

“Infrastructure Financing Strategies for Sustainable Development in Viet Nam”

National Study / Paper

This version: 15 September 2017

The study was developed under a United Nations Development Account project entitled “Financing strategies for inclusive, equitable and sustainable development in Asia and the Pacific”, which focuses on a few selected countries, including Viet Nam, and is implemented by the Macroeconomic Policy and Financing for Development Division, ESCAP. The Document was developed with the assistance of the following consultant: Tran Duy Hung (Monitor Consulting) under the supervision of Mathieu Verougstraete (UNESCAP). The views expressed in this document are those of the authors and do not necessarily reflect the views of the United Nations Secretariat. The study has been issued without formal editing.

Executive Summary

Viet Nam's achievements in poverty alleviation, economic growth, and global economic integration demonstrate the government's determination to modernize its economy and improve the well-being of its people. The country has enjoyed strong economic growth in the last two decades, averaging 6% a year (6.7% in 2015)¹ and growth is expected to continue from 6.2% to 6.3% over the medium term.

Such growth momentum has required significant resources to meet the growing demand for infrastructure services and the country has sustained a high level of infrastructure investment at around 8% of GDP in recent years. According to the World Economic Forum (WEF), the Vietnam's global infrastructure ranking has improved from 95th position in 2012 to 79th position in 2016.² Investments in electric power generation, water systems and transportation have greatly supported economic growth and improve the quality of life in the country. Overall, infrastructure development is essential to deliver basic public services, increase productivity levels and promote job opportunities.

Most infrastructure investment in Viet Nam is currently financed from the central government budget and Official Development Assistance (ODA). However, these sources are not sufficient to accommodate the existing and future infrastructure needs. In addition, ODA sources, while significant, are bound to decrease with the country economic development. Therefore, the government has to consider innovative solutions to finance the necessary infrastructure for the country's sustainable development.

Development banks estimate that Viet Nam requires annually between \$16.7 billion to \$25 billion in order to meet its infrastructure needs during the 2016-2020 period. Based on sector reviews, this study considers that Viet Nam will need about \$20.2 billion per year on average.³ However, the current spending covers less than half of this amount and the financing gap can thus be estimated at around \$12 billion annually.

Due to limited government budget and ODA, a possible solution for financing infrastructure is to leverage domestic and international capital markets, and attract private investments. In addition, it is necessary to increase the institutional capacity and technical expertise to plan, build and operate efficiently economic and social infrastructure as this can lead to significant savings and better public services.

Mobilization of domestic resources through on-going tax reforms and improving public expenditure efficiency are keys to the sustainable financing of infrastructure in Viet Nam. One of the challenges in this regard is a significant downward trend in revenue as a share of GDP. Reversing the decline in the revenue to GDP ratio is vital to stemming the recent build-up in public debt and to restore fiscal policy to a more sustainable path. To address this situation, significant new tax measures will be required including, for example, the possible introduction of a capital gains tax, property taxes, or by lifting marginal tax rates for corporate and personal income. Improved administration measures can also help by reducing tax evasion and arrears, discouraging tax fraud, and streamlining value-added tax refund procedures. Profitable state-owned enterprises should also be made to pay increasing dividends.

As part of recommendations, other important area to focus is to improve the performance of SOEs related to public infrastructure and service delivery, particularly those in electricity, water supply, telecommunications, postal, ports, and airports sectors. It is crucial to lay out a new approach to reducing the economic distortions and fiscal costs created by SOEs. These strategies have

¹ <http://www.tradingeconomics.com/vietnam/gdp-growth>

² World Economic Forum, Global Competitiveness Report 2012-2013, 2016-2017

³ Author's baseline estimates: \$20.2 billion; climate-change adjusted estimates: \$23.4 billion (Table 5).

continued to emphasize the importance of reducing the number and state capital invested in SOE's via equitization and it may help pave the way for private investment. They also began to highlight the importance of improving SOE corporate governance and the need for a revised legal framework to enhance the transparency and quality of public investment through SOE's engaged in the delivery of essential public services.

There are funds available for infrastructure projects in local and international markets. However, channeling such capital into infrastructure projects is a challenge for countries like Viet Nam. By attracting private investment, the country could also benefit from the private sector's management and technical expertise to efficiently build, operate and manage economic and social infrastructure and services. In order to attract private investments, Viet Nam has to establish investor confidence through policy, legal and institutional reforms that meet international standards, streamline project delivery and enable the development of a pipeline of bankable projects.

To facilitate private involvement, the government should also aim at developing the local capital markets. It is believed that there would be a market for a well-structured project revenue bond or a bond backed by securitized assets. The introduction of securitization and project revenue bonds would help to develop capital markets by adding new asset classes to the market. It would also be a way to increase financing without increasing the liabilities of the GVN and could be a mechanism for good projects with good management to attract financing. Foreign financing may be feasible for certain large national programs such as ports, airports and energy, but many other infrastructure projects will need to rely on domestic financing. Domestic bonds could be a sustainable source of funding in the future but important institutional reforms addressing governance and transparency in particular, are required to permit this potential to be realized.

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Abbreviations

ADB	Asian Development Bank
ASA	Authorized-State Agency
ASEAN	Association of Southeast Asian Nations
BIDV	Bank for Investment and Development of Vietnam
CRA	Credit Rating Agency
CARG	Compound Annual Rate Growth
ECA	Export Credit Agency
ERIA	Economic Research Institute for Asean and East Asia
EVN	Electricity of Vietnam
GDP	Gross Domestic Product
GVN	Government of Viet Nam
HCMC	Ho Chi Minh City
JSCB	Joint-Stock Commercial Bank
LDIF	Local Development Investment Fund
MOC	Ministry of Construction
MPI	Ministry of Planning & Investment
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
MOT	Ministry of Transport
NPL	Non-performing loans
ODA	Official Development Assistance
PDF	Project Development Facility
PPP	Public Private Partnership
SBV	State Bank of Vietnam
SEA	South-East Asia
SEDP	Socio-economic Development Plan
SOCB	State-Owned Commercial Bank
SOE	State - Owned Enterprise
UN-ESCAP	United Nations Economic and Social Commission for Asia and Pacific
VDB	Vietnam Development Bank
VGF	Viability Gap Funding
VND	Vietnam Dong
WB	World Bank
\$	United States Dollar

1. Infrastructure Investment Environment

1.1. Country Strategy

The Vietnamese government's development strategy is based on a series of 10-year socio-economic development strategies (SEDS). The five year socio-economic development plan (SEDP) lays out the actions needed to translate the strategies into reality. The SEDP provides a framework and direction for ministries and sectors to develop their own plans.

In this regards, the Government of Viet Nam (GVN) has developed its 2011 – 2020 Socio-Economic Development Strategy (SEDS) – a 10 year strategy which lays out foundation for the country's medium term development strategy. It has highlighted the need for structural reforms, environmental sustainability, social equity and emerging issues of macroeconomic stability.

Infrastructure development is also defined as one of the three "breakthrough areas" along promoting skills development, particularly for modern industry and innovation; and improving market institutions. After the first 5 years of implementation, GVN acknowledged the slow progress on certain policy priorities and emphasized the need to accelerate reforms. In order to further implement its SEDS, the Socio-Economic Development Plan (SEDP) for 2016-2020 was approved in April 2016. The SEDP also takes into account Viet Nam's low competitiveness, poor infrastructure, climate change implications (especially in the Mekong delta), weak institutions, transition towards an aging population. Based on this assessment, GVN sets out 12 solutions to guide Viet Nam's socio-economic development for the next five years (see Box 1). Among the solutions presented, many deal are relevant to infrastructure development:

- Promotion of market for public services and prioritization of PPPs;
- Support for renewable energy sources;
- Construction of urban and infrastructure systems with priority on projects responding to climate change;
- Greater transparency, stability and fairness to encourage business to invest in infrastructure projects;
- Fairer and more transparent procurement, minimizing pre-assigned contractors and using land of high commercial value;
- Strengthened inspection and monitoring of investment projects;
- Improvement of the quality and effectiveness of public investments;
- Commitment to integrate SDGs in the socio-economic programs and plans;
- Reduction of corruption

Box 1- The Socio-Economic Development Plan (SEDP) of Viet Nam for 2016-2020

1. Development of a socialist oriented market economy, macroeconomic stability and a positive environment for socio-economic development

- This includes institutional reforms towards freer markets and further privatization. Instead of direct provision, the government will support the development of a market for public services. More emphasis is also put on greater coordination among monetary, fiscal and other policies.
- By 2020, Vietnam hopes to have a coherent, transparent and effective legal system.

2. Economic restructuring, increase in productivity and competitiveness

- Vietnam plans to promote entrepreneurship, including setting up start-up training centers and venture capital funding. Businesses are to receive support in research and development and public private partnerships (PPP) will be prioritized.
- Vietnam is aiming for agriculture to develop at a rate of 2.5 percent to three percent per year with up to 50 percent of communes meeting the new rural standard by 2020.
- Application of biotechnology and information technology in production, management and agricultural extension services is encouraged. The country is also determined to ensure food safety.
- Regarding industry, Vietnam eyes growth of 8 to 8.5 percent per year. By 2020, industry is set to account for 40 percent of GDP.
- Particular focus is put on high tech industries. Industries that serve agriculture will be prioritized, especially agricultural product processing and manufacturing of agricultural equipment and machinery.
- Vietnam will also support development of renewable energy sources, especially wind and solar power. In parallel, it will invest in oil and gas extraction and processing.
- Services are set to grow 6.6 percent to 7.1 percent per year and by 2020 make up 45 percent of GDP.
- Vietnam hopes to develop tourism into the leading service sector. Meanwhile, priority is also given to intellectual and technology linked services with high added value. Key service sectors include transport, ecommerce, telecommunications, wholesale and retail distribution and branding of Vietnamese products.

3. Development of economic regions and clusters

- Development of business clusters based on regional master plans is high on the agenda, noting the importance of connectivity. Emphasis is put on key economic regions, economic zones and industrial parks.

4. Construction of urban and infrastructure systems

- Key construction projects planned to help upgrade and improve the connectivity of Vietnam's infrastructure include:
 - North-South roads
 - Upgrade existing railroad gauge from one meter to 1.435m
 - Phased construction of a North-South high speed train
 - Construction of international sea ports in the North and South, and mobilization of funding for an international transit port
 - Phasing of investment for Long Thanh International Airport
 - Completion of the irrigation system in the Mekong Delta to prevent flooding, alkaline soils and salinity.
- In addition, infrastructure projects to respond to climate change and sea level rise will be prioritized.

5. Mobilization and effective use of resources

- Vietnam continues to re-structure investment, especially public investment in order to improve quality, effectiveness and competitiveness. Emphasis is put on saving, ensuring trade and budget balances and expanding the scope and opportunities for private investments.
- The legal framework for public private partnerships will be further improved for greater transparency, stability and fairness to encourage businesses to invest in infrastructure projects.
- Vietnam will promote cooperation with FDI companies to facilitate technology and knowledge transfer. However, it will "not attract FDI at all costs". Legislation will be revised to attract foreign investment, especially high tech, environmentally friendly and value adding projects. Meanwhile, projects that widen the trade deficit, are energy intensive and extract resources without processing will be curbed. In addition, projects which waste resources, use out-dated technology and pollute the environment will not be permitted.
- Vietnam will continue to improve relevant legislation on managing and usage of Overseas Development Assistance. Procurement will be fairer and more transparent, minimizing pre-assigning contractors and using land of high commercial value. Priority will be given to projects in large scale economic and social infrastructure, agricultural development, improving modern market economy institutions, human capital (especially development of a skilled workforce), environmental protection, climate change, green growth strategy and others.
- Inspection and monitoring of investment projects will also be strengthened.

6. Improvement in human capital and strengthening the potential of science and technology

- Vietnam plans educational reform towards a more open and comprehensive approach that has a greater emphasis on life skills, reduces workload in pre-tertiary education and encourages self-study and creativity.
- Emphasis is given to developing a knowledge economy with a high quality workforce in science and technology.

7. Cultural development, implementation of social progress and justice, and improving living standards in harmony with economic development

- Vietnam is committed to integrating United Nations Sustainable Development goals into the country's socio-economic programs and plans.

8. Active response to climate change, disaster prevention, resource management and environmental protection

- The country plans to improve regulations, policy and coordination of solutions for climate change, disaster risk reduction, natural resource management, environmental protection and land use.
- Matters that require immediate attention include the drought in the Central Highlands and the Southern Central region and urgent projects to prevent salinity and retain freshwater.

9. Anti-corruption, thrift and anti-wastefulness

- Vietnam continues to improve relevant regulations, focusing on areas easily prone to corruption. They include asset declaration by government officials and limiting cash transactions.
- Inspections, auditing and prosecution are to be strengthened. The monitoring role of publicly elected bodies and the Fatherland Front in reporting corruption will be promoted.

10. Enhancing effectiveness and efficiency of state management, ensuring public freedom and democracy in socio-economic development coupled with compliance with the law

- Government processes are set to be simplified and less bureaucratic. There will be clear distinctions between the functions of government agencies and the market, whereby the government only manages and provides directions for socio-economic development through legislation, planning and regulatory instruments appropriate for the market economy. Administrative intervention is to be minimized.

11. Strengthening national defense and security, fighting to preserve independence and sovereignty and ensuring political security, social order and safety

- The SEDP stresses effective implementation of the strategy to protect the country under changing circumstances.

12. Improving effectiveness of external relations, active international integration, peaceful environment and favorable conditions for the country's development

- Vietnam wants to improve effectiveness of multilateral relations, especially within ASEAN and the United Nations. International cooperation to ensure regional and national defense, security and sovereignty is to be strengthened. Sea disputes are to be resolved by peaceful means in line with international law and regional code of conduct.
- Furthermore, Vietnam intends to actively negotiate and sign new generation free trade agreements.

Source: Viet Nam's Socio-Economic Development Plan 2016-2020

1.2. Economic Growth and Infrastructure Competitiveness

The country has enjoyed strong economic growth in the last two decades, averaging more than 6% a year. Growth is expected to continue from 6.2% to 6.3% over the medium term. Such growth will put pressure on existing infrastructure and require additional investments in key infrastructure sectors such as transport and energy.

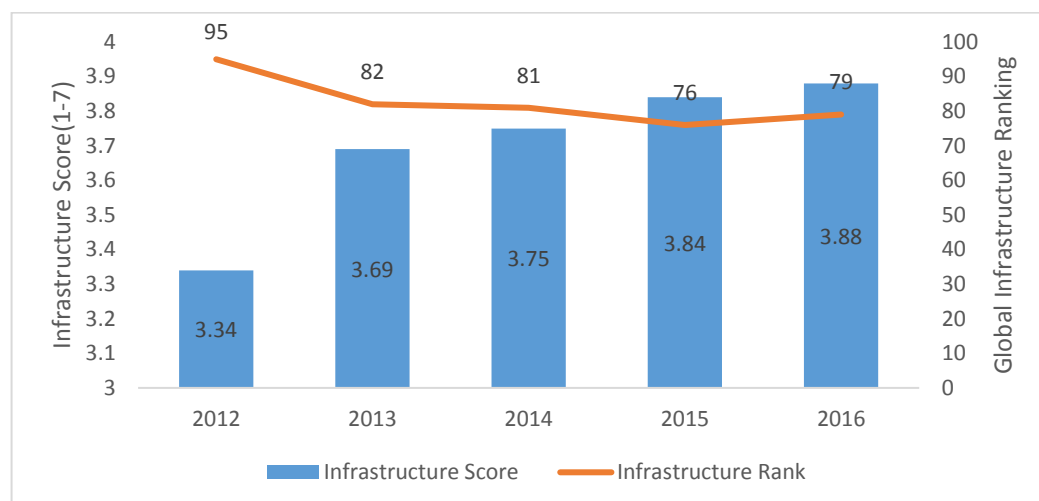
Table 1- Population and GDP of Viet Nam

2015 Data			GDP Growth						
Population (million)	GDP (\$ billion)	GDP per capita (\$)	2013	2014	2015	2016	2017	2018	2019
						Estimates	Projections		
91.7	193.6	2,111	5.4	6.0	6.7	6.0	6.3	6.3	6.2

Source: World Bank Data, <http://data.worldbank.org/>; World Bank (2017), Publication: *Global Economic Prospects, Weak Investment in Uncertain Times*

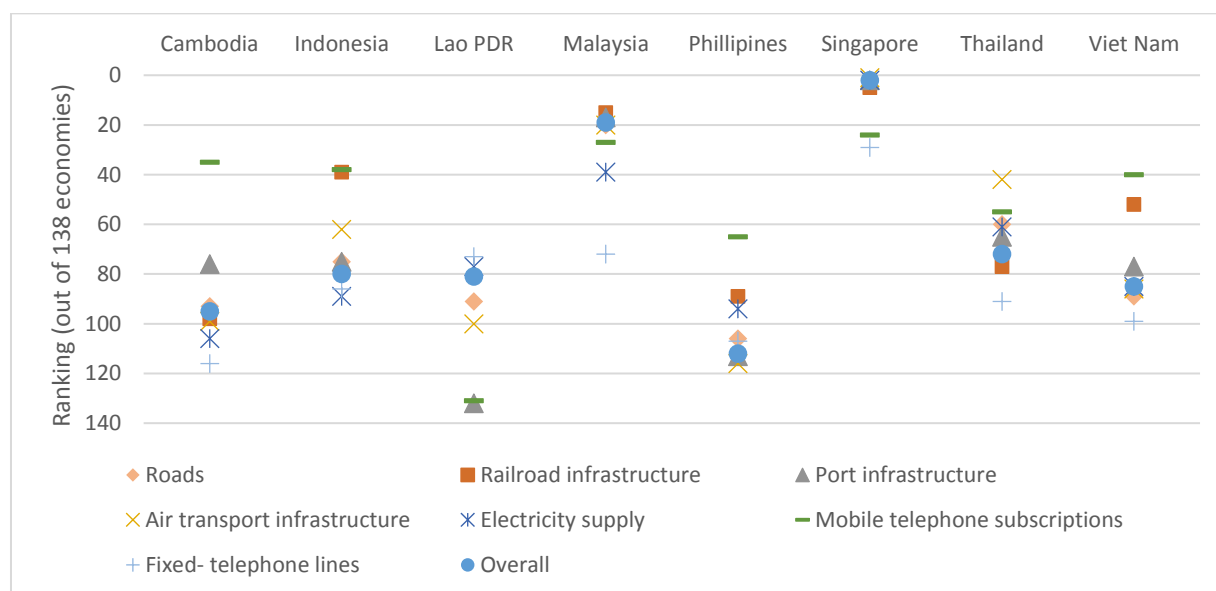
Regarding the current status of infrastructure development in the country, Viet Nam has managed to moderately improve its infrastructure ranking from the 95th place in 2012 to 79th place in 2016 (Figure 1). However, the competitiveness of its infrastructure system is still modest in comparison with more advanced South-East Asian economies (Figure 2).

Figure 1-Viet Nam's Infrastructure Score and Ranking, 2012-2016



Source: World Economic Forum, Global Competitiveness Index Reports.

Figure 2- Comparison of SEA's Infrastructure Competitiveness Ranking, 2016 based on perceptions



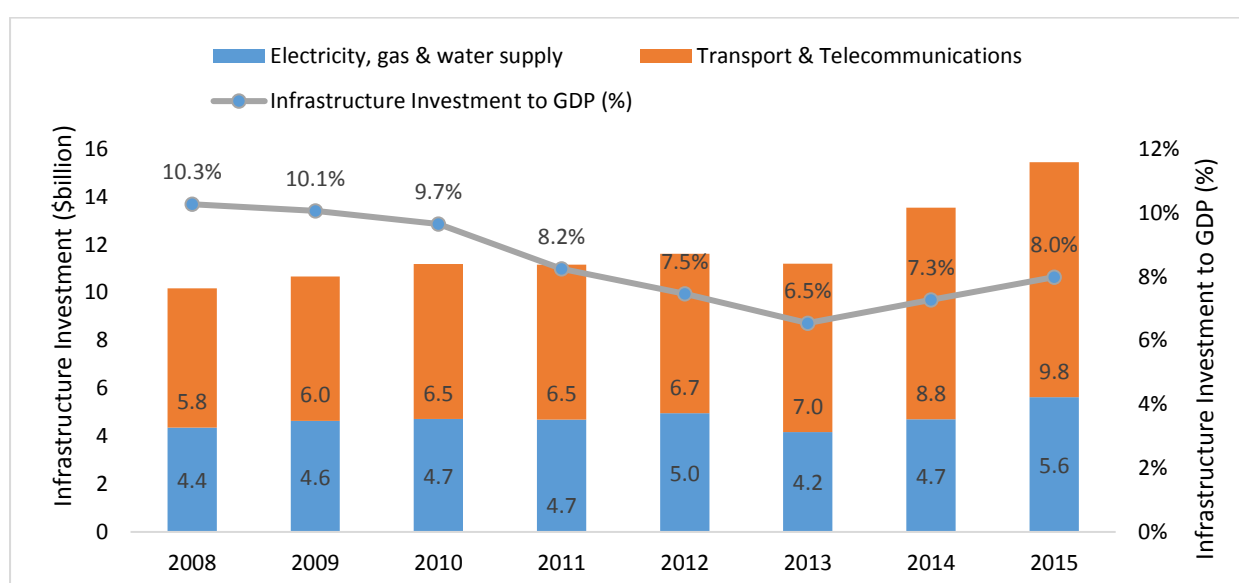
Source: World Economic Forum, Global Competitiveness Index Report 2016-2017

1.3. Historical Infrastructure Spending

Realizing the importance of infrastructure in promoting economic growth and reducing poverty, the Government of Vietnam (GVN) has successfully sustained a high level of infrastructure investment at 8% of GDP on annual average between 2008 and 2015. This is much higher than the world average, which stands at 3.8% of GDP⁴.

The level of infrastructure investment has however not been constant over time. It decreased from 10.3% in 2008 to 6.5% in 2013 before rising again in recent years to stand at 8% in 2015. Over the whole period, total infrastructure investment of Viet Nam has been increased in nominal terms by about 50% from \$10.2 billion in 2008 to \$15.4 billion in 2015 (Figure 3).

Figure 3- Infrastructure Investment in Viet Nam, 2008-2015



Source: Vietnam General Statistics Office, World Bank, Bloomberg and Author's Research and Analysis

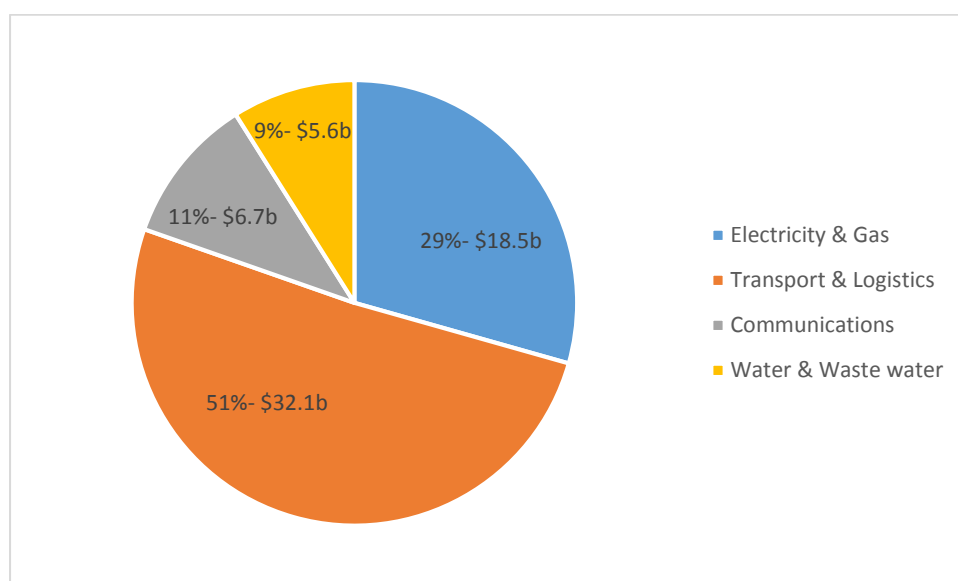
Note: Infrastructure investment includes transport, communication, electricity, gas and water supply.

Total infrastructure investment during 2011-2015 reached \$63 billion or \$12.6 on annual average.⁵ The transport sector accounted for the largest portion with 51% or \$32.1 billion, followed by electricity, telecommunications and water sector with 29% (\$18.5 billion), 11% (\$6.7 billion) and 9% (\$5.6 billion) respectively.

⁴ ADB Institute (2016). ADBI Working paper series, Infrastructure Investment, Private Finance and Institutional Investors: Asia from a Global Perspectives. No. 555 (January 2016).

⁵ Only include Transport & Logistics, Electricity & gas, Communications and Water & waste water. Exclude social infrastructure.

Figure 4- Infrastructure Investment by Sectors, Viet Nam, 2011-2015



Source: GSO and Author's Analysis

1.4. Infrastructure Sector Review

Transport sector

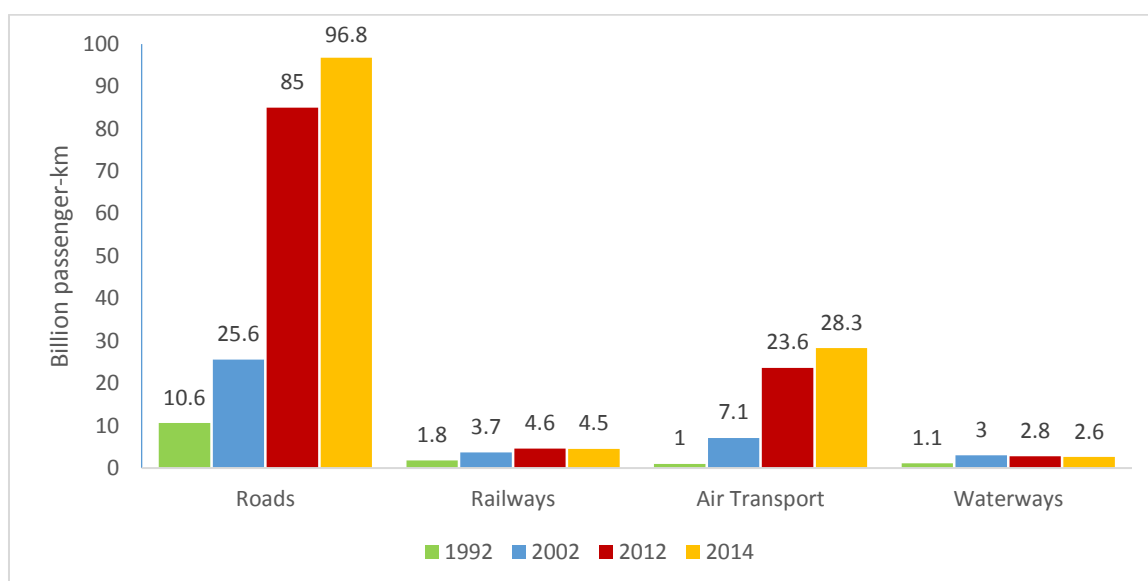
In recent years, the transport infrastructure system in Vietnam has required significant upgrades and new construction given the growing demand for transport services. For example, road traffic has increased by 11 per cent per year on average for the period 1992-2014 on the back of rising vehicle ownership. Likewise, air transport has experienced annual double digit growth over the period (see Figure 5). Therefore, it is no surprise that investment in this sector has been expanding rapidly and accounted for 3.8% of GDP or \$32.1 billion during the period 2011-2015.⁶

In particular, the road sub-sector has been growing more rapidly than others. Road investments are typically large-scale and financed by state budget and ODA although there is growing private investment in the form of Build-Operate-Transfer (BOT) and Build-Transfer (BT) arrangements. Indeed, there were 62 transport projects under BOT and BT during 2011-2015, with total private investment of VND 186.660 trillion (\$8.4 billion) mainly focus on road sub-sector (99.4% of private investment in transport).⁷

⁶ Figure 2 and Author's calculations

⁷ MOT report on BOT projects

Figure 5-Viet Nam- Passenger Traffic by Transport Mode (billion passenger-km)



Source: GSO and Author's Analysis – (GSO applies the same formula for all transport means, i.e. multiplying number of passengers and the average length of their trips)

The Government's sector strategy is defined in the "Strategy for development of transportation services through 2020, and orientations toward 2030" (Decision No. 318/QĐ-TTg dated March 2014) with the overall objective *"To improve the quality of transportation services, reduce transportation costs, ensure traffic order and safety and environmental protection, timely and fully satisfy cargo and passenger transportation demands and raise economic competitiveness for gradually turning Vietnam into a cargo and passenger transshipment center of the region, making great contributions to successfully implementing the socio-economic development strategy and ensuring national defense and security."* Local transportation development strategies and master plans are also defined at the provincial level. SEDP also includes a list of major transport infrastructure projects (see Box 2).

From an institutional point of view, different organizations are involved besides the Ministry of Transport (MOT) such as:

- The Vietnam Expressway Corporation - a state-owned enterprise (SOE) established in 2004 to establish a nationwide expressway network, which is financially independent from MOT funded by revenues from tolled expressways;
- Vietnam Railway Administration (VNRA), which owns the network and is responsible for planning and developing new lines;
- Vietnam Railways Corporation (VNR), an SOE operating and maintaining the existing network.

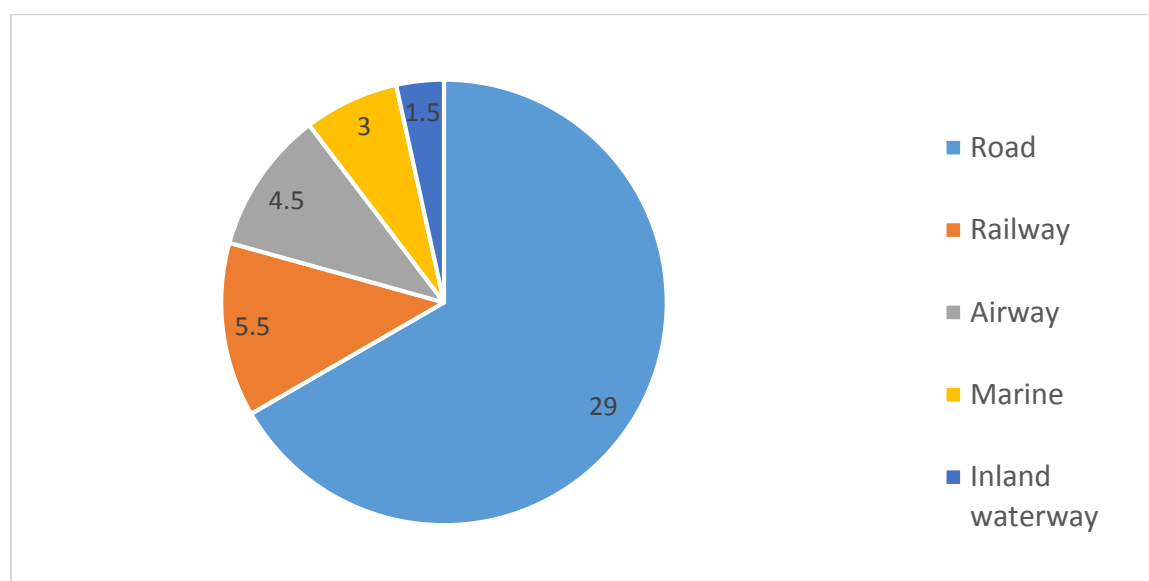
Box 2- Major Infrastructure Projects in SEDP 2016-2020

1. North-South roads
2. Upgrade existing railroad gauge from one meter to 1.435m
3. Phased construction of a North-South high speed train
4. Construction of international sea ports in the North and South, and mobilization of funding for an international transit port
5. Phasing of investment for Long Thanh International Airport
6. Completion of the irrigation system in the Mekong Delta to prevent flooding, alkaline soils and salinity.
7. In addition, infrastructure projects to respond to climate change and sea level rise will be prioritized.

Source: Viet Nam's Socio-Economic Development Plan 2016-2020

MOT is projected that the investment needs for transport sector between 2016 and 2020 would be VND1,015 trillion⁸ (\$45 billion) which is doubling those reported between 2011 and 2015 with VND494 trillion⁹ (\$22 billion). Roads is projected with largest share of total investment needs in transport sector with 67% or \$29 billion, followed by railway with 13% or \$4.5 billion, air transport with 10% or \$4.5 billion, marine with 7% or \$3 billion and inland waterway with 3% or \$1.5 billion. (Figure 6).

Figure 6- Viet Nam- Transport Investment Projection (\$billion), 2016-2020



Source: MOT

⁸ Presentation of MOT to foreign investors on proposal and policies of foreign direct investment attraction into transportation sector until 2020 (Attached with Decision No. 2657/QD-BGTVT dated 24 July 2015).

Note: Based on the detailed projections by sub-sectors, the Author justified the total investment needs for roads, railway, airway, marine and inlandwater is about VND972 trillion or \$43.5 billion.

⁹ <http://vnexpress.net/tin-tuc/thoi-su/giao-thong/62-du-an-bot-dong-gop-cho-giao-thong-viet-nam-nhu-the-nao-3573685.html> and Author's calculation.

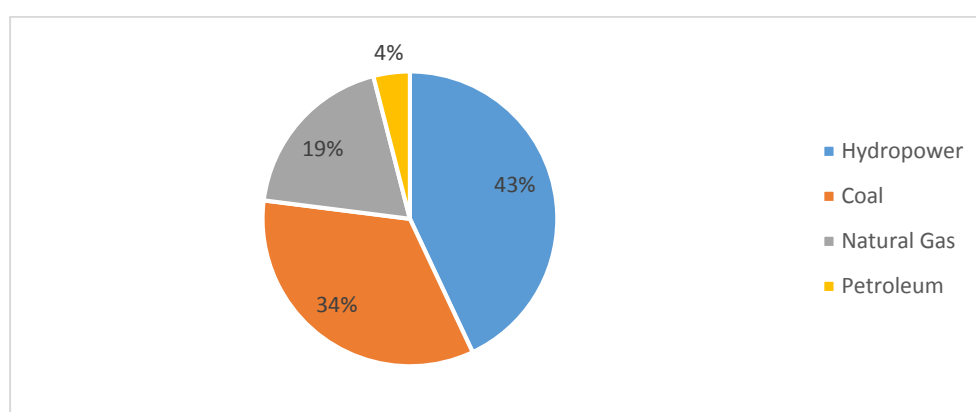
Power sector

Robust economic growth in Vietnam over the past decade has resulted in significant demand for electricity. At present, Electricity of Vietnam (EVN), a SOE that reports directly to the Prime Minister, is the biggest buyer of electricity from power plants and holds a monopoly on electricity transmission and distribution. The electric power industry is under the jurisdiction and management of the Ministry of Industry and Trade (MOIT). The government strictly regulates electricity retail prices, with adjustments recommended by MOIT and requiring approval by the Prime Minister. A unified tariff is applicable across the country and is low in comparison with other countries in the region.¹⁰ Both urban and rural residential rates are cross subsidized by higher rates for industry, commerce, and foreign consumers. To attract more investment from the private sector in developing independent power producer (IPP) projects, MOIT and EVN have been working on a roadmap for price increases and gradual elimination of government control.

One of the many key transitional steps towards a competitive electricity market is the restructuring of EVN, a state-owned monopoly with many wholly owned subsidiaries, into shareholding companies with different types of shareholders including local and foreign private investors. This restructuring aims to create an increasingly business-oriented enterprise with an increased degree of separation from the government. This enterprise reform involves splitting various subsidiary entities away from EVN.

According to EVN, by the end of 2015, the total installed capacity was approximately 38,642 MW and power generation was 164.31 billion kWh. The installed capacity is prominently owned by EVN with 60%, non –EVN with 39% and import with 1%. Hydro power, coal, gas and oil are the main fuel sources for power generation with 43%, 34%, 19% and 4% respectively (Figure 7). Renewable energy is at the infant stage and its share is very small in the total power outputs. By the end of 2014, 100% of the districts were connected to electricity; 99.59% of the communes with 98.22% of rural households have access to the power grid.

Figure 7- Viet Nam- Electricity Power Industry, 2015



Source: EVN

¹⁰ Source: EVN: average electricity tariff of Viet Nam in 2015 (US cent/kWh): 7.58

Source: Eurocham in Viet Nam: average electricity tariff in selected countries (2013)- (US cent/kWh): China: 7.5-10.7; India: 9-12; Indonesia: 8,75; Malaysia: 7.09-14.76; Philippines: 30.46.

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In the 2011-2015 period, domestic and foreign lenders including private and development banks disbursed more than VND320 trillion (\$14.3 billion) for EVN's power generation and transmission projects.

The GVN expects electricity consumption to grow by 10-12% annually through 2020. This soaring demand is attributed both to increasing industrial and residential use. Power shortages are expected during this period if additional power supply is not provided. It is also estimated that an additional capacity of 4,000 MW will be required per year on average during the 2015-2020 time period to meet rapidly growing demand for power.

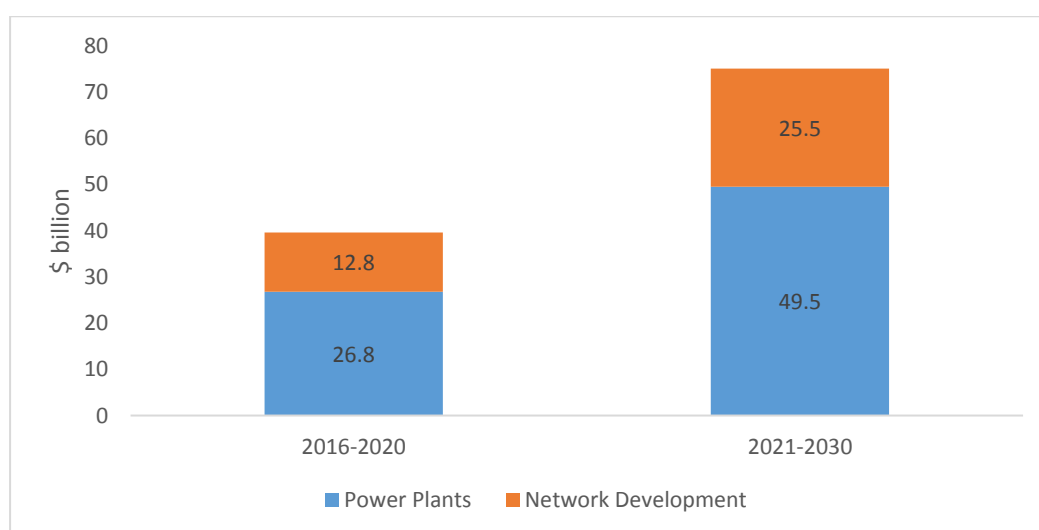
The revised Power Master Plan VII has been approved by the Prime Minister on March 18, 2016 setting the power development plan for the period 2016-2020 with a vision towards 2030. The GVN plans to build new thermal power plant to reduce the reliance on hydropower; to build new hydro plants that can facilitate water supply, drainage and flood control; to develop power plants using renewable energy; and to develop 200 and 500 kV transmission networks.

Box 3- Highlights of The Revised Power Master Plan VII

- Emphasize more on renewable energy and the power market liberalization. Vietnam will provide adequate electricity for the domestic demand; satisfy socio-economic development objectives with average GDP growth rates of 7% during 2016-2030.
- Construction of power transmission grid with flexible operation and high automation capacities is badly needed.
- Emphasize a balanced development of power sources in each region of the country to ensure a sustainable power supply. Thermal coal-fired power, currently accounting for 15 percent, will play an increasingly important role in the medium and long term. Power generation capacity will rise from 21,000 MW in 2010 (that produced 100 billion kWh) to 43,000 MW in 2015 (that produces 200 billion kWh) to 75,000 MW in 2020 (330 billion kWh), and to 146,800 MW in 2030 (695 billion kWh).

Source: Viet Nam's Revised Power Master Plan VII

Figure 8- Viet Nam- Electricity Power Investment Projection (\$billion), 2016-2030



Source: EVN

ICT sector**Table 2- Viet Nam's ICT Sector, 2016**

Indicators	Value	Global ranking
Internet users	49 million	13
Internet user penetration	52%	95
Mobile-cellular telephone subscriptions/100 pop.	130.6	40
Fixed-line telephone lines/100 pop.	6.3	99

Source: <http://www.internetlivestats.com/internet-users-by-country/>, WEF- Global Competitiveness Report 2016-2017

Vietnam's socioeconomic development framework assigns ICT a strategic role in accelerating Vietnam's economic transition and global integration. Therefore, the GVN and businesses are planning to upgrade the country's information technology (IT) infrastructure. In April 2015, the Prime Minister issued Resolution #26/NQ-CP, instructing all Ministries and local government to promote the application and development of IT to serve the purpose of successfully developing the economy sustainably and integrating internationally. In addition, as Viet Nam has become a member of ASEAN's Economic Community and enterprises are expected to increase spending in order to upgrade their IT infrastructure with the goals to improve operational efficiency and expand their business.

At present, there are five cellular phone network operators in Viet Nam. Nearly 90 percent of the mobile phone market share is divided among three major network operators: Viettel, Mobifone, and Vinaphone. According to the Ministry of Information and Communications, there are 128 million subscribers of mobile phones, with a penetration rate of 140 percent as of December 2014. In terms of the technologies used in Vietnam's mobile phone networks, all five mobile network operators (Viettel, Mobifone, Vinaphone, Vietnamobile, and GMobile) have adopted global systems for mobile communications (GSM) technology.

GVN's overall ICT strategy is to develop national information infrastructure in order to deploy high-capacity communications and innovation technology throughout the entire country, including remote areas; to increase telephone and internet penetration rates and to ensure all provinces and cities to connect to broadband networks via optic fiber cable, TV cable and satellite as a basis for the application of information technology in e-trade, e-government, public services and other areas.

The Viet Nam Master Plan on information technology was approved in 2011, which aims to turn Vietnam into a developed country in ICT and the ICT sector is expected to contribute around 8-10% of the country's GDP by 2020. The total labor in the information technology industry will reach 1 million, 50-60% of households nationwide will have computers and access broadband internet, of which 20-30% access to optical cable broadband. The number of the internet users will account for over 70%.

*Water/waste water sector***Table 3- Viet Nam's Water and Waste Sector, 2015**

Indicators	Value
% population having access to improved water source - Urban: 99.1% - Rural: 96.9%	97.6%
Water consumption per capita - Urban - Rural	120 liter/person.day 80 liter/person.day
Average hour of water supplied per day - Urban: 20-22 - Rural: 16-18	18-20
% of Non- revenue water	25%

Source: World Bank Data, <http://data.worldbank.org/indicator/>
<http://aseaniwrm.water.gov.my/vietnam-reports/>

Supply in urban areas is provided mainly by provincial water service companies, which can be 100% SOEs or have some participation of the private sector, through build-operate-transfer (BOT) or joint stock schemes. By 2015, there were more than 100 water supply companies in urban areas with a total capacity of 7.4 million m³/day.¹¹

Provision of wastewater treatment is limited in both urban and rural areas, with estimates of less than 10% of wastewater being treated in urban areas (World Bank WSP, 2014). Household wastewater in urban areas normally passes through a septic tank before being discharged to the sewers. Such septic tanks are normally financed directly by households. Companies such as the urban environment company (URENCO) in Ha Noi provide tank cleaning and sludging services. Storm water and wastewater are normally discharged through sewers and canals into lakes, rivers and ponds.

Centralized wastewater treatment is still limited in Viet Nam, even in urban areas. A 10% surcharge on the cost of water provision has been introduced in some cities such as Hanoi, HCMC to cover the costs of both sanitation and wastewater services.

Among the reasons for the high levels of investment needed in Viet Nam's water and sanitation sector, there are historically low levels of tariffs, which have not covered investment costs, and the volume of non- revenue water. There is a high level of non-revenue water in both urban and rural areas, as only around 200 district towns in Viet Nam have piped water supply and the rate of water loss is as high as 25% in urban areas.¹²

¹¹ Vietnam-Finland Forum for Cooperation in Water sector, 2015

¹² Vietnam-Finland Forum for Cooperation in Water sector, 2015

2. Infrastructure Financing Needs

2.1. Investment Projections by Sectors

Transport sector: Total funding need for Vietnam's transport infrastructure system during period 2016- 2020 in the whole sector is estimated at about \$43.5 billion. The demand of road is about \$29 billion, of railway is about \$ 5.5 billion, of airway is about \$4.5 billion, of marine infrastructure is \$3 billion and of inland waterway is over \$1.5 billion¹³.

Power sector: According to MOIT and EVN's estimates, around \$39.6 billion (including \$26.8 billion for power generation.) will be needed for the national power system development during period 2016-2020, \$75 billion needed for period 2021-2030. It is projected that 66% of investment will be spent on power plants and the remaining 33.4% on network development.¹⁴

ICT sector: Viet Nam's telecommunications spending is anticipated to reach \$9.12 billion by the end 2016. The spending growth in next 5 years is driven greatly by wireless data growth which reached 8.78% CAGR during 2015-2016. However, the mobile data spending is only contributing 30.78% of total spending by 2016. Fixed line services spending reaches \$1.37 billion by end of 2016, with a flat CAGR of 0%.

Water/waste sector: There are a number of different estimates of the investment needs of the water and sanitation sector in Viet Nam. It is estimated by the World Bank that Viet Nam will need around \$1.6 billion annually through 2020 for water supply and \$1.1 billion annually for sanitation¹⁵. 87% of the investment needs are needed to expand water and sanitation systems in urban areas (including replacement of existing assets which account for 60% of water supply investment). MOC has identified investment needs for the 2016-2020 period for urban sewerage systems of VND70,000 billion (\$3.2 billion) and for urban domestic solid waste system at VND31,300 billion (\$1.4 billion).

Assessing the estimates for infrastructure investment needs is complicated by the different approaches, time horizons and definitions of infrastructure. However, based on sector investment projections, the Author estimates that Viet Nam will need about \$100.8 billion for the period 2016-2020 or \$20.2 billion on annual average (Table 1). If it is adjusted with climate-change costs, the total investment needs will be increased to \$116.9 billion or \$23.4 billion on annual average.

¹³ Presentation of MOT to foreign investors on proposal and policies of foreign direct investment attraction into transportation sector until 2020 (Attached with Decision No. 2657/QD-BGTVT dated 24 July 2015) and Author's justification.

¹⁴ <http://vietnambiz.vn/can-bang-cung-cau-dien-giai-doan-2016-2020-8365.html>

<http://minhbach.moit.gov.vn/default.aspx?page=news&do=detail&id=24>

¹⁵ World Bank WSP, 2014

Table 4- Projected Infrastructure Investment Needs in Viet Nam based on Sector Review, 2016-2020

Sector	Baseline Estimates (\$ billion)			Climate-Change Adjusted ¹⁶ (\$ billion)			Source of Data
	Investment Needs 2016-2020	Annual Average	% of GDP	Investment Needs 2016-2020	Annual Average	% of GDP	
Transport	43.5	8.7	3.8%	50.5	10.1	4.4%	MOT
Road	29	5.8	2.5%	33.6	6.7	2.9%	
Railway	5.5	1.1	0.5%	6.4	1.3	0.6%	
Airway	4.5	0.9	0.4%	5.2	1.0	0.5%	
Maritime	3	0.6	0.3%	3.5	0.7	0.3%	
Inland waterway	1.5	0.3	0.1%	1.7	0.3	0.2%	
Power	39.6	7.9	3.5%	45.9	9.2	4.0%	MOIT, EVN
Power Plants	26.8	5.4	2.3%	31.1	6.2	2.7%	
Network Development	12.8	2.6	1.1%	14.8	3.0	1.3%	
Water & Sanitation	2.7	0.5	0.2%	3.1	0.6	0.3%	WB
Water	1.6	0.3	0.1%	1.9	0.4	0.2%	
Sanitation	1.1	0.2	0.1%	1.3	0.3	0.1%	
Other sectors¹⁷	15	3.0	1.3%	17.4	3.5	1.5%	Author's estimates
Total Infrastructure Investment Needs	100.8	20.2	8.8%	116.9	23.4	10.2%	

Source: MOT, MOIT, EVN, WB and Author's Analysis and Research

2.2. Estimates by Government of Viet Nam

The Government estimated that Viet Nam will need \$480 billion for infrastructure investments for the period in 2016-2020.¹⁸ It is believed that these estimations are based on the cumulative capital required for the proposed infrastructure projects prepared by ministries and local governments. Therefore, such estimates seem to be more of a wish list nature and are unlikely to be wholly funded (in comparison investments in 2011-2015 are just about \$63 billion).

The huge mismatch between the investment demand and the financing capability requires the government attention on the prioritization and selection of projects as well as to the streamlining project delivery in order to optimize the use of available resources.

¹⁶ ADB estimates the Climate-Change Adjusted Needs would be 16% higher than the Baseline estimates. See: ADB's publication: Meeting Asia's Infrastructure Needs (2017).

¹⁷ Including social infrastructure such as hospitals, schools and other public utilities

¹⁸ <http://thoibaotaichinhvietnam.vn/pages/nhip-song-tai-chinh/2016-12-16/viet-nam-can-khoang-480-ty-usd-cho-dau-tu-co-so-ha-tang-38958.aspx>

2.3. Estimates by International Financial Organizations

MDBs and private companies have different estimates regarding the investment needs in Viet Nam. They estimate that the country will need from \$16.7 billion to \$25 billion per year on average during 2016-2020.

Table 5- Estimates of Infrastructure Investment Needs in Viet Nam

Source of Estimation	Time horizon	Infrastructure investment needs (\$ billion)	Annual average (\$ billion)
ADB ¹⁹	2015-2025	167	16.7
WB ²⁰	Annual average	25	25
HSBC ²¹	2016-2030	259	17.2
KPMG ²²	2013-2020	170	24.2
Author	2016-2020	116.9	23.4

Source: ADB, WB, HSBC, KPMG and Author's Analysis and Research

¹⁹ Takehiko Nakao, President of ADB, <http://kinhdoanh.vnexpress.net/tin-tuc/doanh-nghiep/adb-viet-nam-can-167-ty-usd-dau-tu-cho-ha-tang-2940674.html>

²⁰ WB, 2013, Assessment of the financing framework for municipal infrastructure in Vietnam

²¹ <http://www.gbm.hsbc.com/insights/growth/filling-aseans-infrastructure-pothole>

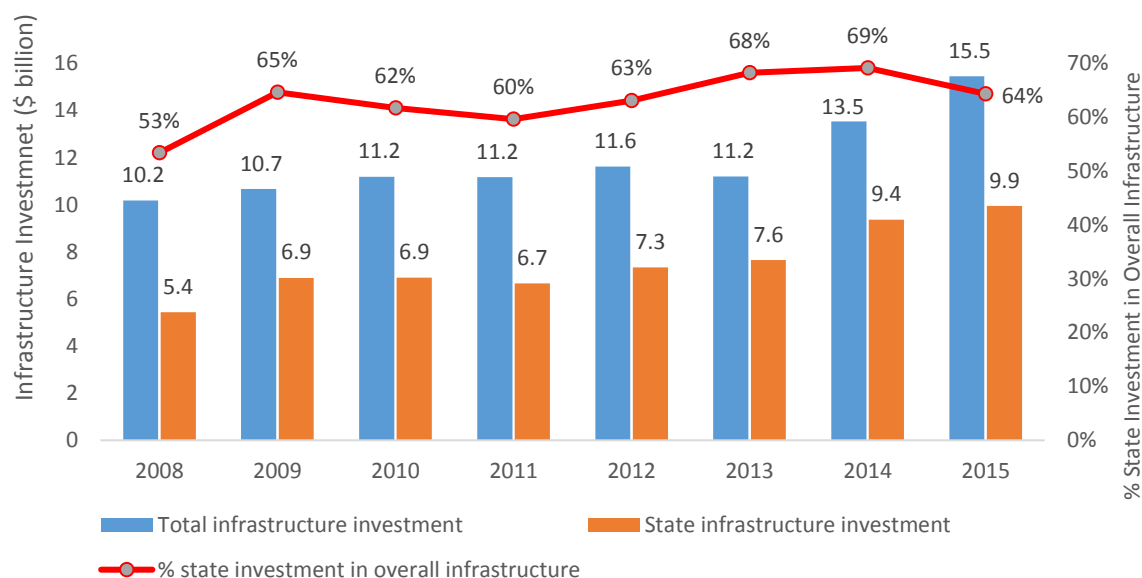
²² Lifting-the-barriers report 2015

3. Availability/ Sources of Funds for Infrastructure Development

3.1. Public Expenditure in Infrastructure

The state budget has accounted about two third of infrastructure investment in Viet Nam during 2009-2015 (Figure 9). The other third has been sourced from private finance and fees/charges. For example, in 2015, GVN has invested nearly \$10 billion from state budget to finance the country infrastructure investment valued at \$15.5 billion in total.

Figure 9- State Investment in Infrastructure in Viet Nam, 2008-2015



Source: Vietnam General Statistics Office and Author's Research and Analysis

Note: Infrastructure investment includes transport, communication, electricity, gas and water supply.

State financing for infrastructure in Viet Nam takes different forms, including direct fiscal support, which typically falls under capital or development expenditures allocating for local governments, sectors and specific projects. In addition, Vietnam Development Bank (VDB) – wholly-owned by the government – plays a significant role in providing financing to infrastructure projects under the execution and management of SOEs and local provinces. GVN also provide guarantees for State-Owned Enterprises (SOEs) and major infrastructure projects, which enter fiscal accounts as contingent liabilities (Table 6). In case of losses, such guarantees, both implicit and explicit, may translate into actual liabilities and thus push public debt higher. For instance, after state-owned shipbuilder Vinashin defaulted on a \$600 million loan, the Ministry of Finance finally had to step in by offering to guarantee a bond issuance to a group of more than 20 creditors, mostly commercial banks, with Credit Suisse as the mandated lead arranger.

Table 6- Viet Nam's Government Guarantee Undertaking (GGU)

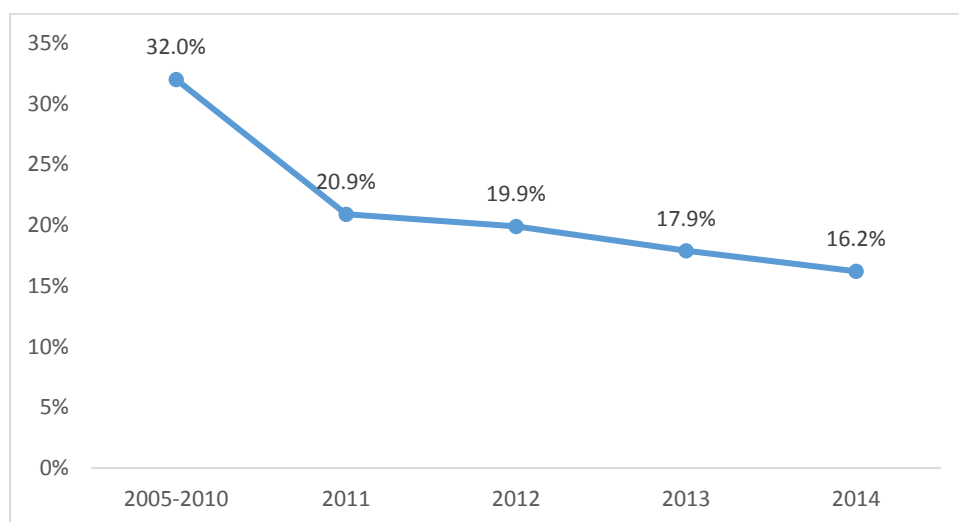
Year	Outstanding GGU volumes (\$ billion)	% year to year	% Public debt
2012	14	n/a	n/a
2013	18	128 %	20.3%
2014	21	116 %	19%

Source: MOF and Author's analysis

Unproductive allocation of public resources has led to inefficient infrastructure investment as ADB noted “*Viet Nam faces substantial challenges in efficiently allocating public finances, largely because of shortcomings in its planning and budgeting processes. Within the development budget, investment projects are not well aligned with the government’s Socio-Economic Development Plan, 2016–2020. As planning and resource allocation is limited to the annual budget, multi-year projects are often commenced without sufficient funds to complete them and little assurance that future funding will be available. This hampers the quality of investment planning and implementation. In addition, Viet Nam has progressively devolved responsibilities to its subnational governments since the mid-1990s. More than half of the state budget is now administered by subnational governments. However, many of Viet Nam’s 63 provinces are too small to enable efficient planning of infrastructure, leading to a proliferation of under-utilized airports, deep sea ports, and industrial parks. Revenue and expenditure assignments between levels of government are not clearly defined. Many spending responsibilities are not supported by adequate budgetary resources, and it is sometimes unclear which level of government is responsible for what. Although recent reforms have introduced new concepts such as gender responsive budgeting, their application through the formulation and implementation of legislation as well as the implementation of government programs and projects remains limited due to a shortage of expertise*”²³.

The proportion of public capital expenditure in State budget has been significantly reduced recently. It accounted for average 32% of State budget during 2005-2010 and declined significantly to 16.2% in 2014. The decline in public capital expenditure has been mainly due to the increasing recurrent expenditure²⁴ and debt repayment obligations of government. The downward trend indicates that less State budget available for infrastructure projects due to the structural allocation of State budget.

Figure 10- Viet Nam- % of Capital Expenditure of State Budget, 2005-2014



Source: MOF

²³ ADB, Sector Assessment (Summary): Public sector management (Public expenditure and Fiscal management)

²⁴ State budget of Viet Nam is comprised of capital and recurrent expenditure. The latter is including government expenditure on social well-beings such as healthcare, education; national security, country administration, etc.

Viet Nam had adopted the pilot of 4 medium-term financial and expenditures plans for 6 ministries and 4 provinces in the 2006-2011 period. This brought positive results: improving budget management towards greater transparency and coordination between ministries, sectors and localities. However, due to the poor analysis and forecast capacity of government agencies, the medium-term investment plans also posed challenges to incorporate factors such as fluctuating macroeconomic situation, limited legal framework and institutions, etc.

The issuance of Public Investment Law 49/2014/QH13 approved by the National Assembly on June 18, 2014 is considered as a big step in the financial planning of Viet Nam in order to create a consistent legal system and improve the efficiency of public investment. The new law has been applied with new international best practices in encouraging ministries, sectors and localities to be proactive in arranging the total investment amount for the medium term of 5 years, checking the list of investment projects including future projects and planning public investment capital allocation.

The current domestic approach to financing infrastructure is primarily done on a pay-as-one-goes basis, with projects, from the local level on up, relying on allocations from each year's central government budget for financing. Local governments send their capital needs to the central government. The Ministry of Finance (MOF) and the Ministry of Planning and Investment (MPI) in turn make recommendations for financing projects. Invariably, the amount available at the national level is insufficient to pay for all the capital requirements identified by the Provinces and cities in the country. These local projects also have to compete for scarce resources with national capital projects.

Effective coordination to ensure appropriate levels of infrastructure investment is critical in Viet Nam as responsibility for investment planning is not vested in one ministry. This often creates inefficiencies in fiscal resource management and project delivery among government agencies. By way of example, the Ministry of Transport (MOT) is the primary actor responsible for transport at the national level, but decision-making, policy formulation and implementation of transport projects are divided between a large number of national and sub-national level agencies, several of which do not fall under the remit of the MOT. There is a number of different agencies are responsible for the investment, implementation and maintenance of road projects. For national roads, MPI approves investment, implementation is the responsibility of the Project Management Units of MOT and maintenance is undertaken by the Viet Nam Roads Administration with funds channeled through the Ministry of Finance.

Competitive bidding is not prevailing in the procurement of infrastructure projects as direct awarding contracts to SOEs and vested companies is a common practice. A current investigation by MPI indicated that 69 out of 71 BOT projects in transport sector during 2011-2015 were awarded directly to the contractors without competitive bidding.²⁵

²⁵ <http://baodauthau.vn/dau-thau/nhin-lai-cac-du-an-bot-giao-thong-chi-dinh-100-nha-dau-tu-17242.html>

Box 4- Viet Nam' Strategies to Improve Public investment

Restructure public investment, firstly investment sourced from the state budget and government bonds, by modifying the regulation on management decentralization but still maintaining the principle that investment will only go to projects that go through the required procedures and only when capital sources, capital level and capital balancing capacity are clear. Urgently determine the criteria and priority order as the basis for approving or rejecting investment projects ;

Source: Viet Nam' Social Economic Development Plan 2016-2020

3.2. Tax Revenue²⁶, Fiscal Balance and Debt

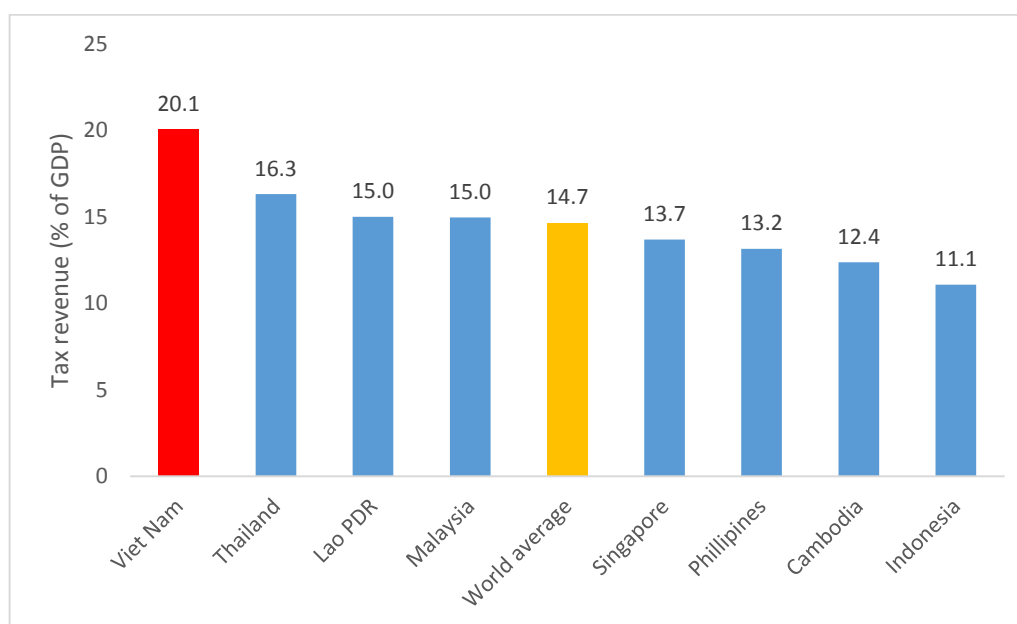
Mobilization of domestic resources through on-going tax reforms and improving public expenditure efficiency are key to the sustainable financing of infrastructure in Viet Nam. The challenges in this regards can be quoted from the recent studies of World Bank and ADB on Viet Nam's public expenditure and fiscal management. The World Bank mentions that *"new challenges have emerged including fiscal pressures from declining revenue (from 25 percent to 20 percent of GDP between 2009 and 2014), build-up of contingent liabilities, larger investments requiring medium-term planning, more robust appraisal, and new sources of financing, increased demand for fiscal information that impacts on economic and credit ratings, increased decentralization of public service delivery (local spending is more than 50 percent of total), and greater demand for public sector performance and accountability"*²⁷. While ADB mentions: *"Although Viet Nam's tax administration systems perform relatively well relative to its peers, the country has seen a significant downward trend in revenue as a share of GDP since 2010. In 2016, the budget deficit is projected to be around 5% of GDP, with lower revenue more than offsetting expenditure restraint. Viet Nam has eroded its tax base with a series of tax and tariff reductions, tax exemptions to favored firms, and incentives to attract foreign direct investment. The corporate income tax was also reduced from 25% to 22% and the value-added tax rate was recently halved for certain housing projects. Reversing the decline in the revenue to GDP ratio is vital to stemming the recent build-up in public debt and to restore fiscal policy to a more sustainable path. To address this situation, significant new tax measures will be required including, for example, the possible introduction of a capital gains tax, property taxes, or by lifting marginal tax rates for corporate and personal income. Improved administration measures can also help by reducing tax evasion and arrears, discouraging tax fraud, and streamlining value-added tax refund procedures. Profitable state-owned enterprises should also be made to pay increasing dividends"*²⁸.

²⁶ Tax revenue is the most important income source for the governments to run the country. The level of tax collection is measured by tax revenue to GDP ratio. Viet Nam has the highest tax to GDP ratio in SEA sub-region with the average 20% annually between 2011 to 2015.

²⁷ <http://www.worldbank.org/en/results/2016/04/15/fiscal-management-reform-for-middle-income-vietnam>

²⁸ ADB, Sector Assessment (Summary): Public sector management (Public expenditure and Fiscal management)

Figure 11- Tax Revenue (% of GDP) in Viet Nam and Selected countries in SEA, 2011-2015

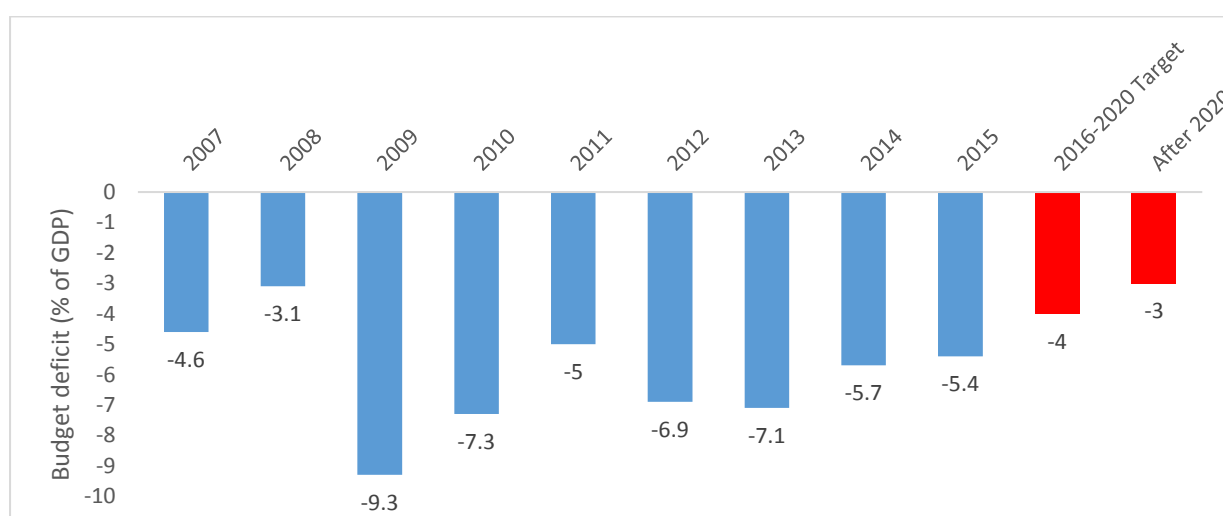


Source: <http://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS> and Author's calculation.

Vietnam recorded a Government Budget deficit about 5.4% of the country's GDP in 2015. In the last decade, Viet Nam's Government budget deficit reached a record high of 9.1% of GDP in 2009 and a low point of 3.1% of GDP in 2008 (Figure 12)

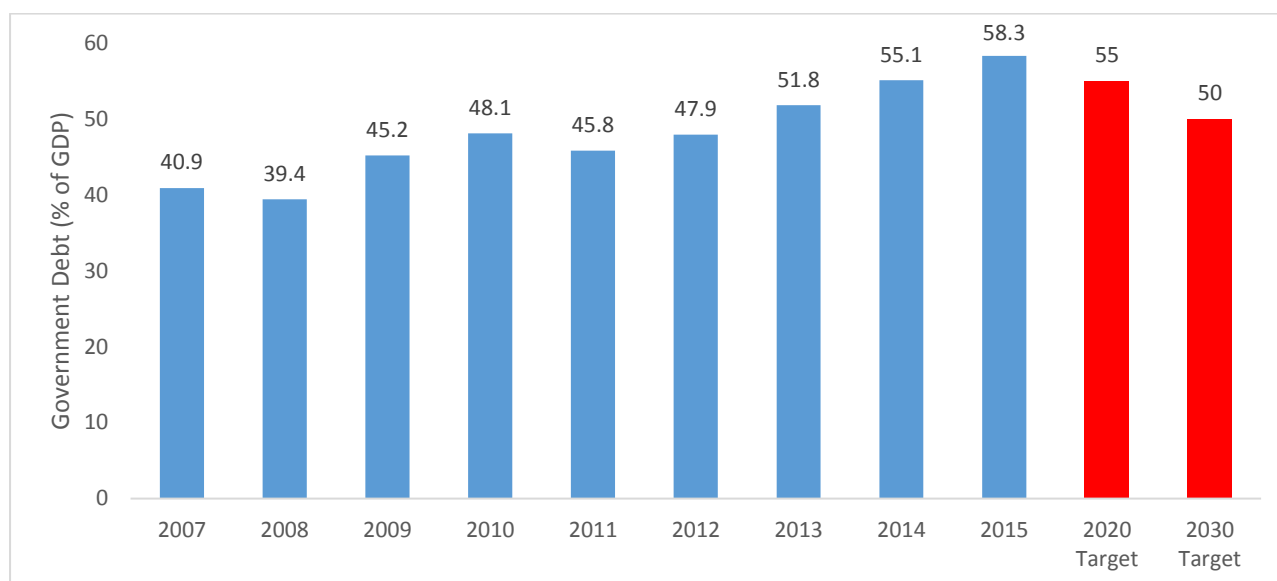
The ineffectiveness of SOEs and high levels of government subsidy and financial support over time directly lead to the increasing government spending. One of the GVN's major income sources from crude oil (which is about 30% of government income) has been severely hit by the dropping prices in recent years which contributed to higher government budget deficits (Figure 7).

Figure 12- Viet Nam's Government Budget Deficit (% of GDP), 2007-2015



Source: <http://www.tradingeconomics.com/vietnam/government-budget>

Figure 13- Viet Nam's Government Debt (% of GDP), 2007-2015



Source: <http://www.tradingeconomics.com/vietnam/government-debt-to-gdp>

GVN's budget deficits have been sizable and rising public debt requires attention. Therefore, GVN has set a target of reducing government budget deficit to around 4% of GDP in the period of 2016-2020 and about 3% of GDP after 2020. It is anticipated that economic growth will continue in Viet Nam but the government debt which now hit the maximum target by 2020 (55%) may put a ceiling on economic growth and infrastructure investment as well. For this reason, state financing for infrastructure will be constrained so other options such as stimulating private investments in infrastructure are critical. Historically, Vietnam's government budget deficit has been financed by government bonds and foreign borrowings that allow government to keep running deficits for years.

Box 5- Major targets of Viet Nam' Strategy on Public Debts period 2011-2020 and visions to 2030

By 2020: Reducing gradually public debt (including government debts, Government-guaranteed debts and local authorities' debts) to not exceed 65% of GDP in which government's outstanding debts not exceeding 55% of GDP and foreign debts not more than 50% of GDP, the minimal proportion of ODA loans must be kept at about 60% of the Government's total foreign debts.

By 2030: the public debt must not over 60% of GDP, among which, government debt shall not exceed 50% of GDP and foreign debt – not exceed 45% of GDP.

Source: Strategy on public debts and national foreign debts in the period of 2011-2020 and visions to 2030

3.3. SOEs in Infrastructure development

The state-owned companies (SOEs)²⁹ including state-owned banks play important roles in all infrastructure sectors in Viet Nam. While the existence of these SOEs makes it easier for government to channel resources directly to certain infrastructure projects, their structure and procurement remain inefficient. Although the equitization³⁰ and divestment of large SOEs has been accelerated but it has not yet created a big change in corporate governance in these companies, and the proportion of large SOEs offerings to external investors is still modest.³¹

In relation to the roles of SOEs in infrastructure development in Viet Nam, ADB³² noted that: *“While state ownership has shrunk in commercial sectors of the economy, government plans have continued to emphasize the importance of retaining control over many ‘strategic sectors’ particularly those sectors related to public infrastructure and service delivery (i.e. electricity, water supply, telecommunications, postal, ports, and airports). These sectors are prone to natural monopolies and oligopolies, so in many cases a continued government role may be necessary. However, while some of these SOEs have been partially equitized, few operate on strict commercial terms with management independence, profit orientation, hard budget constraints, and accountability for results. These characteristics are essential for improved SOE performance as it forces SOEs to meet their costs of capital and divest any activities that are not commercially viable (ADB 2012). Improving SOE performance in these sectors will rely not just on partial equitization but on overhauling the government’s competition policies, regulatory oversight and corporate governance standards to lift accountability for results. Unfortunately, progress on this front has been slow. The poor quality infrastructure services provided by Viet Nam SOE’s drive up the cost of doing business, lower private sector investment, and divert government funds away from more productive activities.*

Complicating the task of reforming service delivery SOE’s is the difficulty in judging their performance, given their competing often complex mandates. For example, some infrastructure SOE’s make substantial profits while providing reasonably priced services. But often, outside of public view, this occurs at the cost of absorbing large amounts of scarce capital stock on which they provide very low returns, acting as a drag on economic growth. Similarly, profitability within some service providers comes at the expense of limited coverage, with service delivery focused on high density, low cost

²⁹ The Vietnamese government defines SOEs as enterprises with 100% state ownership. The General Statistical Office (GSO), however, uses a broader definition to include any enterprises in which the government owns 51% or more of the charter capital. As of end-2013, the government reported 796 SOEs while the GSO provides statistics of 3,135 companies that by commonly applied definitions would be SOEs. However, closed to half of these are not economically active. They contributed to 32.2% of GDP, 16.3% of industrial output and 33.3% non-oil domestic budget revenue. These SOEs' total assets reached 2,8 trillion VND (127.5 billion USD) or 74% of GDP while total debts reached 1.5 trillion VND equivalent (67 billion USD) or 39% of GDP (Source: OECD, *State-Owned Enterprises in Asia: National Practices for Performance Evaluation and Management*, 2016)

³⁰ In Vietnamese context, equitization is a process of transforming an SOE into a joint-stock company and equitization is not always privatization.

³¹ For example, State retains 75% of shares of Vietnam Airlines after its equitization.

³² ADB, *State-Owned Enterprise Reform in Viet Nam: Lessons Learnt and Future Directions*, Background paper prepared for the Viet Nam Public Finance Partnership Group High Level Meeting (July 2015).

regions. The profitability of other SOE's is often eroded by a requirement to deliver services into non-commercially viable regions. These activities, often referred to as public service obligations (PSOs), include delivering services at below cost recovery levels or to remote populations where commercial services are often not commercially viable. If properly identified, contracted and funded, delivering these PSOs should not reduce SOEs' profitability. The reality, however, is that PSOs in Viet Nam continue to be haphazardly imposed, rarely costed, and unfunded. As a result, infrastructure SOE's are forced to operate with conflicting mandates, making it very difficult for SOE management and directors to exercise their responsibilities in a fiscally responsible, efficiency promoting, manner".

GVN has approved the SOE equitization plan for the period 2016-2020 in which the State will retain certain levels of ownership in SOEs in a wide range of infrastructure sectors but overall at a lower level.³³ The percentages are as follows:

- State will retain 100% of shares of SOEs in power transmission, railway infrastructure, air traffic control services;
- State will retain more than 65% of shares of SOEs in aviation operation and management, oil & gas exploitation;
- State will retain from 50% to 65% of shares of SOEs in air transport, telecommunication services with network infrastructure, retail electricity;
- State will retain less than 50% of shares of SOEs in public utilities, water and sanitation.

3.4. ODA

Viet Nam has been one of the largest ODA recipient countries in the last decade. Currently, Vietnam is having relations with 51 international donors, of which 28 bilateral donors and 23 multilateral donors, providing regularly ODA to Vietnam. Between 1993 and the end of 2014, total amount of ODA loans committed by donors to Vietnam reached \$ 85.2 billion. The signed ODA loans amounted to USD 69.1 billion, equivalent to 81% of the committed amount and total disbursed ODA was USD 48.2 billion, equal to 70% of the signed loan amount.³⁴

However, the development financing landscape is changing as stipulated in the ADB country strategy paper (2016-2020): *"Viet Nam's rising economic prosperity is impacting its development financing. Following attainment of lower-middle-income status, numerous bilateral donors have departed, or announced departure plans. This has led to a reduction in grant assistance from 0.5% of GDP in 2010 to an estimated 0.1% of GDP in 2015. Similarly, concessional loan disbursements have fallen from an estimated 4.6% of GDP in 2010 to 2.7% of GDP in 2015. Viet Nam is scheduled to graduate from concessional borrowing from both the World Bank (1 July 2017) and ADB (1 January 2019)".*

Viet Nam secures a substantial portion of its infrastructure development funding from Official Development Assistance (ODA), including from the Multinational Development

³³ Decision 58/2016/QĐ-TTg dated on 28/12/2016.

³⁴ Vietnam's presentation at the Policy Dialogue on Infrastructure Financing Strategies for Sustainable Development in South-East Asia. 29-30 August 2017, Manila, the Philippines

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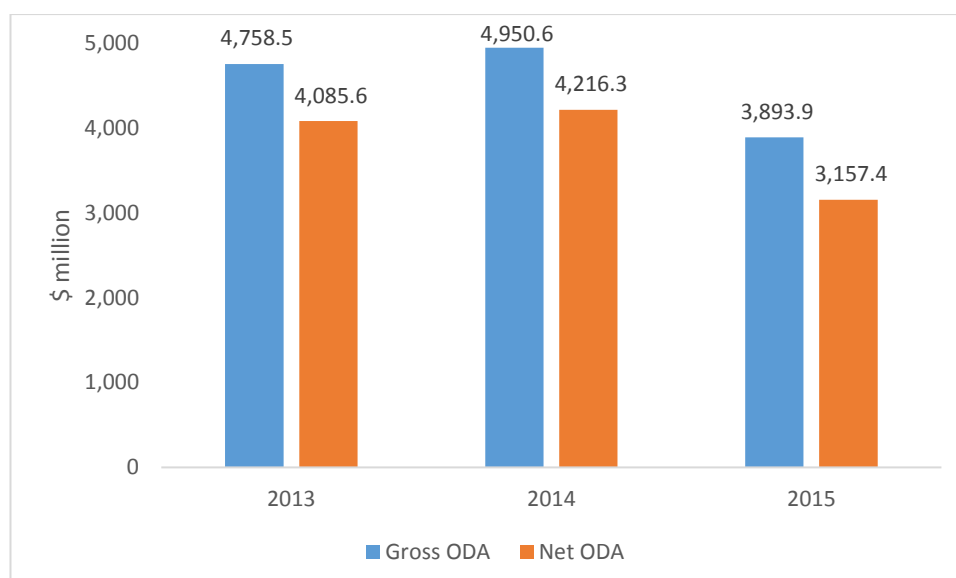
Banks (MDBs) primarily the World Bank (WB) and Asian Development Bank (ADB) and from bilateral donors. The annual average has increased from \$2.4 billion between 2000 and 2009 to \$3.7 billion between 2010 and 2014, which is the equivalent of 2.4% of GDP (Table 8). The total ODA commitment peaked in 2009 with but has been on a downward path since then (Figure 14).

Table 7- Net ODA Flow to Viet Nam, 2000-2014

	2000-2009	2010-2014	% of GDP
	Annual averages (\$billion)	Annual averages (\$billion)	(2010-2014)
Net ODA Flow	2,407	3,710	2.4%

Source: OECD, *Development aid at a glance*, 2016, WB data and Author's calculation

Figure 14- Gross and Net ODA³⁵ flow to Viet Nam, 2013-2015



Source: https://public.tableau.com/views/OECDDataAidatagancebyrecipient_new/Recipients?:embed=y&:display_count=yes&:showTabs=y&:toolbar=no?&:showVizHome=no

MDBs, especially the World Bank (WB) and the Asian Development Bank (ADB) have typically focused on infrastructure development – besides poverty reduction - as a main pillar of their involvement in Viet Nam. The WB maintains a relatively large funding program for Vietnam through International Development Association (IDA) (i.e. on concessional terms).³⁶ As of September 2016, the World Bank has provided \$22.5 billion in grants, credits and concessional loans to Viet Nam.³⁷ The portfolio concentrates on infrastructure, including transportation and urban development, rural development,

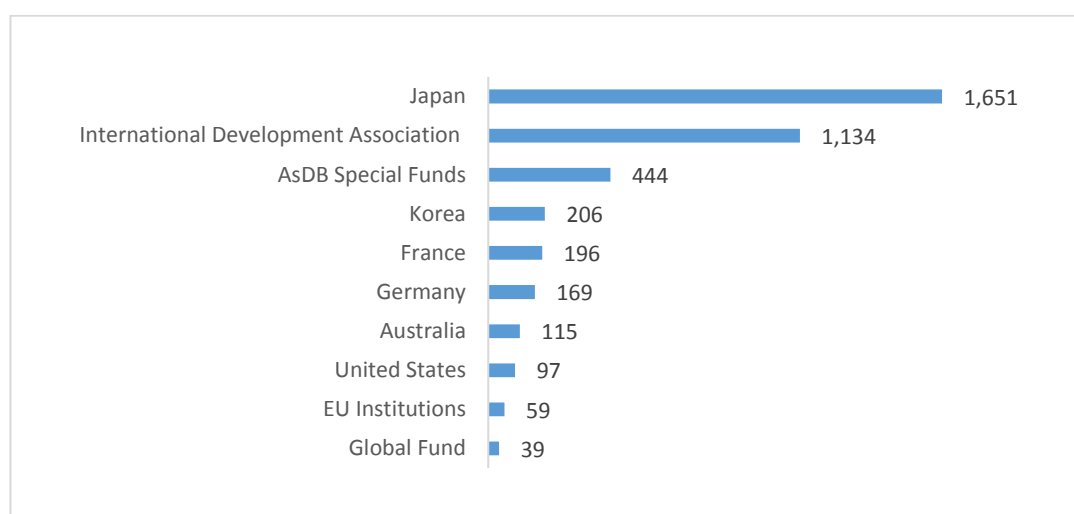
³⁵ Gross ODA is the amount that a donor actually spends in a given year. This figure becomes net once repayments of the principal on loans made in prior years (but not interest) are taken into account, as well as offsetting entries for forgiven debt and any recoveries made on grants (OECD).

³⁶ IDA credits carry no or low interest charges

³⁷ <http://www.worldbank.org/en/country/vietnam/projects>

energy, water resources management, public administration reforms, finance, education, health and social services, and environment. The ADB has provided a cumulative lending, grant and technical assistance of USD 15.2 billion to Viet Nam from 1993 to end of 2015. The transport and telecommunications account for the largest share of 33.5% of cumulative lending and grant (\$5.1 billion), followed by energy with 17.8% (\$2.7 billion) and water and other urban infrastructure and services with 10.6% (\$ 1.6 billion)³⁸. Both the WB, through the International Finance Corporation (IFC), and the ADB, through its Private Sector Group, offer debt and equity for private sector projects in a wide variety of business sectors. Among the bilateral donors providing ODA in Viet Nam, Japan is the largest one followed by Korea, France, Germany, Australia and United States.

Figure 15- Top Ten ODA Donors in Viet Nam, 2014-2015 (\$million)



Source: https://public.tableau.com/views/OECDACAdataglancebyrecipient_new/Recipients?:embed=y&:display_count=yes&:showTabs=y&:toolbar=no?&:showVizHome=no

Common difficulties with ODA in Viet Nam projects include:

- Inconsistencies between the Vietnamese legal system for infrastructural construction projects with international practices and regulations of foreign donors. This has impacted the implementation and disbursement of several ODA funds.
- Differences in procedures between Vietnam and donors have delayed project preparation with the consequences that the initial project design became irrelevant in many cases. This has led to unforeseen adjustments in the project implementation stage resulting in increased costs and reduced efficiency for the project.
- ODA loans are often accompanied by donors' binding conditions such as policy and regulation reforms, limited contractors/suppliers selection, which indirectly lead to higher borrowing cost and less opportunity for domestic contractors.
- Insufficient involvement of social organizations, professional associations, beneficiaries or project affected groups.

As Viet Nam has been considered a middle-income country since 2009, it is expected that the level of ODA directed towards the country will decline in coming years, and this

³⁸ ADB Member Fact Sheet – Viet Nam

will have significant implications for investment in infrastructure. The current high level of ODA in infrastructure points towards the need to diversify the source of infrastructure financing, for example by increasing domestic funding and widening private involvement.

In this respect, it's worth noting that MDBs and bilateral donors not only make capital available for direct financing into infrastructure sectors, but also provide technical assistance for improving the mobilization of capital, setting-up regulatory frameworks and helping to establish capital market. For example, ADB has played a key role in deepening the financial sector in the country via the Financial Sector Deepening Program with the objectives of providing an enabling environment to support the development of a short-term money market, strengthening the legal and operating framework for the public debt, and enhancing investor protection. Under this ADB technical assistance, the State Bank of Viet Nam (SBV) and the Ministry of Finance (MOF) completed a human resource development plan while accounting and auditing standards were strengthened to establish the groundwork for the eventual adoption of the International Financial Reporting Standards (IFRS). The development of the capital market could lead to an increase in funding for infrastructure projects.

3.5. Local Financing Funds and Facilities for Infrastructure

Vietnam Development Bank (VDB)

Vietnam Development Bank (VDB) is the government owned development bank established pursuant to Decision 108/2006/QĐ-TTg dated 19 May 2006 to reorganize the Development Assistance Fund (DAF) and execute the state development investment and export credit policies. VDB operates on a non-profit basis and its payment obligations are guaranteed by the Government. VDB does offer favorable terms to infrastructure projects including longer tenor, but VDB has only limited funds available and lending by VDB would also involve a central government liability.

VDB's charter capital is VND5,000 billion (\$225 million). In addition to state capital allocation and ODA on-lending, the bank is allowed to mobilize capital from issuing bonds and taking loans from domestic and foreign financial institutions.

During 2006-2016, VDB has mobilized about \$22.5 billion for various economic sector projects and lent about \$9 billion (accounted for 40% of total mobilized capital) for electricity production and distribution projects. In transport sector, through on-lending ODA and loans backed by international export credit agencies, VDB has provided about \$600 million³⁹ through both equity and debt for the Ha Noi-Hai Phong Expressway project.

Local Development Infrastructure Funds (LDIF)

LDIFs initially financed by the WB are special sub-national finance institutions that were created at the provincial level with the purpose of mobilizing capital and investing in municipal infrastructure projects of each province. LDIFs were first piloted in HCMC in

³⁹ Author's calculation based on VDB website:
<http://www.vdb.gov.vn/Trangchu.aspx?ID=DETAIL&INFOID=6976>

1997 and the legal framework supporting this municipal financing vehicle has continuously been updated, most recently in 2013 (via Decree 37/2013/ND-CP) to clarify the sectors that LDIFs can invest in, delegate business decision-making to Provincial People's Committees, and allow co-financing between LDIFs.

LDIFs are expected to operate as commercial-oriented entities, raising medium and long-term capital from domestic and foreign sources, and investing in municipal infrastructure projects that will generate sufficient financial returns on investment. LDIFs can only finance revenue-generating municipal infrastructure projects located in their respective provinces.

The LDIF model has expanded to a total of 36 out of 63 provinces, mobilizing capital for infrastructure investment. Funding commitments have grown from \$40 million to approximately \$144 million as of end-February 2015 and each dollar invested from LDIFs has leveraged \$1.73 in investment from the private sector as of March 2015.⁴⁰

In addition, the assets financed by LDIFs seem to sound. The 17 LDIFs involved in World Bank's project have generally managed to minimize non-performing loans (NPLs) even as their debt portfolios were rapidly growing. NPLs as a share of total assets for these LDIFs averaged 3.5 percent in 2015, which increased from the 0.4 percent baseline level but remains within the 5 percent ceiling specified in the project document.⁴¹

Overall, LDIFs have proven to be an important financing channel in Viet Nam but there are limits to their effectiveness as a broad-based municipal infrastructure financing vehicle. As mentioned above, LDIFs are statutorily restricted to financing revenue-generating municipal infrastructure, which leaves a major gap for infrastructure investments that do not have explicit revenue streams. LDIF professionals have developed new and better financing skills which should be transferable to help provinces in obtaining loans from the commercial banks to financing their non-revenue generating infrastructure projects.

Asian Development Bank's (ADB), Water Sector Investment Program 1

The ADB financing facility was established in 2010 with a fund commitment up to \$1 billion for the water supply needs of Viet Nam identified in their Socio-Economic Development Plan 2011-2015. The program expects to leverage more than \$1.7 billion from private investors in the water sector. The program's terms are flexible and can be tailored to individual project needs. The program is expected to end in 2020, unless extended.

To date, the loan disbursement progress is however slow as the cumulative disbursement value is about \$100 million⁴². One of the most challenges is that applicants for funding from the ADB facility have to demonstrate they have the ability to pay a loan back from water tariffs, which are currently not enough to cover the operations, maintenance and debt service.

⁴⁰ MOF, LDIF assessment report

⁴¹ <http://documents.worldbank.org/curated/en/308961484078816374/pdf/ICR00003993-12272016.pdf>

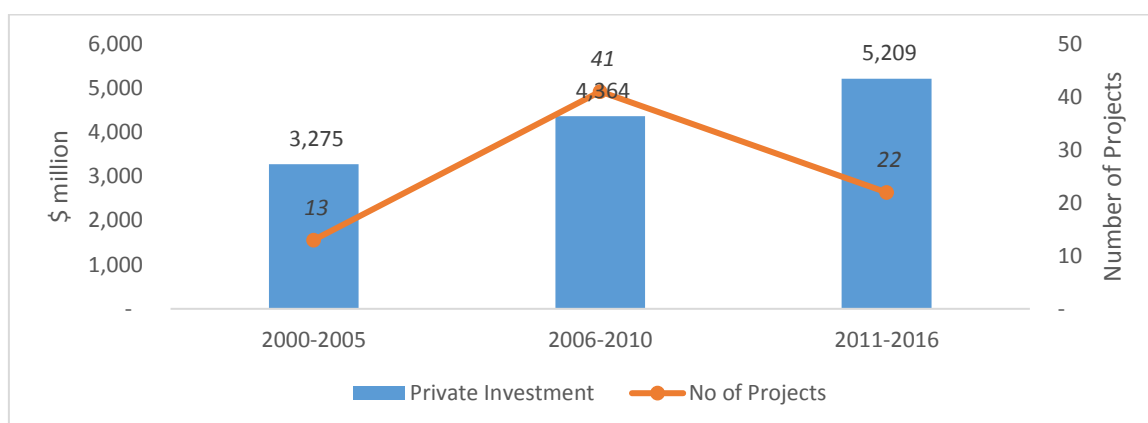
⁴² Author's estimates based on existing tranches of ADB's Water sector investment program in Viet Nam

3.6. Private Financing and Public- Private Partnership (PPP)

In recent years, Viet Nam's growing economy and socio-economic development has led to an increased need for investment in infrastructure projects, as well as the need to augment capacity for the provision of public services. At the same time, GVN has been facing financing challenges with an increasingly constrained state budget and limited ODA available. In that context, private financing, mainly through Public-private partnerships (PPPs), has become a significant channel for infrastructure development in Viet Nam although the emergence of private financing and PPPs in Viet Nam has been relatively slower than expected.

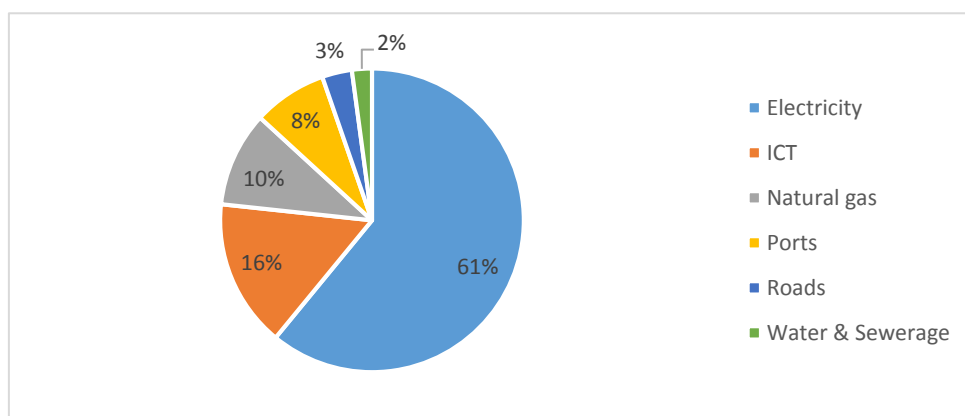
Between 2000 and 2016, Viet Nam has attracted about \$12.85 billion from private investment in 76 infrastructure projects mainly in electricity (61% of the total or \$7.83 billion) and ICT (16% of the total or \$2.02 billion). Private investment in infrastructure in Viet Nam rose from \$3.3 billion between 2000-2005 to \$4.4 billion and \$5.2 billion between 2006-2010 and 2011-2016, respectively.

Figure 16- Private Investment in Infrastructure in Viet Nam, 2000- 2016



Source: World Bank, PPI Database

Figure 17- Private Investment by Infrastructure Sectors in Viet Nam, 2000-2016



Source: World Bank, PPI Database

In the Vietnamese legal system, the Investment Law, the Public Investment Law, the Bidding Law, the Construction Law, and the Law on Public Debt Management are the

main highest bodies of law that govern investment in PPP for infrastructure projects and the provision of public services.

The most recent and main legal document specifically governing PPP projects is Decree No. 15/2015/ND-CP issued by the Government on February 14, 2015 (Decree No. 15). Decree No. 15 is aimed at improving and streamlining the legal framework. This Decree supersedes past legal documents, particularly the Decision No. 71 on pilot investment under the PPP mode, and Decree No. 108 on Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO) and Build-Transfer (BT) projects.

Decree No. 15 was designed to provide basic principles and general regulations to ensure flexibility for PPP projects of different scales and in different areas/sectors. Specifically, Decree No. 15 consolidates the current regulations concerning such projects and addresses issues, inconsistencies and difficulties in their implementation. In addition, it specifies other forms of project contracts, including: Build-Own-Operate (BOO), Build-Transfer-Lease (BTL), Build-Lease-Transfer (BLT), and Operate-Manage (O&M), adding to the variants of “BOT” structures available in Vietnam since the 1990s.

In general, Decree No. 15 inherits the incentives, guarantees and assurances as provided in the current regulations on corporate income tax incentives; incentives for goods which are imported to implement projects; incentives on land use fees and land rent; taxes applicable to contractors; the right to mortgage over assets; the right to buy foreign currency and remit capital abroad, profits and proceeds from investment liquidation; assurance for the supply of public services; and assurance for rights of ownership over assets.

However, Decree No. 15 fails to settle some of the issues that impact bankability. Specifically, it does not provide for the provision of Government guarantees on minimum revenue. Also, amid concerns over sources of foreign currency at the national reserve, the assurance for the balance of foreign currency can only be granted to certain important projects as made eligible under certain Government decisions and programs.

As guarantee for minimum revenue is one of the most important requirements to foreign investors and lenders, a worthwhile option would be for the Government and relevant ministries to review and provide specific legal basis for such a guarantee, whether in the implementing circulars to be issued, or on a project-by-project basis. These guarantees would nevertheless be carefully monitored and assessed to avoid creating unmanageable fiscal risks.

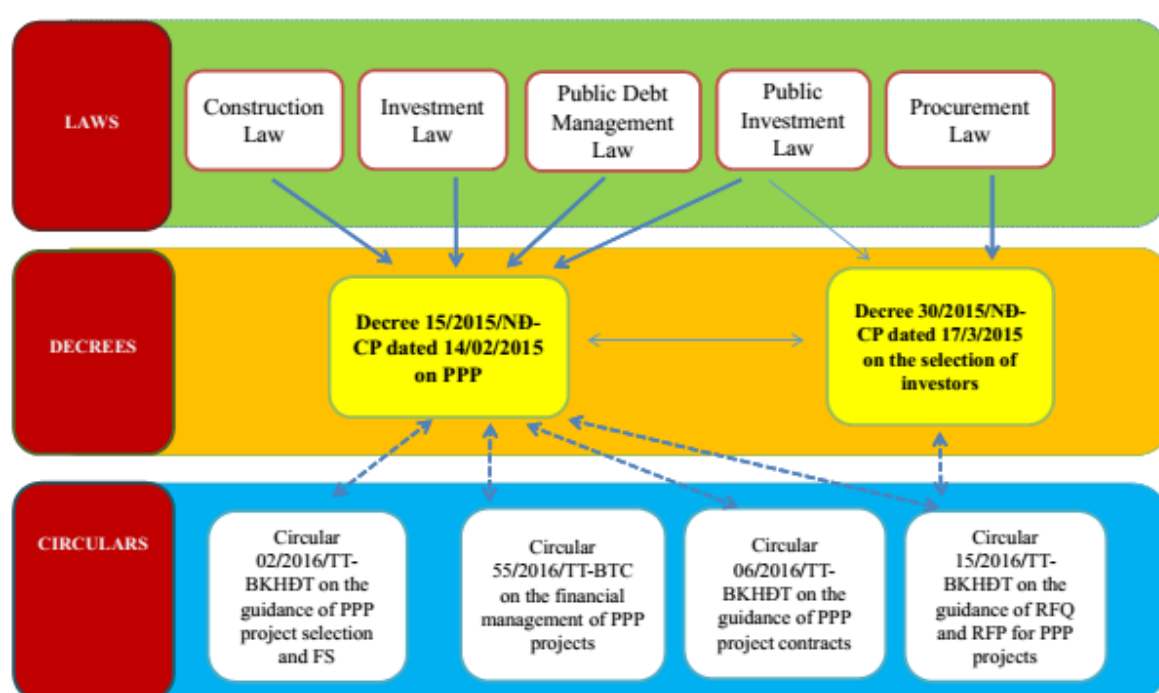
From a lender’s perspective, Decree No. 15 creates a more flexible mechanism for the lender to exercise its project step-in rights.⁴³ Compared to the current regulations, Decree No. 15 adds that the agreement on project step-in right must be made between the lender and the authorized State agency or between the lender and the parties to the project

⁴³ Step-in rights are rights given to lenders in project financed arrangements to “step in” to the project company's position in the contract to take control of the infrastructure project where the project company is not performing.

contract. Also, the lender and authorized State agency can decide the time to sign the agreement on project step-in right. It appears to mean that the lender can directly enter into an agreement on step-in right with the authorized State agency. In such case, however, Decree No. 15 does not discuss how to address any inconsistency between this agreement on project step-in right and the provisions on project step-in right of the lender under the project contract and loan agreement.

The issuance of Decree No. 15 and a number of related guidance circulars is a significant development in the PPP framework in Vietnam. This developing framework still leaves a number of issues uncertain, or too general for both public and private sectors. In the meantime, MPI is going to review and amend Decree 15 as it happens.

Figure 18- PPP Legal and Regulatory Framework of Viet Nam



Source: MPI

The GVN has recognized the importance of financing facilities to support its PPP program. Currently, there have been two key initiatives: one is Project Development Facility (PDF) and the other is Viability Gap Funding (VGF).

First, the GVN initiated the formation of a Project Development Facility (PDF) with the help of development partners (ADB and AFD) to make available resources (about US\$30 million) to help Authorized State Agencies (ASAs) to structure sound PPP projects. The PDF resources will assist Authorized State Agencies (ASAs) on grant basis to procure technical advisory services in the preparation and transaction execution of a PPP project. PDF project work will include: (i) pre-feasibility studies to identify candidate PPP infrastructure projects; (ii) project feasibility analysis; and (iii) transaction advisory services. It is meant to encourage ASAs to follow international best practices in PPP project development and rely on sound analysis to inform infrastructure investments. The

PDF is envisioned to be a revolving fund, replenished by costs reimbursed by winning investors of PPP projects. Although the PDF was initially set-up in 2013 but its disbursement procedure has just been approved by MPI recently on 19 April 2017.

Second, a Viability Gap Funding (VGF) is envisaged because a lot of infrastructure projects would be non-viable without public support in Viet Nam. VGF is intended to close the revenue gap and/or reduce the capital investment for the private investors to make projects viable for private sector investment. The other objective of VGF is to leverage government grants to improve commercial viability of infrastructure projects. The VGF model study has been supported by some donors such as JICA and USAID but the VGF funding sources are yet to be identified.

Developing a bankable PPP project pipeline is one of the success factors for PPP programmes. In this regard, MPI has announced the list of 108 PPP projects with national and provincial priorities mainly focus on transport, water and waste treatment and social infrastructure. The total investment needs for this project pipeline is about VND374 trillion (\$16.6 billion) in which government is initially planned to contribute about VND120 trillion (\$5.3 billion).⁴⁴ To be bankable, projects need to be structure in such a way that investors are repaid provided they perform adequately. Investors only invest to finance local infrastructure projects if they:

- Are confident that sufficient revenues will be generated to make timely payments to shareholders and lenders;
- Believe that government will honor its contractual commitments in partnerships for example through policy legislation or tariff setting;
- Consider that the risks allocated to them are manageable or can be mitigated;
- Can expect all contracts to be enforced;
- Trust that the procurement process is fair and transparent;
- See a pipeline of projects rigorously prepared that create a reliable deal flow for projects in the country; and,
- Observe transparent budgetary, accounting and auditing process that creates incentives and confidence.

⁴⁴ MPI- Report 7647/BC-BKHĐT dated 19/09/2016 and Author's calculation.

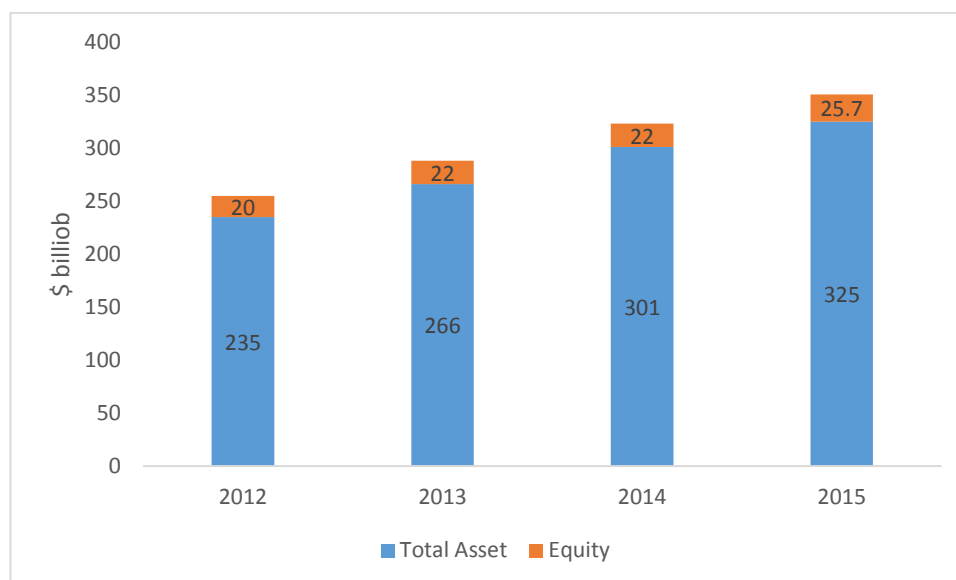
3.7. Source of Infrastructure Finance

Local banking sector

The Vietnamese banking industry has shown impressive growth in the last decade along with the country's economic performance. Overall, the Vietnamese banking industry is highly concentrated with four State-owned commercial banks (SOCBs) or former SOCBs⁴⁵ controlling around 44% of total assets⁴⁶, but also highly fragmented with the remaining 56% held by about 30 banks. The total assets and equity of the whole banking sector in 2015 are \$325 billion and \$25.7 billion, respectively (Figure 12).

As commercial banks are the main buyers of government bonds, they are considered as an indirect financing source for infrastructure projects in Viet Nam⁴⁷. However, bank's direct lending to infrastructure is limited due to the mismatch between banks' short-term liabilities (mainly deposits) and long-term lending required for infrastructure projects and project finance.⁴⁸

Figure 19- Asset and Equity of Viet Nam's Banking Industry, 2012-2015



Source: BIDV, Macro Economy and Banking Industry Overview (April 2016)

Vietnamese commercial banks are just able to mobilize a relatively small amount of long-term capital which is less than 10% their total capital.⁴⁹ However, significant portion of the short-term capital of the Vietnamese banking system is allocated to long-term loans

⁴⁵ Four SOCBs or former SOCBs include the partially- privatized Bank for Foreign Trade of Vietnam (Vietcombank), Vietnam Bank for Industry and Trade (Vietinbank), Bank for Investment and Development of Vietnam (BIDV), and Vietnam Bank for Agricultural and Rural Development (Agribank)

⁴⁶ Source: State Bank of Vietnam, 30 Sep 2014

⁴⁷ Total outstanding volume of Government bonds issued in 2015 was VND 256.253 trillion (USD 11.5 billion) and commercial banks was the biggest buyer with about 85.38% or USD 9.8 billion (MOF Portal)

⁴⁸ Project finance is the long-term financing of infrastructure and industrial projects based upon the projected cash flows of the project rather than the balance sheets of its sponsors.

⁴⁹ <http://vneconomy.vn/tai-chinh/ngan-hang-dang-mao-hiem-voi-thanh-khoan-20150913050038309.htm>

to their clients. The ratios of short-term capital to medium and long-term lending has been on the upward trend from 7.5% in 2011 to 31% in 2015⁵⁰. As a result, Vietnamese commercial banks are currently exposed to liquidity risk as they are using an increased portion of their short-term capital to lend to long-term projects.

Circular 06/2016-TT-NHNN which was issued by State Bank of Vietnam is setting a lower limit that commercial banks are allowed to provide medium and long-term loans up to 40% of their short-term funding mobilization from 2018 comparing to the limit of 60% during 2015-2016. This new regulation has helped Vietnamese commercial banks to meet Basel II requirements, however, it has decreased the long-term lending capability of the commercial banks to finance the infrastructure projects.

SOEs Lending

SOCBs dominate the market in terms of loans and deposits though their market share has eroded. Traditionally, SOCBs have been instrument of policy lending, which often includes lending programs with focus on SOEs. For example, lending to SOEs and companies with more than 50% State's shareholding accounted for 25% loan portfolio of Vietinbank in 2015.⁵¹ As such, SOCBs is a critical source of funding for SOEs and their infrastructure projects. SOCBs not only provide debt but also equity to leading SOEs in transport sector. For example, Bank for Foreign Trade of Vietnam (Vietcombank) contributing VND250 billion (\$11.3 million) or 5% of the charter capital of Vietnam Infrastructure Development and Finance Investment (VIDIFI) who is a developer for the Hanoi-Hai Phong Expressway Project and the Tan Vu-Lach Huyen Highway Project.

Over the past decade the SOCBs have evolved from specialized policy-lending vehicles to more commercially oriented financial intermediaries. However, much need to be done to reform the banking sector before it can be appropriately utilized to finance infrastructure development as described in the following section. Majority of bank income is from interest-based products rather than fee-based products. More specialized segments, such as project financing and investment banking, have a limited presence in Vietnam.

Project Finance Structure

As mentioned in the previous section, a key obstacle to private sector involvement in infrastructure projects is the inability of domestic banks to provide long-term loans in local currency. In general, they have limited experience in evaluating and extending project loans and traditionally rely on the borrower's balance sheet to extend loans.

In particular, they have a limited understanding of project finance structure, which includes "Special Purpose Vehicles" to isolate the project risk from the sponsor(s) and simplify the eventual transfer of assets. However, the international banks in Viet Nam such as HSBC, ANZ, Citibank should be able to bring project and PPP financing capacity

⁵⁰ BIDV, Macroeconomy and Banking Industry Overview(2016)

⁵¹ Source: Vietinbank Annual Report 2015, cumulative lending to SOEs and companies with more than 50% of State's share-holding was about VND 135 trillion (USD 6.8 billion)

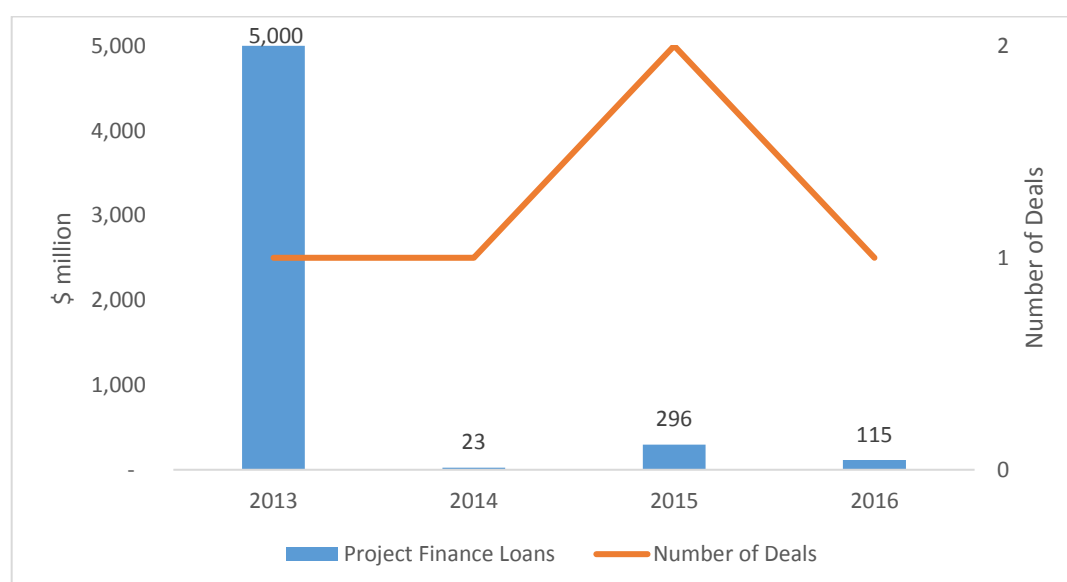
Note: Vietinbank is a SOCB and one of the biggest banks in Viet Nam

from outside of Viet Nam if there are opportunities. Providing loans to infrastructure projects in roads, hospitals and independent power producers do exist in Viet Nam, but have required either government and/or sponsor guarantees even with off-take or minimum traffic agreements. The projects were evaluated based on the tangible collateral and/or guaranteed by the GVN but not simply the project revenues.

All long-term international commercial financing that has gone into Vietnamese infrastructure projects, in the past, have been done under Export Credit Agency (ECA) cover from NEXI (Japan), Sinosur (China), KEXIM (Korea), and MIGA insurance (WB). Standard structures have consisted of BOT projects benefiting from a Government Guarantee Undertaking (GGU) which is further backstopped by an ECA cover. The GGUs cover for performance obligations of Vietnamese public entities, full debt servicing principal and interest, risk of devaluation, currency convertibility, and others. Examples of major BOT projects which have recently raised commercial financing with GGUs and ECA guarantees are the Mong Duong Power Plant and the Nghi Son Refinery. For non-BOT projects, the structure consists of the Ministry of Finance (MOF) issuing MOF Guarantee which provides for 90-99% debt servicing cover. The MOF Guarantee is then backstopped by an ECA cover, or in the case of the NH20 Expressway Built and Transfer project, a MIGA Non Honoring of Sovereign Financial Obligations (NHSFO).

The largest project loans so far was recorded in 2013. The debt financing of \$5 billion is composed of direct loans of \$2.3 billion from The Japan Bank for International Cooperation (JBIC) and The Import Bank of Korea (Kexim) and total loans of \$2.7 billion from commercial banks has been arranged for the Nghi Son Refinery and Petrochemical Project in Thanh Hoa province. The project is a joint venture between Petro Vietnam (25.1%); Idemitsu Kosan of Japan (35.1%); Kuwait Petroleum Europe (35.1%) and Mitsui Chemical, Japan (4.7%).

Figure 20- Project Finance Loans- Viet Nam, 2013-2016



Source: PFI League Table, www.Reuters.com

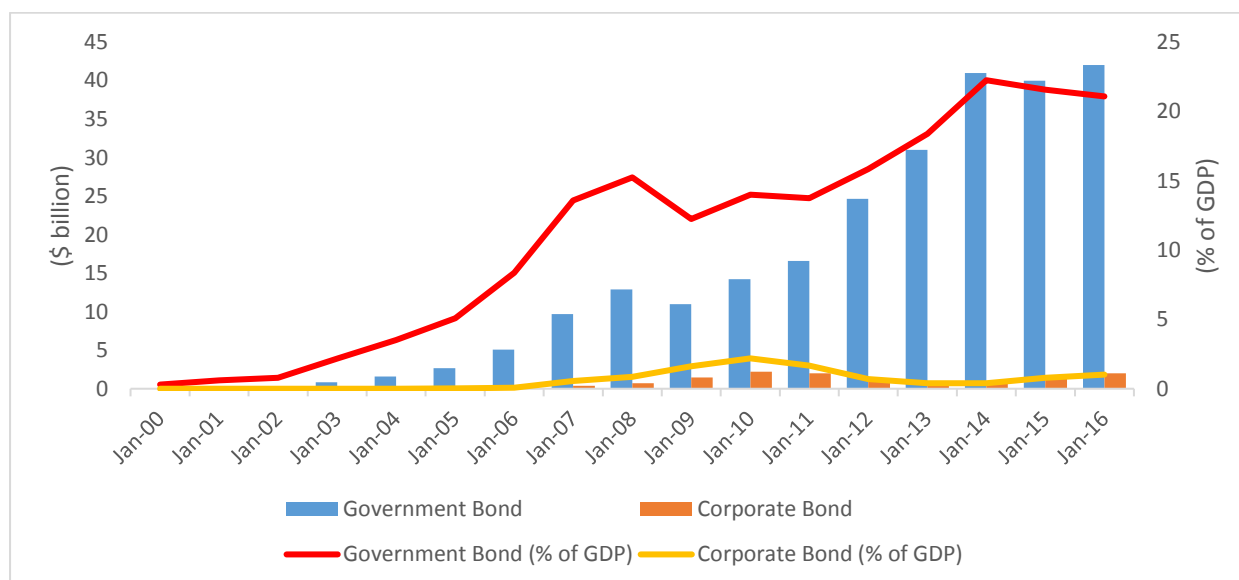
Capital markets

While domestic and international banks have traditionally played a major financing role, stricter capital adequacy requirements and maturity mismatches may constrain infrastructure lending in the future. If sufficiently developed, capital markets could complement bank financing and provide an alternative intermediation mechanism between investors and project developers.

Bond markets

The Viet Nam's outstanding bond market was \$44 billion by the end of 2016, equal to 22.11% of GDP.⁵² Currently, the structure of the bond market in Viet Nam mainly comprises government bonds for about \$42 billion accounting for 95% of the outstanding volume or 21% of GDP. Meanwhile the corporate bond sector is very limited with about \$2 billion, accounting for only 5% of the outstanding volume or 1.1% of GDP.

Figure 21- Bond Market - Viet Nam, 2000-2016



Source: AsianBondsOnline, Data as end of 2016 and Author's Research and Analysis

Issuing government bond is a traditional way of GVN to deal with its fiscal deficit. In the period 2010-2015 the GVN mobilized totally VND715 trillion (\$32.5 billion) via the government bond auctions of all maturities; this was an 18-fold increase compared to the period 2005-2010. Especially, in 2012-2013, the implementation of the electronic auctioning platform in Hanoi Exchange led to a remarkable development of the government bond sector. The total auction volume rose nearly 7-fold from 28.31 trillion VND (USD 1.3 billion) in 2010 up to 194 trillion VND (USD 8.7 billion) in 2013. The open and transparent electronic auction format on the Exchange made it in the main

⁵² AsianBondsOnline, Data as end of 2016.

issuance channel for government bonds at all maturities, with the proportion of auctions via electronic platform increasing from 49% in 2009 to 100% in 2014.⁵³

The maturity structure of the bond market is mainly short term. By the end of 2015, tenors of 5 years or less accounted for more than 70% of the total government bonds issued in that year. The bond market restructuring plan (started in 2012) is carried by MOF with the increasing issuance of 10-year and 15-year tenors, with the aim to encourage the participation of the longer-term institutional investors like insurance. The year 2015 also witnessed the first issuance of Vietnam's longest maturity bonds (20-year and 30-year bonds).

Commercial banks are still the major investors in the market with more than 76% share in 2015, while the government giant financial corporations like the Social Security of Vietnam, State Capital Investment Corporation (SCIC) and Depository Insurance of Vietnam (DIV) hold around 15%.⁵⁴ Due to recent government initiatives and policies, the holdings of insurance companies increased from 1.18% (2011) to 8.42% in 2015. Foreign investors hold 6%, and local investors, including institutional ones, hold around 94% of the total bond market. According to the Resolution 78/2014 of the National Assembly, the government will not issue government bond with maturity less than 3 years. One of the reasons for the government is to restructure its debts and reduce capital costs (e.g. bond proceeding is not yet disbursed to projects but bond repayment is due). From April 2015, the government only issues bonds with maturity of 5, 10 and 15 years and bonds with the shortest maturity of 5 years account for 60% of total bonds issued. Since liquidity is still a big issue, buying long maturity government bond will be limited in the current banking business conditions.

Despite remarkable development of the bond market, especially in the government sector, in comparison with other countries, Vietnam's bond market is still small with limited types of products, focusing mainly in the short-term maturities. The structure of the market is not complete, the link between the specialized government bond trading platform in HNX and the interbank system under the State Bank of Vietnam (SBV) control has not yet been established. Meanwhile, derivatives products and the derivatives market, which is an important supporting market for the effective operation of the underlying stock and bond markets, are expected to be put into operation by 2017. The investor structure is undiversified, the participation of the long-term institutional investors like insurance companies or investment funds is still very modest in comparison with the overwhelming proportion of commercial banks, who prefer short-term maturities. Due to this, the issuance and trading of long-term bonds is more difficult and illiquid.

With regard to the corporate bond sector, the issuers are mainly the local big commercial banks, SOEs in finance, real estate and industrial fields, and some leading local private corporations. Issuance is often by private placement; maturities of 3-5 years account for

⁵³ Report on 5- year establishment of the specialised trading platform for government bond market 2009-2014 (Hanoi Stock Exchange, 2015)

⁵⁴ Total assets of SCIC by end of 2016: VND 66,015 billion or \$ 3 billion and DIV by May 2016: VND 30,680 billion or \$1.4 billion

60%; and the maturities of more than 5 years account for 30% of the total issuance volume. The offering rate is often equal to the 1-year deposit rate (the average of the largest four state-owned commercial banks) plus a spread of 2-5%.

One of the reasons for the limited development of the corporate bond sector is the lack of a system of financial institutions acting as investment bankers to underwrite and as market-makers to match demand and supply for the corporate bond issues and create liquidity in the market. Besides, there are no professional credit rating agencies (CRAs) in Viet Nam although the Decree on the organization of the CRAs in Vietnam was issued by the end of 2014 by MOF.

As part of the GVN's initiatives to manage the public and government debts, the Strategy on public debts and national foreign debts in the period of 2011-2020 and visions to 2030 has set out the maximum volume of government bond issuance for the period 2016-2020 to VND500 trillion (\$22.5 billion), of which VND350 trillion (\$16.8 billion) will be spent on development investment and the rest for refinancing debts. This target imposes a ceiling on bond issuance as government will raise as much as \$3.4 billion via government bonds on annual average for infrastructure projects, contributing to just only 14.5% of the country's infrastructure investment needs⁵⁵.

So far, there are very few local infrastructure-related companies issuing bonds. In 2015, CII Bridges and Roads Investment Joint Stock Company (CII B&R) has successfully issued its corporate bond valued at VND1,200 billion (\$55 million) with five-year tenor. Since the government stopped issuing shorter-term bonds, corporate bonds maybe a good alternative for investors, most of whom prefer short-term bonds in Vietnamese capital markets although this would create refinancing risks for long-term infrastructure projects.

In the current conditions, debt is more difficult to arrange than equity. The equity markets are still in the early stage of development. However, the debt markets in Vietnam are even more undeveloped. This limits considerably the sources of long term finance available to infrastructure investments.

Stock market

For the past 20 years, Vietnam has developed a securities market with two exchanges in HCMC and Hanoi. The main representative index for two exchanges are VN-Index and HNX Index which peaked at 1,170.76 points and 459.35 points respectively (in March 2007). By end of 2016, the VN-Index was at 664.87 while HNX Index stood at 80.12.

The market capitalization with more than 700 listed companies has reached US\$ 51.9 billion or equivalent to 26.8% of GDP, attracting 1.6 million domestic and international investors by end of 2015. However, most of largest companies active in local infrastructure sector including SOEs are not listed. For example, BOT companies on transport, power and water sector are formed under joint ventures, joint-stock company or private management without plans to list on the stock exchange.

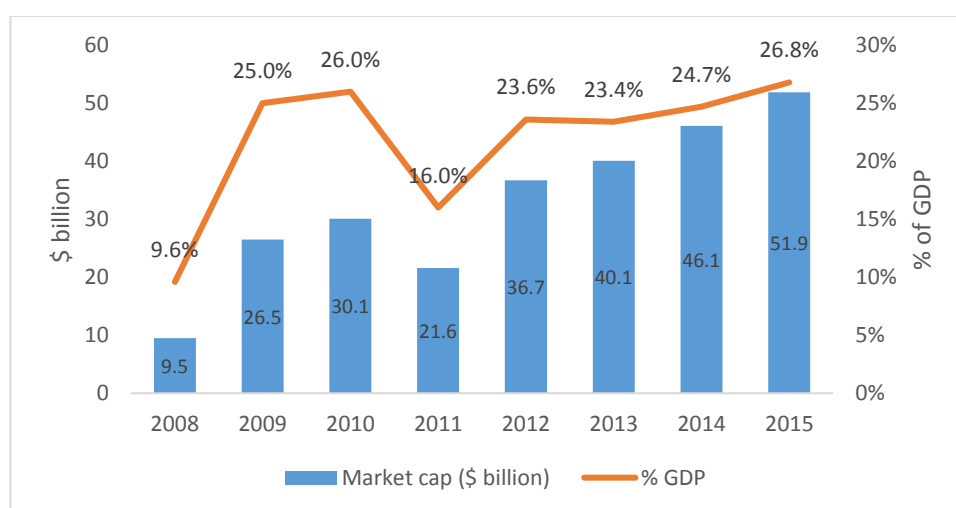
⁵⁵ The author estimates that Viet Nam will need about USD 23.4 billion for infrastructure investment annually for the period 2016-2020 (See Table 5).

The stock market is characterized by a large number of listed companies with low average capitalization, with about 50% of the listed companies having charter capital of less than VND 100 billion (US\$ 4.5 million). Many listed companies in the banking and insurance areas have large capitalization but low free float. On the stock exchanges, products are undiversified, mainly consisting of stocks and government bonds, with few investment funds listed.

Vietnam is planning to merge the Hanoi Stock Exchange and HCM City Stock Exchange into the Vietnam Stock Exchange to improve transparency and attract more foreign investors. The merger will be carried out in 2017 and expected to be completed in 2018 and make the Vietnam stock market more competitive versus other regional countries that just have a single bourse.

Among listed companies, Ho Chi Minh City Infrastructure Investment JSC (CII) established in 2001 is considered as a leading company investing on infrastructure. The company has a chartered capital of about US\$ 15 million and a diverse portfolio of infrastructure investment projects focusing on road transport, water supply and real estate infrastructure.

Figure 22- Viet Nam Stock Market Capitalization, 2008-2015



Source: World Bank and Author's analysis

Offshore markets

The GVN has successfully raised funds through its offshore bond sale. The first offshore bond issue was worth \$750 million in 2005, the second and the third offshore bond sale worth \$1 billion each in 2010 and 2014 respectively. All offshore bonds were issued with the term of 10 years and varied coupons from 4.8% to 6.9%.

The Government lent all the money from the first international bond sale to its SOE- Vietnam Shipbuilding Industry Group with the ambition plan to develop the shipping industry of Vietnam. Through the second international bond sale, the Government has

used part of the proceeds to lend to other major SOEs and investment projects such as Vietnam National Oil and Gas Group, Vietnam National Shipping Lines, Song Da Corp. and Lilama Corp, Dung Quat Oil Refinery, Xekaman 3 and Hua Na hydropower stations, and purchase of seagoing vessels. The third international bond sale was aimed at restructuring public debts.

Vietnam Joint Stock Commercial Bank for Industry and Trade (Vietinbank) - one of Vietnam's top commercial banks has issued its first offshore bond offerings worth \$250 million in 2012 while others such the likes of Vietcombank and BIDV are considering tapping into offshore bond markets.

Some top Vietnamese private enterprises in real estate, manufacturing have successfully issued corporate bonds in offshore markets. For example, Vingroup successfully completed a \$115 million of its offshore convertible bond issue announced in March 2012 – increasing the total raised from its five-year convertible bonds due in April 2017 to \$300 million.

In 2011, Ho Chi Minh City Infrastructure Investment JSC (CII) which is considered as a leading listed company in the infrastructure sector, has successfully issued \$40 million of convertible bonds to Goldman Sachs, marking a milestone for Vietnamese companies in mobilizing capital from overseas private investors.

Institutional investors

There are about 40 local and international asset management funds, including equity investment funds, insurance companies and sovereign wealth funds with total assets of more than \$4 billion.⁵⁶ However, few investment funds focus on infrastructure or hold a portfolio of infrastructure-related assets⁵⁷. This is reflected that the local markets lack of “quality” infrastructure assets that can meet the investment requirements of the institutional investors.

Local credit rating agencies

The financial markets in Vietnam are under-developed for a number of reasons. One of the missing piece is local credit agencies. Local credit rating agencies can help regulate and develop financial markets and enhance transparency in the credit markets in Vietnam.

In the absence of local credit rating agencies in Vietnam, companies and local governments in Vietnam find it very difficult to gain access to loans from international financial institutions or debt markets. The ratings are important to facilitate the monitoring of the credit soundness of various local borrowers through a set of well-defined rules. Many companies and local governments rely on institutional investors and

⁵⁶ Author's source.

⁵⁷ VinaCapital Infrastructure Ltd is the only fund investing in infrastructure and infrastructure-related assets in Viet Nam, namely energy, transport, telecommunications, industrial parks and water/environmental utilities. The Net Asset Value (NAV) of the fund by end of 2016 is \$79.5 million (Source: VNI December 2016 Update [PDF, 251.28kB] - <http://vni-fund.com/report/>).

foreign investors to purchase their debt, and these investors rely heavily on the credit ratings given by the credit rating agencies.

Securitization schemes

In many developed markets and emerging economies, various types of securitization transactions⁵⁸ can be used to assist in meeting the infrastructure financing needs. However, Viet Nam's current laws and regulations do not adequately allow for the use of modern project financing techniques including project revenue bonds and securitization. While a proven method of finance employed in many countries is to securitize revenue flows from existing assets⁵⁹ (e.g. toll roads, mortgages, water treatment plants) as a means of financing new assets, experience to date in securitizing project finance and project revenue bond is extremely limited in Viet Nam. In this context, Ho Chi Minh City Infrastructure Investment Joint Stock Company (CII) was set up with assets that included an existing toll road. In 2015, CII through its subsidiary company CII Bridge & Bridge has successfully issued a corporate bond (value of USD 55 million) using the existing toll revenue flows to partly secure the bond. This could be considered a type of securitization in the current Vietnamese context.

3.8. Climate Finance

Viet Nam's Green Growth Strategy proposes a number of mechanisms for mobilizing resources for green growth. These include the possibility of developing a national Green Growth Fund; fiscal policy reform to include eco-tax and carbon taxes; participation in market-based mechanisms (such as the Clean Development Mechanism (CDM)); and encouraging ODA and climate finance, including the Green Climate Fund.

Viet Nam has estimated that the cost of implementing the National Target Programme to Respond to Climate Change (NTP-RCC) will amount to VND1,965 billion (\$93.5 million) between 2009 and 2015. The Ministry of Planning and Investment (MPI) estimates that VND100 trillion (\$4.7 billion) will be required annually to finance climate change activities until 2020⁶⁰.

Bilateral and multilateral donors are the main source of public climate finance in Viet Nam. So far, main climate funding has been distributed via the Support Program to Respond to Climate Change (SP-RCC) with the estimation that \$240 million has been pledged by international and bilateral donor agencies towards the SP-RCC⁶¹.

⁵⁸ For example, after a project has been constructed and is performing satisfactorily, a special purpose vehicle ("SPV") could issue debt and equity securities and use the proceeds to purchase project loans from the original lender. Alternatively, at such time, the SPV could use the proceeds to refinance a project at a lower rate. In both cases, the banks and other financial institutions which originated the project financing and evaluated and took the construction and similar risks, would be paid out, thereby making these funds available to be lent to finance other projects.

⁵⁹ Asset securitization is the process whereby interests in loans and other receivables are packaged, underwritten, and sold in the form of "asset backed" securities.

⁶⁰ Status of Climate Finance in Vietnam Report, 2013

⁶¹ Status of Climate Finance in Vietnam Report, 2013

4. Conclusions and Recommendations

On the one hand, the Author estimates the total annual investment needs to be at \$20.2 billion and the climate-change adjusted figure at \$23.4 billion (Table 5). On the other hand, the current state spending on infrastructure is about \$10 billion (Figure 9). Given the state budget's constraints and likely decreasing ODA flows, the Author is in the view that the state budget (including ODA and government bonds) can fund up to 50% of the infrastructure investment requirements, leaving a shortfall of about 50% of the total funding.

To bridge the funding gap, domestic financing resources is fundamental but not enough. Viet Nam will need to implement market-based approaches to mobilize private investment in infrastructure. In addition, improving the efficiencies in project planning, resource allocation and project procurement can save government's financial resources. This report presents practical recommendations regarding the different infrastructure financing strategies that GVN should consider in order to achieve sustainable infrastructure development in the country.

However, these recommendations still require additional consultations. First, discussion and consultation among senior government officials in key ministries, state agencies and provinces is important to build broader consensus. Second, assuming the infrastructure financing strategies are acceptable, further technical design work is required to develop these concepts into practical policies, institutional mechanisms and action plans for the government consideration. Third, more research, a study mission to relevant countries, and seminars by international and local experts on key topics related to domestic resources mobilization, SOE reform, debt management, capital mobilization, PPP and infrastructure procurement among other topics, can help to build more understanding and consensus within government and state agencies, as well as with prospective investors and private sector organizations, to identify the best path forward to develop and finance infrastructure in the country. Finally, a pilot project to demonstrate the benefits of each approach will help to develop the institutional capabilities of state agencies.

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