

2018

ANNUAL REPORT ON FORM 20-F

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, 2018
 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.

Title of Each class

Trading Symbol(s)

Name of each exchange on which registered

American Depositary Share representing 100 Series B Shares, par value 50 Rupiah per share
Series B Shares, par value 50 Rupiah per share

TLK

New York Stock Exchange
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

Series B Shares, par value 50 Rupiah per share

1
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

TABLE OF CONTENTS

DEFINITIONS	2
CERTAIN DEFINITIONS, CONVENTIONS AND GENERAL INFORMATION	11
FORWARD-LOOKING STATEMENTS	11

PART I

<u>ITEM 1</u>	<u>IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS</u>	12
<u>ITEM 2</u>	<u>OFFER STATISTICS AND EXPECTED TIMETABLE</u>	12
<u>ITEM 3</u>	<u>KEY INFORMATION</u>	12
<u>ITEM 4</u>	<u>INFORMATION ON THE COMPANY</u>	33
<u>ITEM 4A</u>	<u>UNRESOLVED STAFF COMMENTS</u>	70
<u>ITEM 5</u>	<u>OPERATING AND FINANCIAL REVIEW AND PROSPECTS</u>	70
<u>ITEM 6</u>	<u>DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES</u>	102
<u>ITEM 7</u>	<u>MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS</u>	115
<u>ITEM 8</u>	<u>FINANCIAL INFORMATION</u>	118
<u>ITEM 9</u>	<u>THE OFFER AND LISTING</u>	119
<u>ITEM 10</u>	<u>ADDITIONAL INFORMATION</u>	121
<u>ITEM 11</u>	<u>QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK</u>	134
<u>ITEM 12</u>	<u>DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES</u>	136

PART II

<u>ITEM 13</u>	<u>DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES</u>	137
<u>ITEM 14</u>	<u>MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS</u>	137
<u>ITEM 15</u>	<u>CONTROLS AND PROCEDURES</u>	138
<u>ITEM 16A</u>	<u>AUDIT COMMITTEE FINANCIAL EXPERT</u>	139
<u>ITEM 16B</u>	<u>CODE OF ETHICS</u>	139
<u>ITEM 16C</u>	<u>PRINCIPAL ACCOUNTANT FEES AND SERVICES</u>	139
<u>ITEM 16D</u>	<u>EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES</u>	140
<u>ITEM 16E</u>	<u>PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS</u>	141
<u>ITEM 16F</u>	<u>CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT</u>	141
<u>ITEM 16G</u>	<u>CORPORATE GOVERNANCE</u>	141
<u>ITEM 16H</u>	<u>MINE SAFETY DISCLOSURE</u>	143

PART III

<u>ITEM 17</u>	<u>FINANCIAL STATEMENTS</u>	143
<u>ITEM 18</u>	<u>FINANCIAL STATEMENTS</u>	143
<u>ITEM 19</u>	<u>EXHIBITS</u>	144

SIGNATURES	145
------------	-----

EXHIBIT 1.1	Articles of Association (as amended on July 2, 2018)
EXHIBIT 12.1	CEO Certification pursuant to section 302
EXHIBIT 12.2	CFO Certification pursuant to section 302
EXHIBIT 13.1	CEO Certification pursuant to section 906
EXHIBIT 13.2	CFO Certification pursuant to section 906

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 money we make from the average user. It is defined as the total revenue from specified services divided by the number of consumers for those 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.

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.

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.

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 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 DCP

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 employer contributions and, if applicable, employee contributions) plus any investment earnings on the money in the account. Only employer contributions to the account are guaranteed, not the 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 but still within one country. These areas normally 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.

IGG

Indonesia Global Gateway.

IMT-2000

International Mobile Telecommunications-2000, a body of specifications provided by the International Telecommunication Union. Application services include wide area wireless voice telephone, mobile internet access, video calls and mobile TV, all in a mobile environment.

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

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 uses.

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-Protocal 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.

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 connected 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.

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, 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, and 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 sea bed between land-based stations to carry telecommunication signals across stretches of 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.

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 an owner Government.

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. These 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, references in this Form 20-F to the "Company," "Telkom," "Group," "Telkom Group," "we," "us," and "our" are to Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia Tbk and its consolidated subsidiaries. All references to "Indonesia" are references to the Republic of Indonesia. All references to the "Government" herein are references to the Government of the Republic of Indonesia. References to the "United States" or "US" are to the United States of America. References to the "United Kingdom" or the "UK" are to the United Kingdom of Great Britain and Northern Ireland. References to "Rupiah," "Indonesian Rupiah" or "Rp" are to the lawful currency of Indonesia. References to "U.S. Dollar" or "US\$" are to the lawful currency of the United States. Certain figures (including percentages) have been rounded for convenience, and therefore indicated and actual sums, quotients, percentages and ratios may differ.

Our audited consolidated financial statements as of December 31, 2017 and 2018 and for the years ended December 31, 2016, 2017 and 2018 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").

The financial statements of 12 of our subsidiaries have been consolidated into the Consolidated Financial Statements. The 12 companies are PT Telekomunikasi Selular ("Telkomsel," 65% stake), PT Dayamitra Telekomunikasi ("Dayamitra," 100% stake), PT Multimedia Nusantara ("Metra," 100% stake), PT Telekomunikasi Indonesia International ("Telin," 100% stake), PT PINS Indonesia ("PINS," previously named PT Pramindo Ikat Nusantara, 100% stake), PT Graha Sarana Duta ("Telkom Property," 100% stake), PT Telkom Akses ("Telkom Akses," 100% stake), PT Telkom Satelit Indonesia ("Telkomsat," previously named PT Patra Telekomunikasi Indonesia, 100% stake), PT Infrastruktur Telekomunikasi Indonesia ("Telkom Infratel," 100% stake), PT Metranet ("Metranet," 100% stake), PT Jalin Pembayaran Nusantara ("Jalin," 100% stake), and PT Napsindo Primatel Internasional ("Napsindo," 60% stake).

Solely for the convenience of the reader, certain Indonesian Rupiah amounts have been converted into U.S. Dollars at specified rates. Unless otherwise indicated, the U.S. Dollars equivalent information for amounts in Indonesian Rupiah are converted at the Reuters Rate for December 31, 2018 at 04.00 PM Jakarta time, which was Rp14,380 to US\$1.00. The exchange rate of Indonesian Rupiah for U.S. Dollars on December 31, 2018 was Rp14,481 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.

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, 2014, 2015, 2016, 2017 and 2018 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, 2014, 2015, 2016, 2017 and 2018 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 include elsewhere in this Form 20-F and in our previous Form 20-F filed with the SEC on April 9, 2018.

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, 2014, 2015, 2016, 2017 and 2018.

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

IFRS

	Years Ended December 31,					2018 (US\$ million)
	2014 (Rp billion)	2015 (Rp billion)	2016 (Rp billion)	2017 (Rp billion)	2018 (Rp billion)	
	except for per share and per ADS amount					
Revenues	89,696	102,470	116,333	128,256	130,788	9,095
Expenses ⁽¹⁾	61,617	71,603	77,824	85,332	93,947	6,532
Operating Profit	29,172	32,369	39,172	43,902	38,533	2,680
Profit before Income Tax	28,579	31,293	38,166	42,628	36,077	2,510
Net Income Tax Expense	(7,341)	(8,023)	(9,017)	(9,958)	(9,366)	(652)
Profit for the Year	21,238	23,270	29,149	32,670	26,711	1,858
Attributable to owners of the parent company	14,437	15,451	19,333	22,120	17,802	1,238
Attributable to non-controlling interests	6,801	7,819	9,816	10,550	8,909	620
Other Comprehensive Income (Expenses) - Net	810	493	(2,099)	(2,332)	4,954	344
Net Comprehensive Income for the Year	22,048	23,763	27,050	30,338	31,665	2,202
Attributable to owners of the parent company	15,291	16,003	17,312	19,927	22,631	1,573
Attributable to non-controlling interests	6,757	7,760	9,738	10,411	9,034	629
Weighted average number of shares outstanding (in millions after stock split)	97,696	98,177	98,638	99,062	99,062	—
Basic and Diluted Earnings per Share (in full amount)						
Profit per share ⁽²⁾	147.78	157.38	195.99	223.30	179.71	0.01
Profit per ADS (100 series B shares per ADS)	14,778.00	15,738.00	19,599.85	22,329.40	17,970.52	1.25
Dividend relating to the period (accrual basis, in full amount)						
Dividends declared per share	89.46	94.63	136.75	167.66	—	—
Dividends declared per ADS	8,946	9,463	13,675	16,766	—	—
Dividend paid in the period (cash basis, in full amount) ⁽³⁾						
Dividends declared per share	102.40	89.46	94.63	136.75	167.66	0.01
Dividends declared per ADS	10,240	8,946	9,463	13,675	16,766	1.17

Table of Contents

- (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, gain or loss on foreign exchange - net, share of profit (loss) of associated companies and other expenses.
- (2) Using Indonesian Financial Accounting Standards ("IFAS") results, our profit for the year attributable to owners of the parent company was Rp14,471 billion, Rp15,489 billion, Rp19,352 billion, Rp22,145 billion and Rp18,032 billion for 2014, 2015, 2016, 2017 and 2018, and our net income per share would be Rp148.13, Rp157.77, Rp196.19, Rp223.55 and Rp182.03 for 2014, 2015, 2016, 2017 and 2018. 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 2014, we paid a cash dividend for 2013 of Rp102.40 per share. 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.

KEY CONSOLIDATED STATEMENTS OF FINANCIAL POSITION DATA

IFRS

	As of December 31,					
	2014	2015	2016	2017	2018	
	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
	except for per share					
Cash and cash equivalents	17,672	28,117	29,767	25,145	17,435	1,212
Trade and other receivables	7,380	7,872	7,900	9,564	9,928	690
Other current assets	4,733	5,839	5,246	7,183	7,280	506
Total Current Assets	34,294	47,912	47,701	47,561	42,843	2,977
Property and equipment	94,602	103,455	114,230	129,872	142,912	9,938
Intangible assets	2,463	3,056	3,089	3,530	5,032	350
Total Non-current Assets	107,321	118,016	131,642	150,624	163,057	11,339
Total Assets	141,615	165,928	179,343	198,185	205,900	14,316
Trade and other payables	12,476	14,284	13,690	15,791	15,214	1,058
Current income tax liabilities	1,501	1,802	1,236	801	404	28
Accrued expenses	5,211	8,247	11,283	12,630	12,769	888
Contract liabilities	3,963	4,360	5,563	5,427	5,252	365
Short-term bank loans and current maturities of long-term borrowings	7,709	4,444	5,432	7,498	10,339	719
Total Current Liabilities	32,318	35,413	39,762	45,376	46,322	3,221
Deferred tax liabilities	2,703	2,110	745	933	1,197	83
Pension benefits and other post-employment benefit obligations	4,115	4,171	6,126	10,195	5,555	386
Long-term loans and other borrowings	15,743	30,168	26,367	27,974	33,743	2,347
Total Non-current Liabilities	23,365	37,332	34,305	40,978	42,572	2,960
Total Liabilities	55,683	72,745	74,067	86,354	88,894	6,181
Capital stock ⁽¹⁾	5,040	5,040	5,040	5,040	4,953	344
Net equity attributable to owners of the parent company	67,646	74,934	84,163	92,467	98,739	6,865
Non-controlling interests	18,286	18,249	21,113	19,364	18,267	1,270
Total Equity (Net Assets)	85,932	93,183	105,276	111,831	117,006	8,135
Net Debt	5,780	6,495	2,032	10,327	26,647	1,854
Net Working Capital	1,976	12,499	7,939	2,185	(3,479)	(244)
Issued and fully paid shares (in shares)	100,799,996,400	100,799,996,400	100,799,996,400	100,799,996,400	99,062,216,600	—

- (1) As of December 31, 2018, our issued and paid-up capital consists of one Dwiwarna Share and 99,062,216,599 shares of common stock each from an authorized capital stock comprising one Dwiwarna Share and 399,999,999,999 shares of common stock.

Exchange Controls

The Consolidated Financial Statements are stated in Rupiah. The conversion of Rupiah amounts into U.S. Dollars are included solely for the convenience of the readers and have been made using the average of the market bid and offer rates of Rp14,380 to US\$1.00 published by Reuters on December 31, 2018.

On March 29, 2019, the Reuters bid and offer rates were Rp14,235 and Rp14,245 to US\$1.00.

Foreign Exchange Controls

Currently, Indonesia has limited foreign exchange controls. The 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, a number of submarine cables which we rely on to provide services across the Indonesian archipelago were damaged. 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 currently 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 implementing 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 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 telecommunications 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 cyber attacks to date that have affected our operations, our network and website are frequently targeted by cyber attacks. For example, in April 2017 Telkomsel's website was hacked and in October 2018 Telkomsat's website was also hacked. In both cases, customers were unable to access the site and content on the homepage was altered for a portion of one day. A few other Telkom websites have also been subject to attack, rendering them unusable for a number of days until the incident was remedied. While none of these cyber attacks have caused significant losses to date, a successful cyber attack 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, and cause substantial reputational damage. 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 cyber attack 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. 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 affect 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 currently 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 revenue has declined from 33.1% for 2016 to 26.3% for 2018. 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 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 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 estimated operational lives ending 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 currently 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 currently 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. 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 of the integration opportunities that we currently expect to result from such acquisition and strategic transactions, or realize these benefits within the time frame that we currently expect, and the 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. This competition is likely to continue, particularly as telecommunications companies are affected by increased competition from Over The Top providers.

Our cellular services business, operated through our majority-owned subsidiary, 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, 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. 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 2.9% in 2018 and revenues from our wireline voice services decreased by 13.3% in 2018. The percentage of revenues derived from our wireline voice services out of our total revenues was 4.4% in 2018.

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 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 as 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 currently 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 needed spectrum or deploy the services customers desire on a timely basis and at adequate cost, 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 have launched our 4G/LTE services, which are expected to 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 Ministry of State-Owned Enterprises, currently 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 Ministry of State-Owned Enterprises, certain rights such as right to veto with regard 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

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. By the end of 2018, approximately 40% 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 Rupiah, Bank Indonesia raised its benchmark reference rate six times between May 2018 and November 2018 to 6.00%. These increase of the Bank Indonesia benchmark reference rate were followed by increases in the Jakarta Interbank Offered Rate ("JIBOR") and the Bank Indonesia Certificate ("SBI") interest rates. There can be no assurance that any of the Bank Indonesia benchmark reference rate, the JIBOR or the SBI interest rates will not rise again in the future.

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. Dollars. Most of our revenues are denominated in Indonesian Rupiah, although a portion is denominated in U.S. Dollars (for example, from international services). We may also incur additional long-term indebtedness in currencies other than the Indonesian Rupiah, including the U.S. Dollars, to finance further capital expenditures. Depreciation of the Indonesian Rupiah against the U.S. Dollar may material 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 Rupiah terms, the cost of equipment that we purchase from overseas and pay for in U.S. Dollars.

From 2014 to 2018, the Indonesian Rupiah per U.S. Dollar exchange rate ranged from a high of Rp11,271 per U.S. Dollar to a low of Rp15,253 per U.S. Dollar. As a result, we recorded foreign exchange losses of Rp52 billion in 2016 and foreign exchange gain of Rp51 billion in 2017 and Rp71 billion in 2018. As of December 31, 2018, the Indonesian Rupiah per U.S. Dollar exchange rate stood at Rp14,481 per U.S. Dollar, compared to Rp13,548 per U.S. Dollar as of December 29, 2017. To the extent that the Indonesian Rupiah depreciates further from the exchange rate as of December 2018, 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. Dollars and Euros, 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 telecommunications infrastructure technology, which involves substantial capital investment. For the years ended December 31, 2016, 2017 and 2018, our consolidated capital expenditures totaled Rp29,199 billion, Rp33,154 billion and Rp33,620 billion (US\$2,338 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 telecommunications 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 "Competition Law") prohibits agreements and activities which amount to unfair business competition and an abuse of a dominant market position. Pursuant to the Competition Law, the KPPU was established as Indonesia's antitrust regulator with the authority to enforce the provisions of the Competition Law.

In 2016, our Company, Telkomsel and five other local operators were found to have violated the 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 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 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.

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.

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"). Both Draft Regulation on Affiliated Party Transaction and Draft Regulation on Material Transaction introduce a wider coverage of transactions that are subject to stricter requirements than the previous regulations. If these draft regulations are enacted by the Government in their 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 service is subject to MoCI Regulation No.8 of 2017 on Provision of Internet Telephony Service for Public ("MoCI Regulation No.8/2017"). Based on MoCI Regulation No.8/2017, the tariff for internet telephony service is determined by us, as the operator, on a cost-based calculation. The regulation does not discuss at length the formula that we must apply in determining the tariff. It only requires us to (i) account for investment in the telecommunications network, (ii) account for investment in infrastructure relating to internet telephony services and (iii) maintain that the tariff for internet telephony service corresponds with the tariff for basic telephony services.

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 service. 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 directive in MoCI Regulation No.8/2017 relating to tariff implementation violation 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 and 2009, the Government issued a regulation relating to the construction, utilization and sharing of BTS towers. Pursuant to the regulations, the construction of BTS towers requires permits from the local government. The local government has a right to determine the location of the towers and the license fees to build tower infrastructure. The regulation issued in 2008 was revoked in 2018.

This regulation 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.

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.82 of 2012 on Implementation of Electronic System and Transaction ("GR No.82/2012") 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.

Not all of the implementing regulations to the EIT Law 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.

Furthermore, it is anticipated that a new regulation will be enacted in the future; the form and timing of which is uncertain. The MoCI has issued two draft amendments to GR No.82/2012. The first draft amendment which was issued on February 2018 (i) introduces a broad definition of electronic system operators that provide a "public service," (ii) introduces a brand new concept of data categorization, (iii) implements provisions for the registration of electronic system operators, (iv) implements provisions for the right to be forgotten and (v) implements provisions for the Government's right to terminate access to electronic information and/or documents (generally in respect of unlawful online content). The second draft amendment which was issued on October 2018 (i) introduces a new concept of electronic system feasibility study, (ii) implements requirements for an electronic transaction, (iii) implements provisions on deletion mechanism, (iv) introduction of new concept of digital identity and (v) amendment on provisions for strategic electronic data. If this draft regulation is enacted by the Government in its current form, it is possible that we would be subject to several obligations such as registration with the MoCI, keeping onshore data centers and disaster recovery centers, treatment of data based on the new categorization and the implementation of electronic system feasibility. Further, to the extent that the implementation or interpretation by Indonesian regulatory authorities, courts or MoCI of the new regulations in connection with EIT Law are adverse to us, our business, financial condition, results of operations and prospects could be materially and adversely affected.

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 continuously and consistently secure 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, Macau, Timor Leste, Australia, Myanmar, Malaysia, Taiwan, 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 cause our expected returns from our expansion to be limited and could have a material and adverse effect on our business, results of operations and financial condition.

Other Risks

We are dependent on our subsidiary, Telkomsel

We derived 72.2%, 70.2% and 65.3% of our revenue in 2016, 2017 and 2018, 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 to the OJK our financial results for the year ended December 31, 2018, on April 30, 2019, which we furnished to the SEC on a Form 6-K dated April 30, 2019, which contains our Consolidated Financial Statements as of and for the year ended December 31, 2018 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 Rp22,145 billion for 2017 and Rp18,032 billion for 2018 and our net income per share would be Rp223.55 for 2017 and Rp182.03 for 2018. Dividends declared per share were Rp167.66 for 2017. The dividend for 2018 will be decided at the 2019 AGMS, scheduled for May 24, 2019.

We were 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 stake 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, 2018, the Government had a 14.29% equity stake 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 stake 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 stake in Indosat or acquire a stake 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. Although the votes are still being counted as at the date hereof, President Joko Widodo is leading the votes. Regardless of the final official results, there can be no assurance that there will be no resurgence of political instability which would affect the Indonesian economy and in turn, our business.

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 currently. 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.

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 recent years, 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.

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. 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 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, and concerns over China's economic health and economic protectionism. Uncertainty over the outcome of the Eurozone governments' financial support programs and worries about sovereign finances generally are ongoing. 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 have a material adverse effect on 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-3" 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 have material adverse effects on 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, the extent of which we are still assessing.

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.

Our operations may be adversely affected by an outbreak of an infectious disease, such as avian influenza, Influenza A (H1N1) virus or other epidemics

An outbreak of an infectious disease such as avian influenza, Influenza A (H1N1) or a similar epidemic, or the measures taken by the governments of affected countries, including Indonesia, against such an outbreak, could severely disrupt the Indonesian economy and undermine investor confidence, thereby materially and adversely affecting our financial condition or results of operations and the market value of our securities. Moreover, our operations could be materially disrupted if our employees remained at home and away from our principal places of business for extended period of time, which would have a material and adverse effect on our financial condition or results of operations and the market value of our securities. The perception that an outbreak of infectious diseases or another contagious disease may occur may also have an adverse effect on the economic conditions of countries in Asia, including Indonesia.

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

We continue to seek to innovate and 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 King of Digital in the Region." Our mission is to "Lead Indonesian Digital Innovation and Globalization."

[Table of Contents](#)

In order to achieve such vision and mission, we continue to work to transform five aspects of our business: human resources transformation, business transformation, structural transformation, cultural transformation, and infrastructure and system transformation.

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	: 510/3-0689/2013/7985-BPPT
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)" FitchRatings 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	: – 422 Plasa Telkom outlets – 11 Global Offices in Australia, Hong Kong, Macau, Malaysia, Myanmar, New Zealand, Saudi Arabia, Singapore, Taiwan, Timor Leste, and the United States

- 11 International GraPARI centers across Saudi Arabia, Singapore, Hong Kong, Macau, Taiwan and Malaysia
- 429 GraPARI centers in Indonesia (including 7 GraPARI Telkom Group in Bandung, Medan, Surabaya, and Tangerang, and those managed by third parties)
- 761 GraPARI mobile units
- 1,142 IndiHome mobile units

Other Information

- : - **Public Accountant**
KAP Purwantono, Sungkoro & Surja (a member firm of Ernst & Young Global Limited)
Indonesia Stock Exchange Building, Tower 2, 7th 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 Agency**
PT Pemeringkat Efek Indonesia
Panin Tower Senayan City, 17th Floor, Jl. Asia Afrika Lot. 19, Jakarta 10270
- **ADR Depositary**
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, Telegrap 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 was turned into 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 was transformed into a state-owned limited liability company and renamed Perusahaan Perseroan (Persero) PT Telekomunikasi Indonesia under Government Regulation No.25 of 1991. Our business operations were then divided into 12 telecommunication 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 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"), which became effective in September 2000, was enacted to allow 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"), and 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 telecommunications 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 reconfigured our business portfolio from TIME to TIMES (Telecommunication, Information, Media, Edutainment and Services) to increase business value creation.

2014

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

2015

We launched IndiHome, which bundles in 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 inspiring working environment for our employees.

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.

B. BUSINESS OVERVIEW

Strategy

We are in the process of transforming our Company into a digital telecommunications company to realize our vision of becoming the "King of Digital in the Region," with a view to becoming and remaining one of the ten largest telecommunications companies by market capitalization across Southeast Asia, East Asia, South Asia, Australia and New Zealand by the end of 2020.

To accomplish our objectives, we intend to implement ten strategic initiatives, where we define a thematic strategy each year. In 2018, our strategy was: deliver the best customer experience, expand our digital business, and pursue smart inorganic growth.

We strive to understand and anticipate customers' needs to deliver the best customer experience and exceed our customers' expectations by facilitating customers' interactions with us and digital interfaces (for the purchase of products and service, making payments, submitting requests for service upgrades or submitting complaints for instance) supported by digitalized processes, maximize our engagement with customers through our customer relationship management through our customer facing units. Within our group, we also 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, and allocate resources more efficiently.

We have been strengthening our digital capabilities and intend to further expand such capabilities to become a connectivity-driven business and provide end-to-end digital experience to our customers. To that end, we have been expanding the backbone network infrastructure and broadband network access throughout Indonesia and diversified and improved our offering of digital services. For instance, in the Mobile segment, we have developed digital advertising, mobile banking and financial services the Internet of things, in addition to E-Commerce platforms and digital lifestyle services that focus on providing cellular technology-based entertainment experiences such as music, video streaming, games, and other value added services mobile service platforms. In the Enterprise segment, we provide end-to-end digital solutions for corporate customers, Small and Medium Business and government institutions including 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 stakes 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. We have also collaborated with Oona, a digital company based in Hong Kong, to launch an advertising-based mobile video streaming service which is expected to strengthen our video service capabilities.

Business Portfolios

We organize our business under our digital TIMES portfolio in order to focus on creating customer value. Our six product portfolios are categorized under three lines of business, namely "Telecommunications Business," "Information Business" and "Media and Edutainment Business," and include services and extensions provided in conjunction with our business lines.

Our Telecommunications Business operates the following four product portfolios:

- mobile portfolio, which comprises mobile broadband services and mobile legacy services including mobile voice and SMS;
- fixed portfolio, which comprises fixed voice and fixed broadband services;
- wholesale and international business portfolio, which comprises wholesale telecommunication services (including our interconnection business and our international business); and
- network infrastructure portfolio, which comprises our satellite operations, tower operations and infrastructure and network management.

Our Information Business operates our enterprise digital portfolio. This portfolio includes our information and communications technology platform and smart enabler platform services; it constitutes an extension of our business into professional services which leverage our core capabilities.

Our Media and Edutainment Business operates our digital life and smart platform portfolio which primarily comprises media and edutainment services. We offer mobile-based digital life, E-Commerce and IPTV services to our customers.

We also operate a property management business which aims to leverage our property assets across Indonesia.

Historically, we generated the largest share of our revenue from services related to our telecommunications businesses. Our business has not experienced significant seasonality.

The following is a brief overview of our product portfolios.

A. Telecommunications Business

1. Mobile Portfolio

Our mobile portfolio comprises mobile voice, SMS and mobile data services, as well as 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 2018.

Our prepaid services, used by 96.7% of our cellular subscribers as of December 31, 2018, are marketed under the brands *simPATI*, *Kartu As* and *Loop*. Our postpaid mobile services, used by 3.3% of our cellular subscribers as of December 31, 2018, are marketed under the brand *kartuHalo*.

- ***simPATI*** is a prepaid service that targets the needs of the middle class market segment to provide a high quality telecommunication service, through the purchase of starter packs and top-up vouchers. Telkomsel offers various packages from time to time, such as the *simPATI* Combo and Flash packages. Telkomsel provides traffic generated by *simPATI* subscribers with priority of access to its network over traffic generated by *Kartu As* subscribers.
- ***Kartu As*** is a prepaid service targeting the lower middle class market segment, and offers a more affordable price compared to *simPATI*.
- ***Loop*** is a prepaid service targeting the youth market segment through the provision of attractive data package options.

- **kartuHalo** is a postpaid mobile telecommunications service targeted at the premium, professional and corporate market segments. kartuHalo offers several package options for our customers, including the HaloKick and HaloFit My Plan package options. Package options vary based on price and data allowance, among other factors.

Our total cellular subscriber base decreased by 17.0%, or 33.3 million subscribers, from 196.3 million subscribers (comprising 191.6 million prepaid subscribers and 4.7 million postpaid subscribers) as of December 31, 2017 to 163.0 million subscribers (comprising 157.6 million prepaid subscribers and 5.4 million postpaid subscribers), as of December 31, 2018. The decrease in our total cellular subscriber base was primarily driven by market competition and the implementation of requirements to register prepaid SIM cards.

Our mobile broadband services for all of our customers are marketed under the Telkomsel Flash brand name and are supported by 4G/LTE/HSDPA/3G/EDGE/GPRS technology. As of December 31, 2018, we had 106.6 million Telkomsel data users, compared to 105.8 million data users as of December 31, 2017, an increase of 0.7%, or 0.7 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.

We continued to expand our 4G/LTE network in 2018. We continually analyze the market for potential expansion of our 4G/LTE network. We only commit to expand or add capacity to our network in geographies where our analysis indicates there is sufficient demand to support the service. In 2018, we focussed on deploying 4G/LTE services in more cities and had 54.8 million 4G/LTE subscribers with 56,653 BTS and more than 90% population coverage in Indonesia as of December 31, 2018.

2. Fixed Portfolio

Our fixed portfolio comprises fixed voice and fixed broadband services.

In 2018, we continued to actively promote our "more for less" program, which aims to provide customers with more relevant benefits at a lower price through bundling services. Our bundling program is marketed under the retail brand "IndiHome," which allows customers to choose one or more of our services, which consist of broadband Internet, fixed wireline phone and interactive TV services, at a competitive price. We typically offer promotions for IndiHome products during festive periods such as Chinese New Year, Ramadan, Indonesian Independence Day, Christmas and New Year's Day. During 2018, IndiHome was the official broadcaster for the 2018 World Cup and broadcast all of the games at the World Cup live throughout Indonesia.

In addition, we continued to add value-added services and features to our IndiHome product in 2018 in order to increase its attractiveness to potential customers. During 2018, we introduced IndiHome Paket Gamer, a package aimed at gaming enthusiasts. We have also continued to enrich the variety of our UseeTV channels and began to offer subscribers the ability to add minipacks, which are groups of related channels which can be added on to an existing package. We offer customers the ability to upgrade internet speed and Over The Top content such as iflix, HOOQ and CATCHPLAY to enhance customer experience. 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.

3. Wholesale and International Portfolio

Our wholesale and international portfolio includes wholesale telecommunications services and our international business which is conducted through our subsidiary Telin.

Wholesale telecommunications 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.

During 2018, we embarked on a journey to create sustainable value by launching a Global Digital Hub (GDH) initiative. Through our Global Digital Hub initiative, we aim to create and maximize our capabilities and synergies in order to serve global and domestic carriers and wholesale service providers, enterprises, digital players, retail and other customer needs by providing future proof connectivity, cloud, content, platforms and other portfolios using our data center as a main enabler of digital ecosystem. As part of this initiative, we are planning to build a new data center, neuCentrIX, in Jakarta, which is expected to provide the additional capacity that we need for planned growth as part of the Global Digital Hub, but also to seamlessly connect with our existing data centers at other locations.

We also have limited operations and/or interests in a number of jurisdictions outside Indonesia in telecommunications and data related areas. Our international operations comprise 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;
- Macau, through Telin Macau Limited, where we provide MVNO 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;
- 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*); and
- New Zealand, through Contact Centres New Zealand Limited ("OneContact"), where we provide business process outsourcing services.

4. Network and Infrastructure Portfolio

Our network infrastructure portfolio includes satellite operations, tower operations and infrastructure network management.

Satellite

Our satellite operations consist primarily of leasing satellite transponder capacity to broadcasters and operators of VSAT, cellular and IDD services and ISPs, as well as providing Earth Station satellite up-link and down-link services for domestic and international users. We manage our satellite business through our subsidiaries, Metra and Telkomsat. For more information, see "— Network Infrastructure and Development — National Network — Transmission Network — Satellites."

In November 2017, we entered into a conditional sale and purchase agreement to acquire up to 70% of the equity of TS Global Network Sdn Bhd, a Malaysian satellite communications services and solutions specialist, and we completed the acquisition of 70% of the equity of the company in April 2018.

Towers

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, 2018, we had approximately 30,485 towers, comprising approximately 12,485 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, entered into a sale and purchase agreement to acquire 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.

Infrastructure and Network Management

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 connecting Manado, Indonesia to California and the IGG submarine fiber cable, which will enhance connectivity among major cities in Indonesia while directly connecting Indonesia to South East Asia, the Middle East, Western Europe and the United States.

B. Information Business

5. Enterprise Digital Portfolio

Our enterprise digital portfolio comprises information and communications technology platform services and smart enabler platform services.

Information and Communications Technology Platform Services

We provide information and communications technology platform services, which comprise the following services:

- enterprise connectivity, including satellite services (comprising transponder capacity leasing, satellite secondary product lines and other satellite support solutions), fixed voice, fixed broadband, Wi-Fi, Ethernet services, and data communication services which include leased channels including Metro-e, VPN-IP and Global Link (a high-capacity data networks solution that provides point-to-point connection with high capacity bandwidth), among others;
- IT services, including system integration, IT service management and asset management for managing and coordinating all workstations, office equipment, hardware and software on a single network from one workstation;
- data center and cloud services, which include enterprise data center, collocation, hosting, disaster recovery center, managed operation, data center consulting, and cloud services, which private cloud, hybrid cloud and public cloud (comprising infrastructure-as-a-service, software-as-a-service and platform-as-a-service) and professional services;
- business process outsourcing services which offers business process management, business process-as-a service and customer relationship management; and
- devices and hardware sales and services, under which we sell IT hardware and software and provide certain services including IT support services.

In April 2018, we agreed to acquire 51% of the share capital of PT Swadharma Sarana Informatika (SSI), an information and communications technology company with more than 20 years experience in ATM management services, with extensive business-to-business partnership with large banks in Indonesia. As of December 31, 2018, the number of ATMs managed by SSI was more than 23,000, spread across Indonesia.

In December 2018, we signed a share purchase agreement in order to acquire 70% of the share capital of PT Collega Inti Pratama, a company focusing on core banking system, e.g. the back-end system that processes daily banking transactions and post corresponding updates to the relevant accounts and financial records.

To strengthen our presence in the satellite business, in 2018 we rebranded our satellite business by renaming our subsidiary Patrakom as Telkomsat.

Smart Enabler Platform Services

We also provide smart enabler platform services, in order to promote innovation, integrate industry ecosystems and foster change in consumer behavior in Indonesia. Our smart enabler platform services comprise services relating to:

- financial services, including services such as bill payment aggregator, electronic payment platform services, online payment solution, switching services, ATM/EDC managed service and other financial support services such as cash replenishment and first level maintenance, ATM second level maintenance, cash in transit, and cash processing center;
- digital advertising, including digital advertising agency comprising media placement service and creative solutions; integrated digital media comprising digital out-of-home, mobile advertising, and online advertising; and digital printing services;

- big data and data analytics, which offers a platform service to generate insights for customers to analyze customer behavior and build marketing campaigns in some areas such as advertising, customer relationship management and others; and
- other smart enablers platform services, including Internet of Things (IoT) services which offers IoT solutions for building, IoT applications for smart energy monitoring and management, fleet management, and other IoT solutions; Unified Communication & Collaboration services and IT Security services.

As of December 31, 2018, we provided a total bandwidth of 2,601 Gbps to our broadband customers and 1,097 Gbps to our data communication services customers, which represented increases by 39.7% and 16.9%, respectively, compared to the previous year. As of December 31, 2018, we had approximately 113.8 million broadband customers (including mobile and fixed broadband customers).

C. Media and Edutainment Business

6. Digital Life and Smart Platform Portfolio

Our digital life and smart platform portfolio primarily comprises media and edutainment services that we offer to target digital consumers such as digital advertising, financial services, TV/video, E-Commerce, digital content and lifestyle, big data and smart platform. We also operate a venture capital fund through our subsidiary, PT Metra Digital Innovation which is also known as MDI Ventures, to invest in digital startups.

In this business portfolio, we offer mobile-based digital services that represent a group of digital businesses. Our mobile-based digital services consist of:

- digital advertising, which consists of digital advertising business and mobile banking solutions. Our digital advertising business provides digital advertising media solutions for marketers. Our mobile banking solutions business provides mobile functions for the banking industry, such as banking 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 together the buyers and sellers together in one advertisement marketplace. We also deliver services such as digital advertising agency, integrated digital media, and big data analytics;
- financial services, with a focus 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, which 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% stake in a financial technology company which provides a digital wallet platform to strengthen our financial technology capability. On February 22, 2019, T-CASH changed its name to LinkAja after Telkomsel entered into a non-cash share subscription for shares in PT Fintek Karya Nusantara ("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 the Non-Cash National Movement Program. As at the date hereof, Telkomsel owns a 99.99% equity stake in Finarya;
- TV/video, which is a service we offer to both the fixed and mobile market, and includes TV-on-demand and video-on-demand included as part of our IndiHome services. Our subsidiary, Metranet, has recently introduced OONA TV which is a local and foreign TV streaming service that can be accessed for free without subscription fees, on which we provide space for advertisers. Consumers can earn "tcoins" which can be redeemed at certain merchant partners through interactions on OONA TV. Telkomsel also offers VideoMAX which is a bundling of data packages and access to some Over The Top video service;

- E-Commerce, which comprises BLANJA.com, an online marketplace that facilitates consumer-to-consumer and business-to-consumer sales. Consumers can sell and buy products through the TV screen by access IndiHome Store and Alfamind @ IndiHome, which is a partnership between the Alfa retail store and Indihome. We also introduced a business-to-business marketplace called Xooply in 2018;
- digital content and lifestyle, which focuses on providing a mobile entertainment experience for consumers by targeting different segments and leveraging Telkomsel's trusted billing system to facilitate transactions. It offers applications for music (e.g. LangitMusik, MusicMax and Ring Back Tone) and GameMax, which is a bundling package of game content data for several games and game vouchers; and
- big data and smart platform, which is a business where we act as platform enabler providing common horizontal solution components that can be used across industries and market segments. We provide an Internet of Things (IoT) platform for the enterprise segment that can be used in cases such as smart connected airport and 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.

D. 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, 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.

In 2018, Telkom Property undertook several property developments in accordance with our targets and standards. Our asset leveraging initiatives can be split into two categories: "group synergy projects" and "strategic and retail partnership projects." Group synergy projects are projects which involve the building up or fitting out of our idle land or buildings for use by our subsidiaries. Our goals for these projects are to achieve economies of scale and cost efficiencies. Synergy projects currently being carried out by Telkom Property include: (i) offices and warehouses in several major cities across Indonesia being reconfigured for office use (as regional or branch offices) or other business uses, and (ii) the construction of operation centers. As part of our strategic and retail partnership projects, we offer our facilities to third party users for long term leases or other incremental services. As of December 31, 2018, we had already cooperated with local and global players, in particular in the food, hospitality and retail industry within the framework of these strategic and retail partnership projects. Several prospective projects include office lease, restaurant or food and beverage, retail building rent and co-working space collaborations. We seek to maximize revenue and profit in implementing these projects.

We expect to continue expanding the scale of our property projects in terms of complexity and geographical reach. We aspire to develop a number of mixed-use property development in the future. In addition, we intend to continue looking for opportunities in secondary cities throughout Indonesia, where we believe we have a relative competitive advantage in terms of geographical reach.

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 TIMES services and solutions. In order to develop such platform and ensure the reliability and scalability of our TIMES services and solutions, 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 are actively developing a nationwide infrastructure network with a fiber optic backbone, which covered 458 cities in Indonesia as of December 31, 2018. Telkom also continue the re-engineering & re-inforcing 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 capacity of this satellite is 60 TPE, which consists of 48 C-Band transponders and 12 extended C-Band transponders and it 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, 2018, we managed approximately 11.1 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,				
	2014	2015	2016	2017	2018
Exchange capacity ⁽¹⁾	13,946,801	14,946,076	15,738,803	13,253,971 ⁽³⁾	13,829,115
Installed lines ⁽¹⁾	10,341,807	14,946,076	15,738,803	13,253,971 ⁽³⁾	13,829,115
Lines in service ⁽²⁾	9,698,255	10,276,887	10,663,000	10,957,118	11,111,056

- (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 currently 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 2018, Telkomsel added around 28,376 BTS with all of them were 4G/LTE BTS, and as of December 31, 2018, Telkomsel's digital network was supported by 189,081 BTS (including 56,653 4G/LTE BTS and 82,118 3G BTS).

Data and Internet Network

In 2018, we continued to improve the quality of our data network by installing additional capacity and coverage. As of December 31, 2018, we provided broadband access using fiber optics to 30 million home passed. As of December 31, 2018, our metro ethernet network expanded to 44,468 Gbps, 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, 2018, we have extended the capacity of our Internet gateway to reach an installed capacity of 4,820 Gbps. This ensures the adequacy of the Internet gateway capacity in anticipation of the expected growth for both fixed and mobile broadband traffic. In 2018, operated content delivery networks (CDN) with an aggregate capacity of 3,097 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, 2018, we maintained eight 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) and Makasar (at Pettarani and Balaikota) and we also completed two main points of presence in North Sulawesi (at Manado Centrum and Manado Paniki). In addition, we maintained 32 primary and secondary points of presence and completed four primary points of presence in Central Java (at Kudus and Solo) and West Java (at Bandung and Tasikmalaya) in 2018. As of December 31, 2018, we had 46 points of presence in 31 cities in Indonesia.

Throughout 2018, 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, 2018, a total of 382,361 access points had been installed.

Data Center

As of December 31, 2018, we operated 22 data centers. Telin operated five overseas data centers which consisted of three locations in Singapore (Telin-1, Telin-2, Telin-3), one location in Timor Leste and one location in Hong Kong. In Indonesia, we operated 14 neuCentIX data centers in Balikpapan, Bandung (at Lembong), Batam (at Bukit Dangas and Batam center), Jakarta (at Karet Tengsin and Jatinegara), Yogyakarta, Makasar, Manado (at Paniki), Medan (at Centrum), Semarang (at Banyumanik) and Surabaya (at Kebalen, Kaliasem and Gubeng). Telkom Sigma also managed 3 data centers with a specification of tier 3 and 4 in Indonesia (at Serpong, Sentul, and Surabaya). 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.

We have established 14 neuCentIX data centers across Indonesia as well as one in Hong Kong. These data centers provide carrier neutral connectivity and multiple services custom made for enterprise clients throughout the Asia Pacific region.

Transmission Network

In 2018, 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 24 backbone rings in Indonesia with an aggregate capacity of 128,000 Gbps as of December 31, 2018. As of December 31, 2018, we operated a fiber optic backbone network totaling 96,952 km.

Throughout 2018, we worked to deploy several submarine cable systems in order to strengthen our fiber optic backbone. In the west of Indonesia, we are progressing on the deployment of the SLM (Sabang-Lhokseumawe-Medan), a submarine cable system which will connect the Sabang-Lhokseumawe cable system and the Lhokseumawe-Medan cable system, with a total length of 641.82 km, while in the east of Indonesia we also deploying the PATARA (Papua Utara) submarine cable system which will connect Sentani and Sarmi with a total length of 347.16 km. In Kalimantan, we are progressing on the deployment of the MATANUSA (Mangkajang-Tawao-Nunukan-Sangatta) cable system with a total length 729.63 km. These three additional submarine cable systems (SLM, PATARA and MATANUSA) are expected to be ready for service in the first half of 2019.

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 broadband services. We completed the construction of this cable system in December 2018.

Satellites

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

The Telkom-2 satellite currently 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.

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 49.83 TPE (transponder equivalent to 36 MHz) from the following satellites: Apstar-6 (134 E) in the amount of 1.9 TPE, Apstar-9 (142 E) in the amount of 20.2 TPE, Chinasat-10 (110.5 E) in the amount of 0.85 TPE, Chinasat-11 (98 E) in the amount of 5.5 TPE, Eutelsat 172A (172 E) in the amount of 4.9 TPE, JCSAT 5A (132 E) in the amount of 2.7 TPE, Measat (91.4 E) in the amount of 8.8 TPE, PSN Incline (146 E) in the amount of 3.6 TPE, and other satellites in the amount of 1.38 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"). As of December 31, 2018, 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). In December 2018, we completed the IGG submarine cable system 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 72 points of presence in various parts of the world, including in Asia (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, two points of presence in Yangon, one point of presence in each of Cyberjaya, Dili, Kuala Lumpur, Seoul, Tokyo, Taipei and Bangkok), Europe (one point of presence in each of London, Manchester, Leeds, Amsterdam, Frankfurt, Berlin, Munich, Marseille, Paris, Kiev, Stockholm, Luxemburg, Zurich, Milan, Palermo, Turin, Warsaw, Moscow, St. Petersburg, Madrid, Sofia, Vienna, Dublin, Brussel, Bucharest, Prague, and Scotland), Canada (one point of presence in each of Montreal and Toronto) and the United States (two points of presence in Los Angeles, CA and one point of presence in each of Palo Alto, Ashburn, San Jose, New York, Guam, Hawaii, Chicago, Seattle, Santa Clara, Miami, San Francisco, Dallas, and Atlanta), the Middle East (one point of presence in Dubai), and Australia (one point of presence in Sydney).

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,			
	2016	2017	2018	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
External Revenues				
Indonesia	114,086	125,970	127,442	8,862
Foreign Countries	2,247	2,286	3,346	233
Total	116,333	128,256	130,788	9,095

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 2018 we focused our marketing strategy on improving profitability and increasing ARPU through healthier pricing; for instance, in 2018, we introduced a "more for more" program, whereby customers who subscribe for more expensive data packages get attractive add-ons and features. We also continued 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 continued to focus on promoting data package options which target the youth segment which we market under our Loop brand. Our efforts to increase our ARPU include providing digital lifestyle and digital payment services which we provide as mobile-based digital life services.

In 2018, 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 introduced MAXStream, a video platform offering both free and paid content, as well Shellfire, a gaming platform which offers in-app purchase opportunities 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, 2018, we had 163 million cellular subscribers, including 157 million prepaid subscribers and 5.4 million postpaid subscribers; out of these 163 millions cellular subscribers, mobile broadband customers were 107 million.

Consumer Customers

In 2018, IndiHome was our main product targeting the consumer customer market. In 2018, 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 seasons such as Chinese New Year, Ramadan, Indonesia Independence Day, Christmas and New Year's Day.

In 2018, 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, 2018, we had 11.1 million fixed wireline subscribers out of which 7.3 million subscribers were fixed broadband subscribers (including 5.1 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 2018, 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.

During 2018, we strived to deliver high quality services and provide customer care management/after sales service through several methods, including having our call and contact center handle customer requests and complaints, as well as provide information on our products and services.

Wholesale and International Business Customers

Our wholesale and international business customers are mainly domestic other license operators (OLO's), service providers, global wholesaler and carrier, and enterprises that related with 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; (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 continuously develop 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, and 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 four digital GraPARI outlets as of December 31, 2018, which offer both Telkom and Telkomsel products. As of December 31, 2018, we managed 422 Plasa Telkom outlets and 429 GraPARI centers in Indonesia (including GraPARI centers which are managed by third party business partners), 11 international GraPARI centers (in Saudi Arabia, Singapore, Hong Kong, Macau, Taiwan and Malaysia) and seven 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, 2018, we also operated 761 GraPARI mobile units and 1,142 IndiHome mobile 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 starter packs, 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 to 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, that 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.
- **Websites**, we operate www.telkom.co.id and www.telkomsel.com, 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 domestic long distance network, fixed international call and fixed closed network:

- MoCI Decree No.839 of 2016 (on license to operate fixed domestic long distance 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.14/17/DASP dated 7 June 2012, 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: (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")

Our existing IUJK (which permits us to conduct national telecommunication-related construction services) has expired in November 2018. Considering there is a change in licensing regulatory regime (upon the introduction of the OSS system, where application for licenses is now made through government's electronic platform (i.e., OSS system)), we have applied for extension of our IUJK through OSS system and has obtained the business licenses for the relevant activities. However, the IUJK will only be effective upon us fulfilling several commitments. Among the required commitments are for us to obtain and submit the following: (i) building construction permit, (ii) environmental permit, (iii) location permit and (iv) capability certificate from the relevant association. We are currently working on this, and we expect that we could satisfy all commitments in the second semester of this year.

Pending the fulfilment of the commitment, by virtue of the business license, we are allowed to carry out certain activities, e.g.: land acquisition, certification/worthiness application process, changing the size of the construction area and human resources recruitment.

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 growth of 5.17% in 2018 according to the Indonesian Central Bureau of Statistics along with national growth the information and communication sector recorded growth of 7.04%. 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 use of legacy SMS and voice services with Over The Top applications, which has led the legacy business to decline even more steeply. 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 2018 brought significant adverse financial consequences for telecommunications operators, leading to restoration of pricing to more sustainable levels by the end of 2018.

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, 2018. Following the introduction of the SIM card registration requirements starting from October 2017. In compliance with applicable regulation, the SIM card registration program implemented limits on the number of prepaid SIM cards users may own. As a result, the three largest mobile operators experienced a decrease of 21.8% in the number of subscribers during 2018, in aggregate, according to MoCI. The SIM card registration requirements led to decreased demand for SIM cards generally, due to the inconvenience of the registration process. Nevertheless, as cellular industry growth in the near future is expected to be based on services and data volume consumption rather than on the new purchases of SIM cards, we believe the industry as a whole will be healthier in the next couple of years. As of December 31, 2018, Telkomsel estimates that it remained the largest cellular provider in Indonesia, with approximately 163 million cellular subscribers and a market share of approximately 57.8%.

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. Telkomsel won the auction for a 30 MHz block on the 2,300 MHz band in October 2017, with two other operators (Indosat and Tri) winning auctions for frequency in the 2,100 MHz radio frequency band. This additional spectrum empowers 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. The 3G mobile technology is becoming outdated and as a result, Telkomsel recently stopped adding 3G BTS; XL Axiata and Indosat are expected to do the same. Telecommunication companies currently 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 2018, 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 Play Media") and PT Eka Mas Republik (an affiliate of Smartfren Telecom which operates under the "MyRepublic" brand), based on the number of subscribers, based on 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, 2018, we had more than 7.3 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 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

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 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 ("MoCI Regulation No.7/2018") ("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 is currently encouraging 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 Competition Law. The Competition Law prohibits agreements and activities which amount to unfair business competition and an abuse of a dominant market position. Pursuant to the Competition Law, the KPPU was established as Indonesia's antitrust regulator with the authority to enforce the provisions of the Competition Law.

The 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.

Cellular

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

As of December 31, 2018, Telkomsel remained the largest cellular provider in Indonesia, with approximately 163.0 million cellular subscribers and a market share of approximately 57.8% 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, 2018. 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 281 million cellular subscribers in Indonesia as of December 31, 2018, a 21.9% decrease from approximately 360 million as of December 31, 2017, according to MoCI News Letter dated February 13, 2019. The decrease was primarily due to introduction by the Government of SIM card registration requirements, which led to a number of prepaid subscribers since services to pre-paid SIM cards customers who did not meet these registration requirements were discontinued. 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. During the second half of 2017, Telkomsel saw 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 2018 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, 2018 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	163.0

(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 such as Link Net, First Media, BizNet Networks, MNC Play Media 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 Media and MyRepublic which primarily target the affluent household market in Greater Jakarta. BizNet Networks 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.

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 and PT Jasnita Telekomindo 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 2015-2016 as a result of mobile industry consolidation and spectrum reallocation. XL acquired Axis in 2014 while Flexi and Bakrie Telecom effectively ceased their operations in the same year. 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 2018, tenancy demand was more stable as a result of mobile broadband expansion.

As of December 31, 2018, we had approximately 30,485 towers, including approximately 12,485 towers owned by Dayamitra and approximately 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, as amended (on operation of telecommunications networks).
- Minister of Transportation Decree No.KM.21/2001 (on the provision of telecommunications services) that was most recently 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.

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 authority to regulate the postal and telecommunications sectors in Indonesia including with respect to licensing, numbering, interconnection, universal service obligation and business competition is held by the DGPI. The authority to regulate matters related to radio frequency spectrum and standardization of telecommunications equipment in Indonesia is held by the Directorate General of Posts and Informatics Resources and Equipment of the MoCI ("DGRE").

On July 11, 2003, MoCI promulgated the Telecommunications Regulatory Authority Regulation, pursuant to 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 Director of DGPI and a government representative appointed by the Minister of Communication and Information).

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.

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) and 2.1 GHz (neutral technology) and 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 spectrum in the 2.1 GHz frequency is regulated by:

- MoCI Decree No.19/KEP/M.KOMINFO/2/2006 (on the determination of winner of IMT 2000 mobile cellular operator selection at 2.1 GHz frequency).

- MoCI Decree No.268/KEP/M.KOMINFO/9/2009 (on the determination of additional allocation of radio frequency bandwidth blocks, tariffs, and payment scheme radio frequency spectrum right of usage fees for IMT 2000 mobile cellular operators at 2.1 GHz frequency).
- MoCI Decree No.191 of 2013 (on the determination of Telkomsel as winner in the selection of users of additional frequency bandwidth at 2.1 GHz frequency for IMT 2000 mobile cellular operators).

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 operations) 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 a 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 Telkomsel'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 Telkomsel'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, 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 currently regulated under MoCI Regulation No.7/2018. MoCI Regulation No.7/2018 regulates the requirement and commitment due to the introduction of the OSS system. MOCI Regulation No.7/2018 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.

Our Company obtained its 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, 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, 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 contribute in providing telecommunication facilities and infrastructure for the interest of opening equal access to telecommunications throughout all regions in Indonesia, which is generally done by way of financial contribution. MoCI Regulation No.10/2018 stipulated, among others, that when providing telecommunication access and services in rural areas (as part of the Government's USO program), the provider is determined through a selection process by the Rural Telecommunications and Informatics Center (*Balai Telekomunikasi dan Informatika Pedesaan* or "BTIP") which was established based on MoCI Regulation No.35/PER/M.KOMINFO/11/2006 ("MoCI Regulation No.35/2006") Subsequently, based on MoCI Regulation No.18/PER/M.KOMINFO/11/2010, which revokes MoCI Regulation No.35/2006, BTIP was changed to the Telecommunications and Informatics Financing Provider and Management Center (*Balai Penyedia dan Pengelola Pembiayaan Telekomunikasi dan Informatika* or "BPPPTI"). The roles and responsibilities of BPPPTI are currently governed under MoCI Regulation No.2 of 2017 on the Organization and Work Procedures of the BPPPTI. Based on MoCI Regulation No.3 of 2018, the organization and work procedures were arranged, BPPPTI has been renamed as the Telecommunications and Information Accessibility Agency (*Badan Aksesibilitas Telekomunikasi dan Informatika* 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 current USO tariff rate is 1.25% of gross revenue, net of bad debts and/or interconnection charges and/or connection charges. Subsequently, 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), which was amended by MoCI Regulation No.19/2016, effective as of November 8, 2016 ("MoCI Regulation No.19/2016"). MoCI Regulation No.19/2016 stipulates, among other things, the exclusion of certain revenues that are not considered as part of gross revenues as a basis to calculate the USO charged.

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, the upfront fee is paid at twice the amount of the offering price submitted by each bidding process winner, while the annual license fee for telecommunication operations is paid according to the amount of the lowest offering price from the bidding process winner. The MoCI will stipulate the amount and timing of payment for the radio frequency spectrum right of use.

Further, telecommunication 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 provided in the statement letter has expired, the respective equipment and devices which will be re-used for its original purposes must be certificated with a 50% certification fee. Telecommunication equipment and devices with a local content certificate of higher than 50% are charged at 50% of the certificate type and a testing fee as provided in the GR.

Under GR No. 80/2015, the gross revenue constituting the basis for telecommunication right of use fee calculation can be deducted by (i) receivables which have been written off from the telecommunication operation and (ii) payment of interconnection fee obligation and/or the interconnectedness received by telecommunication operator, which is the right of another party. This deduction is further governed by a MoCI regulation.

Telecommunications Towers

Since the operations of telecommunication towers involves a number of relevant Government bodies, on March 30, 2009, a joint regulation was issued in the form of 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) ("Tower Construction Joint Decree").

Based on the Tower Construction Joint Decree, the construction of telecommunication towers requires permits from the relevant governmental institution (in the form of building construction permits). 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. The Tower Construction Joint Decree regulates 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, the return of investment and the profit. Monopolistic practices in the ownership and management of telecommunications towers is prohibited. This is stipulated in the Tower Construction Joint Decree by stating 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.

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 customer facing unit.

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 customer facing unit in line with their respective particular characteristics.

In order to synchronize our organizational structure with our business character as well as with the dynamic business challenges we face, our parenting strategy based on customer segmentation 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 "customer facing units," i.e. a unit that manages subsidiaries which operate business portfolios in a particular customer segment, which are discussed in greater detail below:

- Our *mobile customer facing unit* is responsible for relationship and interactions with mobile customers.
- Our *consumer customer facing unit* is responsible for relationship and interactions with consumer customers.
- Our *enterprise customer facing unit* is responsible relationship and interactions with small medium enterprise, government 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.

[Table of Contents](#)

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 *digital strategic portfolio functional unit* is responsible for creating company value through the optimization and harmonization of functional management strategy and business development, realize synergies within each customer facing units, maximize cross-customer facing unit synergies and optimize synergies among SOEs, merger and acquisition planning and execution, incubation product services.
- Our *network and IT solutions functional unit* is responsible for promoting integrated network and IT infrastructure across our 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 & workforce readiness, industrial relation, learning, assessment and community development.

The table below sets forth our operating companies and significant subsidiaries organized under the relevant customer facing unit, 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, 2018.

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 Jalin Pembayaran Nusantara (Jalin)	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 (Dayamitra)	Wholesale and International	Indonesia	100	100
PT Infrastruktur Telekomunikasi Indonesia (Telkom Infra)	Wholesale and International	Indonesia	100	100
PT Telekomunikasi Indonesia International (Telin)	Wholesale and International	Indonesia	100	100
PT Melon (Melon)	Digital Services	Indonesia	100	100
PT Metraplaza (Metraplaza)	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, 2018, 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 own several pieces of land located throughout Indonesia with the right to build and right to use for a period of 10-45 years, which will expire between 2018 and 2053. 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 19b.(i) to our Consolidated Financial Statements. Certain property and equipment of our subsidiaries with gross carrying value amounting to Rp8,077 billion as of December 31, 2018 have been placed as collateral for loan agreements. Please refer to Notes 18, 19c and 19d to our Consolidated Financial Statements.

Insurance

As of December 31, 2018, our property and equipment (excluding land rights), with net carrying amount of Rp134,586 billion were insured against fire, theft, earthquake and other specified risks, under blanket policies totaling Rp16,059 billion, US\$47 million, HKD9 million, SGD225 million and MYR37 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 2018, we obtained proceeds from an insurance claim on lost and broken property and equipment, with a total value of Rp153 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 2018 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 2018, we recorded gross revenues of US\$1,685 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 Rp44.8 million from these services in 2018. 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 a leading TIMES player in the region. As of December 31, 2018, we had approximately 163.0 million mobile cellular subscribers through Telkomsel, 11.1 million subscribers on our fixed wireline network, and 113.8 million broadband (mobile and fixed) 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 increased in 2018 as growth of the Indonesian gross domestic product increased from an average of 5.0% between 2014 and 2017 to 5.17% in 2018, and inflation decreased from an average of 4.5% between 2014 and 2017 to 3.13% in 2018, according to the Indonesia Central Bureau of Statistics. The Rupiah depreciated from an average of Rp11,878 to one U.S. Dollar in 2014 to an average of Rp14,246 to one U.S. Dollar in 2018 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. Dollars and Japanese Yen.

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

The growth in our revenues in 2018 compared with 2017 was largely driven by increases in revenues from data, internet and information technology services of 4.6%.

Our operating results in 2018 compared with 2017 also reflected an increase in expenses. This increase was mainly driven by operation, maintenance and telecommunication services expenses, which increased primarily as a result of an increase in our network capacities to better serve our customers, particularly for internet and data service.

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, but cheaper tariffs resulting from promotional programs amidst an environment tightening competition led to a decrease in our ARPU from approximately Rp43,000 in 2017 to Rp41,000 in 2018 approximately.

Data, internet and information technology services revenues accounted for 54.8% of our consolidated revenues for 2018, up from 53.4% for 2017. Revenues from our data, internet and information technology services increased by 4.6% from 2017 to 2018. The increase in data, internet and information technology services revenues in 2018 was primarily due to a 8.1% increase in revenue from cellular internet and data, and 20.3% increase in revenue from non-cellular internet and data, and internet, data communication and information technology services which primarily resulted from increased revenue from IndiHome services and from Telkom Sigma, which provides data center, systems integration and cloud management services. We seek to continue to increase such revenues as we continue to invest in improving broadband infrastructure.

We expect that revenue from cellular internet and data will continue to increase and contribute 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 currently 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.

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 7.6% from Rp37,144 billion in 2017 to Rp34,338 billion 2018. 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 26.3% of our consolidated revenues for 2018 compared to 28.9% for 2017. See Item 3 "Key Information – Risk Factors – Risks Related to our Business – Risks Related to our Fixed and Cellular Telecommunication Business."

Increase in operations and maintenance expenses

We expect that our operations and maintenance expenses will continue to increase 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 operations and maintenance expenses increased by Rp5,286 billion, or 26.5%, from Rp19,929 billion in 2017 to Rp25,215 billion in 2018 primarily due to increased expenses relating to outsourcing maintenance of network infrastructure to third parties. Our operations and maintenance expenses primarily comprise expenses associated with network maintenance to improve our mobile cellular and fixed broadband services and accounted for 26.8% of our total expenses for 2018.

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, 2016, 2017 and 2018. Each item is expressed as a percentage of total revenues or expenses.

	2016		2017		2018		(US\$ million)
	(Rp billion)	%	(Rp billion)	%	(Rp billion)	%	
REVENUES							
Telephone revenues							
Cellular	38,407	33.0	37,144	28.9	34,338	26.3	2,388
Fixed lines	7,644	6.6	6,768	5.3	5,910	4.5	411
Total telephone revenues	46,051	39.6	43,912	34.2	40,248	30.8	2,799
Interconnection revenues	4,147	3.6	5,174	4.0	5,462	4.2	380
Data, internet and information technology services revenues							
Cellular, internet and data	28,307	24.3	37,954	29.6	41,036	31.4	2,854
Internet, data communication and information technology services	13,837	11.9	15,083	11.8	18,143	13.9	1,261
Short Messaging Service ("SMS")	15,953	13.7	13,192	10.3	9,298	7.1	646
Pay TV	1,111	1.0	1,943	1.5	2,326	1.8	162
Others	47	0.0	354	0.3	844	0.6	59
Total data, internet and information technology services revenues	59,255	50.9	68,526	53.5	71,647	54.8	4,982
Network revenues	947	0.8	1,873	1.5	1,735	1.3	121
Other revenues							
Sales of peripheral	1,489	1.3	2,292	1.8	1,852	1.4	129
Manage service and terminal	788	0.7	535	0.4	1,449	1.1	101
Call center service	514	0.4	970	0.8	1,052	0.9	73
E-health	415	0.4	470	0.3	563	0.4	39
E-payment	424	0.4	506	0.4	449	0.3	31
Tower rental	733	0.6	796	0.6	—	—	—
Others	1,570	1.3	3,202	2.5	3,844	2.9	267
Total other revenues	5,933	5.1	8,771	6.8	9,209	7.0	640
Revenue from contract with customers	—	—	—	—	128,301	98.1	8,922
Revenue from other source	—	—	—	—	2,487	1.9	173
Total revenues	116,333	100.0	128,256	100.0	130,788	100.0	9,095
EXPENSES							
Operations, maintenance and telecommunication services expenses							
Operations and maintenance	17,047	21.9	19,929	23.4	25,215	26.8	1,753
Radio frequency usage charges	3,687	4.8	4,276	5.0	5,473	5.8	381
Leased line and CPE	4,141	5.3	5,255	6.2	5,125	5.5	356
Concession fees and USO charges	2,217	2.8	2,249	2.6	2,297	2.4	160
Cost of sales of handset	1,481	1.9	1,544	1.8	1,860	2.0	129
Electricity, gas and water	960	1.2	1,037	1.1	1,051	1.0	74
Cost of SIM cards and vouchers	624	0.8	914	1.1	866	1.0	60
Tower lease rental	322	0.4	472	0.6	480	0.5	33
Vehicles rental and supporting facilities	367	0.5	301	0.4	413	0.4	29
Insurance	256	0.3	294	0.3	193	0.2	13
Others	161	0.2	332	0.4	920	1.0	64
Total operations, maintenance and telecommunication services expenses	31,263	40.1	36,603	42.9	43,893	46.6	3,052
Depreciation and amortization	18,556	23.8	20,477	24.0	21,442	22.8	1,491
Personnel expenses							
Salaries and related benefits	7,122	9.2	7,821	9.2	8,077	8.6	562
Vacation pay, incentives and other benefits	4,219	5.4	3,339	3.9	3,292	3.5	229
Pension benefit cost	1,068	1.4	1,700	2.0	1,120	1.2	78
Net periodic post-employment health care benefit cost	163	0.1	276	0.3	335	0.4	23
LSA expenses	237	0.3	255	0.3	161	0.2	11
Other employee benefit cost	82	0.1	62	0.1	113	0.1	8
Other post-employment benefit cost	48	0.1	42	0.0	32	0.0	2
Early retirement program	628	0.8	—	—	1	0.0	0
Others	45	0.1	34	0.0	47	0.1	3
Total personnel expenses	13,612	17.5	13,529	15.8	13,178	14.1	916
Interconnection expenses	3,218	4.1	2,987	3.5	4,283	4.6	298

Table of Contents

	2016		2017		2018		(US\$ million)
	(Rp billion)	%	(Rp billion)	%	(Rp billion)	%	
General and administrative expenses							
Provision for impairment of receivables	743	1.0	1,494	1.8	2,208	2.4	154
General expenses	1,626	2.1	1,449	1.7	1,792	1.9	125
Training, education and recruitment	399	0.4	531	0.6	463	0.5	32
Professional fees	594	0.8	498	0.6	823	0.9	57
Travelling	436	0.5	475	0.6	415	0.4	29
Meeting	207	0.3	241	0.3	233	0.2	16
Social contribution	134	0.2	197	0.2	181	0.2	13
Collection expenses	152	0.2	135	0.1	157	0.2	10
Others	319	0.4	240	0.3	322	0.3	22
Total general and administrative expenses	4,610	5.9	5,260	6.2	6,594	7.0	459
Marketing expenses	4,132	5.3	5,268	6.2	4,001	4.3	278
Loss (gain) on foreign exchange - net	52	0.1	(51)	(0.1)	(71)	(0.1)	(5)
Other expenses	2,469	3.2	1,320	1.5	680	0.7	47
Total expenses	77,824	100.0	85,332	100.0	93,947	100.0	6,532
Other income	751		1,039		1,745		121
Operating profit	39,172		43,902		38,533		2,680
Finance income	1,716		1,434		1,014		71
Finance costs	(2,810)		(2,769)		(3,523)		(245)
Share of profit (loss) of associated companies	88	0.0	61	0.0	53	0.0	4
Profit before income tax	38,166		42,628		36,077		2,510
Net income tax expense	(9,017)		(9,958)		(9,366)		(652)
Profit for the year	29,149		32,670		26,711		1,858
Other comprehensive income (expenses) - net	(2,099)		(2,332)		4,954		344
Net comprehensive income for the year	27,050		30,338		31,665		2,202
Profit for the year attributable to owners of the parent company	19,333		22,120		17,802		1,238
Net comprehensive income for the year attributable to owners of the parent company	17,312		19,927		22,631		1,573
Basic and diluted earnings per share (in full amount)							
Profit per share	195.99		223.30		179.71		0.01
Profit per ADS (100 shares of common stock per ADS)	19,599.85		22,329.40		17,970.52		1.25

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, 2017 and 2018. See "— Financial Overview — Year ended December 31, 2018 compared to year ended December 31, 2017," and "— New Standards and Interpretations."

Financial Overview

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 (US\$9,095 million) in 2018. The increase was primarily due to an increases 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 (US\$2,388 million) 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 Rp858 billion, or 12.7%, from Rp6,768 billion in 2017 to Rp5,910 billion (US\$411 million) 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 (US\$380 million) in 2018 primarily due to increased in voice traffic between countries, a niche market within the global transit market that we targeted.

d. Data, Internet and Information Technology Services Revenues

Our data, internet and information technology services revenues accounted for 54.8% of our consolidated revenues in 2018, compared to 53.5% in 2017. Data, internet and information technology service revenues increased by Rp3,121 billion, or 4.6%, from Rp68,526 billion in 2017 to Rp71,647 billion (US\$4,982 million) in 2018. This increase was primarily due to an:

- increase in internet, data communication and information technology service revenue by Rp3,060 billion, or 20.3%, from Rp15,083 billion in 2017 to Rp18,143 billion in 2018, primarily due to an increase in fixed broadband subscribers from 5.3 million as of December 31, 2017 to 7.3 million as of December 31, 2018;
- 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 106.5 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;"
- increase in other data and internet revenues by Rp490 billion, or 138.4%, from Rp354 billion in 2017 to Rp844 billion in 2018 primarily due to an increase in volume of collocation data center and value added services; and
- increase in Pay TV revenues by Rp383 billion or 19.7% in line with the increase in add on minipack transactions by IndiHome customers to 4.4 million in 2018, compared to 0.6 million 2017.

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 Rp138 billion, or 7.4%, from Rp1,873 billion in 2017 to Rp1,735 billion (US\$121 million) in 2018, primarily due to a decrease in leased lines and satellite transponders leases revenues.

f. 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 (US\$640 million) in 2018. The increase was primarily due to an:

- 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 other 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 revenue from other source, such as lease, separately from revenue from contract with customers. Revenues from tower lease rental which are previously disclosed as other revenues are disclosed as revenue from other source in 2018.
- a decreased 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.

g. Revenue from other source

Revenue from other source amounted to Rp2,487 billion (US\$173 million) in 2018, was resulted from the adoption of IFRS 15, under IFRS 15, we are required to disclose revenue from other source, such as leases, separately form revenue from contracts with customers. Revenue from other source was previously classified as data, internet, and information technology revenue and other revenues.

Other Income

Other income increased by Rp706 billion, or 67.9%, from Rp1,039 billion, in 2017 to Rp1,745 billion (US\$121 million) in 2018, primarily due to an increase in proceeds from the insurance claim on lost and broken property and equipment.

Expenses

Total expenses increased by Rp8,615 billion, or 10.1%, from Rp85,332 billion in 2017 to Rp93,947 billion (US\$6,532 million) in 2018. The increase in expenses was attributable primarily to increases in operations, maintenance and telecommunication service expenses, interconnection and depreciation.

a. Operations, Maintenance and Telecommunication Service Expenses

Operations, maintenance and telecommunication service expenses increased by Rp7,290 billion, or 19.9%, from Rp36,603 billion in 2017 to Rp43,893 billion (US\$3,052 million) in 2018.

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

- increase in operations 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 (US\$1,491 million) 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 (US\$916 million) 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 as a result of no past service cost having been incurred in 2018 compared to 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 Expense

Marketing expenses decreased by Rp1,267 billion, or 24.1%, from Rp5,268 billion in 2017 to Rp4,001 billion (US\$278 million) 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 starter packs to credit top-up packages.

e. General and Administrative Expense

General and administrative expenses increased by Rp1,334 billion, or 25.4%, from Rp5,260 billion in 2017 to Rp6,594 billion (US\$459 million) in 2017, primarily due to an:

- increase in provision for impairment of receivables 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 provision of expected credit loss 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

[Table of Contents](#)

- 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 Expense

Interconnection expense increased by Rp1,296 billion, or 43.4%, from Rp2,987 billion in 2017 to Rp4,283 billion (US\$298 million) in 2018, reflecting our focus on increasing interconnection revenue.

g. Loss (Gain) on Foreign Exchange - net

Gain on foreign exchange-net by Rp71 billion (US\$5 million) in 2018 compared with Rp51 billion in 2017.

h. Other Expenses

Other expenses decreased by Rp640 billion, or 48.5%, from Rp1,320 billion in 2017 to Rp680 billion (US\$47 million) in 2018, primarily due to Value Added Tax (“VAT”) expense that occurred following the Supreme Court’s ruling that Telkomsel had underpaid VAT expenses for the fiscal year 2010.

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 (US\$2,680 million) 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 (US\$71 million) 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 (US\$246 million) 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 (US\$2,511 million) in 2018. Our pre-tax margin decreased from 33.2% in 2017 to 27.6% in 2018.

Net Income Tax Expense

Income tax expense decreased by Rp592 billion, or 5.9%, from Rp9,958 billion in 2017 to Rp9,366 billion (US\$652 million) in 2018, in line with the decrease in profit before income tax.

Other Comprehensive Income (Expenses) – Net

We recorded other comprehensive income of Rp4,954 billion (US\$344 million) 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.

Net Comprehensive Income for the Year

As a result of the foregoing, net comprehensive income for the year increased by Rp1,327 billion, or 4.4%, from Rp30,338 billion in 2017 to Rp31,665 billion (US\$2,203 million) 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 (US\$1,238 million) in 2018.

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

Net 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 (US\$1,573 million) 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.

Year ended December 31, 2017 compared to year ended December 31, 2016

Revenues

Total revenues increased by Rp11,923 billion, or 10.2%, from Rp116,333 billion in 2016 to Rp128,256 billion in 2017. The increase was primarily due to an increases in data, internet and information technology service revenues, other revenues, interconnection revenues and network revenues.

a. Cellular Telephone Revenues

Cellular telephone revenues decreased by Rp1,263 billion, or 3.3%, from Rp38,407 billion in 2016 to Rp37,144 billion in 2017. This decrease was primarily due to a decrease in revenue from voice services because customers chose 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 telephone revenues decreased by Rp876 billion, or 11.5%, from Rp7,644 billion in 2016 to Rp6,768 billion in 2017. The decrease in fixed lines telephone revenues was primarily due to a decrease in revenues from voice 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 Rp1,027 billion, or 24.8%, from Rp4,147 billion in 2016 to Rp5,174 billion in 2017 primarily due to higher incoming voice call from other operators.

d. Data, Internet and Information Technology Services Revenues

Our data, internet and information technology service revenues accounted for 53.5% of our consolidated revenues for 2017, compared to 50.9% for 2016. Data, internet and information technology service revenues increased by Rp9,271 billion, or 15.6%, from Rp59,255 billion in 2016 to Rp68,526 billion in 2017. This increase was primarily due to an:

- increase in cellular internet and data revenues by Rp9,647 billion, or 34.1%, from Rp28,307 billion in 2016 to Rp37,954 billion in 2017 primarily driven by an increase in mobile broadband subscribers from 84.7 million subscribers as of December 31, 2016 to 105.8 million subscribers as of December 31, 2017. 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";
- increase in internet, data communication and information technology service revenue by Rp1,246 billion, or 9.0%, from Rp13,837 billion in 2016 to Rp15,083 billion in 2017 primarily due to an increase in fixed broadband subscribers from 4.3 million as of December 31, 2016 to 5.3 million as of December 31, 2017;
- increase in Pay TV revenues by Rp832 billion, or 74.9%, from Rp1,111 billion in 2016 to Rp1,943 billion in 2017, primarily due to an increase in revenues from interactive TV services that we offer as part of the IndiHome bundled service; and
- increase in other data and internet revenues by Rp307 billion, or 653.2%, from Rp47 billion in 2016 to Rp354 billion in 2017 primarily due to an increase in E-commerce and value added services.

These increases were partially offset by a decrease in SMS revenues by Rp2,761 billion, or 17.3%, from Rp15,953 billion in 2016 to Rp13,192 billion in 2017 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 Rp926 billion, or 97.8%, from Rp947 billion in 2016 to Rp1,873 billion in 2017 primarily due to an increase in VSAT services revenue.

f. Other Revenues

In 2017, revenues from other services increased by Rp2,838 billion, or 47.8%, from Rp5,933 billion in 2016 to Rp8,771 billion in 2017. The increase was primarily due to an:

- increase in other revenues by Rp1,632 billion, or 103.9%, from Rp1,570 billion in 2016 to Rp3,202 billion in 2017;
- increase in sales of peripheral revenues by Rp803 billion, or 53.9%, from Rp1,489 billion in 2016 to Rp2,292 billion in 2017 primarily as a result in increase in sales of handsets; and
- increase in call center service revenues by Rp456 billion, or 88.7%, from Rp514 billion in 2016 to Rp970 billion in 2017.

These increases were partially offset by a decrease in manage service and terminal revenues by Rp253 billion, or 32.1%, from Rp788 billion in 2016 to Rp535 billion in 2017 primarily as a result from the decreasing demand for CPE such as computers and modems from our customers.

Other Income

Other income increased by Rp288 billion, or 38.3%, from Rp751 billion, in 2016 to Rp1,039 billion in 2017 primarily due to an increase in proceeds from the insurance claim on lost and broken property and equipment mainly relating to satellite and other equipment.

Expenses

Total expenses increased by Rp7,508 billion, or 9.6%, from Rp77,824 billion in 2016 to Rp85,332 billion in 2017. The increase in expenses was attributable primarily to increases in operations, maintenance and telecommunication service expenses, depreciation expenses and marketing expenses.

a. Operations, Maintenance and Telecommunication Service Expenses

Operations, maintenance and telecommunication service expenses increased by Rp5,340 billion, or 17.1%, from Rp31,263 billion in 2016 to Rp36,603 billion in 2017.

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

- increase in operations and maintenance expenses by Rp2,882 billion, or 16.9%, from Rp17,047 billion in 2016 to Rp19,929 billion in 2017 due to an increase in expenses associated with network maintenance to improve our mobile cellular and IndiHome service;
- increase in leased lines and CPE expenses by Rp1,114 billion, or 26.9%, from Rp4,141 billion in 2016 to Rp5,255 billion in 2017 in line with an increase in information technology service revenues;
- increase in radio frequency expenses of Rp589 billion, or 16.0%, from Rp3,687 billion in 2016 to Rp4,276 billion in 2017 due to additional spectrum won at an auction by Telkomsel in 2017;
- increase in cost of SIM card and voucher sales by Rp290 billion, or 46.5%, from Rp624 billion in 2016 to Rp914 billion in 2017 primarily as a result of sales activities to maintain market share and additional promotion related to SIM card registration;
- increase in other expenses of Rp171 billion, or 106.2%, from Rp161 billion in 2016 to Rp332 billion in 2017; and
- increase in tower leases of Rp150 billion, or 46.6%, from Rp322 billion in 2016 to Rp472 billion in 2017 resulting from network expansion

b. Depreciation and Amortization

Depreciation and amortization increased by Rp1,921 billion, or 10.4%, from Rp18,556 billion in 2016 to Rp20,477 billion in 2017 in line with the network infrastructure development both in mobile and fixed businesses.

c. Personnel Expenses

Personnel expenses decreased by Rp83 billion, or 0.6%, from Rp13,612 billion in 2016 to Rp13,529 billion in 2017. This decrease was primarily due to a:

- decrease in vacation pay, incentives and other benefits expenses of Rp880 billion, or 20.9%, from Rp4,219 billion in 2016 to Rp3,339 billion primarily due to a decrease in extra incentive expenses; and
- decrease in early retirement programs expenses of Rp628 billion, since there was no early retirement program in 2017.

The above decreases were partially offset by an:

- increase in salaries and related benefit expenses of Rp699 billion, or 9.8%, from Rp7,122 billion in 2016 to Rp7,821 billion in 2017 in line with increase in total employees;
- increase in pension benefit cost of Rp632 billion, or 59.2%, from Rp1,068 billion in 2016 to Rp1,700 billion in 2017 primarily due to an increase in additional post retirement benefit cost amounting to Rp657 billion which was partially offset by a decrease in defined pension benefit cost amounting to Rp51 billion; and
- increase in net periodic post-employment health care benefit cost of Rp113 billion, or 69.3%, from Rp163 billion in 2016 to Rp276 billion in 2017.

d. Marketing Expense

Marketing expenses increased by Rp1,136 billion, or 27.5%, from Rp4,132 billion in 2016 to Rp5,268 billion in 2017. This increase was mainly related to the increase in advertising and promotion expense of Telkomsel.

e. General and Administrative Expense

General and administrative expenses increased by Rp650 billion, or 14.1%, from Rp4,610 billion in 2016 to Rp5,260 billion in 2017 primarily due to an:

- increase in provision for impairment of receivables of Rp751 billion, or 101.1%, from Rp743 billion in 2016 to Rp1,494 billion in 2017 due to increases in receivable provisioning to be more in line with historical collection patterns; and
- increase in training, education and recruitment expenses of Rp132 billion, or 33.1%, from Rp399 billion in 2016 to Rp531 billion in 2017 resulting from new training initiatives for the training of both new and existing employees.

The above increases were partially offset by a:

- decrease in general expenses of Rp177 billion, or 10.9%, from Rp1,626 billion in 2016 to Rp1,449 billion in 2017; and
- decrease in professional fees of Rp96 billion, or 16.2%, from Rp594 billion in 2016 to Rp498 billion in 2017.

f. Interconnection Expense

Interconnection expense decreased by Rp231 billion, or 7.2%, from Rp3,218 billion in 2016 to Rp2,987 billion in 2017 due to lower outgoing voice and SMS traffic.

g. Loss (Gain) on Foreign Exchange - net

Gain on foreign exchange-net was Rp51 billion in 2017 compared to a loss on foreign exchange – net by Rp52 billion in 2016.

h. Other Expenses

Other expenses decreased by Rp1,149 billion, or 46.5%, from Rp2,469 billion in 2016 to Rp1,320 billion in 2017 primarily due to several expenses incurred in 2016 which were not incurred in 2017, including, among others, direct write-off of long term receivables and the accrual of tower termination expenses for Flexi tower of Rp558 billion and Rp202 billion, respectively.

Operating Profit and Operating Profit Margin

As a result of the foregoing, operating profit increased by Rp4,730 billion, or 12.1%, from Rp39,172 billion in 2016 to Rp43,902 billion in 2017. Our operating profit margin increased from 33.7% in 2016 to 34.2% in 2017.

Finance income

Finance income decreased by Rp282 billion or 16.4%, from Rp 1,716 billion in 2016 to Rp1,434 billion in 2017, in line with a decrease in time deposit by Rp4,990 billion.

Finance costs

Finance costs decreased by Rp41 billion or 1.5%, from Rp2,810 billion in 2016 to Rp2,769 billion in 2017, in line with a decrease in interest rates.

Profit before Income Tax and Pre-Tax Profit Margin

As a result of the foregoing, profit before income tax increased by Rp4,462 billion, or 11.7%, from Rp38,166 billion in 2016 to Rp42,628 billion in 2017. Our pre-tax margin increased from 32.8% in 2016 to 33.2% in 2017.

Net Income Tax Expense

Income tax expense increased by Rp941 billion, or 10.4%, from Rp9,017 billion in 2016 to Rp9,958 billion in 2017, in line with the increase in profit before income tax. This was partially offset by deferred tax benefits of Rp1,399 billion in 2017 compared to Rp1,721 billion in 2016, primarily due to deferred tax assets recognized in 2017.

Other Comprehensive Income (Expenses) – Net

We recorded other comprehensive expenses of Rp2,332 billion for 2017 compared to other comprehensive income of Rp2,099 billion for 2016 primarily due to actuarial losses of Rp2,375 billion recognized in 2017 relating to our Defined Benefit Pension Plan. These losses were partially offset by foreign currency translation of Rp24 billion and net gain on available for sale financial asset of Rp20 billion.

Net Comprehensive Income for the Year

Net comprehensive income for the year increased by Rp3,288 billion, or 12.2%, from Rp27,050 billion in 2016 to Rp30,338 billion in 2017.

Profit for the Year Attributable to Owners of the Parent Company

Profit for the year attributable to owners of the parent company increased by Rp2,787 billion, or 14.4%, from Rp19,333 billion in 2016 to Rp22,120 billion in 2017.

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

Net comprehensive income for the year attributable to owners of the parent company increased by Rp2,615 billion, or 15.1%, from Rp17,312 billion in 2016 to Rp19,927 billion in 2017.

Profit per Share

Profit per share increased by Rp27.31, or 13.9%, from Rp195.99 in 2016 to Rp223.30 in 2017.

Segment Overview

In 2018, 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 34 to our Consolidated Financial Statements. Our segment results for 2016, 2017 and 2018 were as follows:

Telkom's Results of Operation by Segment

	Years Ended December 31,				
	2016	2017	2018	2018-2017	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)	(%)
Mobile					
Revenues					
External revenues	83,998	90,073	85,338	5,934	(5.3)
Inter-segment revenues	2,724	3,086	3,880	270	25.7
Total segment revenues	86,722	93,159	89,218	6,204	(4.2)
Total segment expenses	(50,361)	(53,834)	(55,449)	(3,856)	3.0
Segment results	36,361	39,325	33,769	2,348	(14.1)
Depreciation and amortization	(12,808)	(13,560)	(13,095)	(911)	(3.4)
Provision recognized in current period	(221)	(291)	(438)	(30)	50.5
Consumer					
Revenues					
External revenues	10,410	11,105	13,891	966	25.1
Inter-segment revenues	1,877	287	2,290	159	697.9
Total segment revenues	12,287	11,392	16,181	1,125	42.0
Total segment expenses	(13,817)	(11,923)	(15,531)	(1,080)	30.3
Segment results	(1,530)	(531)	650	45	(222.4)
Depreciation and amortization	(2,881)	(2,839)	(3,060)	(213)	7.8
Provision recognized in current period	(392)	(385)	(438)	(30)	13.8
Enterprise					
Revenues					
External revenues	15,816	19,130	21,054	1,464	10.1
Inter-segment revenues	12,877	16,801	17,995	1,251	7.1
Total segment revenues	28,693	35,931	39,049	2,715	8.7
Total segment expenses	(27,460)	(35,680)	(37,833)	(2,631)	6.0
Segment results	1,233	251	1,216	84	384.5
Depreciation and amortization	(1,386)	(2,136)	(2,128)	(148)	(0.4)

	Years Ended December 31,				
	2016	2017	2018	2018-2017	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)	(%)
Provision recognized in current period	119	(668)	(764)	(53)	14.4
Wholesale and International Business					
Revenues					
External revenues	5,866	7,439	10,084	701	35.6
Inter-segment revenues	14,451	15,305	16,678	1,160	9.0
Total segment revenues	20,317	22,744	26,762	1,861	17.7
Total segment expenses	(15,256)	(17,944)	(20,634)	(1,435)	15.0
Segment results	5,061	4,800	6,128	426	27.7
Depreciation and amortization	(1,715)	(2,382)	(3,146)	(219)	32.1
Provision recognized in current period	(238)	(127)	(71)	(5)	(44.1)
Other					
Revenues					
External revenues	19	126	130	9	3.2
Inter-segment revenues	209	602	886	62	47.2
Total segment revenues	228	728	1,016	71	39.6
Total segment expenses	(429)	(1,049)	(1,073)	(75)	2.3
Segment results	(201)	(321)	(57)	(4)	(82.2)
Depreciation and amortization	(19)	(22)	(21)	(1)	(4.5)
Provision recognized in current period	(1)	(2)	(5)	(0)	150.0

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, 2017 and 2018. See "— Financial Overview — Year ended December 31, 2018 compared to year ended December 31, 2017," and "— New Standards and Interpretations."

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 2017. 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 106.5 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 starter packs; 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 data, internet and information technology services revenue by Rp1,850 billion, or 25.4%, resulting from an increase in Pay TV revenues by Rp1,042 billion, or 86.2 % and an increase in internet, data communication and information technology services revenues by Rp802 billion, or 13.2%; 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 require the Company to disclose revenue from other source, such as leases, separately from revenue from contracts with customers. Revenue from other source was 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 wireline telephone revenues by Rp429 billion, or 11.4% 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 Rp2,019 billion, or 22.3% due to an increase in internet, data communication and information technology services revenues by Rp2,214 billion, or 27.6%; 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 sales of peripheral revenues by Rp440 billion, or 19.2%.

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

- fixed wireline telephone revenues by Rp460 billion, or 16.7%, primarily due to the decrease in the usage of voice service due to the competition of other cellular services; and
- network revenues by Rp465 billion, or 39.5%.

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 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 revenue from other source, such as leases, separately from revenue from contract with customers. Revenue from other source was previously classified as in other telecommunication service revenues and other revenues.
- network revenues by Rp330 billion, or 47.8% primarily due to increased in leased line and satellite lease revenues; and
- data, internet and information technology services revenue 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 Rp809 billion, or 34.6% 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 in 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%.

Year ended December 31, 2017 compared to year ended December 31, 2016

Mobile Segment

Our mobile segment revenues increased by Rp6,075 billion, or 7.2%, from Rp83,998 billion in 2016 to Rp90,073 billion in 2017. The increase was primarily due to an increase in:

- data, internet and information technology service revenues by Rp6,794 billion, or 15.4% due to an increase in cellular internet and data revenues by Rp9,647 billion, or 34.1%, partially offset by a decrease in SMS revenues by Rp2,853 billion, or 17.9%;
- interconnection revenues by Rp332 billion, or 24.8%; and
- other telecommunication services revenues by Rp213 billion.

The revenue increase was partially offset by a decrease in cellular telephone revenues by Rp1,263 billion, or 3.3% due to a decrease in revenue from voice services resulting from customers choosing to use non-traditional telecommunications services, such as Over The Top services, as an alternative to voice services.

Our mobile segment expenses increased by Rp1,638 billion, or 4.3% from Rp37,814 billion in 2016 to Rp39,452 billion in 2017. The increase was primarily due to an increase in:

- operation, maintenance and telecommunication service expenses by Rp904 billion, or 6.4%, due to an increase in expenses associated with network maintenance to improve our mobile network;
- marketing expenses by Rp782 billion, or 25.6%, primarily resulting from an increase in Telkomsel's advertising and promotion expenses; and
- depreciation and amortization expenses by Rp752 billion, or 5.9%, in line with our network infrastructure development in mobile.

Our increase in mobile segment expenses was partially offset by a decrease in interconnection expenses by Rp614 billion, or 38.6% and a decrease in personnel expenses by Rp322 billion, or 7.5%.

Consumer Segment

Our consumer segment revenues increased by Rp695 billion, or 6.7%, from Rp10,410 billion in 2016 to Rp11,105 billion in 2017 primarily due to an increase in data, internet and information technology service revenues by Rp1,592 billion, or 27.9%, resulting from an increase in internet, data communication and information technology services revenues by Rp1,387 billion, or 29.6% and an increase in Pay TV revenues by Rp202 billion, or 20.1 %.

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

- fixed wireline telephone revenues by Rp418 billion, or 10.0% due to a decrease in revenues from voice services; and
- other telecommunication services revenues by Rp472 billion, or 90.2%.

Our consumer segment expenses decreased by Rp664 billion, or 6.0%, from Rp11,024 billion in 2016 to Rp10,360 billion in 2017. The decrease was primarily due to a decrease in:

- operation, maintenance and telecommunication service expenses by Rp379 billion, or 10.2%; and
- general and administration expenses by Rp305 billion, or 38.1%.

Enterprise Segment

Our enterprise segment revenues increased by Rp3,314 billion, or 21.0%, from Rp15,816 billion in 2016 to Rp19,130 billion in 2017, primarily due to an increase in:

- other telecommunication services revenue by Rp2,169 billion, or 54.5%, due to increases in other revenue by Rp923 billion, or 155.1%, sales of peripheral by Rp803 billion, or 53.9% and call center revenues by Rp555 billion, or 201.1%
- network revenues by Rp876 billion, or 291.0%
- data, internet and information technology service revenues by Rp743 billion, or 9.0% due to an increase in Pay TV revenues by Rp630 billion, or 605.8%; and

The increase in enterprise segment revenues was partially offset by a decrease in fixed wireline telephone revenues by Rp474 billion, or 14.7%, due to a decrease in revenues from voice services.

Our enterprise segment expenses increased by Rp2,814 billion, or 15.8%, from Rp17,813 billion in 2016 to Rp20,627 billion in 2017. The increase was primarily due to an increase in:

- operation, maintenance and telecommunication service expenses by Rp414 billion, or 3.6% due to an increase in expenses associated with network maintenance;
- depreciation and amortization expenses by Rp751 billion, or 54.2% in line with our network infrastructure development
- general and administration expenses by Rp539 billion, or 71.3%; and
- personnel expenses by Rp214 billion, or 7.8%.

Wholesale and International Business Segment

Our wholesale and international business segment revenues increased by Rp1,573 billion, or 26.8%, from Rp5,866 billion in 2016 to Rp7,439 billion in 2017, mainly due to an increase in:

- other telecommunication services revenues by Rp769 billion, or 63.9%; and
- interconnection revenues by Rp695 billion, or 24.8% primarily due to higher incoming voice calls from other operators.

Our wholesale and international business segment expenses increased by Rp1,882 billion, or 18.0% from Rp10,451 billion in 2016 to Rp12,333 billion in 2017. The increase was primarily due to an increase in:

- operation, maintenance and telecommunication service expenses by Rp1,504 billion, or 39.6% due to an increase in expenses associated with network maintenance;
- depreciation and amortization expenses by Rp667 billion, or 38.9% in line with our network infrastructure development such as tower, satellite and submarine cable system; and
- interconnection expenses by Rp398 billion, or 64.5%.

The increases in wholesale and international business segment expenses was partially offset by a decrease in other expenses by Rp866 billion, or 73.1%.

Other Segment

Our other segment revenues increased by Rp107 billion, or 574.6%, from Rp19 billion in 2016 to Rp126 billion in 2017. This increase was primarily due to an increase in data, internet and information technology service revenues by Rp107 billion, or 563.2% resulting from an increase in e-business revenues.

Our other segment expenses increased by Rp562 billion, or 134.8% from Rp417 billion in 2016 to Rp979 billion in 2017 primarily due to an increase in operation, maintenance and telecommunication service expenses by Rp339 billion, or 172.1% and an increase in marketing expenses by Rp170 billion, or 136.9%.

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 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, 2018, we had Rp17,435 billion (US\$1,212 million) in cash and cash equivalents available, a decrease of Rp7,710 billion, or 30.7%, from Rp25,145 billion as of December 31, 2017.

Cash receipts from revenues comprised primarily cash receipts from revenues from customer, which amounted to Rp127,855 billion (US\$8,891 million) in 2018, 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, 2018, our current ratio was 0.93 compared to 1.05 as of December 31, 2017.

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 Rp44,082 billion as of December 31, 2018.

External Liquidity Sources

As of December 31, 2018, we had undrawn loan facilities which included the following sources of unused liquidity:

- BNI loan facility in the amount of Rp1,166 billion;
- Bank Mandiri loan facility in the amount of Rp1,005 billion;
- BCA loan facility in the amount of Rp209 billion;
- DBS Bank loan facility in the amount of Rp226 billion;
- ANZ Bank loan facility in the amount of Rp60 billion;
- MUFG Bank loan facility in the amount of Rp1,562 billion;
- PT Bank Sumitomo Mitsui Indonesia loan facility in the amount of Rp162 billion;
- Bank CIMB Niaga loan facility in the amount of Rp24 billion;
- EXIM Bank of Malaysia Berhad loan facility in the amount of MYR9 million;
- Bank UOB loan facility in the amount of Rp167 billion and USD11 million; and
- Bank HSBC loan facility in the amount of Rp387 billion and USD4 million.

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,			
	2016	2017	2018	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
Net cash flows:				
provided by operating activities	47,231	49,405	45,671	3,176
used in investing activities	(27,557)	(33,007)	(35,090)	(2,439)
used in financing activities	(17,905)	(21,052)	(18,458)	(1,284)
Net increase in cash and cash equivalents	1,769	(4,654)	(7,877)	(547)
Effect of exchange rate changes on cash and cash equivalents	(119)	32	171	12
Provision for expected credit losses on cash and cash equivalents	—	—	(4)	(0)
Cash and cash equivalents at beginning of year	28,117	29,767	25,145	1,747
Cash and cash equivalents at end of year	29,767	25,145	17,435	1,212

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.

[Table of Contents](#)

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 (US\$3,176 million), 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 Rp3,434billion; and
- other cash receipts – net of Rp1,498 billion.

Cash Flows from Investing Activities

Net cash flows used in investing activities in 2018 was Rp35,090 billion (US\$2,439 million), 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 time deposits and assets available-for-sale 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;
- purchases of other assets of Rp461 billion;
- acquisition of businesses, net of acquired cash of Rp420 billion;
- additional contribution on long-term investments of Rp337 billion; and
- advances for purchases of property and equipment Rp300 billion.

Cash Flows from Financing Activities

Net cash flows used in financing activities in 2018 was Rp18,458 billion (US\$1,284 million), compared to Rp21,052 billion in 2017, representing an increase of Rp2,594 billion, or 12.3%.

Cash receipts from financing activities increased by Rp23,179 billion, or 189.7%, to Rp35,398 billion compared to 2017. The cash receipts originated from:

- proceeds from loans and other borrowings of Rp35,364 billion; and
- proceeds from the issuance of new shares 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.

Year ended December 31, 2017 compared to year ended December 31, 2016

As of December 31, 2017, total cash and cash equivalent amounted to Rp25,145 billion, a decrease of Rp4,622 billion, or 15.5%, from Rp29,767 billion as of December 31, 2016.

In 2017, operating activity accounted for the largest cash receipts which amounted to Rp127,669 billion, or 90.3% of total cash receipts, followed by financing activity which amounted to Rp12,219 billion, or 8.6% of total cash receipts, and investing activity which amounted to Rp1,550 billion, or 1.1% of total cash receipts. In total, cash receipts increased by Rp9,184 billion, or 6.9%, compared to 2016.

In 2017, cash used for operating activities amounted to Rp78,264 billion, or 53.6% of total cash disbursements, followed by investing activities which amounted to Rp34,557 billion, or 23.6% of total cash disbursements, and financing activities which amounted to Rp33,271 billion, or 22.8% of total cash disbursements. Compared to 2016, cash disbursements increased by Rp15,607 billion, or 12.0%.

Cash Flows from Operating Activities

Net cash provided by operating activities in 2017 was Rp49,405 billion, compared to Rp47,231 billion in 2016, an increase of Rp2,174 billion, or 4.6%.

Cash receipts from operating activities amounted to Rp127,669 billion, an increase of Rp9,343 billion, or 7.9%, compared to 2016. The cash receipts originated from:

- cash receipts from customers and other operators of Rp125,111 billion;
- cash receipts from finance income of Rp1,431 billion;
- cash receipts from tax refund of Rp585 billion; and
- cash receipts from other after netted with the cash disbursement for other of Rp542 billion.

Cash disbursements from operating activities amounted to Rp78,264 billion, an increase of Rp7,169 billion, or 10.1%, compared to 2016. The cash disbursements were used for:

- cash payments for expenses of Rp49,604 billion;
- cash payments for corporate and final income taxes of Rp11,846 billion;
- cash payments to employees of Rp11,739 billion;
- cash payments for finance costs of Rp3,133 billion; and
- cash payments for Value Added Taxes of Rp1,942 billion.

Cash Flows from Investing Activities

Net cash flows used in investing activities in 2017 was Rp33,007 billion, compared to Rp27,557 billion in 2016, an increase of Rp5,450 billion, or 19.8%.

Cash receipts from investing activities amounted to Rp1,550 billion, a decrease of Rp1,457 billion, or 48.5%, compared to 2016. The cash receipts originated from:

- proceeds from sale of property and equipment of Rp1,367 billion;
- proceeds from insurance claims of Rp155 billion; and
- dividends received from associated company of Rp28 billion.

Cash disbursements from investing activities amounted to Rp34,557 billion, an increase of Rp3,993 billion, or 13.1%, compared to 2016. The cash disbursements were used for:

- purchases of property and equipment of Rp32,294 billion;
- placements in other current financial assets of Rp676 billion;
- purchases of intangible assets of Rp508 billion;

- payment for advances for purchases of property and equipment of Rp490 billion;
- additional contribution on long-term investments of Rp269 billion;
- acquisition of business, net of acquired cash of Rp243 billion; and
- purchases of other assets of Rp77 billion.

Cash Flows from Financing Activities

Net cash flows used in financing activities in 2017 was Rp21,052 billion, compared to Rp17,905 billion in 2016, an increase of Rp3,147 billion, or 17.6%.

Cash receipts from financing activities amounted to Rp12,219 billion, an increase of Rp1,298 billion, or 11.9%, compared to 2016. The cash receipts came from:

- proceeds from loans and other borrowings of Rp12,169 billion; and
- proceeds from issuance of new shares of subsidiaries of Rp50 billion.

Cash disbursements from financing activities amounted to Rp33,271 billion, an increase of Rp4,445 billion, or 15.4%, compared to 2016. The cash disbursements were used for:

- cash dividends paid to non-controlling interests of subsidiaries of Rp12,355 billion;
- cash dividends paid to the Company's stockholders of Rp11,627 billion; and
- repayments of loans and other borrowings of Rp9,289 billion.

Current Assets

As of December 31, 2018, our current assets were Rp42,843 billion (US\$2,977 million) compared to Rp47,561 billion as of December 31, 2017, a decrease of Rp4,718 billion, or 9.9%. This decrease was primarily due to:

- a decrease in our cash and cash equivalents of Rp7,710 billion, or 30.7%, from Rp25,145 billion as of December 31, 2017 to 17,435 billion as of December 31, 2018; and
- a decrease in other current financial assets by Rp859 billion, or 39.5% from Rp2,173 billion as of December 31, 2017 to Rp1,314 billion as of December 31, 2018.

This decrease was partially offset by:

- an increase in contract assets by Rp1,560 billion as of December 31, 2018;
- an increase in contract costs by Rp924 billion as of December 31, 2018;
- an increase in prepaid other taxes by Rp492 billion, or 17.4%, from Rp2,833 billion as of December 31, 2017 to Rp3,325 billion as of December 31, 2018;

- an increase in trade and other receivables by Rp364 billion, or 3.8%, from Rp9,564 billion as of December 31, 2017 to Rp9,928 billion as of December 31, 2018 due to an increase in trade receivables from related parties; and
- an increase in assets held for sale by Rp330 billion, or 3,300.1% from Rp10 billion as of December 31, 2017 to Rp340 billion as of December 31, 2018.

Current Liabilities

As of December 31, 2018, our current liabilities were Rp46,322 billion (US\$3,221 million) compared to Rp45,376 billion as of December 31, 2017, an increase of Rp946 billion, or 2.1%. The increase was primarily due to:

- an increase in short-term bank loans and current maturities on long-term liabilities of Rp2,841 billion, or 37.9%, from Rp7,498 billion as of December 31, 2017 to Rp10,339 billion as of December 31, 2018, primarily due to an increase in short-term bank loans of Rp1,754 and an increase in current maturities on long-term liabilities of Rp1,087; and
- an increase in advances from customers of Rp328 billion, or 26.5%, from Rp1,240 billion as of December 31, 2017 to Rp1,568 billion as of December 31, 2018.

This increase was partially offset by:

- a decrease in other tax liabilities of Rp1,213 billion, or 61.0%, from Rp1,989 billion as of December 31, 2017 to Rp776 billion as of December 31, 2018;
- a decrease in trade and other payable of Rp577 billion, or 3.7%, from Rp15,791 billion as of December 31, 2017 to Rp15,214 billion as of December 31, 2018 due to a decrease in trade payables to third parties; and
- a decrease in current income tax liabilities of Rp397 billion, or 49.6%, from Rp801 billion as of December 31, 2017 to Rp404 billion as of December 31, 2018.

Working Capital

As of December 31, 2018, our working capital, defined as the difference between current assets and current liabilities as of the same date, decreased by Rp5,664 billion compared to our working capital as at December 31, 2017. As at December 31, 2018, 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 0.93 as at December 31, 2018. 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 Rp4,718 billion or 9.9%, from Rp47,561 billion as of December 31, 2017 to Rp42,843 billion as of December 31, 2018, primarily due to decreases in cash and cash equivalents of Rp7,710 billion and other current financial assets by Rp859 billion. These decreases were partially offset by increases in contract assets by Rp1,560 billion, contract costs by Rp924 billion, prepaid other taxes by Rp492 billion, trade and other receivables by Rp364 billion and asset held for sale by Rp330 billion.
- an increase in current liabilities of Rp946 billion, or 2.1%, from Rp45,376 billion as of December 31, 2017 to Rp46,322 billion as of December 2018, primarily due to increases in short-term bank loans and current maturities on long-term liabilities of Rp2,841 billion and advances from customers of Rp328 billion. These increases were partially offset by decreases in other tax liabilities of Rp1,213 billion, trade and other payables of Rp577 billion and current income tax liabilities of Rp397 billion.

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, 2018 is described as follows:

	Amount (Rp billion)	Portion (%)
Short-term debt	4,043	2.83
Long-term debt	40,039	28.04
Total debt	44,082	30.87
Equity attributable to owners of the parent company	98,738	69.13
Total	142,820	100.00

We take a qualitative approach towards our capital structure and debt levels. Under our syndicated loan agreement with BNI and BCA, we are required to maintain a debt to equity ratio should not exceed 2.5 and debt service coverage ratio should not be less than 1.0. As of December 31, 2018, our net debt to equity ratio was 0.27 and our debt service coverage ratio was 1.9 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 37 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, 2016, 2017 and 2018 were as follows:

	As of December 31,			
	2016 (Rp billion)	2017 (Rp billion)	2018 (Rp billion)	(US\$ million)
Indonesian Rupiah	30,100	33,623	41,722	2,901
U.S. Dollar ⁽¹⁾	992	1,027	1,631	114
Japanese Yen ⁽²⁾	707	648	602	42
Malaysian Ringgit ⁽³⁾	—	174	127	9
Total	31,799	35,472	44,082	3,066

- (1) The amounts as of December 31, 2016, 2017 and 2018 translated into Rupiah at Rp13,472.5, Rp13,567.5 and Rp14,380 = US\$1, respectively, being the Reuters average rates for U.S. Dollar at each of those dates.
- (2) The amounts as of December 31, 2016, 2017 and 2018 translated into Rupiah at Rp115.06, Rp120.52 and Rp130.63 = Yen 1, respectively, being the Reuters average rates for Yen at each of those dates.
- (3) The amount as of December 31, 2017 and 2018 translated into Rupiah at Rp3,352.07 and Rp3,476.39 = Ringgit 1, being the Reuters average rates for Ringgit.

Of our total indebtedness, as of December 31, 2018, Rp10,339 billion, Rp16,292 billion, Rp9,460 billion and Rp7,991 billion were scheduled for repayment in 2019, 2020-2021, 2022-2023 and thereafter, respectively.

For further information on our Company's indebtedness, see Notes 18 and 19 to our Consolidated Financial Statements.

Capital Expenditures

In 2018, we incurred capital expenditures of Rp33,620 billion (US\$2,338 million). Our capital expenditures are grouped into the following categories for planning purposes:

- Broadband services, which consist of broadband, IT, application and content and service node;
- Network infrastructure, which consists of core transmission network, metro-ethernet and Regional Metro Junction (“RMJ”), IP backbone and satellite;
- Optimizing legacy, for fixed lines; and
- Capital expenditure supports.

Of our Rp33,620 billion capital expenditure in 2018, Telkom, as parent company, incurred capital expenditures of Rp13,186 billion (US\$917 million), Telkomsel incurred capital expenditures of Rp13,885 billion (US\$966 million) and our other subsidiaries incurred capital expenditures of Rp6,549 billion (US\$455 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,			
	2016	2017	2018	
	(Rp billion)	(Rp billion)	(Rp billion)	(US\$ million)
Telkom (parent company)	10,309	11,572	13,186	917
Subsidiaries				
Telkomsel	12,564	15,080	13,885	966
Others	6,326	6,502	6,549	455
Subtotal for subsidiaries	18,890	21,582	20,434	1,421
Total for Telkom Group	29,199	33,154	33,620	2,338

Material Commitments for Capital Expenditures

As of December 31, 2018, we had material commitments for capital expenditures under contractual arrangements totaling Rp9,358 billion (US\$651 million), principally relating to procurement and installation of data, internet and information technology, cellular, transmission equipment and cable network in Indonesia.

The following table sets forth information on our committed capital expenditures under contractual arrangements as of December 31, 2018.

Currencies	Amounts in Foreign Currencies	Equivalent in Rupiah
	(in millions)	(in billions)
Rupiah	—	7,988
U.S. Dollar	94	1,349
Euro	1.23	20
HKD	0.79	1
Total		9,358

For a more detailed discussion regarding our material commitments for capital expenditures, see Note 35a to our Consolidated Financial Statements.

Source of Funds

We have historically funded our capital expenditures primarily with cash generated from operations. In 2019, we expect that our capital expenditure to revenue ratio will be approximately in the range of 25%-30%. We expect that the most significant proportions of capital expenditure will be allocated to broadband services, with a portion of the increase allocated to our subsidiaries. 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.aa to our Consolidated Financial Statements.

New Standards and Interpretations

We have 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 modified retrospective approach. Previous financial periods, in particular the financial years ended December 31, 2016 and 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 years ended December 31, 2016 and 2017 are not directly and fully comparable to our consolidated financial statements as of and for the year ended December 31, 2017. See "— Operating and Financial Review and Prospects."

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 measuring at amortised cost for 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 periods 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 the 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 amortised 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 sources.

Please see Note 2.aa to our Consolidated Financial Statements for a detailed discussion of IFRS 9 and IFRS 15, for other new standards, amendments to standards and interpretations not yet effective for 2018 which have not been applied in preparing the Consolidated Financial Statements, see note 40 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 revenue 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.

As main broadband Internet service provider in the region, we are also concerned about cyber security and Distributed Denial of Service (DDoS) attacks that has been massively targeting ISPs and companies in recent years. To mitigate the risk and protecting our customers from DDoS attacks, we are conducting research and guiding the implementation of carrier grade anti DDoS and cyber security mechanisms that can detect DDoS attack and divert the traffics to scrubbing system that will scrub the DDoS traffic and route clean traffic to our customers. We are also researching security mechanisms that can be deployed within our digital factory, so the security will be inherent within our DevSecOps (Develop-Secure-Operate) methodology in providing many digital applications.

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. We provide office facilities for nurturing creativity such as shared meeting rooms, classrooms and common areas for entrepreneurs which are known as Digital Innovation Lounges at 17 locations in Indonesia. In 2018, we received 406 proposals from startups as part of our startup discovery program and selected 36 of them to join our incubation program. We conduct incubation and acceleration activities and provide mentorships to assist startups to develop and validate their customer, product, and business model. 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 financing. In 2018, we successfully collaborated with and included the products and services of certain startups in our product and service offering.

D. TREND INFORMATION

The significant trends, or developments that have had in recent years, and may have in the future, a material impact on our results of operations, financial condition and capital expenditures, include (i) an increase in revenues from data, internet and information technology services and (ii) a decline in revenues from legacy services such as fixed line telephone, cellular voice and SMS. See "— Operating Results."

We believe favorable external factors, among others, will support our ability to continue to drive revenue growth from both cellular and non-cellular data, internet and information technology services. During 2018, Indonesia recorded GDP growth of 5.17%. With good economic fundamentals, Indonesia's national economy is expected to continue to grow steadily, with a corresponding increase in consumer purchasing power, which in turn is expected to result in higher demand for telecommunications services, for both basic telecommunications services as well as value-added services that are part of the increasingly prevalent digital lifestyle in modern societies.

Indonesia's telecommunications sector remains promising as it offers a large market with a sizable consumer base. Rising spending power of Indonesian consumers and growing mobile technological proliferations have led to an increased demand for innovative uptake. Several ongoing investment programs by telecommunication operators are expected to help improve Indonesia's national broadband landscape, with the emphasis being on 3G/4G mobile networks and fixed broadband. However, the continued decline in legacy services which is affecting all Asian countries is expected to slow down in the coming years. Aggressive mobile data promotions from telecommunications operators have helped drive subscriptions nationally, but have led to lower data margins. The ensuing price war for data services in Indonesia during the first half of 2018 brought significant adverse financial consequences for operators which ultimately forced them to restore prices to more sustainable levels. In addition, the continued widespread rollout of our fiber optic network for fixed broadband services is expected to provide an opportunity to capture more subscribers. We believe the foregoing trends will lead to an improvement in data margins and a continued demand for data, internet and information technology services as well as cloud and digital services that may offset the decline of legacy services.

Enterprise spending on system integration, maintenance and consulting is expected to increase with the fastest growth envisaged in services such as outsourcing and cloud computing. The rapid expansion of the IT service market and improvements made to Indonesia's telecommunications and ICT infrastructure are expected to continue driving IOT, which will require IT support in the form of software and services. We plan to continue to build our capabilities in these areas in order to position ourselves to capture opportunities in this space.

The Palapa national fiber ring project has been completed and has transitioned to the commercial phase. All main islands within the Indonesian archipelago are now connected with sufficient fiber optic backbone capacity. The next step is to further extend the links to Indonesia's neighboring nations that facilitate IT dissemination, and international market expansion. This will also enable improvements for higher mobile internet speed and wider coverage that will help over 200 million Indonesians to access a true broadband internet experience, transforming communication and content consumption behavior in the country. Although free to air television (FTA TV) remains the most effective medium for advertisers to get national reach, competition from internet and other digital media are inevitable. The fast growth of online content consumption is expected to provide an opportunity for broadband players such as Telkom to capture advertising revenue in the medium to longer term.

E. OFF-BALANCE SHEET ARRANGEMENTS

As of December 31, 2018, 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, 2018:

Contractual Obligation	By Payment Due Date				
	Total	Less Than 1 Year ⁽⁷⁾	1-3 years ⁽⁷⁾	3-5 years ⁽⁷⁾	More than 5 years ⁽⁷⁾
	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)	(Rp billion)
Long-Term Debts ⁽¹⁾⁽⁵⁾	36,894	5,489	14,854	8,678	7,873
Capital Lease Obligation ⁽²⁾	3,145	807	1,438	782	118
Interest on Long-Term Debts and Capital Lease ⁽⁶⁾	16,007	3,425	4,769	2,365	5,448
Operating Lease ⁽³⁾	23,832	6,271	7,444	5,586	4,531
Unconditional Purchase Obligations ⁽⁴⁾	9,358	9,358	—	—	—
Total	89,236	25,350	28,505	17,411	17,970

- (1) See Notes 18 and 19 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) Related to leases of leased line, telecommunication installation and equipment and land and building.
- (4) Capital expenditure committed under contractual arrangements.
- (5) Excludes the related contractually committed interest obligations.
- (6) See Item 3 "Key Information - Business Overview - Risk Factors - Risk Related to Our Business - Financial Risk - We are exposed to interest rate risk."
- (7) Less than 1 year = 2019, 1-3 years = 2020-2021, 3-5years = 2022-2023, more than 5 years = 2024 and thereafter.

See Note 35 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 2018, we did not contribute to our defined benefit pension plan and post-employment health care benefit plan. See Note 31 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 Regulation 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 seven members, one of whom is designated as the President Commissioner.

As of December 31, 2018, the Board of Commissioners consisted of seven members as listed below:

Name	Age	Date of Birth	Commissioner Since	Position
Hendri Saparini	54	June 16, 1964	2014	President Commissioner
Rinaldi Firmansyah	58	June 10, 1960	2015	Commissioner
Edwin Hidayat Abdullah	47	April 28, 1971	2018	Commissioner
Isa Rachmatarwata	52	December 30, 1966	2018	Commissioner
Cahyana Ahmadjayadi	63	July 12, 1955	2017	Independent Commissioner
Margiyono Darsasumarja	42	September 14, 1976	2015	Independent Commissioner
Pamijati Pamela Johanna Waluyo	60	June 20, 1958	2015	Independent Commissioner

Each of our Commissioners was a citizen of and domiciled in Indonesia as of December 31, 2018. 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: Cahyana Ahmadjayadi, Margiyono Darsasumarja and Pamijati Pamela Johanna Waluyo. 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:

Hendri Saparini assumed the role of President Commissioner in December 2014. She has also served as a member of the National Industry and Economics Committee (*Komite Ekonomi dan Industri Nasional* or KEIN) since 2016, Chairman of the Public Policy Committee at State-Owned Enterprise since 2015, as a Member Committee OJK Development of Sharia Service since 2014, and as a guest lecturer at the Institute of State Administration (*Lembaga Administrasi Negara*) since 2009. Previously Dr. Saparini was a founder of the Center of Reform on Economics (CORE Indonesia) and has served as its Executive Director (2013-2016). Dr. Saparini holds a doctorate in international political economics (1999) and a master degree in international policy management (1997) from Tsukuba University, Japan and a bachelor of arts degree in economics from Gadjah Mada University, Yogyakarta (1988).

Rinaldi Firmansyah assumed the role of Commissioner in April 2015. He also has served as an advisory board member of Daestrum Capital since 2016 and a commissioner at PT Elnusa Tbk since 2014. Previously, Dr. Firmansyah served as a commissioner at Indosat (2015), a commissioner at PT Bluebird Tbk (2013-2016) and as president commissioner at PT PLN Batam (2013-2016). Dr. Firmansyah also previously served as our President Director (2007-2012) and our Director of Finance (2004-2007). He holds a doctorate in management from the University of Padjadjaran, Bandung (2014), an MBA from the Indonesian Institute of Management Development (IPMI), Jakarta (1988) and a bachelor degree in electrical engineering from the Bandung Institute of Technology, Bandung (1985).

Edwin Hidayat Abdullah assumed the role of Commissioner in April 2018. He also has served as president commissioner at PT Icon+ since 2018 and Deputy Minister for energy, logistics, regions and tourism business in State-Owned Enterprise since 2015. He previously served as a commissioner at PT Pertamina (2016-2018), a commissioner at Telkomsel (2015-2016), an independent commissioner at PT Bumi Serpong Damai Tbk (2004-2015). He holds a master of public management from Lee Kuan Yew School of Public Policy, NUS (in cooperation with Kennedy School of Government, Harvard University) in Singapore and United States (2005) and a bachelor degree in economics from Gadjah Mada University, Yogyakarta (1995).

Isa Rachmatarwata assumed the role of Commissioner in April 2018. He has also served as a director of the Directorate General of State Assets in Ministry of Finance since 2017. Previously, he served as an expert on Policies and Regulations on Financial and Capital Market Services Department in the Ministry of Finance in Indonesia (2013-2017), a high employee at the Fiscal Policy Agency at the Ministry of Finance in Indonesia (2013) and Head of Insurance Bureau of Indonesian Capital Market and Financial Institution Supervisory Agency (*Badan Pengawas Pasar Modal dan Lembaga Keuangan* or BAPEPAM-LK), at the Ministry of Finance in Indonesia (2006-2012). He holds a master of mathematic actuarial science from University of Waterloo Canada, Canada (1994) and a bachelor degree in mathematics and natural sciences from the Bandung Institute of Technology, Bandung (1990).

Cahyana Ahmadjayadi assumed the role of Independent Commissioner in April 2017. Previously, he served as Commissioner of PT Bank Mandiri (Persero) in (2010-2013), an expert at MoCI in Indonesia in 2011, Founder of Pengelola Nama Domain Internet Indonesia in 2006, Directorate General for Telematics Application at MoCI in Indonesia in 2005, Deputy for Communication and Information Networks at MoCI in Indonesia in 2002 and Head of Telkom's Regional V Division, West Java in 1993. Dr. Ahmadjayadi holds a doctorate in cyber law from the University of Padjajaran (2010), a master degree in law from the University of Padjajaran (2004) and a bachelor degree in industrial engineering from Bandung Institute of Technology (1980).

Margiyono Darsasumarja assumed the role of Independent Commissioner in April 2015. He previously served as coordinator of advocacy and partnership for government reform of the Bureaucracy Reform Project (2012-2015), a lecturer in law and media ethics at Bakrie University (2012-2014) and a media development manager at Voice of Human Rights Media, a radio program in Indonesia (2001-2011). He holds a master of cyber law from the University of Leeds, England (2012) and a bachelor of law from the University of Indonesia (2008).

Pamijati Pamela Johanna Waluyo assumed the role of Independent Commissioner in April 2015. Previously, she served as corporate marketing director of Obsession Media Group (2014-2015), assistant director of sales and marketing at PT Media Televisi Indonesia (the broadcaster of Metro TV) (2006-2014), and corporate public relations professional at PT Media Televisi Indonesia and Media Group (2000-2006). She holds a master degree (1983) and a bachelor degree (1981) from the Delft University of Technology, the Netherlands.

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 eight 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 customer facing unit, 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 customer facing unit.
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 customer facing unit, 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 customer facing unit.
Director of Wholesale and International Services	<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 customer facing unit, 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 customer facing unit.
Director of Network, IT and 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, IT and 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, IT and solutions within our Group.

Role	Functions and Authority
Director of Digital and Strategic Portfolio	<ol style="list-style-type: none"> 1. Responsible for (i) distributing corporate strategy, including directional strategy, portfolio strategy and parenting strategy, (ii) exploring new sources of growth through collaboration, acquisition and synergy and (iii) developing a strategy for innovation in order to optimize business exploration in digital services. 2. Oversees our parenting strategy over the digital strategic portfolio functional unit in order to create company value through optimizing and harmonizing the management of strategy and business development within our Group. 3. Oversees our parenting strategy by implementing strategic control, coordination and subsidiary performance management over the digital services customer facing unit, 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 digital services customer facing unit.
Director of Finance	<ol style="list-style-type: none"> 1. Responsible for distributing corporate strategy, including portfolio strategy and parenting strategy with regard to financial operations and procurement in order to encourage optimal financial performance, procurement and assets growth, and drive disruptive competitive growth within our Group. 2. Oversees our parenting strategy by implementing strategic control, coordination and subsidiary performance management over the finance functional unit, 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 finance functional unit.
Director of Human Capital Management	<ol style="list-style-type: none"> 1. Responsible for distributing 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. 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, 2018, the Board of Directors consisted of eight members as listed below :

Name	Age	Date of Birth	Director Since	Position
Alex Janangkih Sinaga	57	September 27, 1961	2014	President Director ⁽¹⁾
Harry Mozarta Zen	49	January 9, 1969	2016	Director of Finance ⁽²⁾
Siti Choiriana	48	May 28, 1970	2018	Director of Consumer Service
Zulhelfi Abidin	56	January 1, 1962	2017	Director of Network and IT Solution
David Bangun	53	September 5, 1965	2017	Director of Digital & Strategic Portfolio
Abdus Somad Arief	55	September 25, 1963	2014	Director of Wholesale and International Service
Herdy Rosadi Harman	55	June 28, 1963	2014	Director of Human Capital Management
Dian Rachmawan	54	May 14, 1964	2014	Director of Enterprise & 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, 2018. Set forth below is a brief biography of each of our Directors:

Alex Janangkih Sinaga assumed the role of President Director in December 2014. He has also served as President Commissioner of Telkomsel since 2014. Mr. Sinaga started his career with our Company in 1987. He previously has served as President Director of Telkomsel (2012-2014), President Director of Metra (2007-2012), Executive General Manager of our Enterprise Services Division (2005-2007), Executive General Manager of our Fixed Wireless Division (2002-2005), Senior Manager of Business Performance for Telkom's Regional Division II Jakarta (2002) and General Manager of Telkom West Jakarta Branch Office (2000-2002). Prior to that, Mr. Sinaga served as General Manager at the West Surabaya Branch Office (1998-1999) and Malang Branch Office (1997-1998). Mr. Sinaga holds a master degree in telematics from the University of Surrey, England (1994) and a bachelor degree in electrical engineering from the Bandung Institute of Technology (1986).

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 Citi Global Corporate Banking at Citibank Co (1996-2001) and an Official Assistant Citi 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 at Buffalo (1996) and a bachelor degree in metallurgical engineering from the University of Indonesia (1993).

Siti Choiriana assumed the role of Director of Consumer Service of Telkom in April 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), Chief of Commissioner of Patrakom (2016-2017), Commissioner of AdMedika (2016), Commissioner of Finnet (2013-2015), Deputy Executive Vice President of our Enterprise Service Division (2012-2013), General Manager Enterprise Finance and Banking of our Enterprise Service Division (2009-2012) and General Manager Enterprise of our Telkom's Regional Division V Surabaya. She holds a master degree in management from Surabaya Institute of Technology (2005) and a bachelor degree in electrical engineering from Surabaya Institute of Technology (1993).

Zulhelfi Abidin assumed the role of Director of Network and IT Solution in April 2017. Mr. Abidin previously served as President Commissioner of Telkom Infratel (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 (1987).

David Bangun assumed the role of Director of Digital and Strategic Portfolio in April 2017. He has also served as President Commissioner of both MDI and Metranet since 2017. Mr. Bangun previously served as President Director of Dayamitra (2014-2017), Executive General Manager for Broadband Network at Telkom (2013-2014), Commissioner of Telin (2011-2014), Executive General Manager of Infratel (2011-2013), Vice President Infrastructure and Service Planning (2009-2011) and Assistant Vice President Investment Analysis (2007-2009). Mr. Bangun has a master degree in electrical engineering from Cornell University at New York (1999) and a bachelor degree in electrical engineering from Bandung Institute of Technology (1989).

Abdus Somad Arief assumed the role of Director of Wholesale and International Service in April 2017. He has also served as President Commissioner of Telin since 2017. Mr. Arief started his career with our Company in 1992. He has served as President Commissioner of Telkom Infratel (2015-2017), Commissioner of Telkom Telstra (2015-2017), Commissioner of Telkom Sigma (2015), Commissioner of Telkomsel (2015), Director of Network and IT Solution (2014-2017), Director of Network at Telkomsel (2012-2014), Commissioner of Dayamitra (2012-2014) and Executive General Manager for our Enterprise Services Division (2009-2012), Vice-President of Business Development for our Enterprise and Wholesale Directorate (2008-2009) and Deputy Executive General Manager of our Enterprise Services Division (2007-2008). In addition, Mr. Arief has served as President Commissioner of PT Pramindo Ikat Nusantara (which has changed its name to PINS) (2011-2012) and as a Commissioner of PT Infomedia Nusantara (2010-2011). Mr. Arief holds a master degree in information and technology systems (2000) and a bachelor degree in electrical engineering from Bandung Institute of Technology (1988).

Herdy Rosadi Harman assumed the role of Director of Human Capital Management in December 2014. He has also served as Commissioner of Telkom Property since 2015 and as the President Commissioner of Infomedia since 2016. Prior to his appointment as our Director, Mr. Harman served as Director of Human Capital Management at Telkomsel (2012-2014), Vice-President of Regulatory Management at our Company (2007-2012) and Vice-President of Legal & Compliance at our Company (2006-2007). He has also served as our Company's General Manager for Management Support (2004-2006). Mr. Harman holds a Master of Laws from Washington College of Law, at the American University, Washington D.C. (1998), an MBA from the Asian Institute of Management, Philippines, and Bandung Institute of Management (now known as Telkom University) (1993) and a bachelor of law degree from the University of Padjadjaran, Bandung (1986).

Dian Rachmawan assumed the role of Director of Enterprise and Business Service in April 2017. He has also served as President Commissioner of Telkom Telstra since May 2017. Mr. Rachmawan started his career with our Company in 1989. He has served as Director of Consumer Services (2014-2017), CEO of Telin Hong Kong (2011-2014), Director of Network Operation & Engineering Business & Partnership Development at Telin (2007-2011) and Executive General Manager for Fixed Wireless Network Division at our Company (2005-2007). Previously, Mr. Rachmawan served as our Company's General Manager for South Jakarta Branch Office (2004-2005), General Manager for Interconnection & Partnership for Regional Division II Jakarta (2001-2004) and Assistant Vice President for Interconnection Planning at our headquarters (2000-2001). Mr. Rachmawan holds a master degree in telecommunications engineering and a master of science in communication and real time systems from Bradford University, England (1994) and a bachelor degree in electronic and telecommunication engineering from Surabaya Institute of Technology (1987).

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 Director and Board of Commissioners for the 2018 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 2018 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.

[Table of Contents](#)

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 be 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 2018, the total remuneration paid to the entire Board of Commissioners was Rp102.9 billion. Taxes from remuneration borne by our Company amounted to Rp4.7 billion. The table below sets forth the remuneration that our Commissioners received in 2018:

Board of Commissioners	Tantiem, THR ⁽¹⁾ , Long-term Incentives and Post-employment Benefit		Total
	Honorarium and Allowance	(Rp million)	
Hendri Saparini	2,908	13,393	16,301
Rinaldi Firmansyah	2,821	12,033	14,854
Edwin Hidayat Abdullah ⁽²⁾	2,011	97	2,108
Isa Rachmatarwata ⁽²⁾	2,009	97	2,106
Cahyana Ahmadjayadi	2,823	8,011	10,834
Margiyono Darsasumarja	2,804	12,054	14,858
Pamijati Pamela Johanna Waluyo	2,804	12,054	14,858
Hadiyanto ⁽³⁾	1,137	11,936	13,073
Dolfie Othniel Fredric Palit ⁽⁴⁾	1,779	12,033	13,812
Devy W. Suradji ⁽⁵⁾	122	—	122

- (1) "THR" refers to *tunjangan hari raya* or religious holiday allowance.
(2) Since the AGMS on April 27, 2018.
(3) Up to AGMS on April 27, 2018
(4) Up to September 20, 2018.
(5) Up to December 22, 2017.

For 2018, the total remuneration of the entire Board of Directors was Rp170.8 billion. Taxes from remuneration borne by our Company amounted to Rp13.3 billion. The table below sets forth the remunerations that our Directors received in 2018:

Board of Directors	Honorarium	Tantiem and THR ⁽¹⁾	Allowance	Total
	(Rp million)			
Alex Janangkih Sinaga	3,530	20,870	300	24,700
Harry Mozarta Zen	2,989	18,783	300	22,072
Siti Choiriana ⁽²⁾	2,021	216	203	2,440
Zulhelfi Abidin	2,989	12,526	300	15,815
David Bangun	2,989	12,526	300	15,815
Abdus Somad Arief	2,989	18,783	300	22,072

Board of Directors	Honorarium	Tantiem and THR⁽¹⁾	Allowance	Total
	(Rp million)			
Herdy Rosadi Harman	2,989	18,783	300	22,072
Dian Rachmawan	2,989	18,783	300	22,072
Mas'ud Khamid ⁽³⁾	986	12,310	100	13,396
Indra Utoyo ⁽⁴⁾	—	4,153	—	4,153
Honesti Basyir ⁽⁵⁾	—	6,201	—	6,201

(1) "THR" refers to *tunjangan hari raya* or religious holiday allowance.

(2) Since the AGMS on April 27, 2018.

(3) Up to AGMS on April 27, 2018

(4) Up to March 15, 2017

(5) Up to April 20, 2017

The total accrued remuneration of Board of Commissioners and Directors for 2018 was Rp273.7 billion, consisting of tantiem.

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.

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 majority shareholder;
- 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 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) Rinaldi Firmansyah (Commissioner/Non-Voting Member); (iv) Cahyana Ahmadjayadi (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/2018 dated October 25, 2018 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.
 - candidates for the Board of Directors and Board of Commissioners of our Company's strategic 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 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 seven members: (i) Pamijati Pamela Johanna Waluyo (Independent Commissioner and Chairman of the Nomination and Remuneration Committee), (ii) Ario Guntoro (Secretary), (iii) Edwin Hidayat Abdullah (Commissioner), (iv) Rinaldi Firmansyah (Commissioner), (v) Isa Rachmatarwata (Commissioner), (vi) Margiyono Darsasumarja (Independent Commissioner), and (vii) Cahyana Ahmadjayadi (Independent Commissioner). To maintain independence in the execution of their tasks, members of the Nomination and Remuneration Committee have no relationship, either directly or indirectly, with us.

D. EMPLOYEES

We had a total of 24,071 employees as of December 31, 2018, consisting of 12,765 Telkom employees and 11,306 employees of our subsidiaries.

As of December 31, 2018, we had 403 senior management employees, compared with 655 senior management employees as of December 31, 2017. Total middle management employees increased from 5,585 employees as of December 31, 2017 to 6,093 employees as of December 31, 2018. Supervisor level employees decreased from 11,547 employees as of December 31, 2017 to 11,050 employees as of December 31, 2018. Other employees increased from 6,278 employees as of December 31, 2017 to 6,525 employees as of December 31, 2018. We did not employ a significant number of temporary employees in 2018. The following table shows our employee profile by position.

Position	As of December 31, 2018			
	Telkom	Subsidiaries	Telkom Group	Percentage (%)
Senior Management	211	192	403	1.7
Middle Management	4,092	2,001	6,093	25.3
Supervisors	7,060	3,990	11,050	45.9
Others	1,402	5,123	6,525	27.1
Total	12,765	11,306	24,071	100.0

Our employee profile based on educational background as of December 31, 2018 was dominated by university graduates which accounted for 56.5% 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, 2018			
	Telkom	Subsidiaries	Telkom Group	Percentage (%)
Pre University	2,484	1,146	3,630	15.1
Diploma Graduates	2,254	1,597	3,851	16.0
University Graduates	5,943	7,666	13,609	56.5
Post Graduates	2,084	897	2,981	12.4
Total	12,765	11,306	24,071	100.0

As of December 31, 2018, 23,942 of our employees were located in Indonesia and 129 of our employees were located outside of Indonesia.

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 pension fund for 2016, 2017 and 2018.

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 Rp83 billion, Rp131 billion for 2016 and 2017, respectively, and was Rp125 billion in 2018.

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 Rp9 billion, Rp10 billion and Rp13 billion, for the years ended December 31, 2016, 2017 and 2018, 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, 2018, SEKAR represented a total of 9,941 employees or 77.9% 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 (the "Seventh CWA"). The Seventh CWA is in effect for a period of two years.

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. In 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 29, 2019, 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 March 21, 2016, 110,256,210 of our shares were owned by 14,373 of our employees and our retirees. From 2014 through 2018, 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, the right to nominate, and to veto the appointment and removal of, any director or commissioner, the issue 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 29, 2019.

	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 29, 2019.

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 29, 2017, 2018 and 2019, 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 29, 2019. No other persons own 5% or more of our shares of common stock.

Commissioners or Directors	Number of Shares	Percentage of Ownership
Commissioners		
Hendri Saparini	654,505	<0.01
Rinaldi Firmansyah	454,113	<0.01
Directors		
Alex Janangkih Sinaga	1,683,359	<0.01
Harry Mozarta Zen	689,492	<0.01
Dian Rachmawan	1,575,562	<0.01
Abdus Somad Arief	1,515,022	<0.01
Herdy Rosadi Harman	1,514,720	<0.01
Siti Choiriana	540	<0.01
Total	8,087,313	<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 29, 2019.

Group	Number of Shares of Common Stock Owned	Percentage of Ownership
Foreign		
Business Entities	36,854,913,392	37.20
Individuals	20,733,355	0.02
Local		
Business Entities		
Companies	2,759,849,609	2.79
Mutual Funds	2,411,546,774	2.43
Insurance Companies	3,049,561,997	3.08
Pension Funds	1,509,608,200	1.52
Others Business Entities	105,842,150	0.11
Individuals	747,807,563	0.75
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 February 28, 2019. 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: (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 Rp1,883 billion in 2017 and Rp1,812 billion (US\$126 million) in 2018. Concession fees as a percentage of total expenses amounted to 2.2% in 2017 and 1.9% in 2018. Radio frequency usage charges amounted to Rp4,276 billion in 2017 and Rp5,473 billion (US\$381 million) in 2018. Radio frequency usage charges as a percentage of total expenses amounted to 5.0% in 2017 and 5.8% in 2018. USO charges to the MoCI amounted to Rp366 billion in 2017 and Rp485 billion (US\$34 million) in 2018. USO charges as a percentage of our total expenses amounted to 0.4% in 2017 and 0.5% in 2018.

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, 2018, we had a total of Rp949 billion (US\$66 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, 2018, 83.2% of such sub-loan borrowings were denominated in foreign currencies, with the remaining 16.8% denominated in Rupiah. In 2018, the annual interest rates charged 7.50% 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 2018, the amount of revenues from Government departments and agencies was Rp3,978 billion, which accounted for 3.04% 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, 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 29, 2019, we had 71,224 holders of shares of common stock (including the Government). This total includes 36,875,646,747 shares of common stock held by 2,212 holders of common stock located outside Indonesia. As of the same date, there were 85 ADS shareholders who owned 68,824,108 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 33 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. See Note 35 to our Consolidated Financial Statements.

DIVIDEND POLICY

An AGMS has the authority to determine the amount of dividends we pay. Our dividend payout ratio for 2018 will be decided at the AGMS scheduled for 2019.

Dividend Year	Date of AGMS	Payout Ratio (%)⁽¹⁾	Amount of Dividends (Rp million)	Dividend per Share After Stock Split (Rp)
2013	April 4, 2014	70	9,943,294 ⁽²⁾	102.40
2014	April 17, 2015	60	8,782,812 ⁽³⁾	89.46
2015	April 22, 2016	60	9,293,184 ⁽⁴⁾	94.64
2016	April 21, 2017	70	13,546,411 ⁽⁵⁾	136.75
2017	April 27, 2018	75	16,608,751 ⁽⁶⁾	167.66

(1) Represents the percentage of profit attributable to owners of the parent paid to shareholders in dividends.

(2) Consists of cash dividend amounting to Rp7,812,588 million and special cash dividend amounting to Rp2,130,706 million.

(3) Consists of cash dividend amounting to Rp7,319,010 million and special cash dividend amounting to Rp1,463,802 million.

(4) Consists of cash dividend amounting to Rp7,744,304 million and special cash dividend amounting to Rp1,548,880 million.

(5) Consists of cash dividend amounting to Rp11,611,211 million and special cash dividend amounting to Rp1,935,200 million.

(6) Consists of cash dividend amounting to Rp13,286,997 million and special cash dividend amounting to Rp3,321,754 million.

TELKOMSEL DIVIDEND

Pursuant to its AGMS on May 7, 2018, Telkomsel approved, the payment of cash dividends in the amount of Rp28,876 billion, which represented 95% of Telkomsel's net profits in 2017. 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.

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.

[Table of Contents](#)

As of December 31, 2018, the IDX had 619 issuers for equity and 106 active brokerage houses. In 2018, IDX recorded a trading volume of 246.51 billion shares. As of December 31, 2018, the total market capitalization was valued at Rp7,023.5 trillion (US\$488.42 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-00168/BEI/11-2018 ("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 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 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 0.0018% 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 that caused typical share price movements, 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 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 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 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 twice wider than auto rejection percentage as mentioned above.

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.01.03.0214555 dated June 8, 2018 and No.AHU-0013328.AH.01.02 TAHUN 2018 dated July 2, 2018.

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. In order to achieve the aforementioned objectives, we may undertake business activities that incorporate the following:

1. Main Business
 - a. Planning, building, providing, developing, operating, marketing/selling/leasing, and maintaining telecommunication and information networks to the widest extent in accordance with prevailing laws and regulations.
 - b. Planning, developing, providing, marketing/selling, and improving telecommunications and information services to the widest extent in accordance with prevailing laws and regulations.
 - c. Investing, including equity capital, in other companies whose businesses align with, and in order to achieve, our purposes and objectives.
2. 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 our resources which, among other things, the utilization of our properties and equipments and movable assets, information systems facilities, education and training facilities, and repairs and maintenance facilities.
 - c. Collaborating with other parties to optimize the information, communication or technology resources owned by other parties as a service provider in the information, communication and technology industry in order to realize our purposes and objectives.

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 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.

In respect of loans, 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, obtain or provide any loan (i) for non-operational purposes except for loans to subsidiaries and (ii) exceeding a certain amount as determined by the Board of Commissioners, subject to applicable capital market regulations in Indonesia.

Other than as above, the Board of Directors requires approval from the Board of Commissioners for:

- disposing/transferring and/or collateralising assets worth from Rp200 billion to Rp500 billion, except for deposits, shares recorded as investments, assets recorded as inventory. Such assets shall be valued based on fair prices;
- establishing cooperation with business entities or other parties, in the form of (i) operational cooperation, (ii) business cooperation, (iii) licensing cooperation, (iv) built, operate and transfer, (v) build, transfer and operate, (vi) build, operate and own, and (vii) other agreements of similar nature worth from Rp200 billion to Rp500 billion and for a duration of between five and ten years;
- making capital participation, relinquishing capital participation, as well as the change of capital structure in other companies, subsidiary companies or joint venture companies, which are not in the context of loan bailout, including capital participation in other companies through the subsidiary companies whose funding derives from the Company, in an amount between Rp150 billion and Rp200 billion;
- establishing subsidiary companies and/or a joint venture companies, in an amount between Rp150 billion and Rp200 million;
- merging, consolidating, acquiring, separating or dissolving subsidiaries or joint ventures, in an amount between Rp150 billion and Rp200 billion;
- binding our Company as a guarantor for a value of between Rp750 billion and Rp1 trillion;
- accepting medium/long-term loans and providing medium/long term loans worth between Rp10 trillion and Rp15 trillion;
- providing non-operational short/medium/long-term loans worth between Rp750 billion and Rp1 trillion, except loans to subsidiaries;
- writing off non-performing loans worth between Rp300 billion and Rp500 million for one fiscal year; and
- nominate representatives to become candidates for 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 values, among other factors, as stipulated by our Board of Commissioners.

Actions of the Board of Directors which exceed the authority of the Board of Commissioners, and the value of which is less than 50% of the total net assets of our Company (based on our Consolidated Financial Statements) must be approved by the Series A Dwiwarna shareholder prior to approval, while actions (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.

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.

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. The quorum for AGMS or EGMS requires shareholders representing more than one-half of the total shares with voting rights issued by us. 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 at least 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 to be determined by the Chairman of 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. 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.

C. MATERIAL CONTRACTS

In 2018 and 2017, 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 35 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 tax treaty country 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-1 or Form DGT-2;
 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;
 5. The form must be used for the period stated in the Form DGT-1 or Form DGT-2 (maximum 12 months); and

6. The form must be submitted by the Indonesian Withholder agent in the submission of its monthly tax return (MTR) at the latest by the due date of the submission (i.e. the 20th of the following month).
- 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 activity other than receiving dividend, interest and/or royalty 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 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 dividend, interest, royalty from Indonesia. Active business is defined as activities or businesses activity carried out by non-resident income recipient according to the actual circumstances indicated by the cost incurred, efforts made, or sacrifices which related directly to its business or activity in order to obtain, collect and maintain income, including significant activities undertaken to maintain operations as a going concern.
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 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 2018 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 believe we were a PFIC for our 2018 taxable year, and 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. Dollars. 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. Dollars 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 you (i) have held the ADSs or common shares for less than a specified minimum period during which you are not protected from risk of loss with respect to such shares, or (ii) are 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. A U.S. Holders should consult their own tax advisors regarding the effect of these rules in their particular circumstance.

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. Dollars, 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 significant 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. Dollars 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. Dollars 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 currently 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 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.

[Table of Contents](#)

"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. This is a factual determination, however, that must be made annually at the end of the taxable year. Therefore, there can be no assurance that we will not be classified as a PFIC for the current taxable year or for any future taxable year. However, the determination of PFIC status is a factual determination that must be made annually at the close of each taxable year, and therefore, there can be no certainty as to our status in this regard until the close of the 2019 taxable year. 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 your 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 you to consult your own tax advisor 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, 2018, assets in foreign currencies reached 109% 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 2016, 2017 and 2018 as the Indonesian economy was affected by changes in the U.S. Dollar to Rupiah exchange rate and interest rates themselves. We are not able to predict whether such conditions will continue during 2019 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 set 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, 2018 and applied respectively to monetary assets and liabilities. The bid and offer rates as of December 31, 2018 were Rp14,375 and Rp14,385 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 Rupiah in the future.

Foreign Exchange Risk	Outstanding Balance as of December 31, 2018		Expected Maturity Date						Fair Value
	Foreign Currency (million)	Rp Equivalent (Rp billion)	2019	2020	2021	2022	2023	Thereafter	
ASSETS									
Cash and Cash Equivalents									
U.S. Dollar	253	3,652	3,652	—	—	—	—	—	3,652
Japanese Yen	8	1	1	—	—	—	—	—	1
Others ⁽¹⁾	11	149	149	—	—	—	—	—	149
Other Current Financial Assets									
U.S. Dollar	15	211	211	—	—	—	—	—	211
Others ⁽¹⁾	1	12	12	—	—	—	—	—	12
Trade Receivables									
Related Parties									
U.S. Dollar	0	7	7	—	—	—	—	—	7
Others ⁽¹⁾	—	—	—	—	—	—	—	—	—
Third Parties									
U.S. Dollar	146	2,118	2,118	—	—	—	—	—	2,118
Others ⁽¹⁾	10	120	120	—	—	—	—	—	120
Other Receivables									
U.S. Dollar	0	5	5	—	—	—	—	—	5
Others ⁽¹⁾	0	1	1	—	—	—	—	—	1
Other Current Assets									
U.S. Dollar	0	0	0	—	—	—	—	—	0
Others ⁽¹⁾	1	14	14	—	—	—	—	—	14
Other Non-current Assets									
U.S. Dollar	57	827	827	—	—	—	—	—	827
Others ⁽¹⁾	1	13	13	—	—	—	—	—	13
LIABILITIES									
Trade Payables									
Related Parties									
U.S. Dollar	0	3	3	—	—	—	—	—	3
Others ⁽¹⁾	—	—	—	—	—	—	—	—	—
Third Parties									
U.S. Dollar	206	2,975	2,975	—	—	—	—	—	2,975
Japanese Yen	33	4	4	—	—	—	—	—	4
Others ⁽¹⁾	5	58	58	—	—	—	—	—	58
Other Payables									
U.S. Dollar	4	53	53	—	—	—	—	—	53
Others ⁽¹⁾	4	59	59	—	—	—	—	—	59

Table of Contents

Foreign Exchange Risk	Outstanding Balance as of December 31, 2018		Expected Maturity Date						Fair Value
	Foreign Currency	Rp Equivalent	2019	2020	2021	2022	2023	Thereafter	
	(million)	(Rp billion)							
Accrued Expenses									
U.S. Dollar	47	681	681	—	—	—	—	—	681
Japanese Yen	16	2	2	—	—	—	—	—	2
Others ⁽¹⁾	3	26	26	—	—	—	—	—	26
Advances from Customers									
U.S. Dollar	1	11	11	—	—	—	—	—	11
Short Term Bank Loans									
U.S. Dollar	1	17	17	—	—	—	—	—	17
Current Maturities of Long-term Liabilities									
U.S. Dollar	19	271	271	—	—	—	—	—	261
Japanese Yen	768	100	100	—	—	—	—	—	113
Others ⁽¹⁾	4	59	59	—	—	—	—	—	63
Other Liabilities									
U.S. Dollar	20	284	14	34	34	101	101	—	284
Long-term liabilities⁽²⁾									
U.S. Dollar	93	1,348	—	386	304	273	226	159	1,074
Japanese Yen	3,839	502	—	100	100	100	100	102	449
Others ⁽¹⁾	5	68	—	36	8	6	4	14	64

- (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 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 Rupiah time deposits are based on average interest rates offered for three-month placements in effect as of December 31, 2018 by the banks where such deposits were located; (ii) variable interest rates on Rupiah denominated long-term liabilities are calculated as of December 31, 2018 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, 2018; and (iv) the value of marketable securities is based on the value of such securities on December 31, 2018. 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, 2018			Expected Maturity Date						Fair Value
	Original Currency	Rupiah Equivalent	Rate	2019	2020	2021	2022	2023	Thereafter	
	(in millions)	(in billions)	(%)							
ASSETS										
Fixed Rate										
Cash and Cash Equivalent										
Time Deposit										
Rupiah	10,093,694	10,094	2.50% - 9.25%	10,094	—	—	—	—	—	10,094
U.S. Dollar	207	2,981	0.50% - 3.20%	2,981	—	—	—	—	—	2,981

Table of Contents

Interest Rate Risk	Outstanding Balance as of									
	December 31, 2018									
	Original Currency (in millions)	Rupiah Equivalent (in billions)	Rate (%)	Expected Maturity Date					Fair Value	
2019				2020	2021	2022	2023	Thereafter		
			(Rp billion)							
Malaysian Ringgit	11	39	3.35% - 3.75%	39	—	—	—	—	—	39
Other Current Financial Assets										
Time Deposit										
Rupiah	1,337	1	5.00%	1	—	—	—	—	—	1
U.S. Dollar	14	204	1.35% - 1.92%	204	—	—	—	—	—	204
Available-for-sale Financial Assets										
Rupiah	470,320	470	—	470	—	—	—	—	—	470
LIABILITIES										
Short-term Bank Loans										
Variable Rate										
Rupiah										
Principal	3,221,849	3,222	—	3,222	—	—	—	—	—	3,222
Interest	—	—	—	—	—	—	—	—	—	—
Fixed Rate										
Rupiah										
Principal	804,552	804	—	804	—	—	—	—	—	804
Interest	—	—	—	—	—	—	—	—	—	—
USD										
Principal	1	17	—	17	—	—	—	—	—	17
Interest	—	—	—	—	—	—	—	—	—	—
Long-term Liabilities⁽¹⁾										
Variable Rate										
Rupiah										
Principal	18,074,885	18,074	—	3,729	3,779	2,788	2,376	2,660	2,742	18,039
Interest	5,452,947	5,453	9.13% - 13.00%	1,570	1,211	911	654	545	562	—
U.S. Dollar										
Principal	97	1,399	—	180	317	258	258	226	159	1,308
Interest	12	170	4.05% - 4.12%	59	40	33	22	12	4	—
Malaysian Ringgit										
Principal	36	127	—	59	36	7	6	5	14	126
Interest	4	13	5.63% - 6.17%	6	2	2	1	1	1	—
Fixed Rate										
Rupiah										
Principal	16,477,305	16,477	—	1,330	6,445	913	2,567	365	4,857	16,502
Interest	9,680,549	9,681	5.18% - 13.30%	1,524	1,375	877	674	366	4,866	—
U.S. Dollar										
Principal	15	215	—	91	64	46	14	—	—	204
Interest	1	13	2.18% - 3.85%	7	4	2	0	—	—	—
Japanese Yen										
Principal	4,607	602	—	100	100	100	100	101	101	562
Interest	442	58	2.95%	17	14	11	8	5	3	—
Finance Lease										
Rupiah										
Principal	3,145,583	3,145	—	807	768	670	549	233	118	3,145
Interest	618,927	619	—	242	177	111	56	21	12	—

- (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 Depositary 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 depositary 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 depositary 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.

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 Depository to registered ADS shareholders.
US\$0.02 (or less) per ADS per calendar year.	Depository services.
Registration or transfer fees.	Transfer or registration of shares on the share register to or from the name of the Depository or its agent when shareholders deposit or withdraw ordinary shares.
Depository fees.	Telegram, telex and fax transmissions (if provided for in the deposit agreement). Converting foreign currency to U.S. Dollars.
Taxes and other duties levied by the government, the Depository 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 Depository or its agent for servicing the securities deposited.	As necessary.

We entered into a new agreement with the Depository in 2016 pursuant to which the Depository 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 Depository's collection of dividend fees and the number of ADSs outstanding falls below a stipulated minimum. In 2018, we received reimbursement of approximately US\$982,860 from the depository for such expenses.

The Depository did not waive, or pay directly to third parties on our behalf, any expenses relating to the year ended December 31, 2018.

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, 2018, as required by Rule 13a-15(b) under the Exchange Act.

Although we have taken all reasonable steps and spent considerable time and resources preparing and reviewing our Annual Report on Form 20-F, we were not able to file our Annual Report on Form 20-F within the time period specified in the SEC's rules and forms. Accordingly, our management has concluded that, as of December 31, 2018, our disclosure controls and procedures were not effective in ensuring that the information required to be disclosed by us in the reports that we file and submit under the Exchange Act was recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that the information required to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our chief executive officer and chief financial officer, 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's, (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, 2018. 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, 2018, 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, 2018 has been audited by KAP Purwantono, 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

The Board of Commissioners has determined that Mr. Tjatur Purwadi, the secretary 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. Purwadi has been a member of our Audit Committee since March 2014. Mr. Purwadi previously served as Director of Assurance at KAP Tanudiredja, Wibisana, Rintis & Partners (formerly Tanudiredja, Wibisana & Partners) (a member firm of the PwC global network) from 2012 to 2013. Prior to that, he served at our Company since 1979 where he rose to become Vice-President of Financial and Logistics Policy and Head of Internal Audit.

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/servlet/tk/about/en_US/stockdetail/code-of-ethics-and-corporate-culture.html. 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 April 27, 2018, 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, 2018 and on the effectiveness of internal control over financial reporting as of December 31, 2018. The fee for the audit for 2018 was agreed at Rp54.6 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 2018.

FEES AND SERVICES OF THE EXTERNAL AUDITOR

The following table summarizes the fees for audit services in 2016, 2017 and 2018:

	For Years Ended on December 31,		
	2016	2017	2018
	(Rp million)	(Rp million)	(Rp million)
Audit Fee	36,655	41,618	51,826
All Other Fees	1,405	2,042	2,819

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 six members: three Independent Commissioners, one Commissioners 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, particularly information relating to changes in the public company's shareholdings and material facts that may affect the decision of shareholders to maintain their share ownership in such public company.

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-138.

ITEM 19. EXHIBITS

The following exhibits are filed as part of this Form 20-F:

- 1.1 Articles of Association (as amended on July 2, 2018).
- 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, May 21, 2019

By: /s/ Alex J. Sinaga
Alex J. Sinaga
President Director / Chief Executive Officer

**Perusahaan Perseroan (Persero)
PT Telekomunikasi Indonesia Tbk. and its subsidiaries**

Consolidated financial statements
as of December 31, 2017 and 2018
and for each of the three years in the period ended December 31, 2018
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, 2018 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 | : Alex J. Sinaga |
| Business address | : Jl. Japati No.1 Bandung 40133 |
| Address | : Jl. Anggrek Nelimurni B-70 No. 38 Kelurahan Kemanggisan
Kecamatan Palmerah, Jakarta Barat |
| 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, May 21, 2019

/s/ Alex J. Sinaga	/s/ Harry M. Zen
Alex J. Sinaga	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, 2017 AND 2018
AND FOR EACH OF THE THREE YEARS ENDED DECEMBER 31, 2018
WITH REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

Table of Contents

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	
Consolidated Statements of Financial Position	F-1
Consolidated Statements of Profit or Loss and Other Comprehensive Income	F-2
Consolidated Statements of Changes in Equity	F-3 – F-5
Consolidated Statements of Cash Flows	F-6
Notes to the Consolidated Financial Statements	F-7 – F-138



Purwantono, Sungkoro & Surja

Indonesia Stock Exchange Building
Tower 2, 7th Floor
Jl. Jend. Sudirman Kav. 52-53
Jakarta 12190, Indonesia

Tel : +62 21 5289 5000
Fax: +62 21 5289 4100
ey.com/id

Report of Independent Registered Public Accounting Firm

Report No. 00016/2.1032/NS.0/06/0691-2/1/V/2019

To the Shareholders, 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, 2018 and 2017, 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, 2018, 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, 2018 and 2017, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, 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, 2018, 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 May 21, 2019 expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

As discussed in Note 2aa to the consolidated financial statements, the Company changed its method for accounting for revenue from contracts with customers and financial instruments in 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. 00016/2.1032/NS.0/06/0691-2/1/V/2019 (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 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 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Purwantono, Sungkoro & Surja

We have served as the Company's auditor since 2012.

Jakarta, Indonesia

May 21, 2019



Purwantono, Sungkoro & Surja

Indonesia Stock Exchange Building
Tower 2, 7th Floor
Jl. Jend. Sudirman Kav. 52-53
Jakarta 12190, Indonesia

Tel : +62 21 5289 5000
Fax: +62 21 5289 4100
ey.com/id

Report of Independent Registered Public Accounting Firm

Report No. 00017/2.1032/NS.0/06/0691-2/1/V/2019

**To the Shareholders, 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, 2018, 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, 2018, 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, 2018 and 2017, 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, 2018, and the related notes, and our report dated May 21, 2019 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. 00017/2.1032/NS.0/06/0691-2/1/V/2019 (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

May 21, 2019

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
As of December 31, 2017 and 2018

(Amounts in the tables expressed in billions of Indonesian Rupiah and millions of U.S. Dollar)

	Notes	2017 Rp	2018 Rp	US\$ (Note 3)
ASSETS				
CURRENT ASSETS				
Cash and cash equivalents	2c,2e,2t,4,33,36	25,145	17,435	1,212
Other current financial assets	2c,2e,2t,5,33,36	2,173	1,314	91
Trade and other receivables	2c,2g,2t,2ab,6,33,36	9,564	9,928	690
Contract assets	2q,7	—	1,560	108
Inventories	2h,8	631	717	50
Prepaid income taxes	2s,30	22	20	1
Prepaid other taxes	2s,30	2,833	3,325	231
Assets held for sale	2j,12	10	340	24
Contract costs	2q,10	—	924	64
Other current assets	2c,2i,2m,9,33	7,183	7,280	506
Total Current Assets		47,561	42,843	2,977
NON-CURRENT ASSETS				
Long-term investments	2f,11	2,148	2,662	185
Property and equipment	2c,2l,2m,2z,2ab,12,33,35	129,872	142,912	9,938
Intangible assets	2d,2k,2z,14	3,530	5,032	350
Deferred tax assets	2s,30	2,804	2,477	172
Contract costs	2q,10	—	320	22
Other non-current assets	2c,2g,2i,2m,2s,2t,13,30,33,36	12,270	9,654	672
Total Non-current Assets		150,624	163,057	11,339
TOTAL ASSETS		198,185	205,900	14,316
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Trade and other payables	2c,2n,2t,15,33,36	15,791	15,214	1,058
Current income tax liabilities	2s,30	801	404	28
Other tax liabilities	2s,30	1,989	776	54
Accrued expenses	2c,2t,2y,16,33,36	12,630	12,769	888
Unearned income	2q	5,427	—	—
Contract liabilities	2q,17	—	5,252	365
Advances from customers	2c,2g,2y,33	1,240	1,568	109
Short-term bank loans and current maturities of long-term borrowings	2c,2m,2o,2t,18,33,36	7,498	10,339	719
Total Current Liabilities		45,376	46,322	3,221
NON-CURRENT LIABILITIES				
Deferred tax liabilities	2s,30	933	1,197	83
Unearned income	2q	524	—	—
Contract liabilities	2q,17	—	652	45
Long service award provisions	2r,2ab,32	758	852	59
Pension benefits and other post-employment benefit obligations	2r,2ab,31	10,195	5,555	386
Long-term loans and other borrowings	2c,2m,2o,2t,19,33,36	27,974	33,743	2,347
Other liabilities	2n,2t,2y	594	573	40
Total Non-current Liabilities		40,978	42,572	2,960
TOTAL LIABILITIES		86,354	88,894	6,181
EQUITY				
Capital stock	1c,21	5,040	4,953	344
Additional paid-in capital	2u,22	4,453	1,977	137
Treasury stock	2u,23	(2,541)	—	—
Retained earnings		85,285	91,488	6,362
Other reserves	2f,2t,24,36	230	321	22
Net equity attributable to owners of the parent company		92,467	98,739	6,865
Non-controlling interests	2b,20	19,364	18,267	1,270
TOTAL EQUITY		111,831	117,006	8,135
TOTAL LIABILITIES AND EQUITY		198,185	205,900	14,316

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, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah and millions of U.S. Dollar,
unless otherwise stated)

	Notes	2016 Rp	2017 Rp	2018 Rp	US\$ (Note 3)
REVENUES		116,333	128,256	130,788	9,095
Operation, maintenance and telecommunication service expenses	2c,2q,2ab,26,33	(31,263)	(36,603)	(43,893)	(3,052)
Depreciation and amortization	2k,2l,2m,2z,2ab,12,14	(18,556)	(20,477)	(21,442)	(1,491)
Personnel expenses	2c,2q,2r,27,31,32,33	(13,612)	(13,529)	(13,178)	(916)
Marketing expenses	2q	(4,132)	(5,268)	(4,001)	(278)
General and administrative expenses	2c,2q,29,33	(4,610)	(5,260)	(6,594)	(459)
Interconnection expenses	2c,2q,33	(3,218)	(2,987)	(4,283)	(298)
Gain (loss) on foreign exchange - net	2p	(52)	51	71	5
Other income	2l,2q,12	751	1,039	1,745	121
Other expenses	2q,12	(2,469)	(1,320)	(680)	(47)
OPERATING PROFIT		39,172	43,902	38,533	2,680
Finance income	2c,2q,33	1,716	1,434	1,014	71
Finance costs	2c,2o,2q,33	(2,810)	(2,769)	(3,523)	(245)
Share of profit of associated companies	2f,11	88	61	53	4
PROFIT BEFORE INCOME TAX		38,166	42,628	36,077	2,510
INCOME TAX (EXPENSE) BENEFIT	2s,2ab,30				
Current		(10,738)	(11,357)	(9,432)	(656)
Deferred		1,721	1,399	66	4
Net Income Tax Expense		(9,017)	(9,958)	(9,366)	(652)
PROFIT FOR THE YEAR		29,149	32,670	26,711	1,858
OTHER COMPREHENSIVE INCOME					
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>					
Foreign currency translation	2p,24	(40)	24	148	10
Net gain on available-for-sale financial assets	2t,24	0	20	—	—
Share of other comprehensive income of associated companies	2f,11	(1)	(1)	(14)	(1)
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</i>					
Defined benefit plan actuarial gain (loss) - net of tax	2r,31	(2,058)	(2,375)	4,820	335
Other Comprehensive Income - net		(2,099)	(2,332)	4,954	344
NET COMPREHENSIVE INCOME FOR THE YEAR		27,050	30,338	31,665	2,202
Profit for the year attributable to:					
Owners of the parent company	25	19,333	22,120	17,802	1,238
Non-controlling interests	2b, 20	9,816	10,550	8,909	620
		29,149	32,670	26,711	1,858
Net comprehensive income for the year attributable to:					
Owners of the parent company		17,312	19,927	22,631	1,573
Non-controlling interests	2b	9,738	10,411	9,034	629
		27,050	30,338	31,665	2,202
BASIC AND DILUTED EARNINGS PER SHARE (in full amount)	2w,25				
Profit per share		195.99	223.30	179.71	0.01
Profit per ADS (100 Series B shares per ADS)		19,599.85	22,329.40	17,970.52	1.25

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, 2018
(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, 2015		5,040	2,457	(3,804)	70,893	348	74,934	18,249	93,183
Net comprehensive income for the year	2b								
Profit for the year		—	—	—	19,333	—	19,333	9,816	29,149
Other comprehensive income	2f,2p,2r	—	—	—	(1,980)	(41)	(2,021)	(78)	(2,099)
Net comprehensive income for the year		—	—	—	17,353	(41)	17,312	9,738	27,050
Transactions with owners recorded directly in equity									
Cash dividends	2v,21	—	—	—	(11,213)	—	(11,213)	(7,058)	(18,271)
Sale of treasury stock	22,23	—	1,996	1,263	—	—	3,259	—	3,259
Issuance of new shares of a subsidiary	1d	—	—	—	—	—	—	183	183
Acquisition of a business	1d	—	—	—	—	—	—	10	10
Acquisition of non-controlling interests		—	—	—	—	(129)	(129)	(9)	(138)
Net transactions with owners		—	1,996	1,263	(11,213)	(129)	(8,083)	(6,874)	(14,957)
Balance, December 31, 2016		5,040	4,453	(2,541)	77,033	178	84,163	21,113	105,276

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, 2018
(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	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,21	—	—	—	(11,627)	—	(11,627)	(12,355)	(23,982)
Acquisition of businesses	1d	—	—	—	—	4	4	145	149
Issuance of new shares of 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, 2018
(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,21	—	—	—	(16,609)	—	(16,609)	(10,131)	(26,740)
Cancellation of treasury stocks	2u,23	(87)	(2,454)	2,541	—	—	—	—	—
Acquisition of businesses	1d	—	—	—	—	—	—	65	65
Acquisition of non-controlling interest		—	(22)	—	—	(16)	(38)	(69)	(107)
Issuance of new shares of 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
For Each of the Three Years in the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah and millions of U.S. Dollar)

	Notes	2016 Rp	2017 Rp	2018 Rp	2018 US\$ (Note 3)
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash receipts from customers and other operators		116,116	125,111	127,855	8,891
Cash receipts from tax refund		—	585	2,578	179
Cash receipts from finance income		1,736	1,431	1,036	72
Cash payments for expenses		(42,433)	(49,604)	(54,099)	(3,762)
Cash payments to employees		(11,207)	(11,739)	(12,657)	(880)
Cash payments for corporate and final income taxes		(11,304)	(11,846)	(10,375)	(721)
Cash payments for finance costs		(3,455)	(3,133)	(3,735)	(260)
Cash payments for Value Added Taxes - net		(2,696)	(1,942)	(3,434)	(239)
Cash payments for (receipts from) other - net		474	542	(1,498)	(104)
Net cash provided by operating activities		47,231	49,405	45,671	3,176
CASH FLOWS FROM INVESTING ACTIVITIES					
Proceeds from sale of property and equipment	12	765	1,367	629	44
Proceeds from (placement in) other current financial assets - net		(983)	(676)	171	12
Proceeds from insurance claims	12	60	155	153	11
Dividend received from associated company	11	23	28	9	1
Proceeds from escrow accounts		2,159	—	—	—
Acquisition of non-controlling interest in a subsidiary		(138)	—	—	—
Purchases of property and equipment	12,38	(26,787)	(32,294)	(31,562)	(2,195)
Purchases of intangible assets	14,38	(1,098)	(508)	(2,972)	(207)
Acquisition of businesses, net of acquired cash	1d	(137)	(243)	(420)	(29)
Acquisition of long-term investments	11	(43)	(269)	(337)	(23)
Payments for advances for purchases of property and equipment		(1,338)	(490)	(300)	(21)
Purchases of other assets	13	(40)	(77)	(461)	(32)
Net cash used in investing activities		(27,557)	(33,007)	(35,090)	(2,439)
CASH FLOWS FROM FINANCING ACTIVITIES					
Proceeds from loans and other borrowings	18,19	7,479	12,169	35,364	2,459
Proceeds from issuance of new shares of subsidiaries		183	50	34	2
Proceeds from sale of treasury stock	23	3,259	—	—	—
Repayments of loans and other borrowings	18,19	(10,555)	(9,289)	(27,113)	(1,885)
Cash dividends paid to the Company's stockholders	21	(11,213)	(11,627)	(16,609)	(1,155)
Cash dividends paid to non-controlling interests of subsidiaries		(7,058)	(12,355)	(10,134)	(705)
Net cash used in financing activities		(17,905)	(21,052)	(18,458)	(1,284)
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS		1,769	(4,654)	(7,877)	(547)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS		(119)	32	171	12
PROVISION FOR EXPECTED CREDIT LOSSES ON CASH AND CASH EQUIVALENTS		—	—	(4)	0
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	4	28,117	29,767	25,145	1,747
CASH AND CASH EQUIVALENTS AT END OF YEAR	4	29,767	25,145	17,435	1,212

The accompanying notes form an integral part of these consolidated financial statements.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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. Decree No. 7 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 21).

The Company was established based on notarial deed No. 128 dated September 24, 1991 of Imas Fatimah, S.H. Its 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 about increase the flexibility and independency of Commissioners in approving the Directors' actions at a certain threshold and changes in authorized and issued capital stocks due to the transfer of total shares of cancelation treasury stocks by deducting from equity as stated in notarial deed No. 34 and No. 35 dated May 15, 2018 of Ashoya Ratam, S.H., MKn. The latest amendments were accepted and approved by the Ministry of Law and Human Rights of the Republic of Indonesia ("MoLHR") in its Letter No. AHU-AH.01.03-0214555 dated June 8, 2018 and MoLHR decision's No. AHU-0013328.AH.01.02 year 2018 dated July 2, 2018.

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 with applied the Limited Company principle. In regard to achieving its objectives, the Company is involved in the following activities:

- a. Main business:
- i. Planning, building, providing, developing, operating, marketing or selling or leasing, and maintaining telecommunications and information networks in a broad sense in accordance with prevailing regulations.
 - ii. Planning, developing, providing, marketing or selling, and improving telecommunications and information services in a broad sense in accordance with prevailing regulations.
 - iii. Investing including equity capital in other companies in line with achieving the purposes and objectives of the Company.
- b. Supporting business:
- i. Providing payment transactions and money transferring services through telecommunications and information networks.
 - ii. Performing activities and other 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 moving assets, information systems, education and training, repair and maintenance facilities.
 - iii. Collaborating with other parties in order to optimize the information, communication or technology resources owned by other parties as service provider in information,

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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.

The Company was granted several networks and/or services licenses by the Government which are valid for an unlimited period of time as long as the Company complies with prevailing laws 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/DJPP/ 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/DJPP/ 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

b. Company's Board of Commissioners, Board of Directors, Audit Committee, Corporate Secretary, and Internal Audit

1. Boards 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. 28 of Ashoya Ratam., S.H., M.Kn., dated April 27, 2018 and April 21, 2017, the composition of the Company's Boards of Commissioners and Directors as of December 31, 2017 and 2018, respectively, were as follows:

	2017	2018
President Commissioner	Hendri Saparini	Hendri Saparini
Commissioner	Rinaldi Firmansyah	Edwin Hidayat Abdullah
Commissioner	Hadiyanto	Rinaldi Firmansyah
Commissioner	—	Isa Rachmatarwata
Independent Commissioner	Margiyono Darsasumarja	Margiyono Darsasumarja
Independent Commissioner*	Dolfie Othniel Fredric Palit	—
Independent Commissioner	Pamijati Pamela Johanna	Pamijati Pamela Johanna
Independent Commissioner	Cahyana Ahmadjayadi	Cahyana Ahmadjayadi
President Director	Alex Janangkih Sinaga	Alex Janangkih Sinaga
Director of Finance	Harry Mozarta Zen	Harry Mozarta Zen
Director of Digital and Strategic Portfolio	David Bangun	David Bangun
Director of Enterprise and Business Service	Dian Rachmawan	Dian Rachmawan
Director of Wholesale and International Service	Abdus Somad Arief	Abdus Somad Arief
Director of Human Capital Management	Herdy Rosadi Harman	Herdy Rosadi Harman
Director of Network, Information Technology and Solution	Zulhelfi Abidin	Zulhelfi Abidin
Director of Consumer Service	Mas'ud Khamid	Siti Choiriana

* Dolfie Othniel Fredric Palit has been appointed as a permanent candidate for the House Representatives of the Republic of Indonesia starting from September 20, 2018, hence his position as Commissioner of the Company was ended by law.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

2. Audit Committee, Corporate Secretary, and Internal Audit

The composition of the Company's Audit Committee, Corporate Secretary, and Internal Audit as of December 31, 2017 and 2018, were as follows:

	2017	2018
Chairman	Margiyono Darsasumarja	Margiyono Darsasumarja
Secretary	Tjatur Purwadi	Tjatur Purwadi
Member	Rinaldi Firmansyah	Rinaldi Firmansyah
Member	Dolfie Othniel Fredric Palit	—
Member	Sarimin Mietra Sardi	Sarimin Mietra Sardi
Member	Cahyana Ahmadjayadi	Cahyana Ahmadjayadi
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 shares prior to its Initial Public Offering ("IPO") totalled 8,400,000,000, consisting of 8,399,999,999 Series B shares and 1 Series A Dwiwarna share, and 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., LL.M., 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,

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 (Note 23).

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 (Note 23).

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 (Note 23).

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 21).

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, 2018, all of the Company’s Series B shares are listed on the IDX and 68,824,067 ADS shares are listed on the NYSE (Note 21).

On June 25, 2010, the Company issued the second rupiah bonds with a nominal amount of Rp1,005 billion for Series A, a five-year period, and Rp1,995 billion for Series B, a ten-year period, respectively, which are listed on the IDX (Note 19b).

On June 16, 2015, the Company issued Continuous Bonds I Telkom Phase I 2015, with a nominal amount Rp2,200 billion for Series A, a seven-year period, Rp2,100 billion for Series B, a ten-year period, Rp1,200 billion for Series C, a fifteen-year period and Rp1,500 billion for Series D, a thirty-year period, respectively which are listed on the IDX (Note 19b).

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 (Note 23).

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 and reduced the Company's capital stock (Note 23).

d. Subsidiaries

As of December 31, 2017 and 2018, 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 start of commercial operations	Percentage of ownership interest		Total assets before elimination	
			2017	2018	2017	2018
PT Telekomunikasi Seluler ("Telkomsel"), Jakarta, Indonesia	Telecommunication - provides telecommunication facilities and mobile celluler services using Global Systems for Mobile Communication ("GSM") technology	1995	65	65	85,597	82,219
PT Multimedia Nusantara ("Metra") Jakarta, Indonesia	Network telecommunication services and multimedia	1998	100	100	13,246	17,123
PT Dayamitra Telekomunikasi ("Dayamitra") Jakarta, Indonesia	Telecommunication	1995	100	100	13,606	13,221
PT Telekomunikasi Indonesia International ("TII"), Jakarta, Indonesia	Telecommunication	1995	100	100	9,122	10,404
PT Graha Sarana Duta ("GSD"), Jakarta, Indonesia	Leasing of offices and providing building management and maintenance services, civil consultant and developer	1982	100	100	5,633	5,794
PT Telkom Akses ("Telkom Akses") Jakarta, Indonesia	Construction, service and trade in the field of telecommunication	2013	100	100	5,716	4,244
PT PINS Indonesia ("PINS"), Jakarta, Indonesia	Telecommunication construction and services	1995	100	100	3,473	4,004
PT Infrastruktur Telekomunikasi Indonesia ("Telkom Infratel"), Jakarta, Indonesia	Construction, service and trade in the field of telecommunication	2014	100	100	1,871	3,351
PT Telkom Satelit Indonesia ("Telkomsat"), previously PT Patra Telekomunikasi Indonesia Jakarta, Indonesia	Telecommunication - provides satellite communication system, services and facilities	1996	100	100	574	3,190
PT Metra-Net ("Metra-Net"), Jakarta, Indonesia	Multimedia portal service	2009	100	100	524	782
PT Jalin Pembayaran Nusantara ("Jalin"), Jakarta, Indonesia	Payment services - principals, switching, clearing and settlement activities	2016	100	100	225	298
PT Napsindo Primatel Internasional ("Napsindo"), Jakarta, Indonesia	Telecommunication - provides Network Access Point, Voice Over Data and other related services	1999; ceased operations on January 13, 2006	60	60	5	5

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

(ii) Immediate indirect subsidiaries:

Subsidiary/place of incorporation	Nature of business	Year of start of commercial operations	Percentage of ownership interest		Total assets before elimination	
			2017	2018	2017	2018
PT Sigma Cipta Caraka ("Sigma"), Tangerang, Indonesia	Information technology service - system implementation and integration service, outsourcing and software license maintenance	1988	100	100	6,050	7,758
Telekomunikasi Indonesia International Pte. Ltd., ("Telin Singapore") Singapore	Telecommunication	2008	100	100	3,048	3,413
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	2,115	2,381
PT Telkom Landmark Tower ("TLT"), Jakarta, Indonesia	Service for property development and management	2012	55	55	2,009	2,128
PT Metra Digital Media ("MD Media"), Jakarta, Indonesia	Directory information services	2013	100	100	1,106	1,645
Telekomunikasi Indonesia International Ltd., ("Telin Hongkong") Hong Kong	Telecommunication	2010	100	100	710	1,185
PT Metra Digital Investama ("MDI"), Jakarta, Indonesia	Trading and/or providing service related to information and technology, multimedia, entertainment and investments	2013	100	100	658	1,178
PT Finnet Indonesia ("Finnet") Jakarta, Indonesia	Information technology services	2006	60	60	907	1,011
TS Global Network Sdn. Bhd. ("TSGN") Petaling Jaya, Malaysia	Satellite service	1996	49	70	815	828
Telekomunikasi Indonesia International S.A. ("TL"), Dili, Timor Leste	Telecommunication	2012	100	100	639	677
PT Swadharna Sarana Informatika ("Swadharna") Jakarta, Indonesia	System integrator services	2001	—	51	—	461
PT Melon ("Melon"), Jakarta, Indonesia	Digital content exchange hub services	2010	100	100	231	457
PT Administrasi Medika ("Ad Medika"), Jakarta, Indonesia	Health insurance administration services	2002	100	100	273	346
PT Nusantara Sukses Investasi ("NSI"), Jakarta, Indonesia	Service and trading	2014	100	100	300	286
PT Graha Yasa Selaras ("GYS"), Jakarta, Indonesia	Tourism service	2012	51	51	178	250
PT Metraplaza ("Metraplaza"), Jakarta, Indonesia	Network and e-commerce services	2012	60	60	203	167
Telekomunikasi Indonesia International Pty Ltd, ("Telkom Australia") Sydney, Australia	Telecommunication	2013	100	100	123	115
PT Nutech Integrasi ("Nutech"), Jakarta, Indonesia	System integrator	2001	60	60	60	93
Telekomunikasi Indonesia International (Malaysia) Sdn. Bhd ("Telin Malaysia") Kuala Lumpur, Malaysia	Telecommunication	2013	49	70	23	76
Telekomunikasi Indonesia International Inc. ("Telkom USA"), Los Angeles, USA	Telecommunication	2014	100	100	36	57
PT Satelit Multimedia Indonesia ("SMI"), Jakarta, Indonesia	Satellite services	2013	99.99	100.00	18	16

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

(a) Nutech

Based on notarial deed of Utiék Rochmuljati Abdurachman, S.H., M.LI, M.Kn., No. 10 and 11 dated December 13, 2017, Metra purchased 36,000 shares of Nutech (equivalent to 60% ownership) amounting to Rp24 billion. This is larger than the ownership portion of net book value amounting to Rp13 billion. As of December 31, 2017, the difference amounting to Rp11 billion was recognised as goodwill (Note 14). In accordance to independent appraisal report, fair value of net assets amounted to Rp18 billion. The difference between transaction price with the fair value of net assets amounting to Rp6 billion was recognised as goodwill (Note 14).

Nutech is engaged in providing system integrator in Information and Communication Technologies ("ICT") total solution in many industries. This new investment is expected to strengthen the Company's business portfolio.

(b) Swadharma

Based on notarial deed Utiék Rochmuljati Abdurachman S.H., MLI., M.Kn, No. 3, 4, and 5 dated April 2, 2018, Metra purchased 14,600 shares of Swadharma ownership interests from Yayasan Dinar Dana Swadharma, PT Tri Handayani Utama, and Koperasi Swadharma or equivalent to 36.50% ownership interests from Swadharma with purchase consideration amounting to Rp220 billion.

Swadharma is engaged in information technology and ATM management facility. This new investment is expected to strengthen the Company's business portfolio.

Based on notarial deed N.M. Dipo Nusantara Pua Upa, S.H., MKn, No. 4 dated April 9, 2018, the Company as Metra's shareholders subscribed for 11,837 new shares issued by Swadharma with purchase consideration amounting to Rp178 billion. These acquired shares resulted in a change in composition to 51% ownership causing the Company to have control over Swadharma as a subsidiary with total purchase consideration amounting to Rp397 billion (consideration paid on acquisition of control net of cash acquired is Rp210 billion). Acquisition cost of Swadharma was higher than the ownership portion of net book value, which amounted to Rp196 billion. As of December 31, 2018, the difference was recorded as provisional goodwill. As of December 31, 2018, purchase price allocation of the acquisition is in progress.

From the date of acquisition until December 31, 2018, the total revenue and profit before tax of Swadharma included in the statements of profit or loss income and other comprehensive income amounted to Rp630 billion and Rp101 billion, respectively. If acquisition occurred since the beginning of the year, revenue and profit before tax recognised in consolidated profit and loss and other comprehensive income would increase by Rp823 billion and Rp110 billion, respectively.

(c) CIP

Based on notarial deed Utiék Rochmuljati Abdurachman S.H., MLI., M.Kn, No. 151 and 152, dated December 28, 2018, Sigma purchased 2,493 shares of PT Collega Inti Pratama ("CIP") (equal to 67% 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 to Rp9 billion, hence Sigma owns 2,604 shares (equal to 70% ownership) causing the Company to have control over Sigma 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

of net book value, which amounting to Rp165 billion. As of December 31, 2018, the difference was recorded as provisional goodwill. As of December 31, 2018, purchase price allocation of the acquisition is in progress.

CIP is engaged in providing information technology that focuses on developing banking sector. This new investment is expected to strengthen the Company's business portfolio.

From the date of acquisition until December 31, 2018, the total revenue and profit before tax of CIP included in the statements of profit or loss income and other comprehensive income amounted to Rpnil. If acquisition occurred since the beginning of the year, revenue and profit before tax recognised in consolidated profit and loss and other comprehensive income would increase by Rp166 billion and Rp24 billion, respectively.

(d) TSGN

On December 14, 2017, TII purchased the equivalent of 49% ownership in TSGN in exchange for MYR66,150,000 (equivalent to Rp220 billion). TSGN is engaged in providing ICT 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 the ability to place and replace 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.

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 (Note 12)	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 14)	68
Fair value consideration transferred	220

(e) Telin Malaysia

On April 18, 2018, TII purchased 21% additional ownership in Telin Malaysia in 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 Systems 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 recognised goodwill amounting to Rp61 billion (Note 14).

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Telin Malaysia's acquisition objective is to strengthen and to grow business relationship between Malaysia and Indonesia in telecommunication sector.

From the date of acquisition until December 31, 2018, the total revenue and profit before tax of Telin Malaysia included in the statements of profit or loss and other comprehensive income amounted to Rp23 billion and Rp20 billion, respectively. If acquisition occurred since the beginning of the year, revenue and loss before tax recognised in consolidated profit and loss and other comprehensive income would increase by MYR13,323,065 (equivalent to Rp47 billion) and MYR7,888,930 (equivalent to Rp28 billion), respectively.

e. 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 were completed and authorized for the issuance by the Board of Directors of The Company on May 21, 2019.

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.

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 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.

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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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.

Intercompany balances and transactions have been eliminated in the consolidated financial statements.

In case of loss of control over a subsidiary, the Group:

- derecognises the assets (including goodwill) and liabilities of the subsidiary at the carrying amounts on the date when it loses control;
- derecognises the carrying amounts of any non-controlling interests of its former subsidiary on the date when it loses control;
- recognises the fair value of the consideration received (if any) from the transaction, events, or condition that caused the loss of control;
- recognises the fair value of any investment retained in the subsidiary at fair value on the date of loss of control; and
- recognises 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.

d. Business combinations

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 recognised 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 recognised 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 recognised 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 recognised in profit or loss.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 recognised 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 recognised 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 recognised as of that date.

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 recognises the resulting gain or loss, if any, in profit or loss.

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.

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 recognised at cost. The carrying amount of the investment is adjusted to recognise 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:

- a. 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; and
- b. 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 recognised directly in the equity of the associate, the Group recognises 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 recognises 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.

g. Trade and other receivables

Trade and other receivables are recognised 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.

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 recognised at the lower of cost and net realizable value. Net realizable value is the estimate of selling price less the 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 recognised 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 recognised 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 recognised 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.

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:

	Years
Software	3-6
License	3-20
Other intangible assets	1-30

Intangible assets are derecognised 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 recognised in the consolidated statements of profit or loss and other comprehensive income.

l. 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Property and equipment are depreciated or amortized using the straight-line method based on the estimated useful lives of the assets as follows:

	Years
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
Other telecommunication peripherals	5
Office equipment	2-5
Vehicles	4-8
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.

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 disposed of, their cost and the related accumulated depreciation are derecognised from the consolidated statements of financial position and the resulting gains or losses on the disposal or sale of the property and equipment are recognised in the consolidated statements of profit or loss and other comprehensive income.

Certain computer hardware can not 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 is 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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

In determining whether an arrangement is, or contains a lease, the Group performs an evaluation over the substance of the arrangement. A lease is classified as a finance lease or operating lease based on the substance, not the form of the contract. Finance lease is recognised if the lease transfers substantially all the risks and rewards incidental to the ownership of the leased asset.

Assets and liabilities under a finance lease are recognised in the consolidated statements of financial position at amounts equal to the fair value of the leased assets or, if lower, the present value of the minimum lease payments. Any initial direct costs of the Group are added to the amount recognised as assets.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. Contingent rents are charged as expenses in the year in which they are incurred.

Leased assets are depreciated using the same method and based on the useful lives as estimated for directly acquired property and equipment. 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.

Lease arrangements that do not meet the above criteria are accounted for as operating leases for which payments are charged as an expense on the straight-line basis over the lease period.

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.

Trade payables are recognised initially at fair value and subsequently measured at amortized cost using the effective interest method.

o. Borrowings

Borrowings are recognised 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 recognised 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 recognised 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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. dollars, Telekomunikasi Indonesia International, Pty. Ltd., Australia whose functional currency is Australian dollars, 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):

	2017		2018	
	Buy	Sell	Buy	Sell
United States dollar ("US\$") 1	13,565	13,570	14,375	14,385
Australian dollar ("AUD") 1	10,592	10,598	10,157	10,167
Euro ("EUR") 1	16,231	16,242	16,432	16,446
Japanese yen ("JPY") 1	120.48	120.55	130.56	130.70
Malaysian ringgit ("MYR") 1	3,349	3,355	3,474	3,480

The resulting foreign exchange gain or losses, realized and unrealized, are credited or charged to the consolidated statements of profit or loss and other comprehensive income, 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 2l).

For the purpose of reporting, the assets and liabilities of subsidiaries that functional currencies are different with the Group's functional currency 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 "Other Reserves" in the equity section of the consolidated statements of financial position.

q. Revenue and expense recognition

Revenue from contract with customers

IFRS 15 establishes a comprehensive framework to determine how, when and how much revenue is to be recognised. 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 recognising the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at January 1, 2018.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The Group has also elected to apply the following practical expedients on the transition date:

- Completed contracts - the Group applied IFRS 15 only to customer contracts that had not been 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; the Group aggregated the effects 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.

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 recognised initially as contract liabilities. The Group recognise contract assets for provision of service from postpaid customers not yet billed.

All mobile services revenues are recognised 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-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 recognised as revenue when the points are redeemed or have expired.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

ii. Consumer

Revenue from Consumer primarily comprises of revenue from telephone service, internet and data service and paid TV service. Those services are offered on postpaid basis which billed in in the following month. The contracts are offered as month to month contract.

All consumer services are recognised 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). 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.

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 recognises 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, 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 recognised 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 recognised 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 recognised 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 that the estimates of variable consideration are 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 recognised 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. WIBS

Revenue from WIBS 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 recognised based on output method using the basis of the actual recorded traffic for the month.

Some of the arrangements with WIBS customers contain a significant financing component as the time between the recognition of revenue and cash receipt is expected to exceed one year. The Group is expected to have a significant financing component in contracts involving the provision indefeasible rights of use which have been paid up-front by the customers.

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 recognised on the statement of financial position. These costs are subsequently amortised 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 source's comprise of revenue from telecommunication tower leases and other rental. Rental income is recognised 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 recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Accounting policy for revenue applied until December 31, 2017

i. Cellular and fixed wireless telephone revenues

Revenues from postpaid service, which consist of usage and monthly charges, are recognised as follows:

- Airtime and charges for value added services are recognised based on usage by subscribers; and
- Monthly subscription charges are recognised 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 recognised initially as unearned income and recognised 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 recognised as customers incur the charges. Monthly subscription charges are recognised as revenues when incurred by subscribers.

Revenues from fixed line installations are deferred and recognised as revenue on the straight-line basis over the expected term of the customer relationships. Based on reviews of historical information and customer trends, the Company determined the term of the customer relationships is 23 years.

iii. Interconnection revenues

Revenues from network interconnection with other domestic and international telecommunications carriers are recognised 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 Group's subscribers (incoming) and calls between subscribers of other operators through the Group's network (transit).

iv. Data, internet, and information technology services revenues

Revenues from data communication and internet are recognised 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 recognised when the goods are delivered to customers or the installation takes place.

Revenue from computer software development service is recognised using the percentage-of-completion method.

v. Network revenues

Revenues from network consist of revenues from leased lines and satellite transponder leases which are recognised over the period in which the services are rendered.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

vi. Other revenues

Revenues from sales of peripherals or other telecommunications equipments are recognised when delivered to customers.

Revenues from telecommunication tower leases are recognised on straight-line basis over the lease period in accordance with the agreement with the customers.

Revenues from other services are recognised 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.

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 recognised as revenue when the points are redeemed or expired.

Expense

Expenses are recognised 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 recognised as expense on undiscounted basis when employees have rendered service to the Group.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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).

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 recognised 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 recognised immediately in profit or loss on the earlier of:

- The date of plan amendment or curtailment; and
- The date that the Group recognised 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 recognised 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 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 recognised 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).

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 employee's services rendered which are compensated with the Company's shares is recognised 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 make 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. Income tax

Current and deferred income taxes are recognised as income or expense and included in the consolidated statements of profit or loss and other comprehensive income, except to the extent that the tax arises from a transaction or event which is recognised directly in equity, in which case, the tax is recognised directly in equity.

Current tax assets and liabilities are measured at the amount expected to be recovered or paid using the tax rates and tax laws that have been enacted at each reporting date. Management periodically evaluates positions taken in tax returns 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.

The Group recognises 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 recognises 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 asset is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable income will be available to allow the benefit of part or all of that deferred tax asset to be utilized. Tax deduction from the reversal of deferred tax assets is excluded from the estimation of future taxable income.

Deferred tax assets and liabilities are offset in the consolidated statements of financial position, except if these are for different legal entities, in the same manner the current tax assets and liabilities are presented.

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 are determined. The additional taxes and penalty imposed through SKP are recognised in the current year profit or loss, unless

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

objection/appeal is taken. The additional taxes and penalty imposed through SKP are deferred as long as they meet the asset recognition criteria.

Indonesian tax regulations impose final tax on several types of transactions based on the gross value of the transaction. Therefore, such transaction remains subject to tax even though the taxpayer incurred a loss on the transaction.

Final income tax on construction services and lease is presented as part of "Other Expenses".

t. Financial instruments

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.

i. Financial assets

Initial recognition and measurement

Financial assets are classified, at initial recognition, and subsequently measured at amortised 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 amortised cost or FVTOCI, it needs to give rise to cash flows that are solely payments of principal and interest on the principal amount 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 recognised 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:

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

a. Financial assets at amortised cost (debt instruments)

This category is the most relevant to the Group. The Group measures financial assets at amortised 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 amortised cost are subsequently measured using the effective interest rate (“EIR”) method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired. The Group’s financial assets at amortised cost consist of cash and cash equivalents, other current financial assets, trade and other receivables, and other non-current assets (long-term trade receivables and restricted cash).

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 recognised in the statement of profit or loss and computed in the same manner as for financial assets measured at amortised cost. The remaining fair value changes are recognised in OCI. Upon derecognition, the cumulative fair value change recognised in OCI is recycled to profit or loss.

The Group’s debt instruments at FVTOCI primarily consist of other current financial assets.

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 recognised 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’s no equity investments elected under this category as of December 31, 2017 and 2018.

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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 amortised 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 recognised in the statement of profit or loss.

Expected credit losses (“ECL”)

The Group recognises 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 recognised 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 recognises a loss allowance based on lifetime ECL at each reporting date. The Group has established a provision 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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

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.

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. No financial liabilities were categorized at FVTPL as of December 31, 2017 and 2018.

Gains or losses on liabilities held for trading are recognised 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 amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are derecognised as well as through the EIR amortisation process. Amortised 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 amortisation 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 19 Long-Term Loans and Other Borrowings.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 recognised 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:

- (i) the normal course of business;
- (ii) the event of default; and
- (iii) the event of insolvency or bankruptcy of the Group and all of the counterparties.

iv. Derecognition of financial instruments

The Group derecognises 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 derecognises a financial liability when the obligation specified in the contract is discharged or cancelled or has expired.

v. Hedge Accounting

The group does not apply hedge accounting.

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 recognised as a liability in the consolidated financial statements in the year in which the dividend is approved by the stockholders. The interim dividend is recognised 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 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

x. Segment information

The Group's segment information is presented based upon identified operating segments. An operating segment is a component of an entity: a) 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); b) 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 c) for which discrete financial information is available.

y. Provisions

Provisions are recognised 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 recognised 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 recognised 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 recognised 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 recognised 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 recognised. 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

depreciation, had no impairment been recognised for the asset in prior periods. Reversal of an impairment loss is recognised 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 recognised. Impairment loss relating to goodwill can not be reversed in future periods.

aa. Changes in accounting policy and disclosures

The Group has applied IFRS 9 modified retrospective approach on the required effective date, January 1, 2018. The 2018 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:

a. Classification and measurement

Under IFRS 9, the Group classifies its financial assets as at amortized cost, at FVTPL, and at FVTOCI. Previously under IAS 39, its classified as loan and receivables 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 assessment of the Group's business model was made as of the date of initial application, January 1, 2018, and then applied retrospectively to those financial assets that were not derecognised before January 1, 2018. The assessment of whether contractual cash flows on debt instruments are solely payments of principal and interest was made based on the facts and circumstances as at the initial recognition of the assets.

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 does not represent solely payments of principal and interest. The Group continued measuring at amortised cost for all financial assets previously classified as loans and receivables under IAS 39.

The table below illustrates the classification and measurement of financial assets under IFRS 9 and IAS 39 at the date of initial application, January 1, 2018:

	Original measurement category under IAS 39	New measurement category under IFRS 9
Cash and cash equivalents	Loans and receivables	Amortised cost
Trade and other receivables	Loans and receivables	Amortised cost
Convertible bonds	Available for sale	FVTPL
Debt instruments	Available for sale	FVTOCI
Long term investments	Available for sale	FVTPL

b. Impairment

The adoption of IFRS 9 has fundamentally changed the Group's accounting for impairment losses for financial assets by replacing IAS 39's incurred loss approach with a forward-looking ECL

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

approach. IFRS 9 requires the Group to recognise an allowance for ECL for all debt instruments not held at FVTPL and contract assets.

The table below is reconciliation of the ending impairment allowance under IAS 39 and IFRS 9 at the date of initial application, January 1, 2018:

	Original carrying amount under IAS 39	Remeasurement under IFRS 9	New carrying amount under IFRS 9
Cash and cash equivalents	—	(4)	(4)
Trade and other receivables	(4,335)	(185)	(4,520)
Contract assets	—	(34)	(34)

The Group has adopted IFRS 15 from January 1, 2018 using the modified retrospective approach, which means the Group elected not to restate comparative figures but any adjustments to the carrying amounts at transition date were recognised in the opening balance of retained earnings, other reserves and non-controlling interest. Some of the key changes that impacted the Group include the following:

- Based on the new requirements under IFRS 15, contract assets and contract liabilities have been added as new lines in the consolidated statements of financial position. 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 fulfill the contract have been added as new line in the consolidated statement of financial position. Previously, these contract costs were expensed as incurred or amortised with systematic basis that is inconsistent with the recognition of related revenue.
- Revenues from contracts with customers which measured under IFRS 15 are separately presented from revenues from other sources.

In the transition date of the standard, the application of variable consideration and timing of revenue recognition principle results in the Group recognising an increase in retained earnings as the amount of revenue recognised for the completed performance obligation under IFRS 15 is greater than the revenue recognised under the previous revenue standard. In return, the Group recognises contract assets as the Group's right to consideration in exchange for the completed performance obligation. The contract assets are subsequently reclassified as trade receivables when the consideration becomes unconditional.

The Group also recognises capitalisation of incremental costs of obtaining and fulfilling the contracts with customers. In contrast to the previous standards that required the Group to expense these costs as incurred, the capitalised contract costs are now amortised on a consistent basis with the transfer to the customer of the goods or services to which the contract costs relate.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The effect of adopting IFRS 9 & 15 was, as follows:

	IFRS 9 & 15 adjustment
STATEMENT OF FINANCIAL POSITION	
ASSETS	
Cash and cash equivalents	(4)
Trade and other receivables	(1,507)
Contract assets	1,311
Contract costs	1,096
Other current assets	(666)
Long-term investments	69
Deferred tax assets	(82)
Other non-current assets	27
LIABILITIES	
Contract liabilities	68
Deferred tax liabilities	(82)
EQUITY	
Retained earnings	315
Other reserves	(27)
Non-controlling interests	(30)

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The impact of the changes to the current year financial statements is as follow:

	Previous standards December 31, 2018	IFRS 9 & 15 adjustment	New standards December 31, 2018
STATEMENT OF FINANCIAL POSITION			
ASSETS			
Cash and cash equivalents	17,439	(4)	17,435
Other current financial assets	1,304	10	1,314
Trade and other receivables	12,141	(2,213)	9,928
Contract assets	—	1,560	1,560
Contract costs - current portion	—	924	924
Other current assets	7,982	(702)	7,280
Long-term investments	2,472	190	2,662
Contract costs - non-current portion	—	320	320
Deferred tax assets	2,504	(27)	2,477
Other non-current assets	9,672	(18)	9,654
LIABILITIES			
Unearned income - current portion	5,190	(5,190)	—
Contract liabilities - current portion	—	5,252	5,252
Unearned income - non-current portion	652	(652)	—
Contract liabilities - non-current portion	—	652	652
Deferred tax liabilities	1,252	(55)	1,197
Long-term loans and other borrowings	33,748	(5)	33,743
EQUITY			
Retained earnings	91,396	92	91,488
Other reserves	304	17	321
Non-controlling interests	18,338	(71)	18,267
STATEMENT OF PROFIT OR LOSS			
Revenues	130,784	4	130,788
Operation, maintenance and telecommunication service expenses	(43,791)	(102)	(43,893)
Marketing expenses	(4,214)	213	(4,001)
General and administrative expenses	(6,137)	(457)	(6,594)
Gain on foreign exchange - net	68	3	71
Other income	1,752	(7)	1,745
Other expenses	(750)	70	(680)
Finance costs	(3,507)	(16)	(3,523)
Income tax expenses	(9,426)	60	(9,366)
OCI			
Foreign currency translation	146	2	148
Net gain on available-for-sale	(10)	10	—

The change in new accounting standards did not have material impact on the Group's consolidated statements of cash flows and the basic and diluted EPS.

ab. Critical accounting estimates and assumptions

Estimates and assumptions 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 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

i. 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. 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.

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 31 and 32.

ii. 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

iii. Credit loss provision for financial asset

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 recognises a loss allowance based on lifetime ECL 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 time deposits and debt instruments at FVTOCI, the Group evaluates whether the time 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 external 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.

iv. Revenue

a. Critical judgements in determining the performance obligation, timing of revenue recognition and revenue classification

The Group provides services to enterprise customer 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 distinct performance obligations promised to customers in those contracts. The number and nature of distinct 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 or by group of contracts if the products are standardized. 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.

The Group also presents the revenue classification using consistent approach. When a contract consisting of several goods and/or service is assessed to represent a single performance obligation, 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.

b. 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

v. 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 recognises 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 30.

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 Rp14,380 to US\$1 as published by Reuters on December 31, 2018. 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

4. CASH AND CASH EQUIVALENTS

The breakdown of cash and cash equivalents is as follows:

	Currency	2017 Balance		2018 Balance	
		Original currency (in millions)	Rupiah equivalent	Original currency (in millions)	Rupiah equivalent
Cash on hand	Rp	—	12	—	36
Cash in banks					
Related parties					
PT Bank Mandiri (Persero) Tbk ("Bank Mandiri")	Rp	—	1,481	—	1,199
	US\$	27	367	10	139
	JPY	7	1	8	1
	EUR	1	17	1	20
	HKD	1	2	1	1
	AUD	0	0	0	0
PT Bank Negara Indonesia (Persero) Tbk ("BNI")	Rp	—	968	—	791
	US\$	1	13	2	28
	EUR	0	6	0	0
	SGD	0	0	0	0
PT Bank Rakyat Indonesia (Persero) Tbk ("BRI")	Rp	—	466	—	728
	US\$	6	82	2	31
PT Bank Tabungan Negara (Persero) Tbk ("BTN")	Rp	—	7	—	342
Others	Rp	—	40	—	58
	US\$	0	1	0	0
Sub-total			3,451		3,338
Third parties					
PT Bank Permata Tbk ("Bank Permata")	Rp	—	278	—	218
	US\$	0	2	2	30
PT Bank HSBC Indonesia ("HSBC")	Rp	—	—	—	1
The Hongkong and Shanghai Banking Corporation Ltd. ("HSBC Hongkong")	US\$	14	184	12	181
	HKD	4	6	5	9
Standard Chartered Bank ("SCB")	Rp	—	0	—	0
	US\$	11	154	10	148
	SGD	0	1	1	14
PT Bank UOB Indonesia ("UOB")	Rp	—	23	—	17
United Overseas Bank Limited ("UOB Singapore")	US\$	1	15	4	55
	SGD	0	2	1	14
	MYR	2	8	3	9
Others	Rp	—	335	—	154
	US\$	4	46	4	60
	EUR	1	20	1	20
	MYR	0	0	3	12
	TWD	8	4	17	8
	AUD	0	1	0	2
	HKD	0	0	0	0
	MOP	0	0	0	0
Sub-total			1,079		952
Total cash in banks			4,530		4,290
Time deposits					
Related parties					
BNI	Rp	—	5,315	—	2,640
	US\$	9	116	58	837
BTN	Rp	—	2,958	—	2,559
	US\$	—	—	31	446
BRI	Rp	—	4,954	—	1,911
	US\$	15	203	47	676
PT Bank Pembangunan Daerah Jawa Barat dan Banten Tbk ("BJB")	Rp	—	1,726	—	1,295
Bank Mandiri	Rp	—	446	—	611
	US\$	—	—	16	230
Others	Rp	—	67	—	1
Sub-total			15,785		11,206
Third parties					
PT Bank Tabungan Pensiunan Nasional Tbk ("BTPN")	Rp	—	676	—	181
	US\$	30	401	25	363
UOB	US\$	20	263	30	429
PT Bank Mega Tbk ("Bank Mega")	Rp	—	1,243	—	365
PT Bank Bukopin Tbk ("Bank Bukopin")	Rp	—	22	—	248
PT Bank CIMB Niaga Tbk ("Bank CIMB Niaga")	Rp	—	600	—	190
	US\$	2	31	—	—
PT Bank Muamalat Indonesia Tbk	Rp	—	91	—	40
PT Bank OCBC NISP Tbk ("OCBC NISP")	Rp	—	1,200	—	—
SCB	US\$	10	136	—	—
PT Bank ANZ Indonesia ("ANZ")	Rp	—	5	—	—
	US\$	5	73	—	—
Others	Rp	—	30	—	52
	MYR	14	47	11	39
Sub-total			4,818		1,907
Total time deposits			20,603		13,113
Provision for impairment of cash and cash equivalent			—		(4)
Total			25,145		17,435

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Interest rates per annum on time deposits are as follows:

	2017	2018
Rupiah	2.85%-8.50%	2.60%-9.25%
Foreign currencies	0.40%-3.50%	0.50%-3.75%

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.

Refer to Note 33 for details of related party transactions.

5. OTHER CURRENT FINANCIAL ASSETS

The breakdown of other current financial assets is as follows:

	Currency	2017 Balance		2018 Balance	
		Original currency (in millions)	Rupiah equivalent	Original currency (in millions)	Rupiah equivalent
Time deposits					
Related parties					
BNI	Rp	—	—	—	1
BRI	Rp	—	2	—	—
Third parties					
SCB	US\$	8	109	8	116
UOB	US\$	14	191	3	45
HSBC	US\$	—	—	3	43
Others	Rp	—	23	—	—
Total time deposits			325		205
Available-for-sale financial assets					
Related parties					
PT Mandiri Manajemen Investasi					
	Rp	—	711	—	379
PT Bahana TCW Investment Management ("Bahana TCW")					
	Rp	—	360	—	91
Others	Rp	—	97	—	—
Total available-for-sale financial assets			1,168		470
Escrow accounts					
	Rp	—	318	—	136
	US\$	6	78	0	1
	MYR	5	15	5	16
Others					
	Rp	—	263	—	486
	US\$	0	6	—	—
	MYR	0	0	—	—
	AUD	0	0	—	—
Total			2,173		1,314

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The time deposits have maturities of more than three months but not more than one year, with interest rates as follows:

	<u>2017</u>	<u>2018</u>
Rupiah	6.00%-7.00%	5.00%
Foreign currency	1.38%-1.64%	1.35%-2.18%

Refer to Note 33 for details of related party transactions.

6. TRADE AND OTHER RECEIVABLES

The breakdown of trade and other receivables is as follows:

	<u>2017</u>	<u>2018</u>
Trade receivables	13,553	14,844
Provision for impairment of receivables	(4,331)	(5,543)
Net	<u>9,222</u>	<u>9,301</u>
Other receivables	346	782
Provision for impairment of receivables	(4)	(155)
Net	<u>342</u>	<u>627</u>
Total trade and other receivables	<u>9,564</u>	<u>9,928</u>

Trade receivables arise from services provided to both retail and non-retail customers, with details as follows:

a. By debtor

(i) Related parties

	<u>2017</u>	<u>2018</u>
State-owned enterprises	721	1,495
Government agencies	519	672
Indonusa	465	522
PT Indosat Tbk ("Indosat")	372	219
Others	670	467
Total	<u>2,747</u>	<u>3,375</u>
Provision for impairment of receivables	(883)	(1,361)
Net	<u>1,864</u>	<u>2,014</u>

(ii) Third parties

	<u>2017</u>	<u>2018</u>
Individual and business subscribers	9,289	10,674
Overseas international carriers	1,517	795
Total	<u>10,806</u>	<u>11,469</u>
Provision for impairment of receivables	(3,448)	(4,182)
Net	<u>7,358</u>	<u>7,287</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

b. By age

(i) Related parties

	2017	2018
Up to 3 months	1,721	2,090
3 to 6 months	107	397
More than 6 months	919	888
Total	2,747	3,375
Provision for impairment of receivables	(883)	(1,361)
Net	<u>1,864</u>	<u>2,014</u>

(ii) Third parties

	2017	2018
Up to 3 months	6,493	6,066
3 to 6 months	681	1,401
More than 6 months	3,632	4,002
Total	10,806	11,469
Provision for impairment of receivables	(3,448)	(4,182)
Net	<u>7,358</u>	<u>7,287</u>

(iii) Aging of total trade receivables

	2017		2018	
	Gross	Provision for impairment of receivables	Gross	Provision for impairment of receivables
Not past due	6,788	920	5,912	479
Past due up to 3 months	1,426	281	2,244	377
Past due more than 3 to 6 months	788	258	1,798	368
Past due more than 6 months	4,551	2,872	4,890	4,319
Total	<u>13,553</u>	<u>4,331</u>	<u>14,844</u>	<u>5,543</u>

The Group has made provision for impairment of receivables 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, 2017 and 2018, the carrying amounts of trade receivables of the Group considered past due but not impaired amounted to Rp3,354 billion and Rp3,868 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Information about the credit risk exposure on the Group's trade receivables as of December 31, 2018 is as follows:

	Days past due				Ending balance
	Not past due	Past due up to 3 months	Past due more than 3 to 6 months	Past due more than 6 months	
Expected credit loss rate	8.1 %	16.8 %	20.5 %	88.3 %	
Estimated total gross carrying amount at default	5,912	2,244	1,798	4,890	14,844
Expected credit loss	479	377	368	4,319	5,543

c. By currency

(i) Related parties

	2017	2018
Rupiah	2,706	3,368
U.S. dollar	41	7
Others	0	0
Total	2,747	3,375
Provision for impairment of receivables	(883)	(1,361)
Net	1,864	2,014

(ii) Third parties

	2017	2018
Rupiah	9,781	9,977
U.S. dollar	968	1,372
Malaysian ringgit	16	82
Others	41	38
Total	10,806	11,469
Provision for impairment of receivables	(3,448)	(4,182)
Net	7,358	7,287

d. Movements in the provision for impairment of receivables

	2017	2018
Beginning balance	2,990	4,331
Adjustment on initial application of IFRS 9	—	159
Provision for impairment of receivables	1,494	2,079
Receivables written off	(153)	(1,026)
Ending balance	4,331	5,543

The receivables written off relate to both related party and third party trade receivables.

Management believes that the provision for impairment of receivables is adequate to cover losses on uncollectible trade receivables.

As of December 31, 2018, certain trade receivables of the subsidiaries amounting to Rp7,116 billion have been pledged as collateral under lending agreements (Notes 18 and 19c).

Refer to Note 33 for details of related party transactions.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

7. CONTRACT ASSETS

As of December 31, 2018, the Group's contract assets are amounted Rp1,560 billion which is net of provision for expected credit losses of Rp38 billion.

8. INVENTORIES

The breakdown of inventories is as follows:

	<u>2017</u>	<u>2018</u>
Components	447	429
SIM cards and blank prepaid vouchers	168	137
Others	69	218
Total	684	784
Provision for obsolescence		
Components	(24)	(38)
SIM cards and blank prepaid vouchers	(29)	(28)
Others	(0)	(1)
Total	(53)	(67)
Net	631	717

Movements in the provision for obsolescence are as follows:

	<u>2017</u>	<u>2018</u>
Beginning balance	47	53
Provision recognised during the year	6	22
Inventory written off	—	(8)
Ending balance	53	67

Management believes that the provision is adequate to cover losses from decline in inventory value due to obsolescence.

The inventories recognised as expense and included in operations, maintenance and telecommunication service expenses as of December 31, 2016, 2017 and 2018 amounted to Rp2,105 billion, Rp2,458 billion, and Rp2,726 billion, respectively (Note 28).

Certain inventories of the subsidiaries amounting to Rp235 billion have been pledged as collateral under lending agreements (Note 19c).

As of December 31, 2017 and 2018, modules and components held by the Group with book value amounting to Rp143 billion and Rp125 billion, respectively, have been insured against fire, theft and other specific risks. Total sum insured as of December 31, 2017 and 2018 amounted to Rp256 billion and Rp176 billion, respectively.

Management believes that the insurance coverage is adequate to cover potential losses of inventories arising from the insured risks.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

9. OTHER CURRENT ASSETS

The breakdown of other current assets is as follows:

	2017	2018
Frequency license (Note 35c.i)	3,760	3,636
Advances	1,156	1,803
Prepaid rental	1,349	1,382
Prepaid salaries	227	200
Advance to employee	35	30
Others	656	229
Total	7,183	7,280

Refer to Note 33 for details of related party transactions.

10. CONTRACT COSTS

Movement of contract costs for the year ended December 31, 2018 is as follows:

	2018		
	Cost to obtain	Cost to fulfill	Total
At January 1, 2018	193	903	1,096
Amortisation during the year	(62)	(1,094)	(1,156)
Addition current year	274	1,030	1,304
At December 31, 2018	405	839	1,244
Short term portion	(85)	(839)	(924)
Long term portion	320	—	320

There is no provision for impairment of contract costs as of December 31, 2018.

11. LONG-TERM INVESTMENTS

The details of long-term investments as of December 31, 2017 are as follows:

	2017						
	Percentage of ownership	Beginning balance	Additions (deductions)	Share of net profit (loss)	Dividend	Share of other comprehensive income	Ending balance
Long-term investments in associated companies:							
Tiphone ^a	24.00	1,488	—	80	(28)	(1)	1,539
Indonusa ^b	20.00	221	—	—	—	—	221
Teltranet ^c	51.00	38	—	(20)	—	—	18
PT Integrasi Logistic Cipta Solusi ("ILCS") ^d	49.00	42	—	1	—	—	43
PT Graha Sakura Nusantara ("GSN") ^e	45.00	—	14	0	—	—	14
Others ^g	25.00 - 49.00	—	4	(0)	—	(0)	4
Sub-total		1,789	18	61	(28)	(1)	1,839
Other long-term investments		58	251	—	—	0	309
Total long-term investments		1,847	269	61	(28)	(1)	2,148

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Summarized financial information of the Group's investments accounted for under the equity method for 2017*:

	<u>Tiphone</u>	<u>Indonusa</u>	<u>Teltranet</u>	<u>ILCS</u>	<u>GSN</u>	<u>Others</u>
<i>Statements of financial position</i>						
Current assets	8,084	307	174	145	1	190
Non-current assets	994	415	101	32	185	606
Current liabilities	(2,107)	(877)	(149)	(87)	(27)	(724)
Non-current liabilities	(3,255)	(177)	(90)	(2)	(129)	(1,882)
Equity (deficit)	3,716	(332)	36	88	30	(1,810)
<i>Statements of profit or loss and other comprehensive income</i>						
Revenues	27,914	692	209	122	—	106
Operating expenses	(27,217)	(333)	(255)	(116)	(0)	(287)
Other expenses - net	(246)	(364)	(5)	(4)	—	(19)
Profit (loss) before tax	451	(5)	(51)	2	0	(200)
Income tax benefit (expense)	(116)	—	13	1	—	—
Profit (loss) for the year	335	(5)	(38)	3	0	(200)
Other comprehensive income (loss)	(3)	—	(0)	(0)	—	—
Total comprehensive income (loss) for the year	332	(5)	(38)	3	0	(200)

The details of long-term investments as of December 31, 2018 are as follows:

	2018								
	<u>Percentage of ownership</u>	<u>Beginning balance</u>	<u>Adjustment on initial application of IFRS 9</u>	<u>Additions (deductions)</u>	<u>Changes of net fair value</u>	<u>Share of net profit (loss)</u>	<u>Dividend</u>	<u>Share of other comprehensive income</u>	<u>Ending balance</u>
Long-term investments in associated companies:									
Tiphone ^a	24.00	1,539	—	—	—	87	(9)	(15)	1,602
Indonusa ^b	20.00	221	—	—	—	(11)	—	—	210
Teltranet ^c	51.00	18	—	—	—	(19)	—	1	0
ILCS ^d	49.00	43	—	—	—	1	0	0	44
GSN ^e	45.00	14	—	—	—	0	—	—	14
Others ^f	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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Summarized financial information of the Group's investments accounted for under the equity method for 2018*:

	<u>Tiphone</u>	<u>Indonusa</u>	<u>Teltranet</u>	<u>ILCS</u>	<u>GSN</u>	<u>Others</u>
<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.

- ^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, pulse reload 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, 2017 and 2018, the fair value of the investment amounted to Rp1,755 billion and Rp1,649 billion, respectively. The fair value was calculated by multiplying the number of shares by the published price quotation as of December 31, 2017 and 2018 amounting to Rp1,000 and Rp940 per share, respectively.

Reconciliation of financial information to the carrying amount of long-term investment in Tiphone as of December 31, 2017 and 2018 is as follows:

	<u>2017</u>	<u>2018</u>
Assets	9,078	8,507
Liabilities	(5,362)	(4,528)
Net assets	3,716	3,979
Group's proportionate share of net assets (24.00% in 2017 and 2018)	892	955
Goodwill	647	647
Carrying amount of long-term investment	1,539	1,602

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

- b Indonusa had been a subsidiary of the Company until 2013 when the Company disposed 80% of its interest 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%.
- c 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. The unrecognised share of losses in Teltranet for the year ended December 31, 2018 are Rp11 billion.
- d ILCS is engaged in providing E-trade logistic services and other related services.
- e On August 31, 2017, NSI and third party established GSN which engaged in real estate, residential and apartment marketing business.
- f The unrecognised share of losses in other investments cumulatively as of December 31, 2018 are Rp263 billion.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

12. PROPERTY AND EQUIPMENT

The details of property and equipment are as follows :

	December 31, 2016	Business acquisitions	Additions	Deductions	Reclassifications/ Translations	December 31, 2017
At cost:						
Land rights	1,417	40	62	—	—	1,519
Buildings	7,837	39	211	(3)	1,718	9,802
Leasehold improvements	1,116	—	34	(25)	132	1,257
Switching equipment	20,539	69	556	(977)	(1,675)	18,512
Telegraph, telex and data communication equipment	1,586	—	—	—	(3)	1,583
Transmission installation and equipment	126,908	—	2,648	(4,489)	14,314	139,381
Satellite, earth station and equipment	8,445	573	1,233	(2,202)	1,251	9,300
Cable network	44,990	—	5,715	(694)	(2,657)	47,354
Power supply	15,237	—	222	(456)	1,491	16,494
Data processing equipment	12,599	—	715	(603)	666	13,377
Other telecommunication peripherals	702	—	966	(7)	—	1,661
Office equipment	1,529	11	327	(84)	(146)	1,637
Vehicles	522	—	355	(37)	—	840
CPE assets	22	—	—	—	—	22
Other equipment	100	—	—	—	(3)	97
Property under construction	4,550	—	20,110	(96)	(20,149)	4,415
Total	248,099	732	33,154	(9,673)	(5,061)	267,251

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	December 31, 2016	Additions	Deductions	Reclassifications/ Translations	December 31, 2017
Accumulated depreciation and impairment losses:					
Land rights	268	31	—	—	299
Buildings	2,435	407	—	38	2,880
Leasehold improvements	692	149	(23)	5	823
Switching equipment	16,690	1,393	(977)	(2,511)	14,595
Telegraph, telex and data communication equipment	333	416	—	53	802
Transmission installation and equipment	64,365	11,213	(3,642)	(55)	71,881
Satellite, earth station and equipment	7,098	595	(2,202)	(1,157)	4,334
Cable network	20,494	2,003	(693)	(3,752)	18,052
Power supply	10,262	1,296	(286)	2	11,274
Data processing equipment	9,512	1,401	(582)	(19)	10,312
Other telecommunication peripherals	462	149	(7)	(1)	603
Office equipment	940	215	(65)	26	1,116
Vehicles	200	113	(21)	—	292
CPE assets	19	1	—	—	20
Other equipment	99	1	—	(4)	96
Total	133,869	19,383	(8,498)	(7,375)	137,379
Net book value	114,230				129,872

	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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	December 31, 2017	Additions	Deductions	Reclassifications/ Translations	December 31, 2018
Accumulated depreciation and impairment losses:					
Land rights	299	36	—	—	335
Buildings	2,880	513	(1)	13	3,405
Leasehold improvements	823	150	(24)	—	949
Switching equipment	14,595	1,309	(1,920)	(3,390)	10,594
Telegraph, telex and data communication equipment	802	518	—	—	1,320
Transmission installation and equipment	71,881	11,561	(5,579)	(372)	77,491
Satellite, earth station and equipment	4,334	677	(3)	(3)	5,005
Cable network	18,052	2,084	(36)	(7,718)	12,382
Power supply	11,274	1,375	(267)	7	12,389
Data processing equipment	10,312	1,047	(601)	(10)	10,748
Other telecommunication peripherals	603	428	—	(1)	1,030
Office equipment	1,116	334	(72)	4	1,382
Vehicles	292	122	(1)	(6)	407
CPE assets	20	—	—	—	20
Other equipment	96	4	—	(25)	75
Total	137,379	20,158	(8,504)	(11,501)	137,532
Net book value	129,872				142,912

Refer to Note 33 for details of related party transactions.

a. Gain on sale of property and equipment

	2016	2017	2018
Proceeds from sale of property and equipment	765	1,367	629
Net book value	(152)	(1,009)	(1)
Gain on sale of property and equipment	613	358	628

b. Asset impairment

In 2014, the Company decided to cease its fixed wireless business, and accelerated the depreciation of its fixed wireless assets in 2015.

In 2017, the Company derecognised the fixed wireless asset which fully depreciated with acquisition cost of Rp3,193 billion.

As of December 31, 2018, 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 December 31, 2018.

c. Others

- (i) Interest capitalized to property under construction amounted to Rp444 billion, Rp328 billion and Rp271 billion for the years ended December 31, 2016, 2017 and 2018, respectively. The capitalization rate used to determine the amount of borrowing costs eligible for capitalization ranged from 10.20% to 11.00%, 8.15% to 11.00% and 9.68% to 11.00% for the years ended December 31, 2016, 2017 and 2018, respectively.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

- (ii) No foreign exchange loss was capitalized as part of property under construction for the years ended December 31, 2016, 2017 and 2018.
- (iii) In 2016, 2017 and 2018, the Group obtained proceeds from the insurance claim on lost and broken property and equipment, with a total value of Rp77 billion, Rp155 billion and Rp153 billion, respectively, and were recorded as part of "Other Income" in the consolidated statements of profit or loss and other comprehensive income. In 2016, 2017 and 2018, the net carrying values of those assets of Rp19 billion, Rp7 billion and Rp51 billion, respectively, were charged to the consolidated statements of profit or loss and other comprehensive income.
- (iv) In 2017 and 2018, Telkomsel decided to replace certain equipment units with net carrying amount of Rp620 billion and Rp341 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, 2018 amounting to Rp378 billion.

In 2014, the useful lives of Telkomsel's buildings and transmissions were changed from 20 years to 40 years, and from 10 years to 15 and 20 years, respectively, to reflect the current economic lives of the buildings and the transmissions. The impact of change in useful lives of the buildings and transmissions was an increase the profit before income tax in 2018 amounted to Rp135 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, 2018 amounting to Rp925 billion. The impact of the changes in the estimated useful lives of the radio software license in following years is as follows:

<u>Years</u>	<u>Increase (Decrease)</u>
2019	637
2020	266
2021	18
2022	(106)

- (v) Exchange of property and equipment

In 2011 and 2012, the Company entered into a Procurement and Installation Agreement for the Modernization of the Copper Cable Network through Optimalization of Asset Copper Cable Network through Trade In/Trade Off method with PT Len Industri ("LEN") and PT Industri Telekomunikasi Indonesia ("INTI"), respectively. In 2017 and 2018, the Company derecognised the copper cable network asset with net carrying amount of Rp1 billion and Rp0 billion, respectively, and recorded the fiber optic network asset from the exchange transaction of Rp506 billion and Rp0 billion, respectively.

In 2017 and 2018, Telkomsel's certain equipment units with net carrying amount of Rp816 billion and Rp777 billion, respectively, were exchanged with equipment from Ericsson AB, PT Ericsson Indonesia, PT Huawei Tech Investment, PT Nokia Solutions and Network Indonesia, and PT ZTE Indonesia. As of December 31, 2018, Telkomsel's equipment units with net carrying amount of Rp340 billion are going to be exchanged and, therefore, these equipment were reclassified as "Assets held for sale" in the consolidated statements of financial position.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

- (vi) The Group owns several pieces of land located throughout Indonesia with Building Use Rights (“Hak Guna Bangunan” or “HGB”) for a period of 10-45 years which will expire between 2018 and 2053. Management believes that there will be no issue in obtaining the extension of the land rights when they expire.
- (vii) As of December 31, 2018, the Group’s property and equipment excluding land rights, with net carrying amount of Rp134,586 billion were insured against fire, theft, earthquake and other specified risks, including business interruption, under blanket policies totalling Rp16,059 billion, US\$47 million, HKD9 million, SGD225 million and MYR37 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, 2018, the percentage of completion of property under construction was around 62.80% of the total contract value, with estimated dates of completion until September 2020. 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 19b.i). Certain property and equipment of the Company’s subsidiaries with gross carrying value amounting to Rp8,077 billion have been pledged as collateral under lending agreements (Notes 18, 19c, and 19d).
- (x) As of December 31, 2018, the cost of fully depreciated property and equipment of the Group that are still used in operations amounted to Rp50,633 billion. The Group is currently performing modernization of network assets to replace the fully depreciated property and equipment.
- (xi) On August 25, 2017, Telkom-1 Satellite experienced technical problems which impacted to customer service disruptions. Therefore, the Company was migrating customers services to the Company’s other satellites (Telkom-3S and Telkom-2), as well as to several third party satellites. This customers services migration process has been completed on September 10, 2017, and the costs incurred on this migration process are recognised in these consolidated statements of profit or loss and other comprehensive income. As of December 31, 2017, the acquisition cost and accumulated depreciation of Telkom-1 Satellite amounting to Rp1,165 billion is presented as part of disposal assets group and classified as “Other Non-current Assets” in the consolidated statements of financial position.
- (xii) Telkomsel entered into several agreements with tower providers to lease spaces in telecommunication towers (slot) and sites of the towers for a period of 10 years. Telkomsel may extend the lease period based on mutual agreement with the relevant parties. In addition, the Group also has lease commitments for transmission installation and equipment, data processing equipment, office equipment, vehicles and CPE assets with the option to purchase certain leased assets at the end of the lease terms.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Future minimum lease payments required for assets under finance leases are as follows:

Years	2017	2018
2018	1,083	—
2019	969	1,049
2020	866	945
2021	778	781
2022	605	605
2023	254	254
Thereafter	130	130
Total minimum lease payments	4,685	3,764
Interest	(881)	(619)
Net present value of minimum lease payments	3,804	3,145
Current maturities (Note 18b)	(794)	(807)
Long-term portion (Note 19)	3,010	2,338

The details of obligations under finance leases as of December 31, 2017 and 2018 are as follows:

	2017	2018
PT Tower Bersama Infrastructure Tbk.	1,293	1,089
PT Profesional Telekomunikasi Indonesia	1,120	930
PT Mandiri Utama Finance	198	186
PT Solusi Tunas Pratama	212	181
PT Putra Arga Binangun	189	159
PT Mitsubishi UFJ Lease and Finance Indonesia	135	103
PT Bali Towerindo Sentra	100	86
Others (each below Rp75 billion)	557	411
Total	3,804	3,145

13. OTHER NON-CURRENT ASSETS

The breakdown of other non-current assets is as follows:

	2017	2018
Prepaid other taxes - net of current portion (Note 30)	3,075	2,698
Prepaid rental - net of current portion (Note 9)	2,688	2,662
Frequency license - net of current portion (Note 9)	2,019	1,743
Prepaid income taxes - net of current portion (Note 30)	763	894
Deferred charges	413	474
Advances for purchases of property and equipment	2,805	387
Convertible bonds	64	213
Restricted cash	31	183
Security deposit	116	173
Others	296	227
Total	12,270	9,654

Prepaid rental covers rent of leased line, telecommunication equipment, land and building under lease agreements of the Group with remaining rental periods ranging from 1 to 40 years.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2017 and 2018 and

For Each of The Three Years In the Period Ended December 31, 2018

(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

As of December 31, 2017 and 2018, deferred charges represent deferred Indefeasible Right of Use (“IRU”) Agreement charges. Total amortization of deferred charges for the years ended December 31, 2016, 2017 and 2018 amounted to Rp40 billion, Rp46 billion and Rp56 billion, respectively.

Refer to Note 33 for details of related party transaction.

14. INTANGIBLE ASSETS

The details of intangible assets are as follows:

	Goodwill	Software	License	Other intangible assets	Total
Gross carrying amount:					
Balance, December 31, 2016	449	7,222	75	607	8,353
Additions	—	1,289	3	21	1,313
Acquisition	232	4	—	—	236
Deductions	(3)	(122)	—	(11)	(136)
Reclassifications/translations	2	(6)	6	18	20
Balance, December 31, 2017	680	8,387	84	635	9,786
Accumulated amortization and impairment losses:					
Balance, December 31, 2016	(21)	(4,776)	(56)	(411)	(5,264)
Amortization	—	(1,037)	(9)	(48)	(1,094)
Deductions	—	95	—	11	106
Reclassifications/translations	—	4	(6)	(2)	(4)
Balance, December 31, 2017	(21)	(5,714)	(71)	(450)	(6,256)
Net	659	2,673	13	185	3,530

	Goodwill	Software	License	Other intangible assets	Total
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	1,066	10,680	94	687	12,527
Accumulated amortization and impairment losses:					
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	(21)	(6,896)	(81)	(497)	(7,495)
Net	1,045	3,784	13	190	5,032

- (i) Goodwill resulted from the acquisition of Sigma (2008), Ad Medika (2010), PT Bina Data Mandiri (2012), Contact Centres Australia Pty. Ltd. (2014), PT Media Nusantara Data Global (2015), Melon (2016), PT Griya Silkindo Drajatmoerni (2016), TSGN (2017), Nutech (2017), Swadharma (2018), CIP (2018) and Telin Malaysia (2018) (Note 1d).

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

- (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, 2018, the cost of fully amortized intangible assets that are still used in operations amounted to Rp4,463 billion.

15. TRADE AND OTHER PAYABLES

This account consists of the following:

	<u>2017</u>	<u>2018</u>
Trade payables	15,574	14,766
Other payables	217	448
Total trade and other payables	<u>15,791</u>	<u>15,214</u>

The breakdown of trade payables is as follows:

	<u>2017</u>	<u>2018</u>
Related parties		
Radio frequency usage charges, concession fees and Universal Service Obligation (“USO”) charges	1,561	1,471
Purchases of equipments, materials and services	577	829
Payables to other telecommunication providers	322	189
Sub-total	<u>2,460</u>	<u>2,489</u>
Third parties		
Purchases of equipments, materials and services	11,659	10,849
Payables to other telecommunication providers	1,455	1,428
Sub-total	<u>13,114</u>	<u>12,277</u>
Total	<u>15,574</u>	<u>14,766</u>

Trade payables by currency are as follows:

	<u>2017</u>	<u>2018</u>
Rupiah	13,344	11,726
U.S. dollar	2,167	2,978
Others	63	62
Total	<u>15,574</u>	<u>14,766</u>

Refer to Note 33 for details of related party transactions.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

16. ACCRUED EXPENSES

The breakdown of accrued expenses is as follows:

	<u>2017</u>	<u>2018</u>
Operation, maintenance and telecommunication services	7,093	8,013
General, administrative and marketing expenses	2,684	2,299
Salaries and benefits	2,664	2,219
Interest and bank charges	189	238
Total	<u>12,630</u>	<u>12,769</u>

Refer to Note 33 for details of related party transactions.

17. CONTRACT LIABILITIES

The breakdown of contract liabilities is as follows:

a. Current

	<u>2017</u>	<u>2018</u>
Prepaid pulse reload vouchers	4,800	4,413
Material rights for contract renewal	44	65
Others	583	774
Total	<u>5,427</u>	<u>5,252</u>

b. Non-current

	<u>2017</u>	<u>2018</u>
IRU	205	258
Material rights for contract renewal	305	394
Others	14	—
Total	<u>524</u>	<u>652</u>

The balance of contract liabilities as of December 31, 2017 is presented as unearned income in the consolidated statements of financial position.

Contract liabilities at the beginning period which recognised as revenue in current year is Rp5,495 billion.

18. SHORT-TERM BANK LOANS AND CURRENT MATURITIES OF LONG-TERM BORROWINGS

This account consists of the following:

	<u>2017</u>	<u>2018</u>
Short-term bank loans	2,289	4,043
Current maturities of long-term borrowings	5,209	6,296
Total	<u>7,498</u>	<u>10,339</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

a. Short-term bank loans

Lenders	Currency	2017		2018	
		Original currency (in millions)	Rupiah equivalent	Original currency (in millions)	Rupiah equivalent
Related parties					
BNI	Rp	—	1,252	—	956
Bank Mandiri	Rp	—	45	—	—
Sub-total			<u>1,297</u>		<u>956</u>
Third parties					
MUFG Bank, Ltd. ("MUFG Bank")	Rp	—	—	—	1,295
DBS	Rp	—	408	—	699
	US\$	—	—	1	13
UOB	Rp	—	400	—	580
HSBC	Rp	—	18	—	317
	US\$	—	—	0	4
SCB	Rp	—	—	—	100
Bank CIMB Niaga	Rp	—	83	—	78
PT Bank Sumitomo Mitsui Indonesia ("Sumitomo")	Rp	—	80	—	—
Others	Rp	—	3	—	1
Sub-total			<u>992</u>		<u>3,087</u>
Total			<u>2,289</u>		<u>4,043</u>

Refer to Note 33 for details of related party transactions.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Other significant information relating to short-term bank loans as of December 31, 2018 is as follows:

	Borrower	Currency	Total facility (in billions) [*]	Maturity date	Interest payment period	Interest rate per annum	Security
BNI							
2014-2017	GSD ^e , Sigma ^a	Rp	375	January 9, 2019 - November 8, 2019	Monthly	9.00%	Trade receivables (Note 6) and property and equipment (Note 12)
2013-2018	Telkom Infratel, Infomedia ^f , MD Media, Sigma ^e	Rp	2,895	January 9, 2019 - November 30, 2019	Monthly	1 month JIBOR + 2.20% - 3.00%	Trade receivables (Note 6)
MUFG Bank							
2018	Telkomsel, Infomedia, Metra, TII	Rp	2,350	March 27, 2019 - September 27, 2019	Monthly, Semi-annually	1 month JIBOR + 0.70% - 0.95%, 6 months JIBOR + 0.70%	None
DBS							
2018	Telkom Infratel, Infomedia	Rp	600	February 26, 2019	Monthly	1 month JIBOR + 0.70%	None
2016	Nutech ^e	Rp	17	October 13, 2019	Monthly	10.50% - 11.00%	None
2016	Sigma ^{b,c}	US\$	0.02	July 31, 2019	Semi-annually	3.25% (US\$), 10.75% (Rp)	Trade receivables (Note 6)
UOB							
2016-2018	MD Media, Finnet ^d	Rp	800	April 6, 2019 - December 20, 2020	Monthly	1 month JIBOR + 2.00%	Trade receivables (Note 6)
HSBC							
2014	Sigma ^g	Rp	600	July 15, 2019	Monthly	14.34%	Trade receivables (Note 6)
2014	Sigma ^g	US\$	0.004	July 15, 2019	Monthly	13.12%	Trade receivables (Note 6)
2018	PINS	Rp	300	June 28, 2019	Quarterly	3 months JIBOR + 1.00%	None
SCB							
2015	GSD ^e	Rp	100	March 28, 2019	Monthly	10.50%	None
Bank CIMB Niaga							
2013	GSD ^e	Rp	85	January 1, 2019	Monthly	10.90% - 11.50%	Trade receivables (Note 6) and property and equipment (Note 12)

* In original currency.

^a Based on the latest amendment on December 21, 2017.

^b Based on the latest amendment on December 5, 2018

^c Facility in U.S. Dollar. Withdrawal can be executed in U.S. Dollar and Rupiah.

^d Based on the latest amendment on June 5, 2018.

^e Unsettled loan will be automatically extended.

^f Based on the latest amendment on March 28, 2018 and July 6, 2018.

^g Based on the latest amendment on July 16, 2018.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and

For Each of The Three Years In the Period Ended December 31, 2018

(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

On February 26, 2018, the Company, Telkom Infratel and Infomedia entered a credit agreements with DBS amounting to Rp600 billion. As of December 31, 2018, the unused facilities was amounting to Rp125 billion.

On March 21, 2018, the Company, TII, Infomedia and Metra entered a credit agreement with MUFG Bank amounting to Rp500 billion. As of December 31, 2018, the unused facilities was amounting to Rp80 billion.

The credit facilities were obtained by the Company's subsidiaries for working capital purposes.

b. Current maturities of long-term borrowings

	Notes	2017	2018
Two-step loans	19a	206	198
Bonds and notes	19b	—	525
Bank loans	19c	4,110	4,472
Other borrowings	19d	99	294
Obligations under finance leases	12c.xii	794	807
Total		<u>5,209</u>	<u>6,296</u>

Refer to Note 33 for details of related party transactions.

19. LONG-TERM LOANS AND OTHER BORROWINGS

Long-term loans and other borrowings consist of the following:

	Notes	2017	2018
Two-step loans	19a	892	751
Bonds and notes	19b	8,982	9,956
Bank loans	19c	13,894	18,748
Other borrowings	19d	1,196	1,950
Obligations under finance leases	12c.xii	3,010	2,338
Total		<u>27,974</u>	<u>33,743</u>

Scheduled principal payments as of December 31, 2018 are as follows:

	Notes	Total	Year				
			2020	2021	2022	2023	Thereafter
Two-step loans	19a	751	198	181	144	127	101
Bonds and notes	19b	9,956	2,490	477	2,197	—	4,792
Bank loans	19c	18,748	7,648	3,051	2,577	2,813	2,659
Other borrowings	19d	1,950	404	405	405	415	321
Obligations under finance leases	12c.xii	2,338	768	670	549	233	118
Total		<u>33,743</u>	<u>11,508</u>	<u>4,784</u>	<u>5,872</u>	<u>3,588</u>	<u>7,991</u>

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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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	2017 Outstanding		2018 Outstanding	
		Original currency (in millions)	Rupiah equivalent	Original currency (in millions)	Rupiah equivalent
Overseas banks	Yen	5,375	648	4,607	602
	US\$	17	237	13	188
	Rp	—	213	—	159
Total			1,098		949
Current maturities (Note 18b)			(206)		(198)
Long-term portion			892		751

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	7.50 %

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.

The Company had used all facilities under the two-step loans program since 2008.

Under the loan covenants, the Company is required to maintain financial ratios as follows:

- a. Projected net revenue to projected debt service ratio should exceed 1.2:1 for the two-step loans originating from Asian Development Bank (“ADB”).
- b. 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, 2018, the Company has complied with the above-mentioned ratios.

Refer to Note 33 for details of related party transactions.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

b. Bonds and notes

Bonds and notes	Currency	2017		2018	
		Original currency (in millions)	Rupiah equivalent	Original 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
Series C	Rp	—	—	—	296
MTN Syariah Ijarah I Telkom 2018					
Series A	Rp	—	—	—	264
Series B	Rp	—	—	—	296
Series C	Rp	—	—	—	182
Total			8,995		10,495
Unamortized debt issuance cost			(13)		(14)
Total			8,982		10,481
Current maturities (Note 18b)			—		(525)
Long-term portion			8,982		9,956

(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 12c.ix). The underwriters of the bonds are PT Bahana Securities (“Bahana”), PT Danareksa Sekuritas, and PT Mandiri Sekuritas and the trustee is Bank CIMB Niaga. Based on the General Meeting of Bondholders on September 26, 2018, the trustee was changed to 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) and infrastructure (backbone, metro network, regional metro junction, internet protocol, and satellite system) and to optimize legacy and supporting facilities (fixed wireline and wireless).

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

As of December 31, 2018, the rating of the bonds issued by PT Pemeringkat Efek Indonesia (“Pefindo”) is idAAA (stable outlook).

Based on the indenture trusts agreement, the Company is required to comply with all covenants or restrictions, including maintaining financial ratios as follows:

1. Debt to equity ratio should not exceed 2:1.
2. EBITDA to finance costs ratio should not be less than 5:1.
3. Debt service coverage is at least 125%.

As of December 31, 2018 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	7,000						

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 12c.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, 2018, the rating of the bonds issued by Pefindo is idAAA (stable outlook).

Based on the indenture trusts agreement, the Company is required to comply with all covenants or restrictions, including maintaining financial ratios as follows:

1. Debt to equity ratio should not exceed 2:1.
2. EBITDA to finance costs ratio should not be less than 4:1.
3. Debt service coverage is at least 125%.

As of December 31, 2018, the Company has complied with the above-mentioned ratios.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

(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
		758					

Based on Agreement of Issuance and Appointment of Monitoring Agents of Medium Term Notes (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 Custodian. The MTN are traded in private placement programs. The funds obtained from MTN are used for development of cable network and backbone.

As of December 31, 2018, the rating of the MTN issued by Pefindo is idAAA (Triple A).

Under the agreement, the Company is required to comply with all covenants or restrictions including maintaining financial ratios as follows:

1. Debt to equity ratio should not exceed 2:1
2. EBITDA to interest ratio should not be less than 4:1
3. Debt Service Coverage is at least 125%

As of December 31, 2018, 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
		742				58	

Based on Agreement of Issuance and Appointment of Monitoring Agents of Medium Term Notes (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 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 Syariah Ijarah transaction is telecommunication network which is located in the special region of Yogyakarta, its network

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

telecommunication involves cable network, information technology equipments, and other production tools of telecommunication services.

As of December 31, 2018, the rating of the MTN Syariah Ijarah issued by Pefindo is idAAA sy (Triple A Syariah).

Under the agreement, the Company is required to comply with all covenants or restrictions including maintaining financial ratios as follows:

1. Debt to equity ratio should not exceed 2:1.
2. EBITDA to interest ratio should not be less than 4:1.
3. Debt Service Coverage is at least 125%.

As of December 31, 2018, the Company has complied with the above-mentioned ratios.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

c. Bank loans

Lenders	Currency	2017 Outstanding		2018 Outstanding	
		Original currency (in millions)	Rupiah equivalent	Original currency (in millions)	Rupiah equivalent
Related parties					
BNI	Rp	—	4,603	—	6,826
Bank Mandiri	Rp	—	1,126	—	4,546
BRI	Rp	—	2,166	—	1,248
Sub-total			<u>7,895</u>		<u>12,620</u>
Third parties					
MUFG Bank	Rp	—	1,944	—	3,011
	US\$	—	—	10	144
Syndication of banks	Rp	—	2,250	—	1,750
	US\$	—	—	37	532
Citibank	Rp	—	—	—	1,000
PT Bank Central Asia Tbk ("BCA")	Rp	—	1,100	—	740
UOB Singapore	US\$	49	664	49	710
Sumitomo	Rp	—	804	—	661
Bank CIMB Niaga	Rp	—	1,726	—	462
ANZ	Rp	—	440	—	440
UOB	Rp	—	500	—	428
DBS	Rp	—	144	—	379
PT Bank ICBC Indonesia ("ICBC")	Rp	—	249	—	204
Exim Bank of Malaysia Berhad	MYR	37	124	23	81
Japan Bank for International Cooperation ("JBIC")	US\$	9	128	3	45
Others	Rp	—	26	—	33
	MYR	15	50	13	46
Sub-total			<u>10,149</u>		<u>10,666</u>
Total			<u>18,044</u>		<u>23,286</u>
Unamortized debt issuance cost			(40)		(61)
Gain on debt restructuring			—		(5)
			<u>18,004</u>		<u>23,220</u>
Current maturities (Note 18b)			<u>(4,110)</u>		<u>(4,472)</u>
Long-term portion			<u>13,894</u>		<u>18,748</u>

Refer to Note 33 for details of related party transactions.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Other significant information relating to bank loans as of December 31, 2018 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	GSD	Rp	182	8	2018 - 2021	Monthly	8.75%	Trade receivables (Note 6)
2013 - 2018	The Company, Telkomsel ^a , GSD, TLT, Sigma, Dayamitra, Telkom Infratel, Telkom Akses	Rp	9,892	671	2016 - 2033	Monthly, Quarterly	1 month JIBOR + 2.20% - 3.00%, 3 months JIBOR + 1.50% - 2.50%	Trade receivables (Note 6), Inventory (Note 8) and Property and equipment (Note 12)
Bank Mandiri								
2016 - 2018	The Company, Telkomsel ^{b,c} , Balebat, TelkomSAT	Rp	8,750	4,035	2017 - 2024	Monthly, Quarterly	8.50%, 8.75%, 9.00%, 9.50%	Trade receivables (Note 6), Inventory (Note 8) and Property and equipment (Note 12)
2017	GSD, TII, Dayamitra	Rp	845	—	2019 - 2024	Quarterly	3 months JIBOR + 1.85%	None
BRI								
2013	GSD	Rp	103	17	2014 - 2021	Monthly	10.00%	Trade receivables (Note 6), Property and equipment (Note 12) and lease agreement
2017 - 2018	The Company, Dayamitra	Rp	1,200	—	2019 - 2025	Quarterly	3 months JIBOR + 1.85%	None
MUFG Bank								
2015 - 2018	GSD, Metra, Infomedia, Dayamitra	Rp	3,950	194	2016 - 2025	Quarterly	3 months JIBOR + 1.43% - 2.25%	Property and equipment (Note 12) and lease agreement
2018	TII	US\$	0.01	—	2019 - 2023	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	—	2020 - 2024	Semi-annually	6 months LIBOR + 1.25%	None
Citibank								
2018	The Company	Rp	1,000	—	2019 - 2020	Quarterly	8.50%	None

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	Borrower	Currency	Total facility (in billions)*	Current period payment (in billions)*	Principal payment schedule	Interest payment period	Interest rate per annum	Security
BCA 2017 - 2018	Metra, Dayamitra, Telkom Infratel	Rp	870	21	2018 - 2025	Quarterly	3 months JIBOR + 1.50% - 1.85%	Property and equipment (Note 12)
UOB Singapore 2016	TII	US\$	0.06	—	2019 - 2024	Monthly	1 month LIBOR + 1.25%	None
Sumitomo 2015 - 2017	GSD, Metra, Infomedia, Dayamitra	Rp	1,150	194	2016 - 2022	Quarterly	3 months JIBOR + 1.50% - 2.15%	None
Bank CIMB Niaga 2011	GSD	Rp	78	8	2011 - 2021	Monthly	9.75%	Property and equipment (Note 12) and lease agreement
2017	GSD, Metra	Rp	495	28	2018 - 2023	Quarterly	3 months JIBOR + 1.50%	None
ANZ 2015 - 2017	GSD, PINS	Rp	750	—	2020 - 2022	Quarterly	3 months JIBOR + 2.00%	Property and equipment (Note 12)
UOB 2016	Dayamitra	Rp	500	71	2018 - 2024	Quarterly	3 months JIBOR + 2.20%	Property and equipment (Note 12)
DBS 2016 - 2017	Nutech, Telkomsat	Rp	136	17	2017 - 2022	Monthly, Quarterly	9.17%, 11.00%	Trade receivables (Note 6) and Property and equipment (Note 12)
2017	PINS, Dayamitra	Rp	400	38	2018 - 2022	Quarterly	3 months JIBOR + 1.50%	None
ICBC 2017	GSD	Rp	272	45	2017 - 2023	Quarterly	3 months JIBOR + 2.36%	Trade receivables (Note 6) and Property and equipment (Note 12)
Exim Bank of Malaysia Berhad 2016	TII	MYR	0.06	0.014	2017 - 2020	Monthly	ECOF + 1.89%	None
JBIC^b 2013	The Company	US\$	0.03	0.004	2014 - 2019	Semi-annually	2.18%	None
2013	The Company	US\$	0.03	0.003	2014 - 2019	Semi-annually	6 months LIBOR + 1.20%	None

* In original currency

- 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, 2018 Telkomsel has complied with the above covenants.
- b In connection with the agreement with NEC Corporation Consortium and TE SubCom, the Company entered into a loan agreement with JBIC, for the procurement of goods and services from NEC Corporation Consortium and TE SubCom for the Southeast Asia Japan Cable System project. The facilities consist of facilities A and B amounting to US\$18.8 million and US\$12.5 million, respectively.
- c 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, 2018, the Group has complied with all covenants or restrictions, except for certain loans. As of December 31, 2018, the Group obtained waiver from lenders to not demand the loan payment as consequence of the breach of covenants.

**PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and**

For Each of The Three Years In the Period Ended December 31, 2018

(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

On March 13, 2015, the Company, GSD, Metra, and Infomedia entered into several credit facilities agreements with Sumitomo, MUFG Bank, ANZ, and syndication of banks (BCA and BNI) 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 Sumitomo 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, 2018 the unused facilities for Sumitomo, 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 amounting to Rp1,000 billion, Rp2,005 billion, and Rp1,500 billion, respectively. As of December 31, 2018, the unused facilities for Bank Mandiri amounted to Rp5 billion.

On March 30, 2017, The Company, GSD, Metra, Dayamitra, PINS, and Telkomsat entered into several credit agreements with MUFG Bank, Sumitomo, DBS, Bank CIMB Niaga, and BCA 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 replaced PINS. As of December 31, 2018, the unused facilities for MUFG Bank, Sumitomo, 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, Dayamitra and TII entered into several credit agreements with BNI, BRI, Bank Mandiri, and MUFG Bank amounting to Rp825 billion, Rp700 billion, Rp775 billion, and Rp800 billion. As of December 31, 2018, the unused facilities for BNI, BRI, Bank Mandiri, and MUFG Bank amounting to Rp825 billion, Rp500 billion, Rp775 billion, and RpNil, respectively.

The credit facilities were obtained by the Group for working capital purposes.

d. Other borrowing

Lenders	Currency	Outstanding	
		2017	2018
PT Sarana Multi Infrastruktur	Rp	1,300	2,250
Unamortized debt issuance cost		(5)	(6)
Total		1,295	2,244
Current maturities (Note 18b)		(99)	(294)
Long-term portion		1,196	1,950

Refer to Note 33 for details of related party transactions.

i. Dayamitra

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	<u>Borrower</u>	<u>Currency</u>	<u>Total facility (in billions)</u>	<u>Current period payment (in billions)</u>	<u>Principal payment schedule</u>	<u>Interest rate per annum</u>	<u>Security</u>
PT Sarana Multi Infrastruktur							
October 12, 2016					Semi-annually (2018-2024)		Property and equipment (Note 12)
	Dayamitra	Rp	700	50	3 months JIBOR+1.85%		
March 29, 2017					Semi-annually (2018-2024)		Property and equipment (Note 12)
	Dayamitra	Rp	600	—	3 months JIBOR+1.85%		

Under the agreement, Dayamitra is required to comply with all covenants or restrictions, including maintaining financial ratios as follows :

1. Debt to equity ratio should not exceed 5:1.
2. Net debt to EBITDA ratio should not exceed 4:1.
3. Debt service coverage is at least 100%.

As of December 31, 2018, Dayamitra has complied with the above-mentioned ratios.

ii. The Company

	<u>Borrower</u>	<u>Currency</u>	<u>Total facility (in billions)</u>	<u>Current period payment (in billions)</u>	<u>Principal payment schedule</u>	<u>Interest rate per annum</u>	<u>Security</u>
PT Sarana Multi Infrastruktur							
November 14, 2018	The Company	Rp	1,000	—	Semi-annually (2019-2023)	8.35 %	None

Under the agreement, The Company is required to comply with all covenants or restrictions, including maintaining financial ratios as follows :

1. Debt to equity ratio should not exceed 2:1.
2. EBITDA to interest ratio should not be less than 4:1.
3. Debt service coverage is at least 125%.

As of December 31, 2018, The Company has complied with the above-mentioned ratios.

20. NON-CONTROLLING INTERESTS

The details of non-controlling interests are as follow:

	<u>2017</u>	<u>2018</u>
Non-controlling interests in net assets of subsidiaries:		
Telkomsel	18,891	17,770
GSD	186	212
Metra	115	174
TII	172	111
Total	19,364	18,267

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	2016	2017	2018
Non-controlling interests in net income (loss) of subsidiaries:			
Telkomsel	9,863	10,632	8,899
Metra	(39)	(83)	11
TII	(3)	6	7
GSD	(5)	(5)	(8)
Total	<u>9,816</u>	<u>10,550</u>	<u>8,909</u>

Material partly-owned subsidiary

As of December 31, 2017 and 2018, 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

	2017	2018
Current assets	21,098	20,089
Non-current assets	64,499	62,130
Current liabilities	(23,031)	(20,775)
Non-current liabilities	(8,587)	(10,667)
Total equity	<u>53,979</u>	<u>50,777</u>
Attributable to:		
Equity holders of parent company	35,088	33,007
Non-controlling interest	18,891	17,770

Summarized statements of profit or loss and other comprehensive income

	2016	2017	2018
Revenues	86,725	93,217	89,258
Operating expenses	(49,765)	(53,198)	(55,408)
Other income – net	483	380	124
Profit before income tax	<u>37,443</u>	<u>40,399</u>	<u>33,974</u>
Income tax expense – net	(9,263)	(10,018)	(8,546)
Profit for the year from continuing operations	<u>28,180</u>	<u>30,381</u>	<u>25,428</u>
Other comprehensive income net	(222)	(392)	356
Net comprehensive income for the year	<u>27,958</u>	<u>29,989</u>	<u>25,784</u>
Profit for the year attributable to non-controlling interest	9,863	10,632	8,899
Dividend paid to non-controlling interest	7,036	12,334	10,105

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Summarized statements of cash flows

	2016	2017	2018
Operating activities	42,827	39,564	36,848
Investing activities	(12,794)	(13,984)	(16,095)
Financing activities	(24,132)	(34,720)	(24,867)
Net (decrease) increase in cash and cash equivalents	<u>5,901</u>	<u>(9,140)</u>	<u>(4,114)</u>

21. CAPITAL STOCK

The details of capital stock are as follows:

Description	2017		
	Number of shares	Percentage of ownership	Total paid-in capital
Series A Dwiwarna share			
Government	1	0	0
Series B shares			
Government	51,602,353,560	52.09	2,580
The Bank of New York Mellon Corporation*	6,078,374,280	6.14	304
Commissioners (Note 1b):			
Hendri Saporini	414,157	0	0
Hadiyanto	875,297	0	0
Rinaldi Firmansyah	147,100	0	0
Directors (Note 1b):			
Alex Janangkih Sinaga	920,349	0	0
Herdy Rosadi Harman	828,012	0	0
Abdus Somad Arief	828,314	0	0
Dian Rachmawan	888,854	0	0
Public (individually less than 5%)	41,376,586,676	41.77	2,069
Total	99,062,216,600	100.00	4,953
Treasury stock (Note 23)	1,737,779,800	0	87
Total	<u>100,799,996,400</u>	<u>100.00</u>	<u>5,040</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Description	2018		
	Number of shares	Percentage of ownership	Total paid-in capital
Series A Dwiwarna share			
Government	1	0	0
Series B shares			
Government	51,602,353,560	52.09	2,580
The Bank of New York Mellon Corporation*	4,944,921,880	4.99	247
Commissioners (Note 1b):			
Hendri Saporini	654,505	0	0
Rinaldi Firmansyah	454,113	0	0
Directors (Note 1b):			
Alex Janangkih Sinaga	1,683,359	0	0
Herdy Rosadi Harman	1,514,720	0	0
Abdus Somad Arief	1,515,022	0	0
Dian Rachmawan	1,575,562	0	0
Harry Mozarta Zen	689,492	0	0
David Bangun	1,000	0	0
Siti Choiriana	540	0	0
Public (individually less than 5%)	42,506,852,846	42.92	2,126
Total	99,062,216,600	100.00	4,953

* The Bank of New York Mellon Corporation serves as the Depository 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.

Pursuant to the AGM of Stockholders of the Company as stated in notarial deed No. 28 dated April 21, 2017 of Ashoya Ratam, S.H., M.Kn., the Company's stockholders approved the distribution of cash dividend and special cash dividend for 2016 amounting to Rp11,611 billion (Rp117.21 per share) and Rp1,936 billion (Rp19.54 per share), respectively.

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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

22. ADDITIONAL PAID-IN CAPITAL

The breakdown of additional paid-in capital is as follows:

	2017	2018
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 (Note 23)	544	544
Excess of value over cost of selling 215,000,000 shares under the treasury stock plan phase II (Note 23)	576	576
Excess of value over cost of treasury stock transferred to employee stock ownership program (Note 23)	228	228
Excess of value over cost of selling 22,363,000 shares under the treasury stock plan phase III (Note 23)	36	36
Excess of value over cost of selling 864,000,000 shares under the treasury stock plan phase IV (Note 23)	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 (Note 23)	—	(2,454)
Differences from acquisition of non-controlling interest	—	(22)
Net	4,453	1,977

23. TREASURY STOCK

Phase	Basis	Period	Maximum Purchase	
			Number of shares	Amount
I	EGM	December 21, 2005 - June 20, 2007	1,007,999,964	Rp5,250
II	AGM	June 29, 2007 - December 28, 2008	215,000,000	Rp2,000
III	AGM	June 20, 2008 - December 20, 2009	339,443,313	Rp3,000
-	BAPEPAM - LK	October 13, 2008 - January 12, 2009	4,031,999,856	Rp3,000
IV	AGM	May 19, 2011 - November 20, 2012	645,161,290	Rp5,000

Movements in treasury stock as a result of the repurchase of shares are as follows:

	2017			2018		
	Number of shares	%	Rp	Number of shares	%	Rp
Beginning balance	1,737,779,800	1.72	2,541	1,737,779,800	1.72	2,541
Sale of treasury stock	—	—	—	(1,737,779,800)	(1.72)	(2,541)
Ending balance	1,737,779,800	1.72	2,541	—	—	—

Pursuant to the AGM of Stockholders of the Company held on June 11, 2010, the stockholders approved the change in the Company's plan for treasury stock phases I, II, and III to become: (i) for reissuance inside or outside the stock exchange, (ii) for retirement of the stock by deducting from equity, (iii) for equity stock conversion and (iv) for funding purposes.

Pursuant to the AGM of Stockholders of the Company held on May 19, 2011, the stockholders approved to execute the repurchase plan for treasury stock phase IV.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

In 2012, the Company bought back 237,270,500 shares (equivalent to 1,186,352,500 shares after stock split) from the public (part of stock repurchase program phase IV) for Rp1,744 billion.

In the AGM on April 19, 2013, the Company's stockholders approved the change to the plan for the treasury stock phase III, which was decided to be used for the implementation of the Employee Stock Ownership Program ("ESOP") for the year 2013.

On May 31, 2013, the Company offered all its eligible employees and those of its subsidiaries (collectively referred to as the "participants"), the right to purchase a fixed number of its shares at a certain price. The shares became an entitlement of the employees on the transaction dates and were no longer conditional on the satisfaction of any vesting conditions. Shares which were held by employees through the ESOP had a lock-up period that varied from 0 up to 12 months, depending on the position of the employee. In the lock-up period, participants could not transfer shares or have shares transactions either through or outside the stock exchange.

Price per share offered was Rp10,714 and each participant received allowance (discount) of Rp5,575 per share. At the closing of this program, the Company had transferred a part of the treasury stock phase III to employees totalling 59,811,400 shares (equivalent to 299,057,000 shares after the stock split) with fair value amounting to Rp661 billion. The excess amounting to Rp228 billion in value of the treasury stock transferred over their acquisition cost was recorded as additional paid-in capital (Note 22).

The difference amounting to Rp353 billion between the fair value of treasury stock and amount paid by the participants was recorded as part of "Personnel Expenses" in the 2013 consolidated statement of profit or loss and other comprehensive income.

On July 30, 2013, the Company resold 211,290,500 shares (equivalent to 1,056,452,500 shares after stock split) of treasury stock phase I with fair value amounting to Rp2,368 billion (net of related costs to sell the shares). The excess amounting to Rp544 billion in value of the treasury shares sold over their acquisition cost was recorded as additional paid-in capital (Note 22).

On June 13, 2014, the Company resold 215,000,000 shares (equivalent to 1,075,000,000 shares after stock split) of treasury stock phase II with fair value amounting to Rp2,541 billion (net of related costs to sell the shares). The excess amounting to Rp576 billion in value of the treasury stock sold over their acquisition cost was recorded as additional paid-in capital (Note 22).

On December 21, 2015, the Company resold 4,472,600 shares (equivalent to 22,363,000 shares after stock split) of treasury stock phase III with fair value amounting to Rp68 billion (net of related costs to sell the shares). The excess amounting to Rp36 billion in value of the treasury stock sold over their acquisition cost was recorded as additional paid-in capital (Note 22).

The Company diverted shares of repurchase program phase I in 2013, shares of repurchase program phase II in 2014, and shares of repurchase program phase III in 2015.

On June 29, 2016, the Company resold 172,800,000 shares (equivalent to 864,000,000 shares after stock split) of treasury stock phase IV with fair value of Rp3,259 billion (net of related costs to sell the shares). The excess amounting to Rp1,996 billion in value of the treasury stock sold over their acquisition cost was recorded as additional paid-in capital (Note 22).

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 with acquisition

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

cost amounting to Rp2,541 billion by reduced the Company's capital stock from 100,799,996,400 shares to 99,062,216,600 shares (decrease amounting to Rp87 billion). (Noted 21).

24. OTHER RESERVES

Other reserves mainly consist of the translation reserve. The translation reserve consists of all foreign currency differences arising from the translation of the financial statements of foreign operations amounting to Rp296 billion and Rp430 billion as of December 31, 2017 and 2018, respectively. There were no reclassifications to profit or loss for the years ended December 31, 2016, 2017 and 2018.

25. 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 Rp19,333 billion, Rp22,120 billion and Rp17,802 billion by the weighted average number of shares outstanding during the year totaling 98,638,501,532 shares, 99,062,216,600 shares and 99,062,216,600 shares for the years ended December 31, 2016, 2017 and 2018, 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 Rp195.99, Rp223.30 and Rp179.71 for the years ended December 31, 2016, 2017 and 2018, respectively. The Company does not have potentially dilutive financial instruments as of December 31, 2016, 2017 and 2018.

26. REVENUES

The Group derives revenues in the following major product lines:

2016	Mobile	Consumer	Enterprise	WIB	Others	Consolidated revenue
Telephone revenues	38,407	4,175	3,232	237	—	46,051
Interconnection revenues	1,340	—	—	2,807	—	4,147
Data, internet, and information technology service revenues						
Cellular internet and data	28,304	—	—	3	—	28,307
Internet, data communication, and information technology services	—	4,683	8,173	981	—	13,837
Short Messaging Services ("SMS")	15,944	—	6	3	—	15,953
Pay TV	—	1,007	104	—	—	1,111
Others	—	11	17	—	19	47
Total Data, internet, and information technology service revenues	44,248	5,701	8,300	987	19	59,255
Network revenues	3	11	301	632	—	947
Other revenues						
Sales of peripherals	—	—	1,489	—	—	1,489
Manage service and terminal	—	—	784	4	—	788
Call center service	—	—	276	238	—	514
E-health	—	—	415	—	—	415
E-payment	—	—	424	—	—	424
Tower lease rental	—	—	—	733	—	733
Others	—	523	595	228	224	1,570
Total other revenues	—	523	3,983	1,203	224	5,933
Total revenues	83,998	10,410	15,816	5,866	243	116,333
Adjustments and eliminations	—	—	—	—	(224)	
Total external revenues as reported in note operating segment	83,998	10,410	15,816	5,866	19	

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Management expects that most of the transaction price allocated to the unsatisfied contracts as of December 31, 2018 will be recognised as revenue during the next reporting period. Unsatisfied performance obligations as of December 31, 2018, which management expects to be realised within one year is Rp2,219 billion, and more than one year is Rp2,300 billion.

There is no revenue from major customer which exceeds 10% of total revenues for the year ended December 31, 2018.

Refer to Note 33 for details of related party transactions.

27. PERSONNEL EXPENSES

The breakdown of personnel expenses is as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Salaries and related benefits	7,122	7,821	8,077
Vacation pay, incentives and other benefits	4,219	3,339	3,292
Pension benefit cost (Note 31)	1,068	1,700	1,120
Net periodic post-employment health care benefit cost (Note 31)	163	276	335
LSA expense (Note 32)	237	255	161
Other employee benefit cost (Note 31)	82	62	113
Other post-employment benefit cost (Note 31)	48	42	32
Early retirement program	628	—	1
Others	45	34	47
Total	<u>13,612</u>	<u>13,529</u>	<u>13,178</u>

Refer to Note 33 for details of related party transactions.

28. OPERATION, MAINTENANCE AND TELECOMMUNICATION SERVICE EXPENSES

The breakdown of operation, maintenance and telecommunication service expenses is as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Operation and maintenance	17,047	19,929	25,215
Radio frequency usage charges (Note 35c.i)	3,687	4,276	5,473
Leased lines and CPE	4,141	5,255	5,125
Concession fees and USO charges	2,217	2,249	2,297
Cost of sales of handset (Note 8)	1,481	1,544	1,860
Electricity, gas and water	960	1,037	1,051
Cost of SIM cards and vouchers (Note 8)	624	914	866
Tower leases	322	472	480
Vehicles rental and supporting facilities	367	301	413
Insurance	256	294	193
Others	161	332	920
Total	<u>31,263</u>	<u>36,603</u>	<u>43,893</u>

Refer to Note 33 for details of related party transactions.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

29. GENERAL AND ADMINISTRATIVE EXPENSES

The breakdown of general and administrative expenses is as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Provision for impairment of receivables	743	1,494	2,208
General expenses	1,626	1,449	1,792
Professional fees	594	498	823
Training, education and recruitment	399	531	463
Travelling	436	475	415
Meeting	207	241	233
Social contribution	134	197	181
Collection expenses	152	135	157
Others	319	240	322
Total	<u>4,610</u>	<u>5,260</u>	<u>6,594</u>

Refer to Note 33 for details of related party transactions.

30. TAXATION

a. Prepaid income taxes

The breakdown of prepaid income taxes is as follows:

	<u>2017</u>	<u>2018</u>
The Company - Corporate Income Tax	610	494
Subsidiaries - Corporate Income Tax	175	420
Total	<u>785</u>	<u>914</u>
Current portion	(22)	(20)
Non-current portion (Note 13)	<u>763</u>	<u>894</u>

b. Prepaid other taxes

The breakdown of prepaid other taxes is as follows:

	<u>2017</u>	<u>2018</u>
The Company:		
Value Added Tax ("VAT")	1,967	2,167
Article 22 - Withholding tax on goods delivery and import	1	—
Article 23 - Withholding tax on service delivery	44	63
Subsidiaries:		
VAT	3,879	3,792
Article 23 - Withholding tax on services delivery	17	1
Total	<u>5,908</u>	<u>6,023</u>
Current portion	(2,833)	(3,325)
Non-current portion (Note 13)	<u>3,075</u>	<u>2,698</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

c. Current income tax liabilities

The breakdown of current income tax liabilities is as follows:

	2017	2018
The Company:		
Article 25 - Installment of corporate income tax	1	1
Subsidiaries:		
Article 25 - Installment of corporate income tax	37	14
Article 29 - Corporate income tax	763	389
Total	801	404

d. Other tax liabilities

The breakdown of other tax liabilities is as follows:

	2017	2018
The Company:		
Article 4 (2) - Final tax	26	18
Article 21 - Individual income tax	81	47
Article 22 - Withholding tax on goods delivery and imports	3	3
Article 23 - Withholding tax on services	29	36
Article 26 - Withholding tax on non-resident income	1	3
VAT - Tax collector	372	334
Sub-total	512	441
Subsidiaries:		
Article 4 (2) - Final tax	85	75
Article 21 - Individual income tax	129	113
Article 22 - Withholding tax on goods delivery and imports	3	5
Article 23 - Withholding tax on services	115	110
Article 26 - Withholding tax on non-resident income	303	7
VAT	842	25
Sub-total	1,477	335
Total	1,989	776

e. The components of income tax expense (benefit) are as follows:

	2016	2017	2018
Current			
The Company	671	586	236
Subsidiaries	10,067	10,771	9,196
Sub-total	10,738	11,357	9,432
Deferred			
The Company	(844)	(1,608)	(159)
Subsidiaries	(877)	209	93
Sub-total	(1,721)	(1,399)	(66)
Net income tax expense	9,017	9,958	9,366

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

f. Reconciliation of income tax expense

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>2016</u>	<u>2017</u>	<u>2018</u>
Profit before income tax	38,166	42,628	36,077
Less: income subject to final tax - net	(1,684)	(1,491)	(1,277)
Net	<u>36,482</u>	<u>41,137</u>	<u>34,800</u>
Income tax expense calculated at the Company's applicable statutory tax rate of 20%	7,296	8,228	6,960
Difference in applicable statutory tax rate for subsidiaries	1,904	2,046	1,753
Non-deductible expenses	496	767	423
Final income tax expense	345	591	60
Deferred tax assets that cannot be utilized - net	56	4	(2)
Deferred tax assets on fixed assets revaluation for tax purpose	(1,415)	(1,796)	—
Others	335	118	172
Net income tax expense	<u>9,017</u>	<u>9,958</u>	<u>9,366</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The details of the net income tax expense for the years ended December 31, 2016, 2017 and 2018 are as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Estimated taxable income (loss) of the Company	1,703	(861)	400
Corporate income tax:			
Current corporate income tax expense:			
The Company	340	—	80
Subsidiaries	10,053	10,766	9,193
Current income tax expense on tax assessment:			
The Company	—	—	99
Final tax expense:			
The Company	331	586	57
Subsidiaries	14	5	3
Total income tax expense - current	<u>10,738</u>	<u>11,357</u>	<u>9,432</u>
Income tax expense (benefit) - deferred - effect of temporary differences at enacted maximum tax rates:			
The Company			
Tax loss utilization (recognition)	—	(172)	172
Cost to obtain contracts	—	—	38
Net periodic pension and other post-employment benefits costs and provision for employee benefits	(214)	(235)	5
Finance leases	68	0	2
Valuation of long-term investments	(34)	—	—
Depreciation and gain on disposal or sale of property and equipment	(825)	(1,012)	(180)
Trade receivables write-off (provision for impairment of receivables)	41	(206)	(132)
Realization of accrual (accrual) of expenses and inventory write-off (provision for inventory obsolescence)	142	26	(36)
Amortization of (addition to) deferred installation fee	(10)	1	(18)
Amortization of intangible assets, land rights and others	(12)	(10)	(10)
Net	<u>(844)</u>	<u>(1,608)</u>	<u>(159)</u>
Telkomsel			
Finance leases	164	177	170
Depreciation and gain on disposal or sale of property and equipment	(913)	(55)	64
Amortization of (addition to) license	(4)	12	58
Provision for impairment of receivables	(5)	(41)	(88)
Provision for employee benefits	(55)	(68)	(83)
Net	<u>(813)</u>	<u>25</u>	<u>121</u>
Subsidiaries - others - net	<u>(64)</u>	<u>184</u>	<u>(28)</u>
Net income tax benefit - deferred	<u>(1,721)</u>	<u>(1,399)</u>	<u>(66)</u>
Income tax expense - net	<u>9,017</u>	<u>9,958</u>	<u>9,366</u>

Tax Law No. 36/2008 with implementing rules under Government Regulation No. 56/2015 stipulates a reduction of 5% from the maximum 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 tax year. The Company has met all of the required criteria; therefore, for the

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

purpose of calculating income tax expense and liabilities for the financial reporting years ended December 31, 2016, 2017 and 2018, the Company has reduced the applicable tax rate by 5%.

The Company applied the tax rate of 20% for the years ended December 31, 2016, 2017 and 2018. The subsidiaries applied the tax rate of 25% for the years ended December 31, 2016, 2017 and 2018.

The Company will submit the above corporate income tax computation in its income tax return ("Surat Pemberitahuan Tahunan" or Annual Tax Return) for fiscal year 2018 that will be reported to the tax office based on prevailing regulations. The amount of corporate income tax for the year ended December 31, 2017, is different with what was reported in the annual tax return due to adjustment of fiscal correction from tax assessment for fiscal year 2016.

g. Tax assessments

(i) The Company

On November 15, 2013, the Company received Tax Underpayment Assessment Letters ("SKPKBs") for the underpayment of VAT for the 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 billion). The accepted portion was charged to the 2014 consolidated statement 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 recognised 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 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 Rp115 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.

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 sent contra memorandum for judicial review to Supreme Court ("SC"). In September and November 2018, the Company received the verdict from the SC as the result of the tax audit for tax 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. As of the date of approval and authorization for the issuance of these consolidated financial statements, the judicial review for tax period May 2007 is still in process.

In November 2014, the Company received SKPKBs from the Tax Authorities as the result of the tax audit for fiscal year 2011. Based on the letters, the Company received VAT underpayment assessment for the tax 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 amounting to Rp4.7 billion (including penalty of Rp2 billion) was charged to the 2014 consolidated financial statement of profit or loss

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

and other comprehensive income. The portion of VAT international incoming call interconnection amounting to Rp178 billion (including penalty of Rp58 billion) is recognised as claim for tax refund. On January 7, 2015, the Company filed an objection and on October 20, 2015, Tax Authorities issued a rejection regarding this objection. On January 20, 2016, the Company filed an appeal on the decision of its objection.

On April 4 and 5, 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 is the taxable services and categorized as export service that subject to 0% VAT and granted the Company's appeal for the tax period January and September to December 2011. Tax Court rejected the Company's appeal for the tax period February to August 2011, since the Company did not meet the administrative requirement. Regarding this rejection, on June 19 and 21, 2017, the Company filed the request for judicial review. On October 15, 2018, the Company received a notification from Tax Court that Tax Authorities filed a request for judicial review for the tax period January and September to December 2011. On November 13, 2018, to response the judicial review from Tax Authorities, the Company sent contra memorandum for judicial review to SC for the tax period January and September to December 2011. In November 2018, the Company received a notification from Tax Court that Tax Authorities filed a contra memorandum for judicial review for the tax period February to August 2011. As of the date of approval and authorization for the issuance of these consolidated financial statements, the judicial review is still in process.

On May 3, 2016, the Tax Authorities issued Field Tax Audit Notification Letter for tax 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 billion, corporate income tax amounting to Rp613 million and withholding tax article 26 amounting to Rp311.5 million that have been charged in the 2016 consolidated statement of profit or loss and other comprehensive income. The Company filed an objection regarding to the remaining assessments on November 16, 2016.

On March 1, 2017 and May 9, 2017, the Company received the Decision Letter from Directorate General of Taxes ("DGT") 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). The Company decided to accept the decision.

On October 19, 2017, the Tax Authorities issued Decision Letter on Company's objections, wherein the Tax Authorities has reduced Company's underpayment. 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 reduced Company's underpayment for VAT from the tax period January to December 2012 totaling 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. As of the date of approval and authorization for the issuance of these consolidated financial statements, the appeal is still in process.

On August 23, 2016, the Tax Authorities issued Field Tax Audit Notification Letter for tax period January to December 2015 regarding overpayment of corporate income tax amounting to Rp414 billion. 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 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 billion (including penalty of Rp17 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 totaling to Rp26 billion. The accepted portion was charged to the 2017 consolidated financial statement 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 billion and granted all the Company's objection. 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.

On August 25, 2017, the Tax Authorities issued Field Tax Audit Notification Letter for tax periods January to December 2016 regarding overpayment of corporate income tax amounting to Rp114.4 billion. 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 Rp557 million (including penalty of Rp180 million) and SKPLB of VAT amounting to Rp923 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 and correction of VAT In totaling 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 consolidated financial statement of profit or

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 billion and STP for VAT amounting to Rp30.3 billion. As of the date of approval and authorization for the issuance of these consolidated financial statements, the objection is still in process.

On September 11, 2017 and January 9, 2018, the Tax Authorities issued Field Tax Audit Notification Letter for tax period December and November 2014 regarding claim for tax refund overpayment of VAT correction for tax period November and December 2014 amounting to Rp129 billion and Rp86.7 billion, respectively. On July 25 and September 7, 2018, the Company received SKPLB for tax period December and November 2014. 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 has been compensated to SKPKBs for self-assessed offshore VAT for tax period March, April and June 2015, STP for VAT for tax period November 2014, and other tax assessment letters.

On November 6, 2018, the Tax Authorities issued Field Tax Audit Notification Letter for tax period 2017 for all taxes. As of the date of approval and authorization for the issuance of these consolidated financial statements, the tax audit is still in process.

(ii) **Telkomsel**

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 VAT case 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 on interest income will be compensate against corporate income tax installment for the period of April 2017. In July 2018, Telkomsel received the official verdict from the SC which rejected the Tax Authorities request.

On April 21, 2010, the Tax Authorities filed a request for judicial review to the SC for the Tax Court's acceptance of Telkomsel's request to cancel the STP for the underpayment of December 2008 income tax article 25 amounting to Rp429 billion (including a penalty of Rp8.4 billion). In May 2010, Telkomsel filed a contra memorandum for judicial review to the SC. On March 2, 2017, Telkomsel received the official verdict from the SC which accept the Tax Authorities request. The penalty was paid in June 2017.

In May and June 2012, Telkomsel received the refund of the penalty on the 2010 income tax article 25 underpayment amounting to Rp15.7 billion based on the Tax Court's verdict. On July 17, 2012, the Tax Authorities filed a request for 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. In July 2016, conservatively, Telkomsel recognised the tax penalty of Rp15.7 billion as expense based on its previous experience on a similar income tax case.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

On May 24, 2012, Telkomsel filed an objection to the Tax Authorities for the 2010 underpayment of VAT of Rp290.6 billion (including penalty of Rp67 billion) and recorded it as a claim for tax refund. On May 9, 2017, Telkomsel received the official verdict from the SC which rejected Telkomsel's request, 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. On August 8, 2018, the SC accepted Telkomsel's request. Telkomsel received Surat Pelaksanaan Putusan Peninjauan Kembali ("SP2PK").

In July and October 2017, Telkomsel received notifications that the Tax Authorities had filed a request for judicial reviews to the SC for cases relating to corporate income tax and VAT amounting to Rp62 billion and Rp1.2 billion, respectively. Telkomsel submitted its contra memorandum for judicial review in August and November 2017. As of the date of approval and authorization for the issuance of these consolidated financial statements, Telkomsel has received partial official verdicts from the SC which rejected the Tax Authorities's request for VAT case amounting to Rp1.1 billion.

On July 28, 2016 and March 24, 2017, Telkomsel received the tax audit instruction letter for compliance of fiscal year 2014 and 2015, respectively. As of the date of approval and authorization for the issuance of these consolidated financial statements, the tax audit is still in progress.

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 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 recognised 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

i. Deferred tax assets and liabilities

The details of deferred tax assets and liabilities are as follows:

	December 31, 2016	(Charged) credited to profit or loss	Credited to other comprehensive income	(Charged) credited to equity	December 31, 2017
The Company					
Deferred tax assets:					
Net periodic pension and other post-employment benefit costs	563	197	342	—	1,102
Provision for impairment of receivables	388	206	—	—	594
Provision for employee benefits	209	38	—	—	247
Difference between accounting and tax bases of property and equipment	(772)	1,012	—	—	240
Fiscal loss	—	172	—	—	172
Deferred installation fee	75	(1)	—	—	74
Accrued expenses and provision for inventory obsolescence	69	(26)	—	—	43
Finance leases	1	(0)	—	—	1
Total deferred tax assets	533	1,598	342	—	2,473
Deferred tax liabilities:					
Valuation of long-term investment	(11)	—	—	—	(11)
Land rights, intangible assets and others	(11)	10	—	—	(1)
Total deferred tax liabilities	(22)	10	—	—	(12)
Deferred tax assets of the Company - net	511	1,608	342	—	2,461
Deferred tax assets of the other subsidiaries - net	258	(20)	9	96	343
Telkomsel					
Deferred tax assets:					
Provision for employee benefits	478	68	131	—	677
Provision for impairment of receivables	143	41	—	—	184
Total deferred tax assets	621	109	131	—	861
Deferred tax liabilities:					
Finance leases	(549)	(177)	—	—	(726)
Difference between accounting and tax bases of property and equipment	(482)	55	—	(125)	(552)
License amortization	(48)	(12)	—	—	(60)
Total deferred tax liabilities	(1,079)	(134)	—	(125)	(1,338)
Deferred tax liabilities of Telkomsel - net	(458)	(25)	131	(125)	(477)
Deferred tax liabilities of the other subsidiaries - net	(287)	(164)	12	(17)	(456)
Total deferred tax liabilities - net	(745)	(189)	143	(142)	(933)
Total deferred tax assets - net	769	1,588	351	96	2,804

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	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
Provision for impairment of receivables	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)
Finance 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
Telkomsel						
Deferred tax assets:						
Provision for employee benefits	677	—	83	(119)	—	641
Provision for impairment of receivables	184	98	88	—	—	370
Total deferred tax assets	861	98	171	(119)	—	1,011
Deferred tax liabilities:						
Finance 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)
Total deferred tax assets - net	2,804	(82)	234	(474)	(5)	2,477

As of December 31, 2017 and 2018, the aggregate amounts of temporary differences associated with investments in subsidiaries and associated companies, for which deferred tax liabilities have not been recognised were Rp31,783 billion and Rp31,296 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

j. Administration

From 2008 to 2018, 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, 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 to withhold income tax article 22 as amended by PMK No. 16/PMK.010/2016 dated February 3, 2016. The Company has withheld, deposited, and reported the VAT, PPnBM and also income tax article 22 in accordance with the Regulations.

31. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

The details of pension and other post-employment benefit liabilities are as follows:

	<u>Notes</u>	<u>2017</u>	<u>2018</u>
Pension benefit and other post-employment benefit obligations			
Pension benefit			
The Company - funded			
Defined pension benefit obligation	31a.i.a		
Additional pension benefit obligation	31a.i.a.ii	1,540	1,057
The Company - unfunded	31a.i.b	1,076	6
Telkomsel	31a.ii	2,384	1,830
Telkomsat		1,839	1,541
MD Media		0	0
Infomedia		0	0
Projected pension benefit obligations		6,839	4,434
Net periodic post-employment health care benefit	31b	2,419	195
Other post-employment benefit	31c	510	419
Obligation under the Labor Law	31d	427	507
Total		<u>10,195</u>	<u>5,555</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The details of net pension benefit expense recognised in the consolidated statements of profit or loss and other comprehensive income is as follows:

	Notes	2016	2017	2018
Pension benefit cost				
The Company - funded	31a.i.a			
Defined pension benefit obligation	31a.i.a.i	608	557	511
Additional pension benefit obligation	31a.i.a.ii	—	657	69
The Company - unfunded	31a.i.b	279	239	198
Telkomsel	31a.ii	181	247	342
MD Media		0	0	0
Infomedia		0	0	0
Telkomsat		0	0	0
Total pension benefit cost	27	1,068	1,700	1,120
Net periodic post-employment health care benefit cost	27,31b	163	276	335
Other post-employment benefit cost	27,31c	48	42	32
Obligation under the Labor Law	27,31d	82	62	113
Total		<u>1,361</u>	<u>2,080</u>	<u>1,600</u>

The details of net pension benefit expense recognised in the consolidated statements of profit or loss and other comprehensive income is as follows (continued):

The amounts recognised in OCI are as follows:

	Notes	2016	2017	2018
Defined benefit plan actuarial gain (losses)				
The Company - funded	31a.i.a			
Defined pension benefit obligation	31a.i.a.i	(492)	(1,154)	1,236
Additional pension benefit obligation	31a.i.a.ii	—	(419)	934
The Company - unfunded	31a.i.b	(119)	(100)	137
Telkomsel	31a.ii	(292)	(530)	514
MD Media		(1)	(2)	0
Infomedia		0	(1)	0
Telkomsat		0	0	0
Post-employment health care benefit cost	31b	(1,309)	(551)	2,559
Other post-employment benefit	31c	(20)	(40)	24
Obligation under the Labor Law	31d	(33)	(72)	14
Sub-total		<u>(2,266)</u>	<u>(2,869)</u>	<u>5,418</u>
Deferred tax effect at the applicable tax rates	30i	208	494	(598)
Defined benefit plan actuarial (losses) gain - net of tax		<u>(2,058)</u>	<u>(2,375)</u>	<u>4,820</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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”). 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 did not make contributions to the pension fund for the years ended December 31, 2016, 2017 and 2018.

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 recognised in the consolidated statements of financial position as of December 31, 2017 and 2018, under the defined benefit pension plan:

	2017	2018
Changes in projected pension benefit obligations		
Projected pension benefit obligations at beginning of year	18,849	22,354
Charged to profit or loss:		
Service costs	366	384
Past service cost - plan amendments	94	—
Interest costs	1,454	1,459
Pension plan participants’ contributions	41	38
Actuarial losses (gain) recognised in OCI	2,862	(2,691)
Pension benefits paid	(1,312)	(1,423)
Projected pension benefit obligations at end of year	22,354	20,121
Changes in pension benefit plan assets		
Fair value of pension plan assets at beginning of year	19,046	20,814
Interest income	1,388	1,357
Return on plan assets (excluding amount included in net interest expense)	1,708	(1,455)
Pension plan participants’ contributions	41	38
Pension benefits paid	(1,312)	(1,423)
Provision of additional benefit	—	(205)
Plan administration cost	(57)	(62)
Fair value of pension plan assets at end of year	20,814	19,064
Projected pension benefit obligations at end of year	(1,540)	(1,057)

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

As of December 31, 2017 and 2018, plan assets consist of:

	2017		2018	
	Quoted in active market	Unquoted	Quoted in active market	Unquoted
Cash and cash equivalents	1,481	—	873	—
Equity instruments:				
Finance	1,463	—	1,456	—
Consumer goods	1,411	—	1,336	—
Infrastructure, utilities and transportation	656	—	530	—
Construction, property and real estate	363	—	199	—
Basic industry and chemical	115	—	124	—
Trading, service and investment	388	—	420	—
Mining	92	—	112	—
Agriculture	46	—	55	—
Miscellaneous industries	377	—	362	—
Equity-based mutual fund	1,233	—	1,336	—
Fixed income instruments:				
Corporate bonds	—	5,428	—	5,267
Government bonds	6,968	—	6,166	—
Mutual funds	54	—	54	—
Non-public equity:				
Direct placement	—	237	—	288
Property	—	188	—	178
Others	—	314	—	308
Total	14,647	6,167	13,023	6,041

Pension plan assets include Series B shares issued by the Company with fair values totalling Rp469 billion and Rp372 billion, representing 2.25% and 1.95% of total plan assets as of December 31, 2017 and 2018, respectively, and bonds issued by the Company with fair value totalling Rp340 billion and Rp314 billion, representing 1.64% and 1.65% of total plan assets as of December 31, 2017 and 2018, 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 Rp3,039 billion and Rp(158) billion for the years ended December 31, 2017 and 2018, 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, 2018, Dapen's FSR is below 105%. Therefore, the Company will make contributions to the defined benefit pension plan in 2019.

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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The movement of the projected pension benefit obligations for the years ended December 31, 2017 and 2018 are as follow:

	<u>2017</u>	<u>2018</u>
Projected pension benefit obligations (prepaid pension benefit cost) at beginning of year	(197)	1,540
Net periodic pension benefit cost	583	548
Provision of additional pension benefit	—	205
Actuarial losses (gain) recognised in OCI	2,862	(2,691)
Return on plan assets (excluding amount included in net interest expense)	<u>(1,708)</u>	<u>1,455</u>
Projected pension benefit obligations at end of year	<u>1,540</u>	<u>1,057</u>

The components of net periodic pension benefit cost for the years ended December 31, 2016, 2017 and 2018 are as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Service costs	363	366	384
Past service cost - plan amendments	245	94	—
Plan administration cost	46	57	62
Net interest cost	(14)	66	102
Net periodic pension benefit cost	640	583	548
Amount charged to subsidiaries under contractual agreements	<u>(32)</u>	<u>(26)</u>	<u>(37)</u>
Net periodic pension benefit cost less cost charged to subsidiaries	<u>608</u>	<u>557</u>	<u>511</u>

Amounts recognised in OCI are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Actuarial losses (gain) recognised during the year due to:			
Experience adjustments	70	163	329
Changes in demographic assumptions	140	—	—
Changes in financial assumptions	1,470	2,699	(3,020)
Return on plan assets (excluding amount included in net interest expense)	<u>(1,188)</u>	<u>(1,708)</u>	<u>1,455</u>
Net	<u>492</u>	<u>1,154</u>	<u>(1,236)</u>

The actuarial valuation for the defined benefit pension plan was performed based on the measurement date as of December 31, 2016, 2017 and 2018, with reports dated February 22, 2017, February 27, 2018, and April 1, 2019, respectively, by PT Towers Watson Purbajaga (“TWP”), an independent actuary in association with Willis Towers Watson (“WTW”) (formerly Towers Watson). The principal actuarial assumptions used by the independent actuary as of December 31, 2016, 2017 and 2018 are as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Discount rate	8.00 %	6.75 %	8.25 %
Rate of compensation increases	8.00 %	8.00 %	8.00 %
Indonesian mortality table	2011	2011	2011

- ii. Additional pension benefit obligation

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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, 2018 is as follows:

	<u>2017</u>	<u>2018</u>
Changes in projected pension benefit obligations		
Projected pension benefit obligations at beginning of year	—	1,076
Charged to profit or loss:		
Past service costs	657	—
Interest costs	—	69
Actuarial losses (gain) recognised in OCI	419	(948)
Pension benefits paid	—	(93)
Projected pension benefit obligations at end of year	<u>1,076</u>	<u>104</u>
Changes in pension benefit plan assets		
Fair value of pension plan assets at beginning of year	—	—
Provision of additional benefit	—	205
Return of benefit plan assets	—	(14)
Pension benefits paid	—	(93)
Fair value of pension plan assets at end of year	—	98
Projected pension benefit obligations at end of year	<u>(1,076)</u>	<u>(6)</u>

As of December 31, 2018, there is no plan asset on additional pension benefits funds determined by management of Dapen with the approval of the Oversight Board.

Changes in additional pension benefit obligation for the years ended December 31, 2017 and 2018 are as follow:

	<u>2017</u>	<u>2018</u>
Additional pension benefit obligation at beginning of year	—	1,076
Past service cost	657	—
Interest costs	—	69
Provision of additional benefit	—	(205)
Actuarial loss (gain) recognised in OCI	419	(948)
Return on plan asset	—	14
Projected additional pension benefit obligation at end of year	<u>1,076</u>	<u>6</u>

The components of additional pension benefit cost for the years ended December 31, 2017 and 2018 are as follows:

	<u>2017</u>	<u>2018</u>
Past service costs	657	—
Net interest costs	—	69
Pension benefit costs	<u>657</u>	<u>69</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Amounts recognised in OCI for the years ended December 31, 2017 and 2018 are as follow:

	2017	2018
Actuarial (gain) losses recognised during the year due to:		
Experience adjustment	—	(773)
Changes in financial assumption	419	(175)
Return on plan assets (excluding amount included in net interest expense)	—	14
Total	419	(934)

The actuarial valuation for the additional pension benefit plan was performed based on the measurement date as of December 31, 2017 and 2018, with report dated February 27, 2018 and April 1, 2019, by TWP, an independent actuary in association with WTW. The principal actuarial assumptions used by the independent actuary for the year ended December 31, 2017 and 2018 is as follows:

	2017	2018
Rate of return on investment	9.50%-10.25 %	9.30%-10.00 %
Discount rate	6.75 %	8.25 %
Actuarial discount rate of pension fund	9.25-9.50 %	9.25-9.50 %
Rate of compensation increases	8.00 %	8.00 %
Indonesian mortality table	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 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 Rp10 billion and Rp13 billion for the years ended December 31, 2017 and 2018, 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The following table presents the changes in the unfunded projected pension benefit obligations for MPS and MPP for the years ended December 31, 2017 and 2018:

	<u>2017</u>	<u>2018</u>
Unfunded projected pension benefit obligations at beginning of year	2,507	2,384
Charged to profit or loss:		
Service costs	51	54
Net interest costs	188	144
Actuarial losses (gain) recognised in OCI	100	(137)
Benefits paid by employer	(462)	(615)
Unfunded projected pension benefit obligations at end of year	<u>2,384</u>	<u>1,830</u>

The components of total periodic pension benefit cost for the years ended December 31, 2016, 2017 and 2018 are as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Service costs	64	51	54
Net interest costs	215	188	144
Total periodic pension benefit cost	<u>279</u>	<u>239</u>	<u>198</u>

Amounts recognised in OCI are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Actuarial losses (gain) recognised during the year due to:			
Experience adjustments	(9)	19	27
Changes in demographic assumptions	30	—	(21)
Changes in financial assumptions	98	81	(143)
Net	<u>119</u>	<u>100</u>	<u>(137)</u>

The actuarial valuation for the defined benefit pension plan was performed, based on the measurement date as of December 31, 2016, 2017 and 2018, with reports dated February 22, 2017, February 27, 2018 and April 1, 2019, 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, 2016, 2017 and 2018 are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Discount rate	7.75%-8.00 %	6.00%-6.75 %	8.00%-8.25%
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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 Rp131 billion and Rp125 billion for the years ended December 31, 2017 and 2018, 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 recognised in the consolidated statement of financial position for the years ended December 31, 2017 and 2018, under Telkomsel's defined benefit pension plan:

	<u>2017</u>	<u>2018</u>
Changes in projected pension benefit obligation		
Projected pension benefit obligation at beginning of year	2,034	2,928
Charged to profit or loss:		
Service costs	149	213
Net Interest costs	167	203
Actuarial losses (gain) recognised in OCI	584	(583)
Benefit paid	(6)	(27)
Projected pension benefit obligation at end of year	<u>2,928</u>	<u>2,734</u>
Changes in pension benefit plan assets		
Fair value of plan assets at beginning of year	841	1,089
Interest income	69	74
Return on plan assets (excluding amount included in net interest expense)	54	(68)
Employer's contributions	131	125
Benefit paid	(6)	(27)
Fair value of pension plan assets at end of year	<u>1,089</u>	<u>1,193</u>
Pension benefit obligation at end of year	<u>1,839</u>	<u>1,541</u>

Movements of the Pension benefit obligation during the years ended December 31, 2017 and 2018:

	<u>2017</u>	<u>2018</u>
Pension benefit obligation at beginning of year	1,193	1,839
Periodic pension benefit cost	247	342
Actuarial losses (gain) recognised in OCI	584	(583)
Return on plan assets (excluding amount included in net interest expense)	(54)	68
Employer's contributions	(131)	(125)
Pension benefit obligation at end of year	<u>1,839</u>	<u>1,541</u>

The components of the periodic pension benefit cost for the years ended December 31, 2016, 2017 and 2018 are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Service costs	107	149	213
Net interest costs	74	98	129
Total	<u>181</u>	<u>247</u>	<u>342</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Amounts recognised in OCI are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Actuarial (gain) losses recognised during the year due to:			
Experience adjustments	32	(77)	192
Changes in financial assumptions	360	661	(774)
Return on plan assets (excluding amount included in net interest expense)	(100)	(54)	68
Net	<u>292</u>	<u>530</u>	<u>(514)</u>

The actuarial valuation for the defined benefit pension plan was performed based on the measurement date as of December 31, 2016, 2017 and 2018, with reports dated February 7, 2017, February 8, 2018 and February 14, 2019 respectively, by TWP, an independent actuary in association with WTW. The principal actuarial assumptions used by the independent actuary as of December 31, 2016, 2017 and 2018, are as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Discount rate	8.25 %	7.00 %	8.25 %
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").

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 for the years ended December 31, 2017 and 2018.

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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

health care benefit plan and net amount recognised in the Company's consolidated statement of financial position as of December 31, 2017 and 2018:

	2017	2018
Changes in projected post-employment health care benefit obligation		
Projected post-employment health care benefit obligation at beginning of year	13,357	15,448
Charged to profit or loss:		
Interest costs	1,115	1,102
Actuarial losses (gain) recognised in OCI	1,460	(3,641)
Post-employment health care benefits paid	(484)	(486)
Projected post-employment health care benefit obligation at end of year	15,448	12,423
Changes in post-employment health care benefit plan assets		
Fair value of plan assets at beginning of year	11,765	13,029
Interest income	979	927
Return on plan assets (excluding amount included in net interest expense)	909	(1,082)
Post-employment health care benefits paid	(484)	(486)
Plan administration costs	(140)	(160)
Fair value of pension plan assets at end of year	13,029	12,228
Projected for post-employment health care benefit obligation - net	2,419	195

As of December 31, 2017 and 2018, plan assets consist of:

	2017		2018	
	Quoted in active market	Unquoted	Quoted in active market	Unquoted
Cash and cash equivalents	1,354	—	1,115	—
Equity instruments:				
Manufacturing and consumer	835	—	799	—
Finance industries	840	—	799	—
Construction	254	—	190	—
Infrastructure and telecommunication	350	—	332	—
Wholesale	137	—	177	—
Mining	65	—	77	—
Other Industries:				
Services	38	—	60	—
Agriculture	35	—	32	—
Biotechnology and pharma industry	68	—	85	—
Others	1	—	3	—
Equity-based mutual funds	1,113	—	1,204	—
Fixed income instruments:				
Fixed income mutual funds	7,642	—	7,020	—
Unlisted shares:				
Private placement	—	297	—	335
Total	12,732	297	11,893	335

Yakes plan assets also include Series B shares issued by the Company with fair value totalling Rp265 billion and Rp249 billion, representing 2.04% and 2.03% of total plan assets as of December 31, 2017 and 2018, respectively.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 Rp1,748 billion and Rp(315) billion for the years ended December 31, 2017 and 2018, respectively.

The movements of the projected post-employment health care benefit obligation for the years ended December 31, 2017 and 2018 are as follow:

	<u>2017</u>	<u>2018</u>
Projected post-employment health care benefit obligation at beginning of year	1,592	2,419
Net periodic post-employment health care benefit costs	276	335
Actuarial losses (gain) recognised in OCI	1,460	(3,641)
Return on plan assets (excluding amount included in net interest expense)	(909)	1,082
Projected post-employment health care benefit obligation at end of year	<u>2,419</u>	<u>195</u>

The components of net periodic post-employment health care benefit cost for the years ended December 31, 2016, 2017, and 2018 are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Service costs	9	—	—
Plan administration costs	144	140	160
Net interest costs	12	136	175
Periodic post-employment health care benefit cost	<u>165</u>	<u>276</u>	<u>335</u>
Amounts charged to subsidiaries under contractual agreements	(2)	—	—
Net periodic post-employment health care benefit cost less cost charged to subsidiaries	<u>163</u>	<u>276</u>	<u>335</u>

Amounts recognised in OCI are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Actuarial losses (gain) recognised during the year due to:			
Experience adjustments	26	(1,198)	(1,100)
Changes in demographic assumptions	66	—	—
Changes in financial assumptions	1,736	2,658	(2,541)
Return on plan assets (excluding amount included in net interest expense)	(519)	(909)	1,082
Net	<u>1,309</u>	<u>551</u>	<u>(2,559)</u>

The actuarial valuation for the post-employment health care benefits plan was performed based on the measurement date as of December 31, 2016, 2017 and 2018, with reports dated February 22, 2017, February 27, 2018, and April 1, 2019, respectively, by TWP, an independent actuary in association

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

with WTW. The principal actuarial assumptions used by the independent actuary as of December 31, 2016, 2017 and 2018 are as follow:

	2016	2017	2018
Discount rate	8.50 %	7.25 %	8.75 %
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	2017	2018	2018
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”).

The movements of the unfunded projected other post-employment benefit obligations for the years ended December 31, 2017 and 2018 are as follow:

	2017	2018
Projected other post-employment benefit obligations at beginning of year	502	510
Charged to profit or loss:		
Service costs	6	6
Net interest costs	36	26
Actuarial losses (gain) recognised in OCI	40	(24)
Benefits paid by employer	(74)	(99)
Projected other post-employment benefits obligations at the end of year	510	419

The components of the projected other post-employment benefit cost for the years ended December 31, 2016, 2017 and 2018 are as follow:

	2016	2017	2018
Service costs	7	6	6
Net interest costs	41	36	26
Total	48	42	32

Amounts recognised in OCI are as follow:

	2016	2017	2018
Actuarial losses (gain) recognised during the year due to:			
Experience adjustments	2	10	40
Changes in demographic assumptions	0	—	(34)
Changes in financial assumptions	18	30	(30)
Total	20	40	(24)

The actuarial valuation for the other post-employment benefits plan was performed based on measurement date as of December 31, 2016, 2017 and 2018, with reports dated February 22, 2017, February 27, 2018 and April 1, 2019, respectively, by TWP, an independent actuary in association with

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

WTW. The principal actuarial assumptions used by the independent actuary as of December 31, 2016, 2017 and 2018, are as follow:

	<u>2016</u>	<u>2017</u>	<u>2018</u>
Discount rate	7.75 %	5.75 %	8.00 %
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 recognised as of December 31, 2017 and 2018 amounted to Rp427 billion and Rp507 billion, respectively. The related employee benefits cost charged to expense amounted to Rp82 billion, Rp62 billion and Rp113 billion for the years ended December 31, 2016, 2017 and 2018, respectively (Note 27). The actuarial losses recognised in OCI amounted to Rp33 billion, Rp72 billion and Rp(14) billion for the years ended December 31, 2016, 2017 and 2018, respectively.

e. Maturity Profile of Defined Benefit Obligation (“DBO”)

The timing of benefits payments and weighted average duration of DBO for 2018 are as follow:

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					
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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

f. Sensitivity Analysis

1% change in discount rate and rate of compensation would have effect on DBO, as follows:

Sensitivity	Discount Rate		Rate of Compensation	
	1% Increase	1% Decrease	1% Increase	1% Decrease
	Increase (decrease) in amounts		Increase (decrease) in amounts	
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	—	—

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.

32. 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 Rp758 billion and Rp852 billion as of December 31, 2017 and 2018, respectively. The related benefit costs charged to expense amounted to Rp237 billion, Rp255 billion and Rp161 billion for the years ended December 31, 2016, 2017 and 2018, respectively (Note 27).

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

33. 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 with related 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, network service revenues, interconnection expenses, leased line expenses, operation and maintenance expenses
PT Perusahaan Listrik Negara (Persero) (“PLN”)	Entity under common control	Electricity expenses, finance income, finance costs and investment in financial instrument
PT Pertamina (Persero) (“Pertamina”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
PT Pegadaian (Persero) (“Pegadaian”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
PT Garuda Indonesia (Persero) Tbk (“Garuda”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
PT Asuransi Jasa Indonesia (Persero) (“Jasindo”)	Entity under common control	Satellite insurance expenses and vehicle insurance expenses
Perum Peruri (“Peruri”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
PT Angkasa Pura (“Angkasa Pura”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
PT Balai Pustaka (“Balai Pustaka”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
PT Kereta Api Indonesia (“KAI”)	Entity under common control	Internet and data service revenues, other telecommunication service revenues
INTI	Entity under common control	Purchase of property and equipment and construction service
State-owned banks	Entities under common control	Finance income and finance costs
BNI	Entity under common control	Internet and data service revenues, other telecommunication service revenues, 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

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Details of the nature of relationships and accounts/transactions with significant related parties are as follows:

Related parties	Nature of relationships with related parties	Nature of accounts/transactions
BRI	Entity under common control	Internet and data service revenues, other telecommunication service revenues, finance income and finance costs
BJB	Entity under common control	Internet and data service revenues, other telecommunication service revenues, finance income and finance costs
PT Mandiri Manajemen Investasi	Entity under common control	Available-for-sale financial assets
BTN	Entity under common control	Internet and data service revenues, other telecommunication service revenues, finance income and finance costs
Bahana TCW	Entity under common control	Available-for-sale financial assets, bonds and notes
PT Sarana Multi Infrastruktur ("SMI")	Entity under common control	Finance costs
Indonusa	Associated company	Network service revenues and data communication expenses
Teltranet	Associated company	Network service revenue, leased line and CPE expenses and operation and maintenance expenses
Tiphone	Associated company	Distribution of SIM cards and pulse reload voucher
Koperasi Pegawai Telkom ("Kopeptel")	Other related entity	Installation services, leases of buildings expenses, lease of vehicles expenses, purchases of vehicles, and purchases of property and equipment and construction service, maintenance and cleaning service expenses, and Revenue Sharing Agreement ("RSA") revenues
Yakes	Other related entity	Medical expenses, internet and data service revenues and e-health revenues
PT Poin Multi Media Nusantara ("POIN")	Other related entity	Cost of sales of handset
PT Perdana Mulia Makmur ("PMM")	Other related entity	Cost of sales of handset
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
PT Pembangunan Telekomunikasi Indonesia ("Bangtelindo")	Other related entity	Purchase of property and equipment and construction services
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. In 2018, the Group recorded allowance for credit loss of receivables from related parties of Rp486 billion. Impairment assessment is undertaken each financial year through examining the current status of existing receivables and historical collection experience.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

b. Transactions with related parties

The following are significant transactions with related parties:

	2016		2017		2018	
	Amount	% of total revenues	Amount	% of total revenues	Amount	% of total revenues
REVENUES						
Majority stockholder						
Ministry of Finance	207	0.18	280	0.22	258	0.20
Entities under common control						
Government agencies	2,279	1.96	2,568	2.00	3,720	2.84
Indosat	2,167	1.86	1,789	1.39	1,002	0.77
BRI	181	0.16	237	0.18	397	0.30
Pegadaian	93	0.08	115	0.09	228	0.17
BNI	136	0.12	105	0.08	188	0.14
Pertamina	64	0.06	94	0.07	183	0.14
BTN	107	0.09	129	0.10	179	0.14
Bank Mandiri	161	0.14	157	0.12	173	0.13
Peruri	—	—	—	—	120	0.09
Angkasa Pura	—	—	—	—	114	0.09
Garuda	75	0.06	55	0.04	105	0.08
KAI	68	0.06	18	0.01	83	0.06
Balai Pustaka	—	—	—	—	81	0.06
Others	893	0.78	720	0.57	696	0.53
Sub-total	<u>6,224</u>	<u>5.37</u>	<u>5,987</u>	<u>4.65</u>	<u>7,269</u>	<u>5.54</u>
Associated companies	198	0.17	178	0.15	55	0.04
Other related entities	253	0.22	315	0.25	73	0.06
Total	<u>6,882</u>	<u>5.94</u>	<u>6,760</u>	<u>5.27</u>	<u>7,655</u>	<u>5.84</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	2016		2017		2018	
	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	5,911	7.84	6,533	7.77	8,109	8.68
PLN	1,037	1.38	2,269	2.70	2,596	2.78
Indosat	939	1.25	890	1.06	933	1.00
Jasindo	267	0.35	168	0.20	349	0.37
Others	128	0.16	114	0.14	511	0.55
Sub-total	8,282	10.98	9,974	11.87	12,498	13.38
Associated companies						
Indonusa	145	0.19	264	0.31	306	0.33
Teltranet	49	0.06	123	0.15	181	0.19
Others	38	0.05	34	0.04	11	0.01
Sub-total	232	0.30	421	0.50	498	0.53
Other related entities						
Kisel	771	1.02	813	0.97	916	0.98
POIN	1,459	1.94	405	0.48	850	0.91
PMM	—	—	404	0.48	850	0.91
Kopegstel	533	0.71	713	0.85	836	0.90
Yakes	192	0.25	139	0.17	128	0.14
Others	188	0.25	83	0.10	190	0.20
Sub-total	3,143	4.17	2,557	3.05	3,770	4.04
Total	11,657	15.45	12,964	15.43	16,766	17.95

	2016		2017		2018	
	Amount	% of total finance income	Amount	% of total finance income	Amount	% of total finance income
FINANCE INCOME						
Majority stockholder						
Ministry of Finance	2	0.12	0	0.00	—	—
Entities under common control						
State-owned banks	895	52.16	863	60.18	596	58.78
Government agencies	34	1.98	34	2.37	12	1.18
Others	5	0.29	35	2.44	6	0.59
Total	936	54.55	932	64.99	614	60.55

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	2016		2017		2018	
	Amount	% of total finance cost	Amount	% of total finance cost	Amount	% of total finance cost
FINANCE COSTS						
Majority stockholder						
Ministry of Finance	64	2.28	54	1.95	41	1.16
Entities under common control						
State-owned banks	1,228	43.70	820	29.61	1,140	32.36
SMI	—	—	94	3.39	110	3.12
Total	1,292	45.98	968	34.95	1,291	36.64

	2016		2017		2018	
	Amount	% of total revenues	Amount	% of total revenue	Amount	% of total revenues
DISTRIBUTION OF SIM CARD AND PULSE RELOAD VOUCHER						
Other related entities						
Tiphone	3,441	2.96	3,888	3.03	4,390	3.36
Kisel	4,600	3.95	4,181	3.26	4,221	3.23
Gratika	408	0.35	408	0.32	474	0.36
Total	8,449	7.26	8,477	6.61	9,085	6.95

	2017		2018	
	Amount	% of total property and equipment purchased	Amount	% of total property and equipment purchased
PURCHASE OF PROPERTY AND EQUIPMENTS				
Entities under common control				
INTI	203	0.61	137	0.41
Others	98	0.29	70	0.21
Sub-total	301	0.90	207	0.62
Other related entities				
Kopegtel	130	0.39	144	0.43
Bangtelindo	64	0.19	135	0.40
Others	188	0.57	193	0.57
Sub-total	382	1.15	472	1.40
Total	683	2.05	679	2.02

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	2017		2018	
	Amount	% of total liabilities	Amount	% of total liabilities
g. Accrued expenses				
Majority stockholder				
Ministry of Finance	9	0.01	7	0.01
Entities under common control				
State-owned banks	22	0.03	61	0.07
Others	129	0.15	86	0.10
Sub-total	<u>151</u>	<u>0.18</u>	<u>147</u>	<u>0.17</u>
Other related entities				
Kisel	235	0.27	183	0.21
Others	—	—	13	0.01
Sub-total	<u>235</u>	<u>0.27</u>	<u>196</u>	<u>0.22</u>
Total	<u>395</u>	<u>0.46</u>	<u>350</u>	<u>0.40</u>
h. Advances from customers				
Majority stockholder				
Ministry of Finance	19	0.02	19	0.02
Entity under common control				
PLN	11	0.01	12	0.01
Total	<u>30</u>	<u>0.03</u>	<u>31</u>	<u>0.03</u>
i. Short-term bank loans (Note 18)	<u>1,297</u>	<u>1.50</u>	<u>956</u>	<u>1.08</u>
j. Two-step loans (Note 19a)	<u>1,098</u>	<u>1.27</u>	<u>949</u>	<u>1.07</u>
k. Long-term bank loans (Note 19c)	<u>7,895</u>	<u>9.14</u>	<u>12,620</u>	<u>14.20</u>
l. Other borrowings (Note 19d)	<u>1,295</u>	<u>1.50</u>	<u>2,244</u>	<u>2.52</u>

c. Significant agreements with related parties

i. The Government

The Company obtained two-step loans from the Government (Note 19a).

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 fixed line network, as well as allowing Indosat's mobile customers to access the Company's IDD service by dialing "007".

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 Lintasarta. The leased lines can be used by these companies for telephone, telegraph, data, telex, facsimile or other telecommunication services.

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.

d. 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:

	2016		2017		2018	
	Amount	% of total expenses	Amount	% of total expenses	Amount	% of total expenses
Directors	427	0.57 %	175	0.21 %	360	0.39 %
Board of Commissioners	121	0.16 %	65	0.08 %	166	0.18 %

The amounts disclosed in the table are the amounts recognised as an expense during the reporting periods.

34. OPERATING SEGMENT

In 2017, management rearranged the Group's business portfolios from a customer-centric approach to a Customer Facing Unit ("CFU") approach that allow the Group to focus on more specific customer markets. This was followed by a change in the Group's organizational structure to accommodate decision making

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2017 and 2018 and

For Each of The Three Years In the Period Ended December 31, 2018

(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

and assessing performance based on the CFU approach. The change in the way of managing the Company's business portfolios and the change in the Company's organizational structure led the Board of Directors, as the Company's CODM, to change the presentation of the Group's segment information previously presented in the consolidated financial statements for the years ended December 31, 2016. Accordingly, the segment financial information in the consolidated financial statements for the years ended December 31, 2016 were restated to conform with the presentation of segment information in the consolidated financial statements for the years ended December 31, 2017.

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 fixed wireline telecommunications services, pay TV, data, 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. 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 IFAS which differ from IFRS primarily in the accounting for land rights, revenues and expenses recognition, and financial instruments. 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.

	2016					Total Segment	Adjustments & eliminations	Total consolidated
	Mobile	Consumer	Enterprise	WIB	Others			
Segment results								
Revenues								
External revenues	83,998	10,410	15,816	5,866	19	116,109	224	116,333
Inter-segment revenues	2,724	1,877	12,877	14,451	209	32,138	(32,138)	—
Total segment revenues	86,722	12,287	28,693	20,317	228	148,247	(31,914)	116,333
Expenses								
External expenses	(37,814)	(11,024)	(17,813)	(10,451)	(417)	(77,519)	358	(77,161)
Inter-segment expenses	(12,547)	(2,793)	(9,647)	(4,805)	(12)	(29,804)	29,804	—
Total segment expenses	(50,361)	(13,817)	(27,460)	(15,256)	(429)	(107,323)	30,162	(77,161)
Segment results	36,361	(1,530)	1,233	5,061	(201)	40,924	(1,752)	39,172
Other information								
Capital expenditures	(12,568)	(7,085)	(3,036)	(5,729)	(1)	(28,419)	(780)	(29,199)
Depreciation and amortization	(12,808)	(2,881)	(1,386)	(1,715)	(19)	(18,809)	253	(18,556)
Provision recognised in current period	(221)	(392)	119	(238)	(1)	(733)	(10)	(743)

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

	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	93,159	11,392	35,931	22,744	728	163,954	(35,698)	128,256
Expenses								
External expenses	(39,452)	(10,360)	(20,627)	(12,333)	(979)	(83,751)	(603)	(84,354)
Inter-segment expenses	(14,382)	(1,563)	(15,053)	(5,611)	(70)	(36,679)	36,679	—
Total segment expenses	(53,834)	(11,923)	(35,680)	(17,944)	(1,049)	(120,430)	36,076	(84,354)
Segment results	39,325	(531)	251	4,800	(321)	43,524	378	43,902
Other information								
Capital expenditures	(15,134)	(6,544)	(3,637)	(7,120)	(11)	(32,446)	(708)	(33,154)
Depreciation and amortization	(13,560)	(2,839)	(2,136)	(2,382)	(22)	(20,939)	462	(20,477)
Provision recognised in current period	(291)	(385)	(668)	(127)	(2)	(1,473)	(21)	(1,494)
2018								
	Mobile	Consumer	Enterprise	WIB	Others	Total Segment	Adjustments & eliminations	Total consolidated
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
Expenses								
External expenses	(40,041)	(11,739)	(21,717)	(14,624)	(1,042)	(89,163)	(3,092)	(92,255)
Inter-segment expenses	(15,408)	(3,792)	(16,116)	(6,010)	(31)	(41,357)	41,357	—
Total 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 recognised in current period	(438)	(438)	(764)	(71)	(5)	(1,716)	(363)	(2,079)

Adjustments and eliminations:

	2016	2017	2018
Segment results	40,924	43,524	41,706
Operating loss of operating business	(339)	(786)	(798)
Other eliminations and adjustments	(1,390)	1,195	(2,063)
IFRS reconciliation	(23)	(31)	(312)
Consolidated operating income	39,172	43,902	38,533

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Revenues information based on the location of the customers:

	2016	2017	2018
Indonesia	114,086	125,970	127,442
Foreign countries	2,247	2,286	3,346
Total	116,333	128,256	130,788

	2016	2017	2018
Non-current operating assets			
Indonesia	114,948	130,169	144,296
Foreign countries	2,371	3,233	3,648
Total	117,319	133,402	147,944

Non-current operating assets for this purpose consist of property and equipment and intangible assets.

35. SIGNIFICANT COMMITMENTS AND AGREEMENTS

a. Capital expenditures

As of December 31, 2018, 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	—	7,988
U.S. dollar	94	1,349
Euro	1.23	20
HKD	0.79	1
Total		9,358

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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 of <i>Sistem Komunikasi Kabel Laut</i> ("SKKL") Indonesia Global Gateway
The Company and Consortium Bisnis Submarine Cable	November 10, 2017	Procurement and installation agreement of SKKL Sabang-Lhoksemawe-Medan
The Company and PT Sisindokom Lintas Buana	November 15, 2017	Procurement and installation for Provider Edge Virtual Private Network ("PE-VPN") CISCO expansion
The Company and PT Sisindokom Lintas Buana	April 26, 2018	Procurement and installation for PE-VPN CISCO expansion
The Company and PT ZTE Indonesia	May 31, 2018	Procurement and installation of Optical Line Terminal and Optical Network Terminal ("ONT") Platform ZTE
The Company and PT ZTE Indonesia	September 13, 2018	Procurement agreement for ONT Platform ZTE
The Company and PT ZTE Indonesia	October 30, 2018	Procurement agreement for Set Top Box Platform ZTE phase-2
The Company and PT Huawei Tech Investment	November 23, 2018	Procurement and installation for Dual Wavelength Division Multiplexing ("DWDM") Platform Huawei
The Company and PT Lintas Teknologi Indonesia	December 13, 2018	Procurement and installation for DWDM Platform Nokia NARU 2018
The Company and NEC Indonesia	December 13, 2018	Procurement and installation agreement of Inside Plant SKKL Platform NEC expansion and reengineering transport
The Company and PT Datacomm Diangraha	December 14, 2018	Procurement and installation for Metro Ethernet Platform Nokia-ALU expansion
The Company and PT Huawei Tech Investment	December 17, 2018	Procurement and installation agreement of Metro Ethernet, Broadband Remote Access Server, Policy and Charging Enforcement Function and Provider Edge Transit Platform Huawei
The Company and PT Master System Infotama	December 31, 2018	Procurement and installation for IP Backbone Platform CISCO expansion
The Company and PT Lanacs Arche Consumma	December 31, 2018	Procurement and installation for DWDM Platform Coriant NARU 2018

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

(ii) Telkomsel

<u>Contracting parties</u>	<u>Initial date of agreement</u>	<u>Significant provisions of the agreement</u>
Telkomsel, PT Nokia Siemens Network, Nokia Siemens Network Oy and Nokia Siemens Networks GmbH & Co.KG	April 17, 2008	The combined 2G and 3G CS Core Network Rollout Agreement ("ROA")
Telkomsel, PT Ericsson Indonesia and PT Ericsson AB	April 17, 2008	Technical Service Agreement ("TSA") for combined 2G and 3G CS Core Network
Telkomsel, PT Datacraft Indonesia, PT Dimension Data Indonesia and PT Huawei Tech Investment	February 3, 2010	Next Generation Convergence Core Transport Rollout and Technical Support agreement
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 Agreements
Telkomsel and PT Application Solutions	February 8, 2010	Technical Support agreement to provide technical support services for the OCS and SCP
Telkomsel, Amdocs Software Solutions Limited Liability Company and PT Application Solutions	July 5, 2011	Development and Rollout agreement for Customer Relationship Management and Contact Center Solutions
Telkomsel and PT Huawei Tech Investment	March 25, 2013	Technical Support agreement for the procurement of Gateway GPRS Support Node ("GGSN") Service Complex
Telkomsel, Wipro Limited, and PT WT Indonesia	April 23, 2013	Development and procurement of Operational and Strategic Decision Support System Solution Agreement
Telkomsel, PT Huawei Tech Investment and PT Ericsson Indonesia	October 22, 2013	Procurement of GGSN Service Complex TSA and ROA agreement
Telkomsel, PT Ericsson Indonesia, PT Nokia Solutions and Network Indonesia, Nokia Solutions and Network Oy, PT Huawei Tech Investment and PT ZTE Indonesia	February 1, 2018	Ultimate Radio Network Infrastructure ROA and TSA agreement

b. Borrowings and other credit facilities

- (i) As of December 31, 2018, 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:

<u>Lenders</u>	<u>Total facility</u>	<u>Maturity</u>	<u>Currency</u>	<u>Facility utilized</u>
BRI	500	March 14, 2020	Rp	280
BNI	850	March 31, 2019	Rp	261
Bank Mandiri	500	December 23, 2019	Rp	361
Total	1,850			902

- (ii) Telkomsel has US\$3 million bond, bank guarantee and standby letter of credit facility with SCB, Jakarta. The facilities will expire on July 31, 2019.

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, 2018, Telkomsel has issued a bank guarantee amounting to Rp499 billion as payment commitment guarantee for annual right of usage fee valid until March 31, 2019 and Rp20 billion as frequency performance bond valid until May 31, 2019 (Note 35c.i).

Telkomsel has a Rp150 billion bank guarantee facility with BCA. The facility will expire on April 15, 2019.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Telkomsel also has a Rp2,100 billion bank guarantee facility with BNI. The facility will expire on December 11, 2019. Telkomsel used this facility to replace the time deposits which were pledged as collateral for bank guarantees required for the USO program amounting to Rp52.2 billion (Note 35c.iii) and for surety bond of 2.3 GHz radio frequency amounting to Rp1,030 billion (Note 35c.i)

- (iii) TII has a US\$15 million equivalent to Rp202 billion bank guarantee from Bank Mandiri and has been renewed in accordance with the addendum V (five) on December 18, 2017 with a maximum credit limit of US\$10 million equivalent to Rp135 billion. The facility will expire on December 18, 2018. As of December 31, 2018, TII has not used the facility.
- (iv) As of December 31, 2018, Sigma has a Rp354 billion bank guarantee from BNI and HSBC. The used facility on December 31, 2018 amounting to Rp156 billion.

c. Others

(i) Radio Frequency Usage

Based on Decree No. 8 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 frequency usage fees for the 800 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.

With reference to Decision Letters No. 268/KEP/M.KOMINFO/9/2009, No. 191 Year 2013, No. 509 Year 2016 and No. 1896 year 2017 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 35b.ii).

(ii) Future minimum lease payments under operating lease

The Group entered into non-cancelable lease agreements with both third and related parties. The lease agreements cover leased lines, telecommunication equipment and land and building with terms ranging from 1 to 10 years and with expiry dates between 2019 and 2028. Periods may be extended based on the agreement by both parties. Minimum lease payments charged to profit or loss in 2018 amounted to Rp4,038 billion.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Future minimum lease payments/receivables under non-cancelable operating lease agreements as of December 31, 2018 are as follows :

	<u>Total</u>	<u>Less than 1 year</u>	<u>1-5 years</u>	<u>More than 5 years</u>
As lessee	23,832	6,271	13,030	4,531
As lessor	4,105	1,084	2,464	557

(iii) USO

The MoCI issued Regulation No. 17 year 2016 dated September 26, 2016 which replaced Regulation 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, Regulation No. 17 year 2016 was replaced by Regulation No. 19 year 2016 which was effective from November 8, 2016. The latest Regulation 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 Regulation No. 18/PER/M.KOMINFO/11/2010 dated 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 Konsorsium Telkomsel, 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 the payment from BPPPTI amounting to Rp83 billion (before tax).

As of December 31, 2017 and 2018, Telkomsel's net carrying amount of trade receivables for the USO programs which are measured at amortized cost using the effective interest method amounted to Rp115 billion.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

36. FINANCIAL RISK MANAGEMENT

1. Financial assets and financial liabilities

a. Classification

i. Financial assets

	<u>2017</u>	<u>2018</u>
Loans and receivables		
Cash and cash equivalents	25,145	—
Trade and other receivables, net	9,564	—
Other current financial assets	1,005	—
Other non-current assets	183	—
Available-for-sale financial assets		
Available-for-sale investments	1,541	—
Amortized cost		
Cash and cash equivalents, net	—	17,435
Trade and other receivables, net	—	9,928
Contract assets, net	—	1,560
Other current financial assets, net	—	844
Other non-current assets, net	—	443
FVTPL		
Subsidiaries' investments	—	709
Mutual funds	—	470
Convertible bonds	—	213
Total financial assets	<u>37,438</u>	<u>31,602</u>

ii. Financial liabilities

	<u>2017</u>	<u>2018</u>
Financial liabilities measured at amortized cost		
Trade and other payables	15,791	15,214
Accrued expenses	12,630	12,769
Interest-bearing loans and other borrowings		
Short-term bank loans	2,289	4,043
Two-step loans	1,098	949
Bonds and notes	8,982	10,481
Long-term bank loans	18,004	23,220
Obligations under finance leases	3,804	3,145
Other borrowings	1,295	2,244
Other liabilities	296	261
Total financial liabilities	<u>64,189</u>	<u>72,326</u>

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

b. Fair values

2017	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					
Available-for-sale investments	1,541	1,541	1,151	17	373
Financial liabilities for which fair values are disclosed					
Interest-bearing loans and other borrowings:					
Two-step loans	1,098	1,111	—	—	1,111
Bonds and notes	8,982	10,051	10,051	—	—
Long-term bank loans	18,004	18,126	—	—	18,126
Obligations under finance leases	3,804	3,804	—	—	3,804
Other borrowings	1,295	1,365	—	—	1,365
Other liabilities	296	296	—	—	296
Total	35,020	36,294	11,202	17	25,075

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
Subsidiaries' investments	709	709	—	—	709
Financial liabilities for which fair values are disclosed					
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	41,692	41,540	9,850	—	31,690

Gain on fair value recognised in consolidated statements of profit or loss for 2018 amounting to Rp52 billion. There is no movement between fair value hierarchy during 2018.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

c. 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 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:

- (i) FVTPL, 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 are determined using valuation technique. Corporate and government bonds are stated at fair value by reference to prices of similar securities at the reporting date;
- (ii) 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.

2. Financial risk management

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. 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.

a. 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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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:

	2017		2018	
	U.S. dollar (in millions)	Japanese yen (in millions)	U.S. dollar (in millions)	Japanese yen (in millions)
Financial assets	261	7	473	8
Financial liabilities	(304)	(5,413)	(391)	(4,656)
Net exposure	(43)	(5,406)	82	(4,648)

Sensitivity analysis

A strengthening of the U.S. dollar and Japanese yen, as indicated below, against the rupiah at December 31, 2018 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, 2018	
U.S. dollar (1% strengthening)	12
Japanese yen (5% strengthening)	(30)

A weakening of the U.S. dollar and Japanese yen against the rupiah at December 31, 2018 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.

b. 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 recognised in the consolidated statements of profit or loss and other comprehensive income.

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, 2018, 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.

c. 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 18 and 19). To measure market risk pertaining to fluctuations in interest rates, the Group primarily uses interest

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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>2017</u>	<u>2018</u>
Fixed rate borrowings	(14,281)	(21,260)
Variable rate borrowings	(21,191)	(22,822)

Sensitivity analysis for variable rate borrowings

As of December 31, 2018, a decrease (increase) by 25 basis points in interest rates of variable rate borrowings would have increased (decreased) equity and profit or loss by Rp57 billion, respectively. The analysis assumes that all other variables, in particular foreign currency rates, remain constant.

d. Credit risk

The following table presents the maximum exposure to credit risk of the Group's financial assets:

	<u>2017</u>	<u>2018</u>
Cash and cash equivalents	25,145	17,435
Trade and other receivables, net	9,564	9,928
Contract Asset	—	1,560
Other current financial assets	2,173	1,314
Other non-current assets	183	443
Total	<u>37,065</u>	<u>30,680</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. 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. 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 5.25% of trade receivables as of December 31, 2018.

Management is confident in its ability to continue to control and sustain minimal exposure to the customer credit risk given that the Group has recognised sufficient provision for impairment of receivables to cover incurred loss arising from uncollectible receivables based on existing historical data on credit losses.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

e. 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:

	Carrying amount	Contractual cash flows	2018	2019	2020	2021	2022 and thereafter
2017							
Trade and other payables	15,791	(15,791)	(15,791)	—	—	—	—
Accrued expenses	12,630	(12,630)	(12,630)	—	—	—	—
Interest bearing loans and other borrowings:							
Bank loans	20,293	(24,365)	(7,721)	(5,056)	(3,979)	(2,641)	(4,968)
Bonds and notes	8,982	(18,278)	(929)	(929)	(2,873)	(726)	(12,821)
Obligations under finance leases	3,804	(4,685)	(1,083)	(969)	(866)	(778)	(989)
Other borrowings	1,295	(1,759)	(220)	(303)	(285)	(266)	(685)
Two-step loans	1,098	(1,247)	(251)	(223)	(215)	(190)	(368)
Other liabilities	296	(355)	(17)	(34)	(34)	(135)	(135)
Total	64,189	(79,110)	(38,642)	(7,514)	(8,252)	(4,736)	(19,966)

	Carrying amount	Contractual cash flows	2019	2020	2021	2022	2023 and thereafter
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	72,326	(88,459)	(41,783)	(14,384)	(6,777)	(7,405)	(18,110)

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 interest rates effective as of reporting dates.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The changes in liabilities arising from financing activities is as follows:

	December 31, 2017	Net cash flows	Non-cash changes				December 31, 2018
			Acquisition	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

37. CAPITAL MANAGEMENT

The capital structure of the Group is as follows:

	2017		2018	
	Amount	Portion	Amount	Portion
Short-term debts	2,289	1.79 %	4,043	2.83 %
Long-term debts	33,183	25.94 %	40,039	28.04 %
Total debts	35,472	27.73 %	44,082	30.87 %
Equity attributable to owners of the parent company	92,467	72.27 %	98,739	69.13 %
Total	127,939	100.00 %	142,821	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.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The Group's debt-to-equity ratio as of December 31, 2017 and 2018 is as follows:

	2017	2018
Total interest-bearing debts	35,472	44,082
Less: cash and cash equivalents	(25,145)	(17,435)
Net debts	10,327	26,647
Total equity attributable to owners of the parent company	92,467	98,739
Net debt-to-equity ratio	11.17 %	26.99 %

As stated in Note 19, 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, 2017 and 2018, the Group has complied with the externally imposed capital requirements.

38. SUPPLEMENTAL CASH FLOW INFORMATION

The non-cash investing activities for the years ended December 31, 2016, 2017 and 2018 are as follows:

	2016	2017	2018
Acquisitions of property and equipment:			
Credited to trade payables	6,199	5,525	4,275
Advance paid	—	—	2,837
Non-monetary exchange	636	816	—
Interest capitalization	188	328	270
Credited to obligations under finance leases	368	518	201
Acquisitions of intangible assets: Credited to trade payables	41	846	235

39. SUBSEQUENT EVENTS

1. Based on notarial deed of Bonardo Nasution, S. H. No. 12 dated January 12, 2019 and No. 13 dated January 21, 2019, Telkomsel established a subsidiaries, PT Telkomsel Mitra Inovasi ("PT TMI") and PT Fintek Karya Nusantara ("PT Finarya") with full ownership by Telkomsel.
2. On January 25, 2019, and on January 14, 2019, Telkomsel fully paid the loan with MUFG and BNI amounting to Rp750 billion and Rp1,000 billion, respectively.
3. Based on notarial deed of Jimmy Tanal, S. H., M. Kn., No. 22 dated March 6, 2019 regarding Shareholder's Resolution of PT Persada Sokka Tama ("PST"), approving transfers of right over shares of PST to Dayamitra from Mrs. Rahina Dewayani and Mrs. Rahayu amounting to 2,559,000 and 6,000 shares, respectively, therefore Dayamitra has 2,565,000 shares or 95% ownership of PST.

PST is a company engaged in managing tower rental. This new investment is expected to strengthen the Company's business portfolio.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

The fair values of the identifiable assets and liabilities acquired at acquisition date were:

	<u>Total</u>
Assets	
Cash and cash equivalents	5
Trade receivables	121
Property and equipment (Note 9)	1,107
Other assets	113
Liabilities	
Current liabilities	(129)
Non-current liabilities	(378)
Other liabilities	(104)
Fair value of identifiable net assets acquired	735
Fair value of non-controlling interest	(37)
Provisional goodwill	415
Fair value consideration transferred	1,113

As of the date of approval and authorization for the issuance of these consolidated financial statement, purchase price allocation calculation is still in process.

4. In January, February and March 2019, the Company received the SC's verdicts as the result of the tax audit for tax period January to April and September 2007. Based on the verdict, SC rejected the Tax Authorities's judicial review and strengthen the Tax Court's verdict.

On March 11, 2019, Tax Authorities issued Decision Letter on Company's objection, wherein the Tax Authorities has granted all the Company's objection and addition the overpayment amount for the tax period January to April 2016.

5. On February 18, 2019, Telkomsel received SP2PK from the Tax Authorities regarding the 2010 fiscal year VAT amounting to Rp290.6 billion. On March 25, 2019, the Company received SP2PK payment from the Tax Authorities regarding the 2010 fiscal year VAT amounting to Rp290.6 billion.

40. NEW ACCOUNTING STANDARDS AND INTERPRETATIONS NOT YET ADOPTED

Effective for annual periods beginning on or after January 1, 2019

- IFRS 16, Leases

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.

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.

The Group elected to apply the standard by using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognised as an adjustment to the opening balance of retained earnings at January 1, 2019, with no restatement of comparative information.

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

Under IAS 17 Lease, Lessees recognised a periodic lease expense over the lease term for operating leases, while adoption of IFRS 16 resulted in the Group's future minimum lease payments under non-cancellable operating leases to be recognised as lease liabilities with corresponding Right-of-Use ("RoU") assets. The amounts are adjusted for the effects of discounting and the practical expedients available and selected by the Group.

The Group elected the package of practical expedients permitted under the transition guidance within IFRS 16, which among other things, allows the Group to carryforward the historical lease assessments which permits the Group not to reassess the Group prior conclusions about lease identification, lease classification and initial direct costs.

The Group as Lessee

IFRS 16 establishes a single recognition model for all leases with terms longer than 12 months to record RoU assets and corresponding lease liabilities on the consolidated statement of financial position. Besides the carrying forward of the historical lease classification, the Group elected the package of practical expedients permitted under the transition guidance within IFRS 16 which allow the Group to apply single discount rate to a leases portfolio with reasonably similar characteristic such as similar assets in similar economic environment with the same end date. The Group also elected not to separate the lease components from non-lease components and included the initial direct costs in the measurement of the RoU assets, consequently the Group accounted for the whole contract as a lease. In addition, the election of the hindsight practical expedient will make the Group initial application of IFRS 16 to some extent more simple in determining the lease term, especially if the contract contains extension or termination options. Further, as permitted by the standard, the Group rely on the previous onerous lease provision as an alternative to perform an impairment review of each of its RoU assets on the transition date.

The Group also elected the practical expedient to recognise RoU assets or lease liabilities for leases which the lease term ends within 12 months after January 1, 2019. The Group will recognise those lease payments on a straight-line basis over the lease term in the consolidated statement of profit or loss and other comprehensive income.

The Group as Lessor

The accounting for lessors under IFRS 16 is similar with the previous lease accounting standard, IAS 17 Leases. It requires the lessors to classify the lease as either operating lease or finance lease. The leases will be classified as financing if it transfers substantially the risks and rewards incidental to ownership of the underlying asset, otherwise it will be classified as an operating lease.

The Group expect that the effect of the adoption will be material to the consolidated statement of financial position. The Group do not expect that the impact of the adoption will be material to the consolidated statement of profit of loss and other comprehensive income. The Group currently believe the most significant changes pertaining to the recognition of RoU assets and lease liabilities on the Group consolidated statement of financial position for operating assets such as transmission installation and equipment, land rights, buildings, data processing equipment and other assets as determined. The Group do not expect any significant changes in the Group leasing activities between now and the time of adoption.

The Group continue to finalize the assessment of all of the potential impacts that the adoption of IFRS 16 will have on the Group consolidated financial statements, including evaluation of the existing lease portfolios, review of contractual arrangements for lease contracts, embedded leases, and collation all

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

of the necessary information required to properly account for the leases under IFRS 16, and its disclosure. Additionally, the Group is continuing to identify necessary changes to the business process, system, and internal controls to prepare the adoption and meet the reporting standard. The aforementioned activities are monitored by a dedicated project team.

- **IFRIC 23, Uncertainty over Income Tax Treatments**

IFRIC 23 clarifies how to apply the recognition and measurement requirements in IAS 12 Income Taxes when there is uncertainty over income tax treatments. When there is uncertainty over income tax treatments, IFRIC 23 addresses:

- whether an entity considers uncertain tax treatments separately;
- the assumptions an entity makes about the examination of tax treatments by taxation authorities;
- how an entity determines taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates; and
- how an entity considers changes in facts and circumstances.

The Group is currently assessing on how the recognition and measurement of ongoing tax assessment would be affected by this IFRIC 23.

- **Amendments to IFRS 3, Business Combination and IFRS 11, Joint Arrangements, previously Held Interest in a Joint Operation**

IFRS 3 is amended to clarify that when an entity obtains control of a business that is a joint operation and had rights to the assets and obligations for the liabilities relating to that joint operation immediately before the acquisition date, the transaction is a business combination achieved in stages. The acquirer shall therefore apply the requirements for a business combination achieved in stages, including remeasuring its previously held interest in the assets and liabilities of the joint operation at fair value.

IFRS 11 is amended to clarify that a party that participates in, but does not have joint control of, a joint operation might obtain joint control of the joint operation in which the activity of the joint operation constitutes a business as defined in IFRS 3. In such cases, previously held interests in the joint operation are not remeasured.

These amendments are not expected to have an impact to the Group's consolidated statements of financial position or performance.

- **Amendments to IFRS 9, Prepayment Features with Negative Compensation**

IFRS 9 is amended to clarify that financial assets with prepayment features that may result in negative compensation qualify as contractual cash flows that are solely payments of principal and interest on the principal amount outstanding.

These amendments are not expected to have an impact to the Group's consolidated statements of financial position or performance since there is no financial assets with prepayment features as of December 31, 2018.

- **Amendments to IAS 12, Income Tax Consequences of Payments on Financial Instruments Classified as Equity**

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

IAS 12 is amended to clarify that an entity shall recognise the income tax consequences of dividends as defined in IFRS 9 when it recognises a liability to pay a dividend. An entity shall recognise the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognised those past transactions or events.

These amendments are not expected to have an impact to the Group's consolidated statements of financial position or performance.

- Amendments to IAS 23, Borrowing Costs Eligible for Capitalisation

IAS 23 is amended to clarify that when the entity calculates the borrowing costs eligible for capitalisation from general borrowings, the entity shall exclude from this calculation borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

These amendments are not expected to have an impact to the Group's consolidated statements of financial position or performance.

- Amendments to IAS 28, Long-term Interests in Associates and Joint Ventures

IAS 28 is amended to provide that the entity shall apply IFRS 9 to financial instruments in an associate or joint venture to which the equity method is not applied. These include long-term interests that, in substance, form part of the entity's net investment in an associate or joint venture.

These amendments are not expected to have an impact to the Group's consolidated statements of financial position or performance since there are no long-term interests in associates and joint ventures as of December 31, 2018.

- Amendment to IAS 19, Plan Amendment, Curtailment, or Settlement

The amendments address the accounting when a plan amendment, curtailment or settlement occurs during a reporting period. The amendments specify that when a plan amendment, curtailment or settlement occurs during the annual reporting period, an entity is required to:

- Determine current service cost for the remainder of the period after the plan amendment, curtailment or settlement, using the actuarial assumptions used to remeasure the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event
- Determine net interest for the remainder of the period after the plan amendment, curtailment or settlement using: the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event; and the discount rate used to remeasure that net defined benefit liability (asset).

The amendments also clarify that an entity first determines any past service cost, or a gain or loss on settlement, without considering the effect of the asset ceiling. This amount is recognised in profit or loss. An entity then determines the effect of the asset ceiling after the plan amendment, curtailment or settlement. Any change in that effect, excluding amounts included in the net interest, is recognised in other comprehensive income. These amendments will apply only to any future plan amendments, curtailments, or settlements of the Group.

Effective for annual periods beginning on or after January 1, 2020

- Amendment to IAS 1 and IAS 8, Definition of Material

PERUSAHAAN PERSEROAN (PERSERO)
PT TELEKOMUNIKASI INDONESIA Tbk. AND ITS SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
As of December 31, 2017 and 2018 and
For Each of The Three Years In the Period Ended December 31, 2018
(Amounts in the tables expressed in billions of Indonesian Rupiah, unless otherwise stated)

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; and
- 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, 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**

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 recognised 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 statements of financial position or performance.