

TELECOMMUNICATIONS IN VIETNAM

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GLOSSARY

ADSL	Asymmetric Digital Subscriber Line
ASN	Autonomous System Numbers
AVG	Audio Visual Global Joint Stock Company
BTA	Vietnam-US Bilateral Trade Agreement
CMC Telecoms	CMC Telecommunications Infrastructure JSC
Dong Duong	Indochina Telecommunications Joint Stock Company
ERC	Enterprise Registration Certificate
FPT Telecoms	FPT Telecoms Company
Government	Office of the Prime Minister
GTel	Global Telecommunications Corporation
HTC	Hanoi Telecoms Corporation
IAS	Internet Access Services
ICANN	Internet Corporation for Assigned Names and Numbers
IRC	Investment Registration Certificate
ISP	Internet service provider
IXP	Internet exchange service provider
LOT	Law on Telecommunications
MIC	Ministry of Information and Communications
MIT	Ministry of Industry and Trade
MobiFone	Vietnam Mobile Telecoms Services Company;
MPI	Ministry of Planning and Investment
Netnam	Netnam Corporation
OSP	Online service provider
OTT Services	Internet-based calls and texting services
POS	Points of telecommunications services
QCVN	Vietnamese norms
SPT	Saigon Post and Telecommunications Services Corporation
STCV	SaigonTourist Cable Television Co.,
TCN	Sectoral standards
TCVN	Vietnamese standards
TSBL	Telecoms Service Business License
TSMA	Telecommunications specialized management agency
Viettel	Military Electronics and Telecommunications Group
Vinaphone	Vietnam Telecoms Services Company
Vishipel	Maritime Electronics and Telecommunications Company
VNNIC	Vietnam Internet Network Information Centre
VNPT	Vietnam Post and Telecommunications Group
VoIP	Voice-over-Internet Protocol
VTC	Vietnam Multimedia Corporation
WTO	World Trade Organization

I. Introduction

Decree 121/CP of 15 August 1987, promulgated by the Council of Ministers (“**Decree 121**”), created the first legal framework for telecommunications and postal activities in Vietnam. Between 1987 and 1997, Decree 121 was the primary piece of legislation regulating the telecommunications industry.

With the rapid evolution of the industry, especially during the late 1990s, Decree 121 soon became obsolete. On 12 November 1997, the Government issued Decree 109/1997/ND-CP on postal and telecommunications activities (“**Decree 109**”) to replace Decree 121. A number of implementing sub-regulations followed. Most of these regulations had the purpose of protecting the State’s monopoly through tight control of the market.

Vietnam entered into a Bilateral Trade Agreement (“**BTA**”) with the United States in December 2001, in which Vietnam agreed to gradually open the telecommunications sector to United States entities. This commitment also set a schedule. Vietnam became a member of the WTO in January 2007. In its WTO commitments, Vietnam agreed to open telecommunications services to foreign investors under a prescribed schedule. As such, there was a need for a more comprehensive legal framework to manage a fully liberalized market.

Vietnamese telecommunications law has undergone several reformations in order to meet Vietnam’s international obligations. On 25 May 2002, the first Ordinance on Post and Telecommunications was approved by the Standing Committee of the National Assembly and became effective on 1 October 2002 (“**Ordinance**”)¹. The Ordinance was then replaced by the Law on Telecommunications (“**LOT**”) which came into effect on 1 July 2010. The Law on Telecommunications represented the first time that regulations on telecommunications were compiled in a separate comprehensive law. It provides a legal framework for all telecommunications activities.

The LOT includes 63 Articles, which are divided into 10 chapters:

- Chapter I : General regulations;
- Chapter II : Telecoms business;
- Chapter III : Telecoms for public benefit;
- Chapter IV : Setting up networks and telecoms service supply;
- Chapter V : Telecoms operation licenses;
- Chapter VI : Connection and sharing telecoms infrastructure;
- Chapter VII : Telecoms resources;
- Chapter VIII : Management of telecoms technical standards, norms, quality, and fees;
- Chapter IX : Telecoms works; and
- Chapter X : Implementing provisions.

This book was written by lawyers from Russin & Vecchi. This edition is current through December 2019.

¹ An Ordinance is a legal instrument passed by the Standing Committee of the National Assembly when the National Assembly is not in session. An Ordinance has the same effect as a Law.

Decree No. 25/2011/ND-CP dated 6 April 2011 of the Government (“**Decree 25**”) implements the LOT. Decree 25 has been amended and supplemented by the Government’s Decree No. 81/2016/ND-CP dated 1 July 2016 and Decree No. 49/2017/ND-CP dated April 24, 2017.

Along with the LOT, the Law on Electronic Transactions issued on 29 November 2005, the Law on Information Technology issued on 29 June 2006, the Law on Radio Frequencies issued on 23 November 2009, and other lesser regulations all represent steady progress in the development of legislation on information technology and telecommunications.

II. Specific regulations

1. Status and powers of telecommunications regulators

Under Article 9 of the LOT, the Government is empowered to manage the telecommunications activities of the State. The Ministry of Information and Communications (“**MIC**”)² is the State body in charge of telecommunications. The MIC has the following powers and duties:

- to promulgate or prepare drafts of legal regulations, technical specifications and standards, economic-technical norms of telecoms strategies and telecoms development plans;
- to implement legal regulations on telecoms, strategies, and telecoms development plans;
- to manage and regulate the telecoms market; to manage the telecoms service business and telecoms operation;
- to actively co-ordinate with the Ministry of Industry and Trade to manage competition in the formulation of telecoms infrastructure and to assure that telecommunications services are provided in accordance with the laws on competition;
- to inspect, verify, and resolve disputes, claims, and complaints, and to deal with violations in telecoms activities;
- to train, foster, and develop human resources; to study and apply science and technology in telecoms activities; and
- to organize international co-operation in the telecoms sector.

The LOT refers to the telecommunications specialized management agency (“**TSMA**”). This is a specific agency under the MIC that supports the MIC to carry out state management of the telecommunications sector. Decree 25 assigns TSMA the following tasks:

- to participate in drafting mechanisms, policies, strategies, plans, and legal regulations on telecommunications;
- to manage the telecommunications market and universal telecommunications;

² The MIC (formerly the Ministry of Post and Telecommunications) was established in August 2002 to assume the telecommunications functions of the General Department of Post and Telecommunications, People’s Committees, and certain other Ministries.

- to organize the implementation of legal regulations on telecommunications; and
- to carry out other state management missions in the telecommunications sector as delegated by the MIC's minister.

2. Interconnection between networks

Article 42 of the LOT provides general principles for interconnection between networks. The basic principle is that all telecoms enterprises³ are entitled to connect with each other's networks and services in order to take advantage of existing infrastructure. Stated differently, a telecommunications enterprise must allow other telecoms enterprises to connect to its network or services. Interconnection is based on negotiations intended to assure the equality, rights and benefits of the parties as well as the rights and benefits of telecommunications service users and related persons.

A facilities-based enterprise is responsible for providing connection at any point in the telecommunications network provided that it is technically feasible. It should not discriminate in terms of charges, technical standards, network quality nor telecommunications services. The interconnection charges must be calculated on the basis of market price, reasonably separate network components, or service phases without distinguishing service forms.

A private network may connect to a public network based on a written contract between a telecommunications enterprise and the owner of the private network. A private network cannot directly connect to another private network without the written consent of the TSMA.

3. Pricing guidelines

In its accession to the WTO, Vietnam committed to apply price controls in a WTO-consistent fashion. Telecommunications prices comprise charges applicable to telecoms service users and charges applicable as between telecoms enterprises. The LOT stipulates the following principles for determining telecommunications prices:

- to respect the rights of telecoms enterprises to determine the price and to compete in terms of price;
- to ensure the legitimate rights and benefits of service users, telecoms enterprises and the State;
- to ensure fair competition and to perform telecoms activities for public purposes; and
- to ensure equality and non-discrimination in the determination and management of telecoms charges, except in cases designed to encourage new enterprises to enter the market.

³Article 3.23 of the LOT states that a telecommunications enterprise is one that is incorporated under Vietnamese law and is granted a telecoms business license. Telecoms enterprises include enterprises which provide facilities-based services and enterprises which provide non facilities-based services.

Telecommunications charges must be calculated on the basis of:

- applicable policies and objectives of telecoms development; regulations on price management and international treaties to which Vietnam is a signatory;
- market price, market demand and supply, and an appropriate correlation with telecoms charges of regional and international countries; and
- no cross compensation among telecommunications services.

A telecommunications enterprise may determine the prices of services that it provides except the prices of services that must be determined by the State. On 13 May 2013, the MIC issued Circular 11/2013/TT-BTTTT promulgating the list of telecommunications services whose actual prices and projected price must be reported. They are:

- Terrestrial fixed telecommunications services: local phone services, data transmission service, image transmission service, conference services, local long-distance phone services, international phone services, leased line services, Internet connection services, Internet access services;
- Satellite fixed telecommunications services: phone services, data transmission services, image transmission services, lease line services, Internet access services;
- Terrestrial mobile telecommunications services: phone service, SMS and MMS services, Internet access services (2G, 3G);
- Satellite mobile telecommunications services: phone services, data transmission services, SMS and MMS services, Internet access services (2G, 3G);
- Services of Vinasat satellite system: band lease services, transponder lease package.

Similar to the price of services, discount rates of telecommunications services generally can be decided by a telecommunications enterprise, provided that it must comply with the universal discount limit of 50% which is set by the Commercial Law on all goods and services. However, on December 29, 2017, the MIC issued Circular 47/2017/TT-BTTTT which sets out a tighter discount limit on terrestrial mobile telecommunications services. Accordingly, post-paid mobile subscribers are still entitled to a maximum promotional value of 50% while, from 1 March 2018, the maximum discount is 20% for pre-paid mobile users.

4. Telecoms business

a. Telecommunications services' classification

Decree 25 provides non-exhaustive lists of basic telecommunications services and value-added telecommunications services. The MIC is entitled to add more services to each list.

Basic telecommunications services include: (a) talking services; (b) facsimile services; (c) data transmission services; (d) image transmission services; (e) message services; (f) video conference services; (g) leasing private channel services; (h) Internet

connection services; (i) and other basic telecommunications services as regulated by the Ministry of Information and Communications (“MIC”).

Value-added telecommunications services include: (i) e-mail services; (ii) voice mail services; (iii) value-added facsimile services; (iv) Internet access services; and (v) other value-added telecommunications services as regulated by the MIC.

On 18 May, 2012, the MIC issued Circular 05/2012/TT-BTTTT to classify telecoms services (“Circular 05”). Circular 05 sets forth different criteria to categorize telecommunications services:

- According to technological characteristics, transmission methods, there are fixed telecommunications services (ie, terrestrial fixed telecommunications services, satellite fixed telecommunications services); and mobile telecommunications services (ie, terrestrial mobile telecommunications services, satellite mobile telecommunications services, maritime mobile telecommunications services, air mobile telecommunications services);
- According to the payment method, there are pre-paid services and post-paid services; and
- According to the scope of communications, there are home-network services (ie, services sending, transmitting, receiving and processing information among service users of the same telecommunications network); and inter-network services (ie, services sending, transmitting, receiving and processing information among service users of different telecommunications networks).

Circular 05 introduces the term “additional telecommunications services” which is intended to include more functions, utilities for telecommunications service users. Additional telecoms services are integral parts of and are supplied together with basic and value-added telecommunications services. They include services showing the number of callers, services which hide the number of callers, ID caller display services, service of call waiting, service of call transfer, call barring, service of abbreviated dialing, and additional telecommunications services as prescribed by the MIC.

b. Telecoms enterprises and agencies

A telecoms enterprise that provides non facilities-based telecommunications services has the following rights and obligations:

- to construct, install and own telecoms equipment systems and transmission lines within its units and public utility points to provide telecommunications services to telecoms service users;
- to hire telecoms transmission lines to link its telecoms equipment system, units and public utility points together and to connect to public telecoms networks of other telecoms enterprises;
- to hire transmission lines or buy telecoms output of other telecoms enterprises in order to resell to telecoms service users;
- to sub-lease telecoms infrastructure to other telecoms enterprises;
- to allocate telecoms resources in accordance with master plans and regulations on the management of telecoms resources;

- to fulfill public utility telecoms obligations as assigned by the State and to make financial contributions to the Vietnam Public Utility Telecoms Service Fund⁴;
- to be responsible for service quality according to standards that have been registered or declared;
- to assure that the calculation of telecoms charges in a telecoms service use contract are correct, sufficient, and exact;
- to be responsible to the competent state agencies and to implement regulations on the assurance of telecoms infrastructure and information security; and
- to make periodic reports on certain business activities to telecoms management agencies; and
- to be responsible for the accuracy and timeliness of contents and data contracts.

Along with the foregoing rights and obligations, a telecoms enterprise that provides facilities-based telecommunications services has the following additional rights and obligations:

- to use the aerial space, land surface, underground space, river beds, and sea beds to construct telecoms infrastructure in accordance with master plans, technical standards and norms;
- to lease telecoms infrastructure to other telecoms enterprises; and
- to provide telecommunications services for the benefit of the public.

A telecoms service agent has the following rights and obligations:

- to establish terminal equipment systems at locations that are used to provide telecommunications services for telecoms service users as agreed in telecoms service agency contracts;
- to provide and resell telecommunications services in accordance with the LOT;
- to refuse to provide services for telecoms service users who violate the LOT or upon the request of competent state agencies;
- to comply with regulations with the assurance of telecoms infrastructure and information security;
- to request a telecoms enterprise that is a party to a telecoms service agency contract to guide and provide information on telecommunications services and to be inspected and supervised by such telecoms enterprise;
- to comply with local regulations pertaining to the time within which to provide telecommunications services; and
- to provide telecommunications services in accordance with the quality and telecoms charges stipulated in telecoms service agency contracts.

c. *Telecommunications resale*

Under the LOT, the resale of telecommunications services means that a telecoms enterprise or telecoms service agency provides telecommunications services to telecoms service users on the basis of leasing transmission lines or purchasing telecoms

⁴ The Vietnam Public Utility Telecoms Service Fund is a non-profit financial organization managed by the State. Its purpose is to assist in the realization of the State's policies on the provision of universal telecommunications services. The Vietnam Public Utility Telecoms Service Fund is financed by: (i) contributions from telecoms enterprises in proportion to their income; (ii) sponsorship and voluntary contributions from local and foreign organizations and individuals; and (iii) other legitimate sources.

traffic under a contract with another telecoms enterprise. A telecommunications enterprise may hire transmission lines or buy telecoms output of other telecoms enterprises in order to resell to telecoms service users. Telecommunications services may also be resold by a telecommunications agency.

Decree 25 further provides that in order to resell fixed telecommunications services to users in a given area, an agent must obtain a business registration certificate and enter into an agency agreement with a telecommunications enterprise. In order to resell fixed telecommunications services at two locations or more, or to resell mobile telecommunications services, an enterprise must obtain a license to provide telecommunications services.

These provisions are still rather general. Further detailed guidance on technical and professional matters relating to the resale of telecommunications services is expected. We believe such guidance will deal with: the list of telecommunications services permitted for resale, specify individuals and organizations permitted to resell services, outline the scope of permissible resale, impose tariffs for the resale of services, the numbering protocol, interconnection, and channel leasing.

d. Ownership in telecoms enterprises

The State holds the controlling shares in telecoms enterprises that provide facilities-based telecommunications services, that play an important role in operating the national telecoms infrastructure and that have direct influence on socio-economic development, national security, and defense.

In order to ensure fair competition, Decree 25 limits the percentage of charter capital that an enterprise or an individual can own in enterprises that operate in the same telecommunications services market. If an enterprise or individual owns more than 20% of the charter capital or shares in a telecommunications enterprise, it is not allowed to own concurrently more than 20% of the charter capital or shares in another enterprise in the same telecommunications market. Such restrictions, however, only apply to terrestrial mobile communications services as listed in Circular 10/2012/TT-BTTTT of the MIC dated 10 July 2012.

e. Investment in the telecommunications sector

Decree 25 sets out the requirements on legal capital⁵ and investment commitments in relation to different categories of telecommunications networks.

⁵ The legal capital is the minimum capital that is required by law to set up an enterprise.

The requirements can be summarized in the following table:

Networks	Coverage area	Legal capital (billions of VND)	Investment commitments (billions of VND)
Fixed terrestrial network without using radio spectrum	A city/province	5	15 within first 3 years from the date license is issued.
	From 2 to 30 cities/provinces	30	100 within first 3 years from the date license is issued.
	More than 30 cities/provinces	100	300 within first 3 years from the date license is issued.
Fixed terrestrial network using radio spectrum	From 15 to 30 cities/provinces	100	300 within first 3 years from the date license is issued.
	More than 30 cities/provinces	300	1,000 within first 3 years from the date license is issued, and 3,000 within 15 years.
Mobile terrestrial network using radio channels		20	60 within first 3 years from the date license is issued.
Mobile terrestrial network without using a radio spectrum (virtual mobile network)		300	1,000 within first 3 years from the date the license is issued and 3,000 within 15 years.
Mobile terrestrial network using a radio spectrum		500	2,500 within first 3 years from the date the license is issued

(virtual mobile network)			and 7,500 within 15 years.
Satellite telecommunications network		30	100 within first 3 years from the date license is issued.

In order to guarantee implementation of a license for telecommunications services, Circular 12/2013/TT-BTTTT of the MIC requires telecoms enterprises to submit a form of guarantee, as follows:

- 5% of the investment committed during the first three years, and it must be paid as from the issuance of the license. This applies to a license to establish a terrestrial stationary public telecommunications network using radio frequencies and telecommunication numbers;
- 5% of the investment committed during the first three years, and it must be paid as from the issuance of the license. This applies to a license to establish a terrestrial stationary public telecommunications network using radio frequencies; and
- 5% of the difference between the investment committed during the first three years, and it must be paid as from the issuance of the license and the actual investment in the telecommunications network established previously. This applies to a license to establish a terrestrial stationary public telecommunications network using radio frequencies and telecommunication numbers and a license to establish a terrestrial mobile public telecommunications network.

Foreign investors are subject to additional requirements. In addition to the basic licenses required by telecommunications legislation and the Enterprise Registration Certificate (“**ERC**”) required by the Department of Planning and Investment, foreign investors that intend to provide telecommunications networks and services must first obtain an Investment Registration Certificate (“**IRC**”)⁶ issued by the investment registration authority. The investment registration authority may seek opinions on the project from the MPI, the MIC, and other organizations it may select. In the end, the Prime Minister must decide.

The ownership proportion of a foreign investor in a telecoms enterprise must comply with investment regulations and international treaties to which Vietnam is a signatory.

⁶ The Law on Investment and the Law on Enterprises of 26 November 2014 and their implementing regulations provide rules and criteria for a foreign invested enterprise to receive an IRC and an ERC.

In particular:

Vietnam's commitments to the WTO

In the negotiations for Vietnam to become a member of the WTO, other WTO members, in particular the United States, EU, Japan, and South Korea, required Vietnam to commit to remove restrictions on foreign investment in the telecommunications sector.

In its accession to the WTO, Vietnam made commitments in certain specific areas:

- Facilities-based telecommunications services: Upon Vietnam's accession to the WTO on 11 January 2007, joint ventures with telecommunications service suppliers licensed in Vietnam were allowed. Foreign investors may hold a maximum stake of 49% of legal capital. For US investors, Vietnam had already made this commitment in the BTA.
- Non facilities-based telecommunications services: Since accession, joint ventures with telecommunications service suppliers licensed in Vietnam have been allowed. Foreign investors may hold a maximum stake of 51% of the legal capital of a joint venture. Beginning January 2010, three years after accession, joint ventures have been allowed without any limitation on the choice of partners. The stake of foreign investors, however, may not exceed 65% of legal capital. For virtual private networks and value-added services [except Internet Access Services (“IAS”)], joint ventures have been allowed since accession, without limitation on the choice of partners. The stake of foreign investors, however, may not exceed 70% of legal capital.

f. Competition in the telecommunications sector

Like other enterprises, a telecoms enterprise must follow general regulations on competition under the Competition Law, which came into effect on 1 July 2005. Telecoms enterprises or a group of telecoms enterprises that dominate the telecoms market and hold “essential means”⁷ are prohibited from:

- carrying out cross compensation of telecommunications services in order to engage in unfair competition;
- using its advantage in terms of its network and essential means in order to hinder market access or to cause limitations and difficulties to other telecoms enterprises;
- using information obtained from other telecoms enterprises in order to engage in unfair competition; and

⁷ Article 3.19 of the Law on Telecommunications defines “essential means” to be important parts of the telecoms infrastructure which infrastructure is exclusively or largely held by one or some telecoms enterprises in the telecoms market, moreover, it is economically or technically infeasible to establish new parts of the telecoms infrastructure to replace them.

- not timely providing other telecoms enterprises with technical information of essential means and commercial information necessary for them to provide telecommunications services.

A telecoms enterprise, a group of telecoms enterprises that dominate the telecoms market, or a telecoms enterprise holding essential means are required to keep separate statistics and accounting records for the telecommunications services they provide in order to determine the cost of telecommunications services for competition purposes. Telecoms enterprises that together have a market share ranging from 30% to 50% after shares are consolidated must notify the TSMA prior to economic consolidation. If the market share exceeds 50%, the Ministry of Industry and Trade⁸ will accept the exemption only upon receipt of a MIC's exemption acceptance.

The TSMA is responsible for settling telecommunications competition cases within 30 days from the date of receipt of a dossier. Although the parties in a competition case must comply with the TSMA's decision, any party may appeal the decision if it does not agree with it.

On 15 November 2012, the MIC issued Circular 18/2012/TT-BTTTT setting out a List of Dominant Telecoms Enterprises, Groups of Telecoms Enterprises. The list was amended by Circular 15/2015/TT-BTTTT dated 15 June 2015 and is, as follows:

No.	Telecommunications services	Dominant Enterprises/ Groups of Enterprises
<i>I</i>	<i>Terrestrial fixed telecommunications services</i>	
1	Local telephone service	VNPT; Viettel
2	Domestic long-distance telephone service	VNPT
3	International telephone service	Viettel VNPT
4	Local leased line service	VNPT Viettel
5	Domestic long distance leased line service	VNPT Viettel
6	International leased line service	VNPT Viettel
7	Broadband Internet access service	VNPT FPT Telecoms

⁸ Under the Law on Competition, the Ministry of Industry and Trade is the state authority in charge of competition management.

No.	Telecommunications services	Dominant Enterprises/ Groups of Enterprises
		Viettel
<i>II</i>	<i>Terrestrial mobile information services</i>	
1	Phone service	Viettel
2	Messaging service	Viettel
3	Internet access service	Viettel

5. Establishment of telecoms networks and provision of services

Telecoms networks are established and developed, with reference to approved strategies, master plans, and technical standards.

To provide services, a telecommunications service provider must follow the rules on connection, management of telecommunications resources, telecommunications standards and norms, and related regulations. Telecommunications services can be provided directly or can be resold on the basis of contracts executed between telecoms enterprises/agencies and users. Contracts must be registered with the competent authorities. If a telecommunications provider fails to comply with the terms of the contract, it must reimburse all or a part of the service fees it has collected.

- A telecoms enterprise that fails to provide timely services and agreed quality must refund all or a part of the charges it has collected;
- A telecoms enterprise need not compensate for indirect damages or unrealized profit because of its failure to provide agreed telecommunications services on time;
- Either party must compensate the other party for direct material damages that it causes.

6. Telecommunications licenses

a. License categories

There are two categories of licenses: (i) telecoms service business licenses, and (ii) telecoms operations licenses.

A *telecoms service business license* (“**TSBL**”) can be either:

- a license to set up a public telecoms network with a term of 15 years or less; it is issued to a telecoms enterprise that provides facilities-based services; or

- a license to provide telecommunications services with a term of 10 years or less; it is issued to a telecoms service provider that does not own any infrastructure.

A telecoms operations license is:

- a license to lay telecoms cables beneath Vietnamese waters, with a term of 25 years or less; issued to an organization that installs telecoms cables under the sea or through Vietnam's internal waterways, territorial waters, above the continental shelf, or through Vietnam's exclusive economic zones;
- a license to set up a private telecoms network with a term of 10 years or less; it is issued to an organization that establishes a private network;
- a license to test existing networks and telecommunications services with a term of one year or less; it is issued to an organization that tests telecoms networks and services.

A telecoms license is not required in connection with certain activities/situations:

- trading of telecoms goods;
- provision of telecommunications services by telecoms service agents;
- lease of transmission lines to provide telecoms application services; and
- service of private telecoms networks of state/communist party organs or for national security and defense purposes.

On 13 May 2013, the MIC issued Circular 12/2013/TT-BTTTT ("**Circular 12**") to guide the issuance of TSBL (ie, TSBL to set up a public telecoms network and TSBL to provide telecommunications services). According to Circular 12, in order to provide facility-based services, company must obtain a TSBL to set up a public telecoms network and a TSBL to provide the telecommunications services that it intends to provide. A license to set up a telecoms network is not required for a company that provides non-facility-based services.

According to the Government's Decree No. 81/2016/ND-CP dated 1 July 2016 which amends Decree 25 ("**Decree 81**"), in order to obtain a TSBL to provide telecommunications services, a company must satisfy all of the following conditions:

- **Business lines:** A company's business lines, as recorded in its Business Registration Certificate/Investment Certificate, must cover telecommunications services;
- **Financial capacity:** A company must satisfy the requirement on investment capital (see Part II, Section 4.e. above) and its financial capacity must be sufficient to realize its proposed business and technical plans;
- **Organization and personnel:** In general, a company's organization and personnel must be suitable to its business and technical plans and the plan to protect telecoms infrastructure and information safety. Specifically, Decree 81 requires that company must not be in the process of dividing, splitting,

merging, nor in the process of acquisition, reorganization, dissolution nor a bankruptcy under a decision issued by the authorities. The company's organizational structure and manpower must be sufficient to implement its business plan, technical plan and plan to ensure telecommunications infrastructure safety and information security;

- Business and technical plans: Its business and technical plans must: (x) be in line with the national strategy, telecoms development master plan, and telecoms resources plan; (y) be feasible and comply with regulations on inter-connection, price, norms, standards, quality of telecoms network and services; and (z) have feasible plan on allocation of telecommunications numbers and radio spectrums; and
- Telecoms infrastructure safety and information security: company must have plans to protect telecoms infrastructure and information safety.

The application for issuance of a TSBL to set up a public telecoms network includes the following documents:

- Application made on a standard form;
- ERC/IRC;
- Charter;
- A business plan for the first five years made on a standard form;
- A technical plan for the first five years made on a standard form;
- A written document which certifies that the required legal capital has been contributed; and
- A commitment letter by which the company undertakes to comply with the TSBL, once it is issued.

The application for issuance of a TSBL to provide telecommunications services must include the following documents:

- Application made on a standard form;
- ERC/IRC;
- Charter;
- A business plan for the first five years made on a standard form; and
- A technical plan for the first five years made on a standard form.

An applicant for a TSBL is no longer required to submit service contract templates at the time of application.

The regulatory timeframe for the license to be issued is 15 working days.

The company must file an application to amend/supplement its TSBL in the following circumstances: (i) change of the company's name; (ii) change of the locations which the telecoms network covers, or change of the locations in which the telecommunications services are provided, or changes in the types of services, or change of demand for use of telecommunications resources; (iii) supplementation of other telecommunications services, provided that the licensing authorities in charge of the supplemental telecommunications services will be the

same; or (iv) cease to provide certain licensed telecommunications services. Notice is only required if there is a change in the company's address, legal representative, charter capital or investment capital (but continues to satisfy the regulatory requirements on charter capital and investment capital), or a change in shareholders' shareholding.

At least 60 days before a TSBL expires, the company must file an application for either (i) an extension of the current TSBL, in case the term of the current TSBL does not yet exceed the maximum term for a TSBL (ie, 10 years for a TSBL to provide telecommunications services, or 15 years for a TSBL to set up a public telecoms network); or (ii) a new license, in case the term of the current TSBL has reached its maximum term.

b. Fees on telecommunications operation rights

A telecoms enterprise must pay the State a fee to establish a network and a fee to provide telecommunications services.

- The fee for a license to establish a public network must be paid annually; the amount is determined on the basis of: (i) the scale of the telecoms network and the income generated from the telecommunications services; (ii) the quantity and value of attributed telecoms resources; (iii) usage of aerial space, terrestrial space, underground space, river bed, or sea bed needed to establish a telecoms network, telecoms works, and points to provide public telecommunications services;
- The lump sum fee for the entire term of the license applies to: (i) establishing a private network; or (ii) establishing a network and providing telecommunications services on an experimental basis;
- The lump sum fee for the entire term of the license applies to a license to install telecommunications cables under the sea. An additional fee must be paid whenever a ship enters to survey, install, repair, or maintain the cables; and
- The fee to provide telecommunications services must be paid annually as a percentage of revenue, but the fee will not exceed 1% of the revenue generated by the telecommunications services.

c. License withdrawal

The LOT lists the circumstances under which the licensing authorities may consider withdrawal of a telecoms license. Among other things, a telecoms license may be withdrawn if the telecoms enterprise commits one of the following acts:

- fails to comply with the terms of the telecoms license, causes material damage to the rights or interests of other organizations and individuals;
- fails to implement the license within two years from the date the license was issued; or
- stops providing the licensed telecommunications services for one year without notifying the MIC.

A telecoms enterprise may apply for a new telecoms license if, after one year from the date on which its telecoms license is withdrawn, it pays all damages it owes and satisfies other conditions for issuance of a new telecoms license.

d. Standard form contracts and general conditions

In order to provide certain essential telecom services, a company must use a standard form contract and general terms and conditions as required by Circular 39/2016/TT-BTTTT dated December 26, 2016 of the MIC (“**Circular 39**”). According to Circular 39, the company must register its contract and its terms and conditions templates with various authorities:

No.	Telecommunications services	Responsible authorities
1	Terrestrial fixed telecommunications services	Ministry of Industry and Trade (“ MIT ”), or provincial Departments of Industry and Trade
2	Terrestrial mobile information services	
3	Internet access service via terrestrial fixed telecommunications networks	
4	Other fixed telecommunications services, including: (i) leased line services; (ii) data transmission services; (iii) video conference services; and (iv) private virtual network services.	TSMA

Registration with the TSMA must be made at least 10 working days before use.

7. Telecoms resources

Telecoms resources are managed by the State in accordance with strategies and plans to develop a national telecoms system designed to optimize the establishment of networks and the provision of telecommunications services. Telecoms resources are allocated/attribution on the basis of equality and transparency. Priority in the allocation of telecommunications numbers storage and Internet resources is reserved for telecoms enterprises that are able to provide services quickly and that are able to provide services to remote regions, border areas and islands, and for purposes of public telecoms activities. Telecoms resources are allocated/attribution: (i) through auction and competition in the case of rights to use telecommunications number storage or Internet resources that have a high commercial value⁹ and the demand for which exceeds capacity; (ii) directly under a master plan and on the basis of first to register, first approval or on the basis of first use; and (iii) through other methods provided by law.

⁹ The Law on Telecommunications does not explain the term “telecommunications number storage or Internet resources that have a high commercial value”. It is commonly understood that the term refers to telecommunications number storage or Internet resources that carry the accessibility for an enterprise to increase its market share and profits significantly.

An organization/individual who is allocated a telecommunications number storage/Internet resource can use, lease, or re-allocate its telecommunications number storage/Internet resource in accordance with a decision on the allocation and based on regulations of management and the use of telecommunications number storage/Internet resources.

On 9 September 2015, the MIC issued Circular 25/2015/TT-BTTTT (“**Circular 25**”) on the management and use of telecommunications number storage. Agencies, organizations and enterprises that are allocated a telecommunications number must report each year to the Telecommunications Bureau (of MIC). This report should contain data such as the exploitation on pioneering and status on using telecommunications numbers.

Domain names (except the national domain name “.vn,” which is reserved to agents of the Communist Party, the State, or other organizations as provided by the MIC), and telecommunications number storage/Internet resources allocated to an organization/individual through auction, are transferable. The following conditions apply to the transfer of telecommunications number storage/Internet resources:

- transferor has legal use rights over the telecommunications number storage, Internet resources;
- transferee is eligible to operate or invest to exploit and use telecommunications numbers and Internet resources;
- taxes in connection with the transfer must be paid;
- legitimate rights and the interest of related organizations and individuals are assured; and
- transfer of any telecommunications number storage, Internet resource that has been granted by auction must be approved by the MIC.

Telecommunications number storage/Internet resources may be revoked in the following circumstances:

- for the national or public interest, socio-economic development, or national defense and security. The State will compensate the organization/individual whose telecommunications number storage/Internet source has been revoked;
- purpose and use of telecommunications number storage and Internet resources is no longer suitable to the existing telecommunications number storage and Internet resource plan. The State will compensate the organization/individual whose telecommunications number storage/Internet source is so revoked; or
- an organization/individual who has been granted telecommunications number storage or Internet resources and fails to pay the allocation fee and/or use fee.

8. Telecommunications quality

According to Article 51 of the LOT, Vietnam’s system of telecommunications standards includes:

- national standards on telecommunications issued by the Ministry of Science and Technology;
- basic standards of telecommunications products, interconnection works, network quality, and services; and

- international and foreign standards applicable in Vietnam in accordance with regulations on standards and quality.

The MIC issues national technical norms for telecoms equipment, telecoms connection, telecoms works, and the quality of networks and services. The MIC is also in charge of promulgating a list of telecoms equipment that may be unsafe and a list of networks and services that must comply with technical standards. Those lists may be amended from time to time.

Before any telecoms terminal equipment that is on a list of telecoms equipment thought to be hazardous that may circulate in the market or that may link into public telecoms networks, a conformity certificate must be obtained and placed on the equipment. Before using network equipment to calculate prices, a telecoms enterprise must verify that the equipment is on the list of telecoms equipment that must be certified. A telecoms enterprise must declare, examine, and supervise the quality of all network and telecommunications services that are on a list of services for which certification is compulsory. The Telecommunications Bureau under the MIC is in charge of management of the quality of telecommunications equipment and services.

The most recent list of telecommunications services subject to quality control was issued in connection with Circular 35/2015/TT-BTTTT of the MIC dated 15 December 2015. The following is a list of those services and the Vietnamese standards that apply:

Services	Applicable standards
Telephone services via terrestrial fixed telecommunications services	QCVN 35:2011/BTTTT
Terrestrial fixed broadband internet access services using FTTH/xPON (Fiber optic Internet access services)	QCVN 34:2014/BTTTT
Terrestrial fixed broadband Internet access services using Cable Modem Technology (Television cable Internet access services)	QCVN 34:2014/BTTTT
Terrestrial fixed broadband Internet	QCVN 34:2014/BTTTT

access services using xDSL (xDSL Internet access services)	
Telephone services via terrestrial mobile telecommunications network	QCVN 36:2011/BTTTT
Internet access services via terrestrial mobile telecommunications network IMT-2000	QCVN 81:2014/BTTTT

The most recent list of telecommunications equipment and radio stations subject to a requirement for verification was issued in connection with Circular 17/2011/TT-BTTTT of the MIC dated 30 June 2011. The following is a list of the telecoms works subject to requirement for verification:

Names of telecommunications equipment and radio stations	Verification cycle (years)
Public mobile phone base earth stations	5
Charge-recording systems of public telecommunications switchboards	5
Radio stations	5
Television stations	5

In addition, unsafe telecommunications equipment (including: end-user mobile equipment, radio and television equipment, radar equipment, etc) is subject to quality control. The list of such equipment and its regulatory standard can be found in Circular No. 04/2018/TT-BTTTT dated 8 May 2018 of the MIC (“**Circular 04**”). Accordingly, telecommunications equipment that is specified under Appendix II of Circular 04 (eg, set top box for satellite television) must be tested by a licensed testing agency in accordance with its regulatory standard. The test results, together with required application documents, must be filed with the MIC or other authorities. If the quality control result is approved by the MIC, a certificate of standard conformation will be issued for the equipment. The certificate has a term of three years.

The MIC promulgated the Regulations on Management of the Quality of Telecommunications Services with Circular No. 08/2013/TT-BTTTT of 26 March 2013 (“**Circular 08**”). Circular 08 provides guidance on:

- quality declarations;
- quality reports;

- quality examinations;
- quality supervision; and
- disclosure of telecoms service quality.

Telecoms enterprises that provide telecommunications services and that are subject to quality control must declare the quality standards to which they will adhere. These declared quality standards must be in line with required quality standards. In order to declare its quality standards, an enterprise must send its Declaration of Telecommunications Service Quality to the Telecommunications Bureau (under MIC). If accepted, the Telecommunications Bureau will issue a Receipt. The enterprise must post the Receipt of Declaration of Telecommunications Service Quality and the List of Quality Standards of its telecommunications services on its website and in its business offices.

An enterprise that provides telecommunications services other than those that are subject to quality control must nevertheless declare the quality standards of those services on its website. The declaration procedure described above is encouraged.

Enterprises are required to report the quality status of the network and services each quarter or upon request of the Telecommunications Bureau.

9. Telecoms works

Telecoms enterprises are granted rights to use space, land surface, underground rivers and seabed routes in their construction networks. Enterprises receive only land use rights, not actual land ownership.

When investing in important telecoms works which relate to national security or locations providing public telecommunications services, investors must clearly determine the area of land that needs to be used, the compensation, and site clearance plans after the competent state agency approves and allocates the land. Based on the passive telecoms work plans and approved land use plans, competent People's Committees will allocate the land for the construction of important telecoms works that relate to national security or to public telecommunications services. The People's Committee also cooperates with the investor to implement site clearance.

In practice, this process takes quite some time, as many permits are required. Increasingly, People's Committees in major urban areas also want telecoms enterprises to co-ordinate their construction work with public utilities and road building programs. There have been cases where People's Committees have refused permission to telecoms enterprises to build ducts in congested urban areas.

10. Other matters

a. Telephone number allocation

The MIC is responsible for allocating telephone numbers. The MIC allocates blocks of numbers to telecoms enterprises, which then assign them to their customers. Telecoms enterprises must, in turn, report their allocation plan and the status of telephone numbers

and codes allocated to them. Unused numbers and codes must be returned to the Ministry.

Traditionally, a mobile phone number has been either a 10-digit or an 11-digit number. However, on 25 May 2018, the MIC issued Decision 798/QD-BTTTT (“**Decision 798**”). The effect will be to shorten mobile phone numbers. According to Decision 798, all current 11-digit mobile phone numbers will be withdrawn and converted to 10-digit numbers. The new numbers will start with a new network code of 08 (the prior network code for 10-digit mobile phone numbers is 09). All the withdrawn numbers will be used for the purpose of Internet-of-Things (“**IoT**”) services in the near future. The timeframe for the conversion is from 15 September 2018 to 30 June 2019.

b. *Number portability*

A subscriber number is specific to each telephone network. For a long time, a change in network resulted in a change in a subscriber’s number. However, since Circular 35/2017/TT-BTTTT of the MIC came into effect on 8 January 2018, telephone subscribers can retain their phone numbers while changing network providers. Value-added telecommunications services and application services provided by the previous network may not be transferred to the new one when subscribers change their network. The previous network, however, may refuse to transfer subscribers to a new network in the following circumstances:

- The subscriber information registered with the new network is not consistent with that registered with the previous network.
- The subscriber has committed prohibited acts, or the transfer is denied by a competent state agency.
- In case of complaints and disputes related to the use of telecommunications services with the previous network.
- Breach of contract on telecommunications services or violation of general terms and conditions with the previous network.

c. *Internet telephony*

According to Circular 05/2008/TT-BTTTT dated 12 November 2008 (“**Circular 05**”) on the Management, Provision, and Use of Internet Services and Electronic Information on the Internet, Internet Service Providers (“**ISP**”) are allowed to provide internet telephony. ISPs can provide local and international PC-to-PC phone service and outbound PC-to-phone service. ISPs must: (i) have a billing system, a system to manage the customers’ data, and a system to manage services in Vietnam, and (ii) provide sufficient information in connection with the payment of service fees and in order to determine customers’ claims in connection with service fees and quality. Circular 05, however, has become ineffective (due to its decree being replaced). Currently, no detailed regulations on internet telephony has been issued yet.

In 2015, the MIC drafted a new Circular on the management, on providing and on the use of internet-based calls and texting services (“**Draft Circular**”). Public comment was closed on 6 January 2015. The MIC has not adopted the draft Circular. To date, provision and use of internet-based voice and text are not yet regulated.

In the Draft Circular, internet-based calls and texting services (“**OTT Services**”) are categorized as a basic telecoms service. In order to provide OTT Services and to be able to charge for the services, the domestic service provider must obtain an enabling license. Foreign OTT service providers are required to have an agreement with a licensed OTT service provider to provide services in Vietnam. If they do not, they have to base at least one host server in Vietnam and must have a cooperation agreement with a licensed OTT service provider. Moreover, OTT Services must comply with regulations on fee management and service quality applicable to traditional telecommunications services in Vietnam.

A license to provide telecoms services is not required if the OTT Service is provided free of charge. However, if the OTT Service attracts more than one million registered users, the service provider must provide the MIC with information such as the location of the service provider’s headquarters, domain names and the address of the host server, as well as the number of calls and texts they handle.

In the draft, an OTT service provider is prohibited from connecting to the network to provide Internet-based calls directly to local phone subscribers. In order to provide Internet-based calls/texting services and to be able to charge local phone subscribers for these services, the OTT service provider must enter into an agreement with a company that provides fixed or mobile telecoms services.

The Draft Circular, if approved in its current form, will certainly burden the operations of OTT service providers, especially offshore OTT service providers.

d. Internet Television

On 18 January 2016, the Government issued Decree 06/2016/ND-CP on the management, provision and use of broadcasting and TV services (“**Decree 06**”). Decree 06 introduces clear regulations on Internet TV, which is introduced as a new category of broadcasting and TV services. According to Decree 06, the provision of internet TV services can be offered as both free internet TV services and fee-based internet TV services. Provision of free internet TV services is not subject to any license.

Only Vietnamese companies are permitted to provide paid internet TV services without restrictions. They must, however, obtain a license in order to provide paid internet TV services. There is an additional requirement for a Vietnamese foreign-invested company. Approval by the Prime Minister must be obtained. The company must satisfy certain requirements for the license. One requirement is that a foreign invested company must have a TSBL to set up a telecoms network or it must have an agreement to lease a telecoms network from a service provider that is licensed to set up telecoms network. In case of internet broadcasting, a “.vn” domain name or IP address must be registered by the company.

The maximum term of a license for internet TV services is 10 years, but must not exceed the term of the relevant TSBL or the agreement on lease of telecoms network, or the relevant registration certificate of the “.vn” domain name or IP address. A license may be extended only once and is valid for up to five years. However, the term may not exceed the term of of the relevant TSBL or agreement

on lease of telecoms network, or the relevant registration certificate of the “.vn” domain name or IP address.

Free TV services may only broadcast Vietnamese channels (defined as radio or television channels lawfully produced or co-produced by Vietnamese news agencies licensed to operate in the broadcasting industry). Pay TV services may broadcast on both Vietnamese and foreign channels (defined as radio or television channels lawfully produced by foreign broadcasters and made in foreign languages). The number of foreign channels is limited to 30% of the total number of channels. A paid broadcasting services provider must register a list of programmes to be broadcast on its Vietnamese and foreign channels.

A foreign channel must obtain a certificate of registration to provide subscription services in Vietnam. A foreign channel provider must also have a Vietnamese agent that is an authorized agent in Vietnam. The agent must, on behalf of the foreign channel, apply for the registration certificate and fulfill its financial obligations. The content of foreign channels must comply with Vietnamese law and needs to be edited and translated by an agency that is licensed to edit the content of foreign channels. The editing agency is responsible for its translations and editing.

Companies that provide internet TV services are subject to quality control, and must declare the quality standards to which they will adhere. Declared quality standards must be in line with required national quality standards. In order to declare quality standards, an enterprise must send its Declaration of Radio and Television Broadcasting Service Quality to the Authority of Broadcasting and Electronic Information (under the MIC) which will issue a receipt. The receipt and the List of Quality Standards of its radio and television broadcasting services must be posted on its website and in its business offices.

Enterprises are required to report the quality status of the services biannually or upon request of the authorities. In addition, once every two years, the quality of the radio and television broadcasting services must be tested by a licensed testing company. The result of the test must be reported to the Authority of Broadcasting and Electronic Information.

e. Frequency allocation

Matters related to radio frequencies are regulated by the Law on Radio Frequencies.¹⁰ In principle, the State manages all radio frequencies and radio transmitters, and decision-making and management must take national interests and sovereignty into account.

Licenses are required for the use of radio frequencies and special radio frequency equipment as follows:

- use of radio frequency and radio frequency equipment with a maximum term of 10 years;
- use of spectrum band with a maximum term of 15 years; and
- use of frequency and satellite orbit with a maximum term of 20 years.

¹⁰ The Law on Radio Frequencies came into effect on 1 July 2010.

A license may be granted through one of the following methods: (i) directly on the basis of an application for a license; (ii) via a competition for the right to use a particular radio frequency; or (iii) via an auction of the right to use a radio frequency. Methods (ii) and (iii) apply to spectrum bands, radio frequencies that have high commercial value, and in cases where use demand exceeds allocation capacity. The right to use radio frequency is transferable if it is granted via an auction and the MIC approves.

f. Domain name registration

On 15 July 2013, the Government issued Decree 72/2013/ND-CP on Management, Provision, and Use of Internet Services and Online Information (“Decree 72”). Decree 72 provides that an entity or individual may register a “.vn” domain name or international domain name. Except for domain names reserved for auction, a “.vn” domain name is allocated on the principle of first-registration, first-use.

A “.vn” domain name is registered through an organization that satisfies the following conditions:

- (i) is a Vietnamese enterprise or a foreign organization that has entered into an agreement with an Accredited Registrar of Internet Corporation for Assigned Names and Numbers (“ICANN”)¹¹;
- (ii) has appropriate personnel and technical capacity; and
- (iii) enters into an agreement with VNNIC to provide domain name registration.

An international domain name is registered through an organization that satisfies the following conditions:

- (i) is a Vietnamese enterprise;
- (ii) has entered into an agreement with an Accredited Registrar of ICANN to provide the service of domain name registration within Vietnam.

A domain name can be revoked administratively, ie, a decision or an administrative sanction issued by a competent authority (eg, the Inspectorate Department of MIC).

Circular 24 introduces a new generic top-level domain name (ie, New gTLD) which is expanded for direct assignment to worldwide organizations or individuals under the New gTLD program of ICANN. According to Circular 24, enterprises must seek a written opinion from the MIC before they can register with ICANN to use New gTLD in Vietnam, and after ICANN officially transfers New gTLDs to an enterprise, it must send written notification to the MIC.

¹¹ According to Circular No. 24/2015/TT-BTTTT dated 18 August 2015 of the MIC on management and use of internet resource (“Circular 24”), a foreign organization is only permitted to provide “.vn” domain name registration services outside of Vietnam.

g. Allocation, issuance, and withdrawal of Internet addresses and Autonomous System Numbers (ASN)

The MIC registers Internet addresses and ASN with international organizations and then allocates them to enterprises that provide Internet services and to other members having Internet addresses. An enterprise that provides Internet services may re-allocate the Internet addresses that it is allocated by the MIC, to its Internet subscribers.

An enterprise that receives Internet addresses and ASNs directly from international organizations must report them to the MIC and comply with applicable regulations.

h. IPv6 technology

Decree 72 gives priority to the development and use of IPv6 technology. The research, manufacture, and import of equipment or software that uses IPv6 technology is eligible for incentives and support under the Law on High Technologies (eg, tax incentives). Enterprises that provide Internet services are encouraged to develop networks using IPv6 technology. The objective is that: (i) all equipment and software manufactured in Vietnam or that is imported must support IPv6 technology; and (ii) the manufacture and import of software and equipment that do not support Ipv6 will be restricted.

i. Provision of prepaid SIM cards¹²

On 24 April 2017, the Government issued Decree No. 49/2017/ND. It provides stricter grounds to manage the sale and use of pre-paid SIM cards. Individuals are no longer limited to having three or fewer SIM cards for each mobile network as was previously the case. However, users now need to perform a more thorough and complicated procedure when registering for each service.

Firstly, SIM cards for mobile subscribers may only be provided to clients at the point of telecommunications services (“POS”) held by mobile operators. A POS must satisfy certain legal requirements. A mobile operator may only provide services to a customer after it has checked, verified and ensured that the customer’s information has been input and stored in a centralized database.

For the first three SIM cards of each service provider, users are required to present identification documents (copies of passports for foreigners, or IDs for Vietnamese citizens) and sign a confirmation letter. From the fourth SIM card on, buyers must sign a contract with their mobile network operator. Mobile operators have the right to refuse to provide services to a customer if the customer fails to present required documentation.

¹² A SIM card is a device which is associated with a specific subscriber number and stores relevant information concerning the supply and use of mobile telecommunications services.

III. Market overview

1. Service providers

By the end of 2017, there were 49 companies licensed to set up public telecoms networks, including Vietnam Post and Telecommunications Group ('VNPT'); Saigon Postel ('SPT'); Gtel Mobile; FPT Telecoms; Hanoi Telecom; Vishipel; Viettel Group; VTC; Dong Duong; CMC Telecoms; SCTV; and AVG.

By the end of 2017, the telecommunications market was dominated by the big telecom enterprises, including VNPT, Viettel, MobiFone and FPT. VNPT dominated the market for fixed-line telephone services with 68.7% of market share, followed by Viettel with 28.6%.

VNPT was the leading company with 43.2% of the market of fixed terrestrial broadband service providers measured by subscribers. Viettel was second with 31.4%, FPT was third with 16%.

Viettel was first with 51.8% in market share, again by subscribers among terrestrial mobile telephone service providers via 2G networks. VNPT was second with 24.8%, and Mobifone was third with 19.4%. In market share of terrestrial mobile broadband providers via 3G network, Viettel was first with 52.5%, followed by Mobifone with 24.9%, and VNPT with 22%. For terrestrial mobile service provider (including both 2G and 3G), the largest market share belonged to Viettel with 46.7%, followed by MobiFone with 26.1% and VNPT with 22.2%.

4G services were officially licensed in 2016. By the end of 2017, five telecommunications companies had been licensed to provide 4G network service, including Viettel, VinaPhone, MobiFone, Gtel and most recently Vietnamobile.

2. Market development

This discussion carries through 2017 only, because subsequent figures were not publically available on the date of publication. We nevertheless, include the 2016 figures, as they are indicative.

A national strategy on Information Technology and Telecommunications through 2010 and development orientation through 2020 was approved by Decision 246/2005/QĐ-TTg dated 6 October 2005. Vietnam's Telecommunications and Internet Development Plan through 2020, approved by Decision 32/2012/QĐ-TTg of the Prime Minister dated 27 July 2012 ("**Decision 32**") provided further detail on Vietnam's national strategy.

On 7 July 2007, the MIC issued Instruction 07/CT-BBCVT on the Orientation of Information Technology and the Telecommunications Development Plan from 2011 to 2020 ("**Instruction 07**"). According to Instruction 07, Vietnam intends to accelerate development of the information technology and telecommunications industry by 20-30% per year. A further objective is to give people access to high quality telecommunications services at low prices. Vietnam's objective is to reach a medium technology ranking in the region.

Vietnam's telecommunications market, however, made slow progress during the five years through 2016. The total revenue of the telecommunications industry decreased from US\$8.4 billion in 2012 to US\$7.4 billion in 2013. In 2015, the total revenue dropped to US\$6.0 billion and rose slightly to US\$6.1 billion in 2016. In 2017, however, it considerably dipped to US\$5.88 billion.

Despite the decline in revenue, there have been positive signs from the number of customers using telecom services. According to MIC's statistics, the number of 3G mobile phone subscribers (per 100 inhabitants) was 34.8% in 2015, increased to 39% in 2016, and rose up to 47.9% in 2017 (ie, about 44.8 million subscribers in total). Number of fixed (wired) broadband subscribers (per 100 inhabitants) was 8.4% in 2015, increased to 9.8% in 2016, and reached 12.03% in 2017 (ie, about 11.27 million subscribers in total).

Alongside domestic operation, investment overseas in telecommunications has also accelerated and has shown impressive results. The most remarkable is Viettel Group, whose total overseas investment increased 9% to nearly US\$1.5 billion in 2015. In 2015, Viettel expanded its operations to three large African markets, ie, Cameroon, Burundi and Tanzania, which raised Viettel's international markets to 10 countries by 2015 with a combined population of 270 million, three times Vietnam's population. Recently, Viettel Global has looked at Nigeria and Indonesia and presented an investment plan to its annual general shareholders' meeting in April 2017. Viettel's prosperous operations in foreign markets has encouraged other telecoms enterprises in Vietnam to seek growth outside the country. FPT Corporation has built its businesses in Myanmar and Bangladesh and also achieved significant results. FPT's 2015 report showed that revenue in foreign markets was nearly US\$219.4 million) and US\$30.2 million in pre-tax profit, creating an increase of 41% and 17% compared with 2014. According to the Chairman of MobiFone Corporation, the company also plans to operate abroad with a target of US\$1.63 billion in total revenue in 2015, and with a profit of US\$328.2 million.

IV. Conclusion

During the last decade, Vietnam's telecommunications sector has shown a steady growth and a willingness to innovate. Regulations have been promulgated in an effort to keep pace with market changes. Various matters, however, have still not been addressed or have been inadequately addressed. Procedures and conditions to obtain licenses are not yet standardized.

This poses a challenge to both local and foreign telecommunications investors. Under its commitments to the WTO, Vietnam pledged to open the local market to foreign investors. This gives customers access to higher quality telecommunications services at competitive prices. Various commercial arrangements between foreign investors and local telecoms enterprises have indeed been executed. However, due to various practical factors, access to foreign investors has not reached the level of Vietnam's actual commitments to WTO. Certain foreign investors (e.g. VimpelCom, SK Telecoms) have left Vietnam.

Vietnamese government has recently demonstrated significant efforts to accelerate the equitization and divestment of State-owned enterprises, including big

telecommunications companies. According to Vietnam's equitization and divestment plan from 2017 to 2020, two of the biggest telecom enterprises, namely MobiFone and VNPT, are scheduled to hold their initial public offering in 2018¹³ and 2019, respectively. This movement shows a good sign that market access for foreign investors in Vietnam's telecommunications market may be significantly improved in the near future.

The LOT has created a more transparent environment for activities in the telecommunications sector and this is helping Vietnam reach its goal of becoming a leader within ASEAN in technology and telecommunications by 2020.

¹³ Mobifone's IPO schedule was, however, delayed.