26,30d	62	113	136
Total		<u>2,080</u>	<u>1,600</u>	<u>1,176</u>

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The amounts recognized in OCI are as follows:

	Notes	2017	2018	2019
Defined benefit plan actuarial gain (losses)				
The Company - funded	30a.i.a			
Defined pension benefit obligation	30a.i.a.i	(1,154)	1,236	(1,116)
Additional pension benefit obligation	30a.i.a.ii	(419)	934	7
The Company - unfunded	30a.i.b	(100)	137	(94)
Telkomsel	30a.ii	(530)	514	(561)
MD Media		(2)	0	0
Infomedia		(1)	0	0
Telkomsat		0	0	0
Post-employment health care benefit cost	30b	(551)	2,559	(634)
Other post-employment benefit	30c	(40)	24	(15)
Obligation under the Labor Law	30d	(72)	14	(107)
Sub-total		(2,869)	5,418	(2,520)
Deferred tax effect at the applicable tax rates	29i	494	(598)	411
Defined benefit plan actuarial (losses) gain - net of tax		<u>(2,375)</u>	<u>4,820</u>	<u>(2,109)</u>

a. Pension benefit cost

i. The Company

a. Funded pension plan

i. Defined pension benefit obligation

The Company sponsors a defined benefit pension plan for employees with permanent status prior to July 1, 2002. The plan is governed by the pension laws in Indonesia and managed by Telkom Pension Fund ("Dana Pensiun Telkom" or "Dapen"). Pension Fund Management in accordance with the Pension Fund and Investment Directives Regulations determined by the Founder is carried out by the Board of Management. The Board of Management is monitored by the Oversight Board consisting of representatives of the Company and participants. The pension benefits are paid based on the participating employees' latest basic salary at retirement and the number of years of their service. The participating employees contribute 18% (before March 2003: 8.4%) of their basic salaries to the pension fund. The Company made contributions to the pension fund amounting to Rp233 billion for year period ended December 31, 2019. The Company did not make contributions to the pension fund for the year ended December 31, 2018.

Risks exposed to defined benefit programs are risks such as asset volatility and changes in bond yields. The project liabilities are calculated using a discount rate that refers to the level of government bond yields, if the return on program assets is lower, it will result in a program deficit. A decrease in the yield of government bonds will increase the program liabilities, although this will be offset in part by an increase in the value of the program bonds held. The Company ensures that the investment position is set within the framework of asset-liability matching ("ALM") that has been formed to achieve long-term results that are in line with the liabilities in the defined benefit pension plan. Within the ALM framework, the Company's objective is to adjust its pension assets and liabilities by investing in a well diversified portfolio to produce an optimal rate of return, taking into account the level of

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risk. Investment in the program has been well diversified, so that one investment's poor performance will not have a material impact on all asset groups.

The following table presents the changes in projected pension benefit obligations, changes in pension benefit plan assets, funded status of the pension plan, and net amount recognized in the consolidated statements of financial position as of December 31, 2018 and 2019, under the defined benefit pension plan:

	<u>2018</u>	<u>2019</u>
Changes in projected pension benefit obligations		
Projected pension benefit obligations at beginning of year	22,354	20,121
Charged to profit or loss:		
Service costs	384	259
Interest costs	1,459	1,599
Pension plan participants' contributions	38	33
Actuarial (gain) losses recognized in OCI	(2,691)	1,514
Pension benefits paid	(1,423)	(1,465)
Projected pension benefit obligations at end of year	<u>20,121</u>	<u>22,061</u>
	<u>2018</u>	<u>2019</u>
Changes in pension benefit plan assets		
Fair value of pension plan assets at beginning of year	20,814	19,064
Interest income	1,357	1,524
Return on plan assets (excluding amount included in net interest expense)	(1,455)	398
Employer's contributions	—	233
Pension plan participants' contributions	38	32
Pension benefits paid	(1,423)	(1,465)
Provision of additional benefit	(205)	—
Plan administration cost	(62)	(63)
Fair value of pension plan assets at end of year	<u>19,064</u>	<u>19,723</u>
Projected pension benefit obligations at end of year	<u>1,057</u>	<u>2,338</u>

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As of December 31, 2018 and 2019, plan assets consist of:

	2018		2019	
	Quoted in active market	Unquoted	Quoted in active market	Unquoted
Cash and cash equivalents	873	—	521	—
Equity instruments:				
Finance	1,456	—	1,735	—
Consumer goods	1,336	—	1,085	—
Infrastructure, utilities and transportation	530	—	540	—
Construction, property and real estate	199	—	210	—
Basic industry and chemical	124	—	135	—
Trading, service and investment	420	—	395	—
Mining	112	—	159	—
Agriculture	55	—	70	—
Miscellaneous industries	362	—	292	—
Equity-based mutual fund	1,336	—	1,027	—
Fixed income instruments:				
Corporate bonds	—	5,267	—	6,077
Government bonds	6,166	—	6,493	—
Mutual funds	54	—	85	—
Non-public equity:				
Direct placement	—	288	—	374
Property	—	178	—	186
Others	—	308	—	339
Total	13,023	6,041	12,747	6,976

Pension plan assets include Series B shares issued by the Company with fair values totalling Rp372 billion and Rp346 billion, representing 1.95% and 1.75% of total plan assets as of December 31, 2018 and 2019, respectively, and bonds issued by the Company with fair value totalling Rp314 billion and Rp341 billion, representing 1.65% and 1.73% of total plan assets as of December 31, 2018 and 2019, respectively.

The expected return is determined based on market expectation for returns over the entire life of the obligation by considering the portfolio mix of the plan assets. The actual return on plan assets was Rp(158) billion and Rp1,858 billion for the years ended December 31, 2018 and 2019, respectively. Based on the Company's policy issued on January 14, 2014 regarding Dapen's Funding Policy, the Company will not contribute to Dapen when Dapen's Funding Sufficiency Ratio ("FSR") is above 105%. Based on Dapen's financial statement as of December 31, 2019, Dapen's FSR is below 105%. Therefore, the Company will contribute to the defined benefit pension plan in 2020.

Based on the Company's policy issued on June 7, 2017 regarding Pension Regulation by Dapen, the Company provided other benefits in the form of additional benefit in 2017 amounted to Rp4.5 million to monthly pension beneficiaries who retired before end of June 2002 and Rp2.25 million to monthly pension beneficiaries who retired starting from the end of June 2002 until the end of April 2017.

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The movement of the projected pension benefit obligations for the years ended December 31, 2018 and 2019 are as follows:

	<u>2018</u>	<u>2019</u>
Projected pension benefit obligations (prepaid pension benefit cost) at beginning of year	1,540	1,057
Net periodic pension benefit cost	548	398
Provision of additional pension benefit	205	—
Employer Contribution	—	(233)
Actuarial (gain) losses recognized in OCI	(2,691)	1,514
Return on plan assets (excluding amount included in net interest expense)	1,455	(398)
Projected pension benefit obligations at end of year	<u>1,057</u>	<u>2,338</u>

The components of net periodic pension benefit cost for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Service costs	366	384	259
Past service cost - plan amendments	94	—	—
Plan administration cost	57	62	63
Net interest cost	66	102	76
Net periodic pension benefit cost	583	548	398
Amount charged to subsidiaries under contractual agreements	(26)	(37)	(36)
Net periodic pension benefit cost less cost charged to subsidiaries	<u>557</u>	<u>511</u>	<u>362</u>

Amounts recognized in OCI for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Actuarial (gain) losses recognized during the year due to:			
Experience adjustments	163	329	(677)
Changes in financial assumptions	2,699	(3,020)	1,952
Changes in demographic assumptions	—	—	239
Return on plan assets (excluding amount included in net interest expense)	(1,708)	1,455	(398)
Net	<u>1,154</u>	<u>(1,236)</u>	<u>1,116</u>

The actuarial valuation for the defined benefit pension plan was performed based on the measurement date as of December 31, 2017, 2018, and 2019, with reports dated February 27, 2018, April 1, 2019 and April 20, 2020, respectively, by PT Towers Watson Purbajaga (“TWP”), an independent actuary in association with Willis Towers Watson (“WTW”) (formerly Towers

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Watson). The principal actuarial assumptions used by the independent actuary as of December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Discount rate	6.75 %	8.25 %	7.25 %
Rate of compensation increases	8.00 %	8.00 %	8.00 %
Indonesian mortality table	2011	2011	2011

ii. Additional pension benefit obligation

Based on the Company's policy issued on June 7, 2017 regarding Pension Regulation by Dapen, the Company established additional benefit fund at maximum 10% of surplus of defined benefit plan, when FSR is above 105% and return on investment is above actuarial discount rate of pension fund.

The additional pension benefit obligation for the year ended December 31, 2019 is as follows:

	<u>2018</u>	<u>2019</u>
Changes in projected pension benefit obligations		
Projected pension benefit obligations at beginning of year	1,076	104
Charged to profit or loss:		
Interest costs	69	9
Actuarial gain recognized in OCI	(948)	(17)
Pension benefits paid	(93)	(96)
Projected pension benefit obligations at end of year	104	—
Changes in pension benefit plan assets		
Fair value of pension plan assets at beginning of year	—	98
Interest income from assets	—	8
Provision of additional benefit	205	—
Return of benefit plan assets	(14)	(5)
Pension benefits paid	(93)	(96)
Fair value of pension plan assets at end of year	98	5
(Surplus) deficit in the program	6	(5)
Changes in asset ceiling excluding amount in net interest	—	5
Projected pension benefit obligations at end of year	6	—

Program assets for Additional Benefits have been set aside since 2018 according to the Oversight Board's approval. As of December 31, 2019, the program assets had been fully paid to the pension beneficiaries.

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Changes in additional pension benefit obligation for the years ended December 31, 2018 and 2019 are as follows:

	<u>2018</u>	<u>2019</u>
Additional pension benefit obligation at beginning of year	1,076	6
Net periodic pension benefit cost	69	1
Provision of additional benefit	(205)	—
Actuarial gain recognized in OCI	(948)	(12)
Return on plan asset	14	5
Projected additional pension benefit obligation at end of year	<u>6</u>	<u>—</u>

The components of additional pension benefit cost for the years ended December 31, 2017, 2018 and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Past service costs	657	—	—
Net interest costs	—	69	1
Pension benefit costs	<u>657</u>	<u>69</u>	<u>1</u>

Amounts recognized in OCI for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Actuarial gain recognized during the year due to:			
Experience adjustment	—	(773)	(17)
Changes in financial assumption	419	(175)	—
Return on plan assets (excluding amount included in net interest expense)	—	14	5
Changes in asset ceiling excluding amount in net interest	—	—	5
Total	<u>419</u>	<u>(934)</u>	<u>(7)</u>

The actuarial valuation for the additional pension benefit plan was performed based on the measurement date as of December 31, 2017, 2018 and 2019, with report dated February 27, 2018, April 1, 2019 and April 20, 2020, by TWP, an independent actuary in association with WTW. The principal actuarial assumptions used by the independent actuary for the years ended December 31, 2017, 2018, and 2019 is as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Rate of return on investment	9.50% - 10.25 %	9.30% - 10.00 %	9.00% - 9.50 %
Discount rate	6.75 %	8.25 %	7.25 %
Actuarial discount rate of pension fund	9.25% - 9.50 %	9.25% - 9.50 %	9.25% - 9.50 %
Rate of compensation increases	8.00 %	8.00 %	8.00 %
Indonesian mortality table	2011	2011	2011

b. Unfunded pension plan

The Company sponsors unfunded defined benefit pension plans and a defined contribution pension plan for its employees.

The defined contribution pension plan is provided to employees with permanent status hired on or after July 1, 2002. The plan is managed by Financial Institutions Pension Fund (*Dana*

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Pensiun Lembaga Keuangan or “DPLK”). The Company’s contribution to DPLK is determined based on a certain percentage of the participants’ salaries and amounted to Rp13 billion and Rp55 billion for the years ended December 31, 2018 and 2019, respectively.

Since 2007, the Company has provided pension benefit based on uniformization for both participants prior to and from April 20, 1992 effective for employees retiring beginning February 1, 2009. In 2010, the Company replaced the uniformization with *Manfaat Pensiun Sekaligus* (“MPS”). MPS is given to those employees reaching retirement age, upon death or upon becoming disabled starting from February 1, 2009.

The Company also provides benefits to employees during a pre-retirement period in which they are inactive for 6 months prior to their normal retirement age of 56 years, known as pre-retirement benefits (*Masa Persiapan Pensiun* or “MPP”). During the pre-retirement period, the employees still receive benefits provided to active employees, which include, but are not limited to, regular salary, health care, annual leave, bonus, and other benefits. Since 2012, the Company has issued a new requirement for MPP effective for employees retiring since April 1, 2012, whereby the employee is required to file a request for MPP and if the employee does not file the request, such employee is required to work until the retirement date.

The following table presents the changes in the unfunded projected pension benefit obligations for MPS and MPP for the years ended December 31, 2018 and 2019:

	2018	2019
Unfunded projected pension benefit obligations at beginning of year	2,384	1,830
Charged to profit or loss:		
Service costs	54	29
Net interest costs	144	134
Actuarial (gain) losses recognized in OCI	(137)	94
Benefits paid by employer	(615)	(608)
Unfunded projected pension benefit obligations at end of year	1,830	1,479

The components of total periodic pension benefit cost for the years ended December 31, 2017, 2018, and 2019 are as follows:

	2017	2018	2019
Service costs	51	54	29
Net interest costs	188	144	134
Total periodic pension benefit cost	239	198	163

Amounts recognized in OCI for the years ended December 31, 2017, 2018, and 2019 are as follows:

	2017	2018	2019
Actuarial (gain) losses recognized during the year due to:			
Experience adjustments	19	27	12
Changes in demographic assumptions	—	(21)	37
Changes in financial assumptions	81	(143)	45
Net	100	(137)	94

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The actuarial valuation for the defined benefit pension plan was performed, based on the measurement date as of December 31, 2017, 2018, and 2019, with reports dated February 27, 2018, April 1, 2019, and April 20, 2020 respectively, by TWP, an independent actuary in association with WTW.

The principal actuarial assumptions used by the independent actuary for the years ended December 31, 2017, 2018, and 2019 are as follows:

	2017	2018	2019
Discount rate	6.00% - 6.75 %	8.00% - 8.25 %	6.50% - 7.25%
Rate of compensation increases	6.10% - 8.00 %	6.10% - 8.00 %	6.10% - 8.00%
Indonesian mortality table	2011	2011	2011

ii. Telkomsel

Telkomsel sponsors a defined benefit pension plan to its employees. Under this plan, employees are entitled to pension benefits based on their latest basic salary or take-home pay (excluding functional allowance) and number of years of their service. PT Asuransi Jiwasraya ("Jiwasraya"), a state-owned life insurance company, manages the plan under an annuity insurance contract. Until 2004, the employees contributed 5% of their monthly salaries to the plan and Telkomsel contributed any remaining amount required to fund the plan. Starting 2005, the entire contributions have been fully made by Telkomsel.

Telkomsel's contributions to Jiwasraya amounted to Rp125 billion and Rp207 billion for the years ended December 31, 2018 and 2019, respectively.

The following table presents the changes in projected pension benefit obligation, changes in pension benefit plan assets, funded status of the pension plan and net amount recognized in the consolidated statements of financial position for the years ended December 31, 2018 and 2019, under Telkomsel's defined benefit pension plan:

	2018	2019
Changes in projected pension benefit obligation		
Projected pension benefit obligation at beginning of year	2,928	2,734
Charged to profit or loss:		
Service costs	213	187
Net Interest costs	203	224
Actuarial (gain) losses recognized in OCI	(583)	614
Benefit paid	(27)	(21)
Projected pension benefit obligation at end of year	2,734	3,738
Changes in pension benefit plan assets		
Fair value of plan assets at beginning of year	1,089	1,193
Interest income	74	97
Return on plan assets (excluding amount included in net interest expense)	(68)	53
Employer's contributions	125	207
Benefit paid	(27)	(21)
Fair value of pension plan assets at end of year	1,193	1,529
Pension benefit obligation at end of year	1,541	2,209

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Movements of the pension benefit obligation during the years ended December 31, 2018 and 2019:

	<u>2018</u>	<u>2019</u>
Pension benefit obligation at beginning of year	1,839	1,541
Periodic pension benefit cost	342	314
Actuarial (gain) losses recognized in OCI	(583)	614
Return on plan assets (excluding amount included in net interest expense)	68	(53)
Employer's contributions	<u>(125)</u>	<u>(207)</u>
Pension benefit obligation at end of year	<u>1,541</u>	<u>2,209</u>

The components of the periodic pension benefit cost for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Service costs	149	213	187
Net interest costs	98	129	127
Total	<u>247</u>	<u>342</u>	<u>314</u>

Amounts recognized in OCI for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Actuarial (gain) losses recognized during the year due to:			
Experience adjustments	(77)	192	115
Changes in financial assumptions	661	(774)	499
Return on plan assets (excluding amount included in net interest expense)	(54)	68	(53)
Net	<u>530</u>	<u>(514)</u>	<u>561</u>

The actuarial valuation for the defined benefit pension plan was performed based on the measurement date as of December 31, 2017, 2018, and 2019, with reports dated February 8, 2018, February 14, 2019, and February 28, 2020 respectively, by TWP, an independent actuary in association with WTW. The principal actuarial assumptions used by the independent actuary as of December 31, 2017, 2018, and 2019, are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Discount rate	7.00 %	8.25 %	7.50 %
Rate of compensation increases	8.00 %	8.00 %	8.00 %
Indonesian mortality table	2011	2011	2011

b. Post-employment health care benefit cost

The Company provides post-employment health care benefits to all of its employees hired before November 1, 1995 who have worked for the Company for 20 years or more when they retire, and to their eligible dependents. The requirement to work for 20 years does not apply to employees who retired prior to June 3, 1995. The employees hired by the Company starting from November 1, 1995 are no longer entitled to this plan. The plan is managed by *Yayasan Kesehatan Telkom* ("Yakes Telkom").

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The defined contribution post-employment health care benefit plan is provided to employees with permanent status hired on or after November 1, 1995 or employees with terms of service less than 20 years at the time of retirement. The Company did not make contributions to Yakes Telkom for the years ended December 31, 2018 and 2019.

The following table presents the changes in projected post-employment health care benefit obligation, changes in post-employment health care benefit plan assets, funded status of the post-employment health care benefit plan, and net amount recognized in the Company's consolidated statements of financial position as of December 31, 2018 and 2019:

	<u>2018</u>	<u>2019</u>
Changes in projected post-employment health care benefit obligation		
Projected post-employment health care benefit obligation at beginning of year	15,448	12,423
Charged to profit or loss:		
Interest costs	1,102	1,062
Actuarial (gain) losses recognized in OCI	(3,641)	905
Post-employment health care benefits paid	(486)	(567)
Projected post-employment health care benefit obligation at end of year	<u>12,423</u>	<u>13,823</u>
Changes in post-employment health care benefit plan assets		
Fair value of plan assets at beginning of year	13,029	12,228
Interest income	927	1,045
Return on plan assets (excluding amount included in net interest expense)	(1,082)	271
Post-employment health care benefits paid	(486)	(567)
Plan administration costs	(160)	(150)
Fair value of pension plan assets at end of year	<u>12,228</u>	<u>12,827</u>
Projected for post-employment health care benefit obligation - net	<u>195</u>	<u>996</u>

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As of December 31, 2018 and 2019, plan assets consist of:

	2018		2019	
	Quoted in active market	Unquoted	Quoted in active market	Unquoted
Cash and cash equivalents	1,115	—	563	—
Equity instruments:				
Finance industries	799	—	954	—
Manufacturing and consumer	799	—	706	—
Infrastructure and telecommunication	332	—	317	—
Construction	190	—	181	—
Wholesale	177	—	159	—
Mining	77	—	117	—
Other Industries:				
Biotechnology and pharma industry	85	—	96	—
Services	60	—	75	—
Agriculture	32	—	49	—
Others	3	—	3	—
Equity-based mutual funds	1,204	—	1,202	—
Fixed income instruments:				
Fixed income mutual funds	7,020	—	8,071	—
Unlisted shares:				
Private placement	—	335	—	334
Total	11,893	335	12,493	334

Yakes Telkom plan assets also include Series B shares issued by the Company with fair value totalling Rp249 billion and Rp222 billion, representing 2.03% and 1.73% of total plan assets as of December 31, 2018 and 2019, respectively.

The expected return is determined based on market expectation for the returns over the entire life of the obligation by considering the portfolio mix of the plan assets. The actual return on plan assets was Rp(315) billion and Rp1,166 billion for the years ended December 31, 2018 and 2019, respectively.

The movements of the projected post-employment health care benefit obligation for the years ended December 31, 2018 and 2019 are as follows:

	2018	2019
Projected post-employment health care benefit obligation at beginning of year	2,419	195
Net periodic post-employment health care benefit costs	335	167
Actuarial (gain) losses recognized in OCI	(3,641)	905
Return on plan assets (excluding amount included in net interest expense)	1,082	(271)
Projected post-employment health care benefit obligation at end of year	195	996

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The components of net periodic post-employment health care benefit cost for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Plan administration costs	140	160	150
Net interest costs	136	175	17
Net periodic post-employment health care benefit cost	<u>276</u>	<u>335</u>	<u>167</u>

Amounts recognized in OCI for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Actuarial (gain) losses recognized during the year due to:			
Experience adjustments	(1,198)	(1,100)	810
Changes in financial assumptions	2,658	(2,541)	1,190
Changes in demographic assumptions	—	—	(1,095)
Return on plan assets (excluding amount included in net interest expense)	(909)	1,082	(271)
Net	<u>551</u>	<u>(2,559)</u>	<u>634</u>

The actuarial valuation for the post-employment health care benefits plan was performed based on the measurement date as of December 31, 2017, 2018, and 2019, with reports dated February 27, 2018, April 1, 2019, and April 20, 2020 respectively, by TWP, an independent actuary in association with WTW. The principal actuarial assumptions used by the independent actuary as of December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Discount rate	7.25 %	8.75 %	8.00 %
Health care costs trend rate assumed for next year	7.00 %	7.00 %	7.00 %
Ultimate health care costs trend rate	7.00 %	7.00 %	7.00 %
Year that the rate reaches the ultimate trend rate	2018	2018	2019
Indonesian mortality table	2011	2011	2011

c. Other post-employment benefits cost

The Company provides other post-employment benefits in the form of cash paid to employees on their retirement or termination. These benefits consist of final housing allowance (*Biaya Fasilitas Perumahan Terakhir* or "BFPT") and home passage leave (*Biaya Perjalanan Pensiun dan Purnabhakti* or "BPP").

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The movements of the unfunded projected other post-employment benefit obligations for the years ended December 31, 2018 and 2019 are as follows:

	<u>2018</u>	<u>2019</u>
Projected other post-employment benefit obligations at beginning of year	510	419
Charged to profit or loss:		
Service costs	6	4
Net interest costs	26	29
Actuarial (gain) losses recognized in OCI	(24)	15
Benefits paid by employer	(99)	(101)
Projected other post-employment benefits obligations at the end of year	<u>419</u>	<u>366</u>

The components of the projected other post-employment benefit cost for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Current Service costs	6	6	4
Net interest costs	36	26	29
Total	<u>42</u>	<u>32</u>	<u>33</u>

Amounts recognized in OCI for the years ended December 31, 2017, 2018, and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Actuarial (gain) losses recognized during the year due to:			
Experience adjustments	10	40	(25)
Changes in demographic assumptions	—	(34)	20
Changes in financial assumptions	30	(30)	20
Total	<u>40</u>	<u>(24)</u>	<u>15</u>

The actuarial valuation for the other post-employment benefits plan was performed based on measurement date as of December 31, 2017, 2018 and 2019, with reports dated February 27, 2018, April 1, 2019, and April 20, 2020 respectively, by TWP, an independent actuary in association with WTW. The principal actuarial assumptions used by the independent actuary as of December 31, 2017, 2018, and 2019, are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Discount rate	5.75 %	8.00 %	6.25 %
Indonesian mortality table	2011	2011	2011

d. Obligation under the Labor Law

Under Law No. 13 Year 2003, the Group is required to provide minimum pension benefits, if not covered yet by the sponsored pension plans, to its employees upon retirement. Total obligation recognized as of December 31, 2018 and 2019 amounted to Rp507 billion and Rp690 billion, respectively. The related employee benefits cost charged to expense amounted to Rp62 billion, Rp113 billion and Rp136 billion for the years ended December 31, 2017, 2018 and 2019, respectively (Note 26). The actuarial losses recognized in OCI amounted to Rp72 billion, Rp(14) billion and Rp107 billion for the years ended December 31, 2017, 2018 and 2019, respectively.

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e. Maturity Profile of Defined Benefit Obligation (“DBO”)

The timing of benefits payments and weighted average duration of DBO for 2018 and 2019 are as follows:

Time Period	Expected Benefits Payment					
	The Company			Telkomsel	Post-employment health care benefits	Other post-employment benefits
	Funded		Unfunded			
Defined pension benefit obligation	Additional pension benefit obligation	Unfunded	Telkomsel	Post-employment health care benefits	Other post-employment benefits	
December 31, 2018						
Within next 10 years	16,370	—	948	2,498	5,620	485
Within 10-20 years	20,349	—	160	7,880	6,913	91
Within 20-30 years	16,207	20	29	6,680	6,217	39
Within 30-40 years	9,400	38	9	1,580	3,193	3
Within 40-50 years	3,383	30	—	—	661	—
Within 50-60 years	644	50	—	—	22	—
Within 60-70 years	62	101	—	—	0	—
Within 70-80 years	2	—	—	—	—	—
Weighted average duration of DBO	9.11 years	9.11 years	3.97 years	10.58 years	17.41 years	3.13 years
December 31, 2019						
Within next 10 years	18,392	—	1,587	3,486	6,064	418
Within 10-20 years	21,855	—	125	9,420	8,001	68
Within 20-30 years	20,154	—	52	7,150	7,501	38
Within 30-40 years	15,351	—	18	1,267	4,123	3
Within 40-50 years	4,265	—	—	—	958	—
Within 50-60 years	468	—	—	—	42	—
Within 60-70 years	32	—	—	—	—	—
Within 70-80 years	—	—	—	—	—	—
Weighted average duration of DBO	10.16 years	10.16 years	4.69 years	10.44 years	13.34 years	3.65 years

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f. Sensitivity Analysis

As of December 31, 2019, and 2018, 1% change in discount rate and rate of compensation would have effect on DBO, as follow:

Sensitivity	Discount Rate		Rate of Compensation	
	1% Increase	1% Decrease	1% Increase	1% Decrease
	Increase (decrease) in amounts		Increase (decrease) in amounts	
December 31, 2018				
Funded:				
Defined pension benefit obligation	(1,568)	1,832	275	(286)
Additional pension benefit obligation	(2)	(1)	—	—
Unfunded	(41)	38	42	(45)
Telkomsel	(497)	562	294	(276)
Post-employment health care benefits	(1,428)	1,815	1,783	(1,508)
Other post-employment benefits	(12)	13	—	—
December 31, 2019				
Funded:				
Defined pension benefit obligation	(1,952)	2,416	257	(275)
Additional pension benefit obligation	—	—	—	—
Unfunded	(40)	33	34	(43)
Telkomsel	(686)	777	390	(366)
Post-employment health care benefits	(1,551)	1,888	2,030	(1,689)
Other post-employment benefits	(12)	13	—	—

The sensitivity analysis has been determined based on a method that extrapolates the impact on DBO as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

The sensitivity results above determine the individual impact on the Plan's DBO at the end of the year. In reality, the Plan is subject to multiple external experience items which may move the DBO in similar or opposite directions, and the Plan's sensitivity to such changes can vary over time.

There are no changes in the methods and assumptions used in preparing the sensitivity analysis from the previous period.

31. LSA PROVISIONS

Telkomsel and Telkomsat provide certain cash awards or certain number of days leave benefits to their employees based on the employees' length of service requirements, including LSA and LSL. LSA are either paid at the time the employees reach certain years of employment, or at the time of termination. LSL are either certain number of days leave benefit or cash, subject to approval by management, provided to employees who meet the requisite number of years of service and reach a certain minimum age.

The obligation with respect to these awards which was determined based on an actuarial valuation using the Projected Unit Credit method, amounted to Rp852 billion and Rp1,066 billion as of December 31, 2018 and 2019, respectively. The related benefit costs charged to expense amounted to Rp255 billion, Rp161 billion and Rp290 billion for the years ended December 31, 2017, 2018, and 2019, respectively (Note 26).

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32. RELATED PARTY TRANSACTIONS

a. Nature of relationships and accounts/transactions with related parties

Details of the nature of relationships and accounts/transactions with significant related parties are as follows:

Related parties	Nature of relationships parties	Nature of accounts/ transactions
The Government Ministry of Finance	Majority stockholder	Internet and data service revenues, other telecommunication service revenues, operation and maintenance expense, finance income, finance costs and investment in financial instruments
Government agencies	Entities under common control	Network service revenues, internet and data service revenues and other telecommunication revenues
MoCI	Entity under common control	Concession fees, radio frequency usage charges, USO charges, telecommunication service revenues and operation and maintenance expenses
Indosat	Entity under common control	Interconnection revenues, leased lines revenues, satellite transponder usage revenues, interconnection expenses, telecommunication facilities usage expenses, operating and maintenance expenses, and usage of data communication network system expenses
PT Pertamina (Persero) ("Pertamina")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
State-owned banks	Entities under common control	Finance income and finance costs
Bank Mandiri	Entity under common control	Internet and data service revenues, other telecommunication service revenues, finance income and finance costs
BNI	Entity under common control	Internet and data service revenues, other telecommunication service revenues, finance income and finance costs
BRI	Entity under common control	Internet and data service revenues, other telecommunication service revenues, finance income and finance costs
BTN	Entity under common control	Internet and data service revenues, other telecommunication service revenues, and finance income
PT Kereta Api Indonesia ("KAI")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
PT Pegadaian ("Pegadaian")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
PT Garuda Indonesia Tbk. ("Garuda Indonesia")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
PT Kimia Farma ("Kimia Farma")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
PT Pos Indonesia ("Pos Indonesia")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
Perum Peruri ("Peruri")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
PT Taspen ("Taspen")	Entity under common control	Internet and data service revenues, and other telecommunication service revenues
PT Asuransi Jasa Indonesia ("Jasindo")	Entity under common control	Fixed assets insurance expenses
PT Perusahaan Listrik Negara ("PLN")	Entity under common control	Electricity expenses

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Details of the nature of relationships and accounts/transactions with significant related parties are as follows:

Related parties	Nature of relationships parties	Nature of accounts/ transactions
PT Mandiri Manajemen Investasi	Entity under common control	Available-for-sale financial assets
Bahana TCW	Entity under common control	Available-for-sale financial assets, bonds and notes
PT Sarana Multi Infrastruktur	Entity under common control	Finance costs
Tiphone	Associated company	Distribution of SIM cards and pulse reload voucher
Indonusa	Associated company	Pay TV expenses
Teltranet	Associated company	CPE expenses
PT Poin Multi Media Nusantara ("POIN")	Other related entity	Purchase of handset
PT Perdana Mulia Makmur ("PMM")	Other related entity	Purchase of handset
Yakes Telkom	Other related entity	Health expenses
Koperasi Pegawai Telkom ("Kopegtel")	Other related entity	Purchase of property and equipment, construction and installation services, leases of buildings expenses, lease of vehicles expenses, purchases of vehicles, purchases of materials and construction service, maintenance and cleaning service expenses, and RSA revenues
Koperasi Pegawai Telkomsel ("Kisel")	Other related entity	Internet and data service revenues, other telecommunication service revenues, leases of vehicles expenses, printing and distribution of customer bills expenses, collection fee, other services fee, distribution of SIM cards and pulse reload voucher, and purchase of property and equipment
PT Graha Informatika Nusantara ("Gratika")	Other related entity	Network service revenues, operation and maintenance expenses, purchase of property and equipment and construction services, and distribution of SIM card and pulse reload voucher
Directors	Key management personnel	Honorarium and facilities
Commissioners	Supervisory personnel	Honorarium and facilities

The outstanding balances of trade receivables and payables at year-end are unsecured and interest free and settlement occurs in cash. There have been no guarantees provided or received for any related party receivables or payables. As of December 31, 2019, the Group recorded impairment of receivables from related parties of (Rp188) billion. Impairment assessment is undertaken each financial year through examining the current status of existing receivables and historical collection experience.

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b. Significant transactions with related parties

The following are significant transactions with related parties:

	2017		2018		2019	
	Amount	% of total revenues	Amount	% of total revenues	Amount	% of total revenues
Revenue						
Majority stockholder						
Ministry of Finance	280	0.22	258	0.20	101	0.07
Entities under common control						
Government Agencies	2,568	2.00	3,720	2.84	3,894	2.87
Indosat	1,789	1.39	1,002	0.77	860	0.63
BRI	237	0.18	397	0.30	619	0.46
BNI	105	0.08	188	0.14	578	0.43
Taspen	—	—	7	0.01	298	0.22
BTN	129	0.10	179	0.14	258	0.19
Pegadaian	115	0.09	228	0.17	229	0.17
Pos Indonesia	47	0.04	50	0.04	216	0.16
Bank Mandiri	157	0.12	173	0.13	204	0.15
Pertamina	94	0.07	183	0.14	196	0.14
Peruri	—	—	120	0.09	164	0.12
Kimia Farma	36	0.03	72	0.06	161	0.12
KAI	18	0.01	83	0.06	144	0.11
Garuda Indonesia	55	0.04	105	0.08	112	0.08
Others	637	0.50	762	0.57	824	0.61
Sub-total	5,987	4.65	7,269	5.54	8,757	6.46
Associated companies	178	0.15	55	0.04	75	0.06
Other related entities	315	0.25	73	0.06	104	0.08
Total	6,760	5.27	7,655	5.84	9,037	6.67

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	2017		2018		2019	
	Amount	% of total expenses	Amount	% of total expenses	Amount	% of total expenses
Expenses						
Majority stockholder						
Ministry of Finance	12	0.01	—	—	—	—
Entities under common control						
MoCI	6,533	7.77	8,109	8.68	8,767	9.49
PLN	2,269	2.70	2,596	2.78	2,434	2.64
Indosat	890	1.06	933	1.00	676	0.73
Jasindo	168	0.20	349	0.37	267	0.29
Others	114	0.14	511	0.55	301	0.33
Sub-total	9,974	11.87	12,498	13.38	12,445	13.48
Associated companies						
Indonusa	264	0.31	306	0.33	437	0.47
Teltranet	123	0.15	181	0.19	173	0.19
Others	34	0.04	11	0.01	79	0.09
Sub-total	421	0.50	498	0.53	689	0.75
Other related entities						
Kopegstel	713	0.85	836	0.90	1,049	1.14
Kisel	813	0.97	916	0.98	818	0.89
PMM	404	0.48	850	0.91	587	0.64
POIN	405	0.48	850	0.91	547	0.59
Yakes Telkom	139	0.17	128	0.14	133	0.14
Others	83	0.10	190	0.20	141	0.15
Sub-total	2,557	3.05	3,770	4.04	3,275	3.55
Total	12,964	15.43	16,766	17.95	16,409	17.78

	2017		2018		2019	
	Amount	% of total finance income	Amount	% of total finance income	Amount	% of total finance income
Finance income						
Majority stockholder						
Ministry of Finance	0	0.00	—	—	—	—
Entities under common control						
State-owned banks	863	60.18	596	58.78	743	67.85
Government agencies	34	2.37	12	1.18	18	1.64
Others	35	2.44	6	0.59	10	0.91
Total	932	64.99	614	60.55	771	70.40

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	2017		2018		2019	
	Amount	% of total finance cost	Amount	% of total finance cost	Amount	% of total finance cost
Finance costs						
Majority stockholder						
Ministry of Finance	54	1.95	41	1.16	33	0.61
Entities under common control						
State-owned banks	820	29.61	1,140	32.36	1,332	24.43
Sarana Multi Infrastruktur	94	3.39	110	3.12	263	4.82
Total	968	34.95	1,291	36.64	1,628	29.86

	2017		2018		2019	
	Amount	% of total revenues	Amount	% of total revenue	Amount	% of total revenues
Distribution of SIM card and pulse reload voucher						
Other related entities						
Tiphone	3,888	3.03	4,390	3.36	5,927	4.37
Kisel	4,181	3.26	4,221	3.23	5,077	3.75
Gratika	408	0.32	474	0.36	563	0.42
Total	8,477	6.61	9,085	6.95	11,567	8.54

	2018		2019	
	Amount	% of total property and equipment purchased	Amount	% of total property and equipment purchased
Purchase of property and equipment (Note 12)				
Entities under common control	207	0.62	80	0.22
Other related entities				
Kopegtel	144	0.43	158	0.43
Others	328	0.97	115	0.31
Sub-total	472	1.40	273	0.74
Total	679	2.02	353	0.96

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c. Balance of accounts with related parties

	2018		2019	
	Amount	% of total assets	Amount	% of total assets
Cash and cash equivalents (Note 4)	14,544	7.06	14,841	6.31
Other current financial assets (Note 5)	470	0.23	71	0.03
Trade receivables - net (Note 6)	2,014	0.98	1,741	0.74
Other current assets				
Entities under common control				
MoCI	3,478	1.69	3,719	1.58
Others	85	0.04	49	0.02
Sub-total	3,563	1.73	3,768	1.60
Other related entities	78	0.04	63	0.03
Total	3,641	1.77	3,831	1.63
Other non-current assets				
Entities under common control				
MoCI	1,743	0.85	1,488	0.63
Others	28	0.01	22	0.01
Sub-total	1,771	0.86	1,510	0.64
Other related entities	18	0.01	12	0.01
Total	1,789	0.87	1,522	0.65

	2018		2019	
	Amount	% of total liabilities	Amount	% of total liabilities
Trade payables (Note 16)				
Majority stockholder				
Ministry of Finance	2	0.00	5	0.00
Entities under common control				
MoCI	1,477	1.66	1,374	1.17
Indosat	122	0.14	68	0.06
Others	313	0.35	256	0.22
Sub-total	1,912	2.15	1,698	1.45
Other related entities				
Kopegtel	279	0.31	269	0.23
Others	259	0.29	193	0.16
Sub-total	538	0.60	462	0.39
Associated companies	37	0.04	77	0.07
Total	2,489	2.79	2,242	1.91

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Accrued expenses				
Majority stockholder				
Ministry of Finance	7	0.01	6	0.01
Entities under common control				
State-owned banks	61	0.07	75	0.06
Others	86	0.10	88	0.07
Sub-total	147	0.17	163	0.13
Other related entities				
Kisel	183	0.21	188	0.16
Others	13	0.01	15	0.01
Sub-total	196	0.22	203	0.17
Total	350	0.40	372	0.31
		2018		2019
		Amount	% of total liabilities	Amount
				% of total liabilities
Advances from customers				
Majority stockholder				
Ministry of Finance	19	0.02	19	0.02
Entity under common control				
PLN	12	0.01	6	0.01
Others	—	0.00	2	0.00
Sub-total	12	0.01	8	0.01
Total	31	0.03	27	0.03
Short-term bank loans (Note 19)	956	1.08	3,655	3.10
Two-step loans (Note 20a)	949	1.07	736	0.62
Long-term bank loans (Note 20c)	12,620	14.20	15,319	13.00
Other borrowings (Note 20d)	2,244	2.52	3,740	3.17

d. Significant agreements with related parties

i. The Government

The Company obtained two-step loans from the Government (Note 20a).

ii. Indosat

The Company has an agreement with Indosat to provide international telecommunications services to the public.

The Company has also entered into an interconnection agreement between the Company's fixed line network (Public Switched Telephone Network or "PSTN") and Indosat's Global System for Mobile ("GSM") cellular telecommunications network in connection with the implementation of Indosat Multimedia Mobile services and the settlement of related interconnection rights and obligations.

The Company also has an agreement with Indosat for the interconnection of Indosat's GSM mobile cellular telecommunications network with the Company's PSTN, which enable each party's customers to make domestic calls between Indosat's GSM mobile network and the Company's

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fixed line network, as well as allowing Indosat's mobile customers to access the Company's IDD service by dialing "007".

The Company has been handling customer billings and collections for Indosat. Indosat is gradually taking over the activities and performing its own direct billing and collection. The Company has received compensation from Indosat computed at 1% of the collections made by the Company starting from January 1, 1995, as well as the billing process expenses which are fixed at a certain amount per record. On December 11, 2008, the Company and Indosat agreed to implement IDD service charge tariff which already took into account the compensation for billing and collection. The agreement is valid and effective starting from January to December 2012, and can be applied until a new agreement becomes available.

On December 28, 2006, the Company and Indosat signed amendments to the interconnection agreements for the fixed line networks (local, SLJJ and international) and mobile network for the implementation of the cost-based tariff obligations under the MoCI Regulation No.8/Year 2006. These amendments took effect starting on January 1, 2007.

Telkomsel also entered into an agreement with Indosat for the provision of international telecommunications services to its GSM mobile cellular customers.

The Company provides leased lines to Indosat and its subsidiaries, namely PT Indosat Mega Media and PT Aplikasi Lintasarta ("Lintasarta"). The leased lines can be used by these companies for telephone, telegraph, data, telex, facsimile or other telecommunication services.

Dayamitra signed a SPA with Indosat related to the purchase of Indosat's towers. In addition, Dayamitra and Indosat also signed MTLA, which stipulated that Indosat agreed to lease back telecommunication towers that were acquired (Note 1e).

iii. Others

Kisel is a co-operative that was established by Telkomsel's employees to engage in car rental services, printing and distribution of customer bills, collection and other services principally for the benefit of Telkomsel. Telkomsel also has dealership agreements with Kisel for distribution of SIM cards and pulse reload vouchers.

e. Remuneration of key management and supervisory personnel

Key management personnel consists of the Directors of the Company and supervisory personnel consists of Board of Commissioners.

The Company provides remuneration in the form of salaries/honorarium and facilities to support the governance and oversight duties of the Board of Commissioners and the leadership and management duties of the Directors. The total of such remuneration is as follows:

	2017		2018		2019	
	Amount	% of total expenses	Amount	% of total expenses	Amount	% of total expenses
Board of Directors	175	0.21 %	360	0.39 %	270	0.29 %
Board of Commissioners	65	0.08 %	166	0.18 %	123	0.13 %

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The amounts disclosed in the table are the amounts recognized as an expense during the reporting periods.

33. OPERATING SEGMENT

The Group has four primary reportable segments, namely mobile, consumer, enterprise, and WIB. The mobile segment provides mobile voice, SMS, value added services, and mobile broadband. The consumer segment provides Indihome (bundled services of fixed wireline, pay TV and internet) and other telecommunication services to home customers. The enterprise segment provides end-to-end solution to corporate and institutions. The WIB segment provides interconnection services, leased lines, satellite, VSAT, broadband access, information technology services, data and internet services to Other Licensed Operator companies and institutions. Other segment represents Digital Service Operating Segment that does not meet the disclosure requirements for a reportable segment. There is no operating segments have been aggregated to form the reportable segments.

Management monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on operating profit or loss and is measured on the basis of Indonesian Financial Accounting Standards which differ from IFRS primarily in the accounting for land rights. However, the financing activities and income taxes are managed on a group basis and not separately monitored and allocated to operating segments.

Segment revenues and expenses include transactions between operating segments and are accounted at prices that management believes represent market prices.

	2017					Total Segment	Adjustments & eliminations	Total consolidated
	Mobile	Consumer	Enterprise	WIB	Others			
Segment results								
Revenues								
External revenues	90,073	11,105	19,130	7,439	126	127,873	383	128,256
Inter-segment revenues	3,086	287	16,801	15,305	602	36,081	(36,081)	—
Total segment revenues	<u>93,159</u>	<u>11,392</u>	<u>35,931</u>	<u>22,744</u>	<u>728</u>	<u>163,954</u>	<u>(35,698)</u>	<u>128,256</u>
Segment expenses	<u>(53,834)</u>	<u>(11,923)</u>	<u>(35,680)</u>	<u>(17,944)</u>	<u>(1,049)</u>	<u>(120,430)</u>	<u>36,076</u>	<u>(84,354)</u>
Segment results	<u>39,325</u>	<u>(531)</u>	<u>251</u>	<u>4,800</u>	<u>(321)</u>	<u>43,524</u>	<u>378</u>	<u>43,902</u>
Other information								
Capital expenditures	<u>(15,134)</u>	<u>(6,544)</u>	<u>(3,637)</u>	<u>(7,120)</u>	<u>(11)</u>	<u>(32,446)</u>	<u>(708)</u>	<u>(33,154)</u>
Depreciation and amortization	<u>(13,560)</u>	<u>(2,839)</u>	<u>(2,136)</u>	<u>(2,382)</u>	<u>(22)</u>	<u>(20,939)</u>	<u>462</u>	<u>(20,477)</u>
Provision recognized in current period	<u>(291)</u>	<u>(385)</u>	<u>(668)</u>	<u>(127)</u>	<u>(2)</u>	<u>(1,473)</u>	<u>(21)</u>	<u>(1,494)</u>

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	2018					Total Segment	Adjustments & eliminations	Total consolidated
	Mobile	Consumer	Enterprise	WIB	Others			
Segment results								
Revenues								
External revenues	85,338	13,891	21,054	10,084	130	130,497	291	130,788
Inter-segment revenues	3,880	2,290	17,995	16,678	886	41,729	(41,729)	—
Total segment revenues	89,218	16,181	39,049	26,762	1,016	172,226	(41,438)	130,788
Segment expenses	(55,449)	(15,531)	(37,833)	(20,634)	(1,073)	(130,520)	38,265	(92,255)
Segment results	33,769	650	1,216	6,128	(57)	41,706	(3,173)	38,533
Other information								
Capital expenditures	(14,373)	(6,958)	(5,325)	(6,321)	(18)	(32,995)	(625)	(33,620)
Depreciation and amortization	(13,095)	(3,060)	(2,128)	(3,146)	(21)	(21,450)	8	(21,442)
Provision recognized in current period	(438)	(438)	(764)	(71)	(5)	(1,716)	(363)	(2,079)
2019								
	Mobile	Consumer	Enterprise	WIB	Others	Total Segment	Adjustments & eliminations	Total consolidated
Segment results								
Revenues								
External revenues	87,897	17,706	18,701	10,609	197	135,110	447	135,557
Inter-segment revenues	3,163	786	16,834	16,265	1,289	38,337	(38,337)	—
Total segment revenues	91,060	18,492	35,535	26,874	1,486	173,447	(37,890)	135,557
Segment expenses	(56,864)	(15,904)	(36,768)	(21,111)	(1,546)	(132,193)	40,630	(91,563)
Segment results	34,196	2,588	(1,233)	5,763	(60)	41,254	2,740	43,994
Other information								
Capital expenditures	(11,963)	(10,581)	(5,614)	(7,907)	(21)	(36,086)	(399)	(36,485)
Depreciation and amortization	(13,829)	(3,438)	(2,737)	(3,262)	(21)	(23,287)	(3,917)	(27,204)
Provision recognized in current period	(521)	(665)	(973)	(121)	(13)	(2,293)	581	(1,712)

Adjustments and eliminations:

	2017	2018	2019
Segment results	43,524	41,706	41,254
Operating loss of operating business	(786)	(798)	(599)
Other eliminations and adjustments	1,195	(2,063)	1,739
IFRS reconciliation	(31)	(312)	1,600
Consolidated operating income	43,902	38,533	43,994

Geographic information:

	2017	2018	2019
External revenues			
Indonesia	125,970	127,442	130,979
Foreign countries	2,286	3,346	4,578
Total	128,256	130,788	135,557

The revenue information above is based on the location of the customers.

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There is no revenue from major customer which exceeds 10% of total revenues for the year ended December 31, 2019.

	2017	2018	2019
Non-current operating assets			
Indonesia	130,169	144,296	156,068
Foreign countries	3,233	3,648	3,552
Total	133,402	147,944	159,620

Non-current operating assets for this purpose consist of property and equipment and intangible assets.

34. SIGNIFICANT COMMITMENTS AND AGREEMENTS

a. Capital expenditures

As of December 31, 2019, capital expenditures committed under the contractual arrangements, principally relating to procurement and installation of data, internet and information technology, cellular, transmission equipment, and cable network are as follows:

Currencies	Amounts in foreign currencies (in millions)	Equivalent in Rupiah
Rupiah	—	9,412
U.S. dollar	87.78	1,219
Euro	1.06	16
HKD	0.77	1
Total		10,648

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The above balance includes the following significant agreements:

(i) The Company

Contracting parties	Initial date of agreement	Significant provisions of the agreement
The Company, TII and NEC Corporation	May 12, 2016	Procurement and Installation Agreement Sistem Komunikasi Kabel Laut ("SKKL") Indonesia Global Gateway
The Company and PT Datacomm Diangraha	November 19, 2018	Procurement and Installation Agreement Metro Ethernet Platform Nokia-ALU expansion
The Company and PT NEC Indonesia	March 26, 2019	Procurement and Installation Agreement Radio IP Backhaul Node-B Telkomsel Platform NEC
The Company and PT Lintas Teknologi Indonesia	April 6, 2019	Procurement and Installation Agreement Dual Wavelength Division Multiplexing ("DWDM") Platform Nokia 2018
The Company and PT Huawei Tech Investment	September 18, 2019	Procurement and Installation Agreement OTN VCN Platform Huawei Phase II
The Company and PT ZTE Indonesia	October 10, 2019	Procurement and Installation Agreement OLT Platform ZTE
The Company and PT ZTE Indonesia	December 16, 2019	Procurement and Installation Agreement DWDM dan OTN Platform ZTE
The Company and PT Pembangunan Deltamas	December 19, 2019	Land Purchase Agreement in Greenland International Industrial Center ("GIIC") - Kota Deltamas
The Company and PT Huawei Tech Investment	December 23, 2019	Procurement and Installation Agreement DWDM Platform Huawei
The Company and PT ZTE Indonesia	December 27, 2019	Procurement and Installation Agreement VIMS Platform ZTE
The Company and PT NEC Indonesia	December 31, 2019	Procurement and Installation Agreement ISP SKKL Platform NEC Transport PoP Expansion Phase-2

(ii) Telkomsel

Contracting parties	Initial date of agreement	Significant provisions of the agreement
Telkomsel, PT Ericsson Indonesia, Ericsson AB, PT Nokia Siemens Networks, NSN Oy, and Nokia Siemens Network GmbH & Co, KG	April 17, 2008	The combined 2G and 3G CS Core Network Rollout Agreement
Telkomsel, PT Ericsson Indonesia, and PT Nokia Siemens Networks	April 17, 2008	Technical Service Agreement ("TSA") for combined 2G and 3G CS Core Network
Telkomsel, Amdocs Software Solutions Limited Liability Company, and PT Application Solutions	February 8, 2010	Online Charging System ("OCS") and Service Control Points ("SCP") System Solution Development Agreement
Telkomsel and PT Application Solutions	February 8, 2010	Technical Support Agreement to provide technical support services for the OCS and SCP
Telkomsel and PT Huawei Tech Investment	March 25, 2013	Technical Support Agreement for the procurement of Gateway GPRS Support Node ("GGSN") Service Complex
Telkomsel and Wipro Limited and PT WT Indonesia	April 23, 2013	Development and Procurement of OSDSS Solution Agreement
Telkomsel and PT Ericsson Indonesia	October 22, 2013	Procurement of GGSN Service Complex Rollout Agreement
Telkomsel, PT Ericsson Indonesia, PT Nokia Siemens Networks Indonesia, NSN Oy, PT Huawei Tech Investment, and PT ZTE Indonesia	February 1, 2018	Procurement agreement for Ultimate Radio Network Infrastructure ROA and TSA
Telkomsel, PT Dimension Data Indonesia, and PT Huawei Tech Investment	April 1, 2018	Agreement for Mobile Network Router Infrastructure
Telkomsel, PT Sigma Solusi Integrasi, Oracle Corporation, and PT Phincon	July 5, 2019	Development and Rollout Agreement ("DRA") and Technical Support of Customer Relationship Management ("CRM") solution System Integrator

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(iii) TII

Contracting parties	Initial date of agreement	Significant provisions of the agreement
Telin Hong Kong and Measat Satellite System Sdn. Bhd.	December 1, 2015	Procurement agreement on transponder leases services
Telin Singapore and LSK Engineering (S) Pte Ltd	August 1, 2019	Design and development for Singapore Data Center
TII and HKT Global Singapore Pte. Ltd.	September 12, 2019	Procurement agreement on Entitlement of PLCN Cable System

b. Borrowings and other credit facilities

(i) As of December 31, 2019, the Company has bank guarantee facilities for tender bond, performance bond, maintenance bond, deposit guarantee, and advance payment bond for various projects of the Company, as follows:

Lenders	Total facility	Maturity	Currency	Facility utilized	
				Foreign currency (in million)	Rupiah equivalent
BRI	500	March 14, 2020	Rp	—	291
BNI	500	March 31, 2020	Rp	—	386
Bank Mandiri	500	December 23, 2021	Rp	—	290
Total	1,500				967

(ii) Telkomsel has a Rp1,000 billion bank guarantee facility with BRI. The facility will expire on September 25, 2022. Under this facility, as of December 31, 2019, Telkomsel has issued a bank guarantee amounting to Rp531 billion as payment commitment guarantee for annual right of usage fee valid until March 31, 2020 and Rp20 billion as frequency performance bond valid until May 31, 2020 (Note 34c.i).

Telkomsel has a Rp150 billion bank guarantee facility with BCA. The facility will expire on April 15, 2020. As of December 31, 2019, Telkomsel has issued a bank guarantee of Rp2 billion as M2M performance bond.

Telkomsel also has a Rp2,100 billion bank guarantee facility with BNI. The facility will expire on December 11, 2020. Telkomsel uses this facility for surety bond of 2.3 Ghz radio frequency amounting to Rp1,030 billion (Note 34c. ii) and Rp4 billion as M2M performance bond.

(iii) TII has a US\$15 million or equal to Rp202 billion bank guarantee from Bank Mandiri and has been renewed in accordance with the addendum VIII (eight) on December 18, 2019, with a maximum credit limit of US\$25 million or equal to Rp353 billion. The facility will expire on December 23, 2020. As of December 31, 2019, TII has not used the facility.

(iv) As of December 31, 2019, Sigma has unused facilities of bank guarantee from BNI amounting to Rp119 billion.

c. Others

(i) Radio frequency usage

Based on Decree No. 80 dated November 2, 2015 of the Government of the Republic of Indonesia which replaced Decree No. 76 dated December 15, 2010, Telkomsel is required to pay the annual

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frequency usage fees for the 800 Megahertz (“MHz”), 900 MHz, and 1800 MHz bandwidths using the formula set out in the decree.

As an implementation of the above decree, the Company and Telkomsel paid annual frequency usage fees since 2010.

Based on Decision letter No. 1987 Year 2017 dated November 15, 2017, which amended Decree No. 42 Year 2014 dated January 29, 2014, whereby the MoCI granted Telkomsel the rights to provide:

1. Mobile telecommunication services with radio frequency bandwidth in the 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz, and 2.3 GHz; and
2. Basic telecommunication services.

(ii) Frequency licence

With reference to Decision Letters No. 268/KEP/M.KOMINFO/9/2009, No. 191 Year 2013, No. 509 Year 2016, No. 1896 year 2017, and No. 806 year 2019 of the MoCI, Telkomsel is required, among other things, to:

1. Pay an annual right of usage *Biaya Hak Penyelenggara* (“BHP”) over the license term (10 years) as set forth in the decision letters. The BHP is payable upon receipt of *Surat Pemberitahuan Pembayaran* (notification letter) from the DGPI. The BHP fee is payable annually up to the expiry period of the license.
2. Issue a performance bond each year amounting to Rp20 billion for spectrum 2.1 GHz and a surety bond each year amounting Rp1.03 trillion for spectrum 2.3 GHz (Note 34b.ii).

(iii) Receivable under non-cancelable lease agreements

Receivables under lease agreements as of December 31, 2019 are as follows:

	Total	Less than 1 year	1-5 years	More than 5 years
As lessor	8,526	1,722	4,446	2,358

(iv) USO

The MoCI issued Regulation No. 17 year 2016 dated September 26, 2016 which replaced Decree No. 45 year 2012 and other previous regulations regarding policies underlying the USO program. The regulation requires telecommunications operators in Indonesia to contribute 1.25% of gross revenues (with due consideration for bad debts and/or interconnection charges and/or connection charges and/or the exclusion of certain revenues that are not considered as part of gross revenues as a basis to calculate the USO charged) for USO development.

Subsequently, Decree No. 17 year 2016 dated September 26, 2016 was replaced by Decree No. 19 year 2016 which was effective from November 4, 2016. The latest Decree stipulates, among other things, the USO charged was effective for fiscal year 2016 and thereafter.

Based on MoCI Regulation No. 25 year 2015 dated June 30, 2015, it is stipulated that, among others, in providing telecommunication access and services in rural areas (USO Program), the provider is determined through a selection process by *Balai Penyedia dan Pengelola Pembiayaan Telekomunikasi dan Informatika* (“BPPPTI”). BPPPTI replaced *Balai Telekomunikasi dan Informatika Pedesaan* (“BTIP”) based on Decree No. 18/PER/M.KOMINFO/11/2010 dated

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November 19, 2010 of MoCI. Based on Regulation No. 3 year 2018 of MOCI dated May 23, 2018, BPPPTI has been renamed as *Badan Aksesibilitas Telekomunikasi dan Informasi* (“BAKTI”). Subsequently, MOCI Regulation No. 25 year 2015 was replaced by MOCI Regulation No. 10 year 2018.

On December 27, 2011, Telkomsel (on behalf of Telkomsel Consortium, a consortium which was established with Dayamitra on December 9, 2011) was selected by BPPPTI as a provider of the USO Program in the border areas for all packages (package 1-13) with a total price of Rp830 billion. On such date, Telkomsel was also selected by BPPPTI as a provider of the USO Program (Upgrading) of “Desa Pinter” or “Desa Punya Internet” for packages 1, 2, and 3 with a total price of Rp261 billion.

In 2015, the Program was ceased. In January 2016, Telkomsel filed an arbitration claim to BANI for the settlement of the outstanding receivables of USO Programs.

On June 22, 2017, Telkomsel received a decision letter from BANI No.792/1/ARB-BANI/2016 requesting BPPPTI to pay compensation to Telkomsel amounting to Rp217 billion, and as of the date of the issuance of these consolidated financial statements, Telkomsel has received Rp91 billion (before tax) and no additional payment from BAKTI.

35. FINANCIAL INSTRUMENTS

a. Financial assets and financial liabilities

i. Classification

(a) Financial assets

	2018	2019
Amortized cost		
Cash and cash equivalents	17,435	18,241
Trade and other receivables	9,928	11,272
Contract assets	1,560	944
Other current financial assets	844	483
Other non-current assets	443	290
FVTPL		
Equity investments	1,953	1,210
Other long-term investments	709	989
Mutual funds	470	71
Convertible bonds	213	357
Total financial assets	<u>33,555</u>	<u>33,857</u>

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(b) Financial liabilities

	2018	2019
Financial liabilities measured at amortized cost		
Trade and other payables	15,214	14,324
Accrued expenses	12,769	12,761
Short-term bank loans	4,043	8,705
Two-step loans	949	736
Bonds and notes	10,481	9,958
Long-term bank loans	23,220	26,601
Obligations under finance leases	3,145	—
Lease liabilities	—	17,217
Other borrowings	2,244	3,740
Other liabilities	261	194
Total financial liabilities	<u>72,326</u>	<u>94,236</u>

ii. Fair values

The following table presents comparison of the carrying amounts and fair values of the Company's financial instruments, other than those the fair values are considered to approximate their carrying amounts as the impact of discounting is not significant:

2018	Carrying value	Fair value	Fair value measurement at reporting date using		
			Quoted prices in active markets for identical assets or liabilities (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)
Financial assets measured at fair value					
Mutual funds	470	470	470	—	—
Convertible bonds	213	213	—	—	213
Other long-term investments	709	709	—	—	709
Financial liabilities at amortized cost					
Interest-bearing loans and other borrowings:					
Two-step loans	949	898	—	—	898
Bonds and notes	10,481	10,894	9,380	—	1,514
Long-term bank loans	23,220	22,796	—	—	22,796
Obligations under finance leases	3,145	3,145	—	—	3,145
Other borrowings	2,244	2,154	—	—	2,154
Other liabilities	261	261	—	—	261
Total	<u>41,692</u>	<u>41,540</u>	<u>9,850</u>	<u>—</u>	<u>31,690</u>

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2019	Carrying value	Fair value	Fair value measurement at reporting date using		
			Quoted prices in active markets for identical assets or liabilities (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)
Financial assets measured at fair value					
Mutual funds	71	71	71	—	—
Convertible bonds	357	357	—	—	357
Other long-term investments	989	989	—	—	989
Financial liabilities at amortized cost					
Interest-bearing loans and other borrowings:					
Two-step loans	736	759	—	—	759
Bonds and notes	9,958	10,897	9,906	—	991
Long-term bank loans	26,601	26,537	—	—	26,537
Lease liabilities	17,217	17,217	—	—	17,217
Other borrowings	3,740	3,709	—	—	3,709
Other liabilities	194	194	—	—	194
Total	59,863	60,730	9,977	—	50,753

Gain on fair value recognized in consolidated statements of profit or loss for 2019 amounting to Rp133 billion. There is no movement between fair value hierarchy during 2019.

Reconciliations of the beginning and ending balances for items measured at fair value using significant unobservable inputs (level 3) as of December 31, 2018 and 2019 are as follows:

	2018	2019
Beginning balance	373	922
Gain (loss) recognized in consolidated statement of:		
Profit or loss	146	279
Other comprehensive income	—	9
Purchase/addition	438	389
Settlement/deduction	(35)	(253)
Ending balance	922	1,346

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Sensitivity Analysis

The following table summarises the quantitative information about the significant unobservable inputs used in level 3 fair value measurements:

Industry	Valuation technique	Significant unobservable input	Range (weighted average)	Sensitivity of the input of fair value
Subsidiaries investment				
Non-listed equity investment - technology	Backsolve method	Volatility	20% - 100%	10% increase (decrease) in the percentage of volatility would result in an increase (decrease) Rp10 billion of the Investment value.
		Exit timing	1 - 5.5 years	Increase (decrease) in 1 year exit timing would result in an increase(decrease) Rp15 billion of the Investment value.
	Market approach and liquidation preference	Equity value/revenue multiple	2.5 - 3.5x	Increase in 0.5x of equity value/revenue multiple would result in an increase Rp1 billion of the investment value.
Non-listed equity investment - credit rating agency	Discounted cash flow	Weighted Average Cost of Capital ("WACC")	10.54% - 11.54%	0.50% increase (decrease) in the percentage of WACC would result an increase (decrease) Rp1 billion of the investment value.
		Terminal growth rate	2.50% - 4.50%	1% increase (decrease) in terminal growth rate would result increase (decrease) Rp1 billion of the investment value.
Non-listed equity investment - telecommunication	Discounted cash flow	WACC	4.40% - 17.50%	0.50% increase (decrease) in WACC would result in an increase (decrease) Rp1 billion of the investment value.
		Terminal growth rate	-4.80% - 4.00%	1% increase (decrease) in terminal growth rate would result in an increase (decrease) Rp3 billion of the investment value.
		Revenue achievement	0%	5% increase (decrease) in revenue achievement would result in an increase (decrease) Rp370 million of the investment value.
		Net working capital to revenue	6.00% - 39.00%	1% increase (decrease) in net working capital to revenue would result in an increase (decrease) Rp57 million of the investment value.
Convertible Bonds				
Non-listed equity investment - technology	Backsolve method	Volatility	80% - 100%	10% increase (decrease) in the percentage of volatility would result in an increase (decrease) Rp1 billion of the Investment value.
		Exit timing	3 - 5.5 years	Increase (decrease) in 1 year exit timing would result in an increase (decrease) Rp1 billion of the Investment value.
	First chicago method	Discount rate	40% - 60%	10% increase (decrease) in discount rate would result in an increase (decrease) Rp278 million of the Investment value.
		Probability of conversion	10% - 30%	10% increase (decrease) in probability of conversion would result in an increase (decrease) Rp136 million of the investment value.
	Last Twelve Months ("LTM") revenue movement	Probability of qualified financing	0% - 100%	50% increase (decrease) in probability of qualified financing would result in an increase (decrease) Rp4 billion of the investment value.
Discount on conversion price		Probability of qualified financing	0% - 100%	50% increase (decrease) in probability of qualified financing would result in an increase (decrease) Rp18 billion of the Investment value.

iii. Fair value measurement

Fair value is the amount for which an asset could be exchanged, or a liability settled, between parties in an arm's length transaction.

The fair values of short-term financial assets and financial liabilities with maturities of one year or less (cash and cash equivalents, trade and other receivables, other current financial assets, trade

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and other payables, accrued expenses, and short-term bank loans) and other non-current assets are considered to approximate their carrying amounts as the impact of discounting is not significant.

The fair values of long-term financial assets and financial liabilities (other non-current assets (long-term trade receivables and restricted cash) and liabilities) approximate their carrying amounts as the impact of discounting is not significant.

The Group determined the fair value measurement for disclosure purposes of each class of financial assets and financial liabilities based on the following methods and assumptions:

- (a) Fair value through profit or loss, previously as available-for-sale investments, primarily consist of stocks, mutual funds, corporate and government bonds, and convertible bonds. Stocks and mutual funds actively traded in an established market are stated at fair value using quoted market price or, if unquoted, determined using a valuation technique.

The fair value of convertible bonds and subsidiaries' investments (non-listed equity investments) are determined using valuation technique. The valuation requires management to use unobservable inputs in the model, of which the significant unobservable inputs are disclosed in the tables above. The Group regularly assesses a range of reasonably possible alternatives for those significant unobservable inputs and determines their impact on the total fair value.

The fair values of the non-listed equity investments have been estimated using backsolve method, market approach and liquidation preference, first chicago method, LTM revenue movement, discount on conversion price model, or discounted cash flow model. The valuation requires management to make certain assumptions about the model inputs, including volatility, exit timing, equity value/revenue multiple, discount rate, probability of conversion, probability of qualified financing, WACC, terminal growth rate, revenue achievement, or net working capital to revenue. The probabilities of the various estimates within the range can be reasonably assessed and are used in management's estimate of fair value for these non-listed equity investments.

Corporate and government bonds are stated at fair value by reference to prices of similar securities at the reporting date;

- (b) The fair values of long-term financial liabilities are estimated by discounting the future contractual cash flows of each liability at rates offered to the Group for similar liabilities of comparable maturities by the bankers of the Group, except for bonds which are based on market price.

The fair value estimates are inherently judgmental and involve various limitations, including:

- a. Fair values presented do not take into consideration the effect of future currency fluctuations.
- b. Estimated fair values are not necessarily indicative of the amounts that the Group would record upon disposal/termination of the financial assets and liabilities.

b. Financial risk management objectives and policies

The Group's activities expose it to a variety of financial risks such as market risks (including foreign exchange risk, market price risk, and interest rate risk), credit risk, and liquidity risk. Overall, the Group's financial risk management program is intended to minimize losses on the financial assets and financial liabilities arising from fluctuation of foreign currency exchange rates and the fluctuation of interest rates.

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Management has a written policy on foreign currency risk management mainly on time deposit placements and hedging to cover foreign currency risk exposures for periods ranging from 3 up to 12 months.

Financial risk management is carried out by the Corporate Finance unit under policies approved by the Board of Directors. The Corporate Finance unit identifies, evaluates and hedges financial risks.

i. Foreign exchange risk

The Group is exposed to foreign exchange risk on sales, purchases, and borrowings that are denominated in foreign currencies. The foreign currency denominated transactions are primarily in U.S. Dollar and Japanese yen. The Group's exposures to other foreign exchange rates are not material.

Increasing risks of foreign currency exchange rates on the obligations of the Group are expected to be partly offset by the effects of the exchange rates on time deposits and receivables in foreign currencies that are equal to at least 25% of the outstanding current foreign currency liabilities.

The following table present the Group's financial assets and financial liabilities exposure to foreign currency risk:

	2018		2019	
	U.S. Dollar (in millions)	Japanese yen (in millions)	U.S. Dollar (in millions)	Japanese yen (in millions)
Financial assets	473	8	422	50
Financial liabilities	(391)	(4,656)	(291)	(3,996)
Net exposure	82	(4,648)	131	(3,946)

Sensitivity analysis

A strengthening of the U.S. Dollar and Japanese yen, as indicated below, against the rupiah at December 31, 2019 would have decreased equity and profit or loss by the amounts shown below. This analysis is based on foreign currency exchange rate variances that the Group considered to be reasonably possible at the reporting date. The analysis assumes that all other variables, in particular interest rates, remain constant.

	<u>Equity/profit (loss)</u>
December 31, 2019	
U.S. Dollar (1% strengthening)	18
Japanese yen (5% strengthening)	(25)

A weakening of the U.S. Dollar and Japanese yen against the rupiah at December 31, 2019 would have had an equal but opposite effect on the above currencies to the amounts shown above, on the basis that all other variables remain constant.

ii. Market price risk

The Group is exposed to changes in debt and equity market prices related to financial assets measured at FVTPL carried at fair value. Gains arising from changes in the fair value of financial assets measured at FVTPL are recognized in the consolidated statements of profit or loss and other comprehensive income.

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The performance of the Group's financial assets measured at FVTPL is monitored periodically, together with a regular assessment of their relevance to the Group's long-term strategic plans.

As of December 31, 2019, management considered the price risk for the Group's financial assets measured at FVTPL to be immaterial in terms of the possible impact on profit or loss and total equity from a reasonably possible change in fair value.

iii. Interest rate risk

Interest rate fluctuation is monitored to minimize any negative impact to financial performance. Borrowings at variable interest rates expose the Group to interest rate risk (Notes 19 and 20). To measure market risk pertaining to fluctuations in interest rates, the Group primarily uses interest margin and maturity profile of the financial assets and liabilities based on changing schedule of the interest rate.

At reporting date, the interest rate profile of the Group's interest-bearing borrowings was as follows:

	<u>2018</u>	<u>2019</u>
Fixed rate borrowings	(21,260)	(38,133)
Variable rate borrowings	(22,822)	(28,824)

Sensitivity analysis for variable rate borrowings

As of December 31, 2019, a decrease (increase) by 25 basis points in interest rates of variable rate borrowings would have increased (decreased) equity and profit or loss by Rp73 billion, respectively. The analysis assumes that all other variables, in particular foreign currency rates, remain constant.

iv. Credit risk

The following table presents the maximum exposure to credit risk of the Group's financial assets:

	<u>2018</u>	<u>2019</u>
Cash and cash equivalents	17,435	18,241
Trade and other receivables, net	9,928	11,272
Contract asset	1,560	944
Other current financial assets	1,314	554
Other non-current assets	443	290
Total	<u>30,680</u>	<u>31,301</u>

The Group is exposed to credit risk primarily from cash and cash equivalents and trade and other receivables. The credit risk is controlled by continuous monitoring of outstanding balance and collection. Credit risk from balances with banks and financial institutions is managed by the Group's Corporate Finance Unit in accordance with the Group's written policy.

Credit risk from balances with banks and financial institutions is managed by the Group's Corporate Finance Unit in accordance with the Group's written policy. The Group placed the majority of its cash and cash equivalents in state-owned banks because they have the most extensive branch networks in Indonesia and are considered to be financially sound banks, as they are owned by the

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State. Therefore, it is intended to minimize financial loss through banks and financial institutions' potential failure to make payments.

The customer credit risk is managed by continuous monitoring of outstanding balances and collection. Trade and other receivables do not have any major concentration of risk whereas no customer receivable balance exceeds 4.38% of trade receivables as of December 31, 2019.

Management is confident in its ability to continue to control and sustain minimal exposure to the customer credit risk given that the Group has recognized sufficient provision for impairment of receivables to cover incurred loss arising from uncollectible receivables based on existing historical data on credit losses.

v. Liquidity risk

Liquidity risk arises in situations where the Group has difficulties in fulfilling financial liabilities when they become due.

Prudent liquidity risk management implies maintaining sufficient cash in order to meet the Group's financial obligations. The Group continuously performs an analysis to monitor financial position ratios, such as liquidity ratios and debt-to-equity ratios, against debt covenant requirements.

The following is the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

	<u>Carrying amount</u>	<u>Contractual cash flows</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023 and thereafter</u>
2018							
Trade and other payables	15,214	(15,214)	(15,214)	—	—	—	—
Accrued expenses	12,769	(12,769)	(12,769)	—	—	—	—
Interest bearing loans and other borrowings:							
Two-step loans	949	(1,075)	(242)	(232)	(205)	(159)	(237)
Bonds and notes	10,481	(19,050)	(1,562)	(3,436)	(1,231)	(2,817)	(10,004)
Bank loans	27,263	(33,376)	(10,441)	(9,165)	(3,991)	(3,220)	(6,559)
Other borrowings	2,244	(2,905)	(490)	(570)	(533)	(495)	(817)
Obligations under finance leases	3,145	(3,764)	(1,049)	(945)	(781)	(605)	(384)
Other liabilities	261	(306)	(16)	(36)	(36)	(109)	(109)
Total	<u>72,326</u>	<u>(88,459)</u>	<u>(41,783)</u>	<u>(14,384)</u>	<u>(6,777)</u>	<u>(7,405)</u>	<u>(18,110)</u>

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	Carrying amount	Contractual cash flows	2020	2021	2022	2023	2024 and thereafter
2019							
Trade and other payables	14,324	(14,324)	(14,324)	—	—	—	—
Accrued expenses	12,761	(12,761)	(12,761)	—	—	—	—
Interest bearing loans and other borrowings:							
Two-step loans	736	(804)	(222)	(196)	(154)	(132)	(100)
Bonds and notes	9,958	(17,454)	(3,402)	(1,231)	(2,817)	(507)	(9,497)
Bank loans	35,306	(40,732)	(15,956)	(8,495)	(4,435)	(6,417)	(5,429)
Other borrowings	3,740	(4,534)	(926)	(1,082)	(1,010)	(948)	(568)
Lease liabilities	17,217	(19,502)	(4,752)	(4,247)	(3,529)	(2,636)	(4,338)
Other liabilities	194	(223)	(12)	(52)	(53)	(53)	(53)
Total	94,236	(110,334)	(52,355)	(15,303)	(11,998)	(10,693)	(19,985)

The difference between the carrying amount and the contractual cash flows is interest value. The interest values of variable-rate borrowings are determined based on the effective interest rates as of reporting dates.

36. CAPITAL MANAGEMENT

The capital structure of the Group is as follows:

	2018		2019	
	Amount	Portion	Amount	Portion
Short-term debts	4,043	2.83 %	8,705	5.22 %
Long-term debts	40,039	28.04 %	58,252	34.93 %
Total debts	44,082	30.87 %	66,957	40.15 %
Equity attributable to owners of the parent company	98,739	69.13 %	99,796	59.85 %
Total	142,821	100.00 %	166,753	100.00 %

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for stockholders and benefits to other stakeholders and to maintain an optimum capital structure to minimize the cost of capital.

Periodically, the Group conducts debt valuation to assess possibilities of refinancing existing debts with new ones which have more efficient cost that will lead to more optimized cost-of-debt. In case of idle cash with limited investment opportunities, the Group will consider buying back its shares of stock or paying dividend to its stockholders.

In addition to complying with loan covenants, the Group also maintains its capital structure at the level it believes will not risk its credit rating and which is comparable with its competitors.

Debt-to-equity ratio (comparing net interest-bearing debt to total equity) is a ratio which is monitored by management to evaluate the Group's capital structure and review the effectiveness of the Group's debts. The Group monitors its debt levels to ensure the debt-to-equity ratio complies with or is below the ratio set out in its contractual borrowings arrangements and that such ratio is comparable or better than that of regional area entities in the telecommunications industry.

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The Group's debt-to-equity ratio as of December 31, 2018 and 2019 is as follows:

	<u>2018</u>	<u>2019</u>
Total interest-bearing debts	44,082	66,957
Less: cash and cash equivalents	(17,435)	(18,241)
Net debts	26,647	48,716
Total equity attributable to owners of the parent company	98,739	99,796
Net debt-to-equity ratio	<u>26.99 %</u>	<u>48.82 %</u>

As stated in Note 20, the Group is required to maintain a certain debt-to-equity ratio and debt service coverage ratio by the lenders. For the years ended December 31, 2018 and 2019, the Group has complied with the externally imposed capital requirements.

37. SUPPLEMENTAL CASH FLOW INFORMATION

- a. The non-cash investing activities for the years ended December 31, 2017, 2018 and 2019 are as follows:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Acquisitions of property and equipment:			
Credited to trade payables	5,525	4,275	5,459
Advance paid	—	2,837	—
Credited to obligations under finance leases	518	201	—
Interest capitalization	328	270	99
Acquisitions of intangible assets: Credited to trade payables	846	235	684

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b. The changes in liabilities arising from financing activities is as follows:

	January 1, 2019	Cash flows	Implementation new standard	Non-cash changes				December, 31 2019
				Acquisition	Foreign exchange movement	New leases	Other changes	
Short-term bank loans	4,043	4,657	—	—	—	—	5	8,705
Two step loans	949	(198)	—	—	(15)	—	—	736
Bonds and notes payable	10,481	(526)	—	—	—	—	3	9,958
Long-term bank loans	23,220	2,917	—	520	(53)	—	(3)	26,601
Other borrowings	2,244	1,498	—	—	—	—	(2)	3,740
Obligations under finance leases	3,145	—	—	—	—	—	(3,145)	—
Leases liabilities	—	(4,735)	15,838	—	—	2,969	3,145	17,217
Total liabilities from financing activities	44,082	3,613	15,838	520	(68)	2,969	3	66,957

	January 1, 2018	Cash flows	Acquisition	Non-cash changes			December 31, 2018
				Foreign exchange movement	New leases	Other changes	
Short-term bank loans	2,289	1,759	—	—	—	(5)	4,043
Two step loans	1,098	(214)	—	65	—	—	949
Bonds and notes	8,982	1,498	—	—	—	1	10,481
Long-term bank loans	18,004	5,088	58	86	—	(16)	23,220
Other borrowings	1,295	947	—	—	—	2	2,244
Obligations under finance leases	3,804	(827)	—	—	168	—	3,145
Total liabilities from financing activities	35,472	8,251	58	151	168	(18)	44,082

38. SUBSEQUENT EVENTS

- a. The Company will buy back its shares from public, with a maximum amount Rp1,500 billion, and will be carried out in stages since March 30, 2020 until June 29, 2020. As of June 15, 2020, the Company has not yet reacquired any shares from public.
- b. In January 2020, the Company received tax refunds for VAT for fiscal periods February and August 2011 and January to December 2017 amounting to Rp29.6 billion and Rp747 billion, respectively.

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- c. On January 10, 2020, Telkomsel paid its bank loan to Mandiri amounting to Rp3,000 billion.
- d. On March 31, 2020, the Government issued Government Regulation in Lieu of the Republic of Indonesia Number 1 Year 2020 which stipulates, among others, reduction to the tax rates for corporate income tax payer and permanent establishments entities from previously 25% to become 22% for fiscal years 2020 and 2021 and 20% starting fiscal year 2022 and onwards, and further reduction of 3% for corporate income tax payers that fulfill certain criteria.

The new tax rates will be used as reference to measure the current and deferred tax assets and liabilities starting from the enactment date of the new regulation, on March 31, 2020.

- e. On May 11, 2020, TII paid its bank loan to MUFG Bank amounting to US\$6.7 million or equal to Rp101 billion.
- f. On June 11, 2020, Telkomsel drawdown its loan facility from Mandiri amounting to Rp3,000 billion.
- g. Since the beginning of 2020, the spread of the COVID-19 pandemic has an impact on business activities and economic growth in Indonesia, due to restrictions on social activities. In this case, the Government has taken a number of policies to respond and anticipate the effects of this pandemic. Group has determined that this event is a non-adjusted event after the reporting period, so that these consolidated financial statements are not adjusted to the COVID-19 pandemic impact because the Government's handling process is still ongoing and cannot be determined for a period of time, so specific impacts such as on business, the revenue and recoverable value of the Group's assets and liabilities cannot be determined reliably.

The Company's operations have and may continue to be impacted by the outbreak of COVID-19 virus which started in China and subsequently spread to other countries including Indonesia. The effect of COVID-19 virus to the global and Indonesian economy include effect to economic growth, decline in capital markets, increase in credit risk, depreciation of foreign currency exchange rates and disruption of business operation. The future effect of the outbreak of COVID-19 virus to Indonesia and the Company are unclear at this time.

A significant rise in the number of COVID-19 virus infections or prolongation of the outbreak may affect Indonesia and the Company. The Company is presently evaluating and has not yet determined the effects of COVID-19 virus on its financial statements.

As of the completion date of these financial statements, there has been decline in the Composite Stock Price Index ("CSPI") and in Rupiah foreign currency exchange rates which partially due to impact of COVID-19 virus.

To address the above conditions, management has conducted and plans to do the following:

- i. Adjust some programs and initiatives in order to deliver services to customers by accelerating sales digitalization to ensure product and service availability.
- ii. Maintaining the Company's cash flow to be positive and mitigate foreign exchange fluctuation.
- iii. Intensify cost leadership by prioritizing programs and initiatives.
- iv. Ensure IT system and networks readiness to deliver optimal customers experiences.

39. NEW ACCOUNTING STANDARDS AND INTERPRETATIONS NOT YET ADOPTED

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- Amendments to IFRS 9, IAS 39 and IFRS 7, Interest Rate Benchmark Reform

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The amendments clarify that entities would continue to apply certain hedge accounting requirements assuming that the interest rate benchmark on which the hedged cash flows and cash flows from the hedging instrument are based will not be altered as a result of interest rate benchmark reform.

These amendments are not expected to have an impact to the Group's consolidated financial position or performance.

- Amendments to IAS 1 and IAS 8, Definition of Material

IAS 1 and IAS 8 are amended to clarify the definition of material and its application by:

- aligning the wording of the definition of material across IFRS Standards and other publications and making minor improvements to that wording;
- including some of the supporting requirements in IAS 1 in the definition to give them more prominence; and
- clarifying the explanation accompanying the definition of material.

The amended definition of material states “information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity”.

These amendments are not expected to have an impact to the Group's consolidated financial position or performance.

- Amendments to IFRS 3, Definition of a Business

IFRS 3 is amended to clarify the definition of business in order to assist the entity in determining whether a transaction should be recorded as a business combination or asset acquisition. In general, these amendments:

- clarify that business is an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing goods or services to customers, generating investment income (such as dividends or interest) or generating other income from ordinary activities;
- add an optional test (the concentration test) to permit a simplified assessment of whether an acquired set of activities and assets is not a business;
- clarify that to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output;
- add guidelines and illustrative examples to help the entity assess whether an acquired process is substantive if the acquired set of activities and assets does not have outputs and if it does have outputs.

These amendments are expected to have an impact to the Group's future business combinations.

Effective for annual periods beginning on or after January 1, 2021

IFRS 17, Insurance Contract, will be effective on January 1, 2021, are considered to be not applicable to the Group's consolidated financial statements.

The effective date was postponed to a date yet to be determined

- Amendments to IFRS 10 and IAS 28, Sale or Contribution of Assets between an Investor and its Associate or Joint Venture

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The amendments provide guidance for accounting treatment when a parent loses control of a subsidiary in a transaction with an associate or joint venture. The amendments require full gain to be recognized when the assets transferred meet the definition of a “business” under IFRS 3, Business Combinations. These amendments are not expected to impact the Group’s consolidated financial position or performance.