



FAIR FINANCE ASIA

THE ASIAN WEB

Tracking Regional Financial Flows

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Fair Finance Asia is a regional network of 25 Asian civil society organizations that is committed to ensuring that the business decisions and funding strategies of financial institutions in the region respect the social and environmental well-being of the communities in which they operate. Seven countries within the region are a part of the FFA: Cambodia, Japan, India, Indonesia, The Philippines, Thailand and Vietnam.

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CONTENTS

Executive Summary	vi
Introduction	viii
CHAPTER 1: METHODOLOGY	1
1.1 Focus countries	2
1.2 Sectors in scope	2
1.3 Selected companies	2
1.3.1 Infrastructure construction companies	2
1.3.2 Fossil fuel companies	6
1.3.3 Power generation companies	9
1.3.4 Agribusiness companies	11
1.4 Types of financing	14
1.4.1 Loans	14
1.4.2 Share issuances	14
1.4.3 Bond issuances	15
1.4.4 (Managing) shareholdings	15
1.4.5 (Managing) investments in bonds	15
1.5 Financial institution financing contributions	16
1.6 Data sources	16
1.7 Timeframe	16
1.8 Limitations	16
CHAPTER 2: GENERAL OVERVIEW	18
2.1 Creditors	19
2.2 Investors	21
CHAPTER 3: FINANCIAL FLOWS TO INFRASTRUCTURE COMPANIES	25
3.1 General overview	26
3.1.1 Creditors	26
3.1.2 Investors	28
3.2 Cambodia	30
3.2.1 Creditors	30
3.2.2 Investors	30
3.3 India	30
3.3.1 Creditors	30
3.3.2 Investors	33
3.4 Indonesia	36
3.4.1 Creditors	36
3.4.2 Investors	37
3.5 Japan	39
3.5.1 Creditors	39
3.5.2 Investors	41

3.6 Philippines	43
3.6.1 Creditors	43
3.6.2 Investors	44
3.7 Thailand	47
3.7.1 Creditors	47
3.7.2 Investors	48
3.8 Vietnam	50
3.8.1 Creditors	50
3.8.2 Investors	51
CHAPTER 4: FINANCIAL FLOWS TO FOSSIL FUELS	54
4.1 General overview	55
4.1.1 Creditors	55
4.1.2 Investors	57
4.2 Cambodia	58
4.2.1 Creditors	58
4.2.2 Investors	59
4.3 India	60
4.3.1 Creditors	60
4.3.2 Investors	62
4.4 Indonesia	64
4.4.1 Creditors	64
4.4.2 Investors	66
4.5 Japan	68
4.5.1 Creditors	68
4.5.2 Investors	70
4.6 Philippines	72
4.6.1 Creditors	72
4.6.2 Investors	74
4.7 Thailand	76
4.7.1 Creditors	76
4.7.2 Investors	78
4.8 Vietnam	80
4.8.1 Creditors	80
4.8.2 Investors	82
CHAPTER 5: FINANCIAL FLOWS TO POWER GENERATION COMPANIES	85
5.1 General overview	86
5.1.1 Creditors	86
5.1.2 Investors	88
5.2 Cambodia	89
5.2.1 Creditors	89
5.2.2 Investors	91
5.3 India	92
5.3.1 Creditors	92
5.3.2 Investors	94
5.4 Indonesia	95
5.4.1 Creditors	95
5.4.2 Investors	97

5.5 Japan	99
5.5.1 Creditors	99
5.5.2 Investors	101
5.6 Philippines	103
5.6.1 Creditors	103
5.6.2 Investors	104
5.7 Thailand	106
5.7.1 Creditors	106
5.7.2 Investors	108
5.8 Vietnam	110
5.8.1 Creditors	110
5.8.2 Investors	112
CHAPTER 6: FINANCIAL FLOWS TO AGRIBUSINESS	113
6.1 General overview	114
6.1.1 Creditors	114
6.1.2 Investors	116
6.2 Cambodia	117
6.2.1 Creditors	117
6.2.2 Investors	119
6.3 India	121
6.3.1 Creditors	121
6.3.2 Investors	122
6.4 Indonesia	124
6.4.1 Creditors	124
6.4.2 Investors	126
6.5 Japan	128
6.5.1 Creditors	128
6.5.2 Investors	130
6.6 Philippines	132
6.6.1 Creditors	132
6.6.2 Investors	134
6.7 Thailand	136
6.7.1 Creditors	136
6.7.2 Investors	138
6.8 Vietnam	140
6.8.1 Creditors	140
6.8.2 Investors	142
CHAPTER 7: REGIONAL TRENDS AND STRATEGIC OPPORTUNITIES	145
7.1 Summary of findings	146
7.1.1 Creditors	146
7.1.2 Investors	147
7.2 Strategic opportunities	147
7.2.1 Japanese financial institutions as potential drivers of sustainable finance in Asia	147
7.2.2 Sector-based regional collaboration	148
References	150
Annexure	159

EXECUTIVE SUMMARY

With great influence comes great responsibility. This certainly applies to Japanese financial institutions identified in this study providing both credit and investing towards some of Asia's largest companies operating in high risk sectors. These financial institutions have the potential to catalyze more sustainable and responsible business practices as well as enhance environmental, social, and governance (ESG) transparency and accountability in Asia. However, the change needs to begin within their own institutions, evidenced by policy changes that clearly reflect their position on critical issues such as climate change, environmental degradation, gender, human rights, corruption, and others. Policy change to address these critical issues is the first step towards progress that's accountable and measurable.

In recent years, there has been some gradual changes in the policies of some of the largest Japanese financial institutions which are beginning to pay greater attention to ESG compliance. While these are welcome changes, acceleration of implementation is key if we are to collectively meet commitments towards the SDGs and the Paris Agreement to limit the global temperature increase to 1.5 degrees Celsius.

Making fossil fuels financing history: Asia's reliance and appetite for coal is evidently fueled by the vast amount of finance continuously flowing towards this sector with no clear end in sight. The International Energy Agency (IEA) warned in a 2019 report that Southeast Asia could become a net importer of fossil fuels in the next few years, raising the financial burden on governments and increasing carbon emissions in the region. On the one hand, Asian financial institutions can play an important role in ensuring a sustainable energy transition in the region by reorienting financing towards renewable energy innovation while implementing exit strategies from fossil fuels that are time bound and with clear objectives.

On the other hand, financial regulation also has a very important role to play in ensuring oversight on private investments towards fossil fuels. Asian regulators need to step up and take a more active role in shaping the necessary guidelines and frameworks to support national governments in developing science based targets on climate finance. More importantly, there needs to be regional coordination in the development and implementation of such frameworks in order to more effectively address the social and environmental impacts of cross-border investments towards fossil fuels.

The COVID-19 pandemic has had a profound impact on the social, political, and economic landscape globally. The massive loss of lives and livelihoods among the most vulnerable populations have become the most apparent consequences of COVID-19 as countries struggle to strike the right balance between containing the virus, and keeping economic activities afloat. As world leaders begin to set post-COVID recovery objectives, it is important to ensure that we no longer resume business as usual practices, but take into account the critical areas for change brought to light by the pandemic. The financial

sector is strategically positioned as a key lever of change towards greater sustainability and accountability in the post-COVID world. More specifically, financial institutions could reorient financial flows towards sectors and businesses that uphold ESG standards, and support the acceleration of achieving global commitments towards the SDGs and the Paris Agreement.

In Asia, COVID-19 brought economies to a grinding halt which further exacerbated the negative impacts and risks already borne by some of the poorest and most vulnerable populations in the world. Moreover many private financial institutions in the region also began using COVID-19 as a pretext to delay ESG accountability discussions and initiatives. This study highlights the intricate chain of commercial banks' lending and investing in Asia's high-risk sectors that impact the rights and livelihoods of people in the region, especially the vulnerable communities.

During the time of COVID-19 and in the post-pandemic recovery, financial sector regulators and financial institutions should ensure that: i) financial institutions uphold consumer rights and protection, and implement loan relief measures for clients particularly those whose livelihoods and businesses have been severely impacted by the pandemic; ii) financial institutions and their shareholders cannot profit unfairly as a result of this crisis; and iii) financial institutions continue to take responsibility for social, gender and environmental impacts across their asset and investment portfolios during this period.

Bernadette Victorio

Regional Program Lead, Fair Finance Asia

INTRODUCTION

The present study is aimed to identify regional trends in financing to four priority sectors – infrastructure, power generation, fossil fuel extraction (oil & gas, and coal mining), and agribusiness – across Fair Finance Asia’s seven implementing countries (Cambodia, India, Indonesia, Japan, Philippines, Thailand, and Vietnam). Analysis of these trends further identified financial institutions from the seven FFA countries financing the four sectors in multiple countries. This should allow regional level collaboration on promoting the integration of social and environmental considerations in the decision-making of respective financial institutions.

Between 2014 and 2019, financial institutions from FFA countries provided US\$ 556 billion in loans and underwriting services to the selected companies active in the four focus sectors – agriculture, infrastructure construction, fossil fuels, and power. This includes financial flows to companies active in their own economies, as well as to other FFA countries. Financial institutions from Japan provided the most credit to the selected companies in other FFA countries with financing to all 6 countries. Financial institutions from Thailand, provided loans and underwriting services to 5 other countries. Indonesia, India, the Philippines and Vietnam received financing from the most different FFA countries.

Figure 1 presents a matrix of the credit flows between FFA countries per sector. It shows that financial institutions from Japan provided credit to the most sectors in the greatest number

of countries among FFA coalitions, followed by financial institutions from Thailand. Japanese financial institutions provided credit to companies engaged in agriculture in 4 countries. They also provided credit to companies in 5 countries that were engaged in fossil fuels, and in 5 countries they provided credit to companies engaged in power generation.
























































Financial institutions from India provided credit to companies in 4 countries engaged in fossil fuels, and to 2 countries engaged agriculture. Thai financial institutions provided credit to companies in 4 countries engaged power generation, 3 countries in fossil fuels, and 2 countries in agriculture.

Indonesia attracted financing from the greatest number of countries and in the most sectors. It was followed by the Philippines, India, Vietnam and Thailand.

A closer look at the value of the financial flows to the selected companies – including financial flows to companies operating in their own economies – shows that financial institutions from Japan were by far the largest creditors.

These financial institutions provided US\$ 366 billion in loans and underwriting to the selected companies. This accounts for 66% of all identified credit. Financial institutions from India provided the second most, with US\$ 83 billion, followed by Indonesian financial institutions, which provided approximately US\$ 67 billion in loans and underwriting services to the selected companies.

Figure 1: Matrix of credit flows per country and per sector (2014-2019)

FINANCED COUNTRIES	 Agriculture	 Fossil Fuels	 Infrastructure	 Power
 Cambodia	 			
 India	  	 		 
 Indonesia	   	  	  	 
 Japan				
 Philippines	 	   		 
 Thailand	 	  		
 Vietnam		   		 

The top 15 FFA creditors of the selected companies engaged in the sectors focused on in this study accounted for three quarters of all financing from FFA countries. Seven of the top 15 FFA creditors were Japanese financial institutions. Of the remaining financial institutions, 4 were from India and 3 were from Indonesia. The three largest creditors are all Japanese financial institutions. The largest among these was Mizuho Financial, which provided a total of US\$ 103 billion in loans and underwriting services to the selected companies. It was followed by SMBC Group (US\$ 87 billion) and Mitsubishi UFJ Financial (US\$ 76 billion).













































In total investors from FFA countries invested more than US\$ 118 billion in the bonds and shares of the selected companies. 97% of these investments were in shares, the remaining 3% was in bonds issued by the selected companies.

Financial institutions from Japan, India and Thailand invested in the most other FFA countries, investing in 6, 4 and 4 other countries respectively. Companies in Indonesia and Vietnam received investments from financial institutions from the most other FFA countries.

Figure 2 presents a matrix of the investment flows between FFA countries per sector. It shows that Japanese financial institutions invested in the most sectors in the greatest number of countries, followed by financial institutions from India. Japanese financial institutions invested in companies engaged in agriculture in 5 countries. They also invested in companies in 6 countries that were engaged in infrastructure construction, and in 5 countries they invested in companies engaged in fossil fuels.

Financial institutions from India invested in companies in 2 countries engaged in

Figure 2: Matrix of investment flows per country and per sector (2014-2019)

FINANCED COUNTRIES	 Agriculture	 Fossil Fuels	 Infrastructure	 Power
 Cambodia				
 India	 			
 Indonesia	  	 	 	
 Japan	 			
 Philippines				 
 Thailand		 	 	
 Vietnam	 	 		

agriculture, and in 3 countries engaged fossil fuels. Thai financial institutions invested in companies in 3 countries engaged in agriculture.

Indonesia attracted investment from the greatest number of countries and in the most sectors. It was followed by Vietnam and Thailand.

In terms of value, Japanese investors had invested the most in the selected companies. They accounted for 64% (US\$ 76 billion) of the identified investments in the selected companies. They were followed by investors from India, who accounted for 27%, and Thai investors who accounted for 8%.

The top 15 investors had invested US\$ 90.8 billion in the bonds and shares of the selected companies. Together, this accounted for 77% of all identified investments. 8 of the top 15 investors

were from Japan, 5 from India, and the remaining 2 were investors from Thailand. The largest investor was Sumitomo Mitsui Trust, with investments of over US\$ 14.1 billion. It was followed by Nomura (US\$ 13.0 billion) and Life Insurance Corporation of India (US\$ 11.6 billion).

This research identified a number of opportunities for strategic regional cooperation. Among these is the opportunity for collaborative engagement around the potential role of Japanese financial institutions to drive sustainable finance practices through their extensive network of financial institutions throughout the region provide finance to each of the four key sectors included in this study. Other opportunities revolve around sub-sets of FFA partners engaging in more sector-specific strategic collaborations. These are detailed in the conclusions of this report.

CHAPTER

1

METHODOLOGY

This chapter is organized as follows: section 1.1 lists the countries that form the focus of this study; section 1.2 presents the sectors that are considered in this research; section 1.3 details the selected companies that are in the scope of this study; section 1.4 describes the types of financing included within the scope of this research; section 1.5 details the methodology used to calculate financial contributions of financial institutions where these are not listed in the financial databases; 1.6 lists the data sources used for the financial research; and; section 1.7 sets out the timeframe of this research.

1.1 Focus countries

The research focused on financial flows within, and into Fair Finance Asia's seven country partners:

- Cambodia
- India
- Indonesia
- Japan
- Philippines
- Thailand
- Vietnam

For the agribusiness sector the list of focus countries was extended to Brunei Darussalam, Lao PDR, Malaysia, Myanmar, and Singapore.

1.2 Sectors in scope

The research focused on financial flows to infrastructure, power generation, fossil fuel extraction (oil & gas, and coal mining), and agribusiness in the focus countries.

1.3 Selected companies

The basis of the financial flows research is the companies that are financed. Therefore, lists of the main companies active in each of the four focus sectors were developed for each of the seven FFA countries. As far as possible, the

company selection included companies that accounted for 75% of the market in each of the seven FFA countries.

This research used industry reports, trade journals, EuroMonitor, EMIS, Orbis, Thomson EIKON and Bloomberg to develop the lists. Companies were be selected on the basis their market share where available. Where details of market share were not available, the proportion of the companies' total revenues and/or total assets of the sector in the specific country were used to identify the companies accounting for 75% sector revenues/assets. For the power generation sector, the companies accounting for 75% or more of total national installed capacity were selected.

It should be noted that a number of the selected companies are active in more than one country and/or more than one sector.

1.3.1 Infrastructure construction companies

This section provides further details on the infrastructure construction company selection approach per country.

- **Cambodia**
No sources could be identified which clearly presented the market share of construction companies active in Cambodia. On the basis of trade association journals, lists of all members were taken, and the infrastructure companies among these were identified. All of these companies were then included in the scope of this research, as well as a number of companies, that are clearly active in infrastructure projects, from the EMIS database.

It is not clear which part of the market share the selection represents.

- **India**

The EMIS report *Indian Construction Sector 2019/2023* presents a selection of the top ten of construction companies in India. The sector is, however, highly fragmented. The report states that, “The top ten companies in the construction sector has a total revenue of INR 2,276.8bn in FY2018 accounting for 8% of the construction output, which indicates a low level of concentration in the industry.”¹ This selection of top 10 companies was included in the scope of the research.

- **Indonesia**

The EMIS report *Indonesia Real Estate & Construction Sector 2019/2020* presents a selection of the top ten of construction companies in Indonesia by revenues. The report also shows that “Indonesia’s construction sector is home to more than 160,000 companies as of end-2018... The largest players are mainly state-owned companies, conducting construction works related to the infrastructure investments.”²

It is unclear what part of the market share the top ten companies have. However, regarding infrastructure it is likely that the selection of companies presents a significant market share, since, one of the companies – Waskita Karya – is Indonesia’s largest construction firm by revenue, and it is the government’s main contractor for major infrastructure projects.³ In the overall construction sector the company says to have a market share of 4.8%.⁴

- **Japan**

For Japan five construction companies were selected. This was based on an article in the *Global Construction Review* (GCR), on

Japan’s top four contractors. GCR provides news and analysis to help business leaders and policy makers understand the forces influencing the built environment business globally.

These four companies, together with a fifth, are members of the board of the Overseas Construction Association of Japan, Inc. (OCAJI). OCAJI is a representative body aiming to promote overseas activities of Japan’s construction industry and assist it in contributing to the international community through construction.

It is unclear exactly what part of the market share the selected five companies account for given the lack of relevant figures.

- **Philippines**

For the Philippines eight companies were selected, from different sources. The *MarketLine Construction in the Philippines in 2017* shows that revenues of one of the biggest companies were around 5% of the total revenues in the construction sector in 2017.⁵ Therefore, it is unlikely that the selection represents more than 40% of the market share. However, given the lack of market share figures, it is not possible to determine the market share of the selection of companies.

- **Thailand**

The Fitch Solutions *Thailand Infrastructure Report of 2019* shows that there are “more than 590 construction companies that are part of the Thai Contractors Association, but larger firms tend to take lead roles in the country’s major infrastructure projects. These companies include

Italian-Thai Development, ... and Construction, Sino Thai Engineering and Construction and CH Karnchang- all of whom are participating in the construction of several new rail transit lines in Bangkok.”⁶ This study selected the larger firms mentioned in this report. However, it is unclear what part of the market share the selected companies have.

- **Vietnam**

The MarketLine report on *Construction in Vietnam in 2017* says that “The construction industry is comprised by a large number of small companies alongside a few large players. ... The

non-residential construction segment tends to be more concentrated than the residential segment as the former consists of a few large players, which mainly compete for tenders related to big infrastructure and commercial projects.”⁷

All leading companies in the report were included in the scope of this study. It is unclear exactly what part of the market share the selected companies have.

Table 1 lists the infrastructure construction companies that were included in the scope of the research.

Table 1: Selected infrastructure construction companies

Country	Company	Reference No.
Cambodia	C E & P Corporation Ltd.	8
	China Road and Bridge Corporation (CRBC)	9
	Kim Mex Construction And Investment Co., Ltd	10
	Ly Chhuong Construction (LCC)	11
	Ly Kimhong Development Construction Co., Ltd	12
	Mong Reththy Group Company Limited	13
	Muhibbah Engineering	14
	Nim Meng Group Co., Ltd.	15
	Overseas Cambodia Investment Corporation (OCIC)	16
	Seng Enterprise Company Limited	17
	Sino Foundation Engineering (Cambodia) Company Limited	18
	Ss Builders (Cambodia) Pte Limited	19
	T.C.M. Engineering Company Ltd.	20
	India	Andhra Pradesh Power Generation
GMR Infrastructure		22
Hindustan Construction		23
IL&FS Transportation Networks		24
Kalpataru Power Transmissions		25
KEC International		26
Larsen and Toubro		27
Megha Engineering & Infrastructure		28
Indonesia	Reliance Infrastructure	29
	Tata Projects	30
	Adhi Karya	31
	Bukaka Teknik Utama	32
	Jaya Konstruksi Manggala Pratama	33
	Mitra Karya Prima (PLN (Persero))	34
	Petrosea	35

Country	Company	Reference No.
	PT PP	36
	Surya Semesta Internusa	37
	Waskita Karya	38
	Wijaya Karya (Wika)	39
	Wijaya Karya Bangunan Gedung	40
Japan	Kajima	41
	Obayashi	42
	Shimizu	43
	Taisei	44
	Takenaka	45
Philippines	DMCI Holdings	46
	EEl Corporation (Top Frontier Holdings)	47
	Fluor	48
	Lopez Group	49
	Philippine National Construction Corporation (PNCC)	50
	Sta. Elena Construction and Development Corporation	51
	Sumitomo Mitsui Construction Co. Ltd.	52
	Vista Land & Lifescapes	53
Thailand	CH. Karnchang PCL (CK)	54
	Italian-Thai Development	55
	Ktech	56
	Nawarat Patanakarn Public Company Limited (NWR)	57
	Ritta	58
	Sino-Thai Engineering & Construction Public Company Limited (STECOM)	59
	Thai-Obayashi	60
Vietnam	319 Corporation Ministry of National Defense	61
	Cotec Construction Joint Stock Co	62
	Delta Corporation	63
	F.D.C Investment Construction Joint Stock Company	64
	Faros Construction Corporation	65
	Fecon Corporation	66
	Hoa Binh Construction & Real Estate Corporation	67
	Joint Stock Company No.1 - Cofico	68
	Nishimatsu Construction Co., Ltd	69
	Obayashi Corporation	70
	Phuc Hung Construction Joint Stock Company	71
	Unicons Investment Construction Company Limited	72
	Urban Infrastructure Development Investment Corporation	73

1.3.2 Fossil fuel companies

This section provides further details on the fossil fuel company selection approach per country. The market shares of the selection of oil & gas companies in the seven countries chosen for this research were determined

by using Fitch Solutions' Reports and EMIS reports on the Oil & Gas sectors in several countries. Coal companies were selected using the *Global Coal Exit List* – the most extensive list of coal mining and coal-fired power companies available.

- Cambodia**

The Fitch Solutions' *Cambodia Oil and Gas Report Q4 2019* shows that there is little oil and gas exploration in Cambodia. "As a frontier region for oil and gas exploration, Cambodia has few proven reserves and no production to date."⁷⁴ For this sector the report only mentions three companies, that are active in upstream projects. These cover 100% of the fossil fuel exploring companies.
- India**

The EMIS report *India Oil & Gas Sector 2018/2022*, mentions the market share of two of the big companies. "The Indian Oil Corporation Ltd (IndianOil or IOCL) is the largest single commercial enterprise in India. It is India's flagship national oil company and has a volume market share of approximately 50% in India."⁷⁵ It further adds, "BPCL is India's third largest refining company with a total refining capacity of 36.5mn tonnes, accounting for 15% of India's total refining capacity and domestic market share of 21% in FY2018."⁷⁶ Therefore, the market share of the selected companies is more than the sum of these two companies together, i.e. more than 71%.
- Indonesia**

The big Indonesian oil company Pertamina states on its own website that it had a market share of 44% in 2017.
- Japan**

A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, by the Oxford Institute for Energy Studies, states that "unlike INPEX and JAPEX, the private oil companies in Japan are largely concentrated in the downstream sector."⁷⁷ Therefore, it is likely that these two companies form the dominant part of the oil exploring companies in Japan.
- The other selected companies are mainly operating downstream.
- Philippines**

The Fitch Solutions *Philippines Oil and Gas Report Q4 2019* notes that there is "substantial government presence in the oil and gas sector, particularly in the upstream". The state-owned enterprise is PNOC-EC. And other "leading producers are Shell and Chevron".⁷⁸ Their market share is not mentioned.

The other selected companies mainly operate downstream.
- Thailand**

The selection of companies is based on oil & gas companies with productive concessions as well as midstream operators. As "Thailand's oil and gas industry is dominated by government-owned PTT PCL", it can be estimated that with the inclusion of PTT the dominant market share is accounted for.⁷⁹ The additional concession holders of upstream assets for which reserve volumes are known, include Chevron, Total, and Mitsui. Together with PPT these account for approximately 70% of the upstream assets. In addition to PTT, two other companies have refineries in Thailand - Thai Oil and IRPC. Both companies were selected for this research. In addition to PTT, LPG operators with a market share of 84% are included in this research.
- Vietnam**

The Fitch Solutions *Vietnam Oil and Gas Report Q4 2019*, indicates that "PVN holds monopoly rights in oil and gas in Vietnam, and maintains stakes in all upstream projects in the country".⁸⁰ Other big companies always work in cooperation with PVN. "Russian firms are among the most active foreign players in the Vietnamese upstream sector, led by Vietgazprom, a JOC between state-owned Gazprom

and PVN ... Zarubezhneft (via JOC Vietsovpetro) is also an active explorer ... while Rosneft is exploring and producing gas and condensates from the Lan Tay and Lan Do fields. India's ONGC Videsh and Italy's Eni are other notable players in Vietnam's upstream sector."⁸¹

There are no numbers regarding market share. But it is clear that the mentioned companies form a majority in the crude oil exploration sector.

Table 2 lists the fossil fuel companies that were included in the scope of the research.

Table 2: Selected fossil fuel companies

Country	Sector	Company	Reference No.
Cambodia	Oil & gas	Angkor Resources	82
	Oil & gas	Cambodia National Petroleum Authority (CNPA)	83
	Oil & gas	KrisEnergy	84
India	Coal	Coal India	85
	Coal	Essel Mining & Industries Limited (EMIL)	86
	Coal	NLC India Ltd	87
	Coal	Singareni Collieries Company Limited (SCCL)	88
	Coal	Tata Power Co Ltd	89
	Oil & gas	Agrilink Asia Private	90
	Oil & gas	Bharat Petroleum Corporation	91
	Oil & gas	Essar Oil	92
	Oil & gas	Gujarat State Petroleum Corporation	93
	Oil & gas	Hindustan Petroleum Corporation	94
	Oil & gas	Indian Oil Corporation	95
	Oil & gas	Oil And Natural Gas Corporation	96
	Oil & gas	Oil India	97
	Oil & gas	Petronet LNG	98
	Oil & gas	Reliance Industries	99
Indonesia	Coal	PT Adaro Energy Tbk	100
	Coal	PT Bayan Resources Tbk (KEPCO)	101
	Coal	PT Bukit Asam (Indonesia Asahan Aluminium)	102
	Coal	PT Bumi Resources Tbk	103
	Coal	PT Delta Dunia Makmur Tbk	104
	Coal	PT Indika Energy	105
	Coal	PT Sinar Mas	106
	Oil & gas	Energi Mega Persada	107
	Oil & gas	MedcoEnergi	108
	Oil & gas	Pertamina Persero	109
	Oil & gas	Pertamina Retail (Pertamina)	110
Japan	Oil & gas	Perusahaan Gas Negara (Pertamina)	111
	Coal	Sumitomo Corporation	112
	Oil & gas	Cosmo Oil	113
	Oil & gas	INPEX	114
	Oil & gas	Itochu	115
	Oil & gas	JAPEX	116
	Oil & gas	JXTG	117
	Oil & gas	Showa Shell	118

Country	Sector	Company	Reference No.
	Oil & gas	Sojitz	119
	Oil & gas	Tokyo Gas	120
	Oil & gas and Coal	Idemitsu	121
	Oil & gas and Coal	Marubeni	122
	Oil & gas and Coal	Mitsubishi Corporation	123
	Oil & gas and Coal	Mitsui & Co	124
Philippines	Coal	DMCI Holdings Inc	125
	Oil & gas	Chevron Philippines (Chevron)	126
	Oil & gas	Isla LPG	127
	Oil & gas	Liquigaz	128
	Oil & gas	Petron Corporation (Top Frontier Investment Holdings)	129
	Oil & gas	Phoenix Petroleum Philippines	130
	Oil & gas	Pilipinas Shell Petroleum Corporation (Shell)	131
	Oil & gas	Philippine National Oil Company (PNOC)	132
	Oil & gas	Pryce Gas	133
	Oil & gas	Seaoil	134
	Oil & gas	South Pacific	135
Thailand	Coal	Banpu Public Company Limited	136
	Coal	Electricity Generating Authority of Thailand (EGAT)	137
	Oil & gas	Chevron	138
	Oil & gas	IRPC	139
	Oil & gas	Mitsui & Co	140
	Oil & gas	Siamgas & Petrochemicals	141
	Oil & gas	Thai Oil (PTT PCL)	142
	Oil & gas	Total	143
	Oil & gas	Unique Gas and Petrochemicals	144
	Oil & gas	World Gas Thailand	145
	Oil & gas and Coal	PTT PCL	146
Vietnam	Coal	Cong Thanh Group	147
	Coal	Vietnam National Coal Mineral Industries Holding Corporation Limited (Vinacomin)	148
	Oil & gas	CNOOC	149
	Oil & gas	Eni	150
	Oil & gas	Essar Exploration	151
	Oil & gas	Gazprom	152
	Oil & gas	Oil and Natural Gas Corporation (ONGC)	153
	Oil & gas	Rosneft	154
	Oil & gas	Vietnam Oil and Gas Group (Tập đoàn Dầu khí Quốc gia Việt Nam) (PetroVietnam) (PVN)	155
	Oil & gas	Zarubezhneft	156

1.3.3 Power generation companies

This section provides further details on the power generation company selection methodology per country. The market

shares of the selected power generation companies in the seven countries chosen for this research were determined by using the data on power generation capacity,

mainly derived from Enerdata reports, as seen in the table below. The reports state the total capacity in a country and the capacity of the largest companies.

- **Cambodia**

An Enerdata report was used to the selected power generation companies active in Cambodia. The selected companies together accounted for 90% of installed capacity in 2017, the most recent year for which there were figures.

- **India**

An Enerdata report was used to the selected power generation companies active in India. Power generation in India is shared among State Electricity Boards (30%), national utilities (25%) and private utility companies (45%). As such, the market is relatively diffused. The largest power generation company – National Thermal Power Co (NTPC) – accounts for 14.5% of total installed capacity. Together with the other selected companies, the 7 selected power generation companies in India account for 27.5% of installed capacity.

- **Indonesia**

An Enerdata report was used to the selected power generation companies active in Indonesia. Power generation in Indonesia is dominated by state-owned power companies Perusahaan Listrik Negara (PLN). A number of independent power producers also generate electricity. Together with the other selected company, the selected power generation companies in Indonesia account for 95% of installed capacity.

- **Japan**

An Enerdata report was used to the selected power generation companies

active in Japan. Together the selected companies account for approximately three quarters of all installed capacity in Japan.

- **Philippines**

An Enerdata report was used to the selected power generation companies active in the Philippines. More than 90% of power in the Philippines is generated by private companies. This research selected the largest power generation companies as listed in the Enerdata report. Together these companies account for approximately 40% of installed capacity.

- **Thailand**

An Enerdata report was used to the selected power generation companies active in Thailand. The Electricity Generating Authority of Thailand (EGAT), is historically the main power generation company in Thailand. However, since reforms in the electricity sector, independent power producers are increasingly involved in power generation. The largest among these are affiliates of EGAT – EGCO and Ratch. Additionally, small producers generally using cogeneration generate further capacity. The selected companies together account for approximately 46% of installed capacity in Thailand.

- **Vietnam**

An overview of the regulatory environment for the electricity sector in Vietnam provided the information on the market share of the power generation companies. The three selected companies account for 75% of total generating capacity.¹⁵⁷

Table 3 lists the power generation companies that were included in the scope of the research.

Table 3: Selected power generation companies

Country	Company	Reference No.	
Cambodia	Cambodia Hydropower Development (C.H.D.)	158	
	Cambodia International Investment Development Group (CIIDG)	159	
	Cambodian Energy Limited	160	
	Cambodian Tatay Hydropower	161	
	China Huadian Lower Stung Russei Chrum Hydro-Electric Project (Cambodia)	162	
	Electricité du Cambodge (EDC)	163	
	Sinohydro Kamchay Hydroelectric Project	164	
	India	Adani Power	165
India	Damodar Valley (DVC)	166	
	National Thermal Power Corporation (NTPC)	167	
	NHPC (National Hydro-Electric Power)	168	
	Nuclear Power (NPCIL)	169	
	Reliance	170	
	Tata Power	171	
	Indonesia	Paiton Energy (PEC)	172
Indonesia	Perusahaan Listrik Negara (PLN)	173	
	Japan	Chubu Electric Power	174
Japan	Hokkaido Electric Power	175	
	Hokuriku Electric Power Company	176	
	Japan Nuclear Fuel Ltd (JNFL)	177	
	J-Power (also called EPDC)	178	
	Kansai Electric Power	179	
	Kyushu Electric Power	180	
	Nuclear Fuel Industries	181	
	The Chugoku Electric Power	182	
	The Okinawa Electric Power Company, Incorporated (OEPC)	183	
	Tohoku Electric Power	184	
	Tokyo Electric Power (TEPCO)	185	
	Yonden (also Shikoku)	186	
	Philippines	Energy Development (EDC) (Lopez Group)	187
		First Gen Corporation (Lopez Group)	188
Global Business Power (GBP) (Salim Group)		189	
KEPCO (Korea Electric Power Company)		190	
Napocor		191	
TeaM Energy (Marubeni)		192	
Thailand	Electricity Generating Authority of Thailand (EGAT)	193	
	Electricity Generating Company (EGCO)	194	
	Independent Power Thailand (IPT)	195	
	Ratchaburi Electricity Generating Holding Plc (RATCH)	196	
Vietnam	The Vietnam Oil and Gas Group (Tập đoàn Dầu khí Quốc gia Việt Nam) (PetroVietnam) (PVN)	197	
	Vietnam Electricity (Tập đoàn Điện lực Việt Nam) (EVN)	198	
	Vietnam National Coal-Mineral Industries Holding Corporation Limited (Tập đoàn Công Nghiệp Than - Khoáng Sản Việt Nam) (Vinacomin)	199	

1.3.4 Agribusiness companies

This section provides further details on the agribusiness company selection methodology per country. This research used industry reports, trade journals, EuroMonitor, EMIS, Orbis, Thomson EIKON and Bloomberg to develop the lists. Companies were selected on the basis their market share where available. However, as agriculture is a very diverse sector with multiple commodities, this research selected the most important companies as reported by relevant industry reports as listed in the sources below.

- **Cambodia**

Regarding the rubber companies Hoang Anh Gia Lai (HAGL) and Vietnam Rubber Group, which both operate in Cambodia, Open Development speaks of giant companies. No market share is mentioned however.²⁰⁰

Kampuchea Fish Import and Export Company is a state-owned enterprise and the largest fishing firm in Cambodia. No market share is mentioned however.²⁰¹

In general, since the agricultural sector in Cambodia covers different subsectors, determining a general market share in the agricultural sector for the selected companies is not possible. Nevertheless, given that fisheries and agro-commodities are major segments in agriculture in Cambodia, this selection of companies will provide an indication of significant financiers to the extent that it is possible due to lack of data.

- **India**

The Fitch Solutions' *India Agriculture Report of 2019* shows the competitive landscape ranked by revenue.²⁰²

In general, since the agricultural sector in India covers different subsectors such as, sugar, edible oils, dairy, coffee and tea, determining a general market share in the agricultural sector for the selected

companies is not possible. However, the selected companies represent a broad range of agricultural segments.

- **Indonesia**

The Fitch Solutions' *Indonesia Agriculture Report of 2019* shows the competitive landscape ranked by revenue.²⁰³ A rubber company and a confectionery company have been left out of the selection.

In general, since the agricultural sector in Indonesia covers different subsectors such as, mainly palm oil, but also food manufacturing, livestock, and dairy, determining a general market share in the agricultural sector for the selected companies is not possible. Nevertheless, the selected companies represent a broad range of agricultural segments relevant to the Indonesian context.

- **Japan**

The selection of Japanese companies in the agricultural sector are mainly cooperatives JA Group and ZEN-NOH, and companies in the seafood industry. A report states that, "The largest cooperative association in the world - the National Federation of Agricultural Co-Operative Associations (ZEN-NOH) - dominates agriculture in Japan... ZEN-NOH executes these goals together with Japan Agricultural Cooperatives (JA group)".²⁰⁴

The seafood companies are taken from the Planet Tracker report *Perfect Storm - Profits at risk in the Japanese seafood industry*.²⁰⁵

In general, since the agricultural sector in Japan covers different subsectors such as retail and seafood, determining a general market share in the agricultural sector for the selected companies is not possible. However, this selection of companies is representative of both agro-commodities and fisheries.

- **Philippines**

The Fitch Solutions' *Philippines Agriculture Report Q1 2020* shows the competitive landscape ranked by revenue.²⁰⁶ These are very diverse companies.

In general, since the agricultural sector in the Philippines covers different subsectors, such as feed and livestock, food manufacturing, poultry, seafood, rice, fruits, sugar and flour, determining a general market share in the agricultural sector for the selected companies is not possible. Nevertheless, the selected companies represent a broad range of agricultural segments relevant to the context of the Philippines.

- **Thailand**

The Fitch Solutions' *Thailand Agriculture Report Q1 2020* shows the competitive landscape ranked by revenue.²⁰⁷ These are very diverse companies.

In general, since the agricultural sector in Thailand covers different subsectors such as seafood, rubber, soy, poultry

and sugar, determining a general market share in the agricultural sector for the selected companies is not possible. However, the selected companies represent a range of agricultural sectors relevant in Thailand.

- **Vietnam**

The Fitch Solutions' *Vietnam Agriculture Report Q1 2020* shows the competitive landscape ranked by revenue.²⁰⁸ These are a very diverse group of companies.

In general, since the agricultural sector in Vietnam covers different subsectors such as dairy, sugar, coffee, food manufacturing, seafood, crop seeds and edible oil and fats, determining a general market share in the agricultural sector for the selected companies is not possible. Nevertheless, the selected companies represent the range of agricultural segments relevant to Vietnam.

Table 4 lists the agribusiness companies that were included in the scope of the research.

Table 4: Selected agribusiness companies

Country	Company	Reference No.
Cambodia	CJ Cambodia	209
	Hoang Anh Gia Lai (HAGL)	210
	Kampuchea Fish Import and Export Company	211
	L.Y.P. Group	212
	Lee's Frozen Food Service Ltd	213
	Mitr Phol	214
	TTY Corporation	215
	Vietnam Rubber Group	216
	Vitamar	217
India	Bajaj Hindusthan Sugar	218
	Balrampur Chini Mills	219
	Eid Parry India	220
	Glaxosmithkline Consumer	221
	Godrej Industries	222
	Hatsun Agro Products	223
	Nestlé India	224
	Ruchi Soya Industries	225
	Shree Renuka (Wilmar)	226
	Tata Global Beverages	227

Country	Company	Reference No.
Indonesia	Astra Agro Lestari	228
	Bumitama	229
	Charoen Pokphand Indonesia	230
	First Resources	231
	Golden Agri Resources	232
	Indofood Sukses Makmur	233
	Japfa Comfeed Indonesia	234
	Malindo Feedmill	235
	Sampoerna Agro	236
	Ultrajaya Milk Industry & Trading	237
Japan	Aeon	238
	Itochu	239
	Japan Agricultural Cooperatives (JA group)	240
	Kyokuyo	241
	Marubeni	242
	Maruha Nichiro	243
	Mitsubishi	244
	Mitsui & Co	245
	Nippon Suisan Kaisha (Nissui)	246
	OUG Holdings	247
Philippines	Sojitz	248
	Zen-noh	249
	AgriNurture	250
	Alliance Select Foods	251
	Central Azucarera De Tarlac	252
	JG Summit Holdings (Salim Group)	253
	Liberty Flour Mills	254
	RFM	255
	Roxas And Co	256
	San Miguel Pure Foods (Top Frontier Investment Holdings)	257
Thailand	Swift Foods (A Brown Company)	258
	Vitarich Corp	259
	Bangkok Ranch	260
	Charoen Pokphand Foods	261
	GFPT	262
	Kaset Thai International	263
	Khon Kaen Sugar Industry	264
	Khonburi Sugar	265
	Sri Trang Agro-Industry	266
	Thai Union Frozen Products	267
Vietnam	Thai Vegetable Oil	268
	Thaifoods Group	269
	Hung Vuong	270
	Lam Son Sugar	271
	Minh Phu Seafood	272
	Societe De Bourbon Tay Ninh	273
	Southern Seed	274
	Tuong An Vegetable Oil JSC	275
	Viet Nam Dairy Products JSC (Vinamilk)	276
	Vinacafe Bien Hoa JSC	277

1.4 Types of financing

The banks financing companies engaged can be involved through two types of financing: credit and investment. When financial institutions provide credit, it can be through loans or the underwriting of share and/or bond issuances. Investment, on the other hand, is when financial institutions invest in the equity and debt of a company by holding shares and/or bonds. This section outlines the different types of financing, how they were researched and the implications for the study.

1.4.1 Loans

The easiest way to obtain debt is to borrow money. In most cases, money is borrowed from commercial banks. Loans can be either short-term or long-term in nature. Short-term loans (e.g. trade credits, current accounts, leasing agreements) have a maturity of less than a year. They are mostly used as working capital for day-to-day operations. Short-term debts are often provided by a single commercial bank, which does not ask for substantial guarantees from the company.

A long-term loan has a maturity of at least one year, but more often of three to ten years. Long-term corporate loans are particularly useful to finance expansion plans, which only generate rewards after a certain period of time. The proceeds of corporate loans can be used for all activities of the company. Long-term loans are frequently extended by a loan syndicate, which is a group of banks brought together by one or more arranging banks. The loan syndicate will only undersign the loan agreement if the company can provide certain guarantees that interest and repayments on the loan will be fulfilled. Corporate loans are often used as project finance (a loan that is earmarked for a specific project) or as general corporate purposes or working capital. Sometimes, a loan's use of proceeds is reported as general corporate

purposes when it will be used for a certain project. This is difficult to ascertain.

Moreover, another type of loan is a revolving credit facility. A revolving credit facility provides a company with an option to take up a loan from a bank (or more often: a banking syndicate) when it has an urgent financing need. It is similar to a credit card. Companies can use the revolving facility up to a certain limit, but they don't have to. Revolving credits are often concluded for a five-year period and then renewed, but many companies renegotiate their revolving credit facility every year with the same banking syndicate. Amounts, interest rates, fees and participating banks can change slightly every year. As the financial press often reports these renegotiations for larger companies, this might raise the impression that banks are lending huge sums of money to the same company every year. But: this concerns renegotiations of basically the same facility and a revolving credit facility is hardly ever actually called upon for a loan. Within the scope of this research revolving credit facilities are counted for every time that they are renewed.

Although revolving credit facilities are not always fully called upon, the syndicate of banks providing the facility do have the obligation to provide the entire amount of money when the company asks for it. Therefore, even if the company ends up never using the facility, the banks were still involved with the company during the period of the revolving credit facility and would have provided the company with the money when they asked for it.

1.4.2 Share issuances

Issuing shares on the stock exchange gives a company the opportunity to increase its equity by attracting a large number of new shareholders or to increase the equity from its existing shareholders.

When a company offers its shares on the stock exchange for first time, this is called an Initial Public Offering (IPO). When a company's shares are already traded on the stock exchange, this is called a secondary offering of additional shares. To arrange an IPO or a secondary offering, a company needs the assistance of one or more (investment) banks, which will promote the shares and find shareholders. The role of investment banks in this process is therefore very important.

The role of the investment bank is temporary. The investment bank purchases the shares initially and then promotes the shares and finds shareholders. When all issued shares that the financial institution has underwritten are sold, they are no longer included in the balance sheet or the portfolio of the financial institution. Nevertheless, the assistance provided by financial institutions to companies in share issuances is crucial. They provide the company with access to capital markets and provide a guarantee that shares will be bought at a pre-determined minimum price.

1.4.3 Bond issuances

Issuing bonds can best be described as cutting a large loan into small pieces and selling each piece separately. Bonds are issued on a large scale by governments, but also by corporations. Like shares, bonds are traded on the stock exchange. To issue bonds, a company needs the assistance of one or more (investment) banks which underwrite a certain amount of the bonds. Underwriting is in effect buying with the intention of selling to investors. Still, in case the investment bank fails to sell all bonds it has underwritten, it will end up owning the bonds.

1.4.4 (Managing) shareholdings

Institutional investors, such as banks, insurance companies, pension funds and asset managers, can, through the funds they are managing, buy shares of a certain company making them part-owners of

the company. This gives the bank a direct influence on the company's strategy. The magnitude of this influence depends on the size of the shareholding.

As financial institutions actively decide in which sectors and companies to invest, and are able to influence the company's business strategy, this research will investigate the shareholdings of financial institutions of the selected companies. Shareholdings are only relevant for stock listed companies. Not all companies in the study are listed on a stock exchange.

Shareholdings have a number of peculiarities that have implications for the research strategy. Firstly, shares can be bought and sold on the stock exchange from one moment to the next. Financial databases keep track of shareholdings through snapshots, or filings. This means that when a particular shareholding is recorded in the financial database, the actual holding, or a portion of it, might have been sold, or more shares purchased. Secondly, share prices vary from one moment to the next.

Moreover, it is important to note that banks and asset managers, manage investments on behalf of asset owners through, for example, special funds (such as exchange traded funds) or directly. These asset owners can be other institutional investors – such as pension funds and insurance companies – and ultimately individual investors.

1.4.5 (Managing) investments in bonds

Institutional investors can also buy bonds of a certain company. The main difference between owning shares and bonds is that owner of a bond is not a co-owner of the issuing company; the owner is a creditor of the company. The buyer of each bond is entitled to repayment after a certain number of years, and to a certain interest during each of these years.

Similarly, to shares, bonds can be bought and sold from one moment to the next. Bondholdings are also reported by the holding investor through regular filings.

1.5 Financial institution financing contributions

The financial databases do not always include details on the levels of individual financial institutions' contribution to a deal. Individual bank's contributions to syndicated loans and underwriting were recorded to the largest extent possible where these details were included in the financial databases. In many cases, the total value of a loan or issuance is known, as well as the number of banks that participate in this loan or issuance. However, the amount that each individual bank commits to the loan or issuance has to be estimated. This research uses a two-step method to calculate this amount. The first uses the ratio of an individual institution's management fee to the management fees received by all institutions. This is calculated as follows:

$$\text{Participant's contribution: } \left(\frac{\text{individual participant attributed fee}}{\text{sum of all participants attributed fees}} * \text{principal amount} \right)$$

When the fee is unknown for one or more participants in a deal, the second method is used, called the 'bookratio'. The bookratio (see formula below) is used to determine the commitment distribution of bookrunners and other managers.

$$\text{Bookratio: } \left(\frac{\text{number of participants} - \text{number of bookrunners}}{\text{number of bookrunners}} \right)$$

Table 5 shows the commitment assigned to book runner groups with this estimation method. When the number of total participants in relation to the number of bookrunners increases, the share that is attributed to bookrunners decreases. This prevents very large differences in amounts

attributed to book runners and other participants.

Table 5: Commitment assigned to book runner groups

Bookratio	Loans	Issuances
> 1/3	75%	75%
> 2/3	60%	75%
> 1.5	40%	75%
> 3.0	< 40%*	< 75%*

* In case of deals with a bookratio of more than 3.0, we use a formula which gradually lowers the commitment assigned to the bookrunners as the bookratio increases. The formula used for this:

$$\frac{1}{\frac{\sqrt{\text{bookratio}}}{1.443375673}}$$

The number in the denominator is used to let the formula start at 40% in case of a bookratio of 3.0. As the bookratio increases the formula will go down from 40%. In case of issuances the number in the denominator is 0.769800358.

1.6 Data sources

The financial research utilized Refinitiv (formerly known as Thomson Reuters EIKON), Bloomberg, IJGlobal, Trade Finance Analytics, company publications and media archives to identify financial relationships.

1.7 Timeframe

For the different financing types different time periods were used. For bond and shareholdings the most recent filings in February 2020 were retrieved. For corporate loans, and issuance underwriting the research focused on the period 1 January 2014 to 31 December 2019.

1.8 Limitations

This study researched the financial flows to the selected companies engaged in the focus sectors and active in the relevant countries using world-renowned financial databases (Bloomberg, Refinitiv, IJGlobal, TradeFinanceAnalytics), company publications, company registry

documentation, and media archives. These databases provide data on syndicated financing, bond holdings, shareholdings and project and trade finance. Company publications and company registry documentation provide further details on bilateral financing (i.e. between the relevant company and one bank). However, not all companies or the relevant sources disclose this information. This implies that the actual financing per company is higher than can be identified. This is also the reason that financing for smaller companies not attracting syndicated financing, not active in the financial markets, and not disclosing details of their financiers could not be identified.

Financing to companies active in the focus sectors and active in the relevant countries was included in the study. Additionally, financing to the group level companies and finance/trade vehicles was also included. Often companies attract financing at the group level or through specialized finance vehicles, and not necessarily at the local subsidiary level. Therefore, this level of financing was included. This means that where a Japanese group is active in Indonesia, financing for the Japanese group and its Indonesian subsidiary are both included. This is because the Japanese group provides financing for

its Indonesian subsidiary. The dataset provided allows the user to alter this scope for their own analysis.

Finally, a number of companies are active in multiple sectors, sometimes as diverse as agriculture and fossil fuels. Financing to subsidiaries engaged in the focus sectors and active in the relevant countries was included. Additionally, financing to the group level companies and finance/trade vehicles was also included. Often companies attract financing at the group level or through specialized finance vehicles, and not necessarily at the subsidiary level. Therefore, this level of financing was included. This means that where a group is active in both fossil fuels and agriculture, the financing values are reported in both the chapters on agriculture and fossil fuels. These values should, therefore, not be added up as this would imply double counting. The financing values have not been adjusted for the proportions of the group's activities in the respective sectors as this was beyond the scope of the study. The dataset provided allows the user to alter the scope of companies included in the pivot tables by adjusting the Scope column on the Company scoping worksheet for their own analysis.

CHAPTER

2

GENERAL OVERVIEW

2.1 Creditors

Between 2014 and 2019, financial institutions from FFA countries provided US\$ 556 billion in loans and underwriting services to the selected companies active in the four focus sectors – agriculture, infrastructure construction, fossil fuels. This includes financial flows to companies active in their own economies, as well as to other FFA countries.

Figure 3 shows the intra-regional credit flows, i.e. flows from financial institutions from FFA countries, to companies in other FFA countries. Financial institutions from Japan provided the most credit to the selected companies in other FFA countries, with financing to 6 countries. Financial institutions from Thailand, provided loans and underwriting services to 6 other FFA countries. Indonesia, India, the Philippines and Vietnam received financing from the most different FFA countries.

Figure 4 presents a matrix of the credit flows between FFA countries per sector. It shows that financial institutions from Japan provided credit to the most sectors in the greatest number of countries, followed by financial from Thailand. Japanese financial institutions provided credit to companies

engaged in agriculture in 4 countries. They also provided credit to companies in 5 countries that were engaged in fossil fuels, and in 5 countries they provided credit to companies engaged in power generation.

Financial institutions from India provided credit to companies in 4 countries engaged in fossil fuels, and to 2 countries engaged agriculture. Thai financial institutions provided credit to companies in 4 countries engaged power generation, 3 countries in fossil fuels, and 2 countries in agriculture.

Indonesia attracted financing from the greatest number of countries and in the most sectors. It was followed by the Philippines, India, Vietnam and Thailand.

A closer look at the value of the financial flows to the selected companies – including financial flows to companies operating in their own economies – shows that financial institutions from Japan were by far the largest creditors. These financial institutions provided US\$ 366 billion in loans and underwriting to the selected companies. This accounts for 66% of all identified credit (see Figure 5). Financial institutions from India provided the second most, with

Figure 3: Intra-regional credit flows to selected companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)

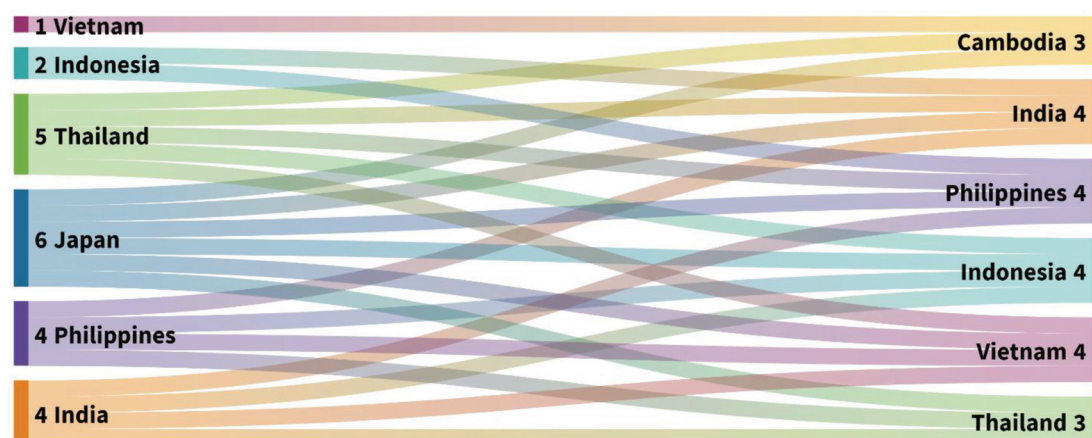
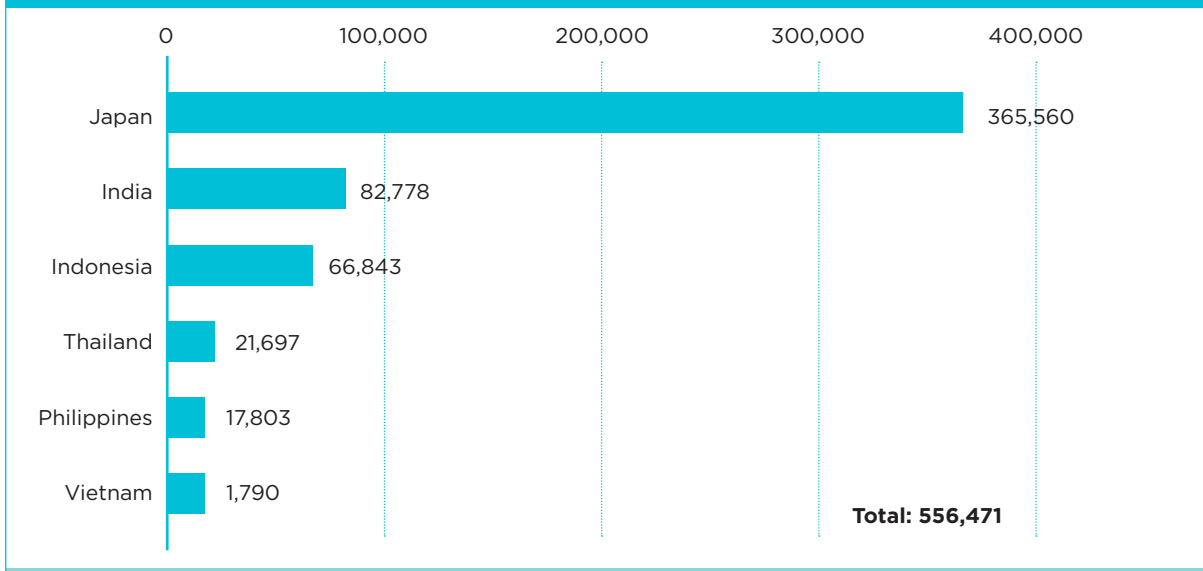


Figure 4: Matrix of credit flows per country and per sector (2014-2019)

FINANCED COUNTRIES	Agriculture	Fossil Fuels	Infrastructure	Power
Cambodia	🇹🇭 🇻🇳			🇯🇵
India	🇮🇩 🇯🇵 🇵🇭	🇯🇵 🇵🇭	🇯🇵	🇯🇵 🇹🇭
Indonesia	🇮🇩 🇯🇵 🇵🇭 🇹🇭	🇮🇩 🇯🇵 🇹🇭	🇮🇩 🇯🇵 🇹🇭	🇯🇵 🇹🇭
Japan				
Philippines	🇮🇩 🇯🇵	🇮🇩 🇹🇭 🇯🇵 🇹🇭	🇯🇵	🇯🇵 🇹🇭
Thailand	🇯🇵 🇵🇭	🇮🇩 🇯🇵 🇵🇭		
Vietnam		🇮🇩 🇯🇵 🇵🇭 🇹🇭	🇯🇵	🇯🇵 🇹🇭

Figure 5: FFA creditor countries of origin (2014-2019, US\$ mln)

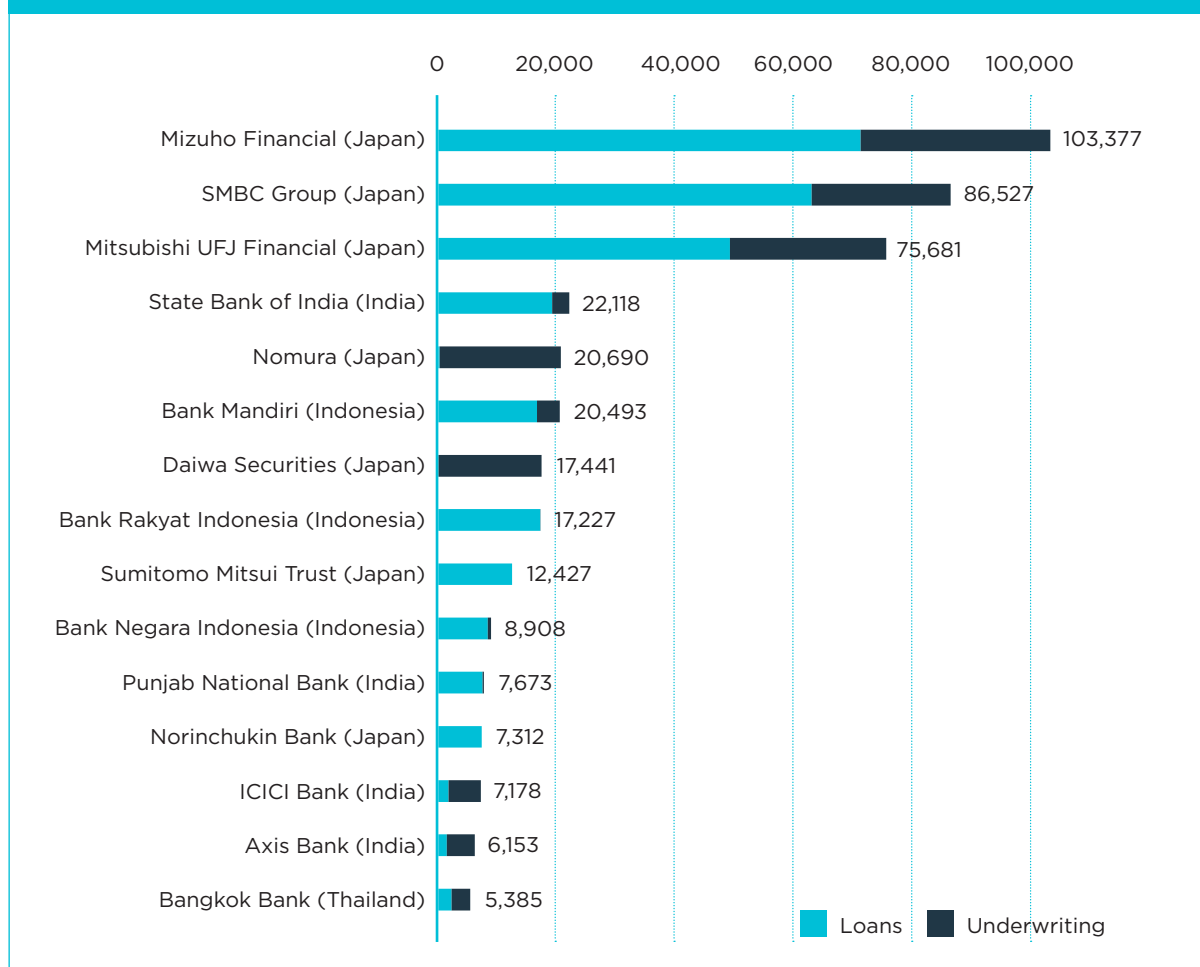


US\$ 83 billion. And Indonesian financial institutions provided approximately US\$ 67 billion in loans and underwriting services to the selected companies.

The top 15 FFA creditors of the selected companies engaged in the focus sectors

accounted for three quarters of all financing from FFA countries. Figure 6 shows that 7 of the top 15 FFA creditors were Japanese financial institutions. Of the remaining financial institutions, 4 were from India and 3 were from Indonesia. The three largest creditors are all Japanese

Figure 6: Top 15 creditors to selected companies (2014-2019, US\$ mln)



financial institutions. The largest among these was Mizuho Financial, which provided a total of US\$ 103 billion in loans and underwriting services to the selected companies. It was followed by SMBC Group (US\$ 87 billion) and Mitsubishi UFJ Financial (US\$ 76 billion).

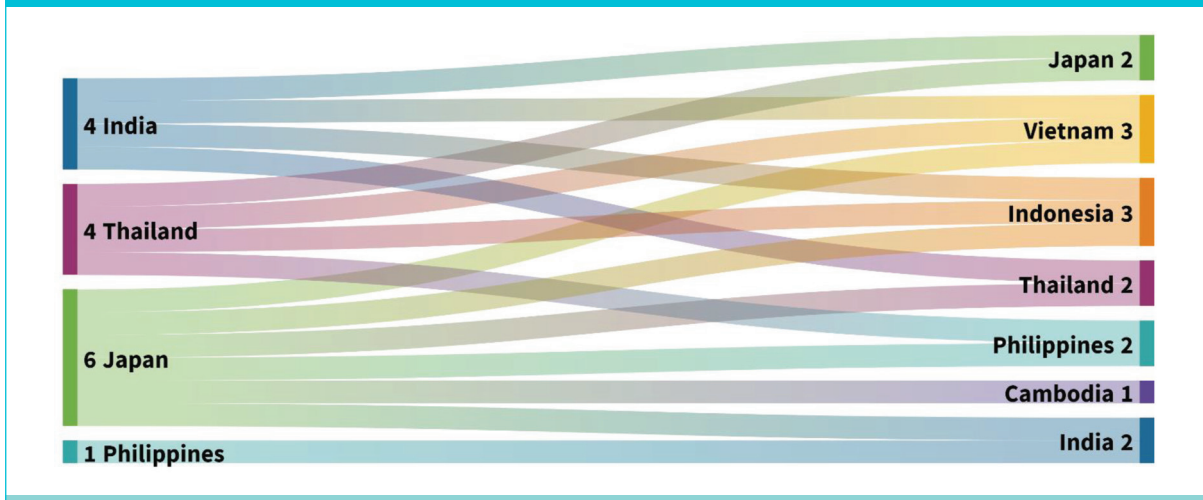
In total investors from FFA countries invested more than US\$ 118 billion in the bonds and shares of the selected companies. 97% of these investments were in shares, the remaining 3% was in bonds issued by the selected companies. Financial institutions from India and Japan invested in the most other FFA countries, investing in 4 and 6 other countries respectively. Companies in Indonesia and Vietnam received investments from financial institutions from the most other FFA countries.

The focus of this study is financial institutions from FFA countries. However, it should be noted that local subsidiaries of foreign financial institutions may also have provided credit to the selected companies. For consistency these have been attributed to their parent financial institution as the data sources do not always consistently record this subsidiary level information. Further details can be found in the dataset annex.

2.2 Investors

In total investors from FFA countries invested more than US\$ 118 billion in the bonds and shares of the selected companies. 97% of these investments were in shares, the remaining 3% was in bonds issued by the selected companies. Figure 7 shows that financial institutions

Figure 7: Intra-regional investment flows to selected companies (no. of countries invested in & no. countries invested by)



from Japan, India and Thailand invested in the most other FFA countries, investing in 6, 4 and 4 countries respectively. Companies in Indonesia and Vietnam received investments from financial institutions from the most other FFA countries.

Figure 8 presents a matrix of the investment flows between FFA countries per sector. It shows that Japanese financial institutions provided invested in the most sectors in the greatest number of countries, followed by financial from India. Japanese financial institutions

Figure 8: Matrix of investment flows per country and per sector (2014-2019)













































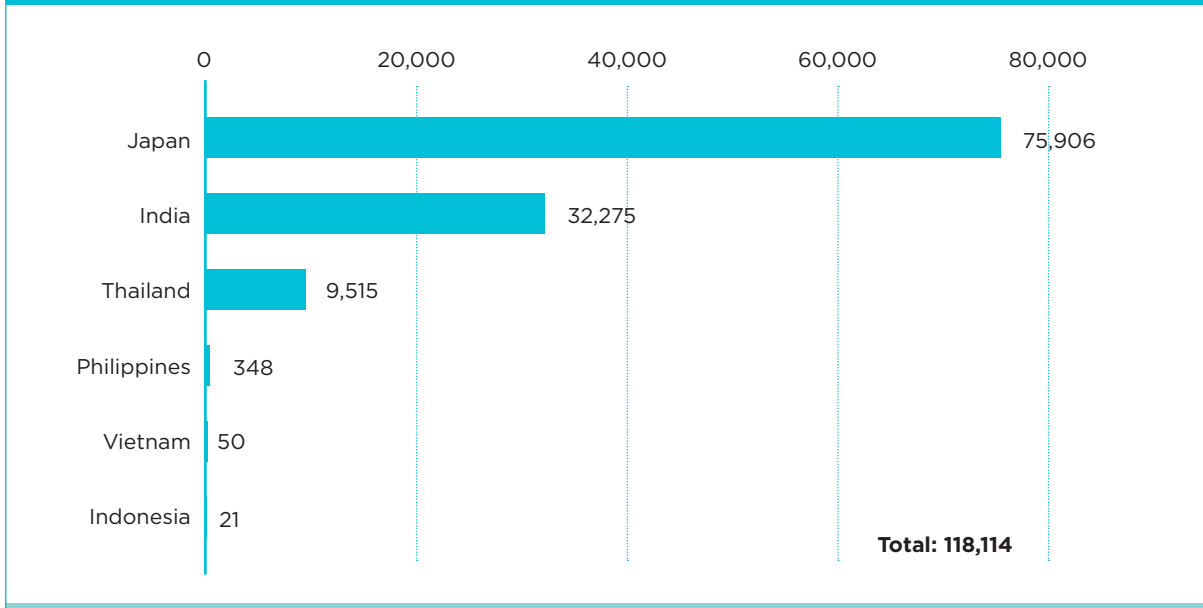
FINANCED COUNTRIES	 Agriculture	 Fossil Fuels	 Infrastructure	 Power
 Cambodia				
 India	 			
 Indonesia	  	 	 	
 Japan	 			
 Philippines				 
 Thailand		 	 	
 Vietnam	 	 		

Figure 9: FFA investor countries of origin (2020 February, most recent filings, US\$ mln)



invested in companies engaged in agriculture in 5 countries. They also invested in companies in 6 countries that were engaged in infrastructure construction, and in 5 countries they invested in companies engaged in fossil fuels.

Financial institutions from India invested in companies in 2 countries engaged in agriculture, and in 3 countries engaged in fossil fuels. Thai financial institutions invested in companies in 3 countries engaged in agriculture.

Indonesia attracted investment from the greatest number of countries and in the most sectors. It was followed by Vietnam and Thailand.

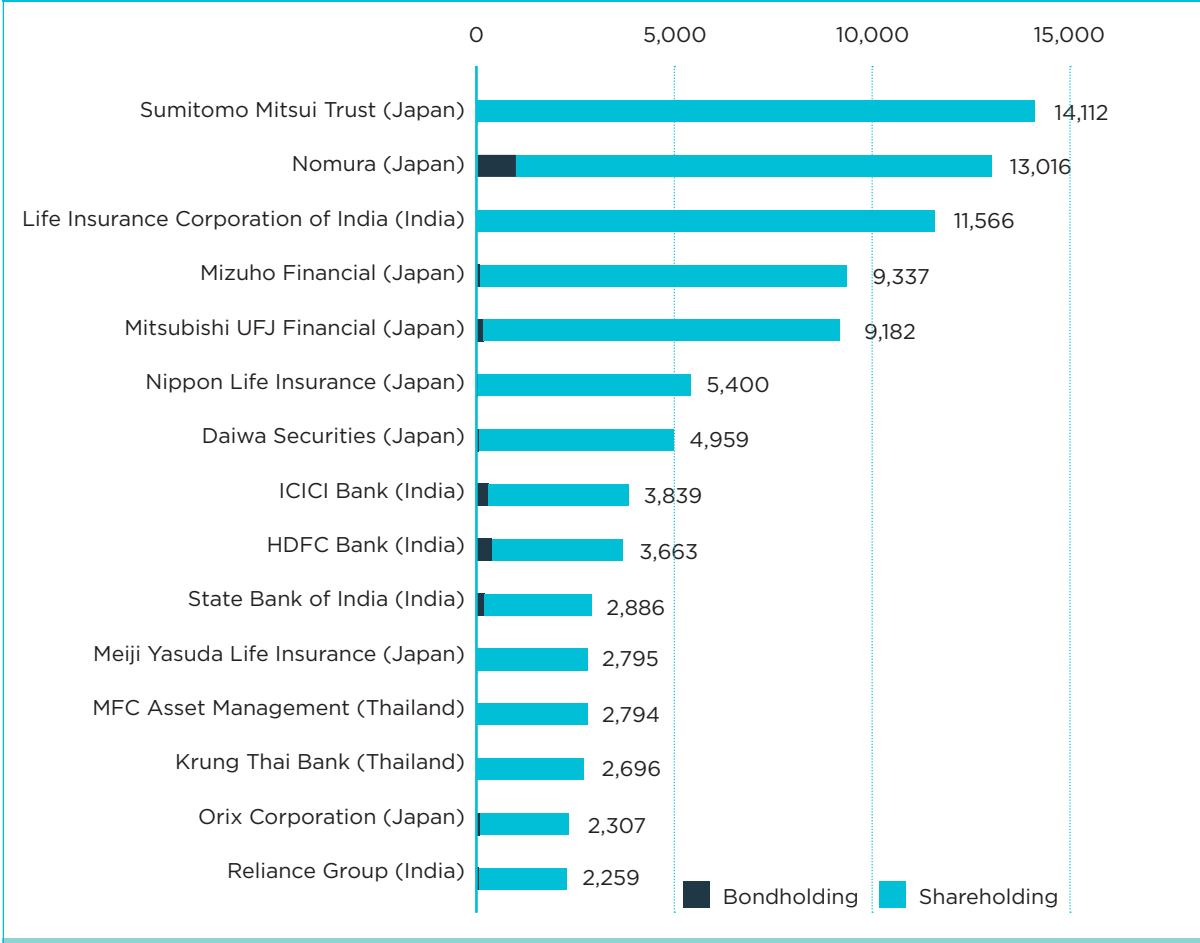
Figure 9 shows that in, Japanese investors had invested the most in the selected companies. In they accounted for 64% (US\$ 76 billion) of the identified investments in the selected companies. They were followed by investors from

India, who accounted for 27%, and Thai investors who accounted for 8%.

The top 15 investors had invested US\$ 90.8 billion in the bonds and shares of the selected companies. Together, this accounted for 77% of all identified investments. 8 of the top 15 investors were from Japan, 5 from India, and the remaining 2 were investors from Thailand. Figure 10 shows that the largest investor was Sumitomo Mitsui Trust, with investments of over US\$ 14.1 billion. It was followed by Nomura (US\$ 13.0 billion) and Life Insurance Corporation of India (US\$ 11.6 billion).

The focus of this study is financial institutions from FFA countries. However, it should be noted that local subsidiaries of foreign financial institutions may have made the investments in the bonds and shares of the selected companies. For consistency these have been attributed to their parent financial institution. Further details can be found in the dataset annex.

Figure 10: Top 15 FFA investors in selected companies (2020 February, most recent filings, US\$ mln)



CHAPTER

3

FINANCIAL FLOWS TO INFRASTRUCTURE COMPANIES

This chapter presents the findings of the financial flows to the selected companies engaged in infrastructure construction (see section 1.3). The chapter is organized as follows: section 3.1 presents a general overview of the findings, and; the following seven sections deals with the trends of financial flows in Cambodia (section 3.24.2), India (section 3.3), Indonesia (section 3.4), Japan (section 3.5), the Philippines (section 3.6), Thailand (section 3.7) and Vietnam (section 3.8) separately. Each section is split into two sub-sections. The first analyses the credit (loans & underwriting services) flows, and the second focuses on investments in bonds and shares.

3.1 General overview

3.1.1 Creditors

In the period of study, financial institutions from FFA countries provided US\$ 86 billion in loans and underwriting services to the selected companies active in infrastructure construction. This includes financial flows to companies active in their own economies, as well as to other FFA countries.

Figure 11 shows the intra-regional credit flows, i.e. flows from financial institutions

from FFA countries, to companies in other FFA countries. Financial institutions from Japan provided the most credit to infrastructure construction companies in other FFA countries, with financing to 4 FFA countries. Financial institutions from India, provided loans and underwriting services to infrastructure construction companies in 2 other countries. Indonesia and India received infrastructure construction financing from the most different FFA countries, 3 and 2 countries respectively.

A closer look at the value of the financial flows to infrastructure construction companies – including financial flows to companies operating in their own economies – shows that financial institutions from Indonesia were by far the largest creditors. These financial institutions provided US\$ 42 billion in loans and underwriting to the selected companies engaged in infrastructure construction companies. This accounts for 49% of all identified infrastructure construction credit (see Figure 12). Financial institutions from Japan provided the second most, with US\$ 30 billion. And Indian financial institutions provided just under US\$ 9 billion in loans and underwriting services to infrastructure construction companies.

Figure 11: Intra-regional credit flows to infrastructure companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)

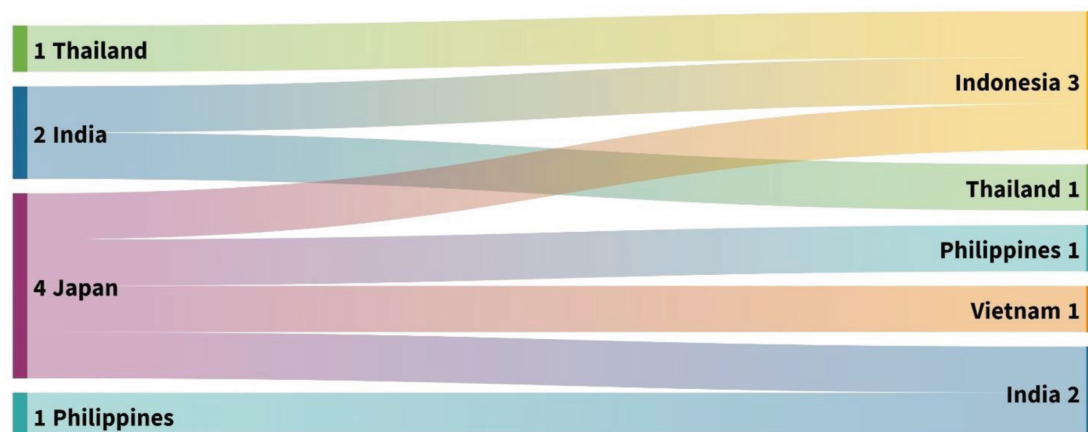


Figure 12: FFA infrastructure construction creditor countries of origin (2014-2019, US\$ mln)

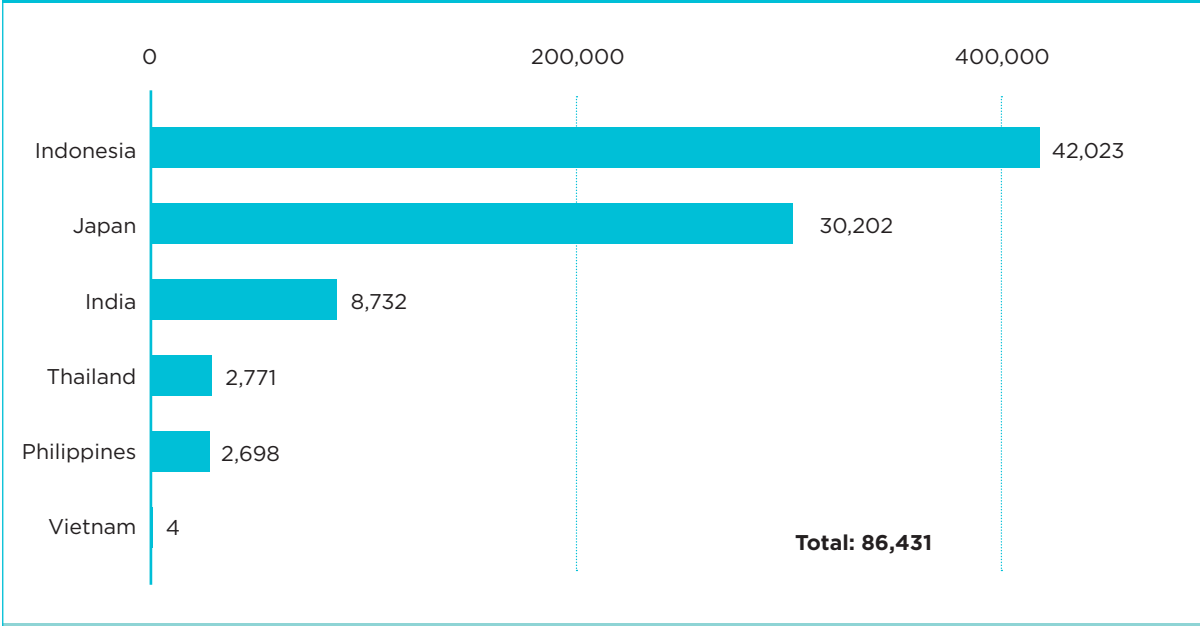
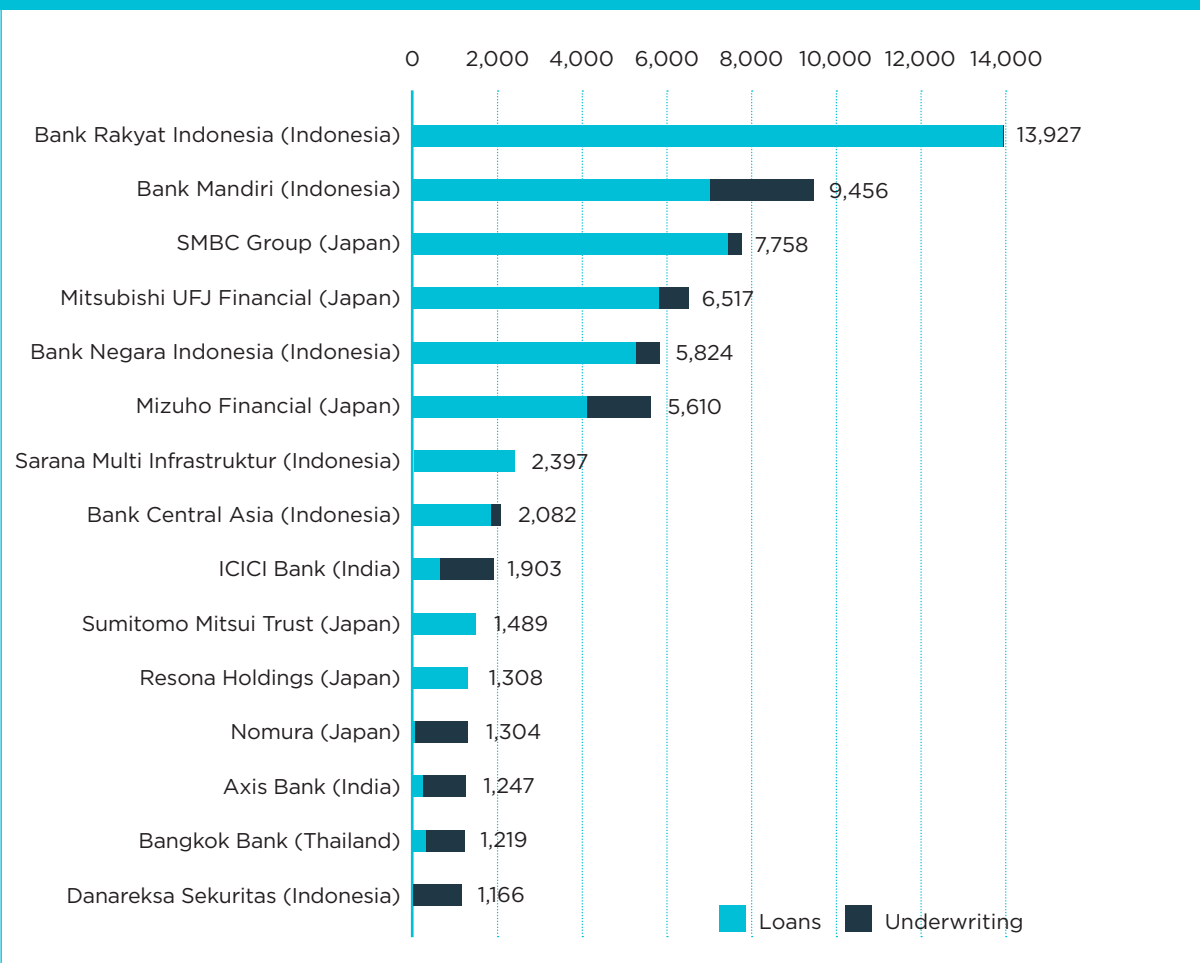


Figure 13: Top 15 FFA infrastructure creditors (2014-2019, US\$ mln)



The top 15 FFA creditors of companies engaged in infrastructure construction accounted for 73% of all financing to these companies from FFA countries. Figure 13 shows that 6 of the top 15 FFA creditors were Indonesian financial institutions, and 6 were Japanese. Of the remaining financial institutions, 2 were from India and 1 was from Thailand. The two largest creditors were Indonesian state-owned banks— Bank Rakyat Indonesia and Bank Mandiri. They provided US\$ 13.9 and US\$ 9.5 billion respectively in loans and underwriting services to the selected infrastructure construction companies. They were followed by Japanese SMBC Group (US\$ 7.8 billion).

3.1.2 Investors

Investors from the FFA countries together invested US\$ 17 billion in the selected companies engaged in infrastructure construction. 98% of these investments were in the shares of the selected companies. The remaining 2% was invested in bonds issued by the selected companies engaged in infrastructure construction.

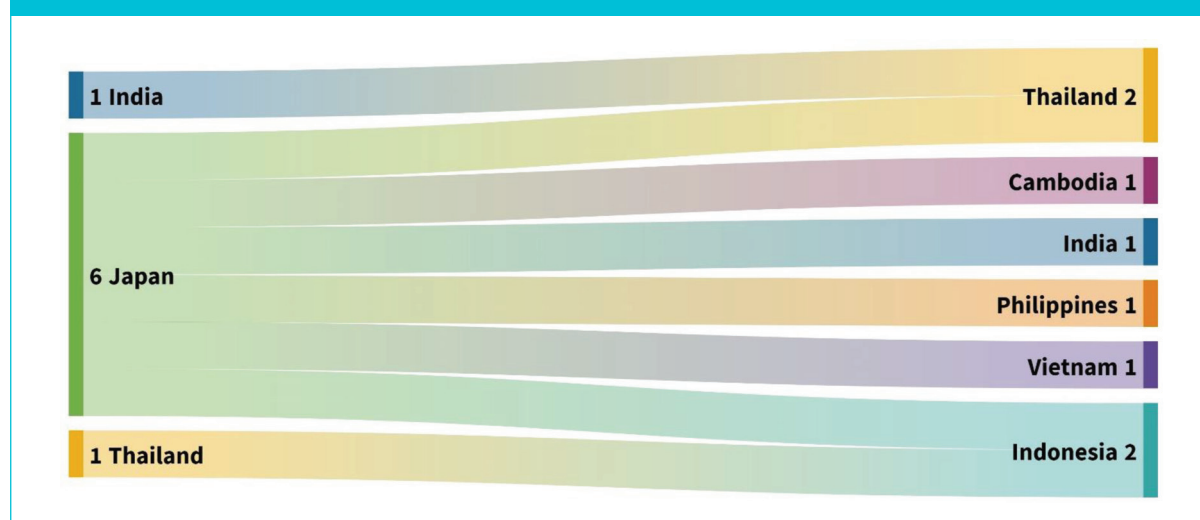
Figure 14 presents the intra-regional flows. These flows exclude domestic flows. It

shows that financial institutions from Japan invested in infrastructure companies active in 6 of the FFA countries. Financial institutions from India and Thailand each invested in infrastructure companies in one other country. Infrastructure construction companies active in Indonesia and Thailand both received financing from two other countries, India & Japan and Japan & Thailand respectively.

Figure 15 shows that in terms of value, Indian investors had invested the most in the selected companies engaged in infrastructure in all FFA countries. They accounted for 63% (US\$ 10.9 billion) of the identified investments in the selected companies. They were followed by investors from Japan, who accounted for 36%, and Thai investors who accounted for 1%.

The top 15 infrastructure investors from FFA countries, accounted for 89% of all identified investments from FFA countries with investments of US\$ 15.6 billion. 9 of the top 15 infrastructure investors were Indian financial institutions. The remaining 6 financial institutions were all from Japan. Figure 16 shows that the largest investor was the Life Insurance Corporation of India which held bonds and shares of US\$ 3.7 billion

Figure 14: Intra-regional investment flows to infrastructure companies (no. of countries invested in & no. countries invested by)



in the selected companies engaged in infrastructure at the most recent filing date in February 2020. It was followed by

Japanese financial institutions Sumitomo Mitsui Trust (US\$ 1.9 billion) and Nomura (US\$ 1.7 billion).

Figure 15: FFA infrastructure construction investor countries of origin (2020 February, most recent filings, US\$ mln)

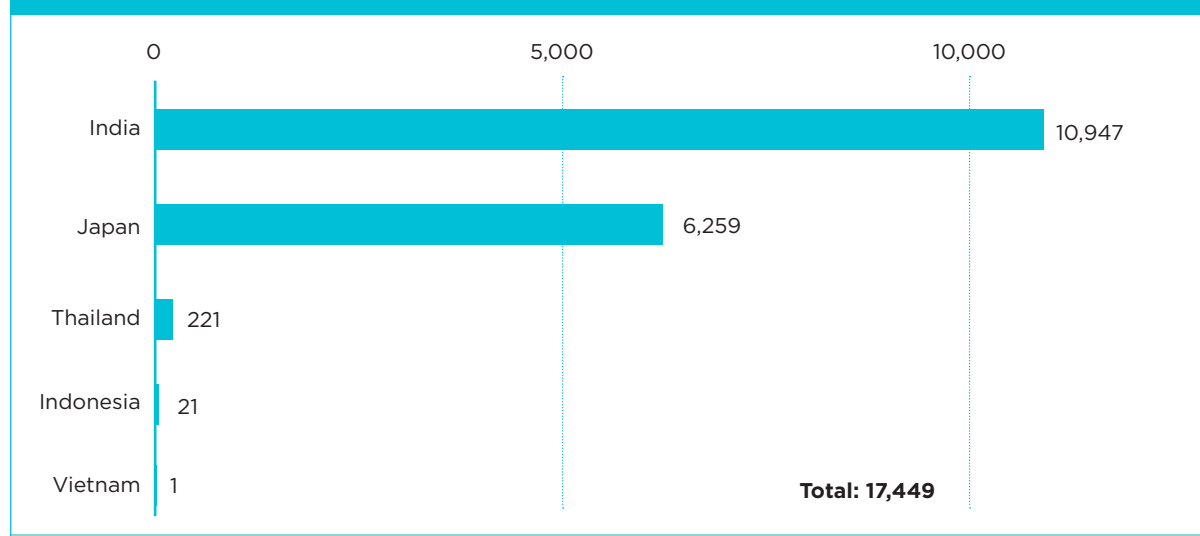
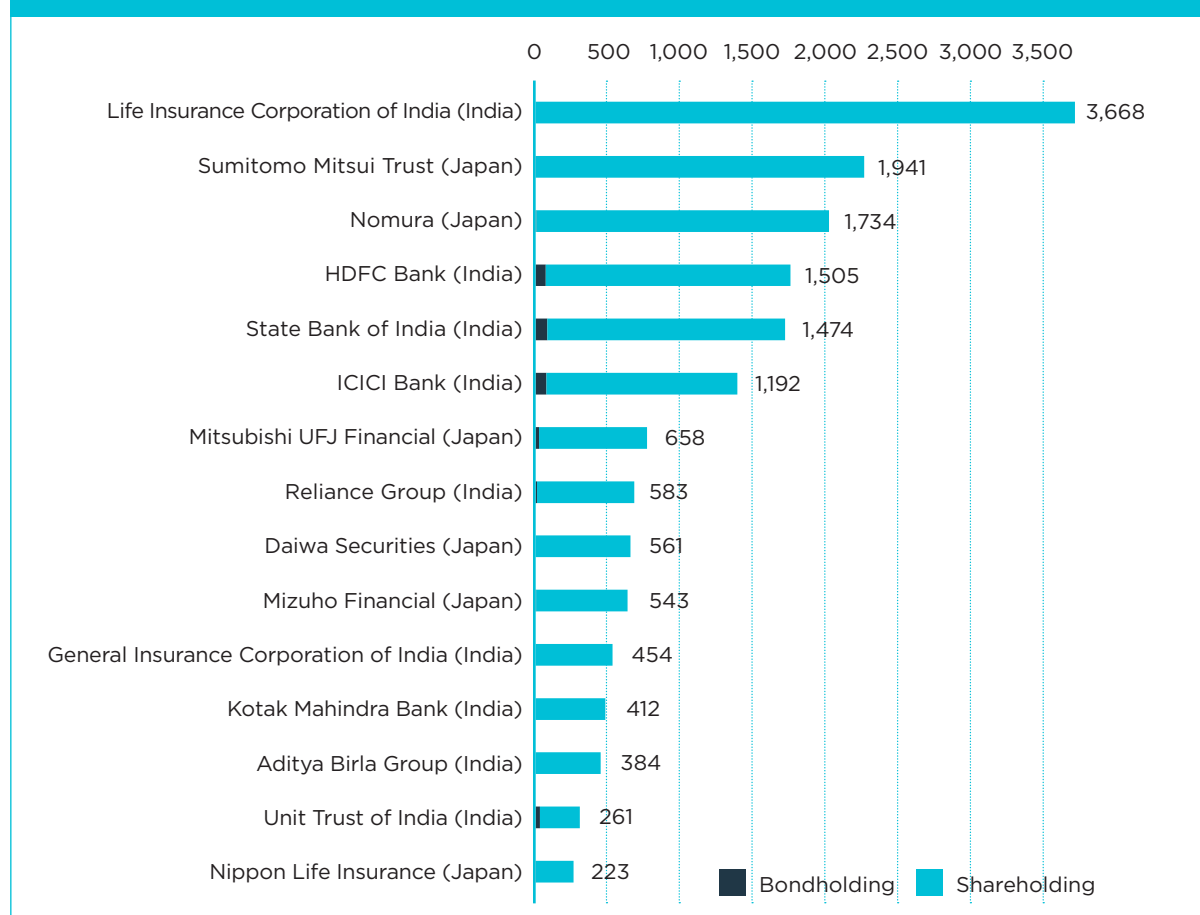


Figure 16: Top 15 FFA infrastructure investors (2020 February, most recent filings, US\$ mln)



3.2 Cambodia

3.2.1 Creditors

No loans and underwriting services were identified to the infrastructure construction companies in the period 2014-2019.

3.2.2 Investors

At the most recent filing date in February 2020, financial institutions held US\$ 127 million in the bonds and shares of the selected companies engaged in infrastructure construction in Cambodia. All of these investments were in the shares of Malaysian Muhibbah Engineering. Figure 17 shows that the majority of these investments were held by Malaysian financial institutions with US\$ 53 million. They were followed by investors registered in Bermuda (US\$ 33 million) and the United States (US\$ 27 million).

The top 15 investors held just over half of all identified shares. Together these financial institutions held US\$ 68 million in Muhibbah Engineering. The largest investor was Fidelity International with shares of US\$ 33 million (see Figure 18). It

was followed by the Malaysian Hajj Pilgrims Fund (US\$ 24 million) and Principle Financial Group (US\$ 11 million).

Investors from FFA countries invested US\$ 0.3 million in the shares of the selected companies engaged in infrastructure at the most recent filing date in February 2020. The largest investor from an FFA country was Japanese SMBC Group with shares of US\$ 0.2 million (see Figure 19).

3.3 India

3.3.1 Creditors

In the period of study (2014-2019), companies engaged in infrastructure construction in India attracted loans and underwriting services worth US\$ 24.9 billion. Just under a quarter of this credit was in the form of loans, and the remaining quarter was in the form of issuance underwriting services. Figure 20 shows that domestic financial institutions from India provided just over a third (US\$ 8.5 billion) of all identified credit. Financial institutions from the United States and Japan also provided significant levels of funding to

Figure 17: Country of origin investors in infrastructure in Cambodia (2020 February, most recent filings)

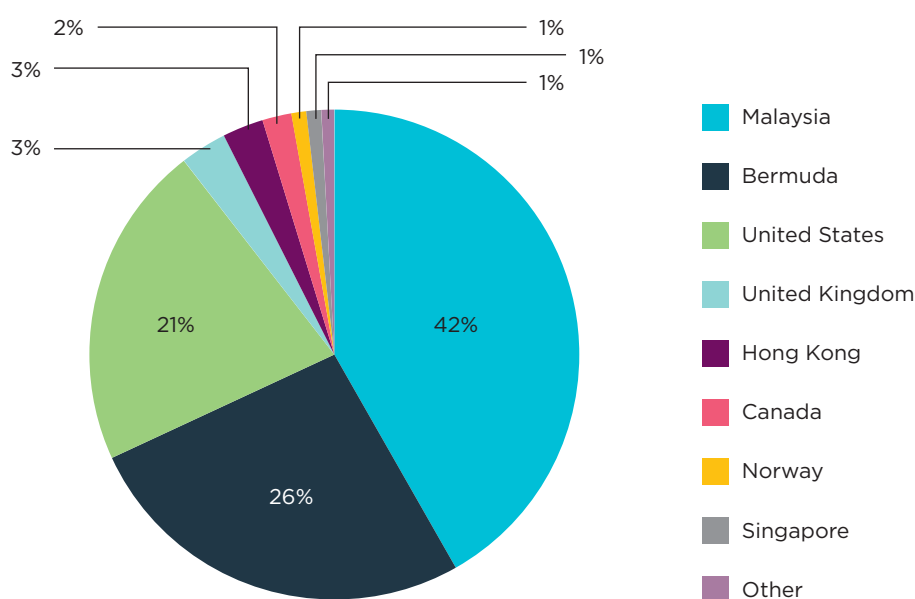


Figure 18: Top 15 infrastructure investors in Cambodia (2020 February, most recent filings, US\$ mln)

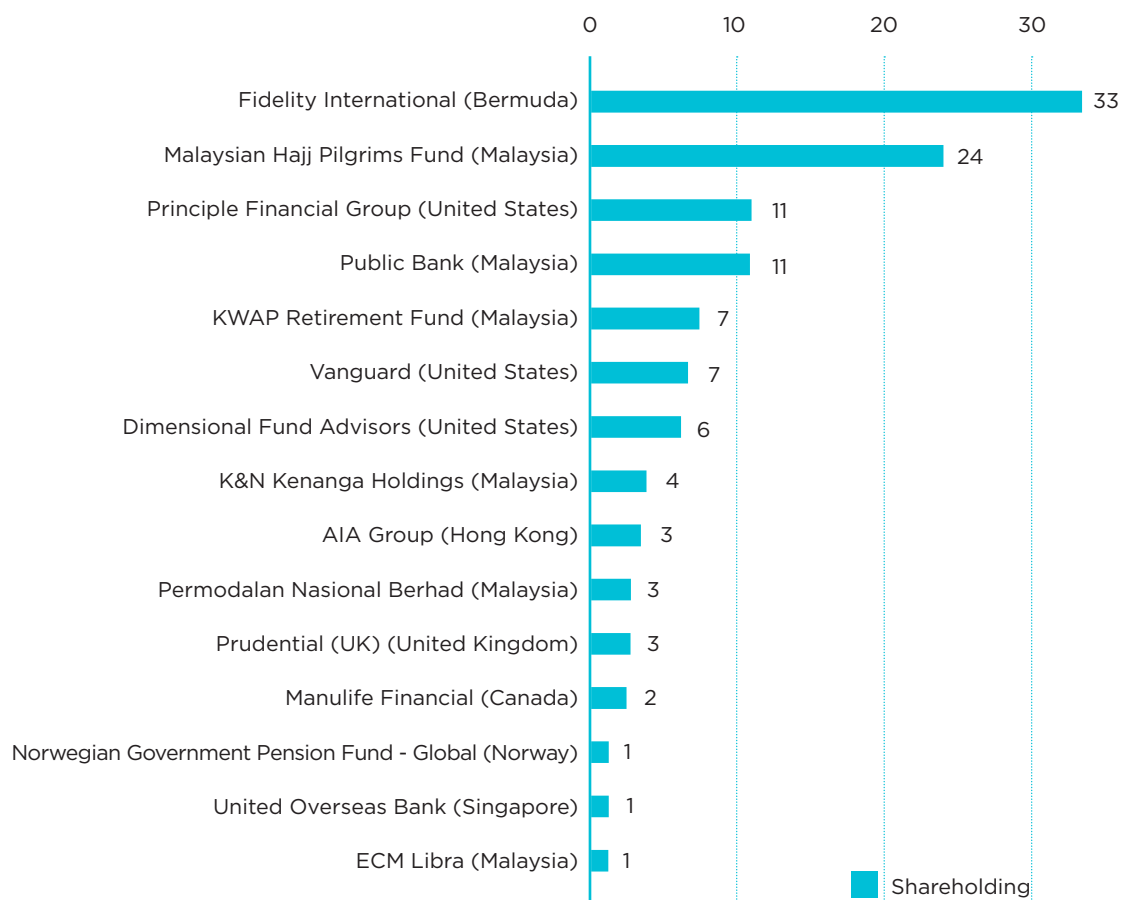


Figure 19: Top 15 FFA infrastructure investors in Cambodia (2020 February, most recent filings, US\$ mln)

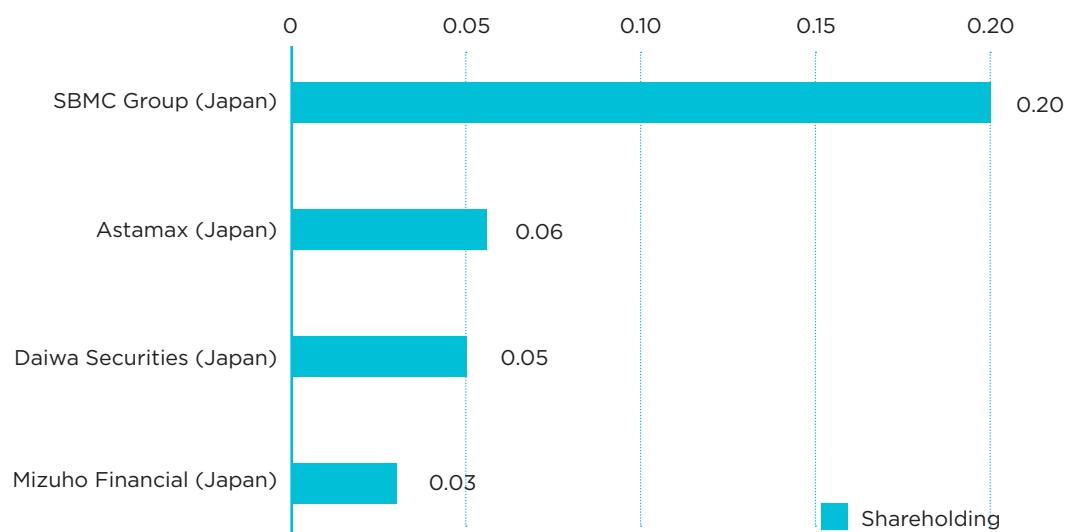


Figure 20: Country of origin creditors of infrastructure in India (2014-2019)

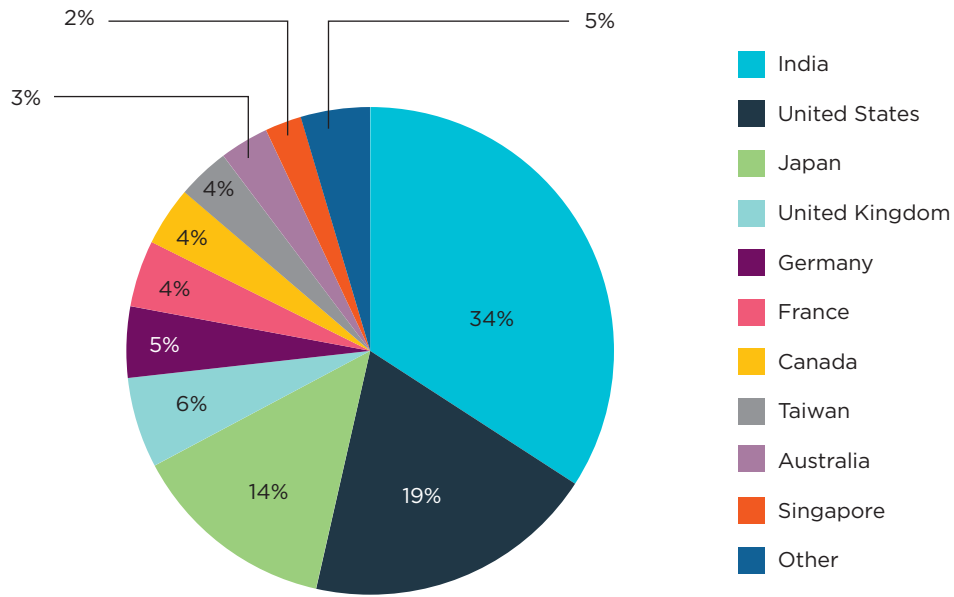
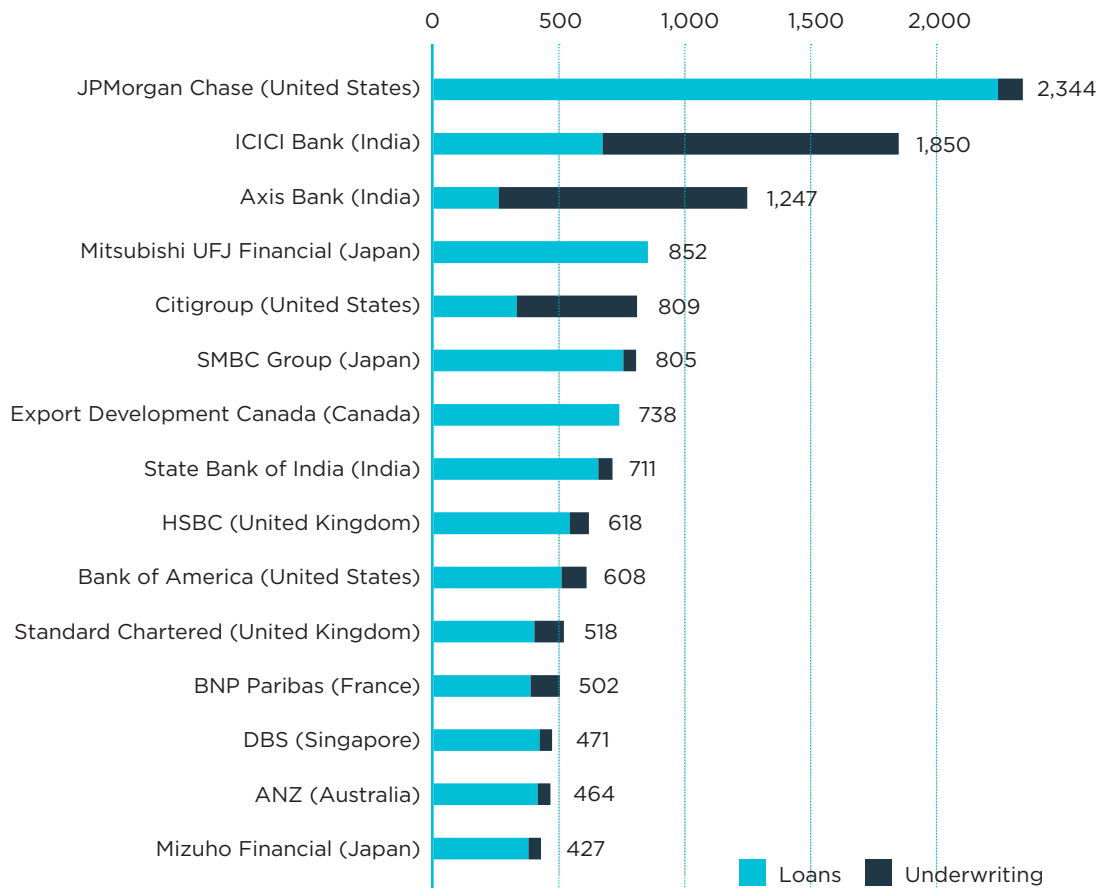


Figure 21: Top 15 infrastructure creditors in India (2014-2019, US\$ mln)



the selected companies. They provided credit of US\$ 4.8 billion and US\$ 3.4 billion respectively in the period 2014-2019.

The top 15 creditors of infrastructure companies in India accounted for 52% of all identified credit flows to these companies. Together they provided US\$ 13.0 billion in loans and underwriting services. As Figure 21, the largest creditor was JPMorgan Chase which provided US\$ 2.3 billion to the selected companies. It was followed by Indian banks, ICICI Bank (US\$ 1.9 billion) and Axis Bank (US\$ 1.2 billion)

Creditors from FFA countries provided 48% of all identified loans and underwriting services to the selected companies active infrastructure construction in India between 2014 and 2019. Together these financial institutions provided US\$ 11.9 billion in

credit to the selected companies. 11 of the top 15 FFA creditors were Indian banks. The remaining financial institutions were all from Japan. The largest FFA creditor was ICICI Bank, which provided US\$ 1.9 billion in loans and underwriting services to the selected companies. It was followed by Axis Bank (US\$ 1.2 billion) and Mitsubishi UFJ Financial (US\$ 852 million).

3.3.2 Investors

The selected companies active in infrastructure construction in India attracted investments in their bonds and shares of US\$ 14.9 billion at the most recent filing date in February 2020. 98% of these investments were in shares, and 2% were in bonds issued by the selected companies. Figure 23 shows that just under three quarters of these investments (US\$ 10.9 billion) were made by domestic

Figure 22: Top 15 FFA infrastructure creditors in India (2014-2019, US\$ mln)

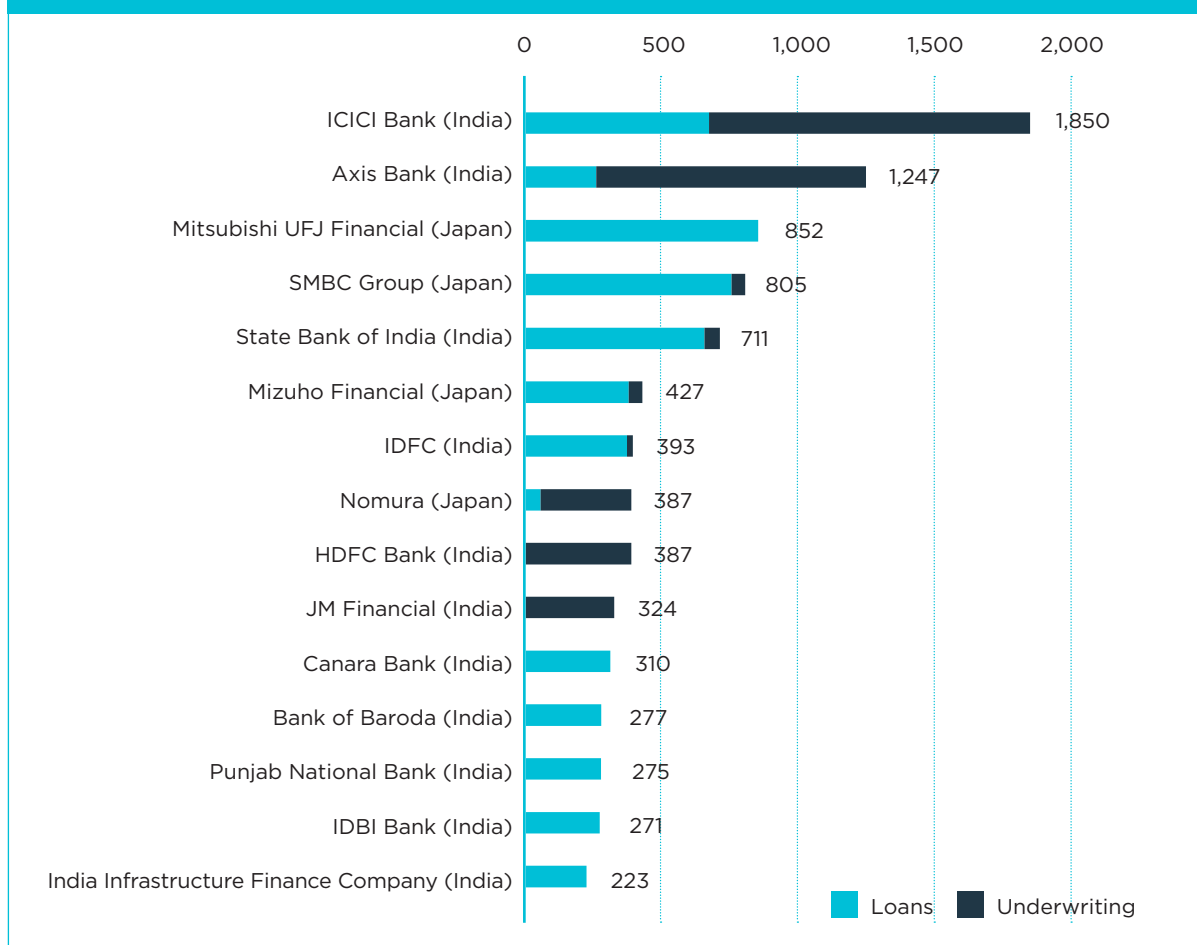


Figure 23: Country of origin investors in infrastructure in India (2020 February, most recent filings)

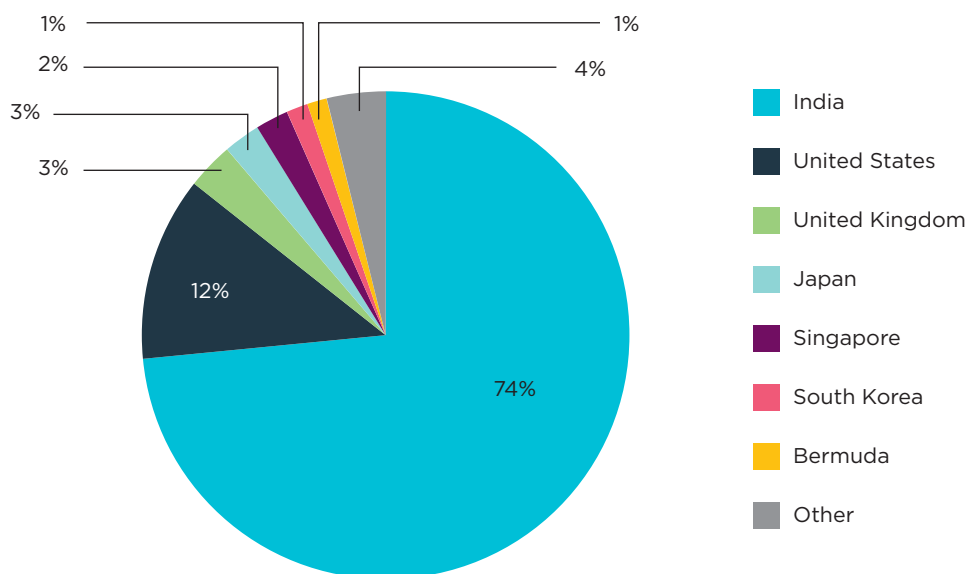


Figure 24: Top 15 infrastructure investors in India (2020 February, most recent filings, US\$ mln)

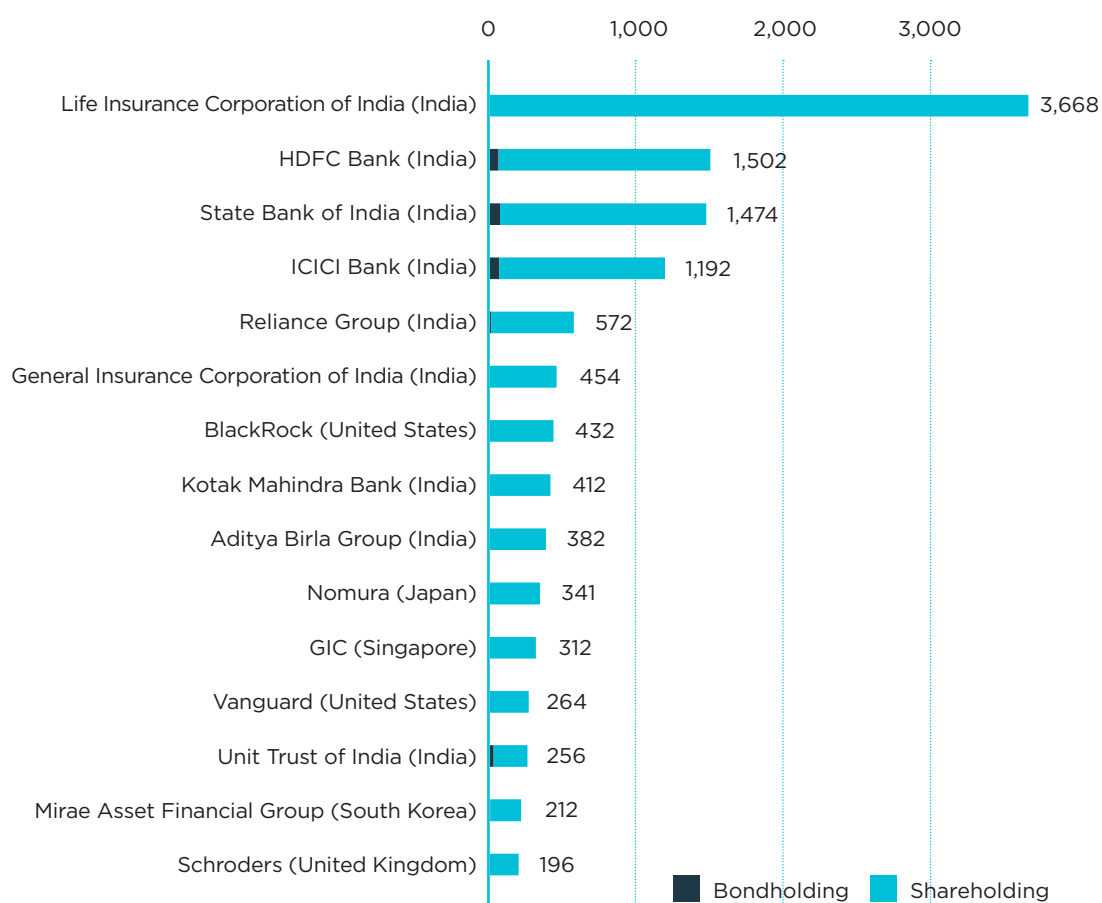
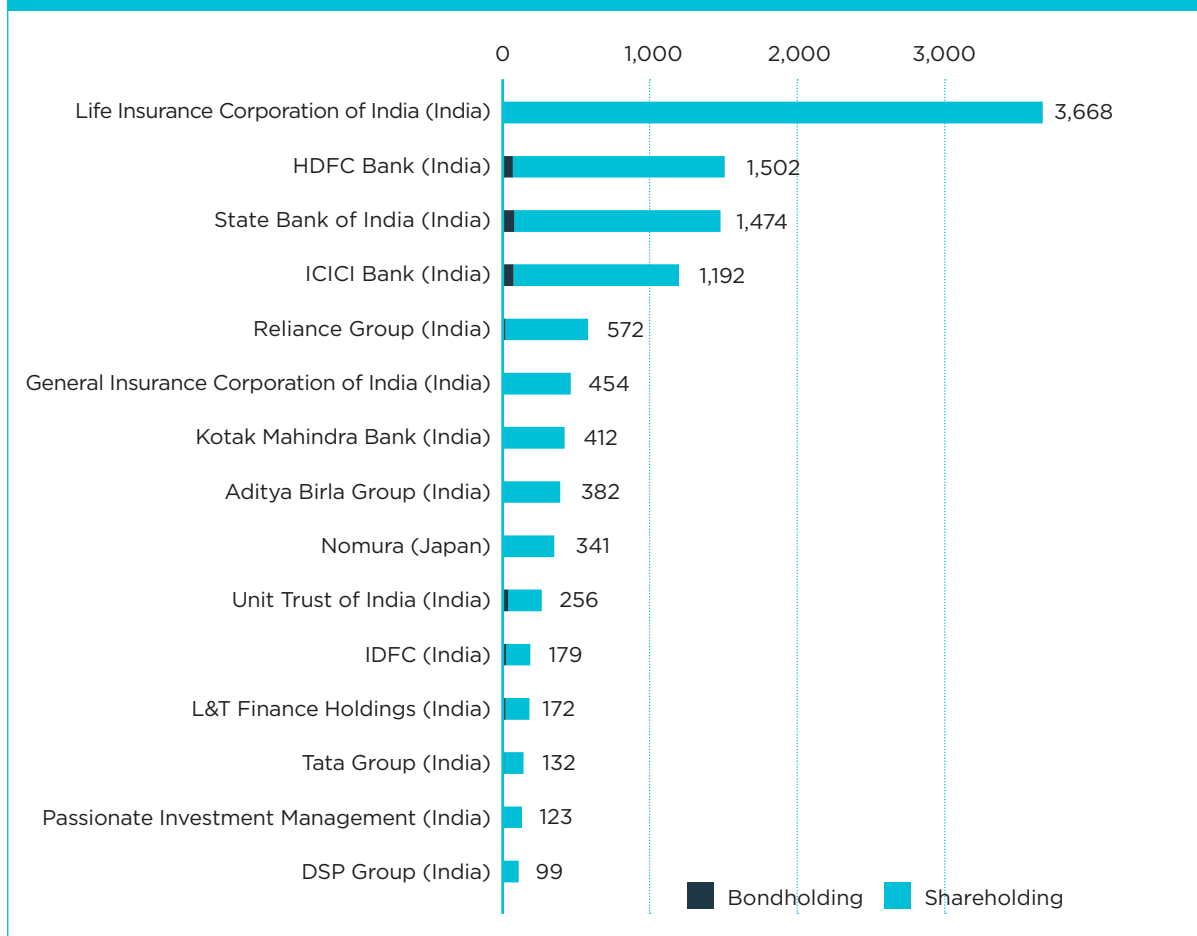


Figure 25: Top 15 FFA infrastructure investors in India (2020 February, most recent filings, US\$ mln)



financial institutions in India. Financial institutions from the United States also held a significant proportion of the bonds and shares with 12% (US\$ 1.8 billion). Financial institutions from the United Kingdom held bonds and shares of US\$ 462 million at the most recent filing date in February 2020.

The top 15 investors in the bonds and shares of the selected companies engaged in infrastructure construction in India held US\$ 11.7 billion at the most recent filing date. Together they accounted for 78% of all investments in the selected companies. The largest investor was Life Insurance Corporation of India, which held bonds and share worth US\$ 3.7 billion (see Figure 22). It was followed by HDFC Bank (US\$ 1.5 billion) and State Bank of India (US\$ 1.5 billion).

Investors from FFA countries held US\$ 11.3 billion in the bonds and shares of the selected companies active in infrastructure construction at the most recent filing date in February 2020. Together these investments accounted for 76% of all identified investments. Figure 25 shows that the top 15 FFA investors don't differ greatly from the top 15 investors overall. 14 of the top 15 FFA investors in the selected infrastructure companies in India were domestic financial institutions from India. The remaining financial institution was from Japan.

As with the top 15 investors overall, the largest investor was Life Insurance Corporation of India, which held bonds and share worth US\$ 3.7 billion. It was followed by HDFC Bank (US\$ 1.5 billion) and State Bank of India (US\$ 1.5 billion).

3.4 Indonesia

3.4.1 Creditors

From 2014 to 2019, infrastructure companies active in Indonesia attracted

US\$ 73.2 billion in loans and underwriting services. 80% of this credit was provided in the form of loans. The remaining 20% was provided in the form of issuance underwriting services. As Figure 26

Figure 26: Country of origin creditors of infrastructure in Indonesia (2014-2019)

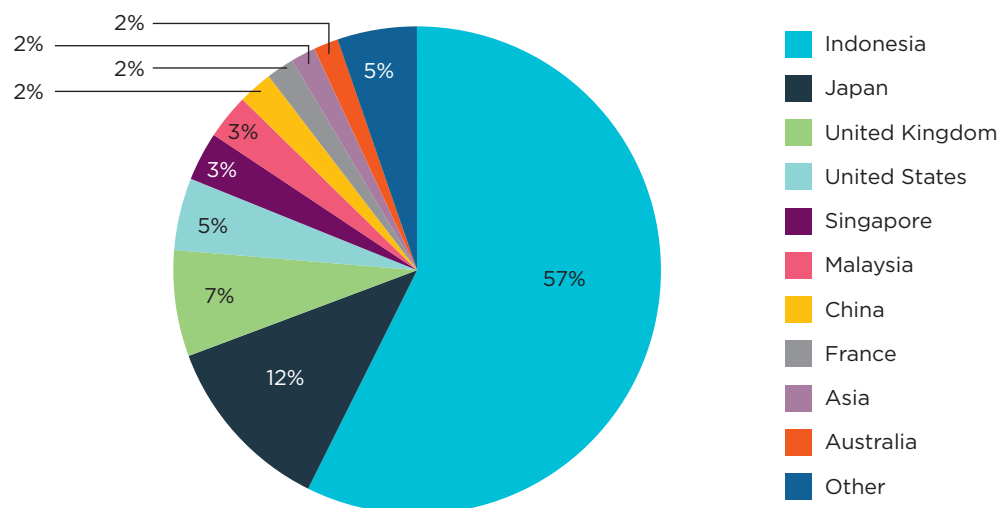


Figure 27: Top 15 infrastructure creditors in Indonesia (2014-2019, US\$ mln)

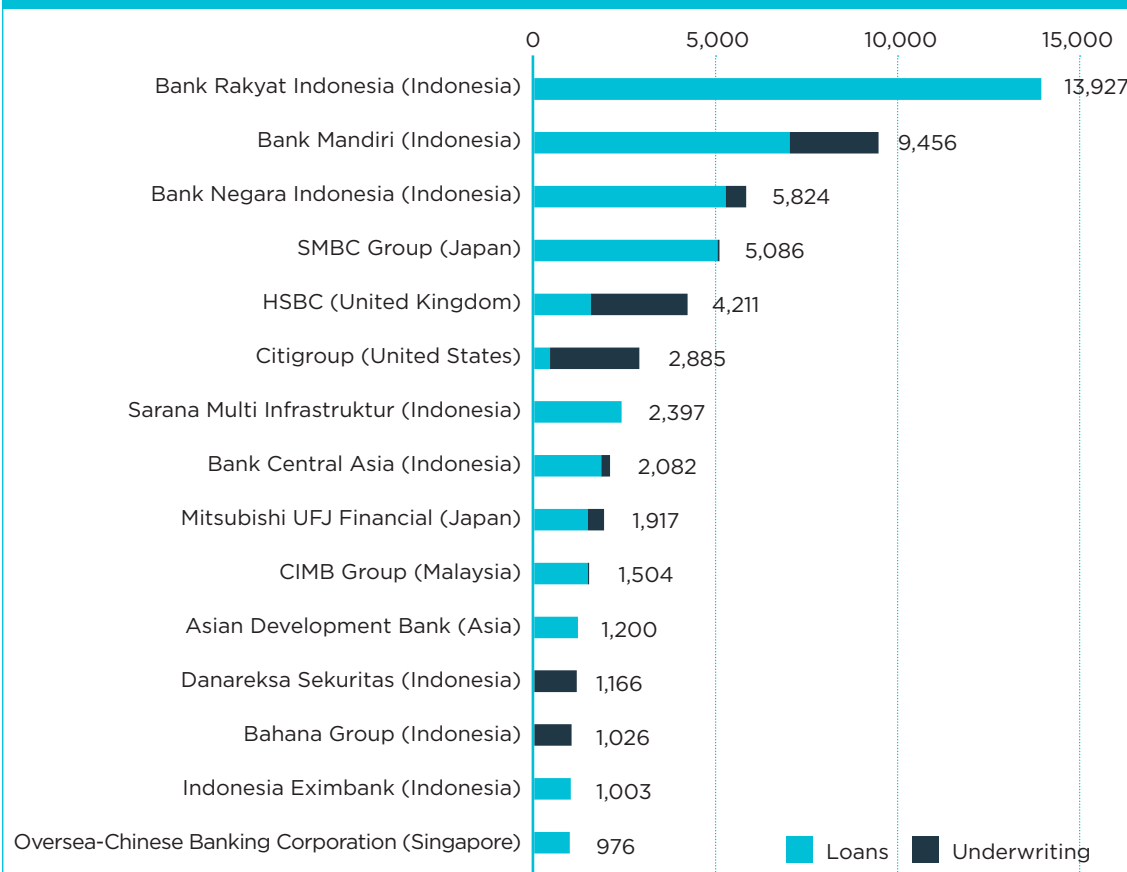
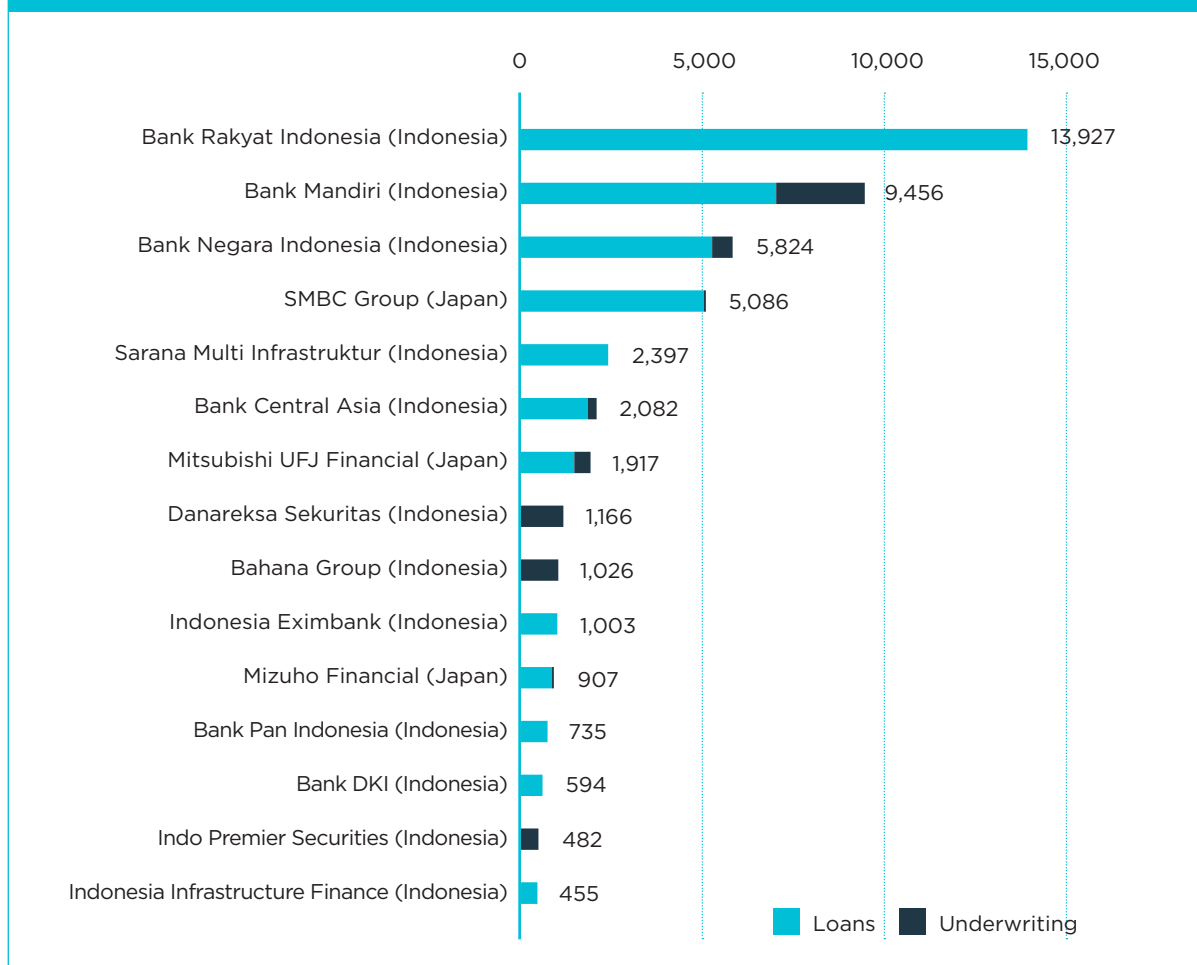


Figure 28: Top 15 FFA infrastructure creditors in Indonesia (2014-2019, US\$ mln)



shows, domestic financial institutions from Indonesia provided more than half of all identified loans and underwriting services to the selected companies engaged in infrastructure construction in Indonesia. Together they provided US\$ 42 billion in credit to the selected companies. They were followed by financial institutions from Japan (US\$ 8.7 billion) and the United Kingdom (US\$ 5.1 billion).

Creditors from FFA countries together provided 70% of all loans and underwriting services to the selected infrastructure companies active in Indonesia in the period 2014-2019. In total these financial institutions provided US\$ 52 billion in credit. Figure 28 shows that 12 of the top 15 creditors from FFA countries, were domestic Indonesian financial institutions. The remaining financial institutions were from Japan.

As with the top 15 overall creditors, the three largest creditors were all Indonesian state-owned banks Bank Rakyat Indonesia, Bank Mandiri and Bank Negara Indonesia. The banks provided US\$ 13.9 billion, US\$ 9.5 billion and US\$ 5.8 billion respectively to the selected infrastructure construction companies.

3.4.2 Investors

At the most recent filing date in February 2020, investors held US\$ 5.2 billion in the bonds and shares of the selected companies active in infrastructure construction in Indonesia. 93% of these investments were in bonds, particularly of bonds issued by Indonesian state-owned enterprises. The remaining 7% were investments in shares. Investors from the United States and Taiwan held over a third each of all identified

Figure 29: Country of origin investors in infrastructure in Indonesia (2020 February, most recent filings)

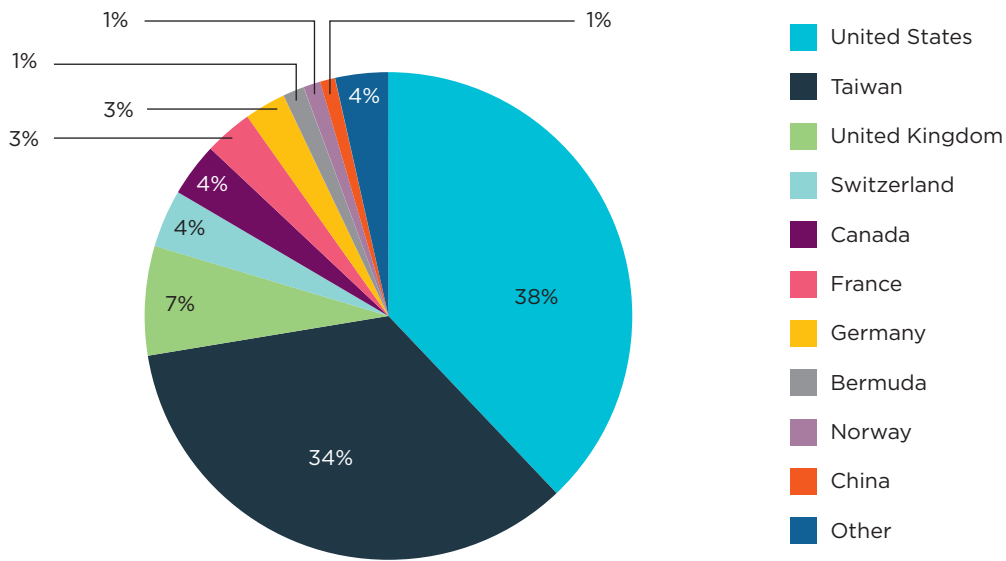


Figure 30: Top 15 infrastructure investors in Indonesia (2020 February, most recent filings, US\$ mln)

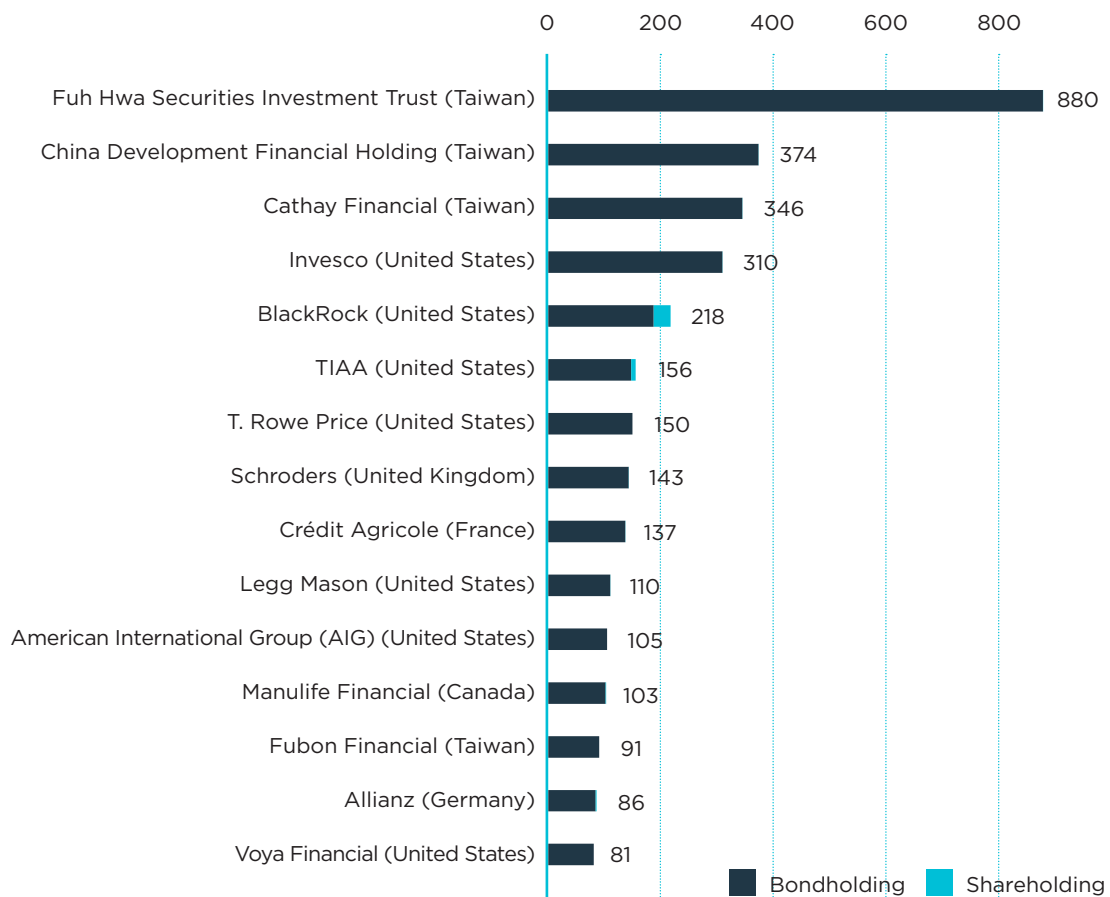
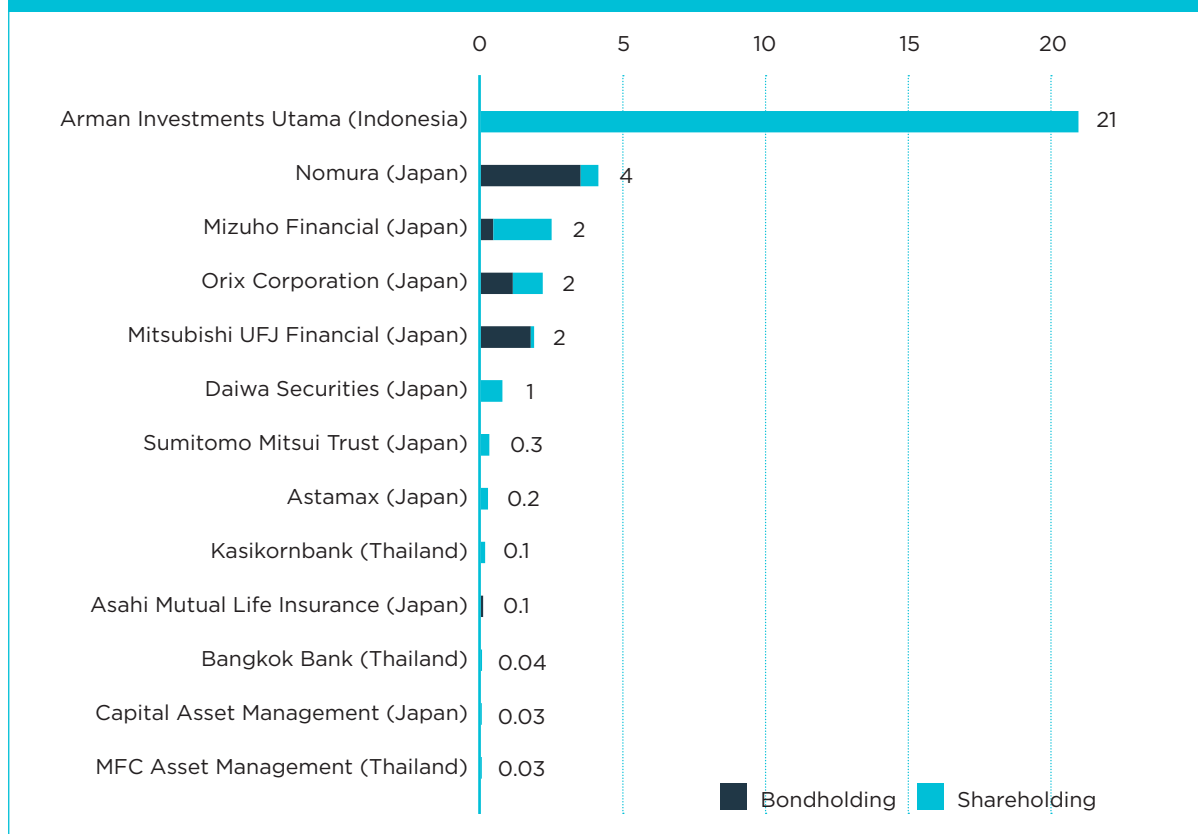


Figure 31: Top 15 FFA infrastructure investors in Indonesia (2020 February, most recent filings, US\$ mln)



investments. They held US\$ 2.0 billion and US\$ 1.8 billion respectively of the bonds and shares of the selected infrastructure construction companies.

The top 15 investors held US\$ 3.3 billion in the bonds and shares of the selected infrastructure construction companies in Indonesia. Together they accounted for 63% of all identified investments. The largest investor was Fuh Hwa Securities Investment Trust, which held bonds and shares of US\$ 8800 million at the most recent filing date (see Figure 30). It was followed by two more Taiwanese financial institutions, China Development Financial Holding (US\$ 374 million) and Cathay Financial (US\$ 346 million).

Financial institutions from FFA countries accounted for less than 1% of all identified investments in the bonds and shares

of selected infrastructure construction companies. Together they held investments of US\$ 33 million. The largest investor was Indonesia Arman Investments Utama, with investments of US\$ 21 million (see Figure 31). It was followed by Japanese financial institutions Nomura (US\$ 4.1 million) and Mizuho Financial (US\$ 2.5 million).

3.5 Japan

3.5.1 Creditors

In the period 2014-2019, the selected infrastructure companies in Japan attracted US\$ 13.6 in loans and underwriting services. 84% of this credit was in the form of loans. The remaining 16% was provided in the form of issuance underwriting services. Figure 32 shows that almost all of this credit was provided by domestic Japanese financial institutions.

Figure 32: Country of origin creditors of infrastructure in Japan (2014-2019)

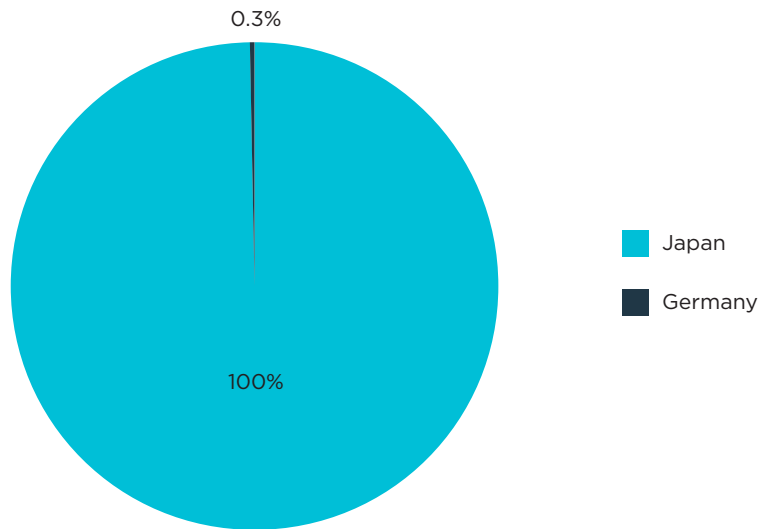
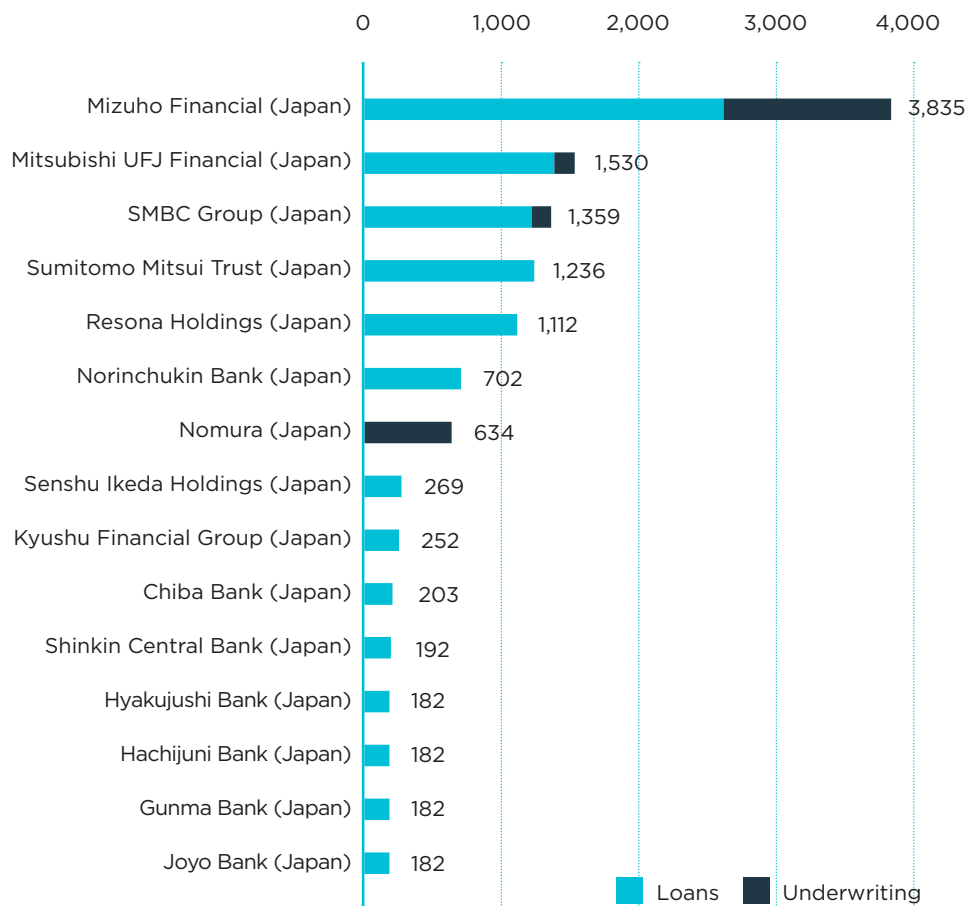


Figure 33: Top 15 infrastructure creditors in Japan (2014-2019, US\$ mln)



The 15 largest creditors of infrastructure construction companies in Japan, provided US\$ 12.1 billion in loans and underwriting services. Together this accounted for 89% all identified credit to these companies. Figure 33 shows that the top 15 creditors are exclusively Japanese financial institutions. The largest creditor infrastructure companies in Japan was Mizuho Financial, with US\$ 3.8 in loans and underwriting services. It was followed by Mitsubishi UFJ Financial (US\$ 1.5 billion) and SMBC Group (US\$ 1.4 billion).

As the top 15 infrastructure construction creditors in Japan are exclusively Japanese, they are also all from an FFA country.

3.5.2 Investors

The selected infrastructure companies active in Japan attracted investments in their bonds and shares worth US\$ 9.7 billion at the most recent filing date in February 2020. Over 99% of these investments were in shares, the remaining 0.7% was in bonds issued by the selected companies. Domestic investors from Japan accounted for more than half of all identified investments (US\$ 5.3 billion)

(see Figure 34). They were followed by investors from United States (US\$ 2.5 billion) and Norway (US\$ 444 million).

The top 15 investors accounted for over three quarters of all identified investments in the bonds and shares of the selected companies engaged in infrastructure construction at the most recent filing date in February 2020. Together these financial institutions held investments of US\$ 7.5 billion. These largest investor was Sumitomo Mitsui Trust with investments in bonds and shares of US\$ 1.7 billion (see Figure 35). It was followed by Nomura (US\$ 1.3 billion) and US asset manager Vanguard (US\$ 781 million).

Investors from FFA countries accounted for 55% of all identified investments. Together they held bonds and shares worth US\$ 5.3 billion. All the top 15 FFA investors were Japanese financial institutions. The largest FFA investor was Sumitomo Mitsui Trust with investments in bonds and shares of US\$ 1.7 billion (see Figure 36). It was followed by Nomura (US\$ 1.3 billion) and Mitsubishi UFJ Financial (US\$ 518 million).

Figure 34: Country of origin investors in infrastructure in Japan (2020 February, most recent filings)

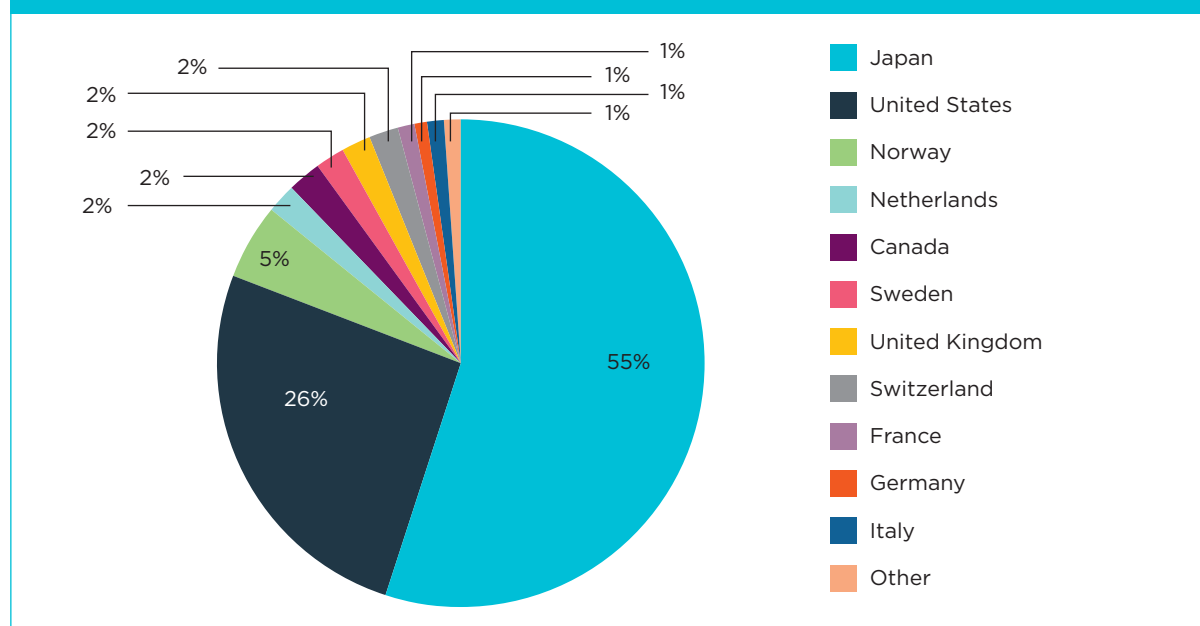


Figure 35: Top 15 infrastructure investors in Japan (2020 February, most recent filings, US\$ mln)

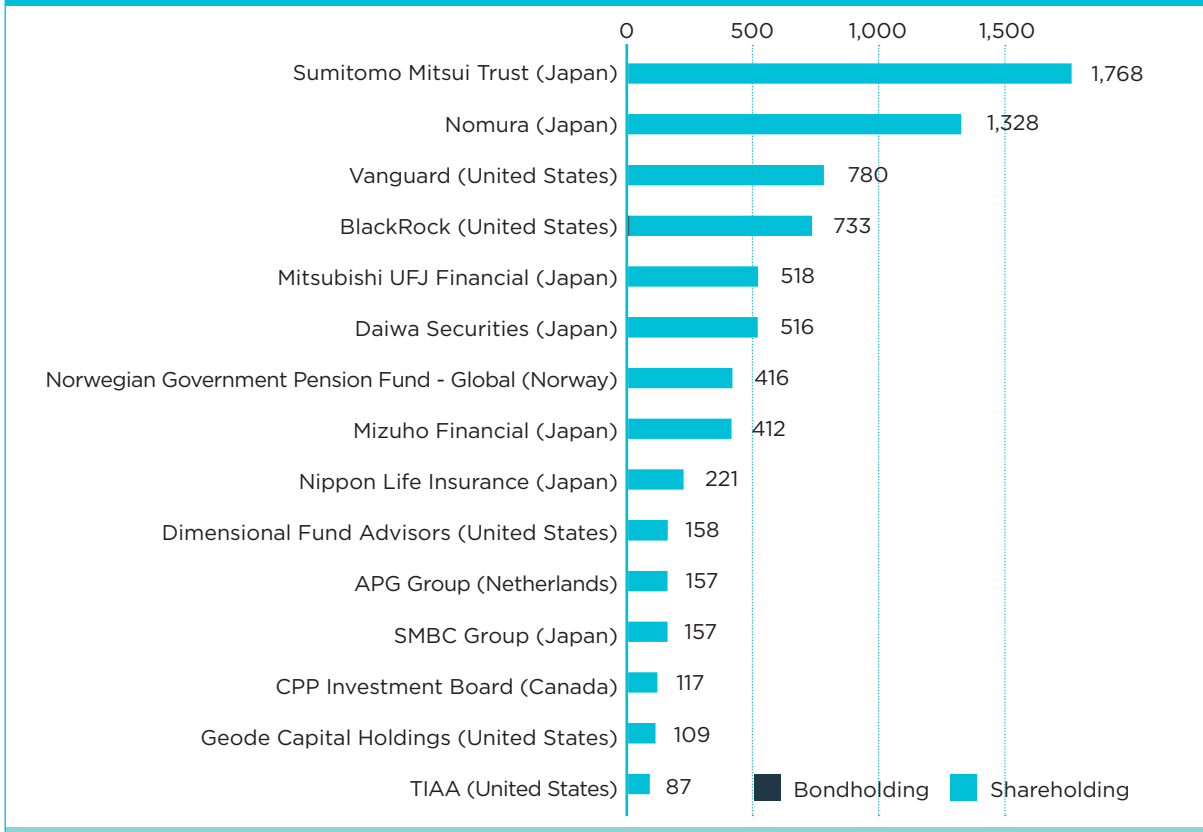
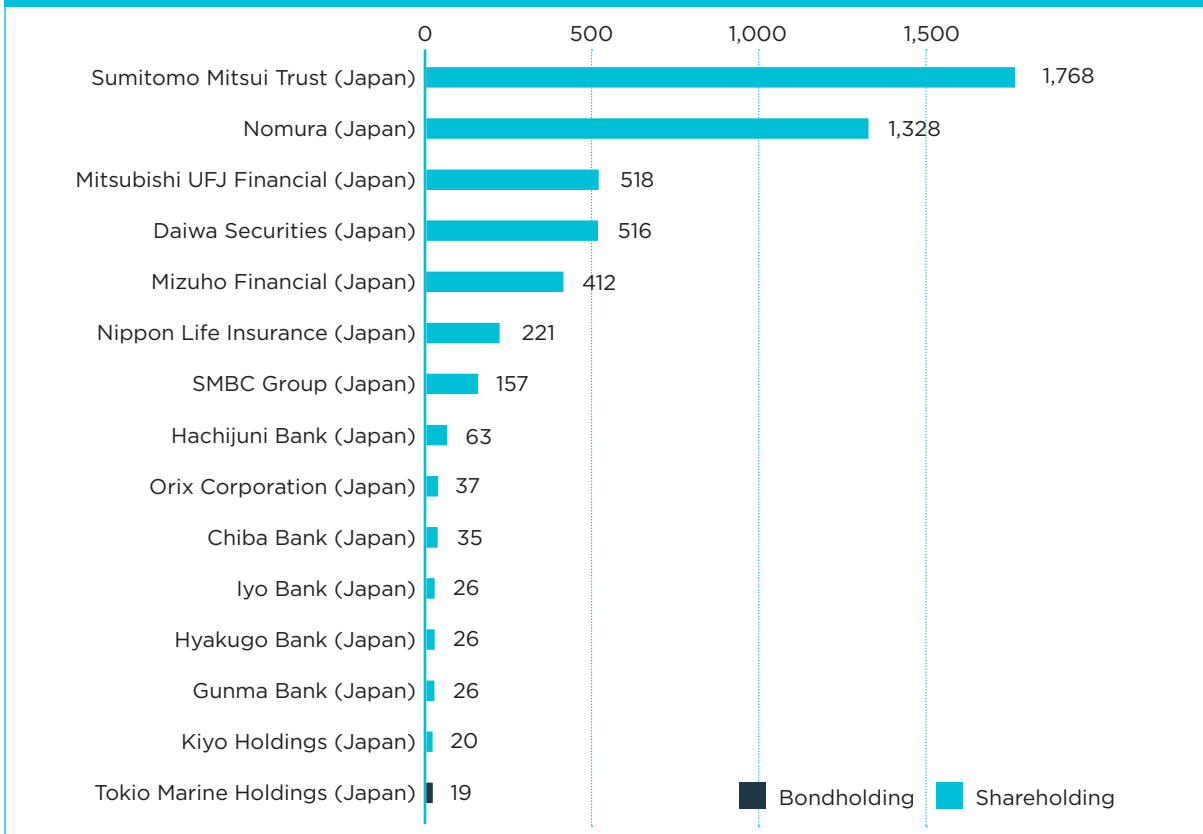


Figure 36: Top 15 FFA infrastructure investors in Japan (2020 February, most recent filings, US\$ mln)



3.6 Philippines

3.6.1 Creditors

The selected infrastructure companies active in the Philippines attracted US\$

17.2 billion in the period 2014 to 2019. 78% of this credit was in form of loans, and the remaining 22% was in the form of issuance underwriting services. As Figure 37 shows, a quarter of this

Figure 37: Country of origin creditors of infrastructure in Philippines (2014-2019)

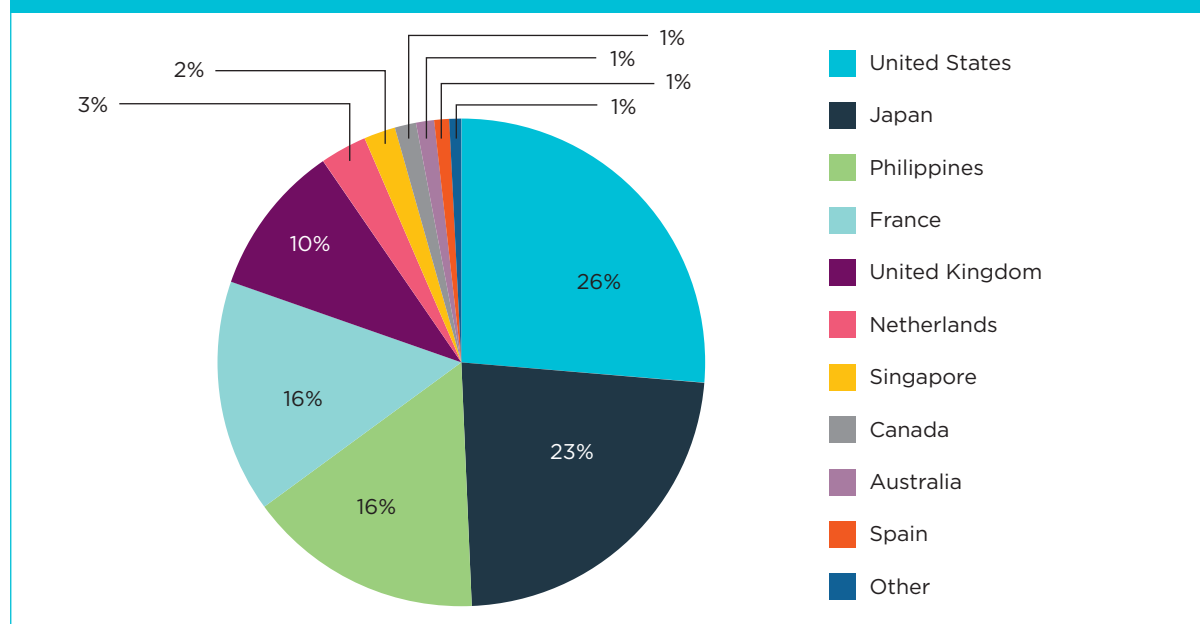


Figure 38: Top 15 infrastructure creditors in Philippines (2014-2019, US\$ mln)

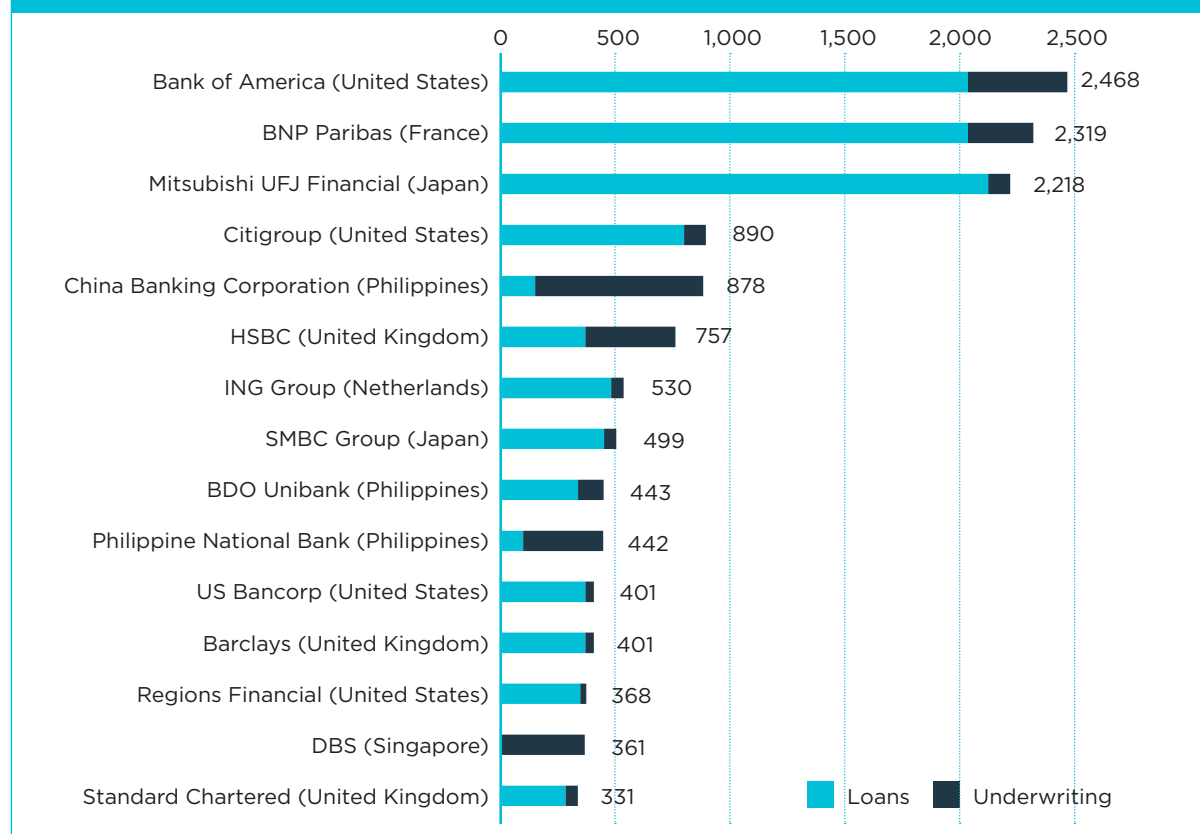
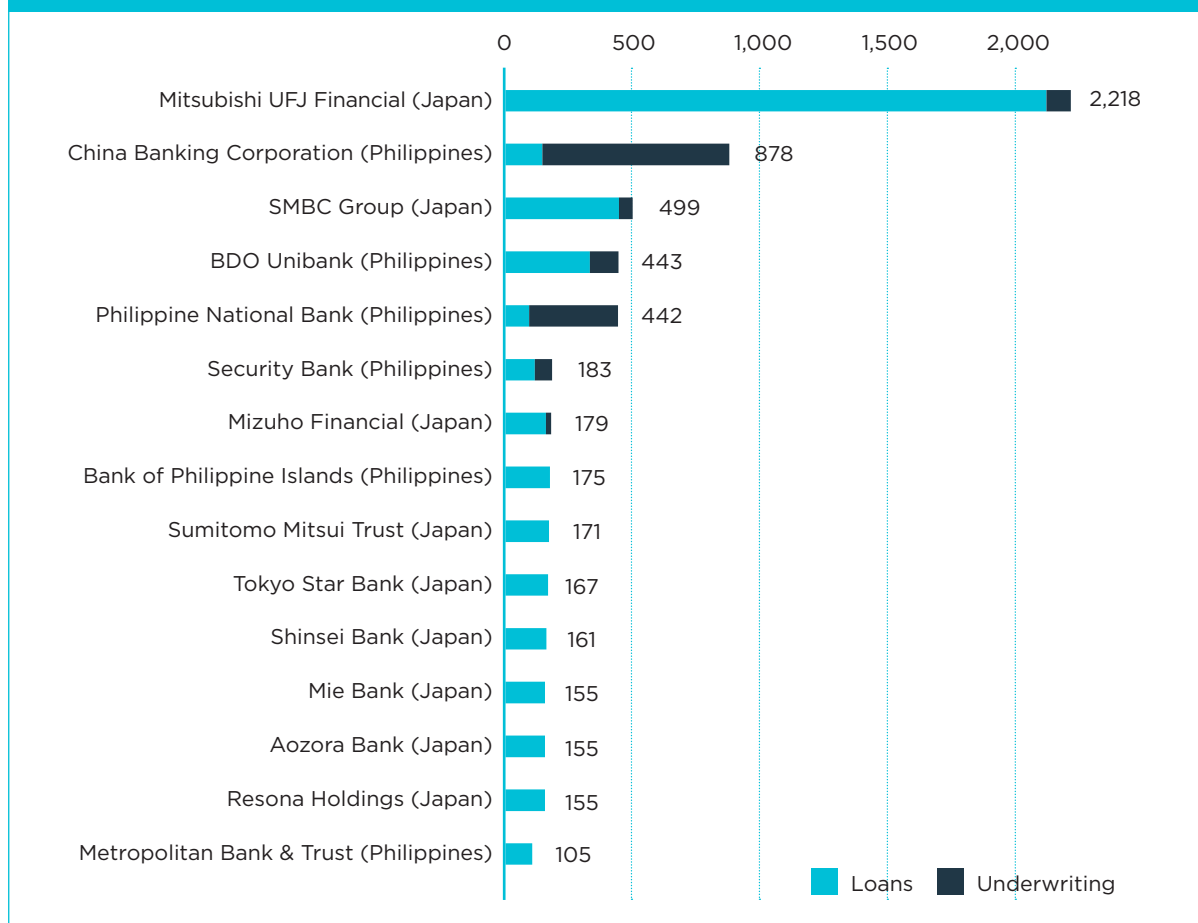


Figure 39: Top 15 FFA infrastructure creditors in Philippines (2014-2019, US\$ mln)



financing (US\$ 4.5 billion) was provided by financial institutions from the United States. Financial institutions from Japan and the Philippines were also significant creditors of infrastructure companies in the Philippines. They provided US\$ 3.9 billion and US\$ 2.7 billion respectively in loans and underwriting services to the selected companies.

The top 15 financial institutions provided over three quarters of all identified credit to the selected infrastructure companies. Together they provided US\$ 13.3 billion in loans and underwriting services. Among them the largest creditor was Bank of America, which provided US\$ 2.5 billion in credit to the selected companies (see Figure 38). It was followed by French BNP Paribas (US\$ 2.3 billion) and Japanese Mitsubishi UFJ Financial (US\$ 2.2 billion).

Financial institutions from FFA countries provided 39% of all identified loans and underwriting services to infrastructure companies in the Philippines. Together these financial institutions provided US\$ 6.6 billion in credit. As Figure 39 shows the largest FFA creditor was Mitsubishi UFJ Financial which provided US\$ 2.2 billion in credit. It was followed by Philippine China Banking Corporation (US\$ 878 million) and Japanese SMBC Group (US\$ 499 million).

3.6.2 Investors

At the most recent filing date in February 2020, financial institutions invested US\$ 3.8 billion in the bonds and shares of infrastructure construction companies active in the Philippines. Three quarters of these investments were in shares, and the remaining quarter was invested in bonds issued by the selected companies. Figure 40 shows that financial institutions from

Figure 40: Country of origin investors in infrastructure in Philippines (2020 February, most recent filings)

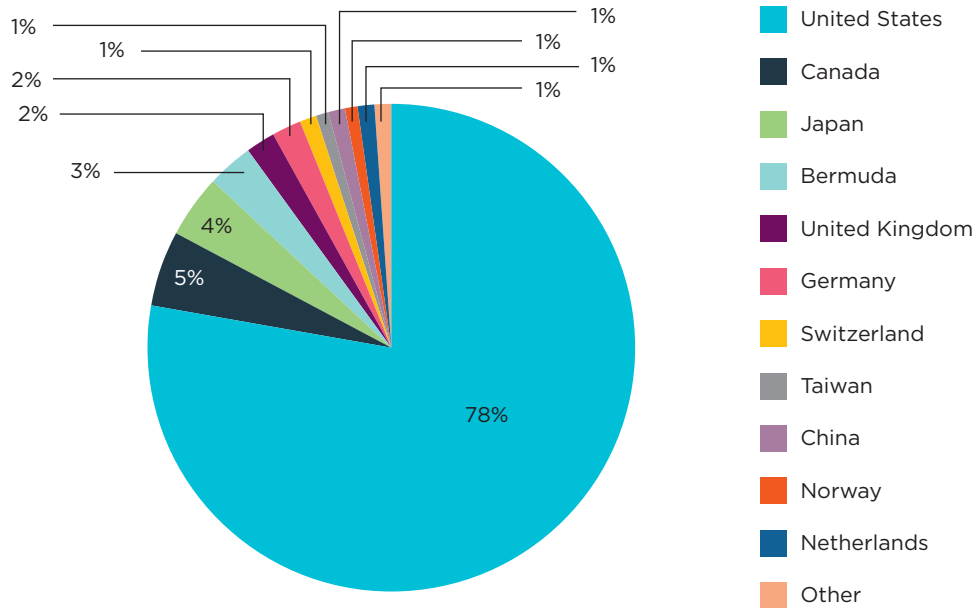
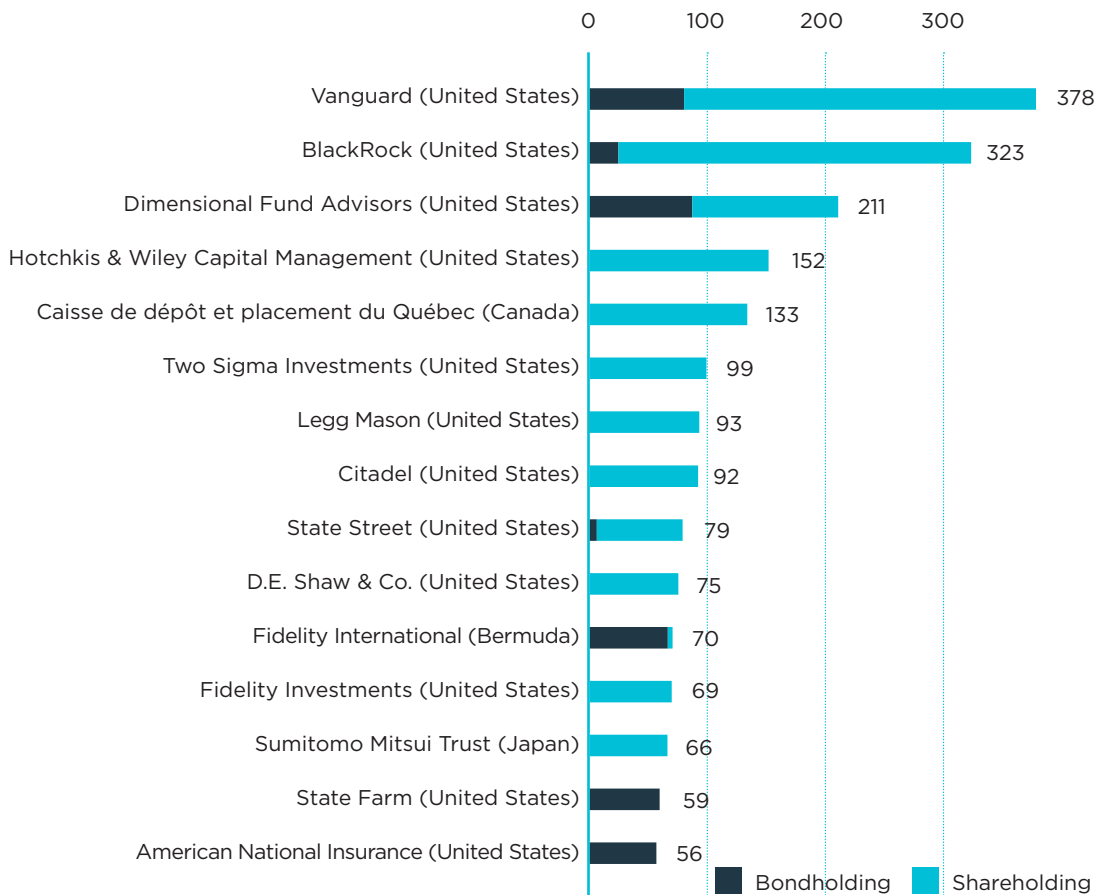


Figure 41: Top 15 infrastructure investors in Philippines (2020 February, most recent filings, US\$ mln)



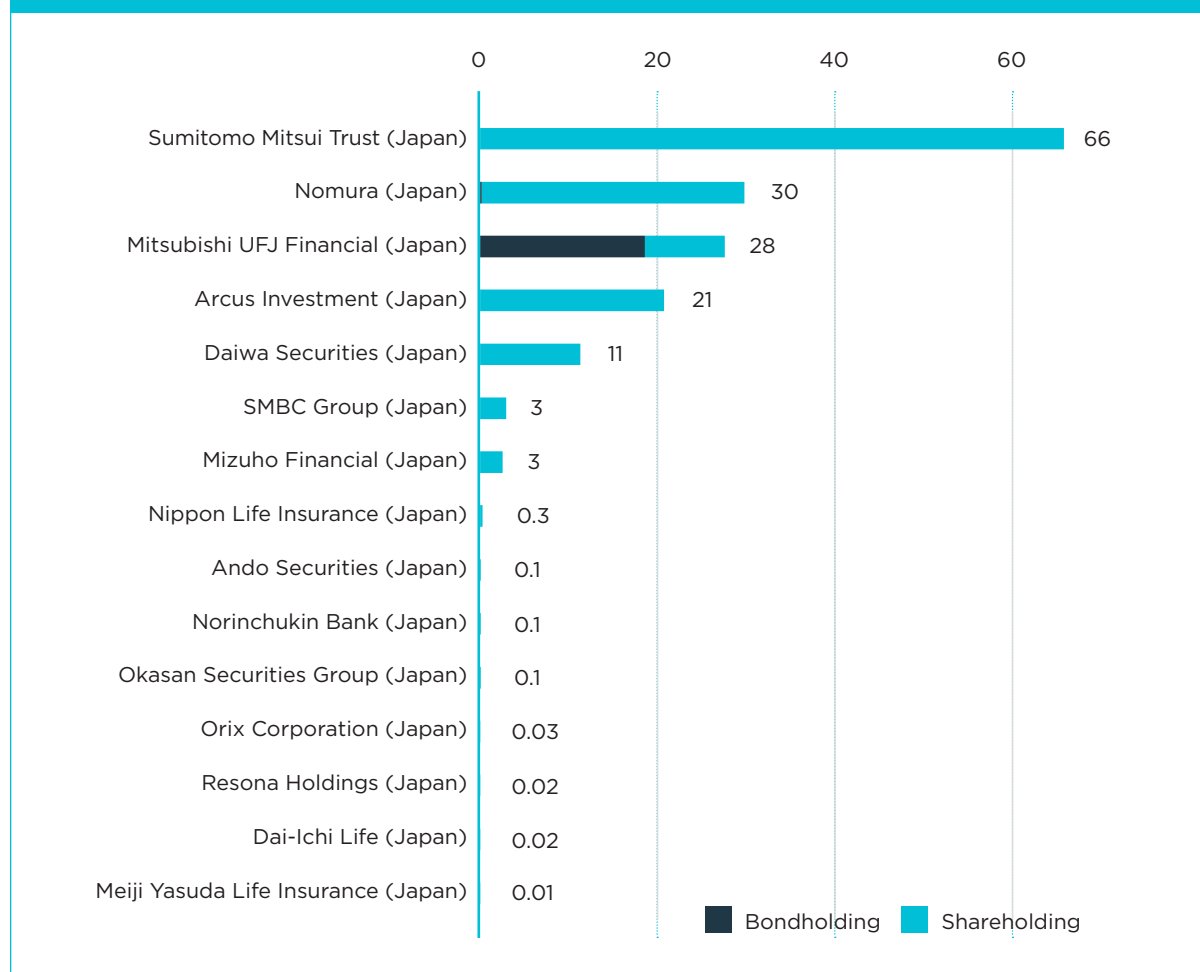
the United States accounted for 78% of all identified investments, with investments worth US\$ 2.9 billion. This is mainly due to the presence of the large US-based multinational construction and engineering company – Fluor Corporation. Financial institutions from Canada held bonds and shares worth US\$ 206 million, and Japanese investments held investments of US\$ 161 million.

The top 15 investors held more than 50% of all identified investments in the selected companies active in infrastructure development in the Philippines at the most recent filing date in February 2020. Together these investors held bonds and shares worth US\$ 2.0 billion. The largest investors were all US asset managers.

Among them, the largest was Vanguard with investments of US\$ 378 million (see Figure 41). It was followed by BlackRock (US\$ 323 million) and Dimensional Fund Advisors (US\$ 211 million).

Investors from FFA countries held approximately 4% of all identified bond- and shareholdings of the selected companies engaged in infrastructure construction in the Philippines. Together they held investments of US\$ 161 million. Figure 42 shows that all the top 15 investors from FFA countries, were from Japan. The largest investor was Sumitomo Mitsui Trust with investments of US\$ 66 million. It was followed by Nomura (US\$ 30 million) and Mitsubishi UFJ Financial (US\$ 28 million).

Figure 42: Top 15 FFA infrastructure investors in the Philippines (2020 February, most recent filings, US\$ mln)



3.7 Thailand

3.7.1 Creditors

In the period 2014-2019, infrastructure construction companies in Thailand attracted US\$ 2.6 billion in credit. All of this was provided in the form of issuance underwriting services. Figure 43 shows that nearly all of these underwriting services were provided by domestic financial institutions in Thailand. These financial institutions provided US\$ 2.5 billion in underwriting services. Financial institutions

from India provided the remaining US\$ 77 million in underwriting services.

In the period of study, 7 financial institutions were identified as providing loans and underwriting services to the selected companies active in infrastructure construction in Vietnam. Of these 7 financial institutions, 5 were from Thailand and 2 were from India. Figure 44 shows that the largest creditor of the selected infrastructure companies in Thailand was Bangkok Bank which provided US\$ 923 in underwriting

Figure 43: Country of origin creditors of infrastructure in Thailand (2014-2019)

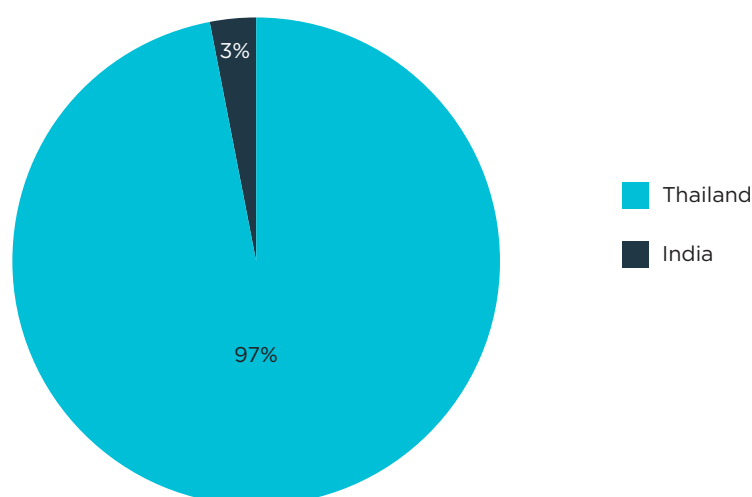
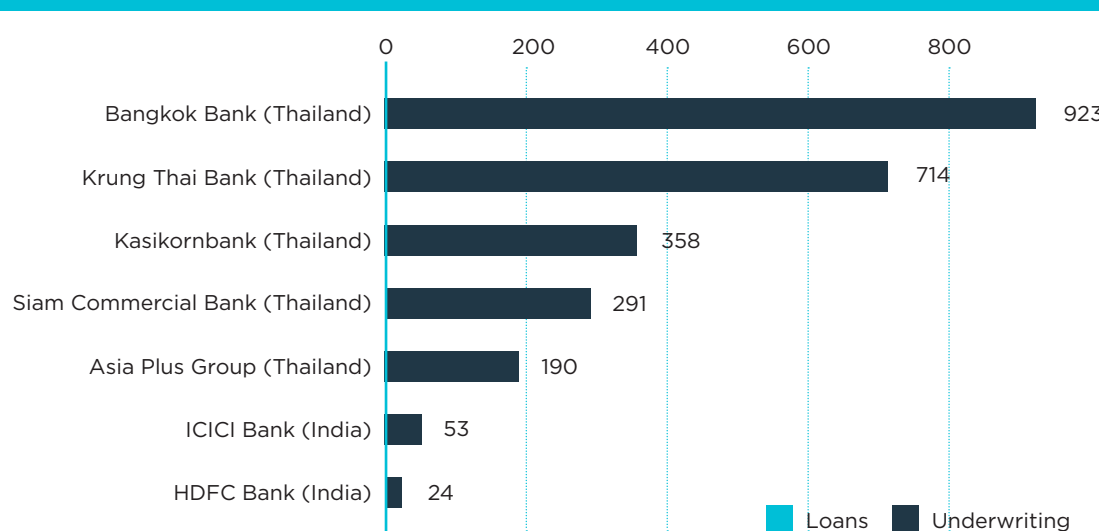


Figure 44: Top 15 infrastructure creditors in Thailand (2014-2019, US\$ mln)



services to the selected companies. It was followed by Krung Thai Bank (US\$ 714 million) and Kasikornbank (US\$ 358 million).

As the creditors were all from Thailand and India, these creditors were all from FFA countries.

3.7.2 Investors

The selected infrastructure construction companies active in Thailand attracted investments in their bonds and shares of US\$ 485 million at the most recent filing date in February 2020. All of these investments were in the form of shares. As Figure 45 shows, less than half of these investments were held by domestic financial institutions in Thailand. These financial institutions held shares of US\$ 221 million. They were followed by financial institutions from the United States (US\$ 120 million) and Norway (US\$ 42 million).

The top 15 investors together held 81% of the identified shareholdings of the selected infrastructure construction companies at the most recent filing date in February 2020. Together they held shares of US\$ 393 million. The

largest investor was Kasikornbank, which held shares of US\$ 57 million of the companies engaged infrastructure construction in Thailand (see Figure 46). It was followed by US asset manager Vanguard (US\$ 41 million) and the Norwegian Government Pension Fund - Global (US\$ 41 million).

Financial institutions from FFA countries accounted for 52% of all identified investments in the shares of infrastructure companies in Thailand. Together they held shares worth US\$ 252 million. 9 of the financial institutions from FFA countries, were domestic investors from Thailand. One of the investors was Japanese Mitsubishi UJF, which has a Thai subsidiary. The remaining five financial institutions were all from India.

The largest investor was Kasikornbank which held shares of US\$ 57 million in the selected infrastructure companies active in Thailand at the most recent filing date (see Figure 47). It is followed by Bangkok Bank (US\$ 31 million) and Mitsubishi UFJ Financial through its Thai subsidiary (US\$ 29 million).

Figure 45: Country of origin investors in infrastructure in Thailand (2020 February, most recent filings)

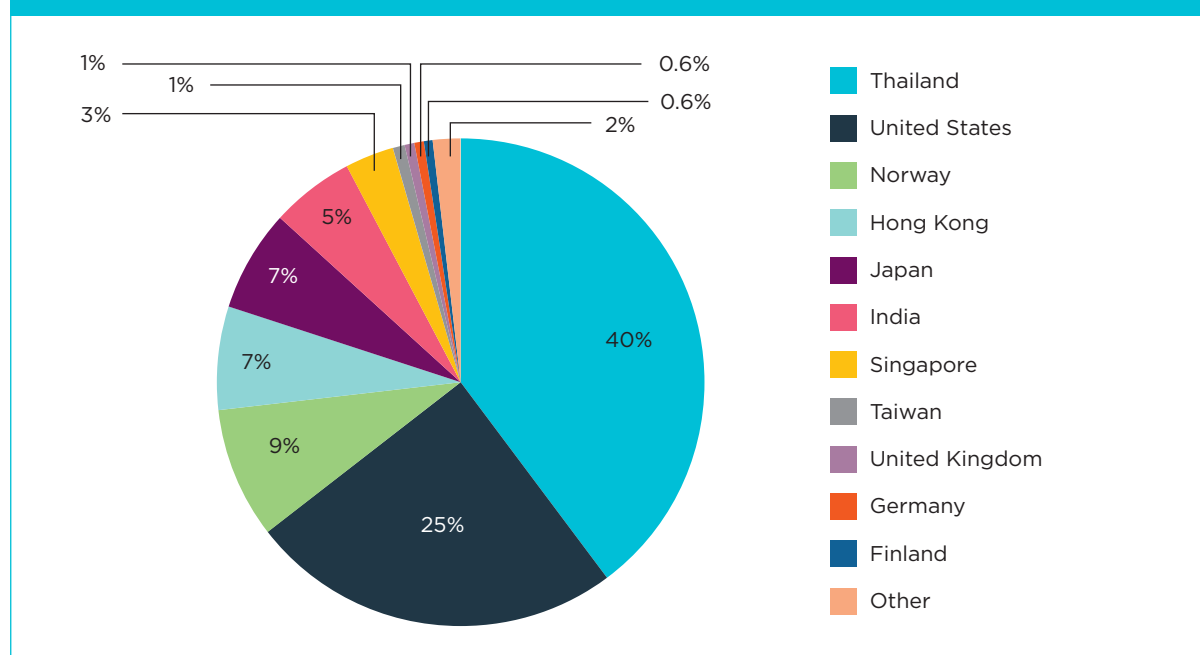


Figure 46: Top 15 infrastructure investors in Thailand (2020 February, most recent filings, US\$ mln)

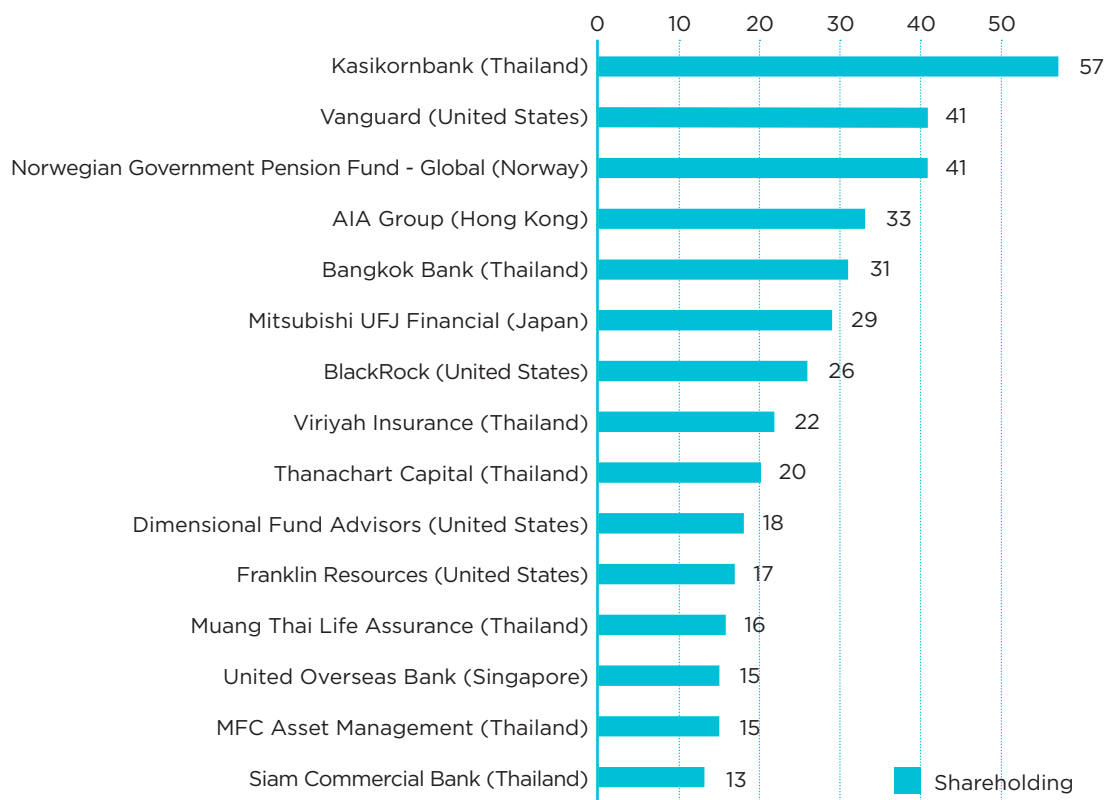
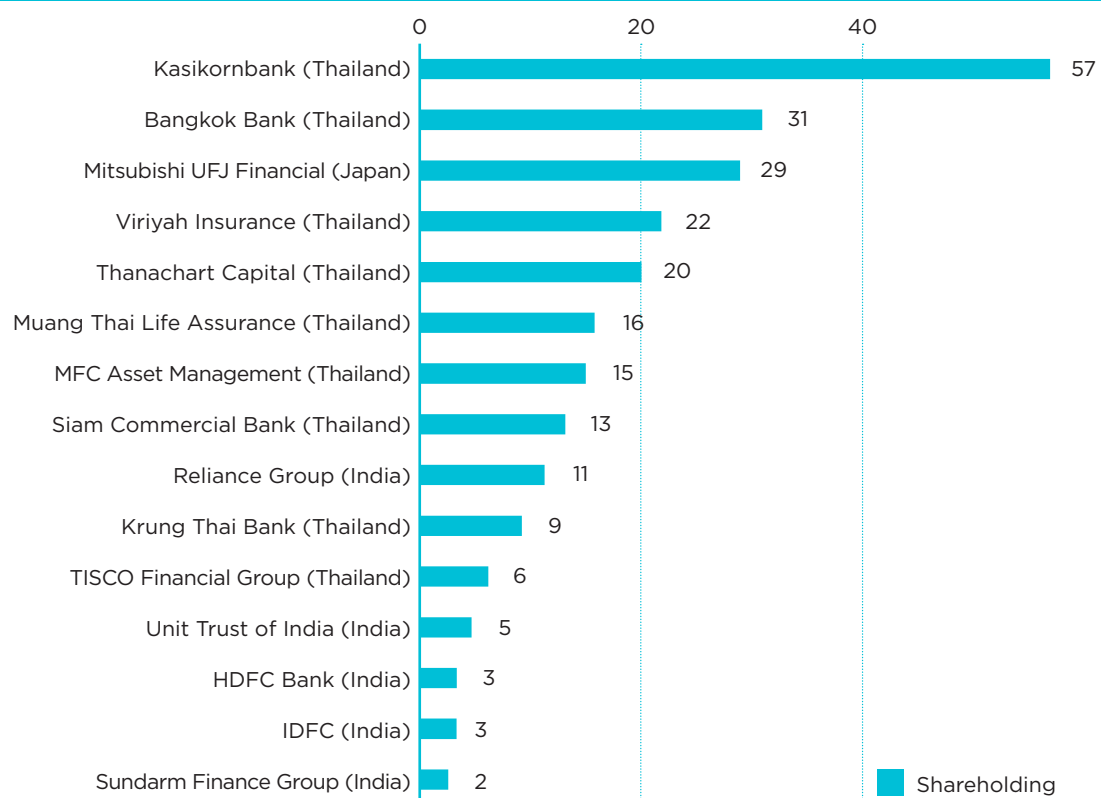


Figure 47: Top 15 FFA infrastructure investors in Thailand (2020 February, most recent filings, US\$ mln)



3.8 Vietnam

3.8.1 Creditors

The selected infrastructure construction companies in Vietnam attracted US\$ 3.0

billion in loans and underwriting services. Three quarters of this was in the form of loans, and the remaining quarters was in the form of issuance underwriting services. Figure 48 shows that almost

Figure 48: Country of origin creditors of infrastructure in Vietnam (2014-2019)

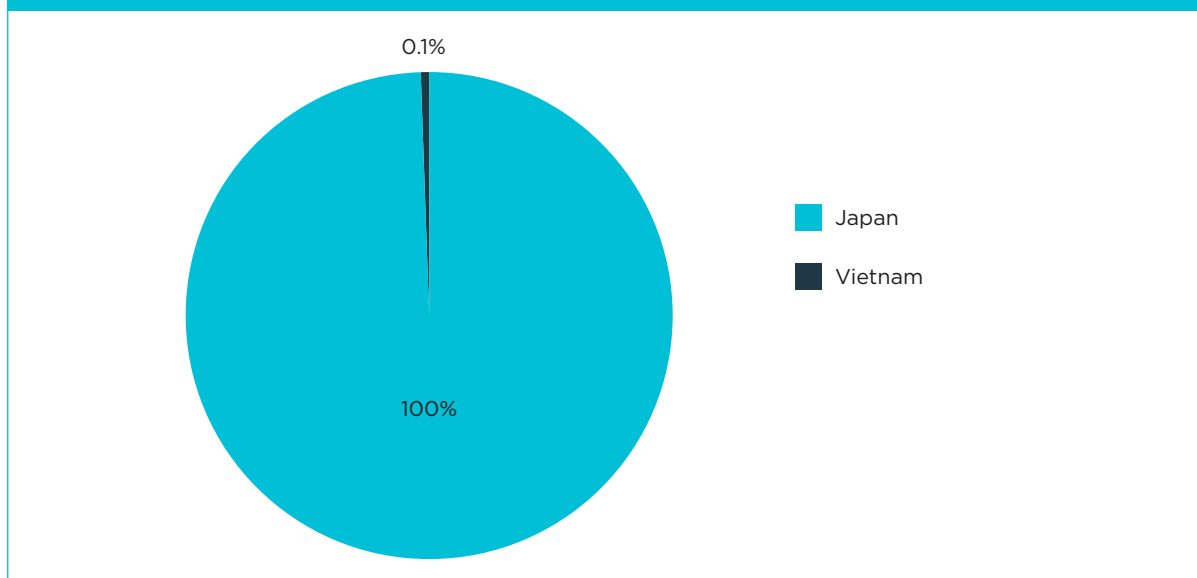
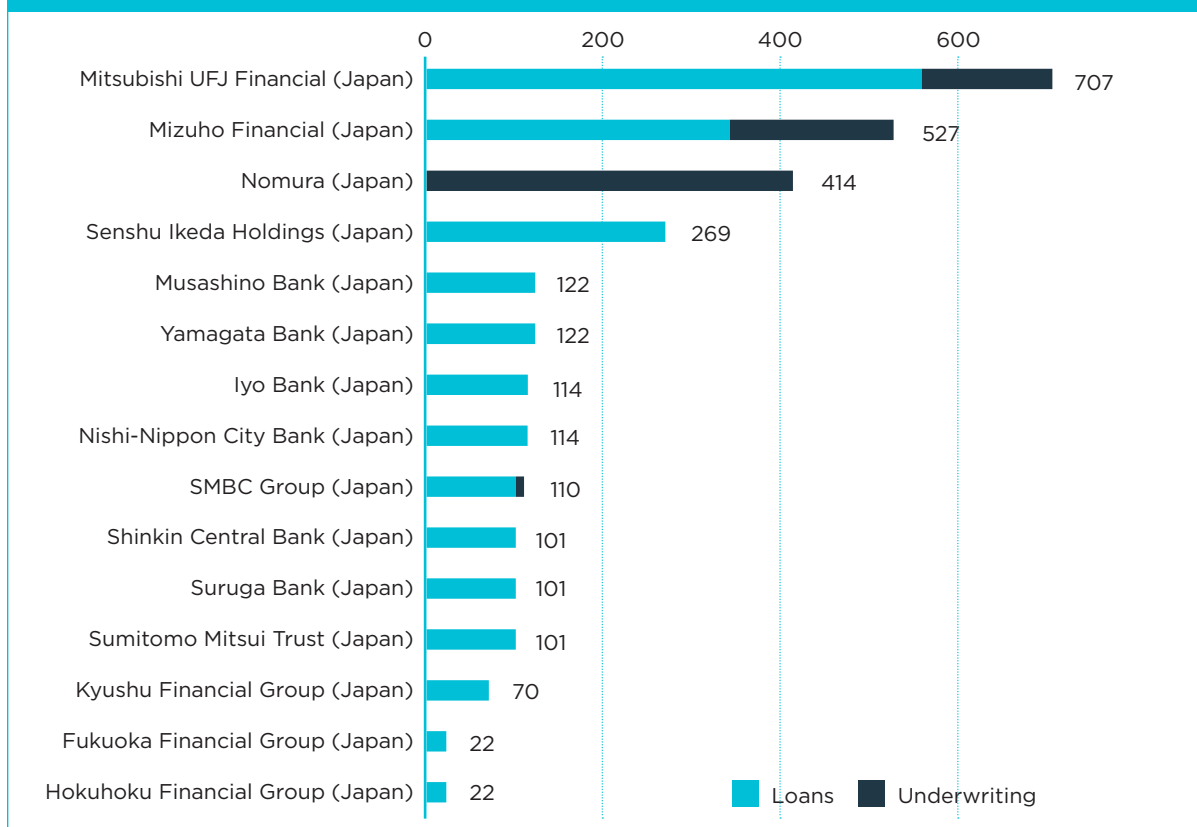


Figure 49: Top 15 infrastructure creditors in Vietnam (2014-2019, US\$ mln)



all of this was provided by financial institutions from Japan. This is due the presence of two Japanese infrastructure construction companies in Vietnam (see section 1.3 for details).

Japanese financial institutions provided US\$ 3 billion in credit to the selected infrastructure companies. Financial institutions from Vietnam provided a further US\$ 44 million during the period of study.

The top 15 creditors of infrastructure construction companies in Vietnam provided 99% of all identified loans and underwriting services to the selected companies. Together these financial institutions provided US\$ 756 million. Figure 49 shows that all of the top 15 creditors were from Japan. Mitsubishi UFJ Financial was the largest creditor of infrastructure construction companies active in Vietnam. It provided US\$ 707 million in credit in the period of study. It was followed by Mizuho Financial (US\$ 527 million) and Nomura (US\$ 414 million).

As the creditors were all from Japan and Vietnam, these creditors were all from FFA countries.

3.8.2 Investors

At the most recent filing date in February 2020, investors held bonds and shares worth US\$ 3.4 billion in the selected companies active in infrastructure construction in Vietnam. Almost all of these investments were in shares. Only 0.2% of the investments were in bonds issued by the selected companies. Figure 50 shows that more than half of these investments (US\$ 1.4 billion) came from Japanese financial institutions. This is because there are a number of large Japanese construction companies active Vietnam (see section 1.3 for details). Japanese investors were followed by financial institutions from the United States (US\$ 838 million) and Norway (US\$ 120 million).

The top 15 investors accounted for 76% of all identified investments in the bonds and shares of selected infrastructure

Figure 50: Country of origin investors in infrastructure in Vietnam (2020 February, most recent filings)

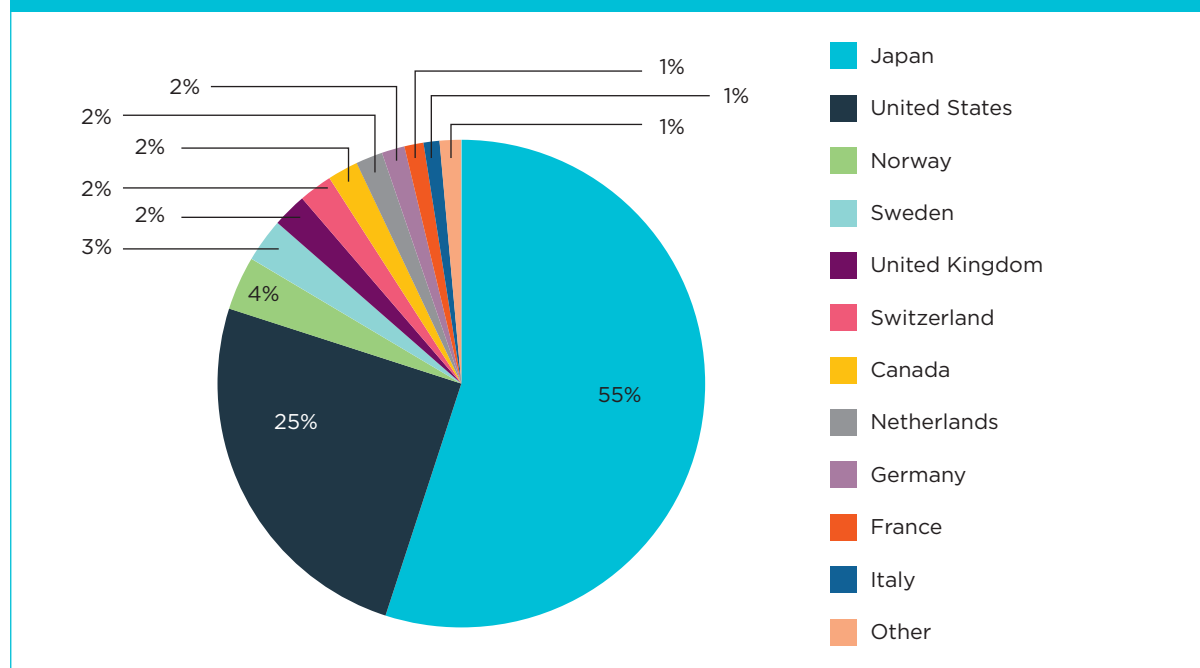


Figure 51: Top 15 infrastructure investors in Vietnam (2020 February, most recent filings, US\$ mln)

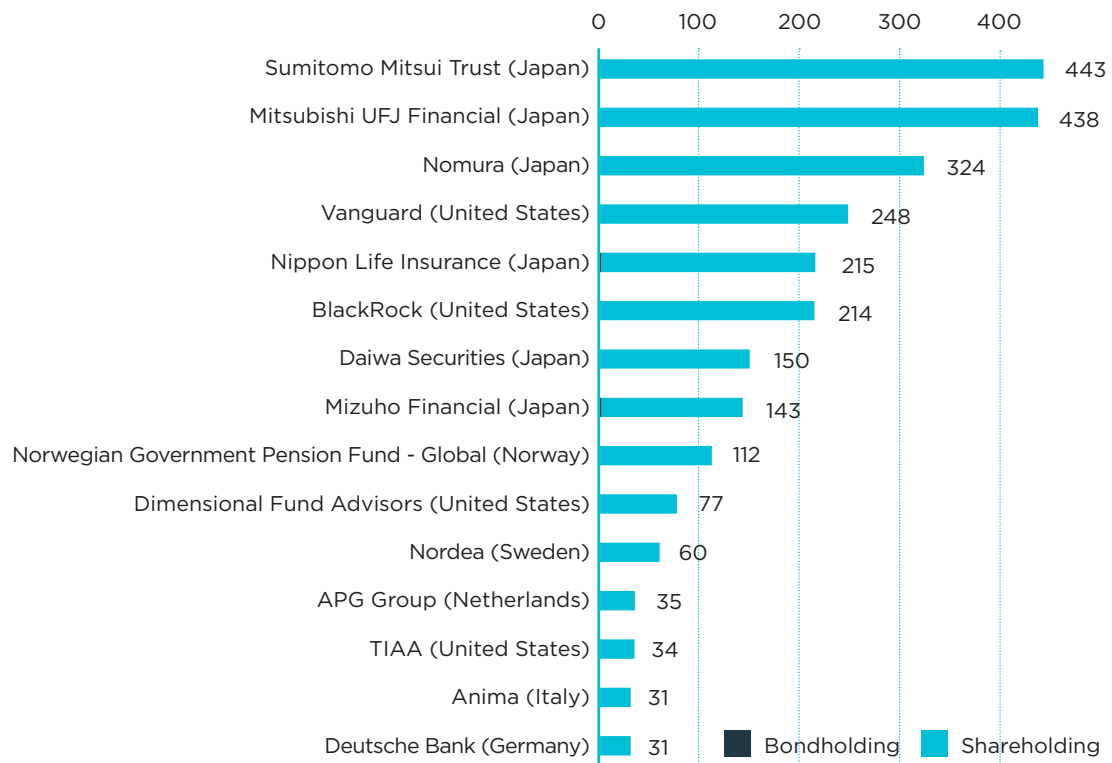
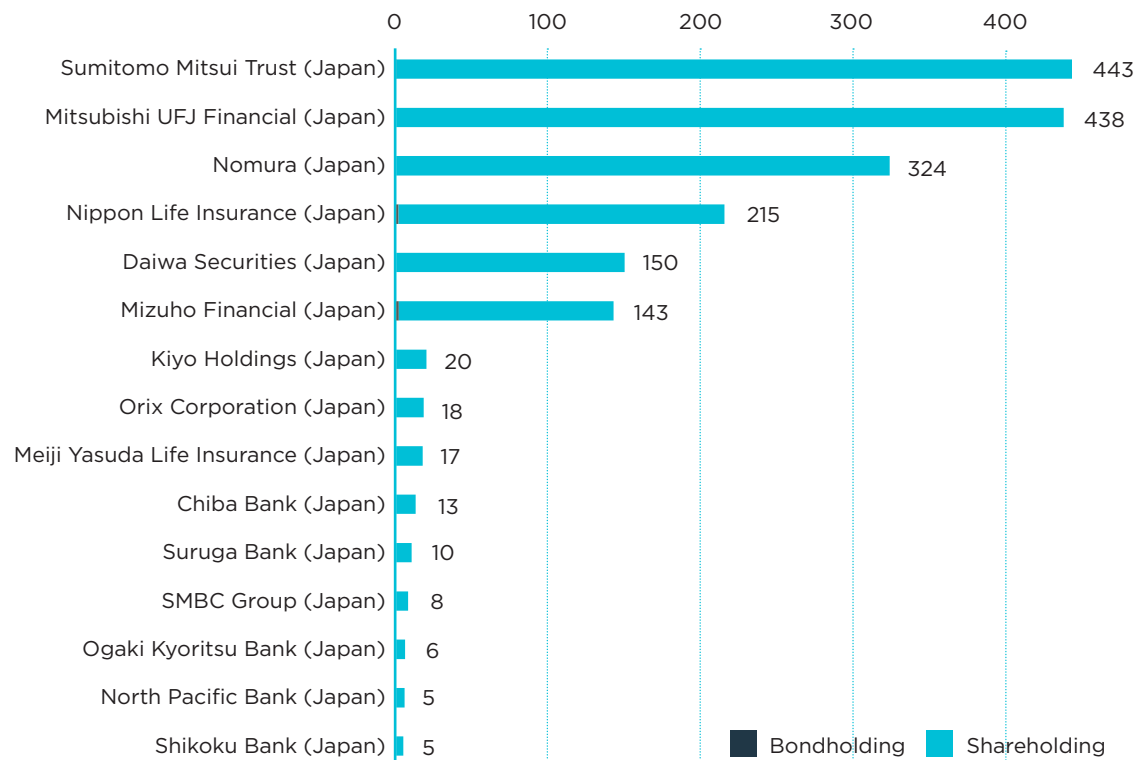


Figure 52: Top 15 FFA infrastructure investors in Vietnam (2020 February, most recent filings, US\$ mln)



construction companies active in Vietnam. These financial institutions together held US\$ 2.6 billion. The largest among these investors was Sumitomo Mitsui Trust, which held US\$ 443 million in the bonds and shares of the selected companies at the most recent filing date in February 2020 (see Figure 51). It was followed by Mitsubishi UFJ Financial (US\$ 438 million) and Nomura (US\$ 324 million).

Financial institutions from FFA countries accounted for more than half (55%) of all identified investments in the bonds

and shares of the selected infrastructure construction companies active in Vietnam. Together these financial institutions held bonds and shares worth US\$ 1.9 billion. As Figure 52 shows, all the top 15 FFA investor are from Japan. The top 3 investors are the same as with the top 15 overall. The largest among these investors was Sumitomo Mitsui Trust, which held US\$ 443 million in the bonds and shares of the selected companies at the most recent filing date in February 2020 (see Figure 52). It was followed by Mitsubishi UFJ Financial (US\$ 438 million) and Nomura (US\$ 324 million).

CHAPTER

4

FINANCIAL FLOWS TO FOSSIL FUELS

This chapter presents the findings of the financial flows to the selected companies engaged in fossil fuels (see section 1.3). The chapter is organized as follows: section 4.1 presents a general overview of the findings, and; the following seven sections deals with the trends of financial flows in Cambodia (section 4.2), India (section 4.3), Indonesia (section 4.4), Japan (section 4.5), the Philippines (section 4.6), Thailand (section 4.7) and Vietnam (section 4.8) separately. Each section is split into two sub-sections. The first analyses the credit (loans & underwriting services) flows, and the second focuses on investments in bonds and shares.

4.1 General overview

4.1.1 Creditors

In the period of study, financial institutions from FFA countries provided US\$ 225 billion in loans and underwriting services to the selected fossil fuel companies. This includes financial flows to companies active in their own economies, as well as to other FFA countries.

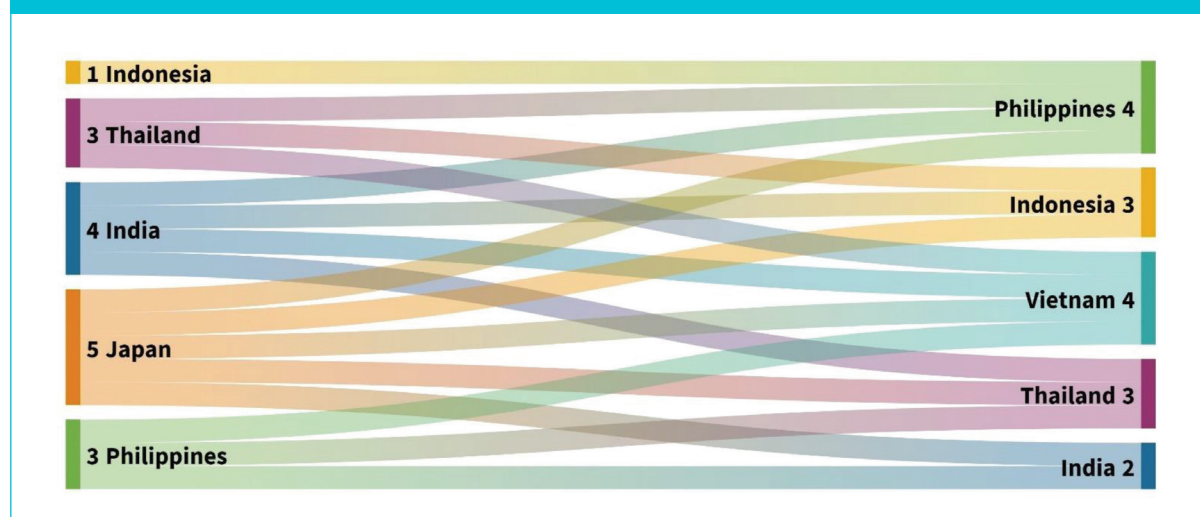
Figure 53 shows the intra-regional credit flows, i.e. flows from financial institutions from FFA countries, to companies in other

FFA countries. Financial institutions from Japan provided the most credit to fossil fuel companies in other FFA countries, with financing to 5 FFA countries. Financial institutions from India, provided loans and underwriting services to fossil fuel companies in 4 other countries. The Philippines and Vietnam received fossil fuel financing from the most different FFA countries, four each.

A closer look at the value of the financial flows to fossil fuels - including financial flows to companies operating in their own economies - shows that financial institutions from Japan were by far the largest creditors. These financial institutions provided US\$ 166 billion in loans and underwriting to the selected companies engaged in fossil fuels. This accounts for just under three quarters of all identified FFA fossil fuel credit (see Figure 54). Financial institutions from India provided the second most, with US\$ 30 billion. And Indonesian financial institutions provided just under US\$ 16 billion in loans and underwriting services to fossil fuel companies.

Since Japanese financial institutions were the largest fossil fuel creditors as a whole, it is not surprising that they

Figure 53: Intra-regional credit flows to fossil fuel companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)



also rank among the top 3 financial institutions from FFA countries providing loans and underwriting services to the selected companies active in fossil fuels. The largest financier was Japanese

Mizuho Financial, which provided US\$ 51.6 billion in the period 2014-2019. It was followed by Mitsubishi UFJ Financial (US\$ 43.3 billion) and SMBC Group (US\$ 40.7 billion).

Figure 54: FFA fossil fuel creditor countries of origin (2014-2019, US\$ mln)

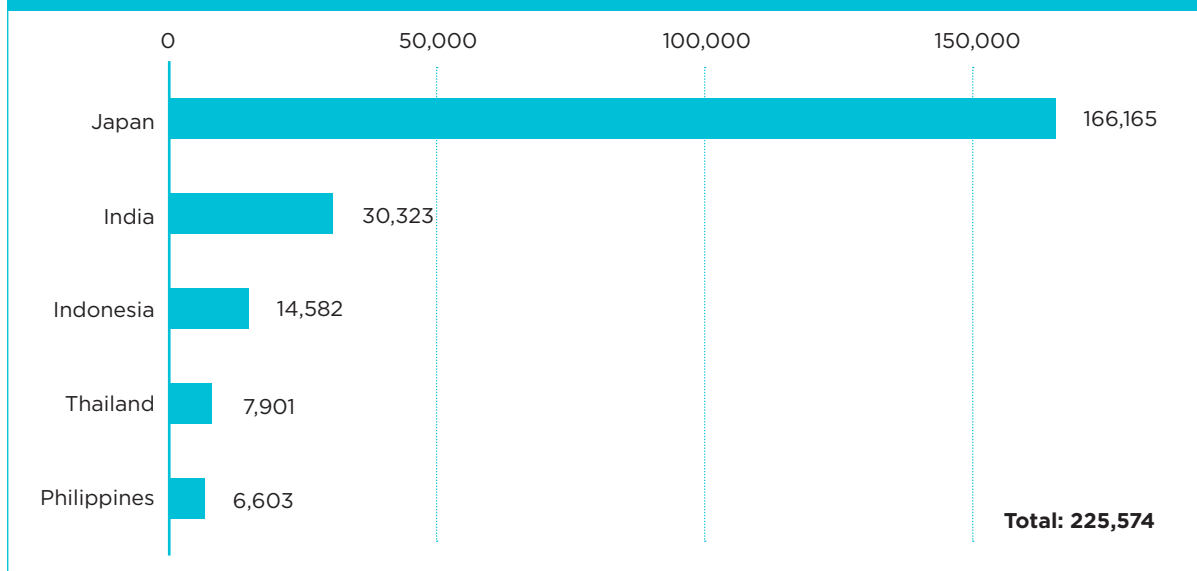
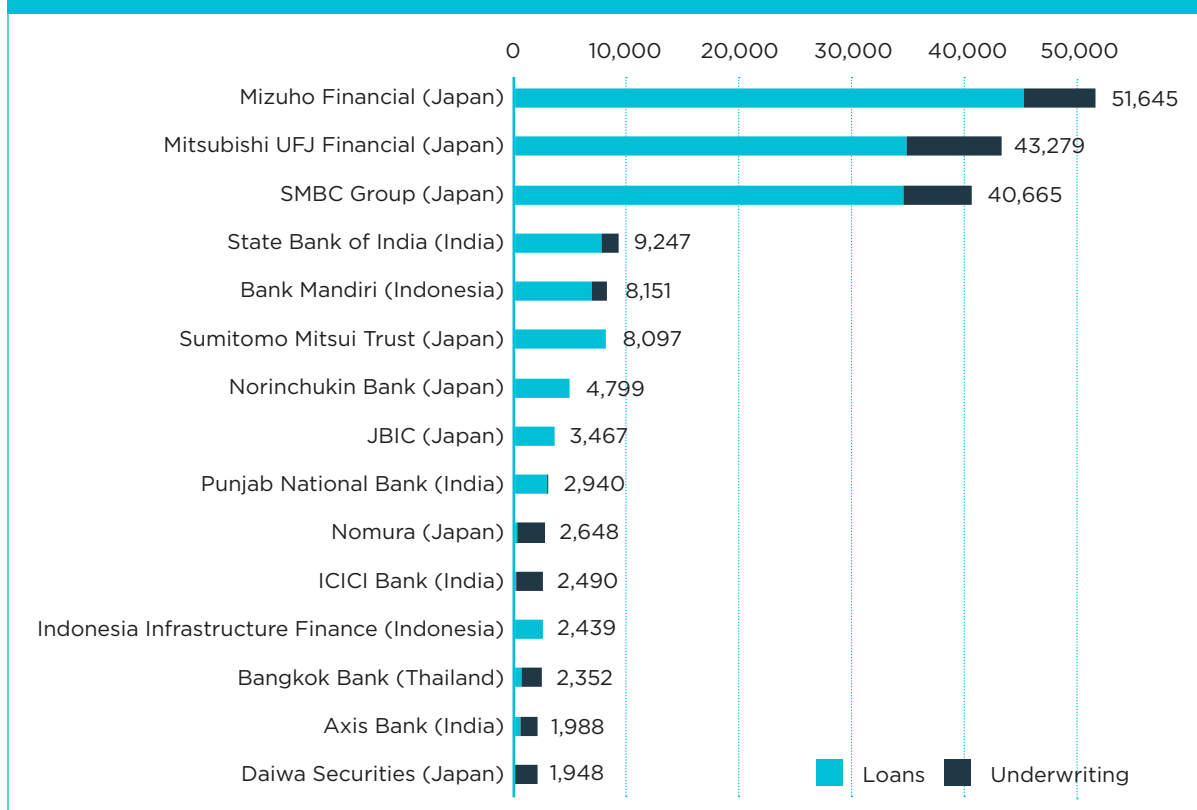


Figure 55: Top 15 FFA fossil fuel creditors (2014-2019, US\$ mln)



4.1.2 Investors

Investors from the FFA countries together invested US\$ 71 billion in the selected companies engaged fossil fuels. 97% of these investments were in the shares of the selected companies. The remaining 3% was invested in bonds issue by the selected companies engaged in fossil fuels.

Figure 56 presents the intra-regional flows. It shows that financial institutions Japan invested in fossil fuels companies active in 5 of the FFA countries. Financial

institutions from India invested in fossil fuel companies active in Japan, Thailand and Vietnam. It should be noted that these flows exclude domestic flows.

Figure 57 shows that in terms of value, Japanese investors had invested the most in the selected companies. In they accounted for 69% (US\$ 49.2 billion) of the identified investments in the selected companies. They were followed by investors from India, who accounted for 19%, and Thai investors who accounted for 11%.

Figure 56: Intra-regional investment flows to fossil fuel companies (no. of countries invested in & no. countries invested by)

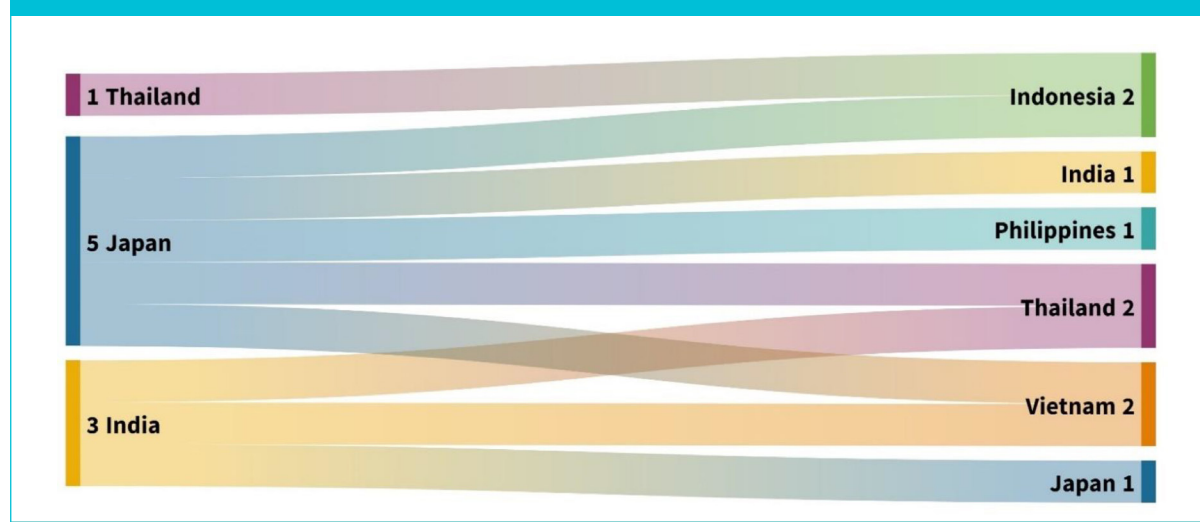


Figure 57: FFA fossil fuel investor countries of origin (2020 February, most recent filings, US\$ mln)

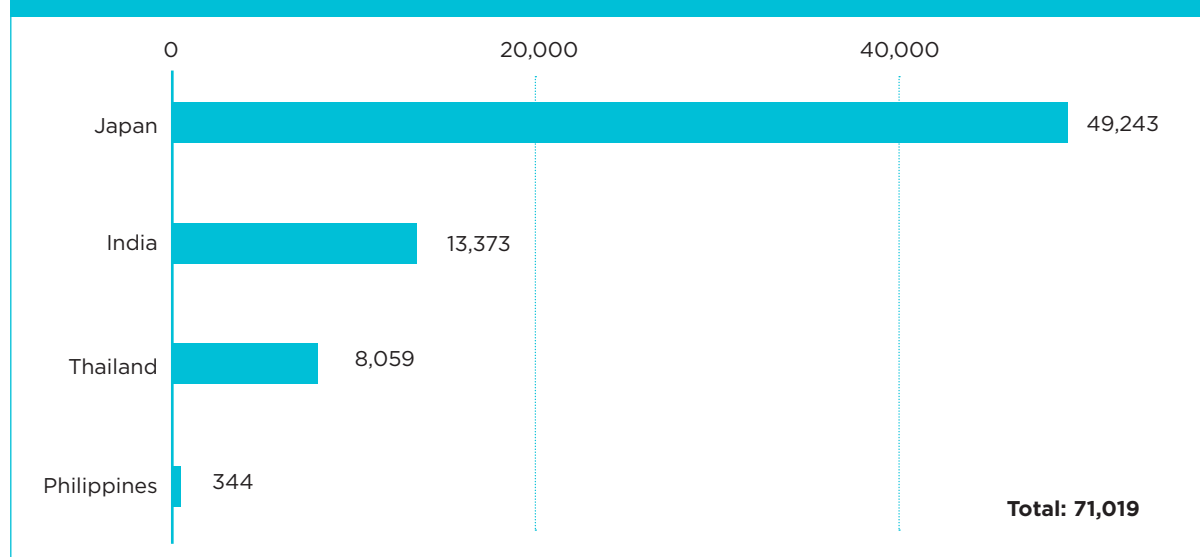
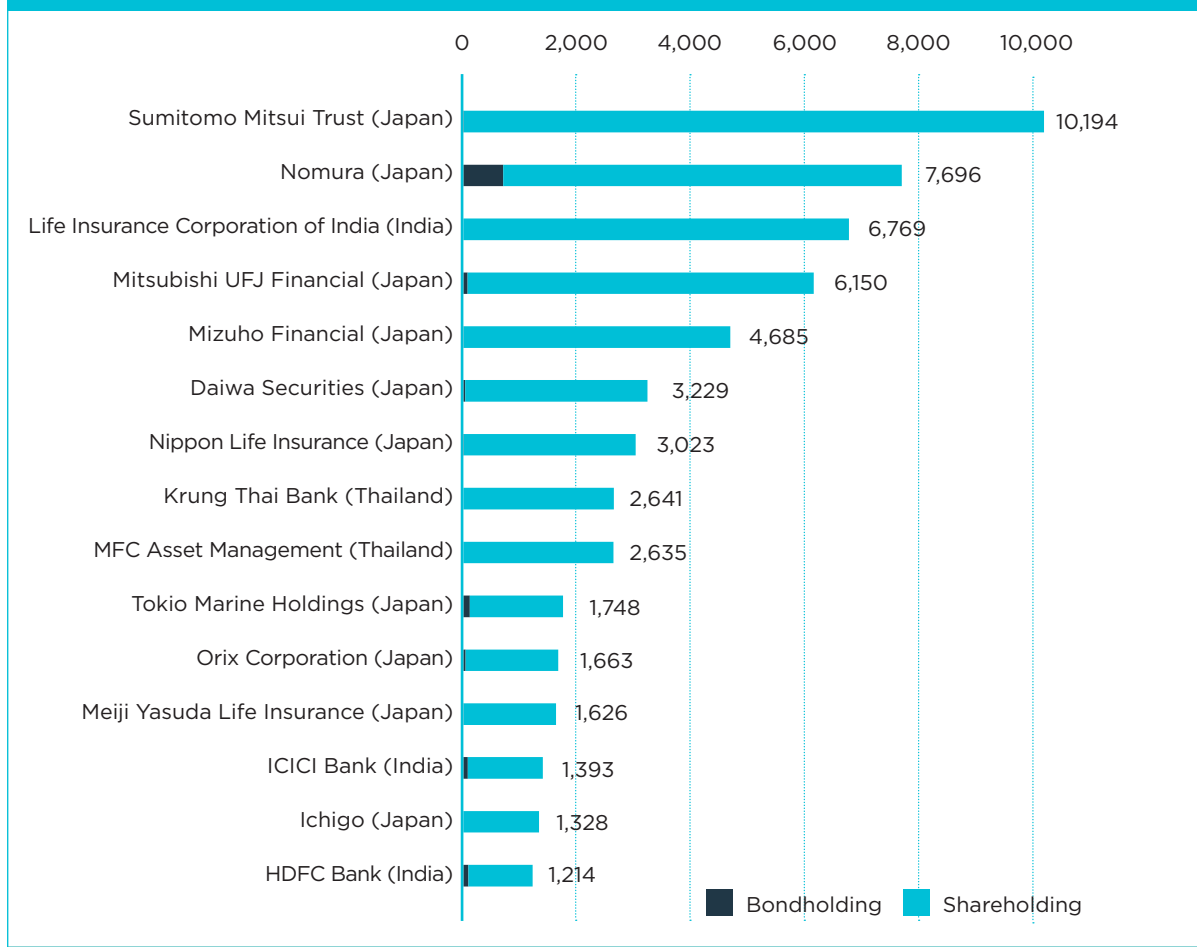


Figure 58: Top 15 FFA fossil fuel investors (2020 February, most recent filings, US\$ mln)



The top 15 investors together invested US\$ 58.6 billion in the bonds and shares of selected companies active in fossil fuels. 10 of the top 15 investors were from Japan, 3 from India, and the remaining 2 were investors from Thailand. Together the investments of the top 15 investors accounted for 83% of the identified investments in fossil fuels companies. The largest investors was Sumitomo Mitsui Trust, with investments of US\$ 10.8 billion. It was followed by Nomura (US\$ 8.6 billion) and Life Insurance Corporation of India (US\$ 6.8).

4.2 Cambodia

4.2.1 Creditors

In total US\$ 2.3 billion was identified in loans and underwriting services provided

to fossil fuel companies active in Cambodia. 33% of this was provided in the form of loans, and 67% in underwriting services. Financial institutions from three countries were identified as having provided this credit (see Figure 59). Namely, financial institutions from the United Kingdom (US\$ 1.5 billion), Singapore (US\$ 615 million) and Australia (US\$ 155 million).

Individually, the largest creditor of fossil fuel companies active in Cambodia was HSBC (see Figure 60). HSBC provided US\$ 833 million in loans and underwriting in the period 2014-2019. It was followed by Standard Chartered (US\$ 678 million) and Singaporean DBS (US\$ 615 million).

Figure 59: Country of origin creditors of fossil fuel in Cambodia (2014-2019)

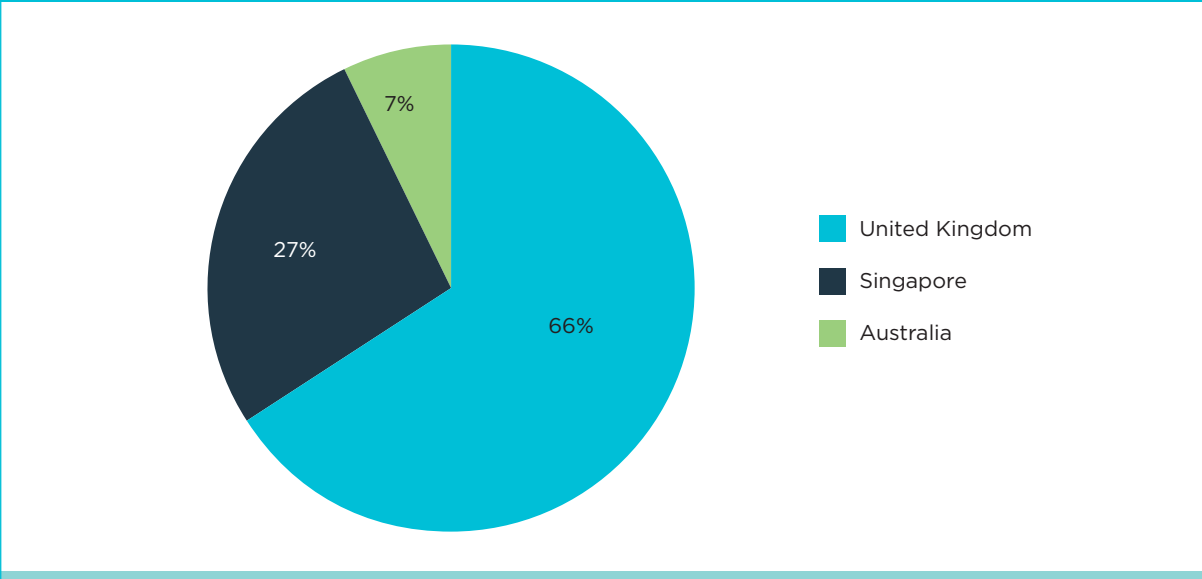
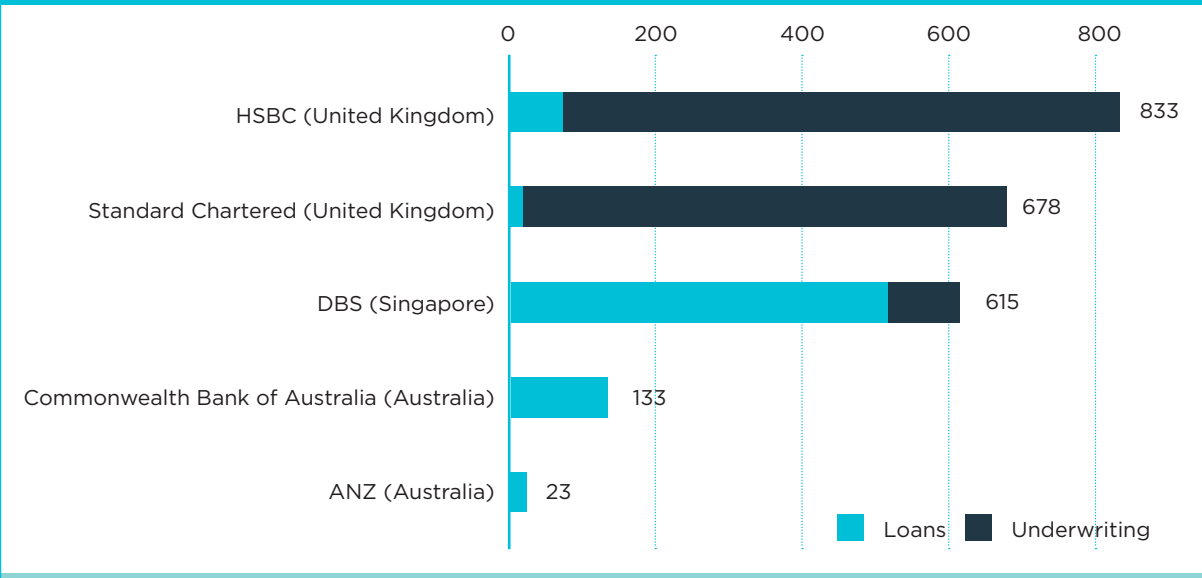


Figure 60: Top 15 fossil fuel creditors in Cambodia (2014-2019, US\$ mln)



No financial institutions from FFA countries were identified as providing loans and underwriting services to fossil fuel companies active in Cambodia. However, although HSBC is not from an FFA country, it is included in the scope of Responsibank's work.

4.2.2 Investors

Investors had investments of US\$ 29

million in the bonds and shares of selected companies active in fossil fuels in Cambodia. 96% of these investments were in shares, while 4% was in bonds. All of these investments were in Kris Energy (see section 1.3). Investors from Singapore accounted for 96% of all identified investments, the remaining investments came from investors from Germany Figure 61.

Figure 61: Country of origin investors in fossil fuel in Cambodia (2020 February, most recent filings)

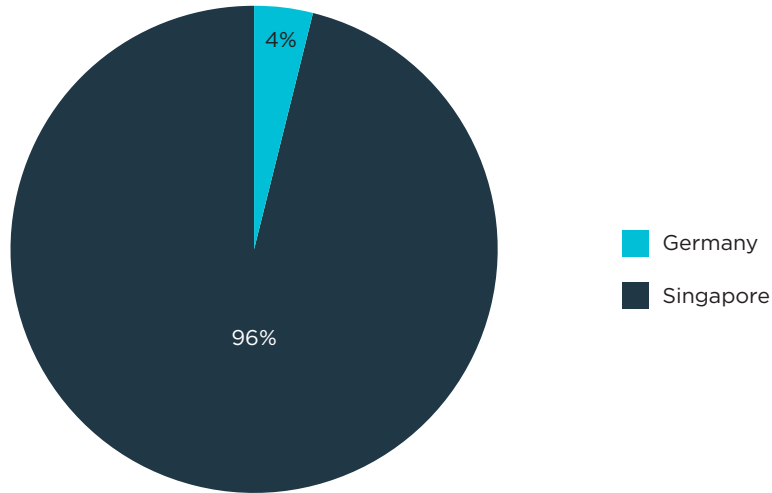
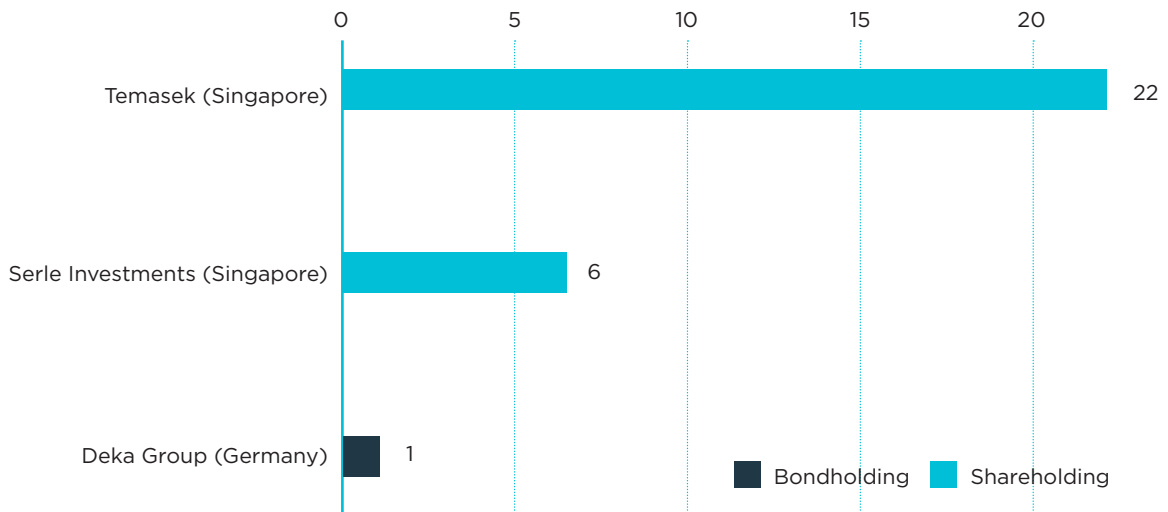


Figure 62: Top 15 fossil fuel investors in Cambodia (2020 February, most recent filings, US\$ mln)



Three investors were identified as investing in fossil fuels companies active Cambodia. These are shown in Figure 62.

No FFA focus financial institutions were identified as investing in the bond and shares of fossil fuel companies active in Cambodia.

4.3 India

4.3.1 Creditors

In the period 2014-2019, US\$ 86.5 billion in loans and underwriting was provided to the selected companies engaged in fossil fuels in India. Of this, 76% was in the form of loans, and 24% in issuance

underwriting services. Indian financial institutions provided 34% of this credit – US\$ 29.7 billion (see Figure 63). They

were followed by financial institutions from Japan (US\$ 14.1 billion) and Singapore (US\$ 10.4 billion).

Figure 63: Country of origin creditors of fossil fuel in India (2014-2019)

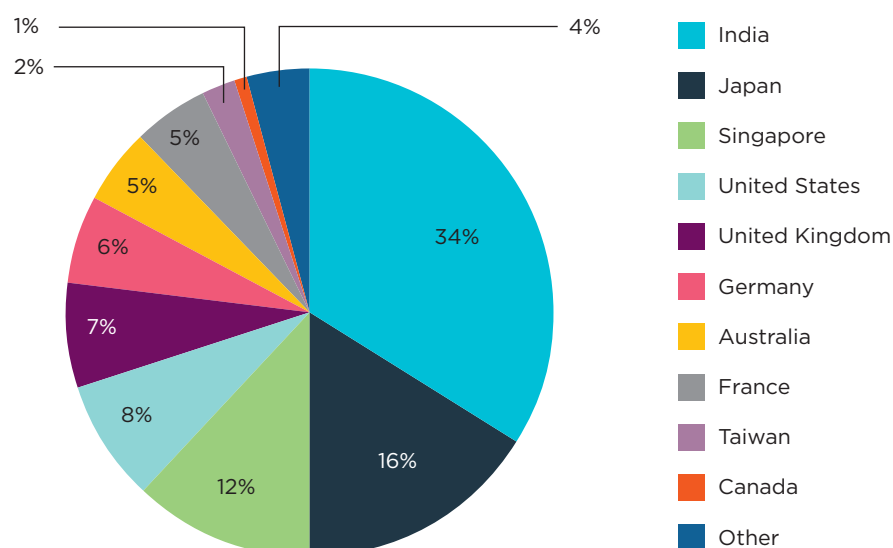


Figure 64: Top 15 fossil fuel creditors in India (2014-2019, US\$ mln)

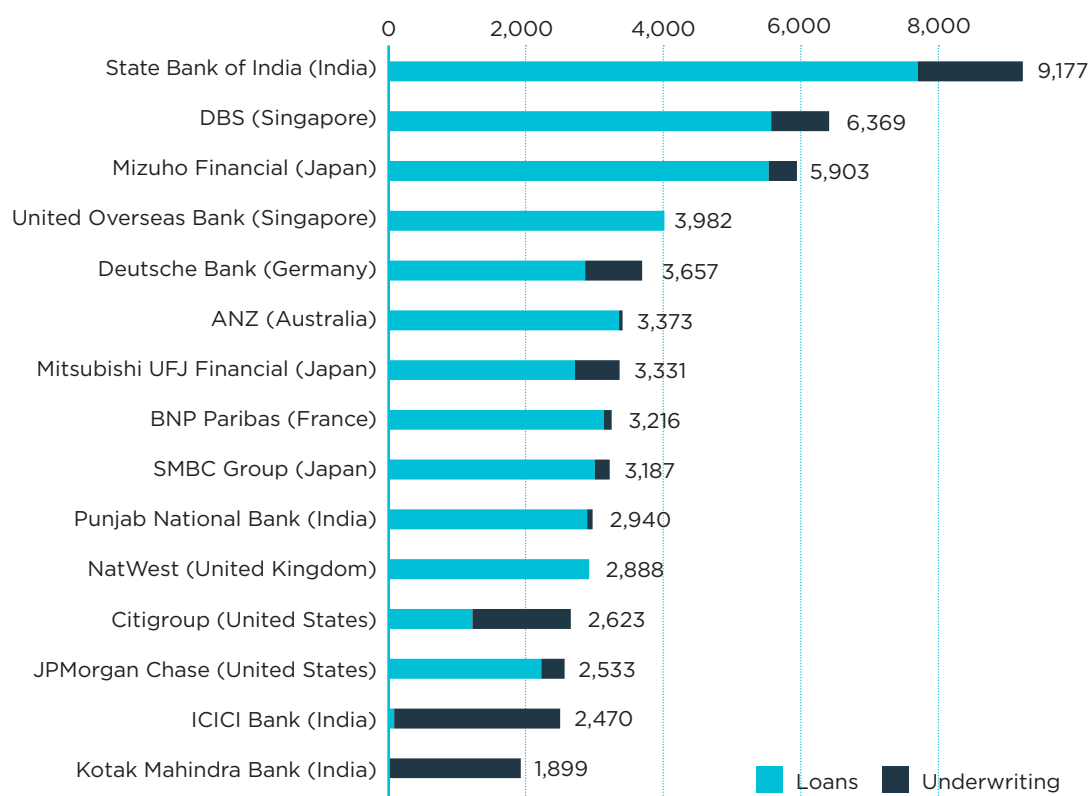
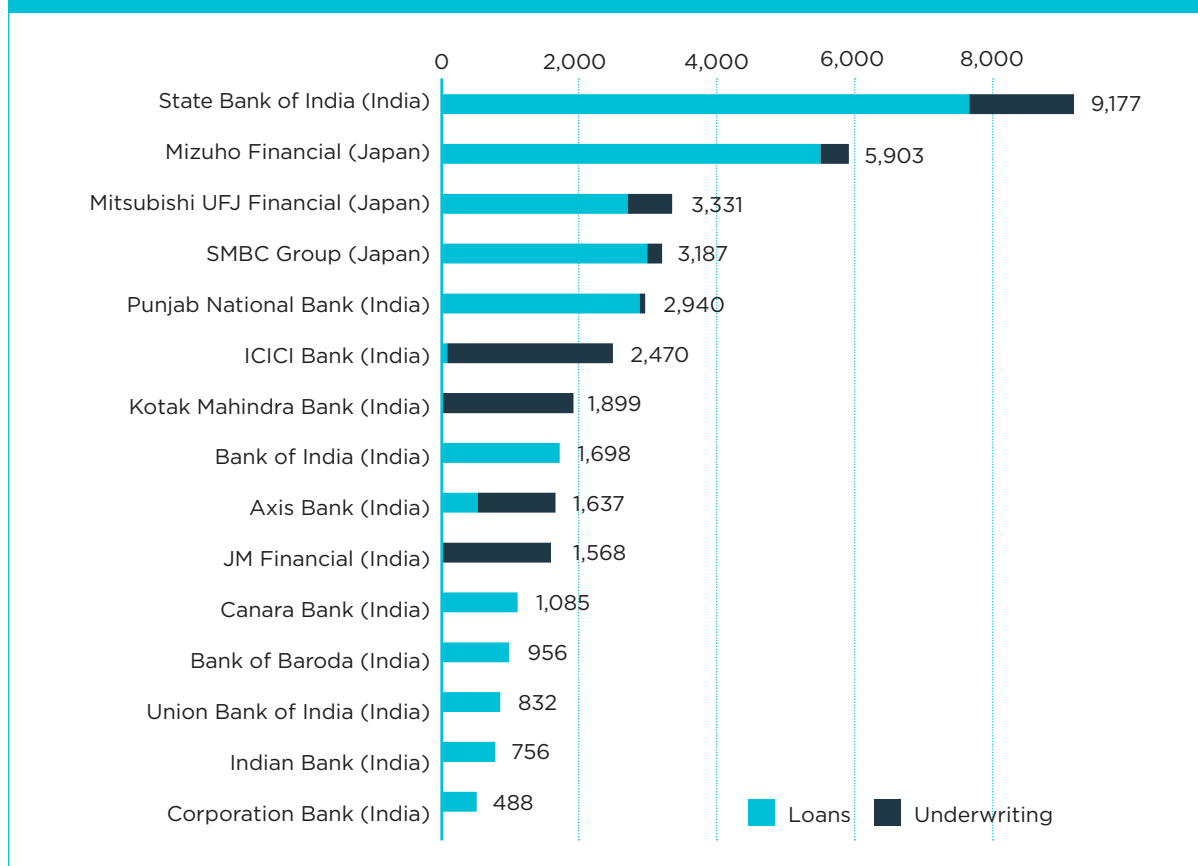


Figure 65: Top 15 FFA fossil fuel creditors in India (2014-2019, US\$ mln)



The top 15 fossil fuel creditors in India provided US\$ 57.5 billion in loans and underwriting services. This accounted for 67% of all identified credit. The largest financier was the State Bank of India, which provided US\$ 9.2 billion (see Figure 64). It was followed by DBS (US\$ 6.4 billion) and Japanese Mizuho Financial (US\$ 5.9 billion).

Financial institutions from FFA countries provided just over half of all identified credit to fossil fuel companies in India in the period 2014-2019. Together they provided US\$ 44.3 billion in loans and underwriting services. The top 15 FFA creditors provided 86% of this, i.e. US\$ 37.9 billion. The largest FFA creditor was the State Bank of India (see Figure 65). It was followed by Mizuho Financial (US\$ 5.9 billion) and Mitsubishi UFJ Financial (US\$ 3.3 billion).

4.3.2 Investors

Investors had invested US\$ 22.3 billion in the bonds and shares of fossil fuel companies active in India at the most recent filing date available in February 2020. 88% of these investments were in shares, and the remaining 12% was in bonds issued by the selected companies. Figure 66 shows that the majority of these investments came from investors from India itself. These investors invested US\$ 13.2 billion, accounting for 59% of the identified investments. Indian investors were followed by institutional investors from the United States who accounted for 22% (US\$ 4.9 billion) of the investments.

The top 15 investors in the bonds and share of fossil fuel companies active in India held US\$ 16.2 billion in bonds and shares. This accounted for 73% of the total identified investments. As Figure 67 shows, by far

the largest investor was Life Insurance Corporation of India with US\$ 6.8 billion, alone accounting for 31% of the identified investments in fossil fuel companies active

in India. 7 of the top 15 investors were from India, 5 from the United States, and the remaining three from Australia, Norway and South Korea.

Figure 66: Country of origin investors in fossil fuel in India (2020 February, most recent filings)

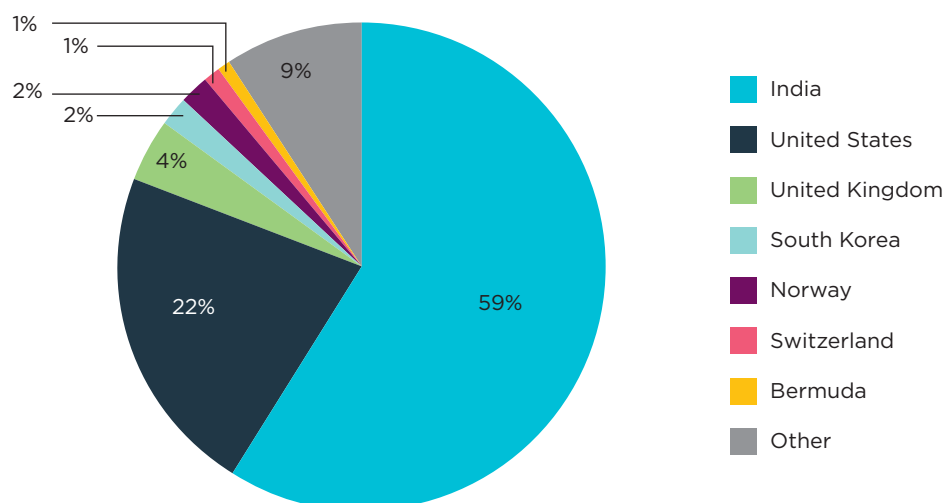


Figure 67: Top 15 fossil fuel investors in India (2020 February, most recent filings, US\$ mln)

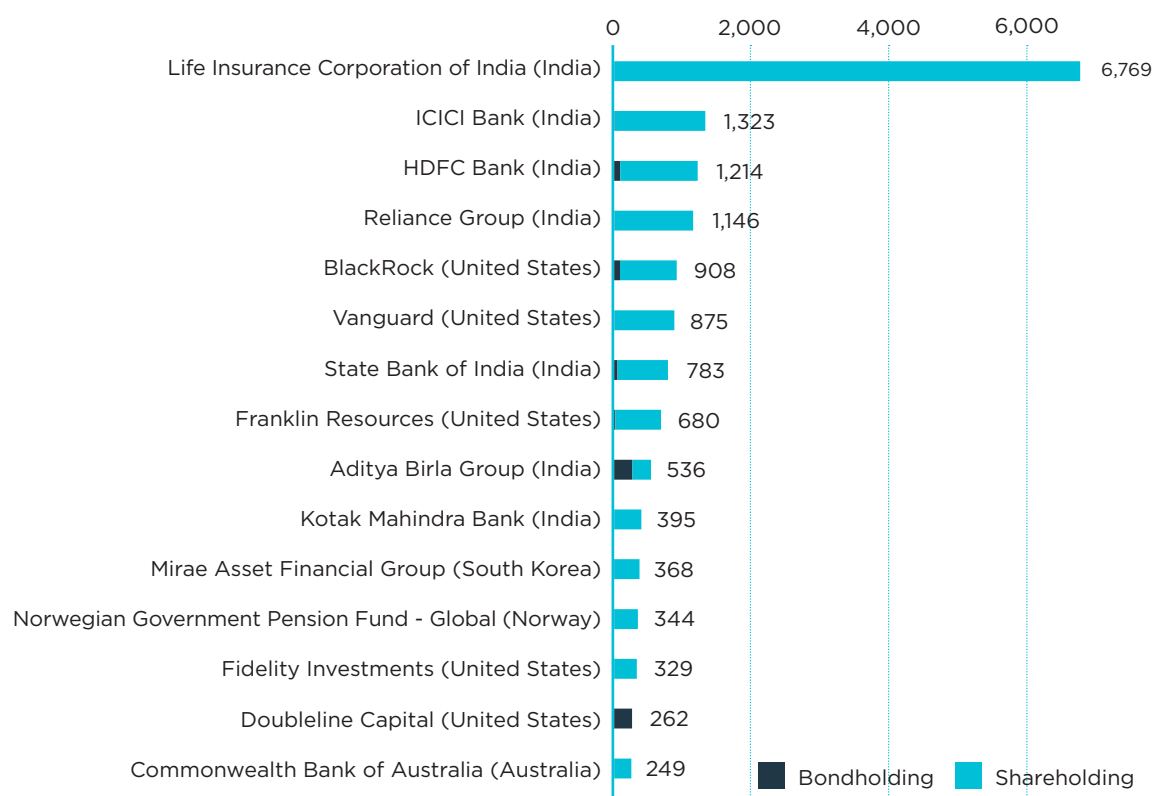
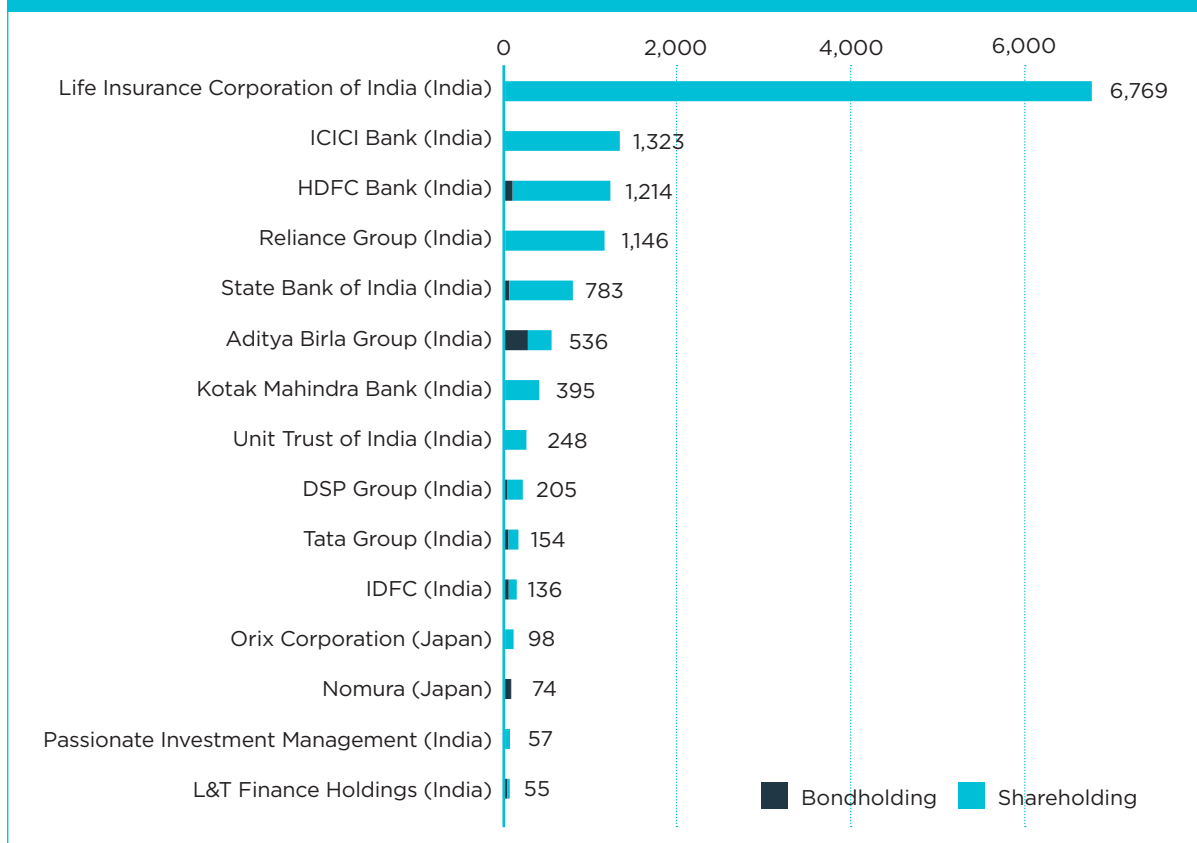


Figure 68: Top 15 FFA fossil fuel investors in India (2020 February, most recent filings, US\$ mln)



Investors from FFA countries accounted for 60% of all identified investments in fossil fuel companies active in India with US\$ 13.5 billion in bonds and shares. The top 15 FFA investors accounted for 59% of the total identified investments. As Figure 68 shows, all but two of the top 15 FFA investors were Indian financial institutions. The remaining two financial institutions were Japanese institutional investors Orix Corporation and Nomura.

4.4 Indonesia

4.4.1 Creditors

The selected fossil fuel companies active in Indonesia received US\$ 63.5 billion in loans and underwriting services in the period 2014-2019. 60% of this credit was in the form of loans, and 40% in issuance underwriting services. Figure 69 shows that domestic creditors provided just

under a quarter of this credit (US\$ 14.6 billion). They were followed by creditors from Japan (US\$ 9.2 billion) and the United Kingdom (US\$ 9.1 billion).

The top 15 creditors provided US\$ 47.1 billion in loans and underwriting services to the selected fossil fuel companies active in Indonesia. This accounted for 74% of all identified credit to these companies. The largest creditor was Indonesia state-owned Bank Mandiri which provided US\$ 8.1 billion (Figure 70). US Citigroup followed with US\$ 5 billion in loans and underwriting services in the period 2014-2019. Standard Chartered rounded off the top 3, with US\$ 4.1 billion in credit to the selected companies active in fossil fuels in Indonesia.

Financial institutions from FFA countries provided 38% all of identified credit – US\$ 24.1 billion. The top 15 FFA creditors

provided US\$ 23.1 billion, or 99% of all FFA credit. Figure 71 shows that the largest FFA creditors were Bank Mandiri

(US\$ 8.1 billion), as well as Japanese SMBC Group (US\$ 3.8 billion) and Mitsubishi UFJ (US\$ 3.0 billion).

Figure 69: Country of origin creditors of fossil fuel in Indonesia (2014-2019)

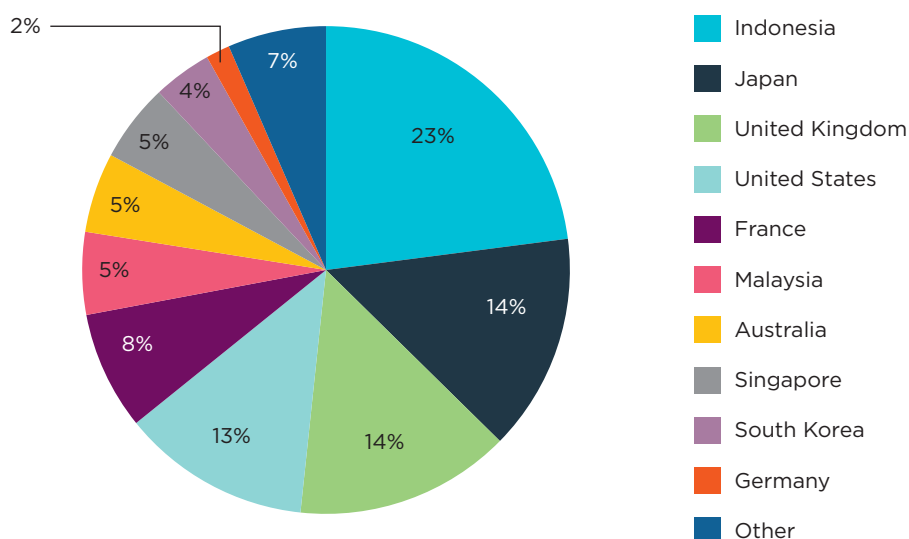


Figure 70: Top 15 fossil fuel creditors in Indonesia (2014-2019, US\$ mln)

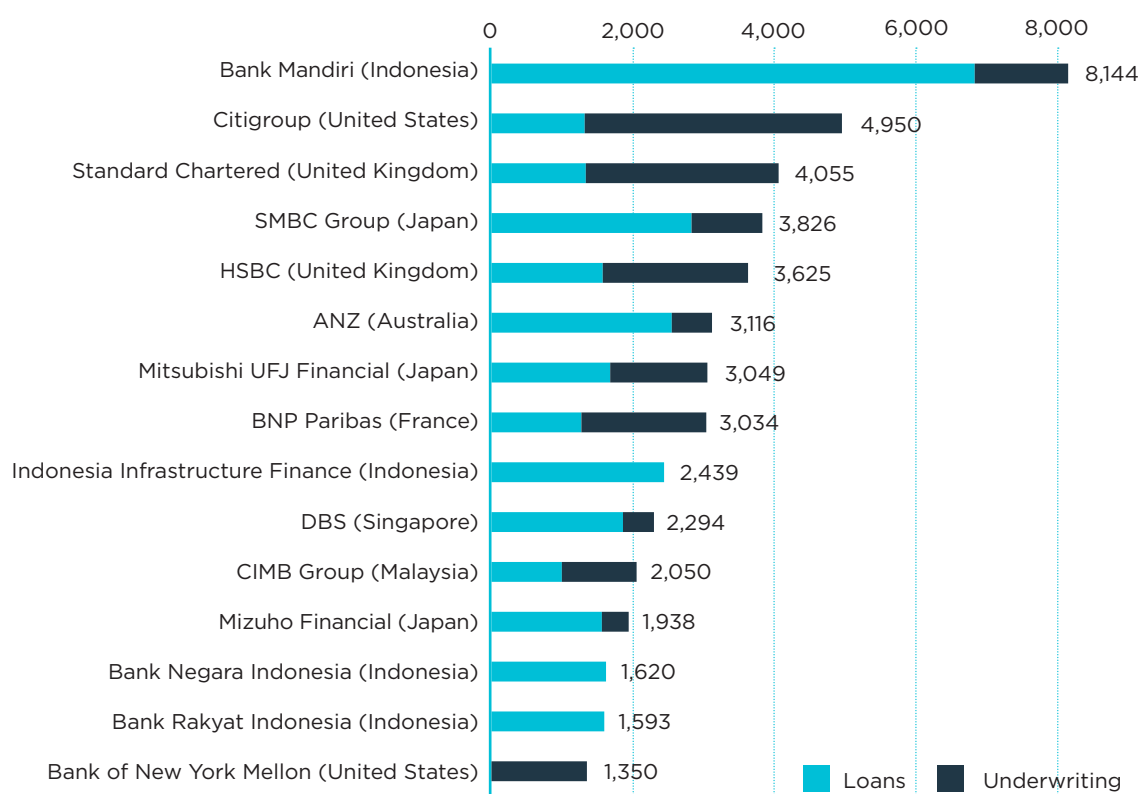


Figure 71: Top 15 FFA fossil fuel creditors in Indonesia (2014-2019, US\$ mln)

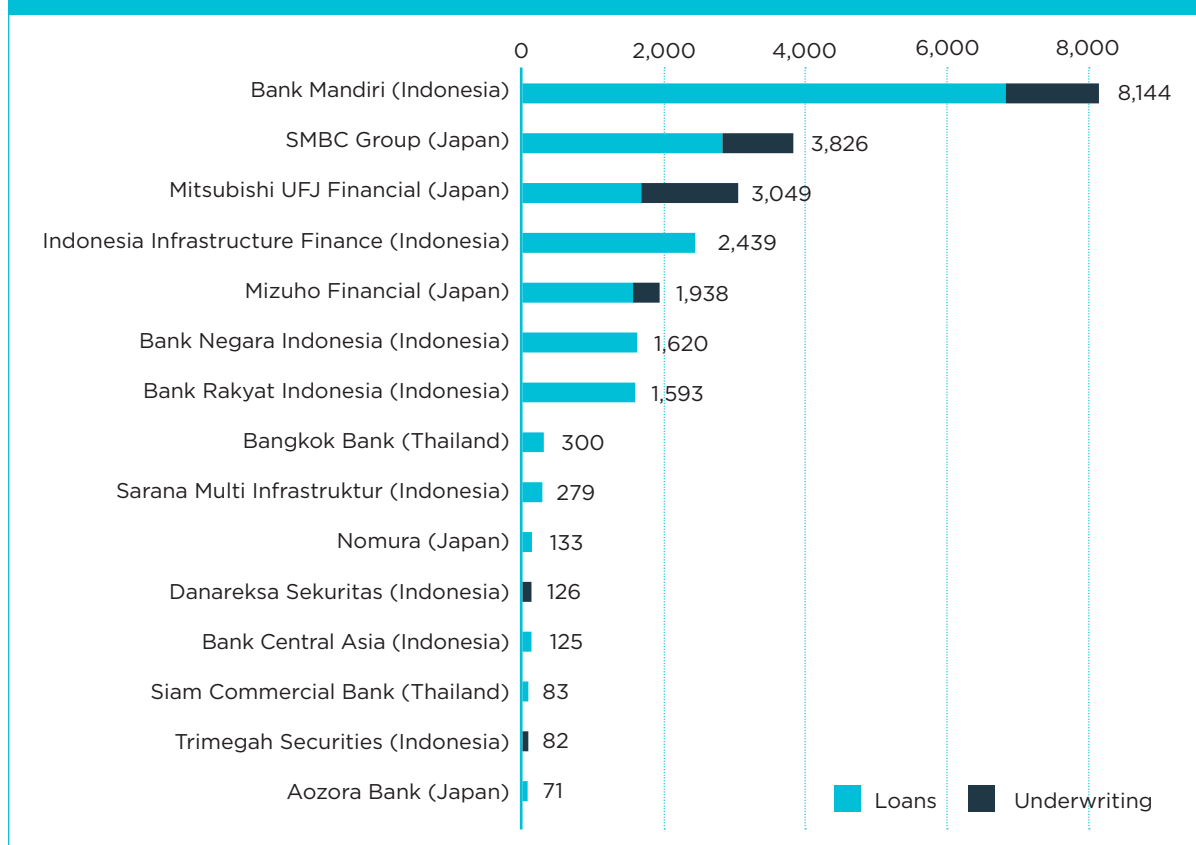


Figure 70 shows that three financial institutions though not from FFA countries, but the policies of which were still being assessed by ResponsiBank, using the Fair Finance Guide International methodology, were among the top 15 creditors of fossil fuels in Indonesia. These were: HSBC (US\$ 3.6 billion), CIMB Group (US\$ 2.3 billion) and Malayan Banking / Maybank (US\$ 1.6 billion).

4.4.2 Investors

Investors had invested US\$ 18.5 billion in the bonds and shares of selected fossil fuel companies active in Indonesia at the most recent filing date. 56% of these investments were in bonds, most issued by Indonesia state owned enterprises. 44% of the investments were in shares. Figure 72 shows that the majority of these investments came from South Korea and the United States, with 32% (US\$ 5.9 billion) and 23% (US\$ 4.3 billion)

respectively. The large stake of South Korean investors can be largely attributed to investments in KEPCO (see section 1.3).

The top 15 investors together invested US\$ 12.4 billion in the bonds and shares of the selected fossil fuel companies active in Indonesia. These investments accounted for 67% of the identified total investments. Figure 73 shows that by far the largest investor was KDB Financial Group with investments of US\$ 4.6 billion. It was followed by Taiwanese Fuh Hwa Securities Investment Trust – which held US\$ 1.5 billion in bonds and shares, and the National Pension Service of South Korea which held US\$ 996 million.

Investors from FFA countries accounted for 3% of all identified investments in fossil fuel companies active in Indonesia with US\$ 559 million in invested in bonds and shares. Only 10 investors from FFA

countries were identified. As Figure 74 shows, all but one of these FFA investors were financial institutions from Japan. The remaining financial institution was Thai

Kasikornbank. By far the largest investor was Normura, with US\$ 557 million invested in the bonds and shares of fossil fuel companies active in Indonesia.

Figure 72: Country of origin investors in fossil fuel in Indonesia (2020 February, most recent filings)

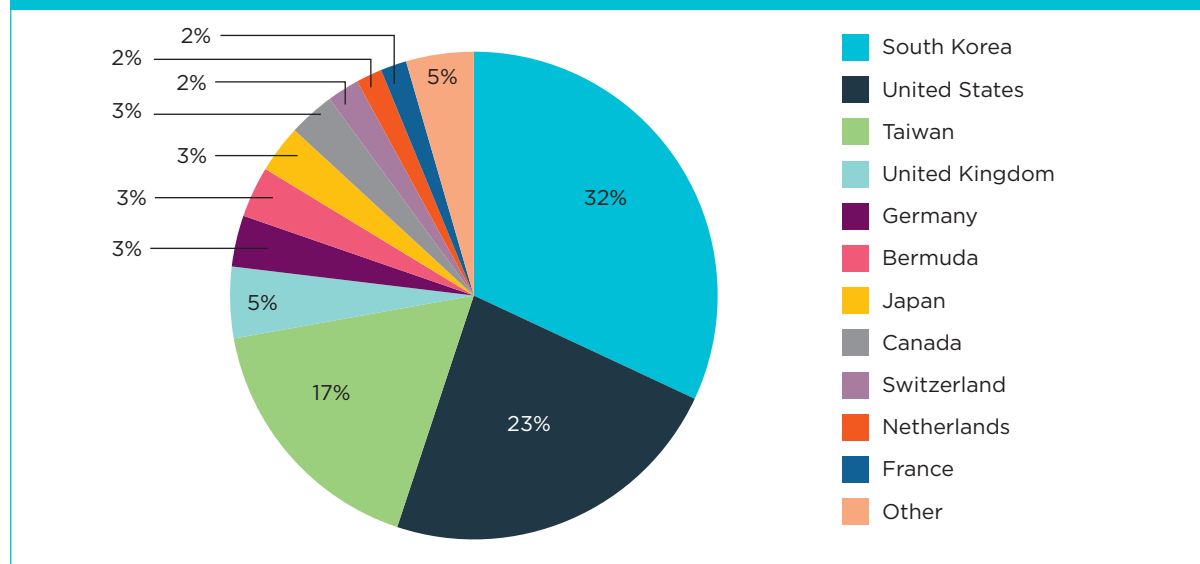


Figure 73: Top 15 fossil fuel investors in Indonesia (2020 February, most recent filings, US\$ mln)

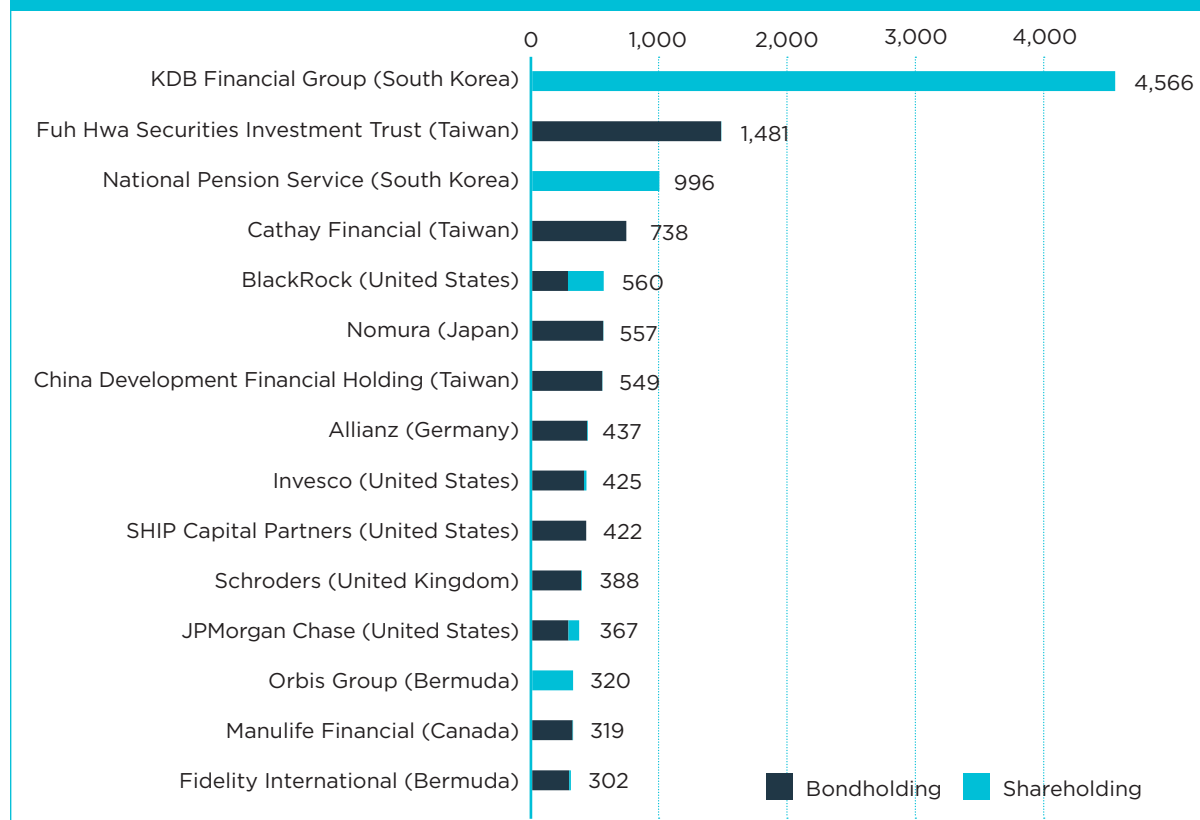
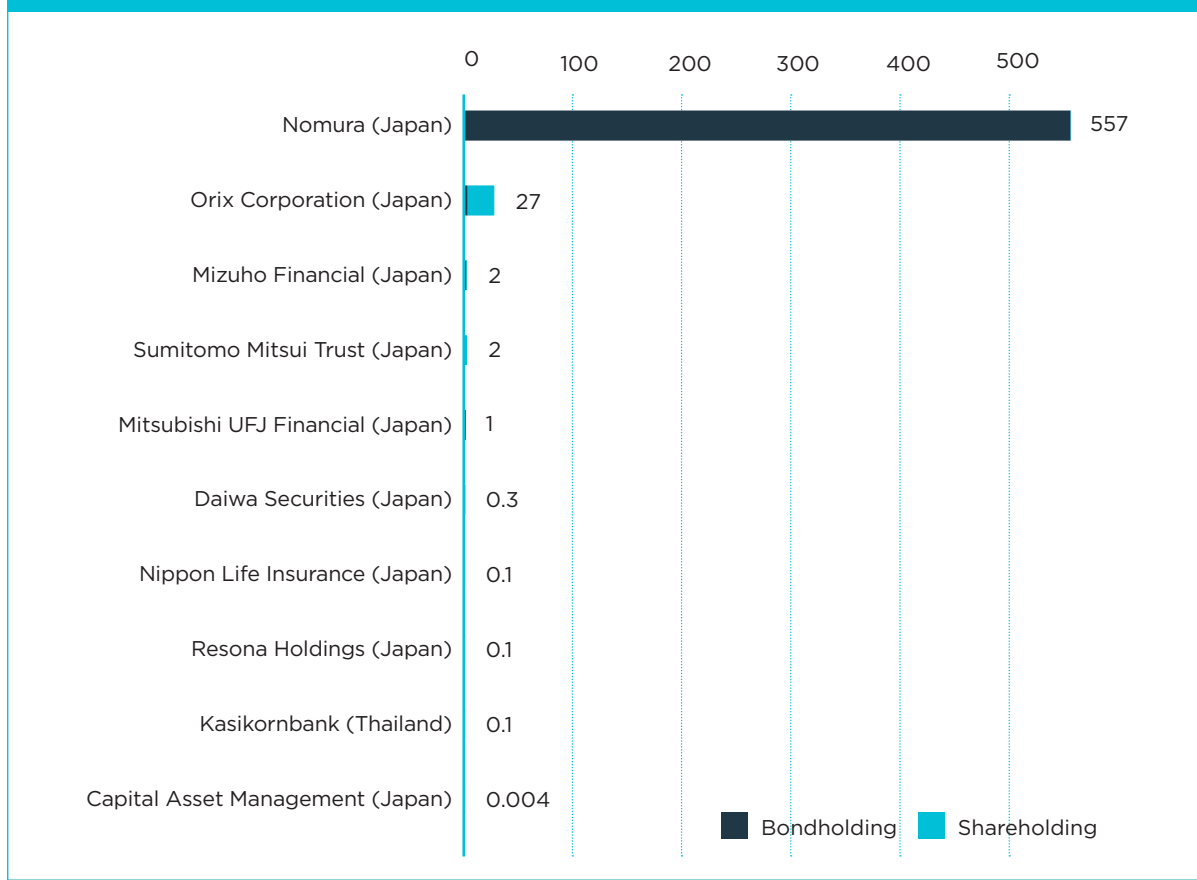


Figure 74: Top 15 FFA fossil fuel investors in Indonesia (2020 February, most recent filings, US\$ mln)



4.5 Japan

4.5.1 Creditors

In the period 2014-2019, fossil fuel companies active in Japan received US\$ 150 billion in loans and underwriting services. 88% of this credit was provided in the form of loans, and 12% in issuance underwriting services. As Figure 75 shows, the vast majority of this financing (82%, US\$ 123) billion was provided by domestic Japanese financial institutions. Financial institutions from the United States and France were also significant creditors of fossil fuel companies active in Japan, providing US\$ 13.4 and US\$ 6.6 billion respectively.

The top 15 creditors provided 89%, or US\$ 128 billion, of all identified credit in the period 2014-2019. The largest

individual creditor of the selected fossil fuel companies, was Mizuho Financial which provided US\$ 37.5 billion (see Figure 76). It was followed by Mitsubishi UFJ Financial (US\$ 29.9 billion) and SMBC Group (US\$ 24.6 billion).

Financial institutions from FFA countries provided 81% of all identified loans and underwriting services to the selected companies engaged in fossil fuels in the period 2014-2019 – US\$ 116 billion. The top 15 creditors from FFA countries provided US\$ 111.9 billion, 97% of all credit from FFA countries. The largest FFA creditor, was Mizuho Financial which provided US\$ 37.5 billion (see Figure 77). It was followed by Mitsubishi UFJ Financial (US\$ 29.9 billion) and SMBC Group (US\$ 24.6 billion).

Figure 75: Country of origin creditors of fossil fuel in Japan (2014-2019)

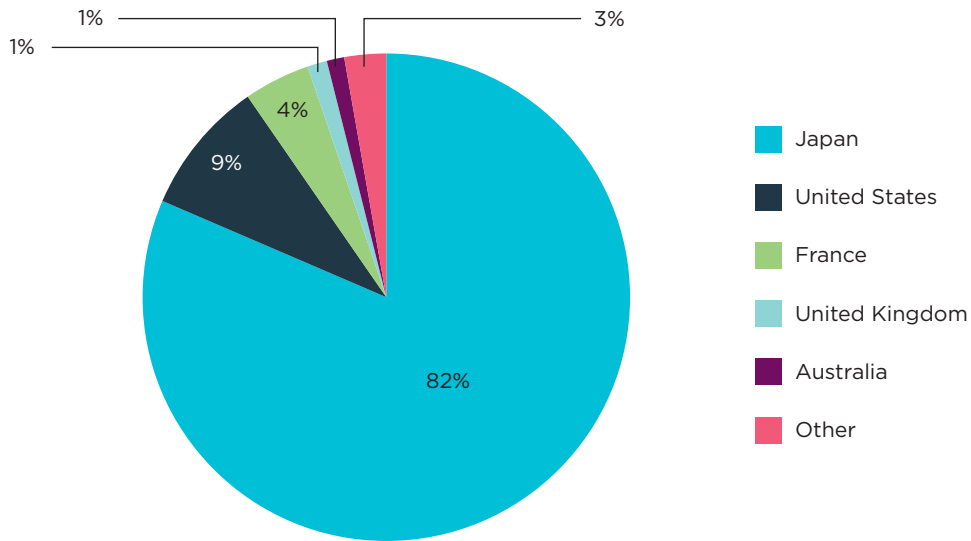


Figure 76: Top 15 fossil fuel creditors in Japan (2014-2019, US\$ mln)

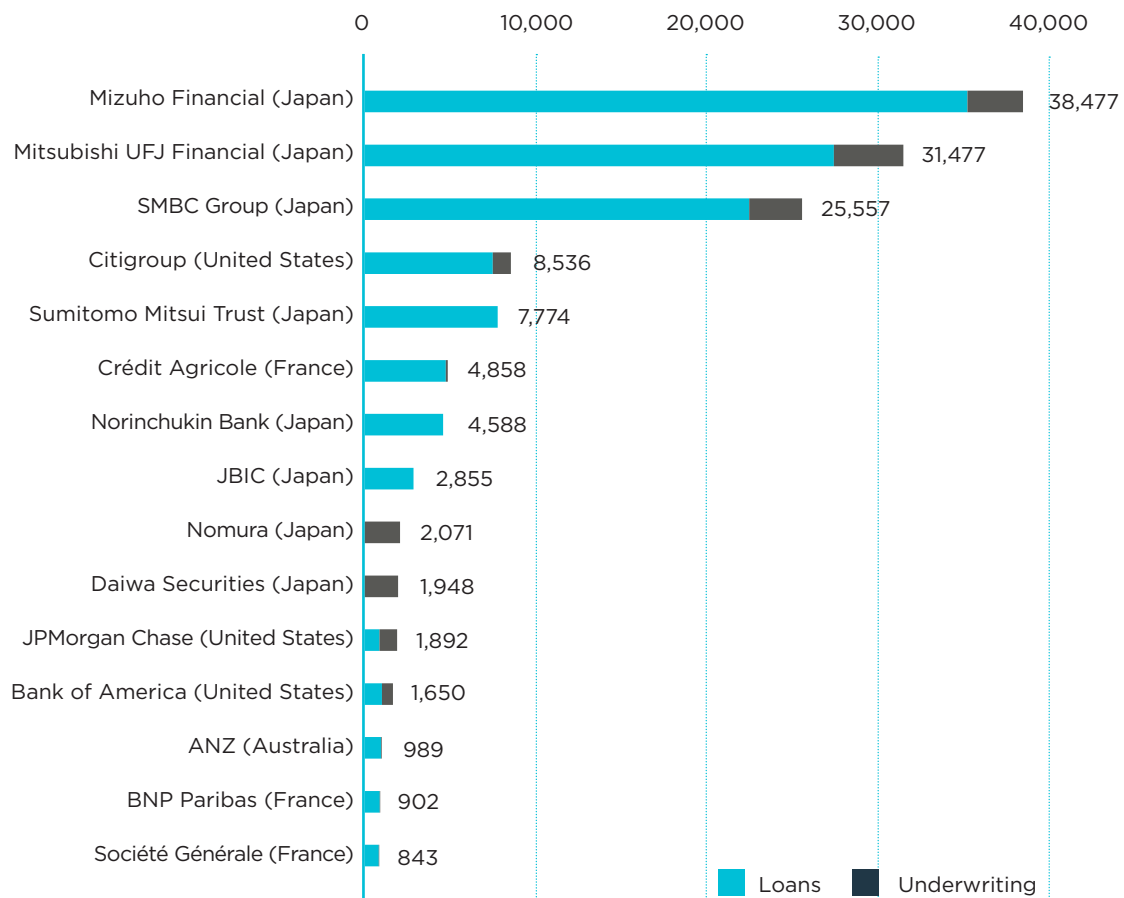
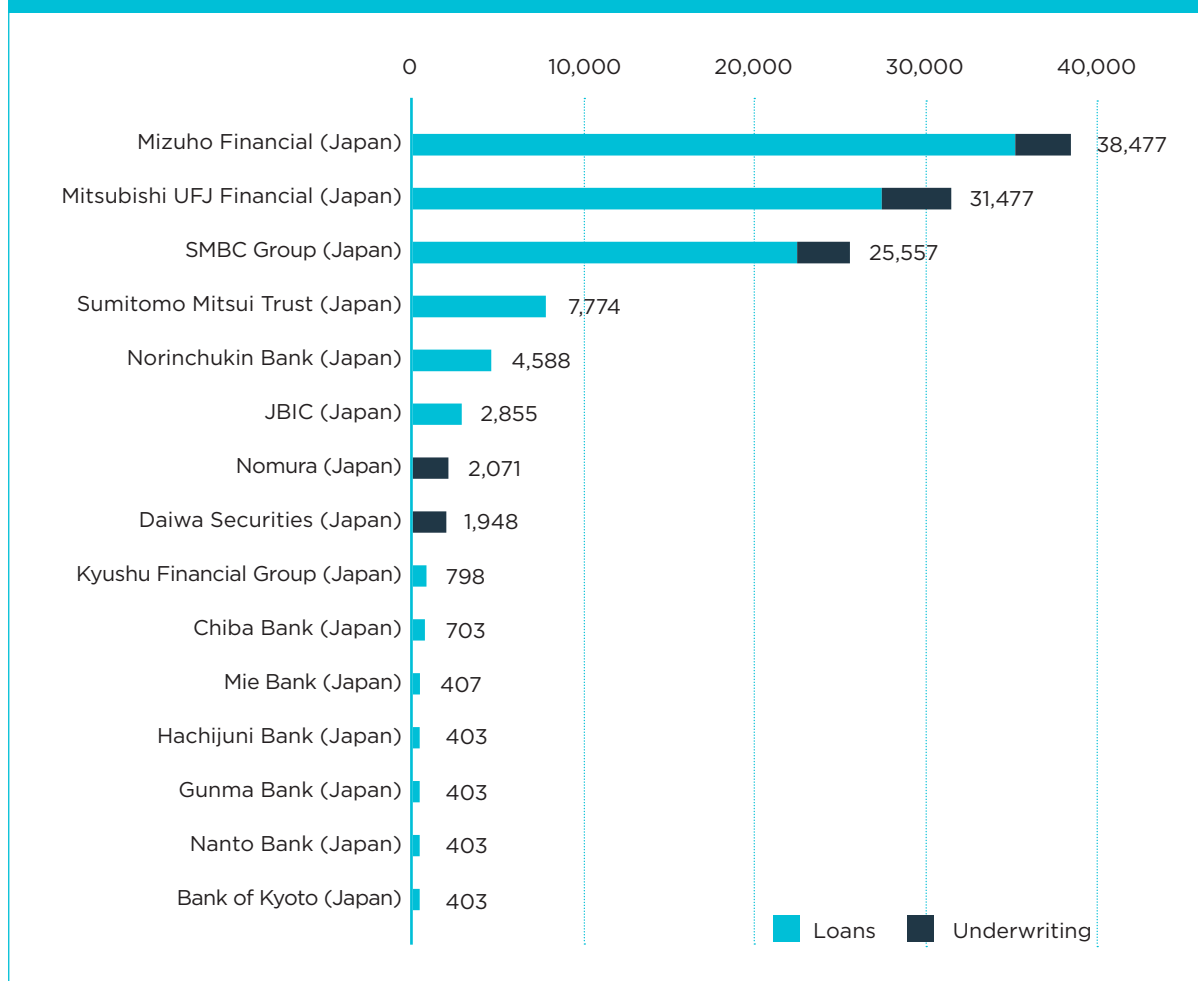


Figure 77: Top 15 FFA fossil fuel creditors in Japan (2014-2019, US\$ mln)



4.5.2 Investors

At the most recent filing date in February 2020, investors had invested US\$ 85.4 billion in the bonds and shares of the selected companies active in fossil fuels in Japan. Approximately 99.8% of these investments were in shares, the remaining 0.2% was in bonds issued by the selected companies. Figure 78 shows that half of the investments were made by Japanese financial institutions. Financial institutions from the United States provided just a third (US\$ 28.5 billion) of investments. The remaining investors were mainly from Europe.

The top 15 investors held bonds and shares worth US\$ 60.9 billion. Together they 71% of all identified bond and shareholdings of the selected companies. 9 of the top

15 investors were Japanese, 4 were from the United States, the remaining two were from Bermuda and Norway. The largest investor was Sumitomo Mitsui Trust, which held US\$ 8.8 billion in bonds and shares. It was followed by Japanese Nomura, with US\$ 7.7 billion in bonds and shares. The third largest investor was US asset manager BlackRock which held bonds and shares worth US\$ 6.4 billion.

Investors from FFA countries accounted for just under half of all identified investments in fossil fuel companies active in Japan with investments of US\$ 39 billion in bonds and shares. The top 15 FFA investors accounted for 47% of the total identified investments, and 97% of FFA investors country investments. As

Figure 80 shows, all these FFA investors were financial institutions from Japan. The largest investor was Sumitomo Mitsui Trust, with US\$ 8.2 billion invested in the

bonds and shares of fossil fuel companies active in Japan. It was followed by Nomura (US\$ 6.8 billion) and Mitsubishi UFJ Financial (US\$ 4.8 billion).

Figure 78: Country of origin investors in fossil fuel in Japan (2020 February, most recent filings)

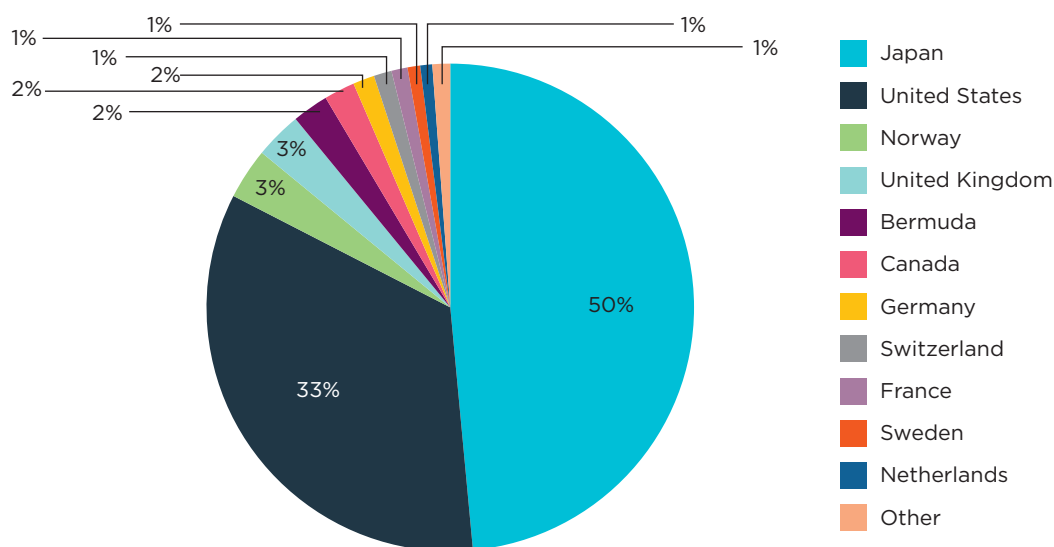


Figure 79: Top 15 fossil fuel investors in Japan (2020 February, most recent filings, US\$ mln)

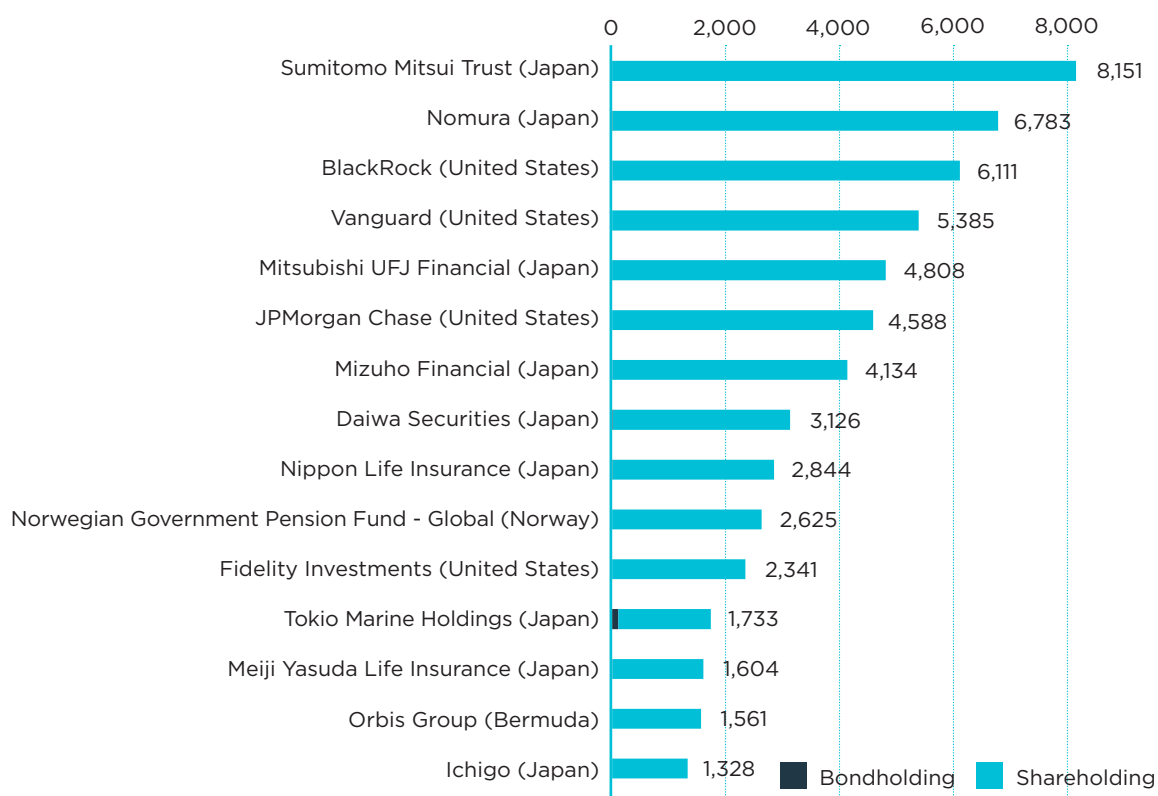
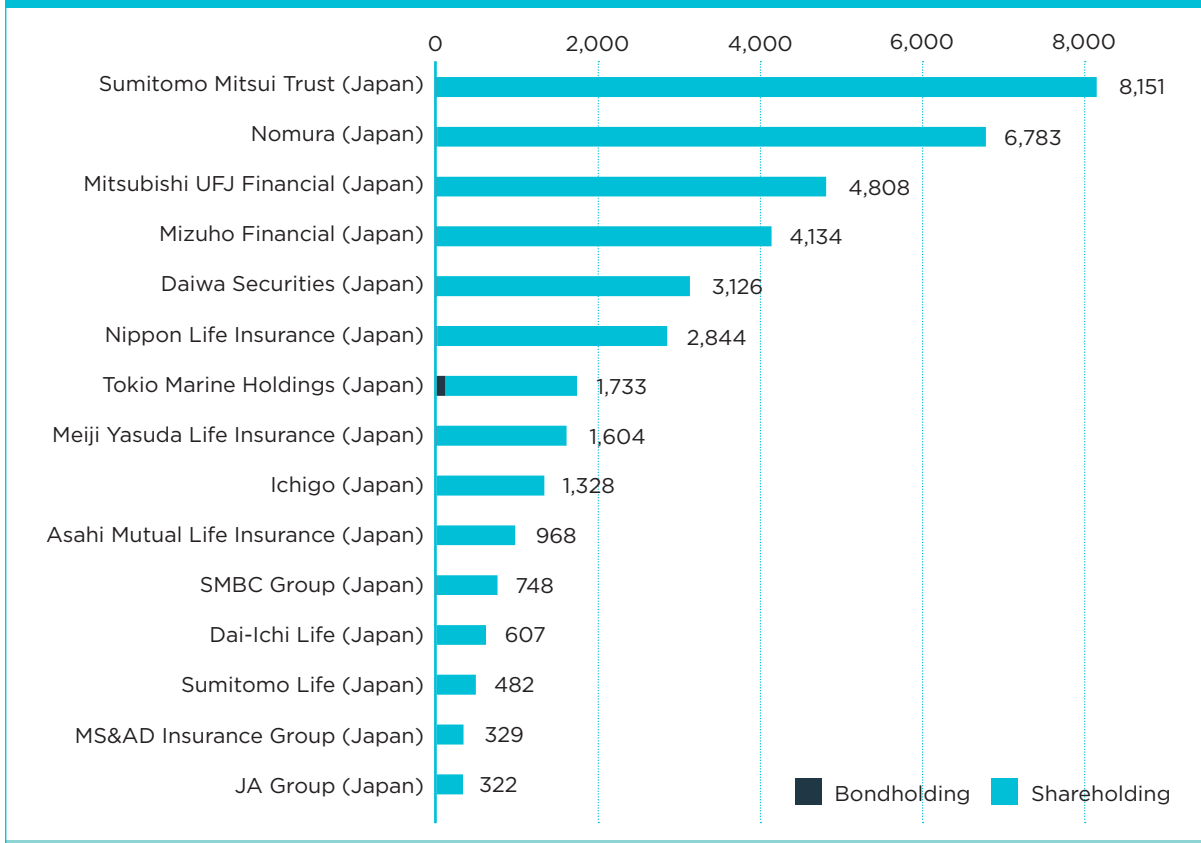


Figure 80: Top 15 FFA fossil fuel investors in Japan (2020 February, most recent filings, US\$ mln)



4.6 Philippines

4.6.1 Creditors

Fossil fuel companies active in the Philippines received US\$ 123 billion in loans and underwriting in the period 2014-2019. This large value is by the large international oil & gas companies – such as Chevron and Shell – that are active in the Philippines (see section 1.3). 46% of the identified credit was provided in the form of loans, and 54% in underwriting services.

Given the role of large international oil & gas companies, particularly Chevron from the United States and Shell from the United Kingdom and the Netherlands, it is not surprising the financial institutions from the United States and the United Kingdom provided the most credit to the selected companies (see Figure 81). They provided US\$ 38.4 billion and US\$ 25.7

billion respectively. They were followed by financial institutions from France which provided US\$ 12.7 billion.

The top 15 creditors of fossil fuel companies active in the Philippines provided US\$ 90.1 billion in loans and underwriting services in the period 2014-2019. This accounts for 74% of total identified credit to the selected companies. The largest financier was Barclays which provided US\$ 10.9 billion (see Figure 82). It was followed by Morgan Stanley (US\$ 10 billion) and Bank of America (US\$ 8.8 billion).

Financial institutions from FFA countries provided US\$ 16.4 billion in loans and underwriting services to the selected fossil fuel companies active in the Philippines. This accounts for 13% of all identified financing. Figure 83 shows that among the top 15 creditors from FFA countries,

4 are Japanese financial institutions. The remainder are all from the Philippines. The largest creditor was SMBC Group (US\$ 3.6 billion). It was followed by Mitsubishi UFJ Financial (US\$ 3.1 billion) and Mizuho Financial (US\$ 2.1 billion).

Although not from an FFA country, HSBC – which provided US\$ 7.7 billion in loans and issuance underwriting services to fossil fuel companies active in the Philippines – is included in the scope of Responsibank’s work.

Figure 81: Country of origin creditors of fossil fuel in Philippines (2014-2019)

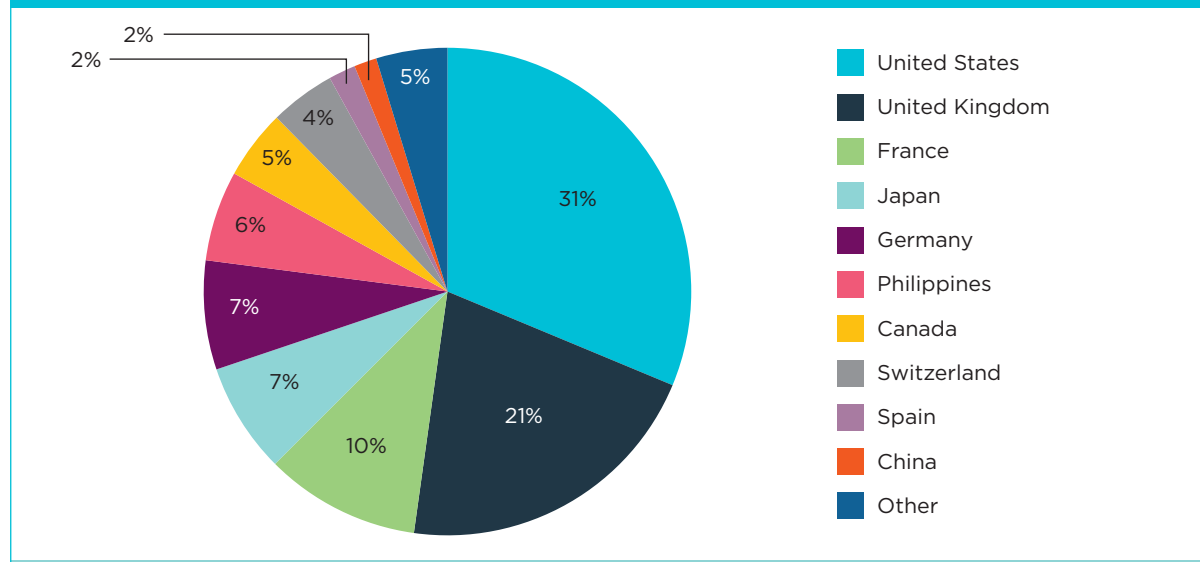


Figure 82: Top 15 fossil fuel creditors in Philippines (2014-2019, US\$ mln)

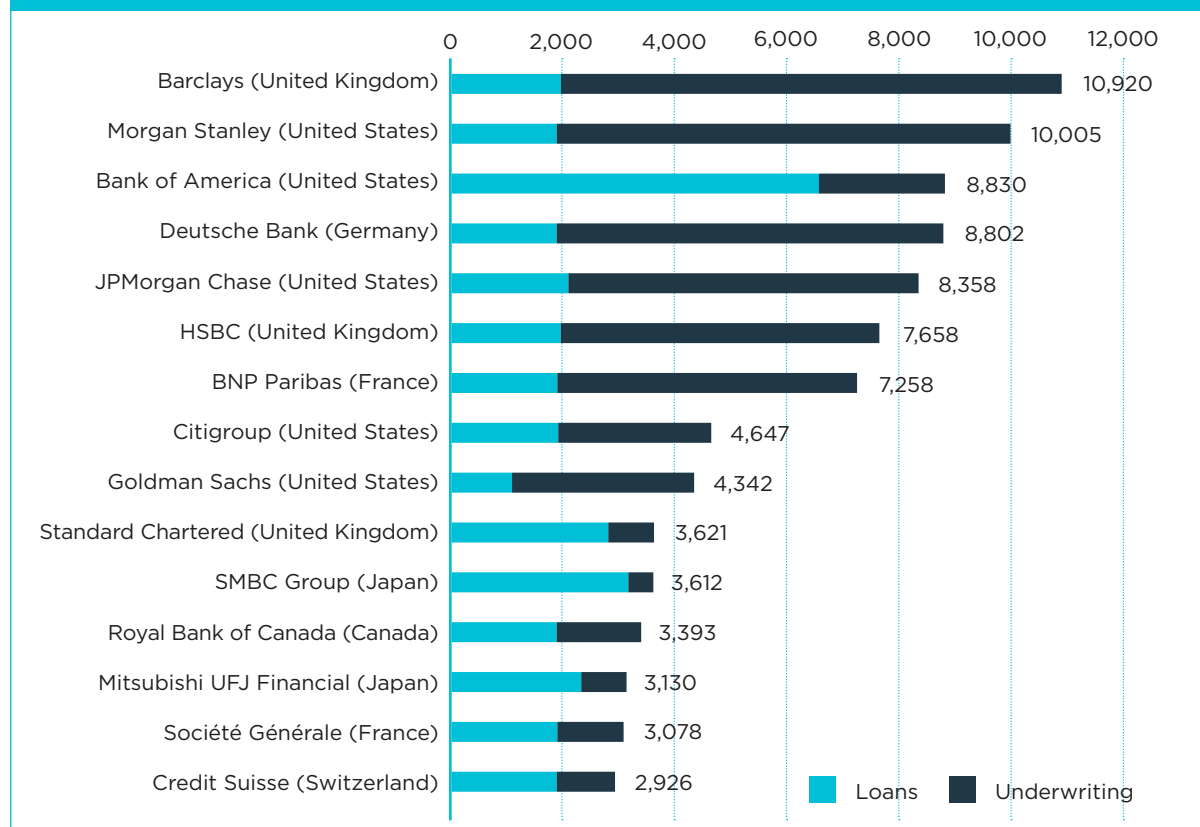
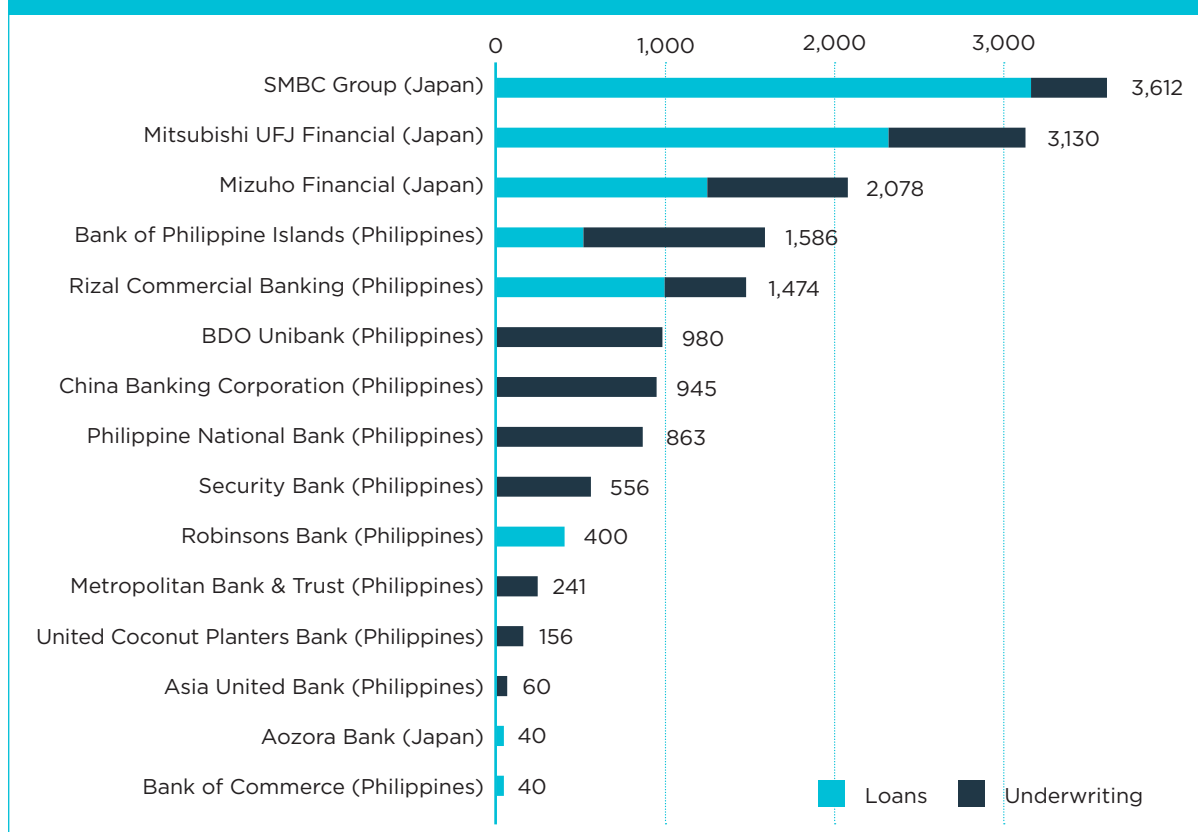


Figure 83: Top 15 FFA fossil fuel creditors in the Philippines (2014-2019, US\$ mln)



4.6.2 Investors

Investors held bonds and shares worth US\$ 440 billion of the selected companies active in fossil fuels in the Philippines. This is mainly driven by the dominance of large oil & gas companies such as Chevron and Shell, and international conglomerate Marubeni (see section 1.3). 93% of the investments were in the form of shares, and 7% in bonds. As Figure 84 shows, three quarters (US\$ 332 billion) of these investments were made by institutional investors from the United States. A further US\$ 25 billion (6%) came from the United Kingdom and US\$ 17 billion (4%) from Switzerland.

The top 15 investors in fossil fuels account for approximately half of all identified investments in the bonds and shares of the selected companies active in fossil fuels in the Philippines. Together they held investments of US\$ 225 billion.

The largest investors were all US asset managers. Among them, Vanguard held the highest investments of US\$ 49.6 billion. It was followed by BlackRock (US\$ 40.4 billion) and State Street (US\$ 32.8 billion).

Investors from FFA countries accounted for 1% of all identified investments in fossil fuel companies active in the Philippines, with US\$ 5.3 billion invested in bonds and shares. The top 15 FFA investors accounted for just under 1% of the total identified investments, and 98% of FFA investors country investments. As Figure 86 shows, 12 of these top 15 FFA investors were financial institutions from Japan. The remaining three financial institutions were from the Philippines. The largest investor was Sumitomo Mitsui Trust, with US\$ 2.0 billion invested in the bonds and shares of fossil fuel companies active in the Philippines. It was followed by Mitsubishi

UFJ Financial (US\$ 929 million) and Mizuho Financial (US\$ 429 million). The largest Philippine investor was Insular Life

Insurance, with US\$ 239 million invested in the shares of selected companies active in fossil fuels in the Philippines.

Figure 84: Country of origin investors in fossil fuel in Philippines (2020 February, most recent filings)

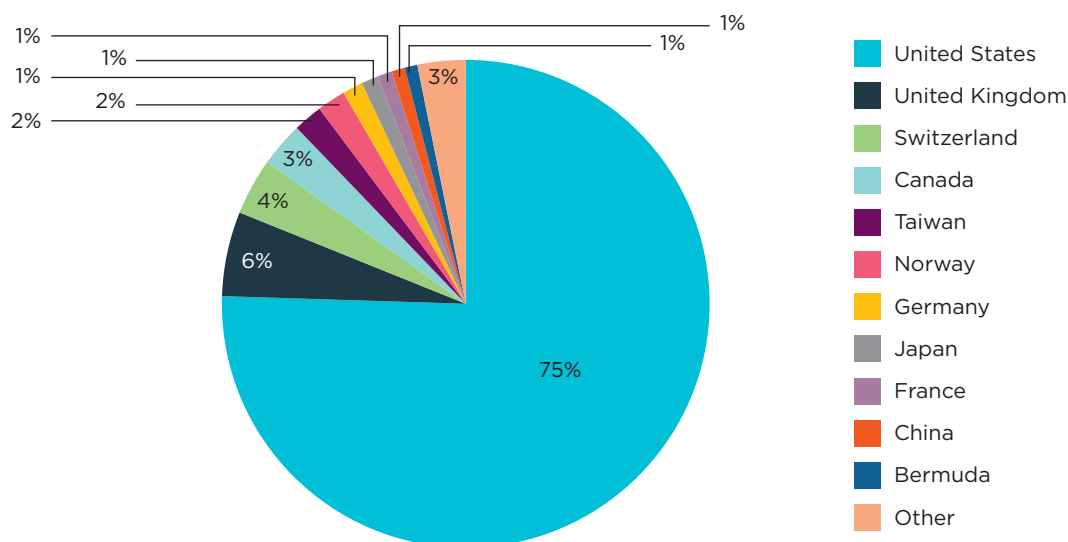


Figure 85: Top 15 fossil fuel investors in Philippines (2020 February, most recent filings, US\$ mln)

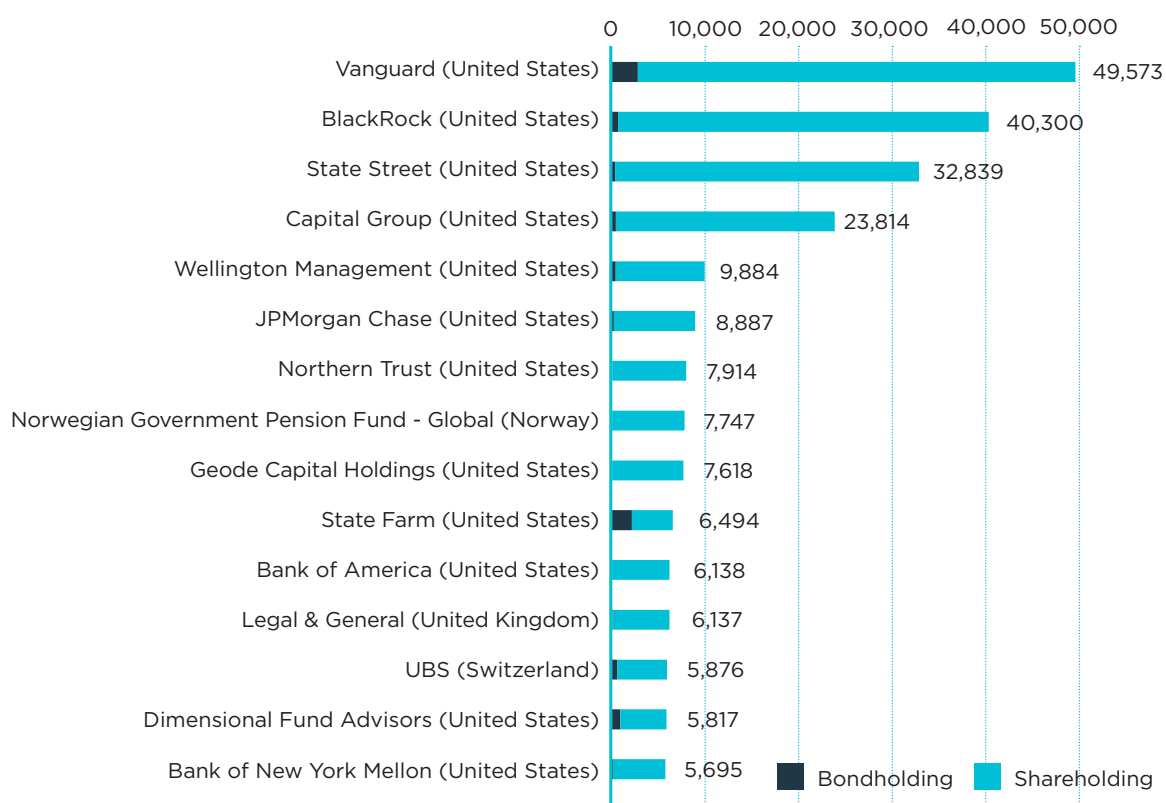
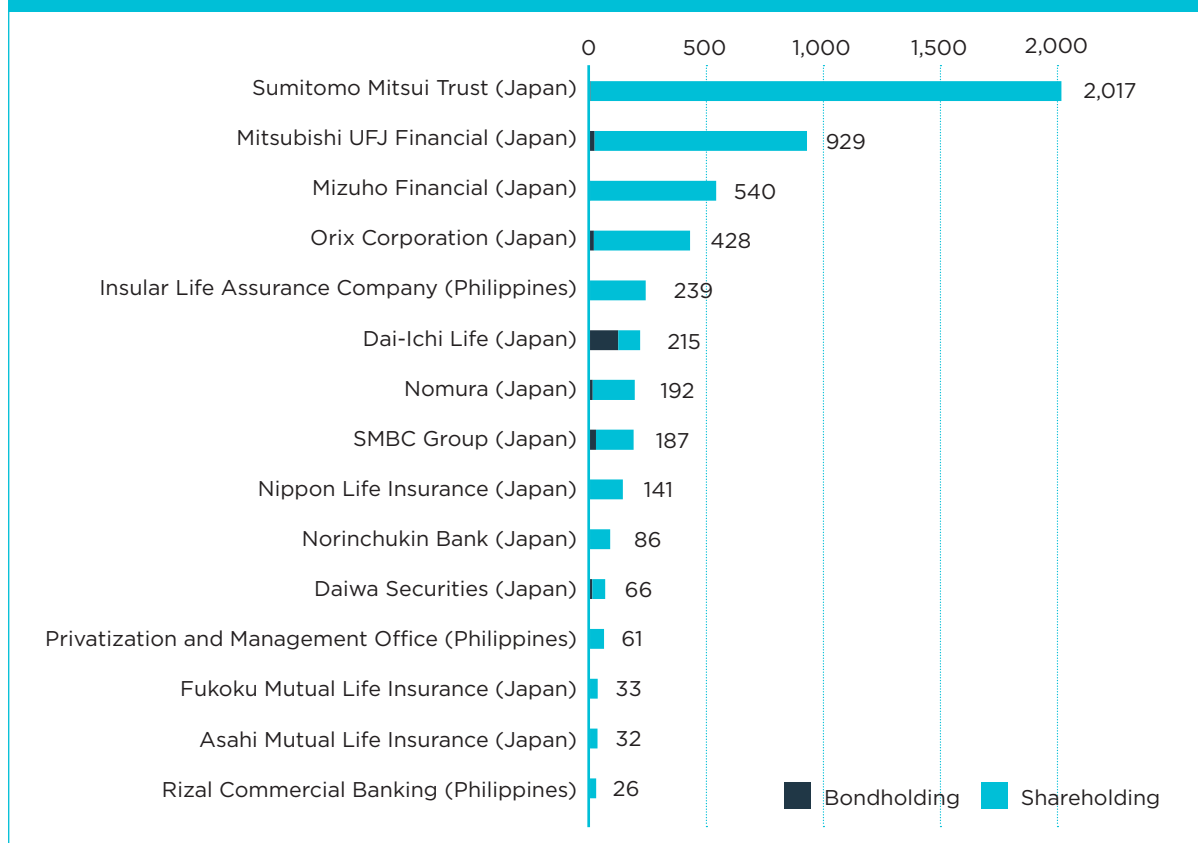


Figure 86: Top 15 FFA fossil fuel investors in the Philippines (2020 February, most recent filings, US\$ mln)



4.7 Thailand

4.7.1 Creditors

In the period 2014-2019, fossil fuel companies active in Thailand attracted US\$ 56 billion in loans and underwriting services. This was due, in large part, to the presence of large international oil & gas companies such as Chevron, Total, and Mitsui & Co (see section 1.3 for details). The majority of this credit was provided in the form of issuance underwriting (85%), with the remainder in loans (15%). Financial institutions from the United States provided the most loans and underwriting services. They provided US\$ 19.9 billion in the period 2014-2019. They were followed by financial institutions from Japan (US\$ 7.6 billion) and the United Kingdom (US\$ 7.4 billion).

The top 15 creditors provided US\$ 40.4 billion in loans and underwriting services

to fossil fuel companies active in Thailand. They accounted for 72% of all identified credit to the selected fossil fuel companies. The largest creditor was Bank of America which provided US\$ 5.0 billion in the period 2014-2019 (see Figure 88). It was followed by two more financial institutions from the US - Citigroup (US\$ 4.3 billion) and JPMorgan Chase (US\$ 4.1 billion).

Creditors from FFA countries provided US\$ 13.9 billion in loans and underwriting services to the selected companies engaged in fossil fuels in Thailand. They accounted for a quarter of all identified credit. 5 of the top 15 creditors were Japanese financial institutions, and the remaining financial institutions were all from Thailand (see Figure 89). The Japanese financial institutions did not only provide credit to Japanese companies, but also Thai companies such as Banpu and PTT Group.

The largest creditor was Mizuho Financial, which provided US\$ 2.5 billion in loans and underwriting services to the selected fossil fuel companies in the period 2014-

2019. It was followed by Mitsubishi UFJ Financial (US\$ 2.3 billion) and SMBC Group (US\$ 2.2 billion).

Figure 87: Country of origin creditors of fossil fuel in Thailand (2014-2019)

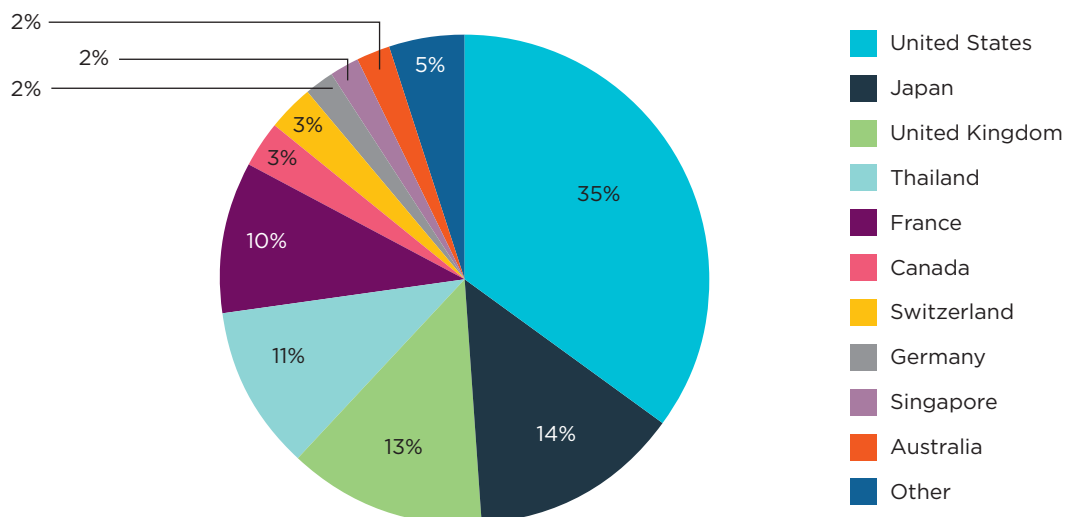


Figure 88: Top 15 fossil fuel creditors in Thailand (2014-2019, US\$ mln)

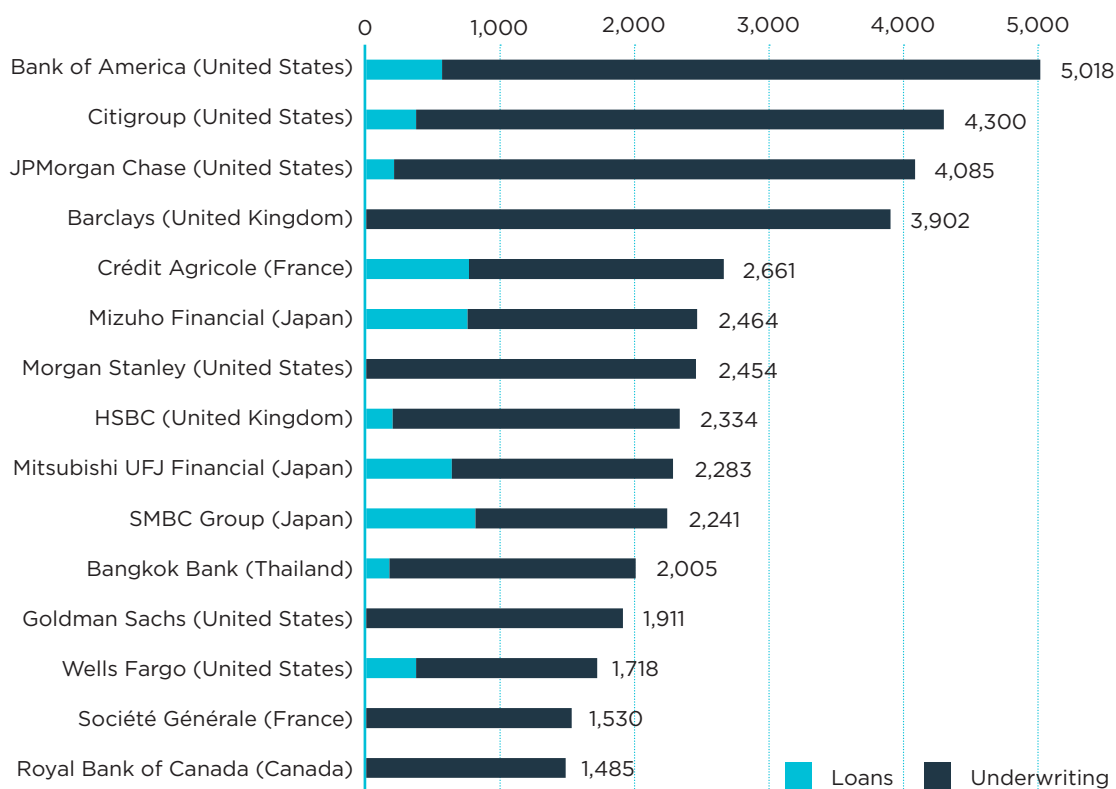
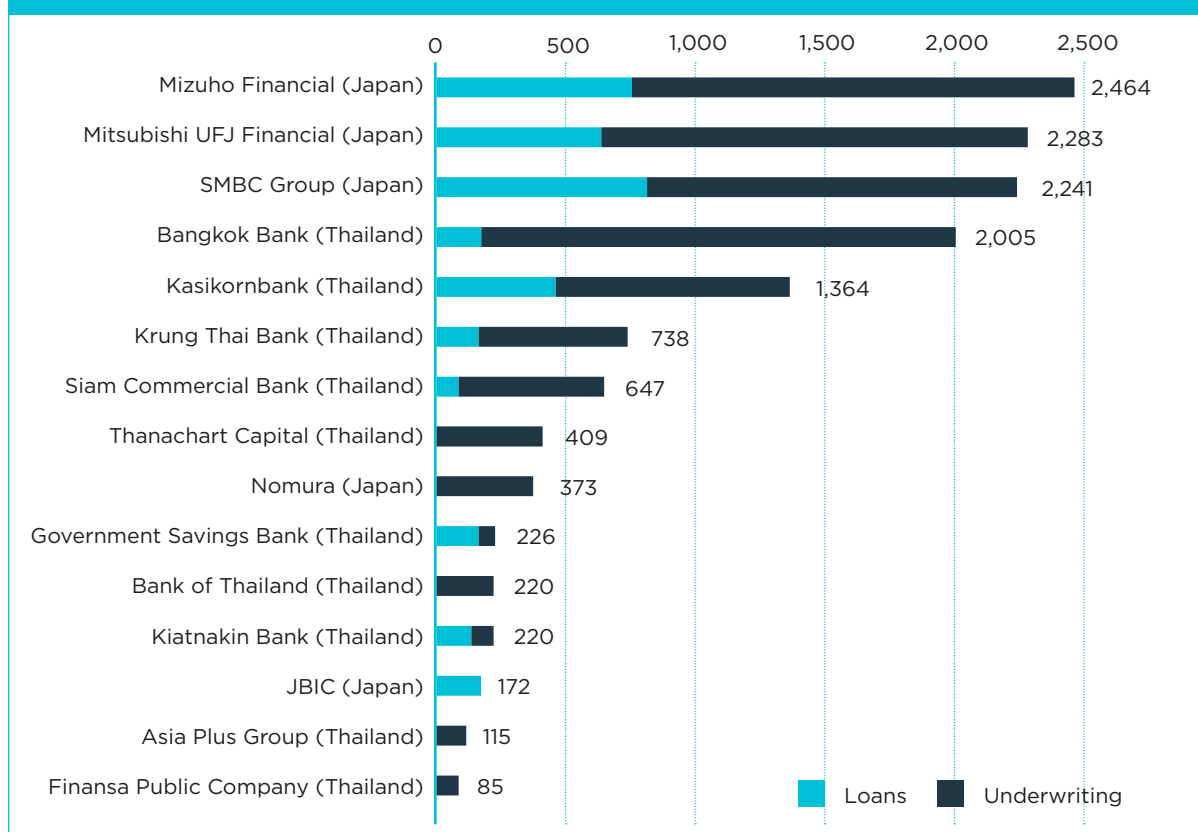


Figure 89: Top 15 FFA fossil fuel creditors in Thailand (2014-2019, US\$ mln)



4.7.2 Investors

At the most recent filing date February 2020, financial institutions had invested US\$ 409 billion in the bonds and shares of fossil fuel companies active in Thailand. This is largely due to the presence of large international oil & gas companies, such as Chevron and Total, in Thailand (see section 1.3 for details). 95% of these investments were in the form of shareholding. The remaining 5% were bondholdings.

Investors from the United States accounted for over three quarters of all identified investments (see Figure 90). These investor held bonds and shares of US\$ 310.1 billion. Investors from the US were followed by the United Kingdom (US\$ 13.1 billion) and Canada (US\$ 13.2 billion).

The top 15 investors accounted for 50% of all identified investments in the bonds

and shares of the selected companies active in fossil fuels in Thailand. Together they had invested US\$ 206 billion at the most recent filing date in February 2020. The largest investor was US asset manager Vanguard which had invested US\$ 46.6 billion (see Figure 91). It was followed by its peers BlackRock (US\$ 37 billion) and State Street (US\$ 29.3 billion).

Investors from FFA countries accounted for 5% of all identified investments in fossil fuel companies active in Thailand, with investments of US\$ 20.6 billion in bonds and shares. The top 15 FFA investors accounted for just under 5% of the total identified investments, and 95% of FFA investors country investments. As Figure 92 shows, 8 of the top 15 FFA investors were financial institutions from Japan. The remaining 7 financial institutions were from Thailand. The largest investor was Sumitomo Mitsui

Trust, with US\$ 3.4 billion invested in the bonds and shares of fossil fuel companies active in Thailand (see Figure 92). It was

followed by Mitsubishi UFJ Financial (US\$ 3.0 billion) and Krung Thai Bank (US\$ 2.6 billion).

Figure 90: Country of origin investors in fossil fuel in Thailand (2020 February, most recent filings)

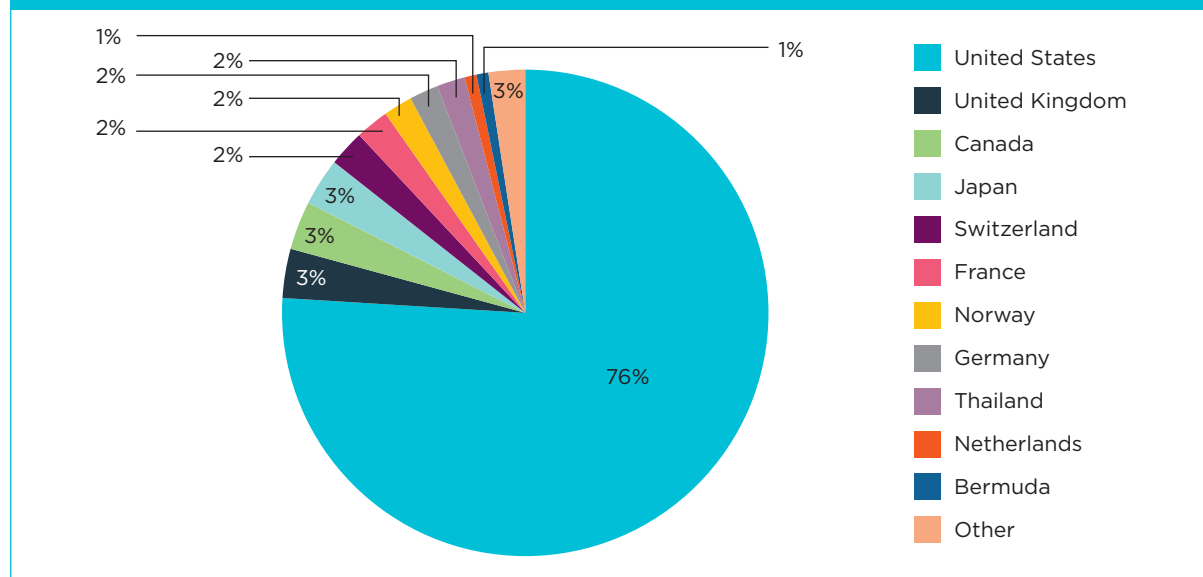


Figure 91: Top 15 fossil fuel investors in Thailand (2020 February, most recent filings, US\$ mln)

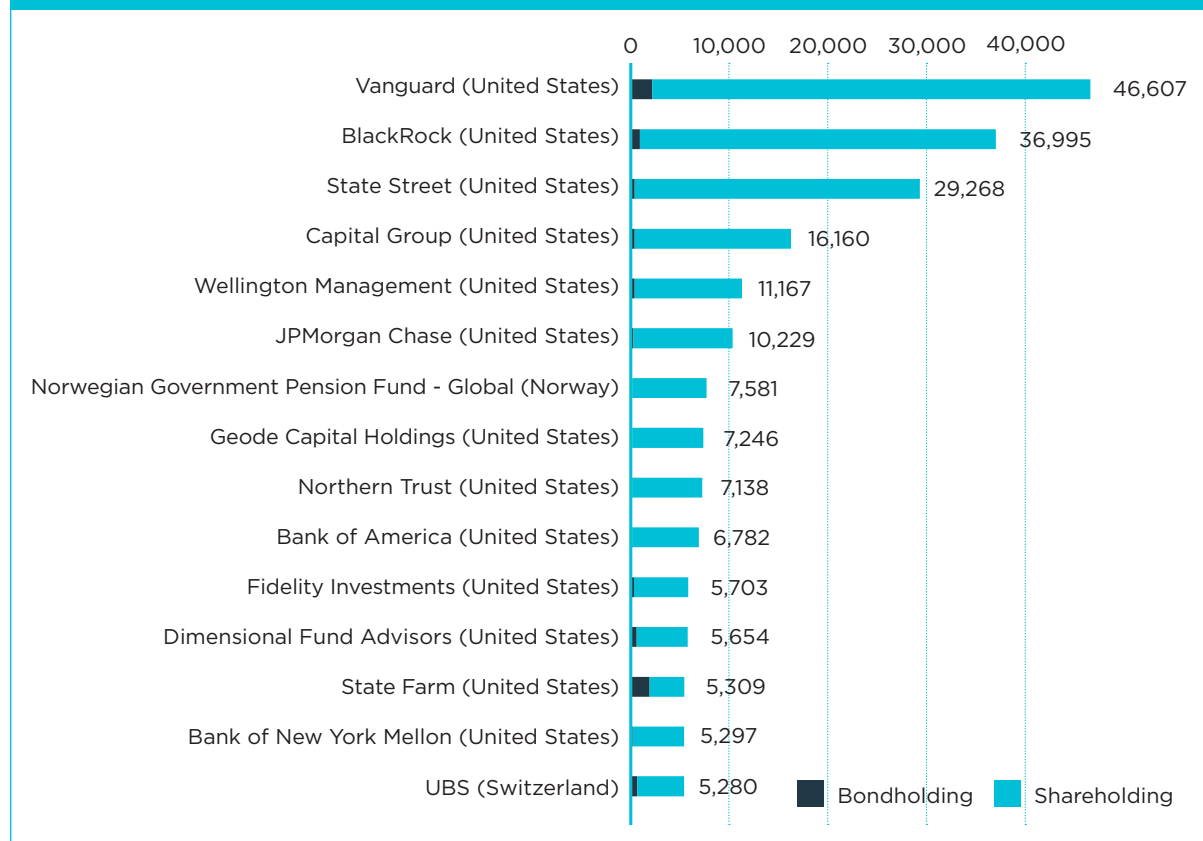
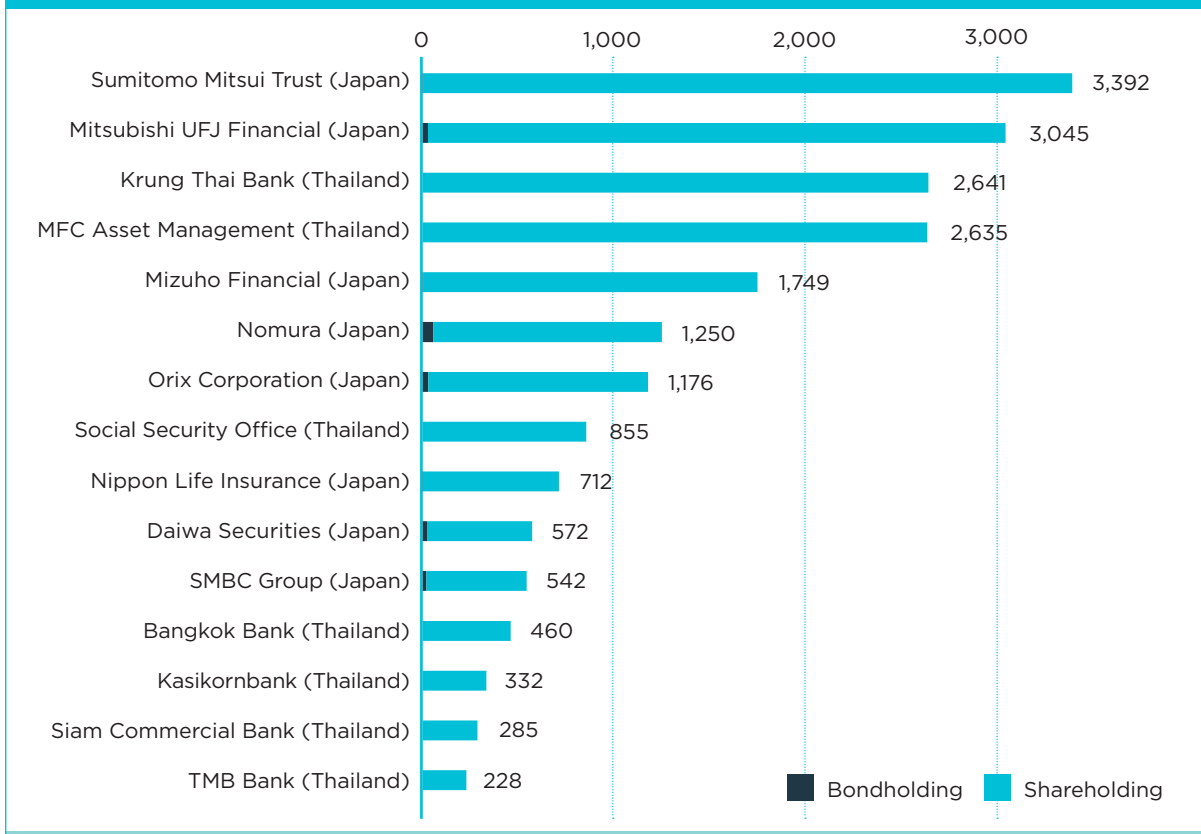


Figure 92: Top 15 FFA fossil fuel investors in Thailand (2020 February, most recent filings, US\$ mln)



4.8 Vietnam

4.8.1 Creditors

In the period 2014-2019, the selected fossil fuel companies active in Vietnam attracted US\$ 130 billion in loans & underwriting services. 50% was provided in the form of loans, and 50% in issuance underwriting services. Financial institutions from Russia provided over a quarter of all identified credit, US\$ 36.4 billion (see Figure 93). This is due to the presence of large Russian oil & gas companies – Gazprom and Rosneft – in Vietnam (see section 1.3 for details). Russian financial institutions were followed by financial institutions from Japan (US\$ 16 billion) and the United States (US\$ 12.4 billion).

The top 15 creditors of the selected fossil fuel companies active in Vietnam provided US\$ 82.1 billion in loans and underwriting services in the period 2014-2019. Together

they accounted for 64% of all identified credit. The largest creditor was Russian VTB Group, which provided US\$ 13 billion in credit (see Figure 94). It was followed by Gazprombank (US\$ 6.9 billion) and Japanese Mizuho Financial (US\$ 6.8 billion).

Creditors from FFA countries provided 20% of all identified loans and underwriting services to the selected companies active in Vietnam. Together they US\$ 26 billion in credit. The top 15 creditors from FFA countries provided US\$ 24.5 billion. 4 of the top 15 FFA creditors of fossil fuels in Vietnam were financial institutions from Japan (see Figure 95). One financial institution – Bank of Commerce – was from the Philippines. The remaining 10 financial institutions from FFA countries were all from India. This mostly due to the presence of a number of Indian companies in the oil & gas sector in Vietnam (see section 1.3 for details).

The largest financier was Mizuho Financial, which provided US\$ 6.8 billion in loans and underwriting services to the selected companies active in fossil fuels

in Vietnam. It was followed by Japanese SMBC Group (US\$ 5.2 billion) and the State Bank of India (US\$ 3.1 billion).

Figure 93: Country of origin creditors of fossil fuel in Vietnam (2014-2019)

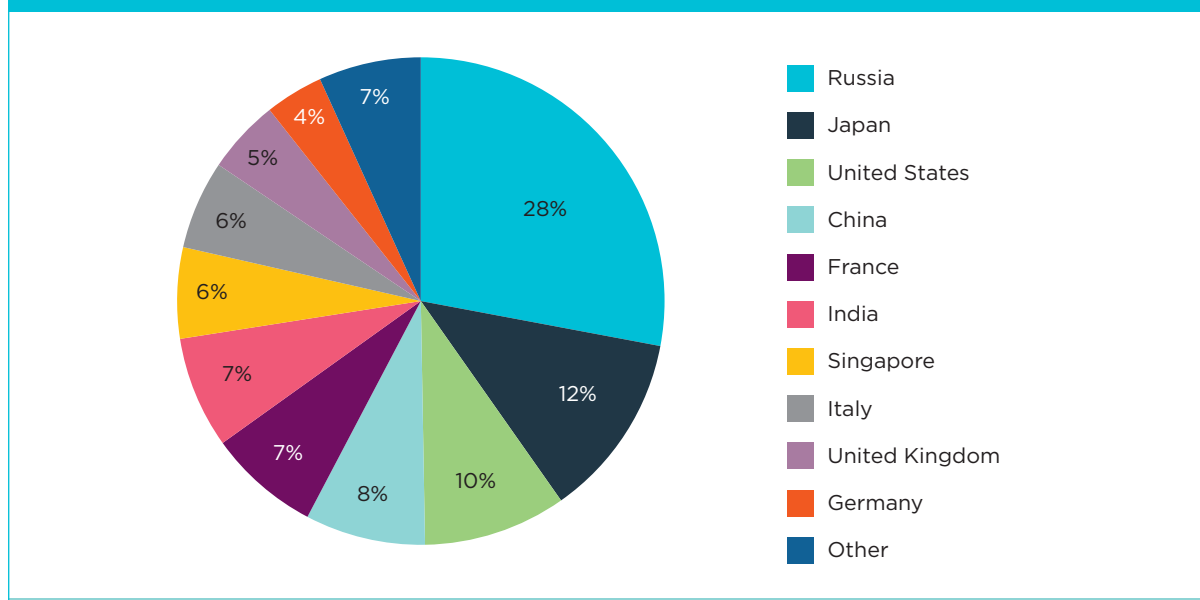


Figure 94: Top 15 fossil fuel creditors in Vietnam (2014-2019, US\$ mln)

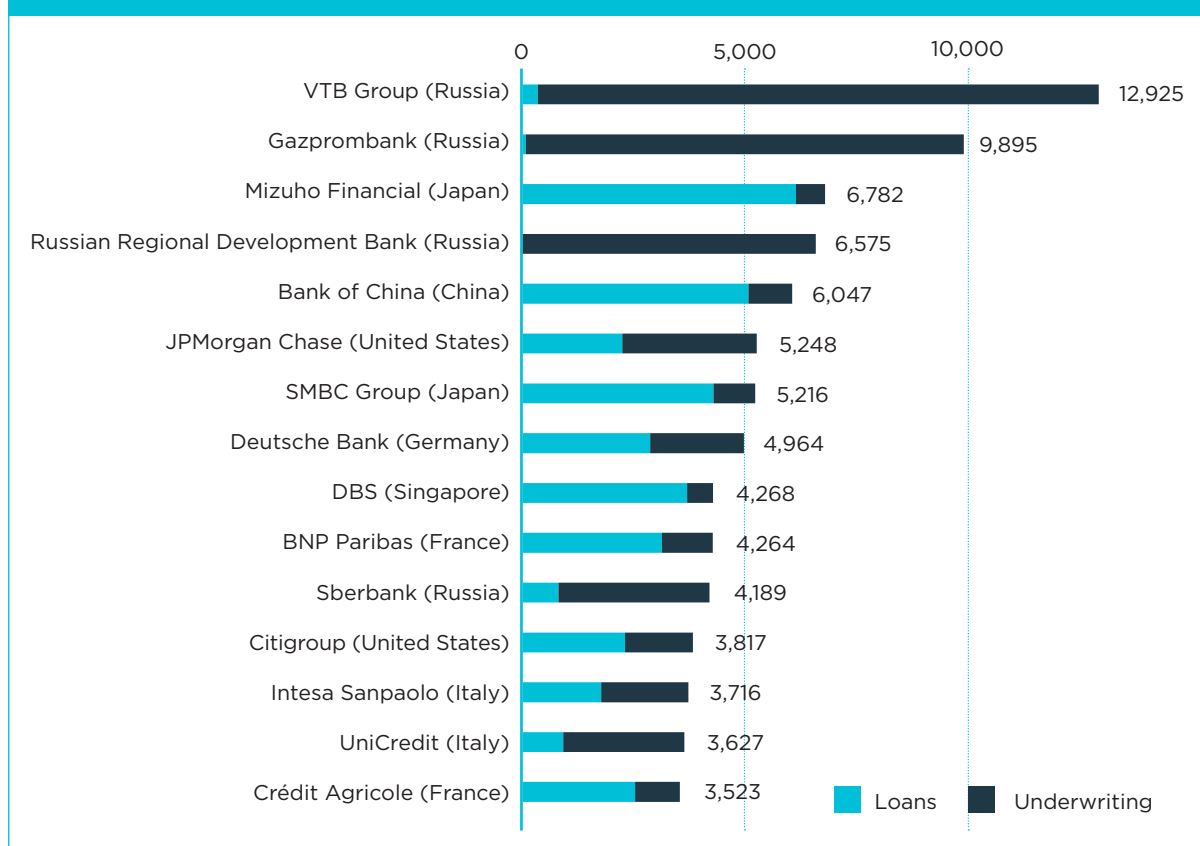
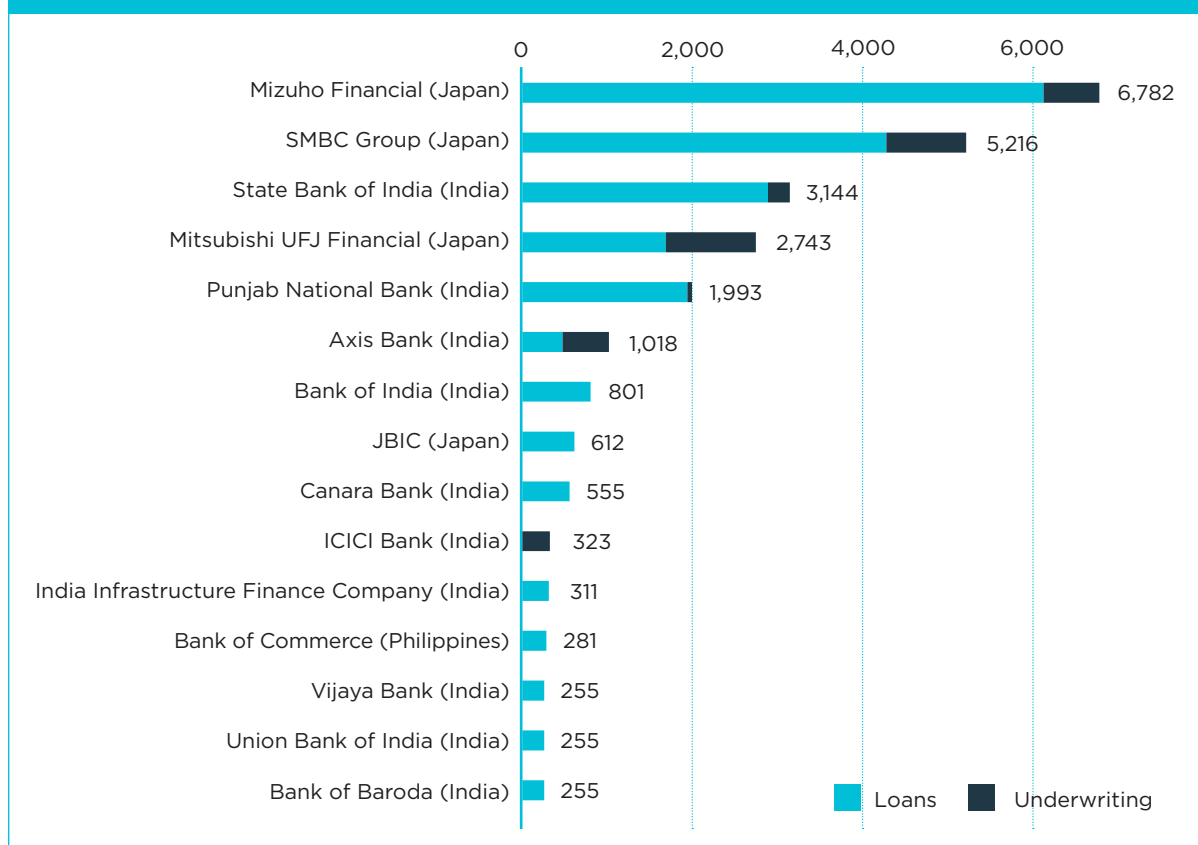


Figure 95: Top 15 FFA fossil fuel creditors in Vietnam (2014-2019, US\$ mln)



4.8.2 Investors

At the most recent filing date in February 2020, financial institutions had invested US\$ 38.8 billion in the bonds and shares of the selected companies active in fossil fuels in Vietnam. 88% of these investments were in the form of shareholdings, and the remaining 12% in bond holdings. Figure 96 shows that financial institutions from the United States held more than half of these investments (US\$ 20.2 billion). They were followed by financial institutions from India (US\$ 4.4 billion) and the United Kingdom (US\$ 2.4 billion).

The top 15 investors together held 56% of the identified bond- and shareholdings in the selected companies in Vietnam active in fossil fuels. Together they held bonds and shares of US\$ 21.2 billion at the most recent filing date. The largest investor was US financial group JPMorgan, which

held US\$ 4.3 billion (see Figure 97). It was followed by US asset managers Vanguard (US\$ 3.4 billion) and BlackRock (US\$ 3.1 billion).

Investors from FFA countries accounted for 14% of all identified investments in fossil fuel companies active in Vietnam, with investments of US\$ 4.7 billion in bonds and shares. The top 15 FFA investors accounted for just under 14% of the total identified investments, and 99% of FFA investor country investments. As Figure 98 shows, 12 of the top 15 FFA investors were financial institutions from India. The remaining 3 financial institutions were from Japan. The largest investor was Life Insurance Corporation of India, with US\$ 2.3 billion invested in the bonds and shares of fossil fuel companies active in Vietnam. It was followed by ICICI Bank (US\$ 613 million) and Reliance Group (US\$ 408 million).

Figure 96: Country of origin investors in fossil fuel in Vietnam (2020 February, most recent filings)

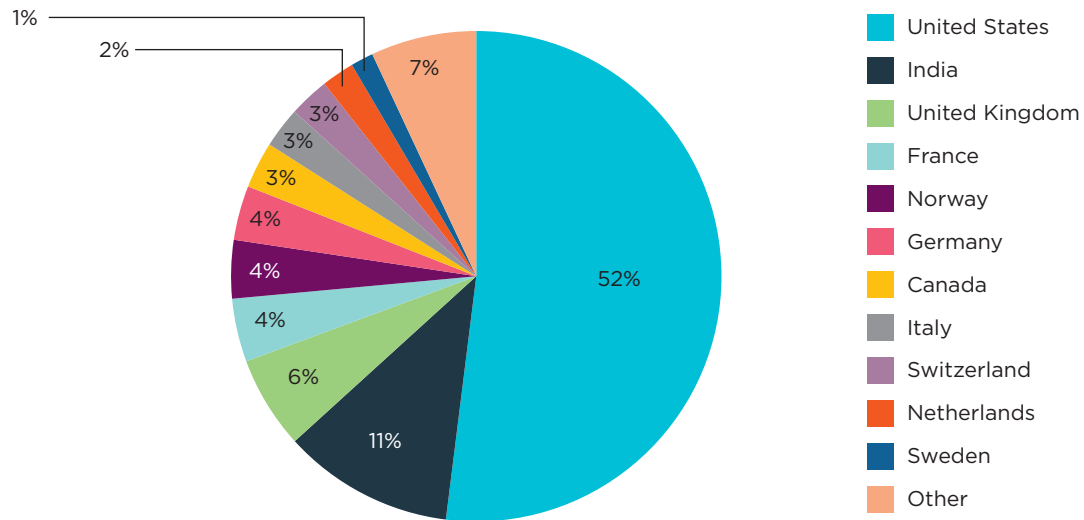


Figure 97: Top 15 fossil fuel investors in Vietnam (2020 February, most recent filings, US\$ mln)

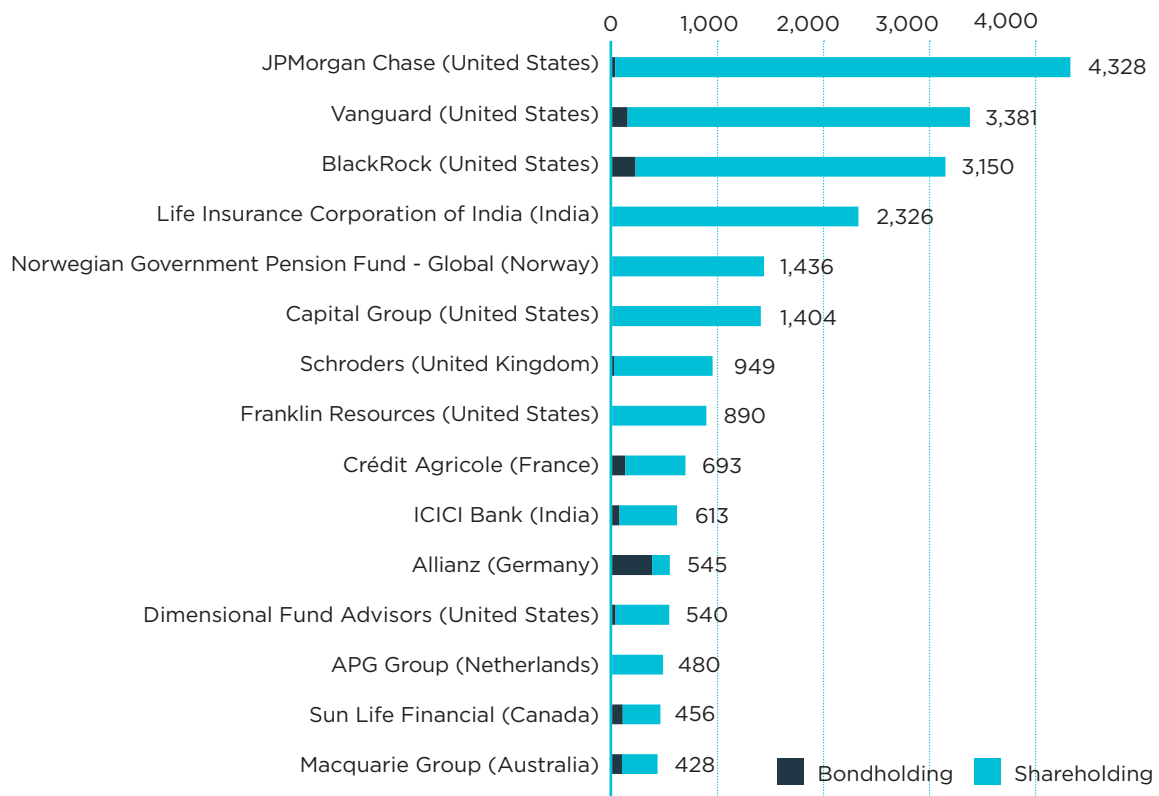
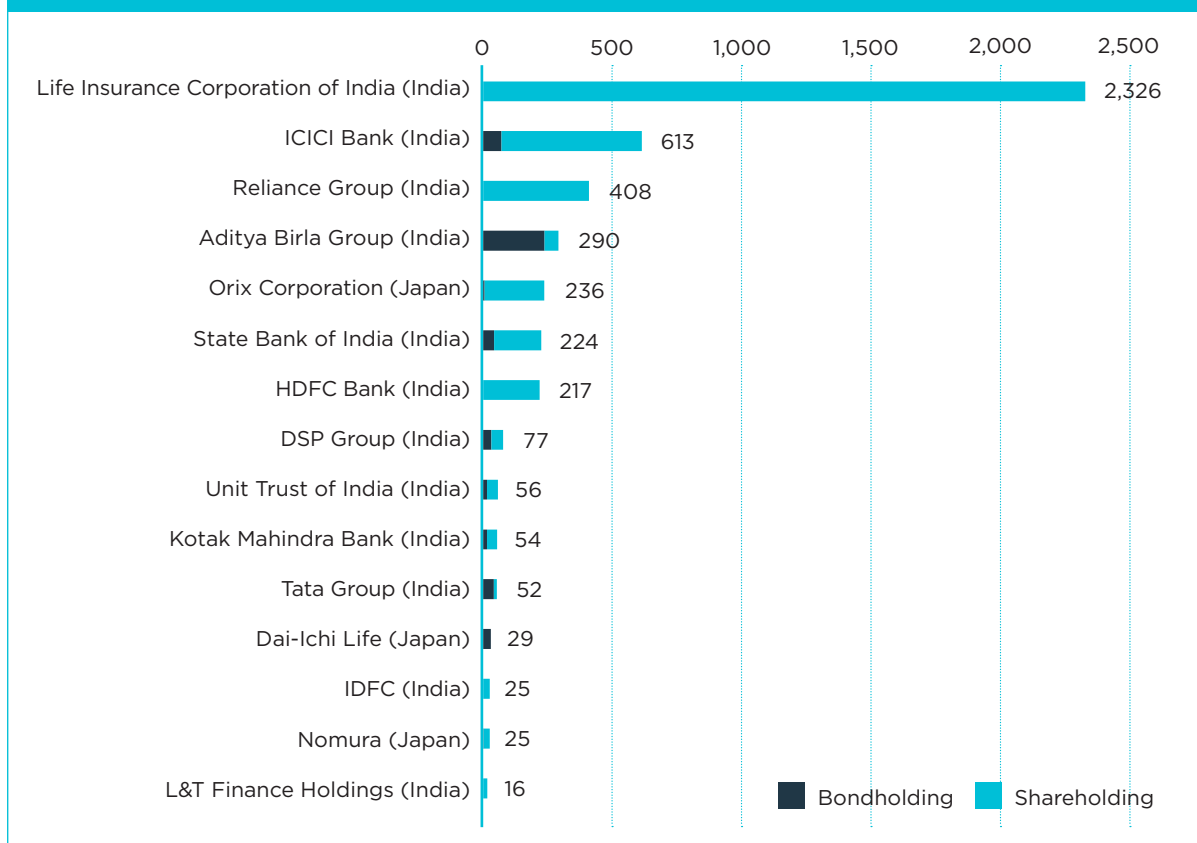


Figure 98: Top 15 FFA fossil fuel investors in Vietnam (2020 February, most recent filings, US\$ mln)



CHAPTER

5

FINANCIAL FLOWS TO POWER GENERATION COMPANIES

This chapter presents the findings of the financial flows to the selected companies engaged in power generation (see section 1.3). The chapter is organized as follows: section 5.1 presents a general overview of the findings, and; the following seven sections deals with the trends of financial flows in Cambodia (section 5.2), India (section 5.3), Indonesia (section 5.4), Japan (section 5.5), the Philippines (section 5.6), Thailand (section 5.7) and Vietnam (section 5.8) separately. Each section is split into two sub-sections. The first analyses the credit (loans & underwriting services) flows, and the second focuses on investments in bonds and shares.

5.1 General overview

5.1.1 Creditors

In the period of study, financial institutions from FFA countries provided US\$ 243 billion in loans and underwriting services to the selected power generation companies. This includes financial flows to companies active in their own economies, as well as to other FFA countries.

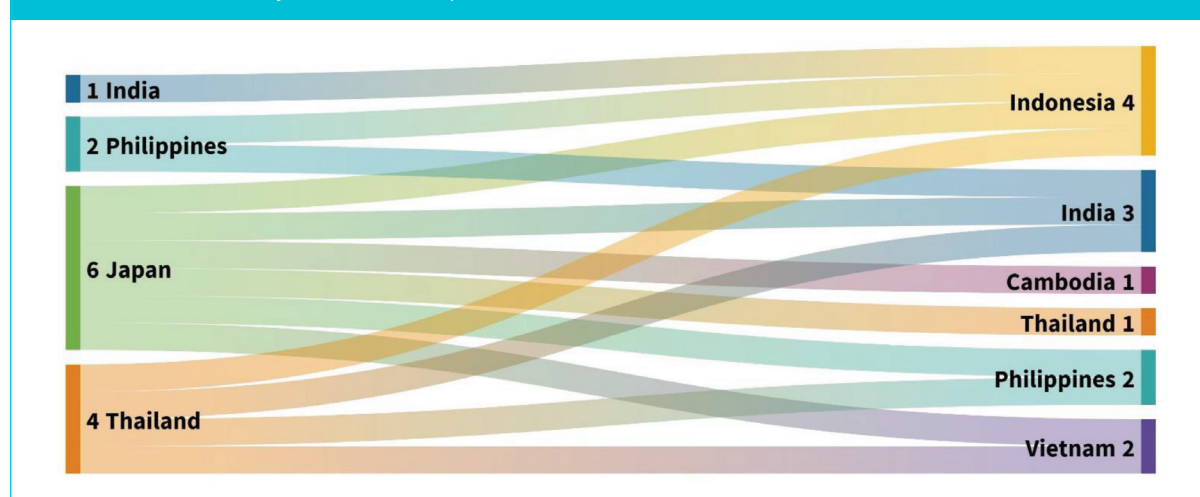
Figure 99 shows the intra-regional credit flows, i.e. flows from financial institutions from FFA countries, to companies in other FFA countries. Financial institutions

from Japan provided the most credit to power generation companies in other FFA countries, with financing to 6 FFA countries. Financial institutions from Thailand, provided loans and underwriting services to power generation companies in 4 other countries. Indonesia received power generation financing from the most different FFA countries, 4 countries. It was followed by India, which received power generation financing from 3 FFA countries.

A closer look at the value of the financial flows to power generation – including financial flows to companies operating in their own economies – shows that financial institutions from Japan were by far the largest creditors. These financial institutions provided US\$ 185 billion in loans and underwriting to the selected companies engaged in power generation. This accounts for over three quarters of all identified power generation credit (see Figure 100). Financial institutions from India provided the second most, with US\$ 31 billion. And Indonesian financial institutions provided just under US\$ 21 billion in loans and underwriting services to power generation companies.

52% of all identified credit provided to companies engaged in power generation

Figure 99: Intra-regional credit flows to power generation companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)



was in the form of loans. The remaining 48% was provided in the form of issuance underwriting services. Figure 101 shows the top 15 creditors from FFA countries. 8 of the top 15 power generation creditors are Japanese financial institutions. 4 were from India, and 3 were from Indonesia.

The largest power generation creditor was Mizuho Financial, which provided US\$ 50.2 in loans and underwriting services to the selected power generation companies. It was followed by its compatriots SMBC Group (US\$ 42.5 billion) and Mitsubishi UFJ Financial (US\$ 31.7 billion).

Figure 100: FFA power creditor countries of origin (2014-2019, US\$ mln)

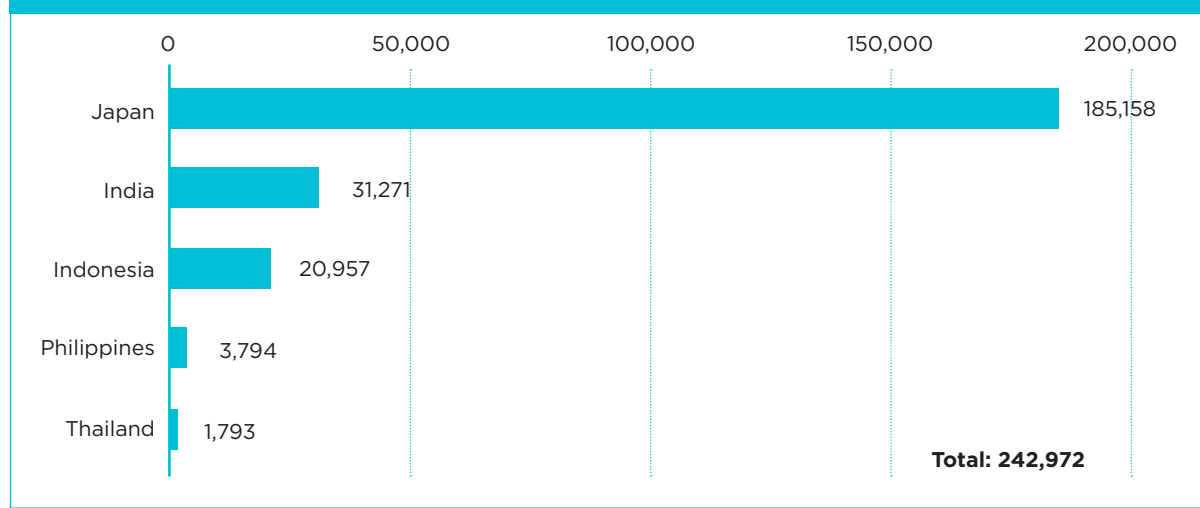
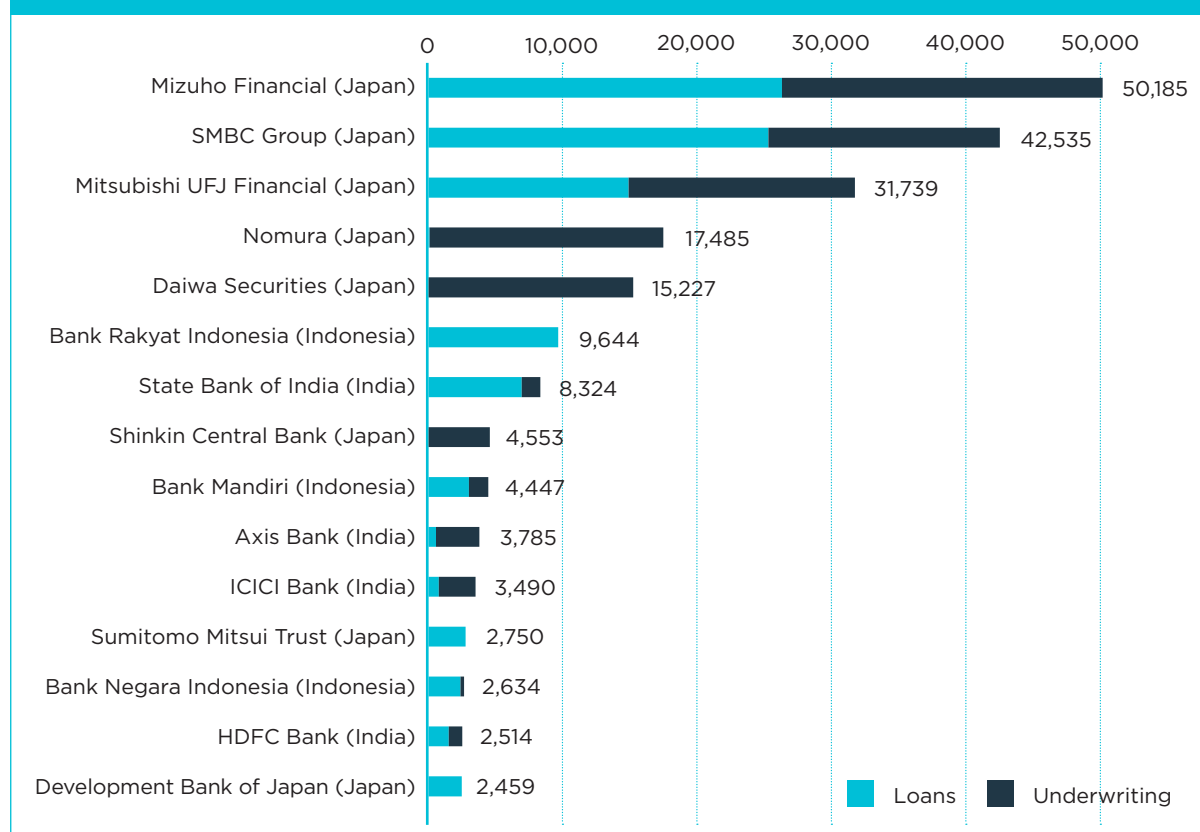


Figure 101: Top 15 power generation creditors (2014-2019, US\$ mln)



5.1.2 Investors

Investors from the FFA countries together invested US\$ 20.3 billion in the selected companies engaged power generation. 97% of these investments were in the shares of the selected companies. The remaining 3% was invested in bonds issue by the selected companies engaged in fossil fuels.

Figure 102 presents the intra-regional flows. It shows that financial institutions from Japan invested in power generation companies active in 4 of the FFA countries.

Financial institutions from the Philippines and Thailand, each invested in one other FFA country. Power generation companies active in Indonesia received investments from the most other FFA countries.

Figure 103 shows that in terms of value, Japanese investors had invested the most in the selected companies. In they accounted for 69% (US\$ 16.3 billion) of the identified investments in the selected companies. They were followed by investors from India, who accounted for 27%, and Thai investors who accounted for 4%.

Figure 102: Intra-regional investment flows to power generation companies (no. of countries invested in & no. countries invested by)

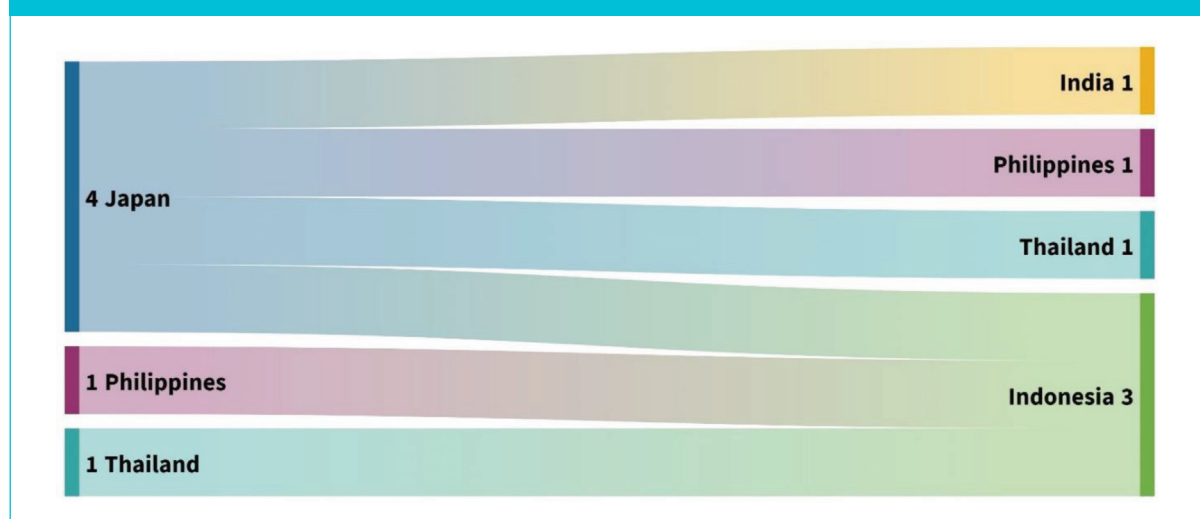


Figure 103: FFA power generation investor countries of origin (2020 February, most recent filings, US\$ mln)

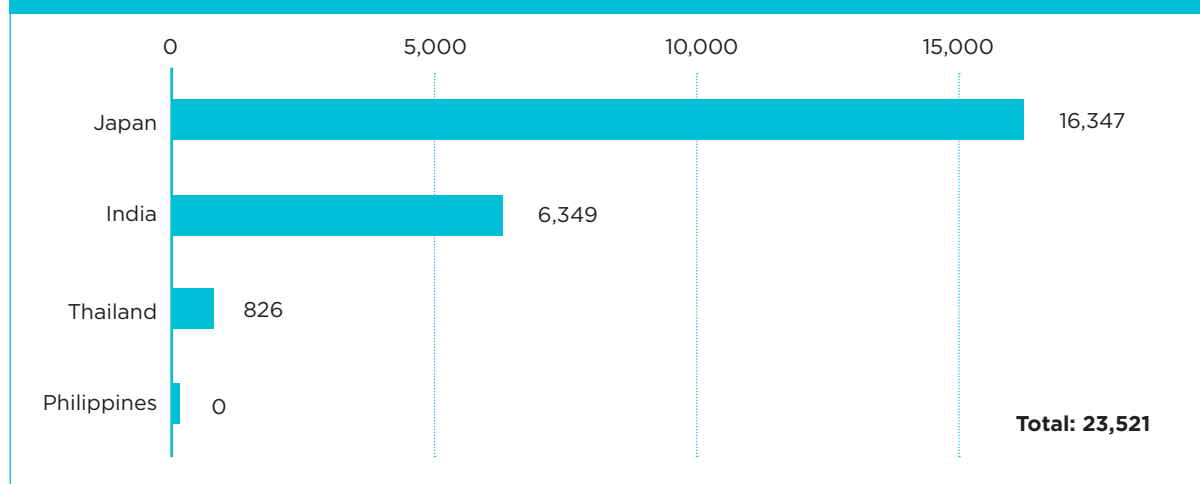
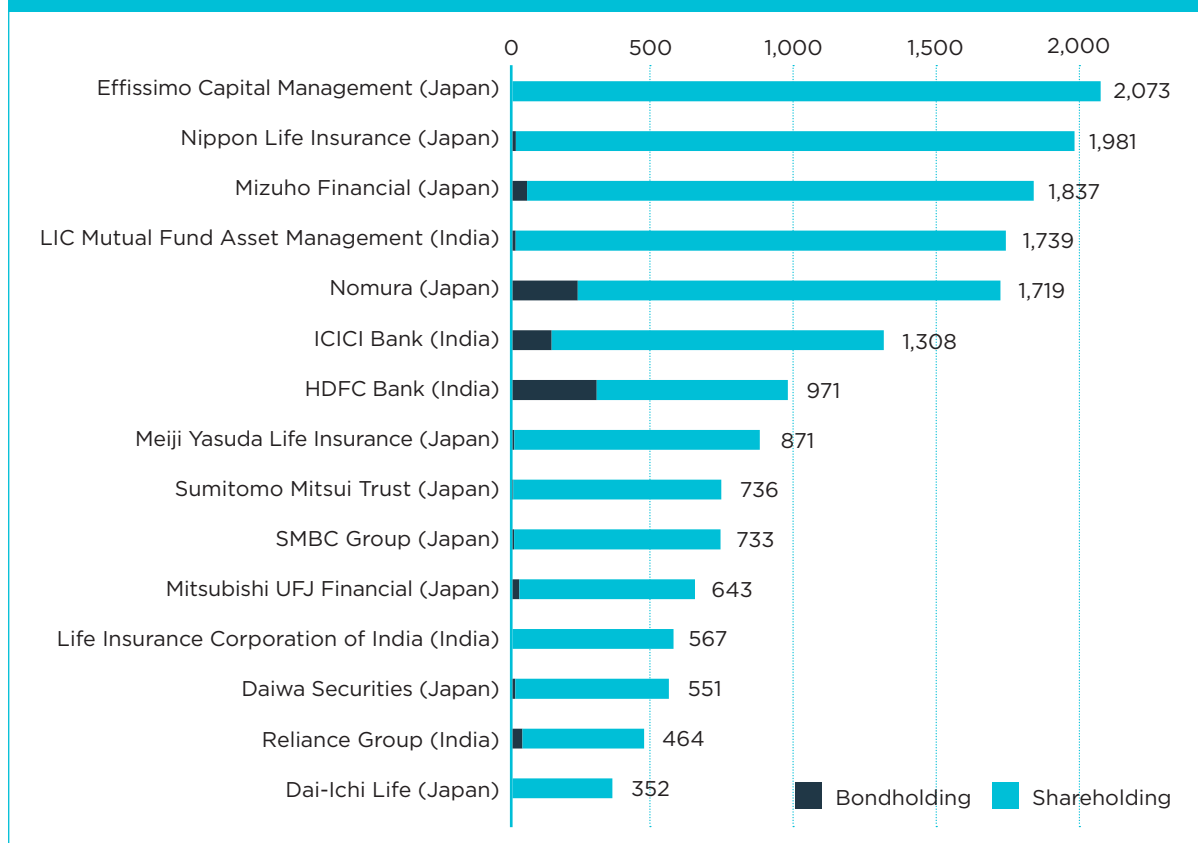


Figure 104: Top 15 FFA power generation investors (2020 February, most recent filings, US\$ mln)



The top 15 power generation investors from FFA countries accounted for 81% of all identified investments in the bonds and shares of the selected companies at the most recent filing date in February 2020. As Figure 104 shows, 10 of the top 15 investors are Japanese financial institutions. The remaining 5 financial institutions are all from India. The top 15 investors held bonds and shares worth US\$ 16.5 billion. The largest investor was Japanese Effissimo Capital Management with US\$ 2.1 billion in bonds and shares of the selected power generation companies. It was followed by Nippon Life Insurance (US\$ 2.0 billion) and Mizuho Financial (US\$ 1.8 billion).

5.2 Cambodia

5.2.1 Creditors

In the period 2014-2019, the selected companies active in power generation

in Cambodia received US\$ 52.2 billion in loans and underwriting services. Only 1% of this was in the form of loans, the remaining 99% was in the form of issuance underwriting services. As Figure 105 shows, the vast majority (98%) of this credit – US\$ 50.9 billion – was provided by Chinese financial institutions. This is due to the dominance of large Chinese companies in the power generation sector in Cambodia (see section 1.3 for details).

The top 15 creditors of power generation companies active in Cambodia provided loans and underwriting services of US\$ 44.9 billion. Unsurprisingly 14 of the top 15 creditors are Chinese financial institutions (see Figure 106). Among them, the largest creditor was the Industrial and Commercial Bank of China, which provided US\$ 6.9 billion in loans and underwriting services to the selected companies active in power

generation in Cambodia. It was followed by CITIC (US\$ 5.6 billion) and the Bank of Beijing (US\$ 5.1 billion).

The only creditor from an FFA country was Mizuho Financial, which provided

US\$ 77 million in loans and underwriting services to companies engaged in power generation in Cambodia between 2014 and 2019. Additionally, HSBC – with is in the scope of Responsibank’s work – provided US\$ 53 million in credit.

Figure 105: Country of origin creditors of power generation in Cambodia (2014-2019)

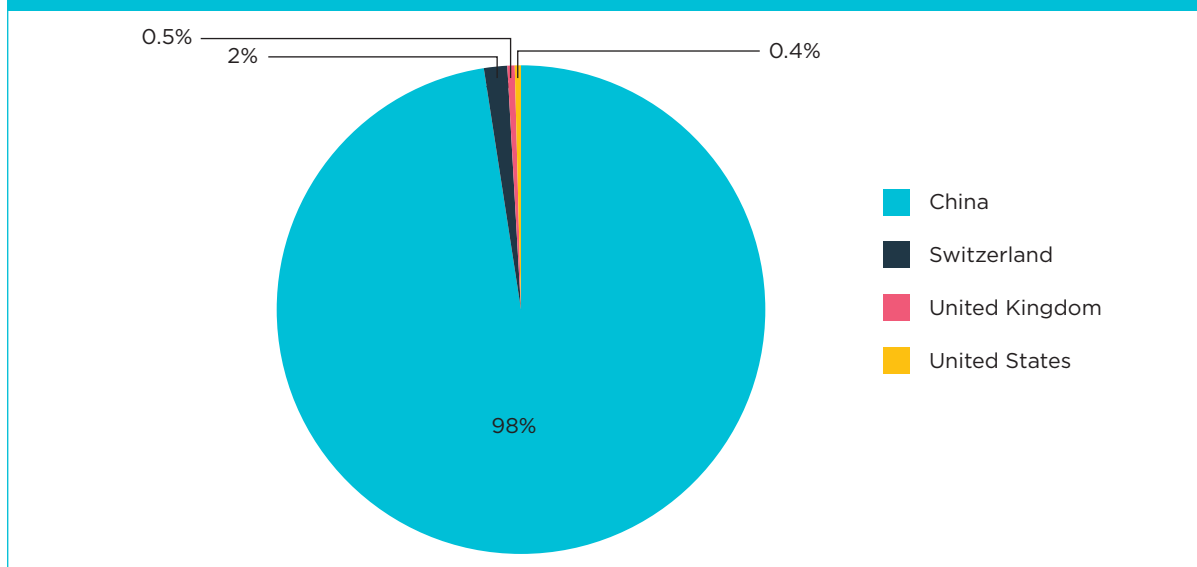
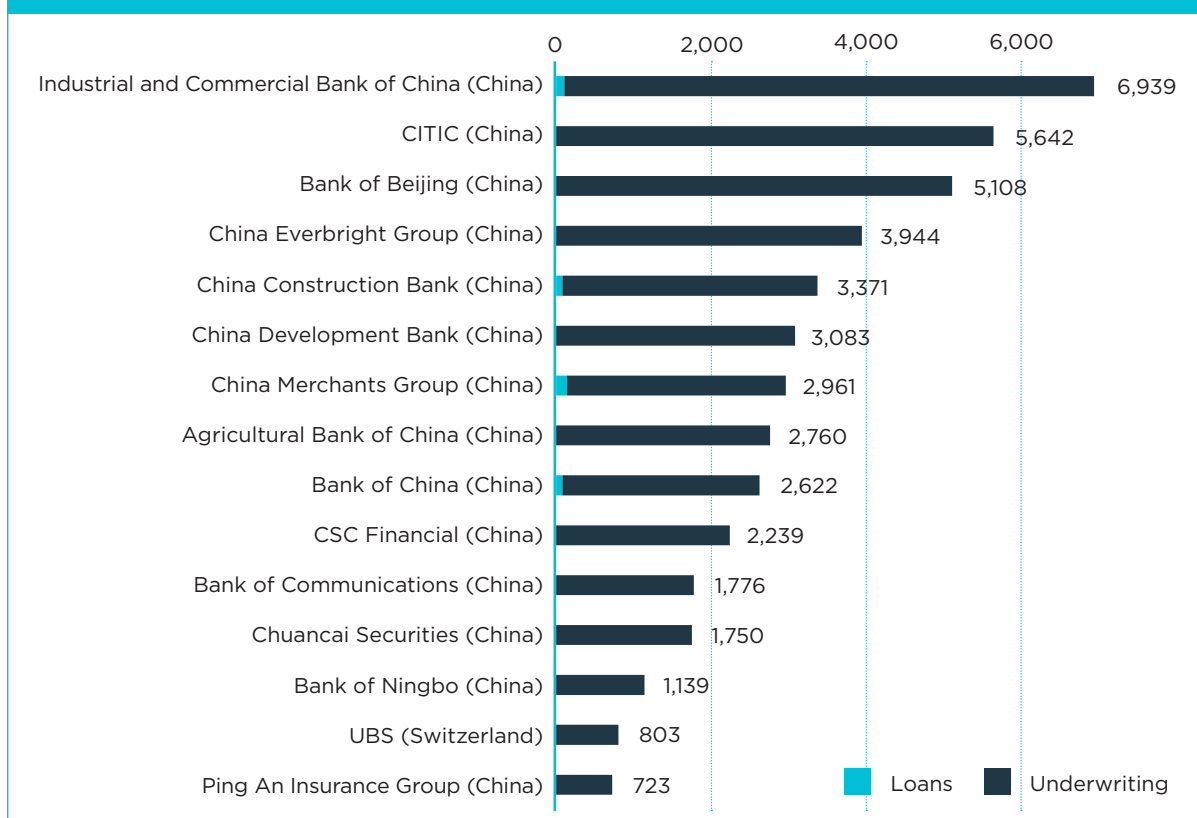


Figure 106: Top 15 power generation creditors in Cambodia (2014-2019, US\$ mln)



5.2.2 Investors

At the most recent filing date in February 2020, investors held US\$ 184 million in the bonds of the selected companies. As Figure 107 shows, approximately 40% of

these investors were from China which held US\$ 78 million. These financial institutions were followed by investors from the United States (US\$ 35 million) and the United Kingdom (US\$ 25.2 million).

Figure 107: Country of origin investors in power generation in Cambodia (2020 February, most recent filings)

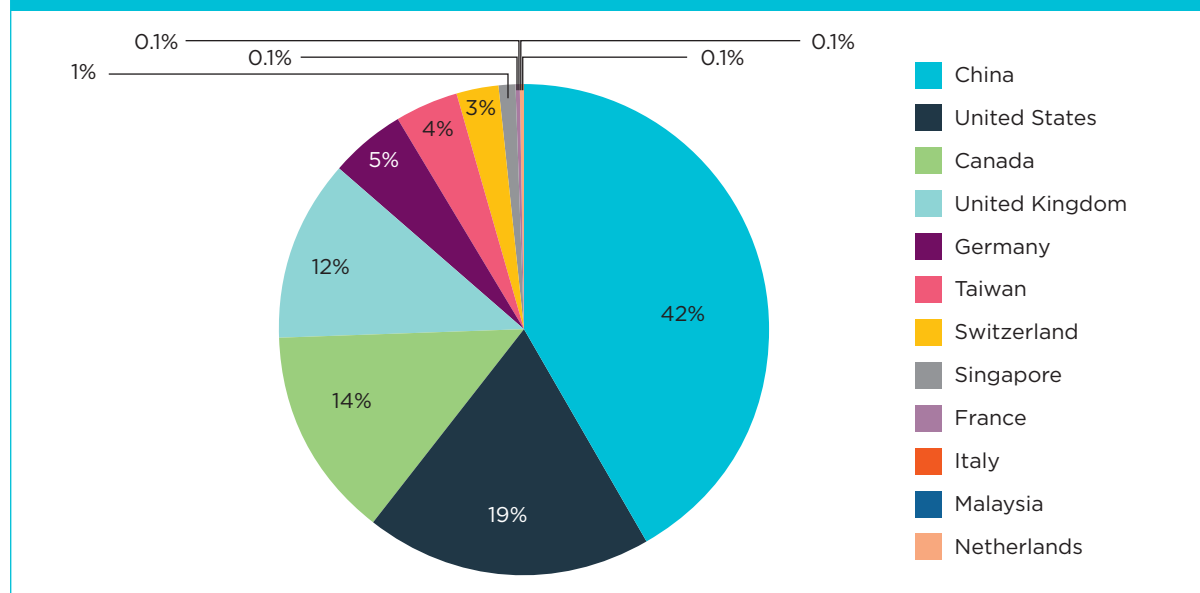
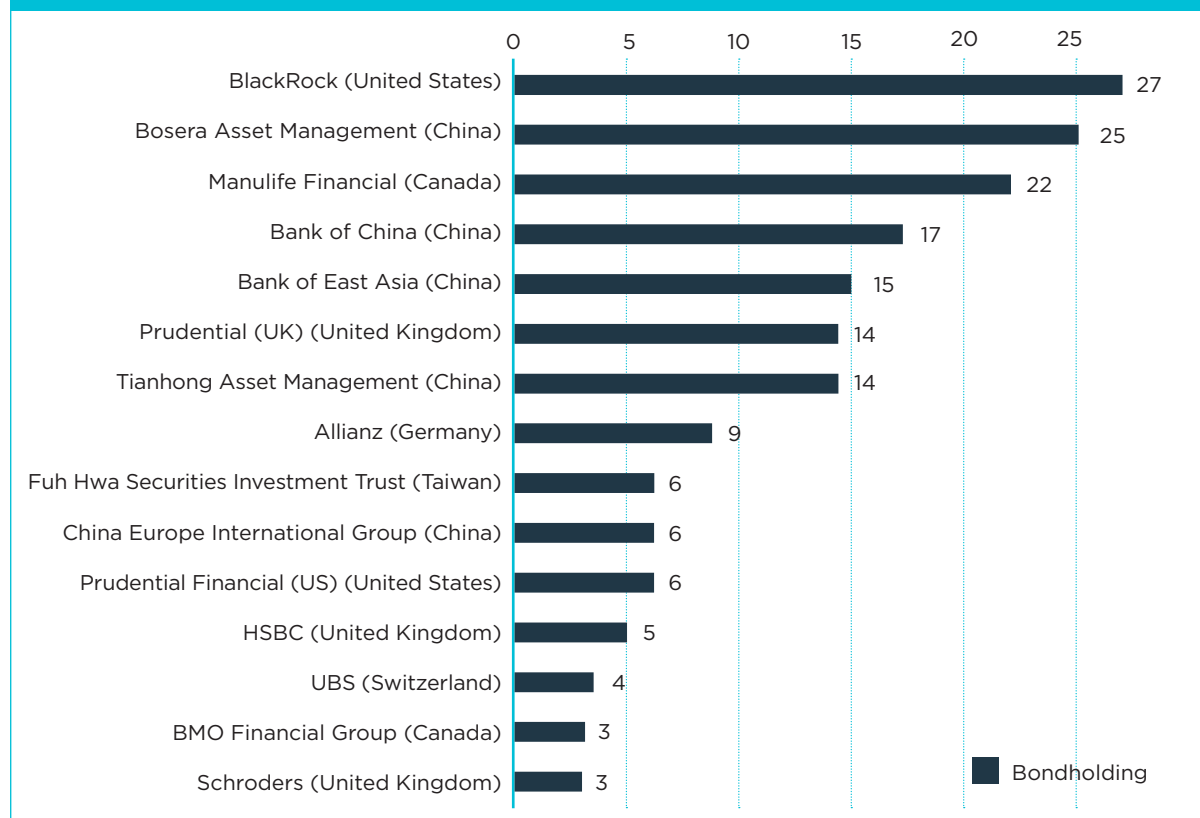


Figure 108: Top 15 power generation investors in Cambodia (2020 February, most recent filings)



The top 15 investors accounted for 40% all identified investments, or US\$ 74.3 million. Figure 108 shows that the largest investor was BlackRock with investments in bonds and shares of US\$ 27 million. It was followed by Chinese Bosera Asset Management (US\$ 25 million) and Manulife Financial (US\$ 22 million).

No financial institutions from FFA countries were identified as investing in the bond and shares of power generation companies active in Cambodia.

5.3 India

5.3.1 Creditors

In the period 2014-2019, power generation companies active in India attracted US\$ 57 billion in loans and underwriting services. 62% of this was in the form of loans, and the remaining 38% was in the form of issuance underwriting services. As Figure 109 shows, more than half of this credit – US\$ 31.2 billion – was provided by domestic financial institutions from India. Financial institutions from Japan and the United States were also significant creditors. They provided US\$ 6.2 billion and US\$ 5.9 billion respectively in loans and underwriting services to the selected companies active in power generation in India.

The top 15 creditors provided US\$ 33.4 billion in loans and underwriting services in the period 2014-2019. This accounted for 59% of all identified credit the selected power generation companies in India. Figure 110 shows that the largest creditor was the State Bank of India, which provided US\$ 8.2 billion the selected companies in the period of study. It was followed by Axis Bank (US\$ 3.8 billion) and ICICI Bank (US\$ 3.5 billion).

66% of the identified credit was provided by financial institutions from FFA countries, in total US\$ 37.5 billion during the period of study. As Figure 111 shows, 14 of the top 15 financial institutions were all from India. The remaining financial institution was Japanese Mitsubishi UFJ Financial. The largest FFA creditor of the selected companies active in power generation in India was the State Bank of India which provided US\$ 8.2 billion the selected companies in the period of study. It was followed by Axis Bank (US\$ 3.8 billion) and ICICI Bank (US\$ 3.5 billion).

Although not from an FFA country, as seen in Figure 110, HSBC which is the scope of Responsibank's work was also among the top 15 creditors of power generation companies active in India.

Figure 109: Country of origin creditors of power generation in India (2014-2019)

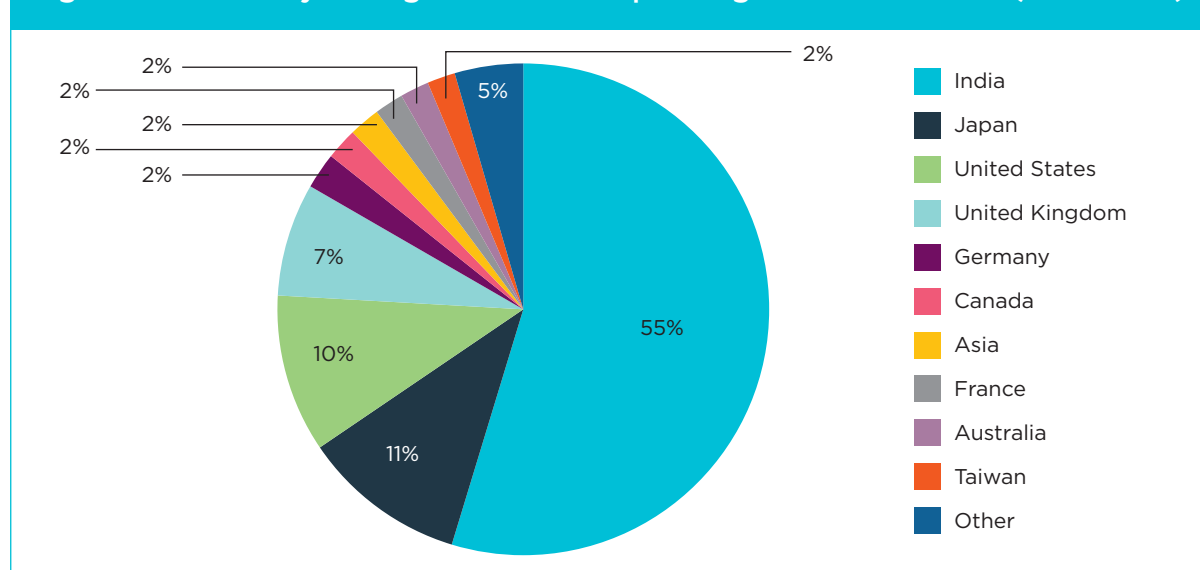


Figure 110: Top 15 power generation creditors in India (2014-2019, US\$ mln)

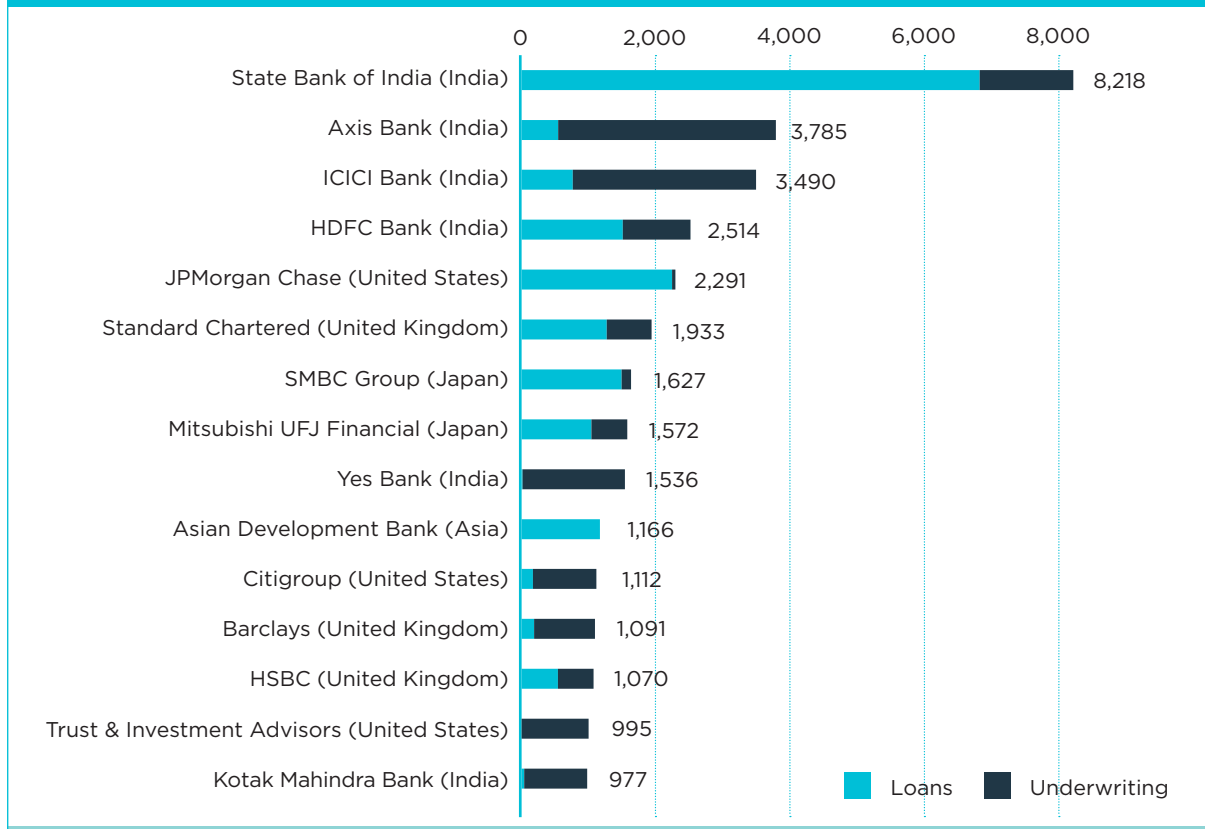
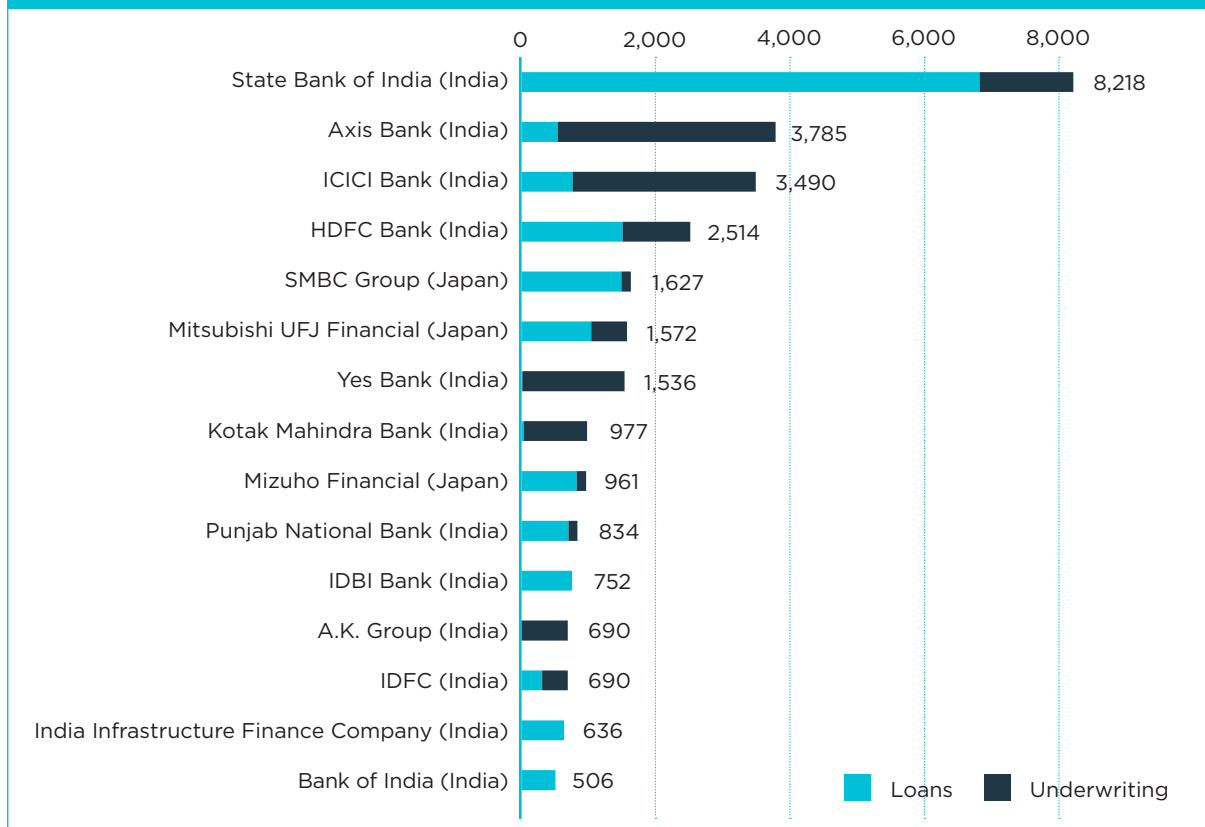


Figure 111: Top 15 FFA power generation creditors in India (2014-2019, US\$ mln)



5.3.2 Investors

Investors held US\$ 11.3 billion in bonds and shares of the selected companies active in power generation in India at the most recent filing date in February 2020. 81% of

these investments were in shares, and the remaining 19% in bonds. Figure 112 shows that more than half of these investments – US\$ 6.3 billion – were held by domestic financial institutions in India. Financial

Figure 112: Country of origin investors in power generation in India (2020 February, most recent filings)

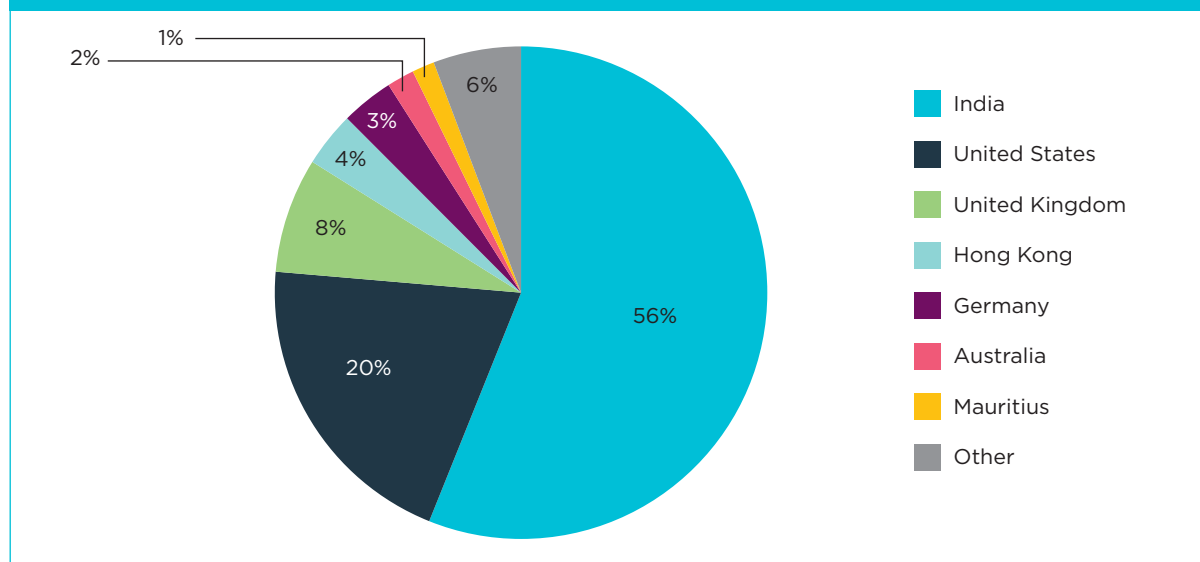


Figure 113: Top 15 power generation investors in India (2020 February, most recent filings, US\$ mln)

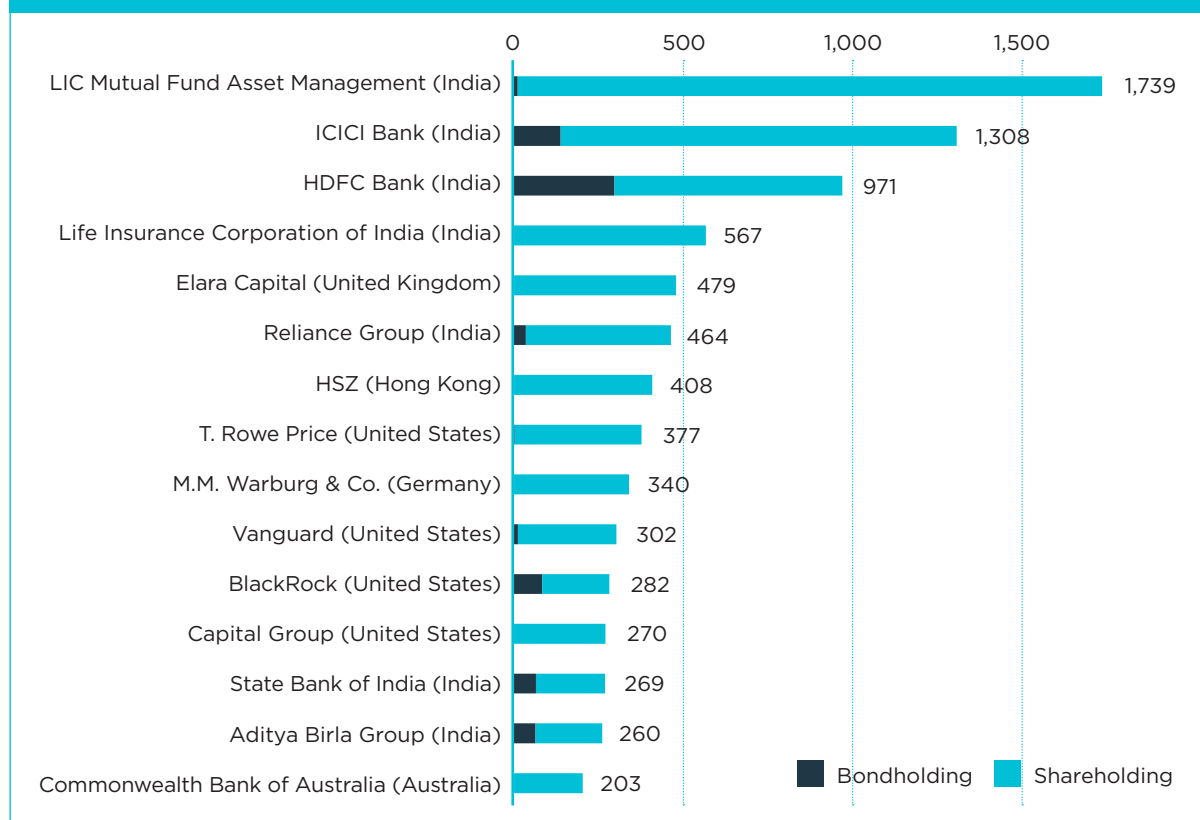
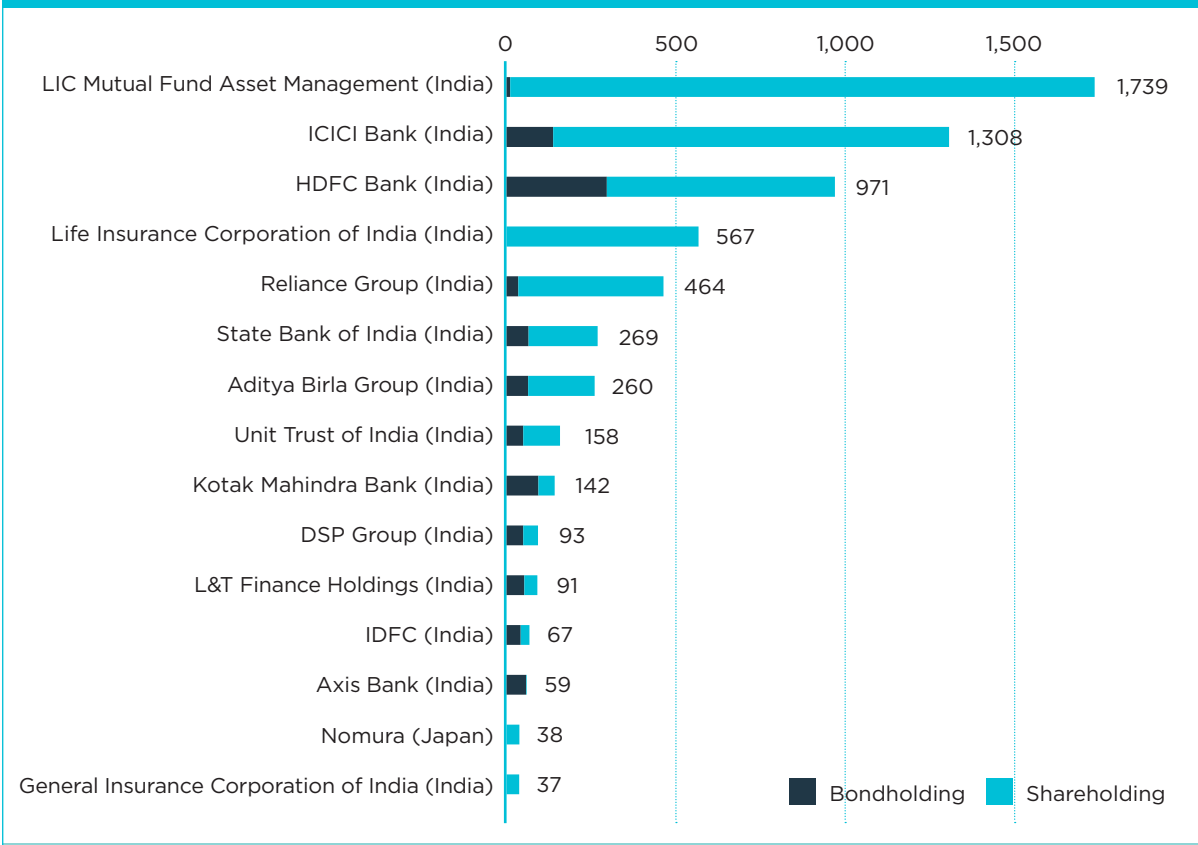


Figure 114: Top 15 FFA power generation investors in India (2020 February, most recent filings, US\$ mln)



institutions from the United States further held US\$ 2.3 billion, and the from the United Kingdom held US\$ 855 million.

The top 15 investors held 73% of the identified bond- and shareholdings. Together these financial institutions held US\$ 8.2 billion in bonds and shares of the selected companies active in power generation in India at the most recent filing date. The largest investor was LIC Mutual Fund Asset Management, which held bonds and shares of US\$ 1.7 billion (see Figure 113). It was followed by Indian compatriots ICICI Bank (US\$ 1.3 billion) and HDFC Bank (US\$ 971 million).

Investors from FFA countries accounted for 57% of all identified investments in power generation companies active in India, with investments in bonds and share of US\$ 6.4 billion. The top 15 FFA investors accounted for 55% of the total identified

investments, and 98% of FFA investor country investments. As Figure 114 shows, all but one of the top 15 FFA investors were financial institutions from India. The remaining financial institution was Japanese Nomura. The largest investor was LIC Mutual Fund Asset Management, with US\$ 1.7 billion invested in the bonds and shares of power generation companies active in India. It was followed by ICICI Bank (US\$ 1.3 billion) and HDFC Bank (US\$ 971 million).

5.4 Indonesia

5.4.1 Creditors

Between 2014 and 2019, companies engaged in power generation in Indonesia attracted US\$ 53 billion in loans and underwriting services. 74% of this was in loans and a further 26% was in the form of issuance underwriting services. This credit was provided to only two Indonesian state-owned companies PLN and Paiton

Energy. As Figure 115 shows, 40% of this credit (US\$ 21 billion) was provided by domestic Indonesian financial institutions. Financial institutions from Japan and the United Kingdom were also significant

creditors provided US\$ 8.4 billion and US\$ 5.6 billion respectively in loans and underwriting services to the selected companies engaged in power generation in Indonesia.

Figure 115: Country of origin creditors of power generation in Indonesia (2014-2019)

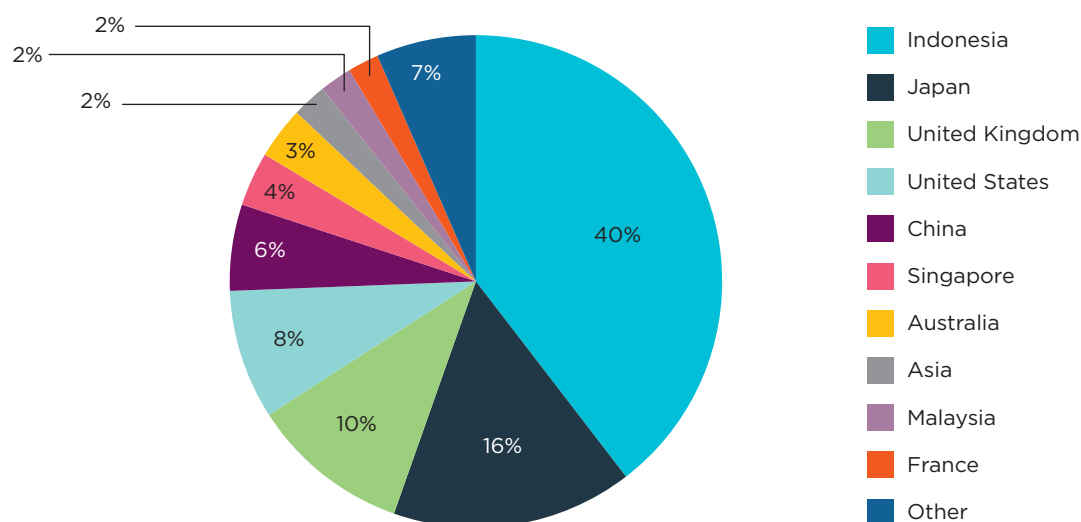


Figure 116: Top 15 power generation creditors in Indonesia (2014-2019, US\$ mln)

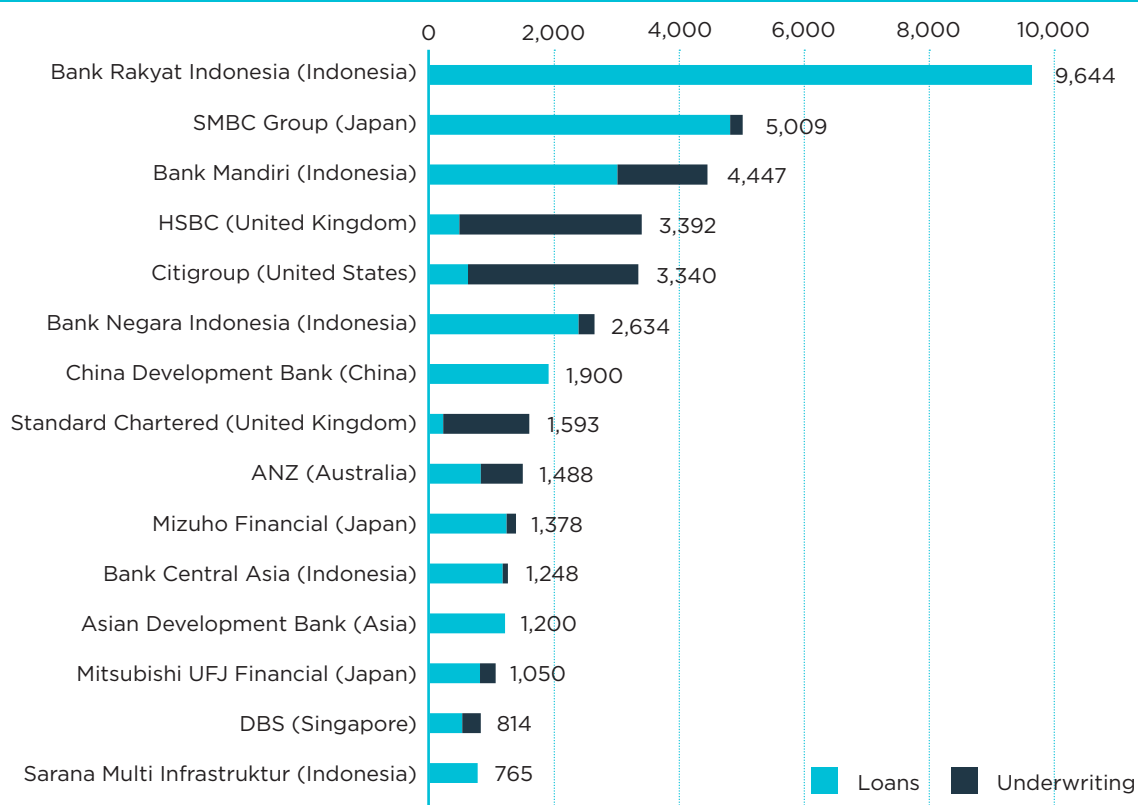
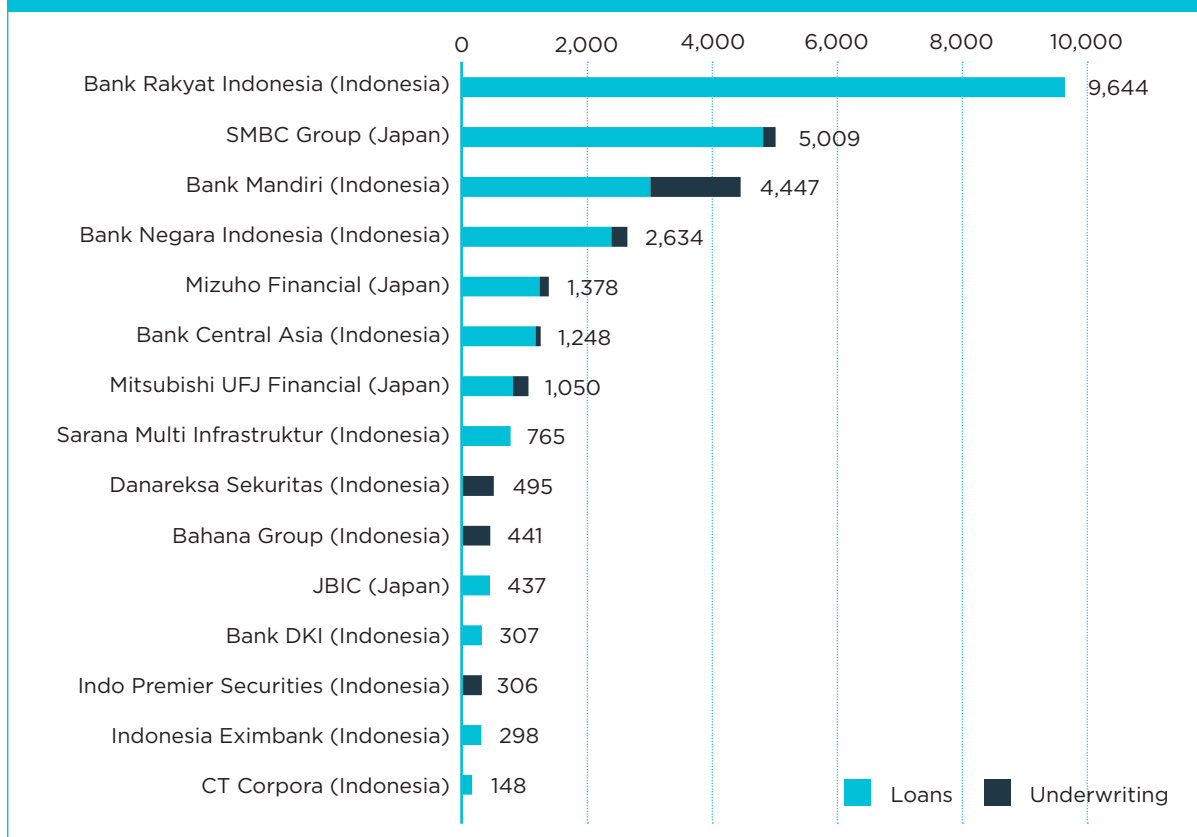


Figure 117: Top 15 FFA power generation creditors in Indonesia (2014-2019, US\$ mln)



The top 15 creditors provided US\$ 39.9 billion in loans and underwriting services to companies engaged in power generation in Indonesia in the period 2014-2019. Together they accounted for 75% of all identified credit to these selected companies. Figure 116 shows that the largest creditor was Bank Rakyat Indonesia which provided US\$ 9.6 billion in credit. It was followed by SMBC Group (US\$ 5.0 billion) and Bank Mandiri (US\$ 4.4 billion).

Financial institutions from FFA countries accounted for 56% (US\$ 29.5 billion) of all identified credit to the selected power generation companies in Indonesia. 11 of the top 15 creditors from FFA countries were from Indonesia. The remaining 4 financial institutions were all from Japan. The largest creditor was Bank Rakyat Indonesia which provided US\$ 9.6 billion in credit. It was followed by SMBC Group

(US\$ 5.0 billion) and Bank Mandiri (US\$ 4.4 billion).

5.4.2 Investors

At the most recent filing date in February 2020, investors held US\$ 4.7 billion in bonds issued by PLN. Investments were not identified for Paiton, and both are state-owned enterprises not listed on the stock exchange. The majority of investors were from Taiwan and the United States (see Figure 118). These investors provided US\$ 1.8 billion and US\$ 1.7 billion respectively. They were followed by financial institutions from the United Kingdom which held bonds worth US\$ 368 million.

The top 15 investors held bonds worth US\$ 3.2 billion, accounting for 69% of identified PLN bondholdings. As Figure 119 shows, the largest investor was Taiwanese Fuh Hwa Securities

Investment Trust which held bonds worth US\$ 880 million. It was followed by two other Taiwanese financial institutions –

China Development Financial Holding (US\$ 374 million) and Cathay Financial (US\$ 345 million).

Figure 118: Country of origin investors in power generation in Indonesia (2020 February, most recent filings)

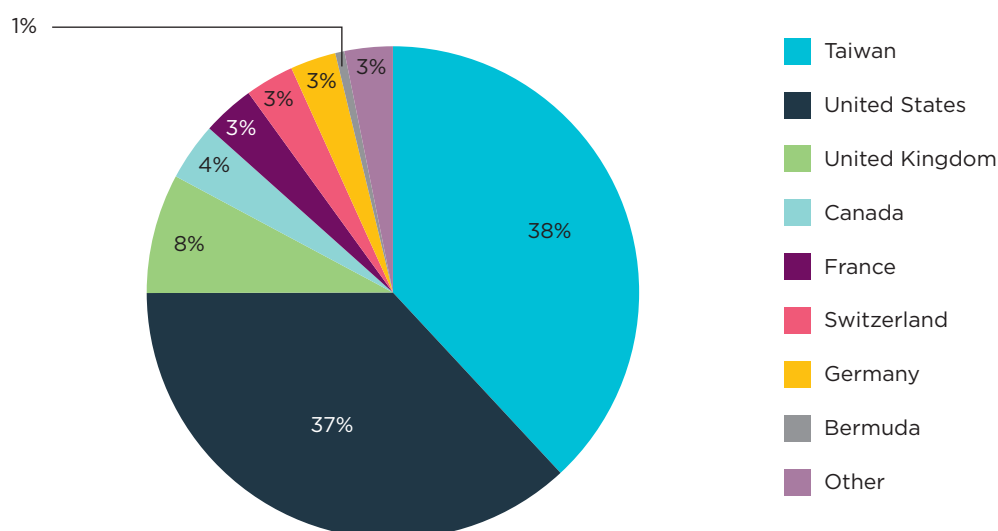


Figure 119: Top 15 power generation investors in Indonesia (2020 February, most recent filings, US\$ mln)

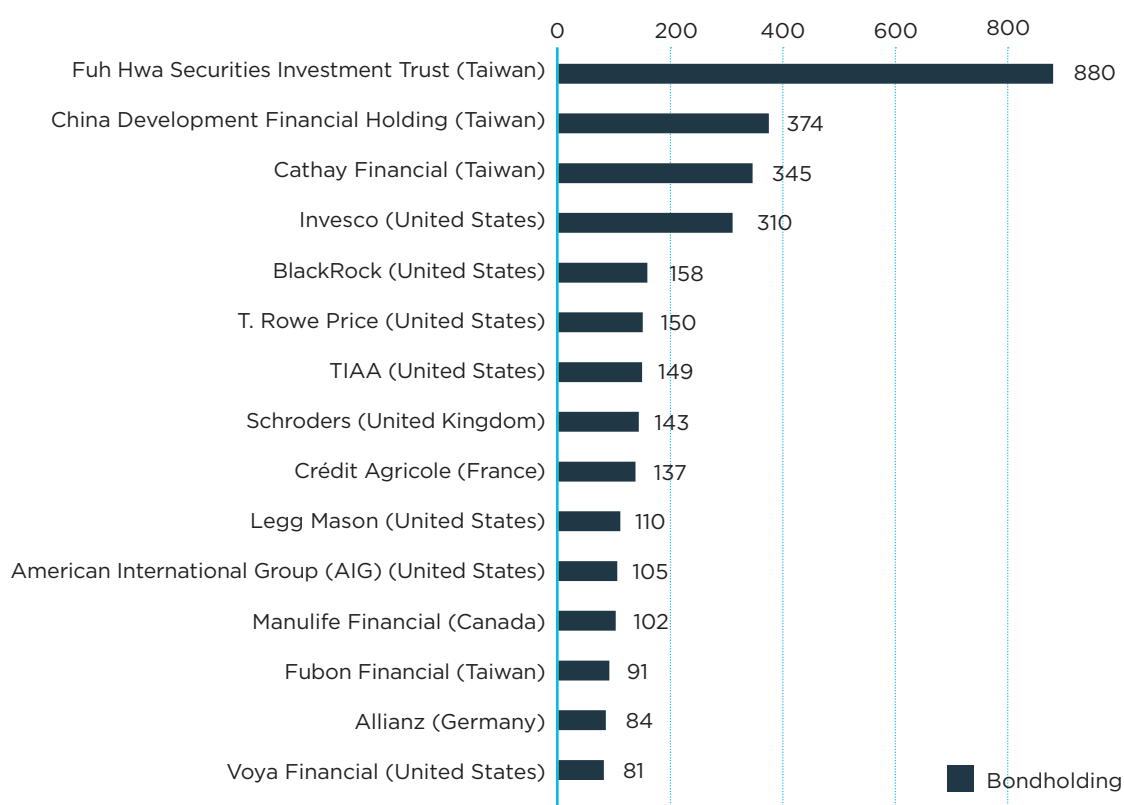
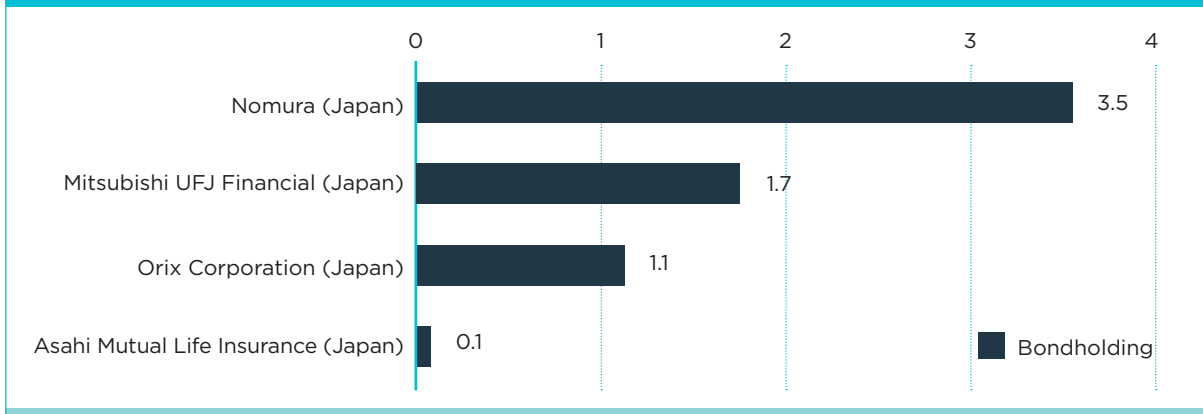


Figure 120: Top 15 FFA power generation investors in Indonesia (2020 February, most recent filings, US\$ mln)



Investors from FFA countries accounted for 0.1% of all identified investments in power generation companies active in Indonesia, with investments in bonds and share of US\$ 6.4 million. Only five FFA investors were identified investments. As Figure 120 shows, these investors were all Japanese financial institutions. The largest investor was Nomura, with US\$ 3.5 million invested in the bonds and shares of power generation companies active in Indonesia. It was followed by Mitsubishi UFJ Financial (US\$ 1.7 million) and Orix Corporation (US\$ 1.1 million).

5.5 Japan

5.5.1 Creditors

During the period 2014-2019, the selected power generation companies active in Japan attracted US\$ 177 billion in loans and underwriting services. 42% of this credit was provided in the form of loans, and the remaining 58% was provided in the form of issuance underwriting services. Figure 121 shows that the vast majority - US\$ 167 billion was provided by Japanese domestic financial institutions.

Figure 121: Country of origin creditors of power generation in Japan (2014-2019)

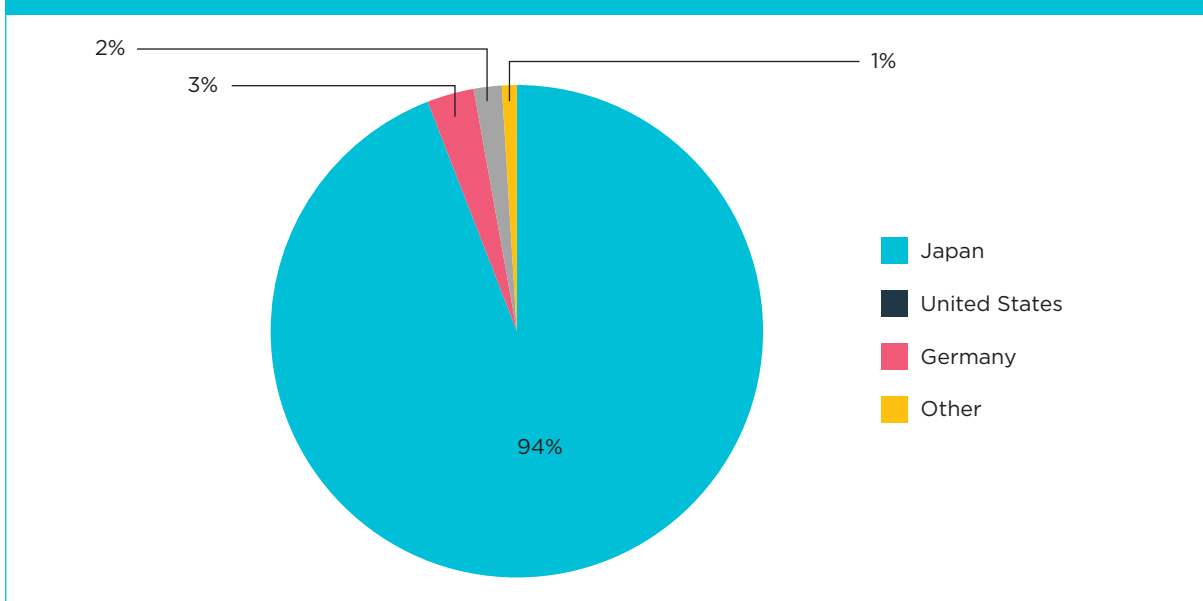


Figure 122: Top 15 power generation creditors in Japan (2014-2019, US\$ mln)

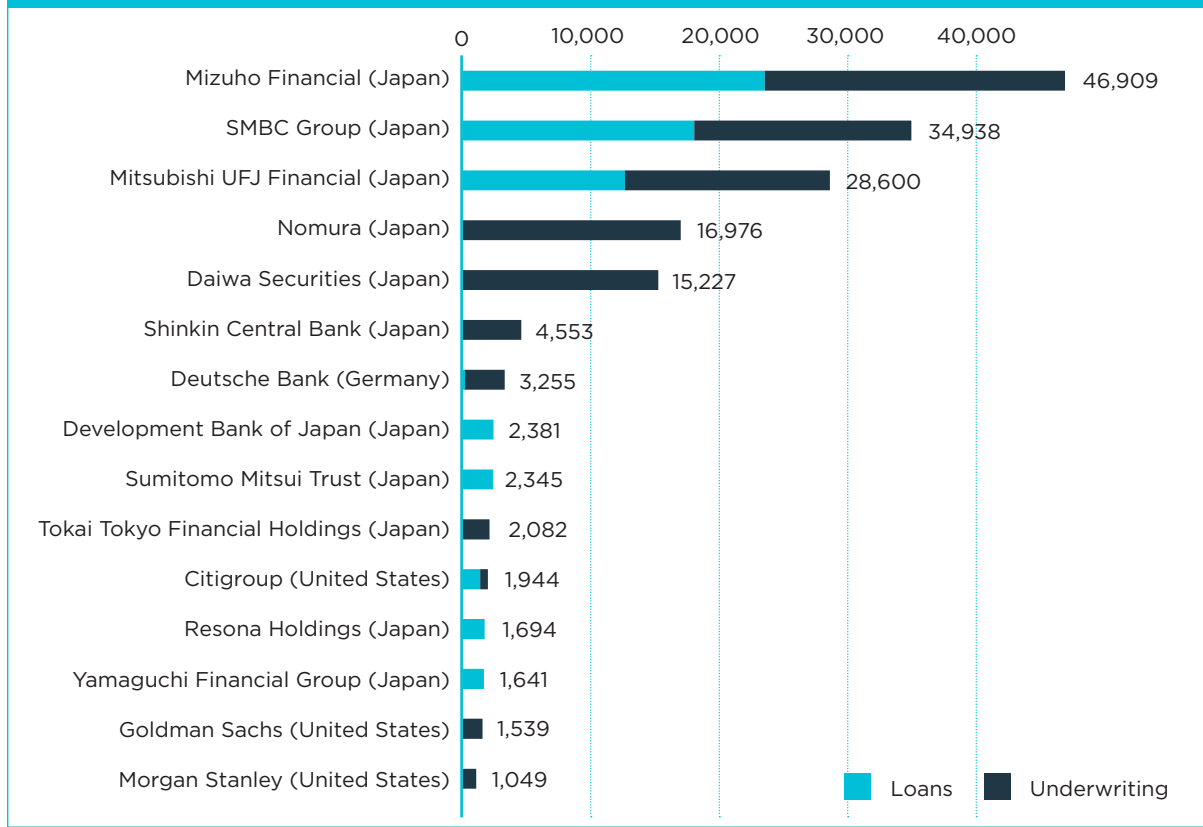
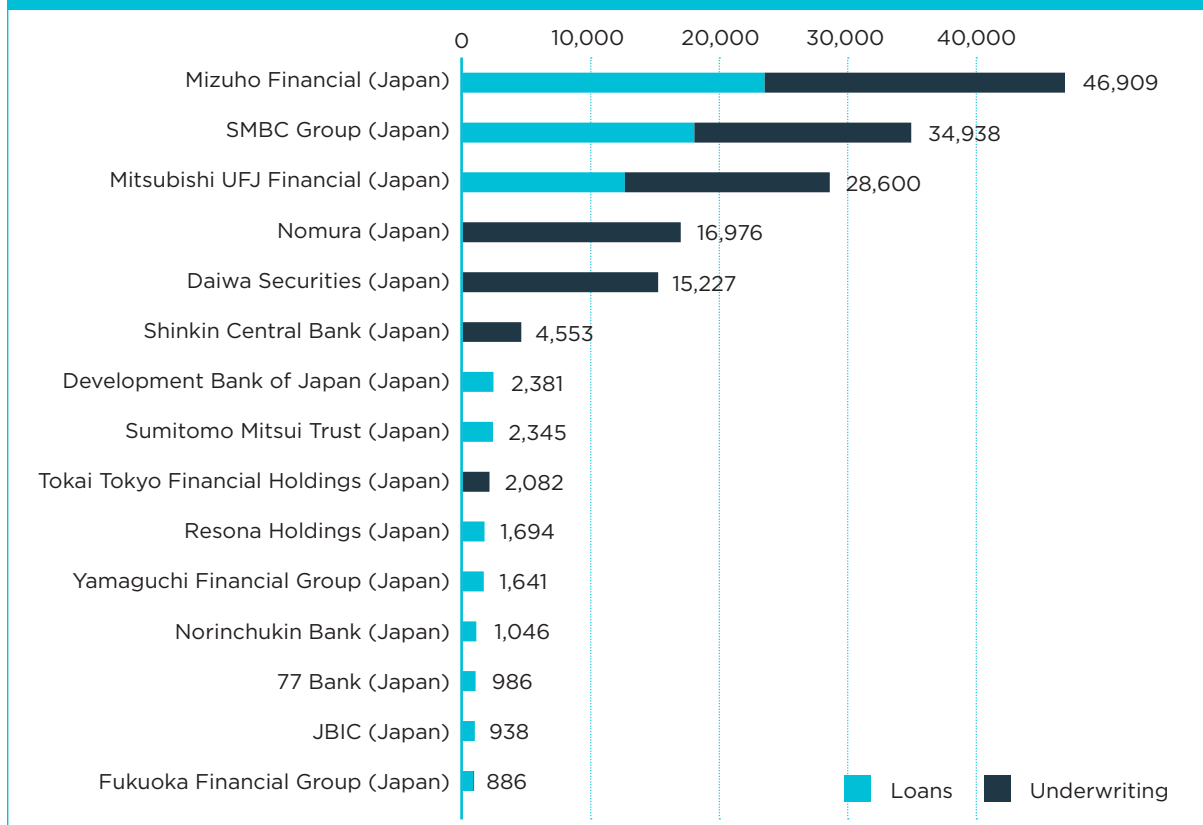


Figure 123: Top 15 FFA power generation creditors in Japan (2014-2019, US\$ mln)



The top 15 creditors provided US\$ 165 billion in loans and underwriting services to companies engaged in power generation in Japan. This accounts for 93% of all identified credit to these selected companies during the period of study. The largest creditor was Mizuho Financial which provided US\$ 46.9 billion to the selected companies (see Figure 122). It was followed by SMBC Group (US\$ 34.9 billion) and Mitsubishi UFJ Financial (US\$ 28.6 billion).

Figure 123 shows that the top 15 creditors from FFA countries does not differ significantly from the top 15 overall creditors. All identified creditors from FFA countries are from Japan.

5.5.2 Investors

Investors held US\$ 23.2 billion in bonds and shares of the selected companies engaged in power generation in Japan at the most recent filing date. 97% of these investments were in shares, and the remaining 3% were in bonds. Figure 124 shows that more than half of these investments were held by domestic Japanese financial institutions, or US\$ 12.9 billion. Financial institutions from the United States held just under a third (US\$ 7.1 billion) of the identified bonds and shares of the selected companies engaged

in power generation in Japan at the most recent filing date.

The top 15 investors held bonds and share worth US\$ 16.8 billion at the most recent filing date. This accounted for just under three quarters of all identified bond- and shareholdings of the selected Japanese power generation companies. The largest investor was Effissimo Capital Management with US\$ 2.1 billion (see Figure 125). It was followed by Nippon Life Insurance (US\$ 2.0 billion) and Mizuho Financial (US\$ 1.8 billion).

Investors from FFA countries accounted for 56% of all identified investments in power generation companies active in Japan, with investments in bonds and share of US\$ 12.9 billion. The top 15 FFA investors accounted for 51% of the total identified investments, and 92% of FFA investor country investments. As Figure 126 shows, all the top 15 FFA investors were financial institutions from Japan. The largest investor was Effissimo Capital Management, with US\$ 2.1 billion invested in the bonds and shares of power generation companies active in Japan. It was followed by Nippon Life Insurance (US\$ 2.0 billion) and Mizuho Financial (US\$ 1.8 billion).

Figure 124: Country of origin investors in power generation in Japan (2020 February, most recent filings)

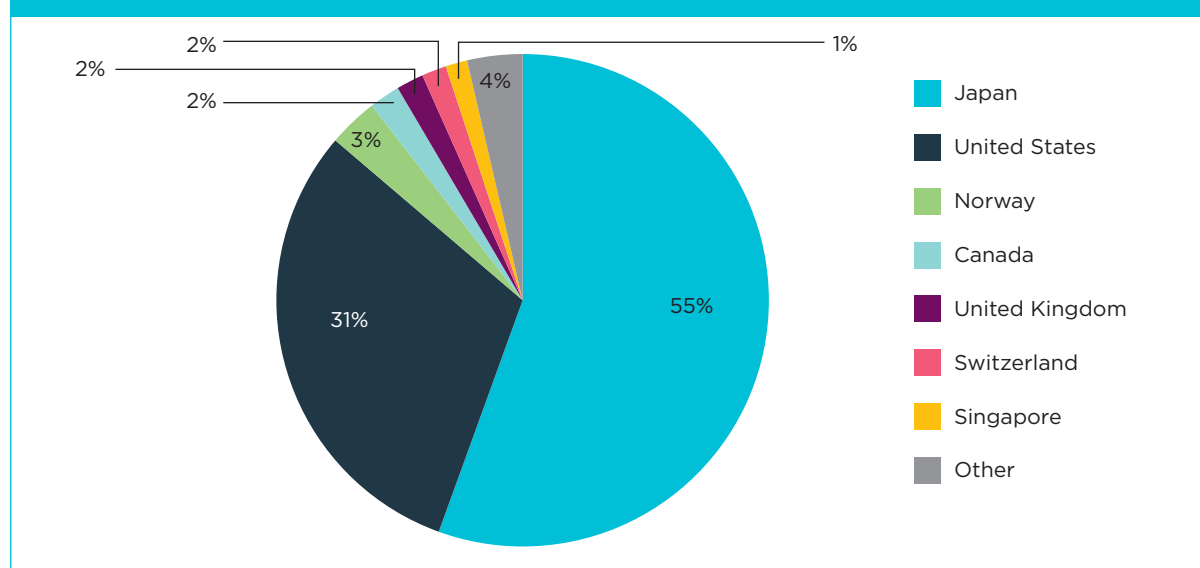


Figure 125: Top 15 power generation investors in Japan (2020 February, most recent filings, US\$ mln)

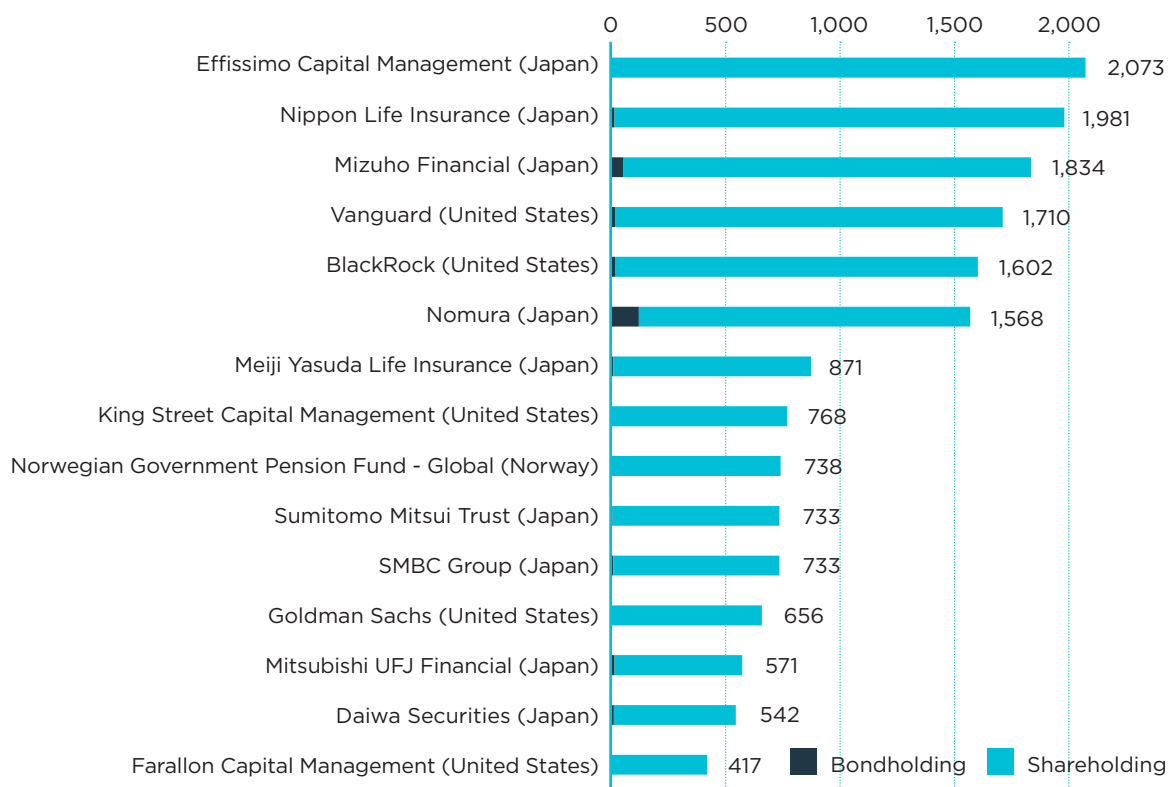
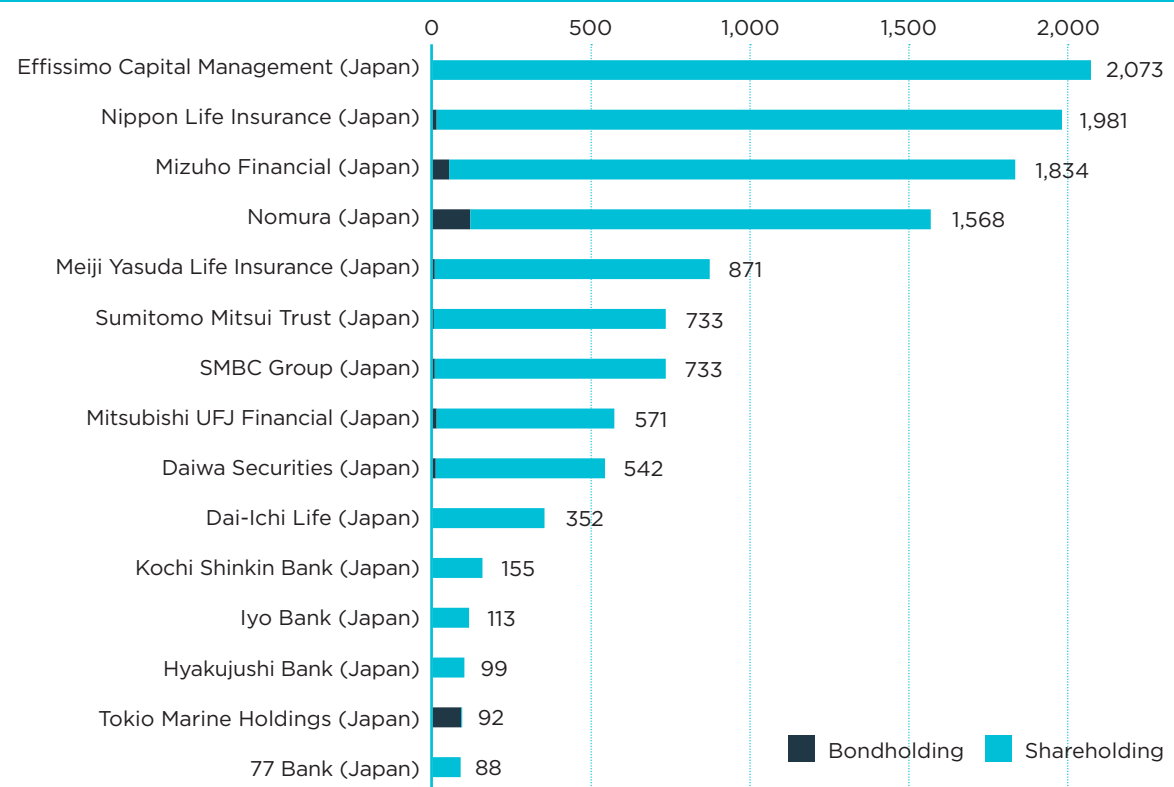


Figure 126: Top 15 FFA power generation investors in Japan (2020 February, most recent filings, US\$ mln)



5.6 Philippines

5.6.1 Creditors

Power generation companies in the Philippines attracted US\$ 35.7 billion in

loans and underwriting services in the period 2014-2019. 82% of this credit was in the form of loans, and the remaining 18% in the form of issuance underwriting services. Figure 127 shows that the majority of

Figure 127: Country of origin creditors of power generation in Philippines (2014-2019)

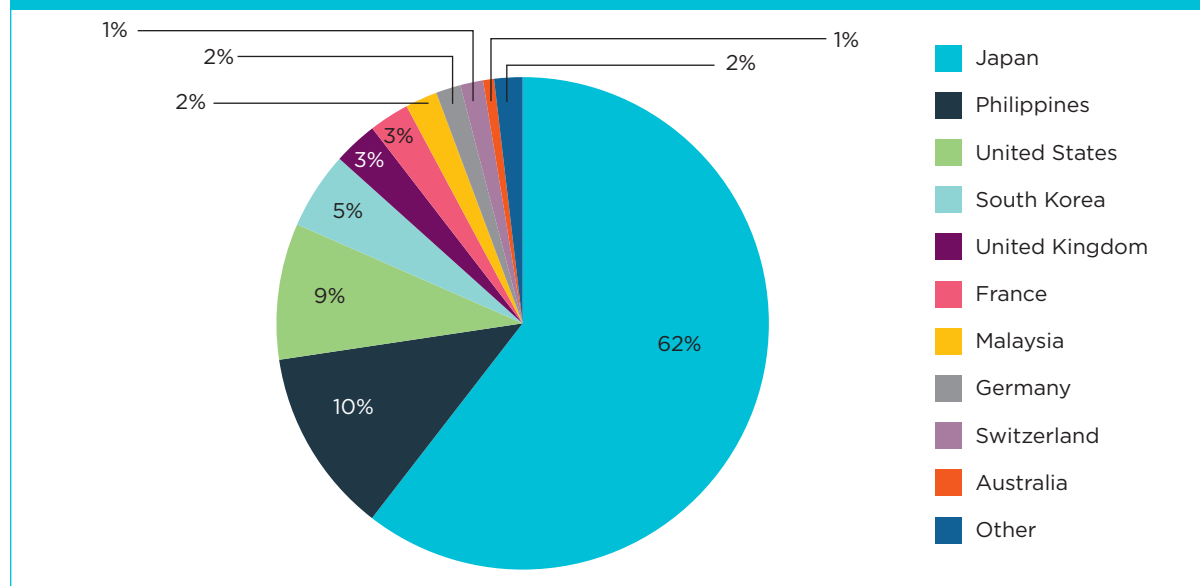


Figure 128: Top 15 power generation creditors in Philippines (2014-2019, US\$ mln)

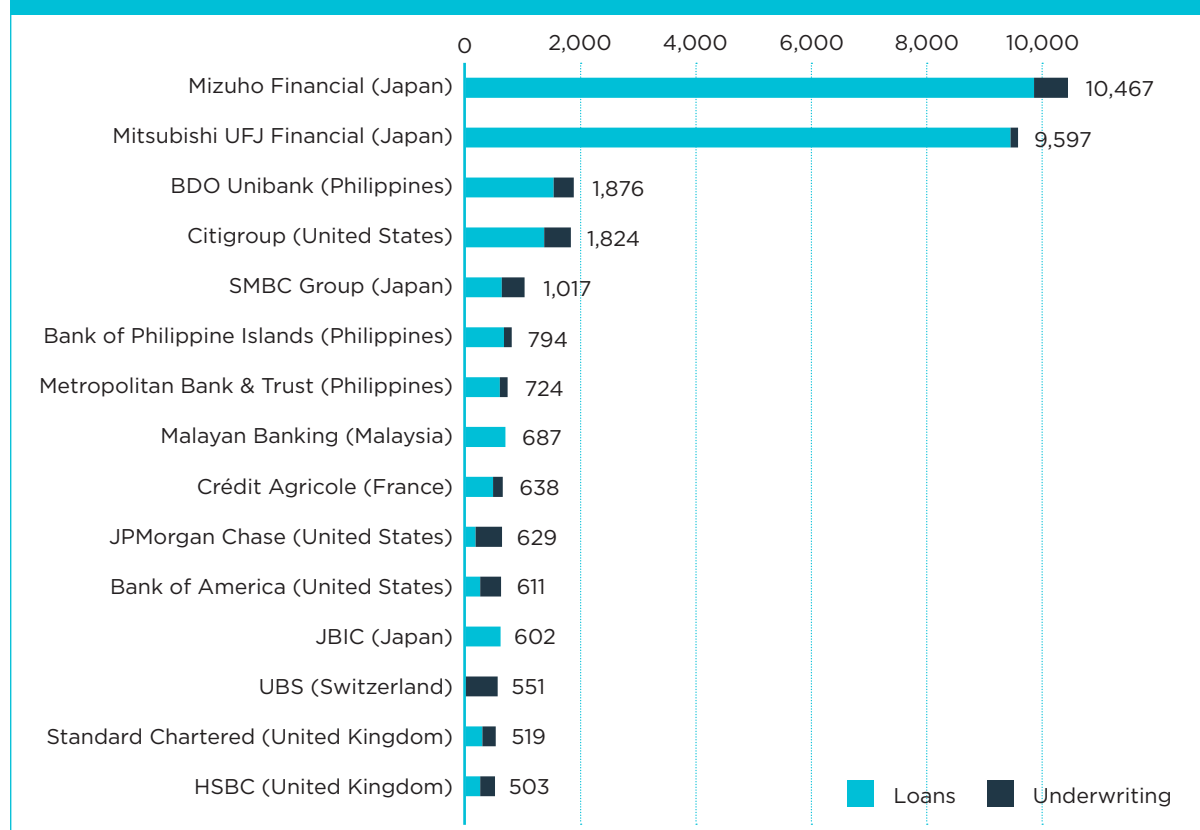
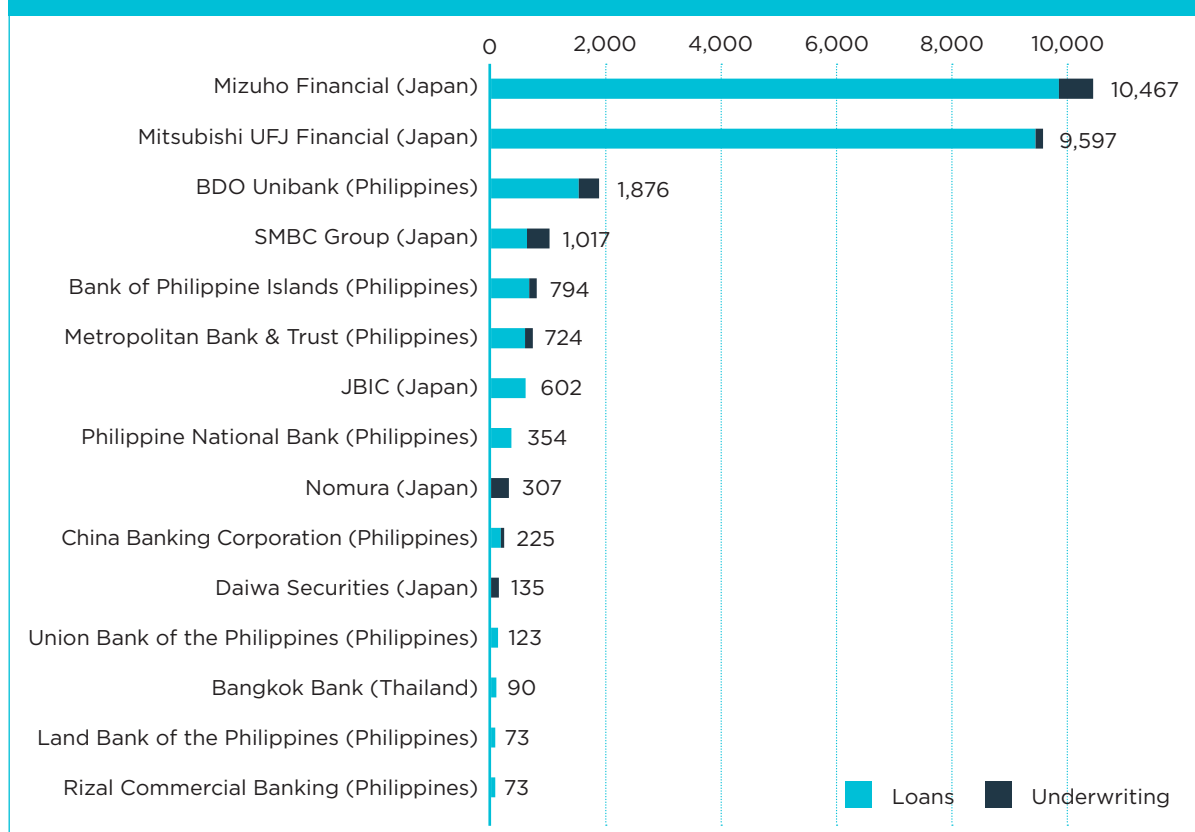


Figure 129: Top 15 FFA power generation creditors in Philippines (2014-2019)



financing was provided by financial institutions from Japan, which provided US\$ 22.2 billion in credit to the selected companies. They were followed by domestic financial institutions from the Philippines (US\$ 3.5 billion) and from the United States (US\$ 3.2 billion).

The top 15 creditors provided US\$ 30.1 billion in loans and underwriting services to the selected companies in the period of the study. This accounts for 84% of all identified credit to these companies. The largest creditor of power generation companies active in the Philippines was Mizuho Financial which provided loans and underwriting services of US\$ 10.5 billion in the period of study (see Figure 128). It was followed by Mitsubishi UFJ Financial (US\$ 9.6 billion) and Citigroup (US\$ 1.8 billion).

Financial institutions from FFA countries provided 72% of all identified loans and

underwriting services to the selected companies active in power generation in the Philippines. Together these financial institutions provided US\$ 25.8 billion. The largest creditor was Mizuho Financial, which provided loans and underwriting services of US\$ 10.5 billion (see Figure 129). It was followed by Mitsubishi UFJ Financial (US\$ 9.6 billion) and BDO Unibank (US\$ 1.4 billion). 8 of the top 15 creditors of power generation companies in the Philippines were domestic financial institutions from the Philippines. 6 financial institutions were from Japan, and one from Thailand.

5.6.2 Investors

At the most recent filing date in February 2020, investors held US\$ 13.9 billion in the bonds and shares of companies engaged in power generation in the Philippines. 99% of these investments were in shares, and the remaining 1% in bonds. Figure 130 shows financial institutions from South

Korea held US\$ 5.9 in bonds and shares of the selected companies, accounting for 42% of all identified investments. They

were followed by financial institutions from Japan (US\$ 3.2 billion) and the United States (US\$ 3.0 billion).

Figure 130: Country of origin investors in power generation in Philippines (2020 February, most recent filings)

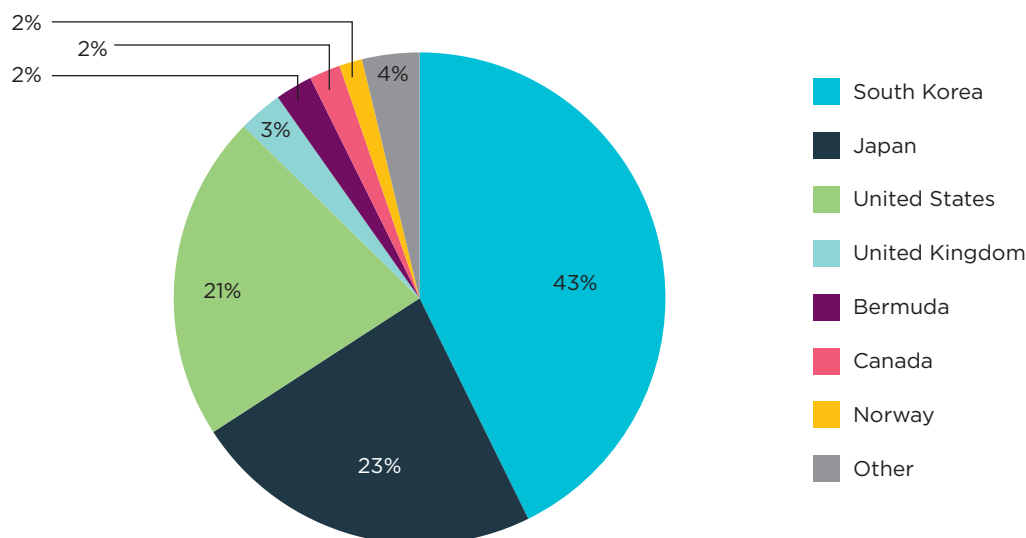


Figure 131: Top 15 power generation investors in Philippines (2020 February, most recent filings, US\$ mln)

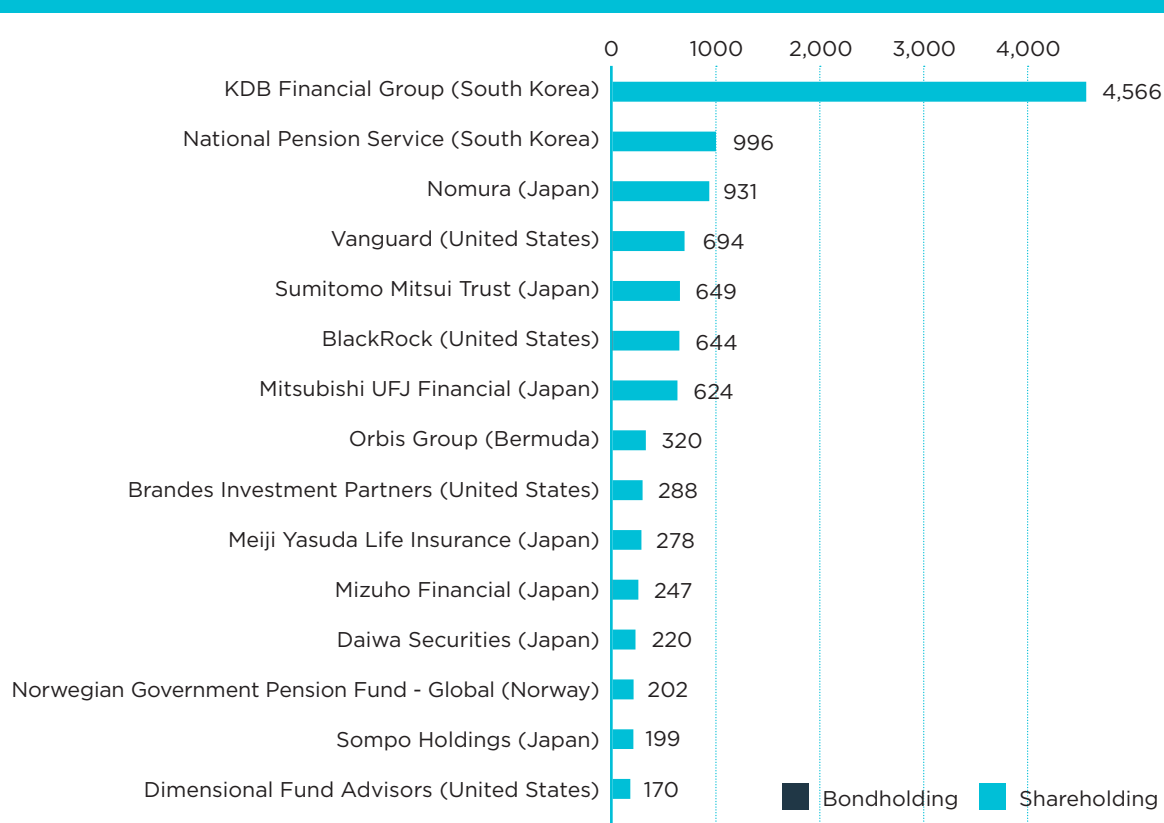
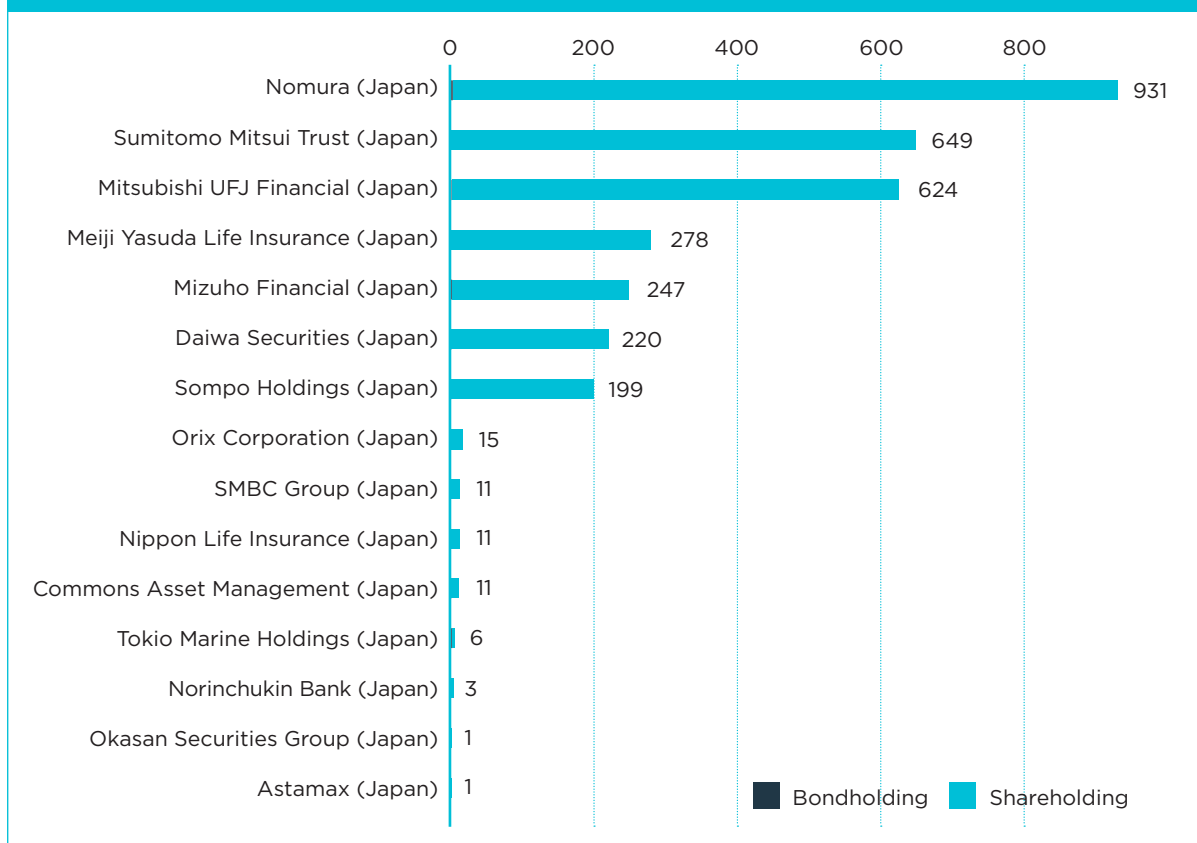


Figure 132: Top 15 FFA power generation investors in the Philippines (2020 February, most recent filings, US\$ mln)



The top 15 investors accounted for 80% of all investments in the bonds and shares of the selected power generation companies active in the Philippines at the most recent filing date. Together these financial institutions held bonds and shares worth US\$ 11.0 billion. Figure 131 shows that the largest investor was KDB Financial Group, with US\$ 4,6 billion in the bonds and shares of the selected companies. It was followed by the South Korean National Pension Service (US\$ 996 million) and Japanese Nomura (US\$ 931 million).

Investors from FFA countries accounted for 23% of all identified investments in power generation companies active in the Philippines, with investments in bonds and shares of US\$ 3.2 billion. The top 15 FFA investors accounted for 23% of the total identified investments, and 99.6% of FFA investor country investments. As Figure 132 shows, all the top 15 FFA investors

were financial institutions from Japan. The largest investor was Nomura, with US\$ 931 million invested in the bonds and shares of power generation companies active in Japan. It was followed by Sumitomo Mitsui Trust (US\$ 649 million) and Mitsubishi UFJ Financial (US\$ 624 million).

5.7 Thailand

5.7.1 Creditors

In the period 2014-2019, power generation companies active in Thailand attracted US\$ 3.1 billion in loans and underwriting service. 67% of this credit was in the form of loans. The remaining 33% was in the form of issuance underwriting services. Figure 133 shows that slightly less than half of this credit was provided by domestic financial institutions from Thailand. Together these financial institutions provided US\$ 1.5 billion in loans and underwriting services to the

selected companies. Financial institutions from Japan and the United Kingdom were also significant investors. They

provided US\$ 678 million and 643 million respectively in credit to the selected power generation companies.

Figure 133: Country of origin creditors of power generation in Thailand (2014-2019)

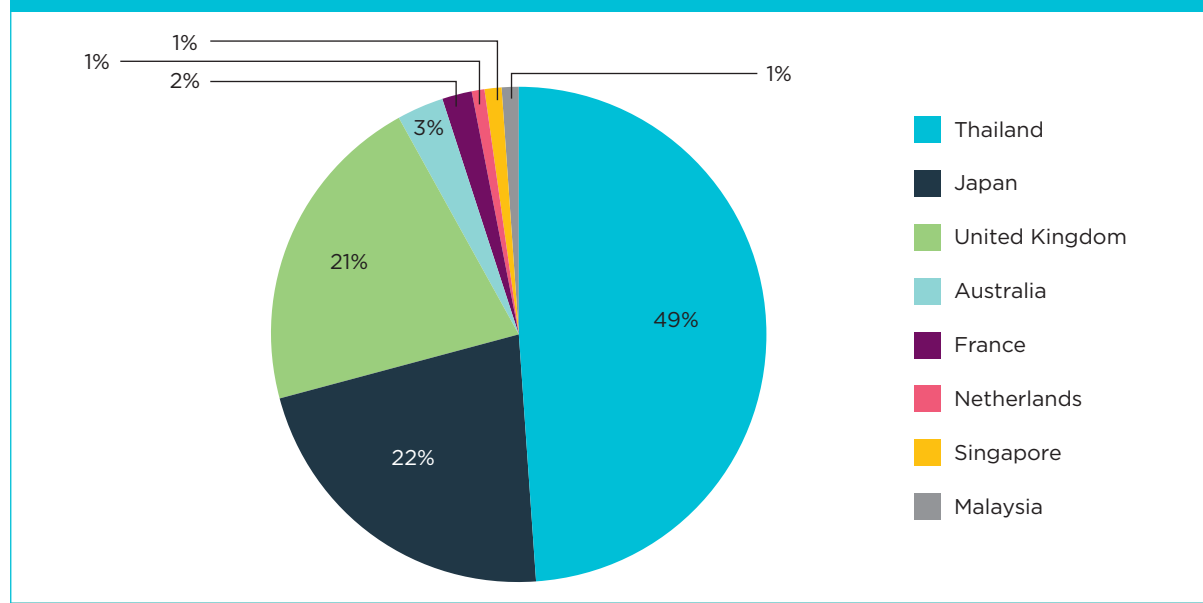


Figure 134: Top 15 power generation creditors in Thailand (2014-2019, US\$ mln)

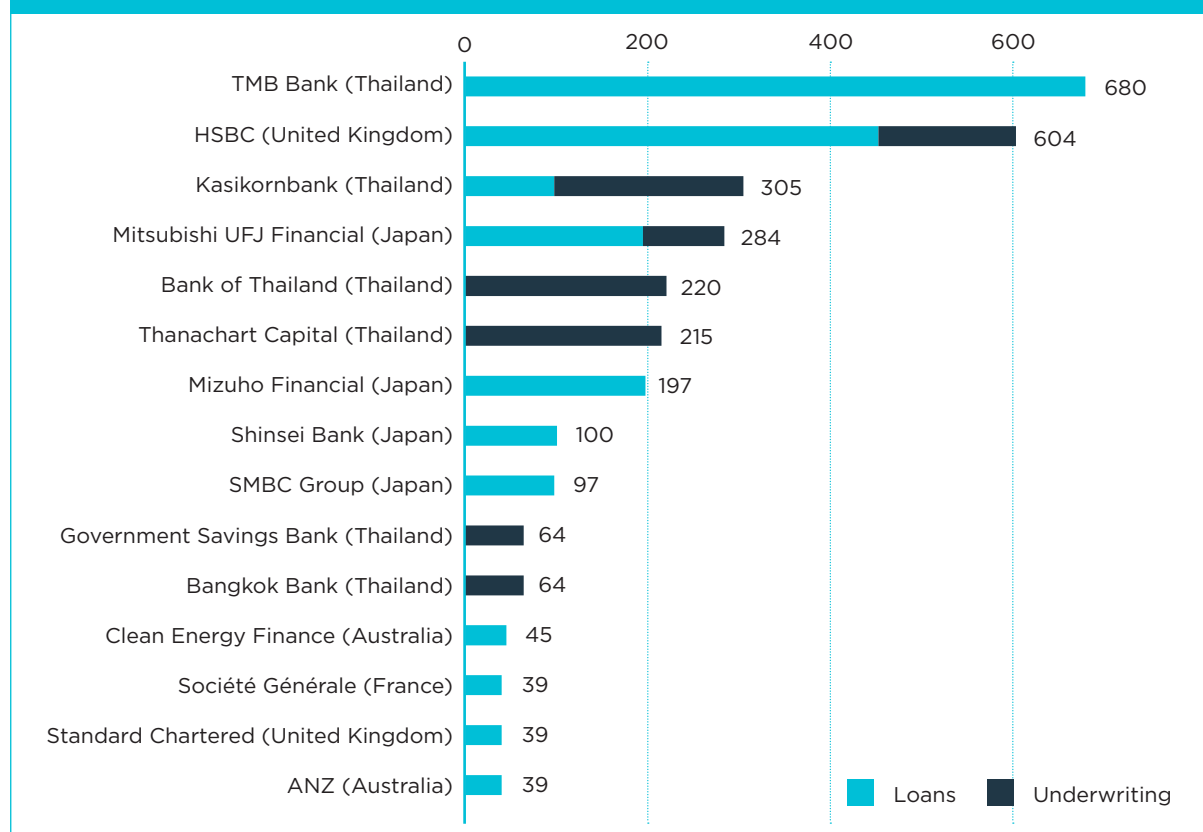


Figure 135: Top 15 FFA power generation creditors in Thailand (2014-2019, US\$ mln)

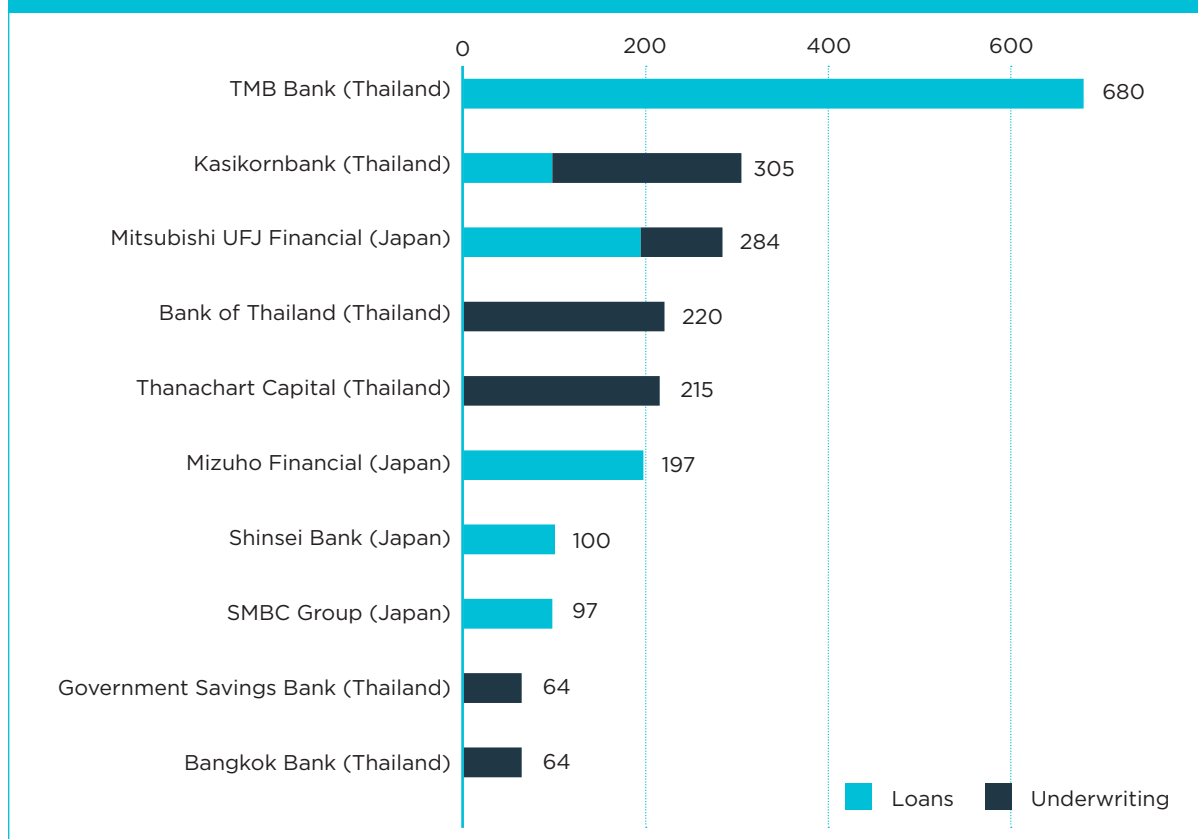


Figure 134 shows that among the top 15 overall creditors of power generation companies active in Thailand, 6 were domestic financial institutions from Thailand. The top 15 creditors provided US\$ 3.1 billion, accounting for 95% of the total credit provided to the selected power generation companies. The largest creditor was TMB Bank which provided US\$ 680 million in loans and underwriting services to the selected companies. It was followed by HSBC (US\$ 604 million) and Kasikornbank (US\$ 305 million).

Figure 134 shows that there were 10 creditors from FFA countries that provided loans and underwriting services to the selected power generation companies in Thailand. These financial institutions provided just under three quarter (71%, US\$ 2.2 billion) of all identified credit to the selected companies. The largest

creditor was TMB Bank which provided US\$ 680 million in loans and underwriting services to the selected companies. It was followed by Kasikornbank (US\$ 305 million) and Mitsubishi UFJ Financial (US\$ 284 million).

5.7.2 Investors

At the most recent filing date in February 2020, investors held US\$ 2.0 billion in the bonds and shares of the selected companies active in power generation in Thailand. All of these investments were in shares of the selected companies. Domestic investors from Thailand accounted for just under 40% of the identified investments, or US\$ 766 million. Financial institutions from the United States and Thailand were also significant investors. These financial institutions held shares of US\$ 632 million and US\$ 201 million respectively.

The top 15 investors accounted for 78% of all identified investments. Together they held shares of US\$ 1.6 billion. The largest investor was the Social Security Office

of Thailand with investments of US\$ 260 million. It was followed by Bangkok Bank (US\$ 228 million) and US asset manager Vanguard (US\$ 151 million).

Figure 136: Country of origin investors in power generation in Thailand (2020 February, most recent filings)

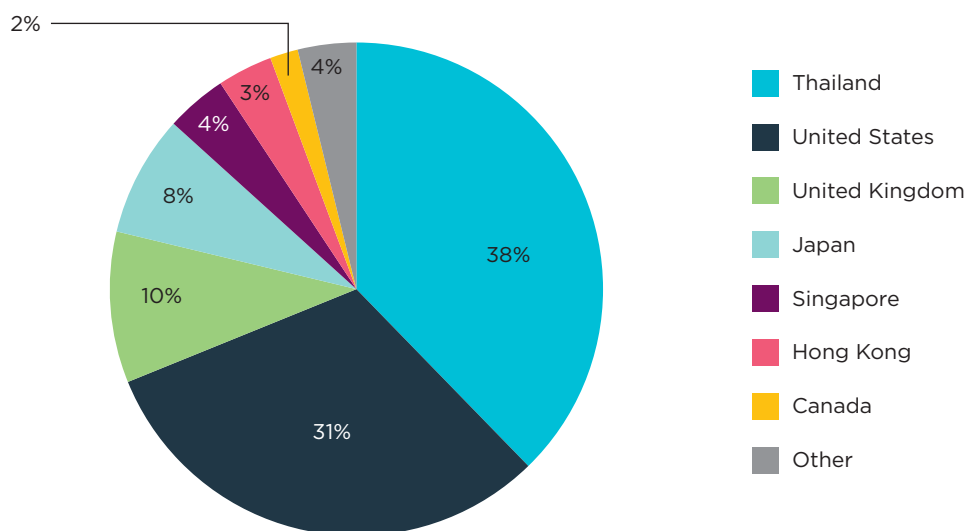


Figure 137: Top 15 power generation investors in Thailand (2020 February, most recent filings, US\$ mln)

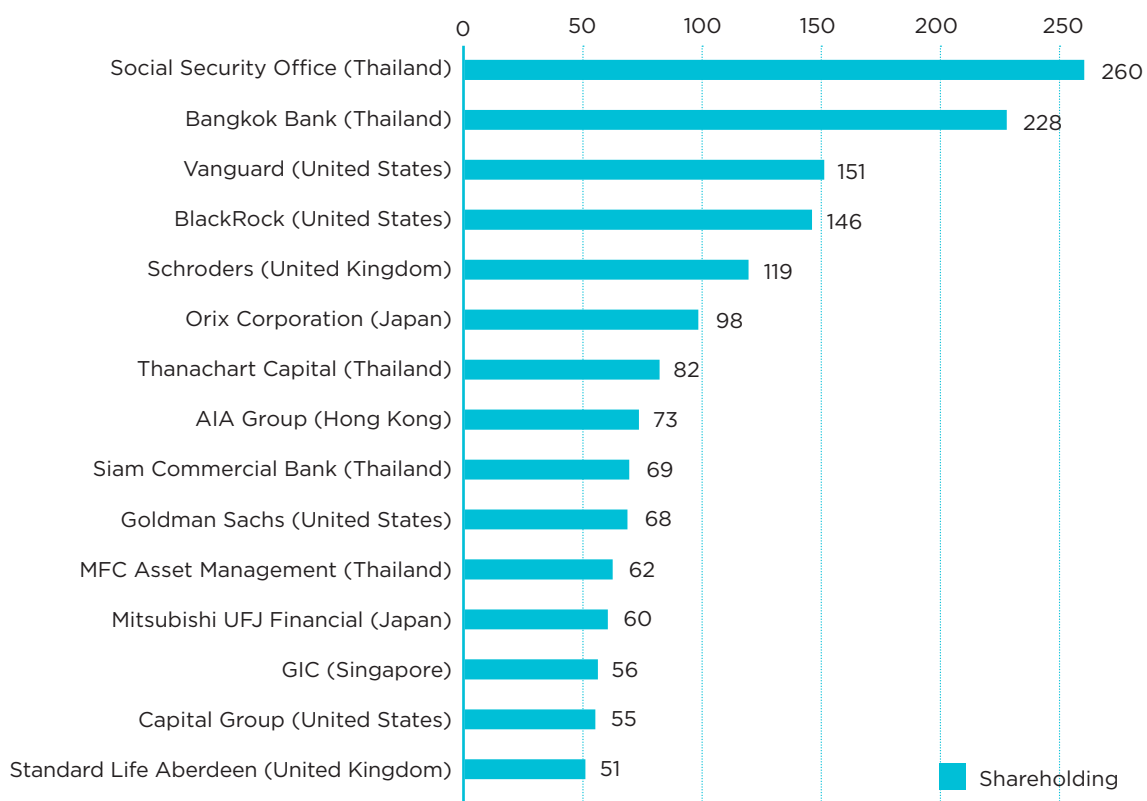
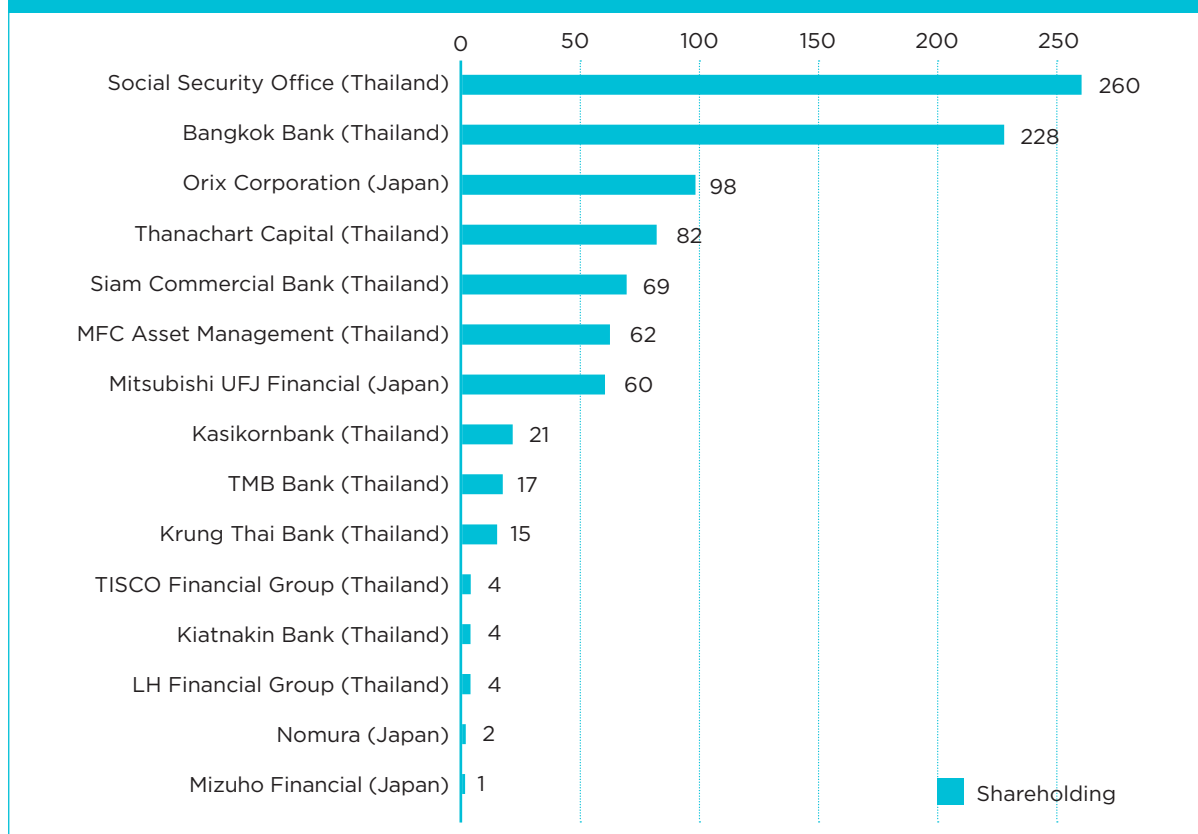


Figure 138: Top 15 FFA power generation investors in Thailand (2020 February, most recent filings, US\$ mln)



Investors from FFA countries accounted for 46% of all identified investments in power generation companies active in Thailand, with investments in bonds and share of US\$ 927 million. The top 15 FFA investors accounted for 46% of the total identified investments, and 99.9% of FFA investor country investments. As Figure 138 shows, 12 of the top 15 FFA investors were financial institutions from Thailand, the remaining three were Japanese financial institutions. The largest investor was the Social Security Office, with US\$ 260 million invested in the bonds and shares of power generation companies active in Thailand. It was followed by Bangkok Bank (US\$ 228 million) and Orix Corporation (US\$ 98 million).

5.8 Vietnam

5.8.1 Creditors

In the period 2014-2019, power generation companies active in Vietnam attracted

US\$ 8.4 billion in loans and underwriting services. All of this credit was provided in the form of loans. Financial institutions from South Korea were the largest creditors, provided US\$ 3.5 billion (42%) of all identified credit to the selected companies (see Figure 139). They were followed by financial institutions from Japan (US\$ 2.1 billion) and the United States (US\$ 1.3 billion).

The top 15 creditors provided US\$ 7.8 billion in loans to the selected power generation companies in Vietnam. Together they accounted for 94% of the identified credit. Figure 140 shows that the largest creditor of power generation companies in Vietnam was Korea Eximbank, providing US\$ 3.0 billion in loans to the selected companies (see Figure 140). It was followed by Citigroup (US\$ 1.3 billion) and the Asian Development Bank (US\$ 931 million).

Figure 139: Country of origin creditors of power generation in Vietnam (2014-2019)

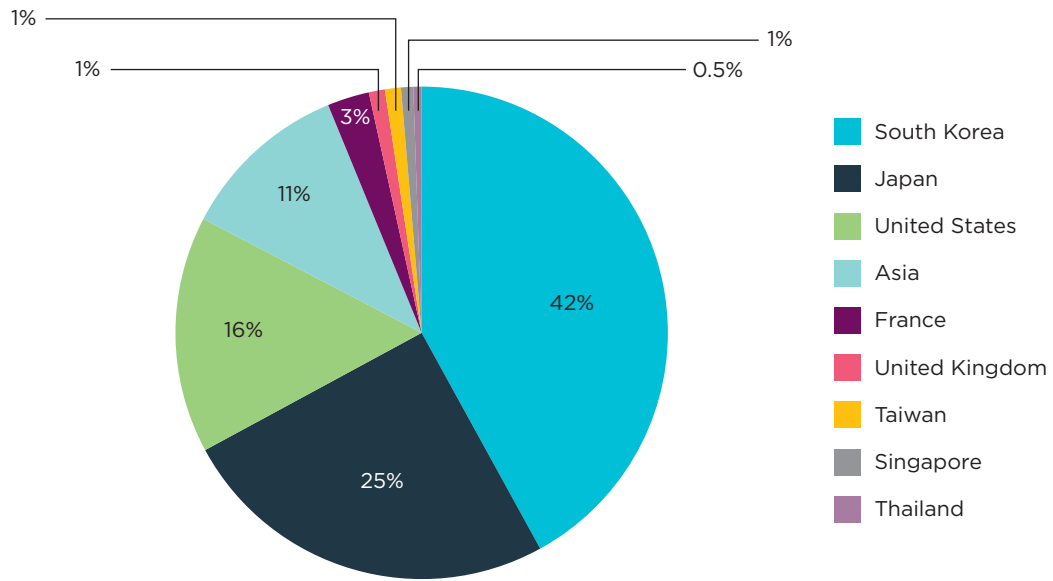


Figure 140: Top 15 power generation creditors in Vietnam (2014-2019, US\$ mln)

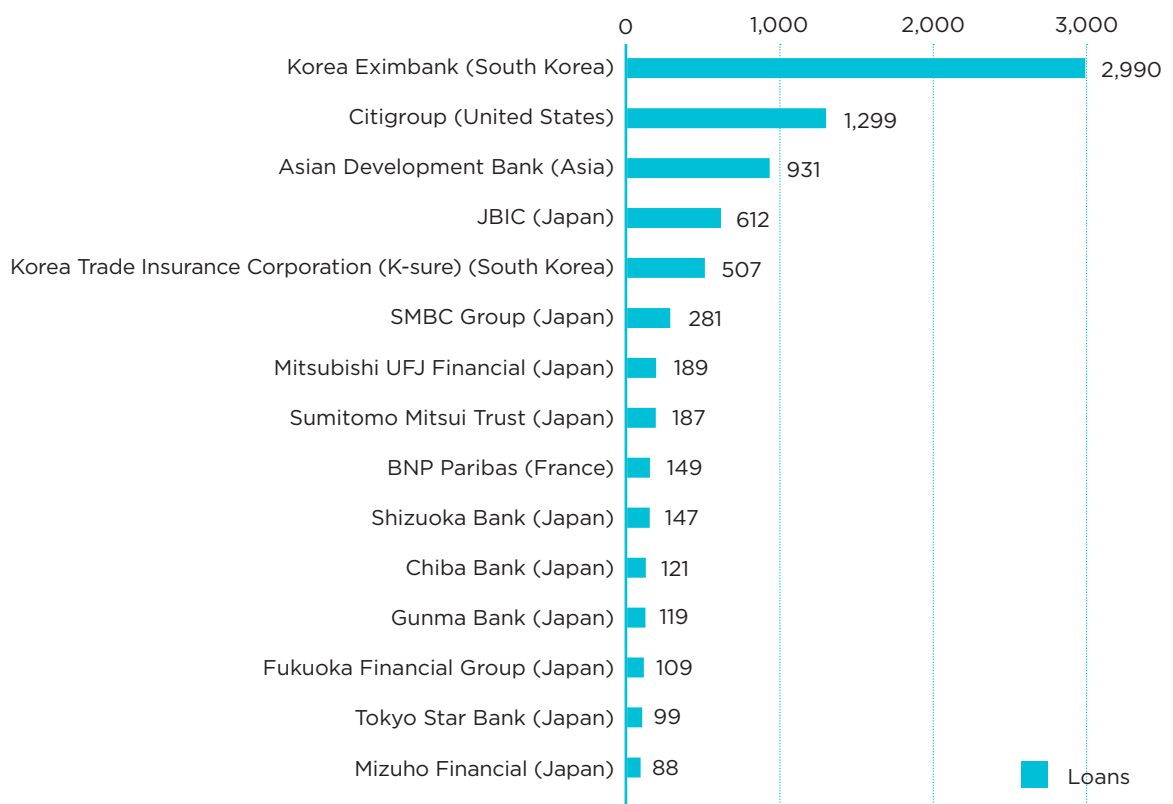
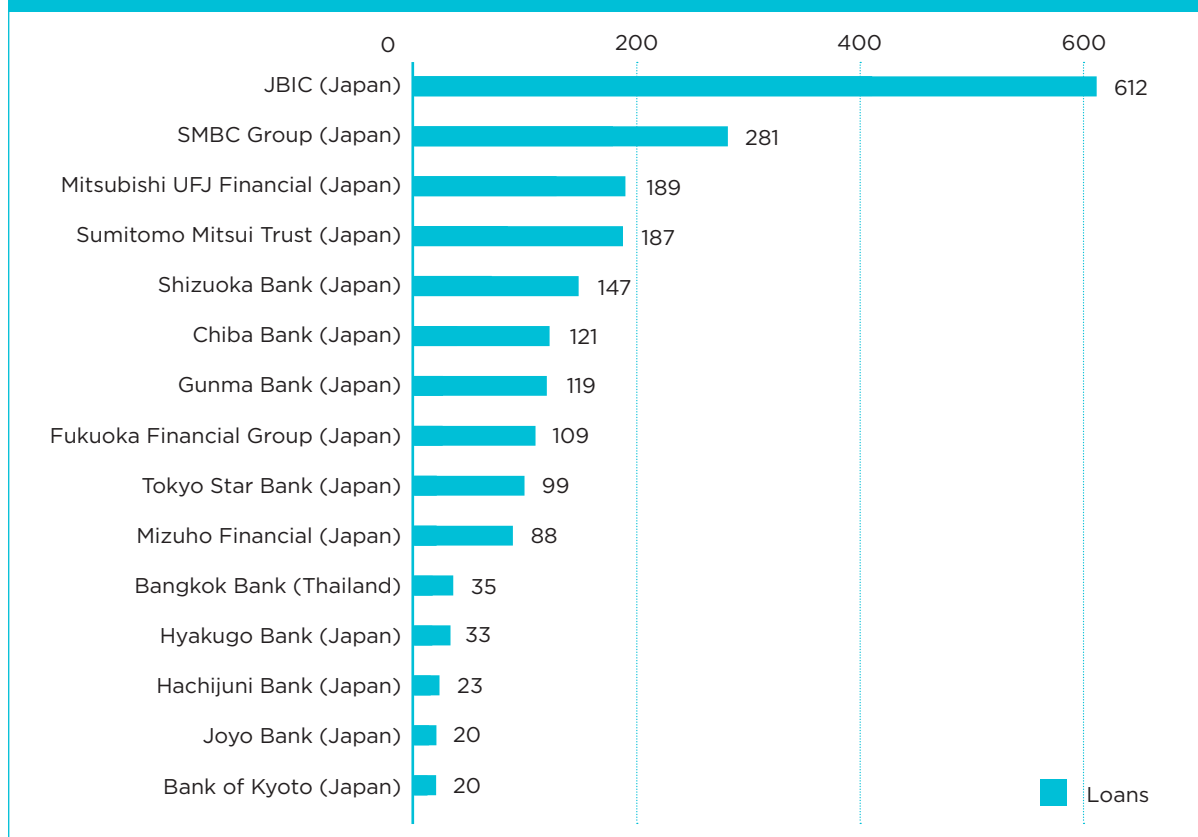


Figure 141: Top 15 FFA power generation creditors in Vietnam (2014-2019, US\$ mln)



Creditors from FFA countries accounted for just under a quarter (26%) of all identified credit. Together they provided US\$ 2.1 billion in loans to the selected companies. The largest creditor from an FFA country was the Japanese development finance institution JBIC which provided US\$ 612 million in loans to the selected power generation

companies (see Figure 141). It was followed by SMBC Group (US\$ 281 million) and Mitsubishi UFJ Financial (US\$ 189 million).

5.8.2 Investors

No investments in the bonds and shares of power generation companies active in Vietnam were identified.

CHAPTER

6

FINANCIAL FLOWS TO AGRIBUSINESS

This chapter presents the findings of the financial flows to the selected companies engaged in Agribusiness (see section 1.3). The chapter is organized as follows: section 6.1 presents a general overview of the findings, and; the following seven sections deals with the trends of financial flows, Cambodia (section 6.2), India (section 6.3), Indonesia (section 6.4), Japan (section 6.5), the Philippines (section 6.6), Thailand (section 6.7) and Vietnam (section 6.8) separately. Each section is split into two sub-sections. The first analyses the credit (loans & underwriting services) flows, and the second focuses on investments in bonds and shares.

6.1 General overview

6.1.1 Creditors

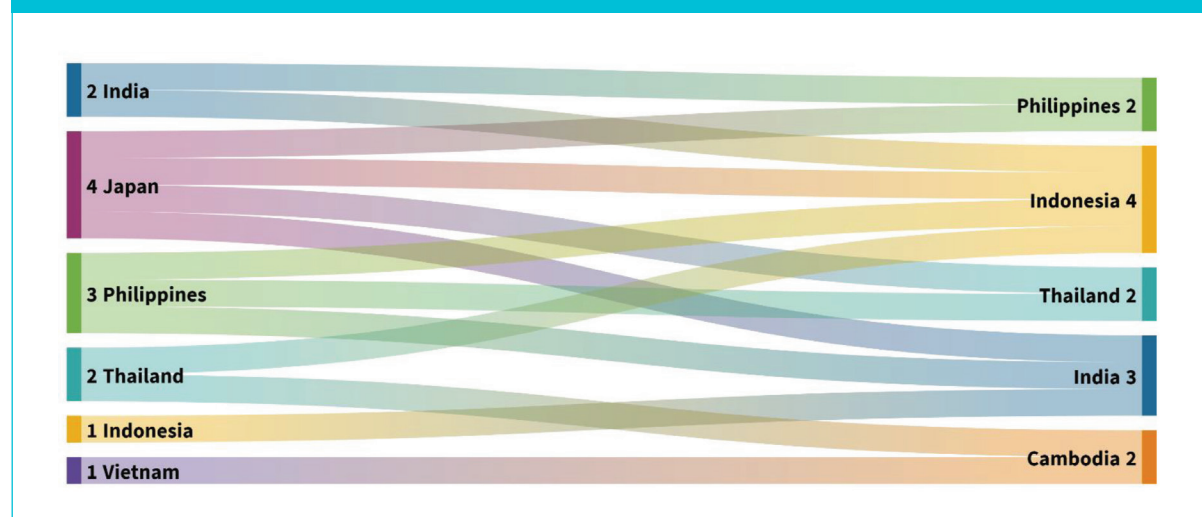
In the period of study, financial institutions from FFA countries provided US\$ 127 billion in loans and underwriting services to the selected agriculture companies. This includes financial flows to companies active in their own economies, as well as to other FFA countries.

Figure 142 shows the intra-regional credit flows, i.e. flows from financial institutions from FFA countries, to companies

in other FFA countries. Financial institutions from Japan provided the most credit to agriculture companies in other FFA countries, with financing to 4 FFA countries. Financial institutions from the Philippines, provided loans and underwriting services to agriculture companies in 3 other countries. Indonesia received agribusiness financing from the most other FFA countries, with financial institutions from 4 countries providing credit to agriculture companies in the country. It was followed by India, which received agriculture financing from 3 FFA countries.

A closer look at the value of the financial flows to agriculture – including financial flows to companies operating in their own economies – shows that financial institutions from Japan were by far the largest creditors. These financial institutions provided US\$ 82 billion in loans and underwriting to the selected companies engaged in agribusiness. This accounts for 64% of all identified agribusiness credit (see Figure 143). Financial institutions from India provided the second most, with US\$ 16 billion. And Thai financial institutions provided US\$ 11.5 billion in loans and underwriting services to agriculture companies.

Figure 142: Intra-regional credit flows to agribusiness companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)



82% of all identified credit provided to companies engaged in agriculture was in the form of loans. The remaining 18% was provided in the form of issuance underwriting services. Figure 144 shows the top 15 creditors from FFA countries.

4 of the top 15 agribusiness creditors were Thai financial institutions, 3 were from Japan, 3 financial institutions were from Indonesia and 2 were from India. The three largest agribusiness creditors were all Japanese financial institutions.

Figure 143: FFA agriculture creditor countries of origin (2014-2019, US\$ mln)

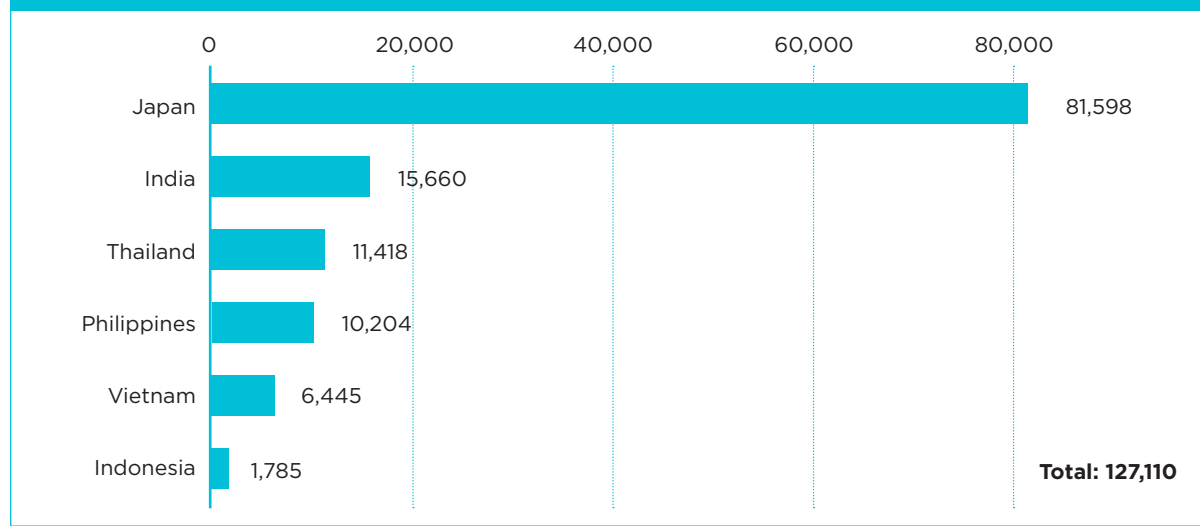
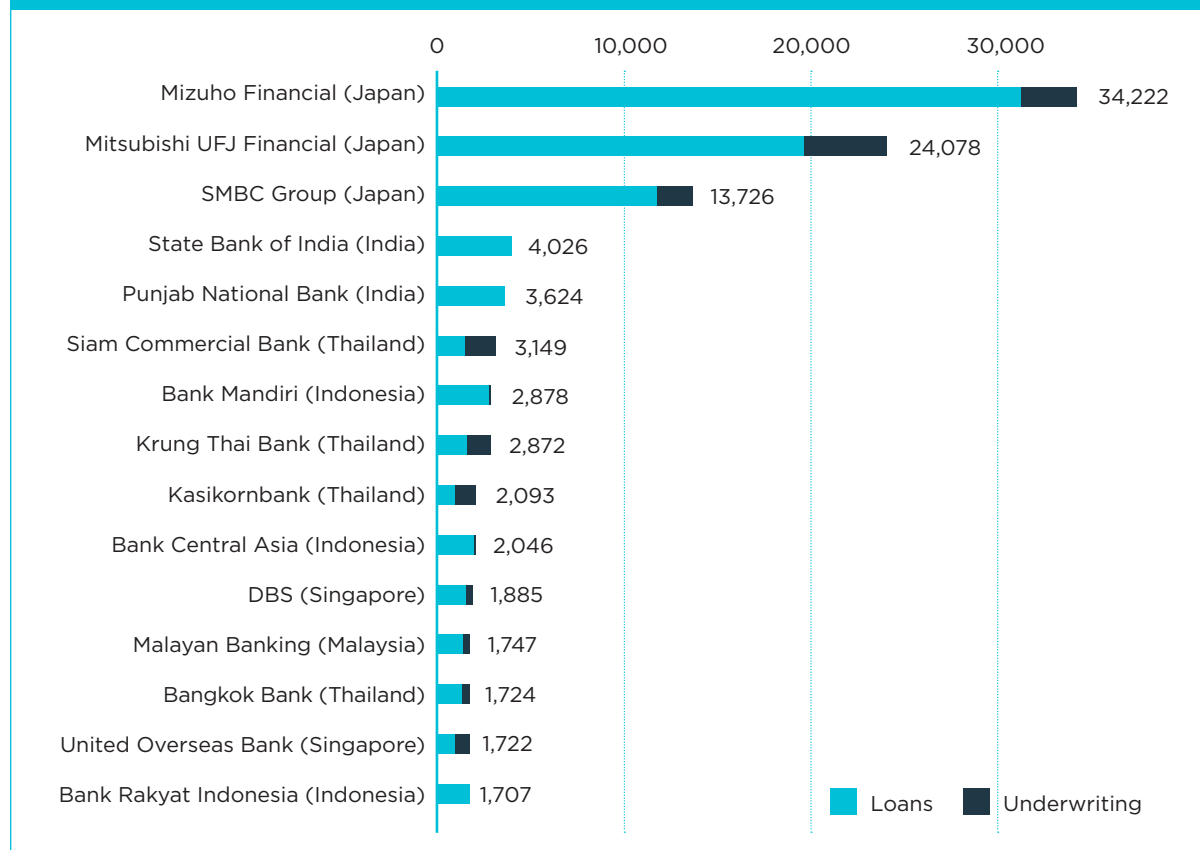


Figure 144: Top 15 agribusiness creditors (2014-2019, US\$ mln)



The largest was Mizuho Financial, which provided US\$ 34.2 in loans and underwriting services to the selected agriculture companies. It was followed by its compatriots Mitsubishi UFJ Financial (US\$ 24.1 billion) and SMBC Group (US\$ 13.7 billion).

6.1.2 Investors

Investors from the FFA countries together invested US\$ 39.1 billion in the selected companies engaged agriculture. 99.4% of these investments were in the shares of the selected companies. The remaining 0.6% was invested in

bonds issued by the selected companies engaged in agriculture.

Figure 145 presents the intra-regional flows. It shows that financial institutions from Japan invested in agribusiness in 5 other FFA countries. Agriculture companies active in Indonesia received investments from the most other FFA countries, with financial institutions from 3 other FFA countries investing in agriculture companies in the country. It was followed by agricultural companies in Japan, India and Vietnam which received investments from 2 other FFA countries each.

Figure 145: Intra-regional investment flows to agribusiness companies (no. of countries invested in & no. countries invested by)



Figure 146: FFA agribusiness investor countries of origin (2020 February, most recent filings, US\$ mln)

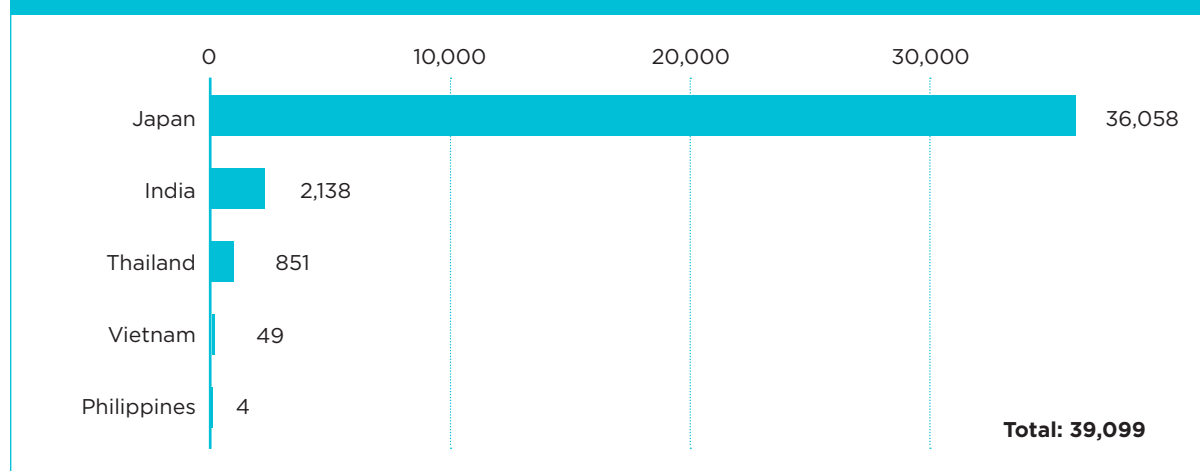


Figure 147: Top 15 FFA agribusiness investors (2020 February, most recent filings, US\$ mln)

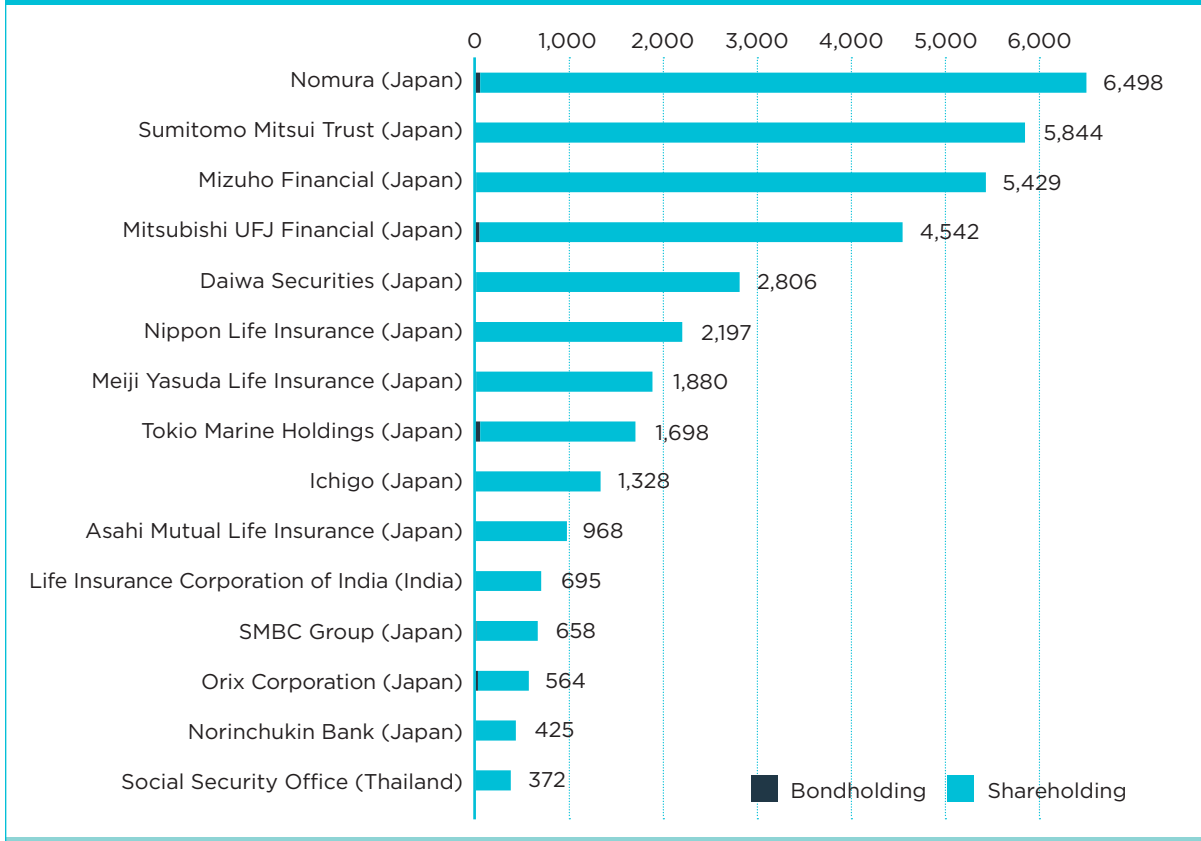


Figure 146 shows that in terms of value, Japanese investors had invested the most in the selected companies. In they accounted for 92% (US\$ 36.1 billion) of the identified investments in the selected companies. They were followed by investors from India, who accounted for 5%, and Thai investors who accounted for 2%.

The top 15 investors in the bonds and shares of the selected agricultural companies at the most recent filing date accounted for 92% of the identified investments. Together these financial institutions invested US\$ 35.9 billion in the selected companies at the most recent filing date in February 2020. Figure 147 shows that the largest investor was Japanese Nomura which held bonds and shares worth US\$ 6.5 billion. It was followed by Sumitomo Mitsui Trust (US\$ 5.8 billion) and Mizuho Financial (US\$ 5.4 billion).

6.2 Cambodia

6.2.1 Creditors

In the period 2014-2019, agriculture companies active in Cambodia attracted US\$ 2.1 billion in loans and underwriting services. 22% of this credit was provided in the form of loans, and the remaining 78% was in the form of issuance underwriting services. As Figure 148 shows, financial institutions from Vietnam provided more than half of the identified loans and underwriting services to agriculture companies active in Cambodia. These Vietnamese financial institutions provided US\$ 1.1 billion in credit. They were followed by financial institutions from Thailand (US\$ 546 million) and Malaysia (US\$ 159 million).

The top 15 creditors of the selected agriculture companies active in Cambodia provided nearly all the identified credit.

7 of the top 15 creditors were financial institutions from Vietnam. 4 were from Thailand. Figure 149 shows that the largest creditor was the Bank for Investment and Development of Vietnam (BIDV), which

provided loans and underwriting services worth US\$ 655 million in the period 2014-2019. It was followed by Siam Commercial Bank (US\$ 347 million) and HDBank (US\$ 180 million).

Figure 148: Country of origin creditors of agribusiness in Cambodia (2014-2019)

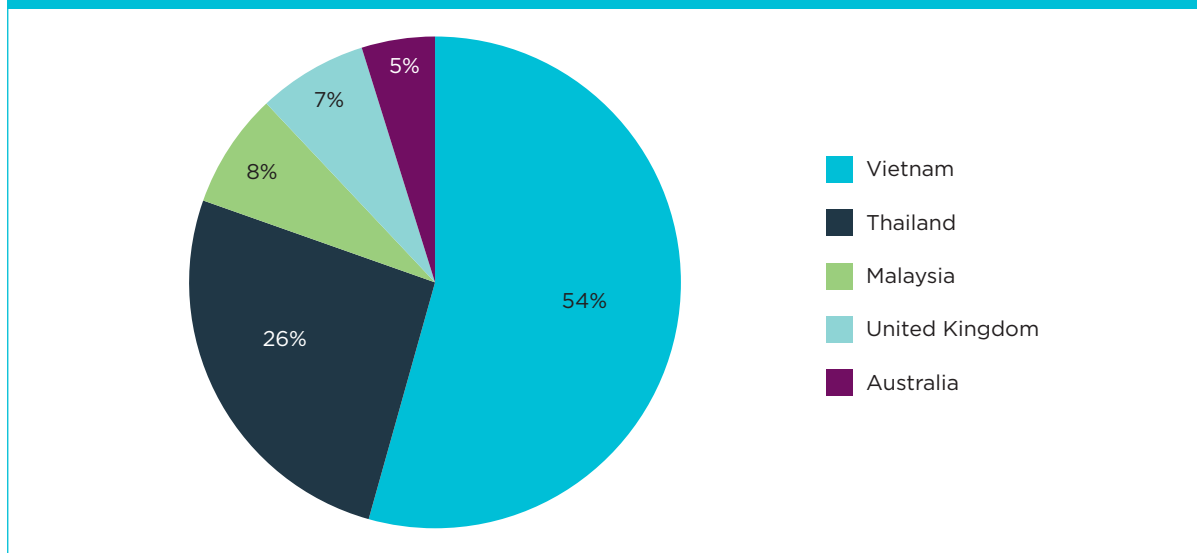


Figure 149: Top 15 agribusiness creditors in Cambodia (2014-2019, US\$ mln)

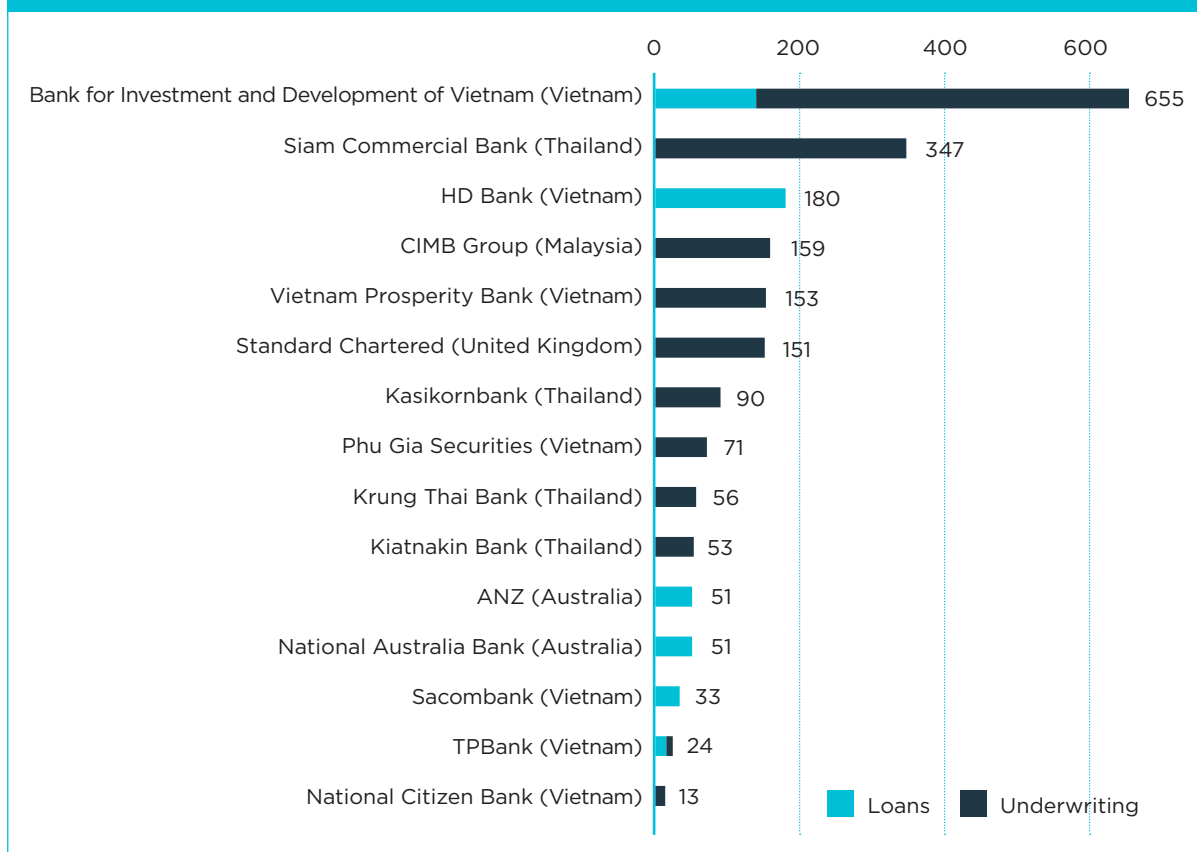
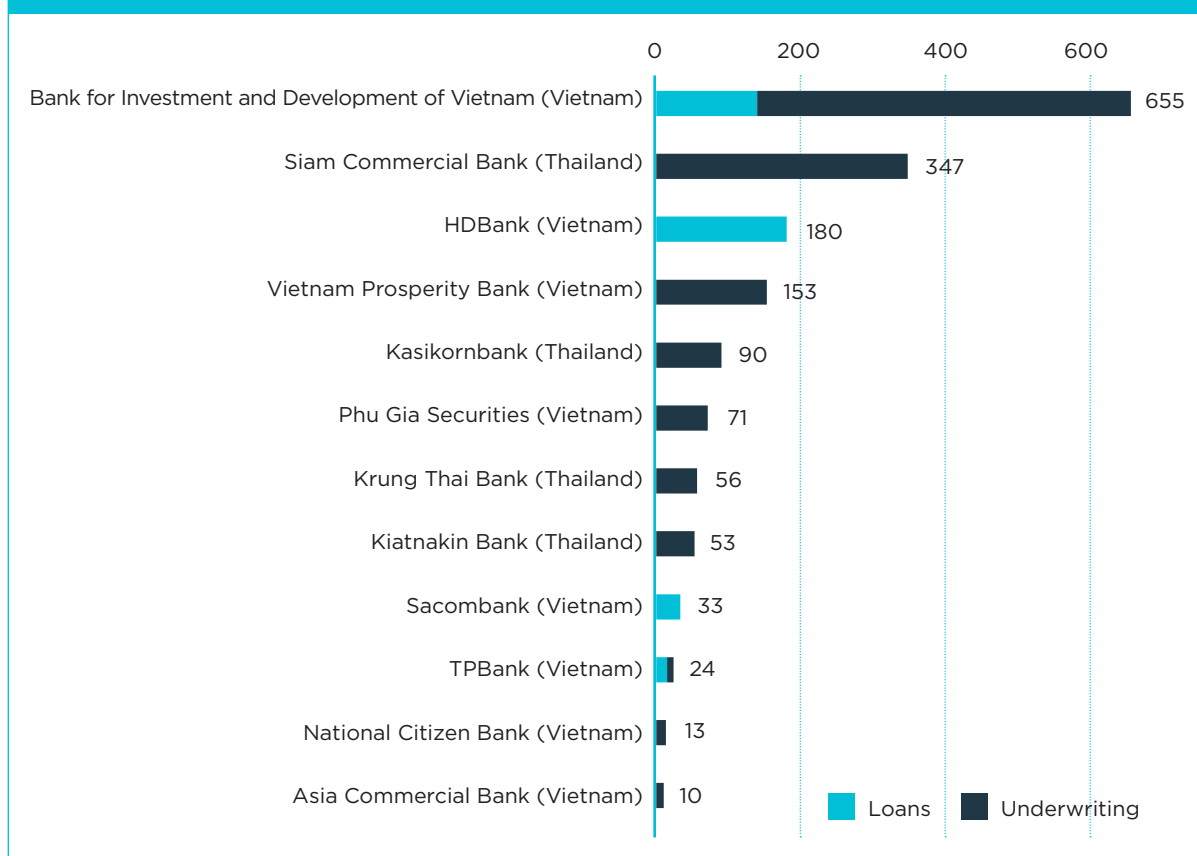


Figure 150: Top 15 FFA agribusiness creditors in Cambodia (2014-2019, US\$ mln)



Financial institutions from FFA countries provided 80% of the identified credit to companies engaged in agriculture in Cambodia. Together these financial institutions provided US\$ 1.7 billion in loans and underwriting services to the selected companies. 8 of top 15 agribusiness creditors from FFA countries in Cambodia were Vietnamese. A further 4 were from Thailand. Figure 150 does not differ significantly from the top 15 creditors overall. The largest creditor was the Bank for Investment and Development of Vietnam (BIDV), which provided loans and underwriting services worth US\$ 655 million in the period 2014-2019. It was followed by Siam Commercial Bank (US\$ 347 million) and HDBank (US\$ 180 million).

6.2.2 Investors

At the most recent filing date in February 2020, investors held shares worth US\$ 15.3 million in companies active in agribusiness

in Cambodia. These investments were exclusively in Vietnamese agriculture companies Vietnam Rubber Group and Hoang Anh Gia Lai, and only shareholdings. Investors from South Korea held the largest proportion of identified investments (62%, US\$ 9.4 million). They were followed by financial institutions from United Kingdom (US\$ 4.2 million) and Finland (US\$ 1.4 million) (see Figure 148).

8 financial institutions were identified as holding shares of the selected companies. Figure 149 shows that the largest investor was Korea Investment Holdings, which held shares of US\$ 9 million. It was followed by Samarang (US\$ 4 million) and PYN Fund Management (US\$ 1 million).

No investments in the bonds and shares of the agriculture companies active in Cambodia by FFA-based financial institutions were identified.

Figure 151: Country of origin investors in agribusiness in Cambodia (2020 February, most recent filings)

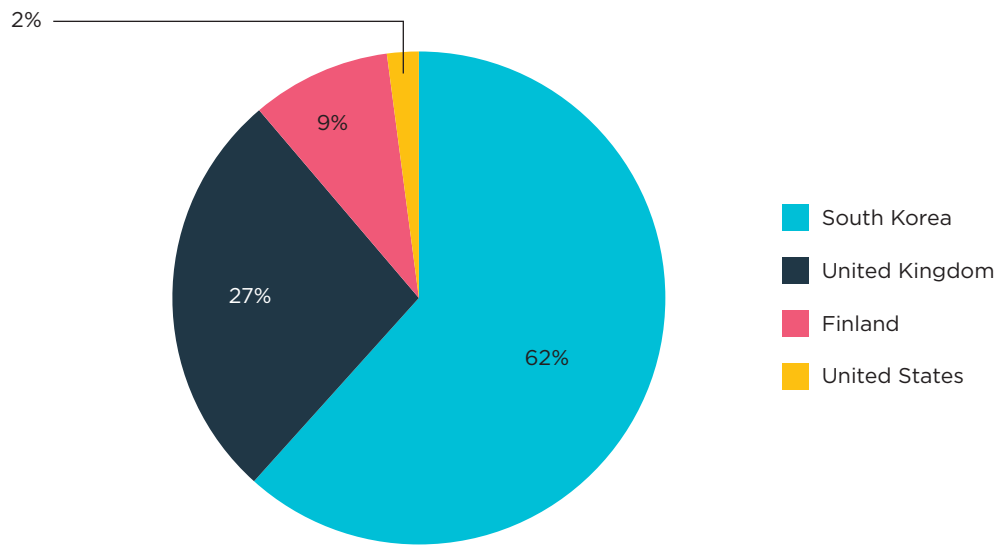
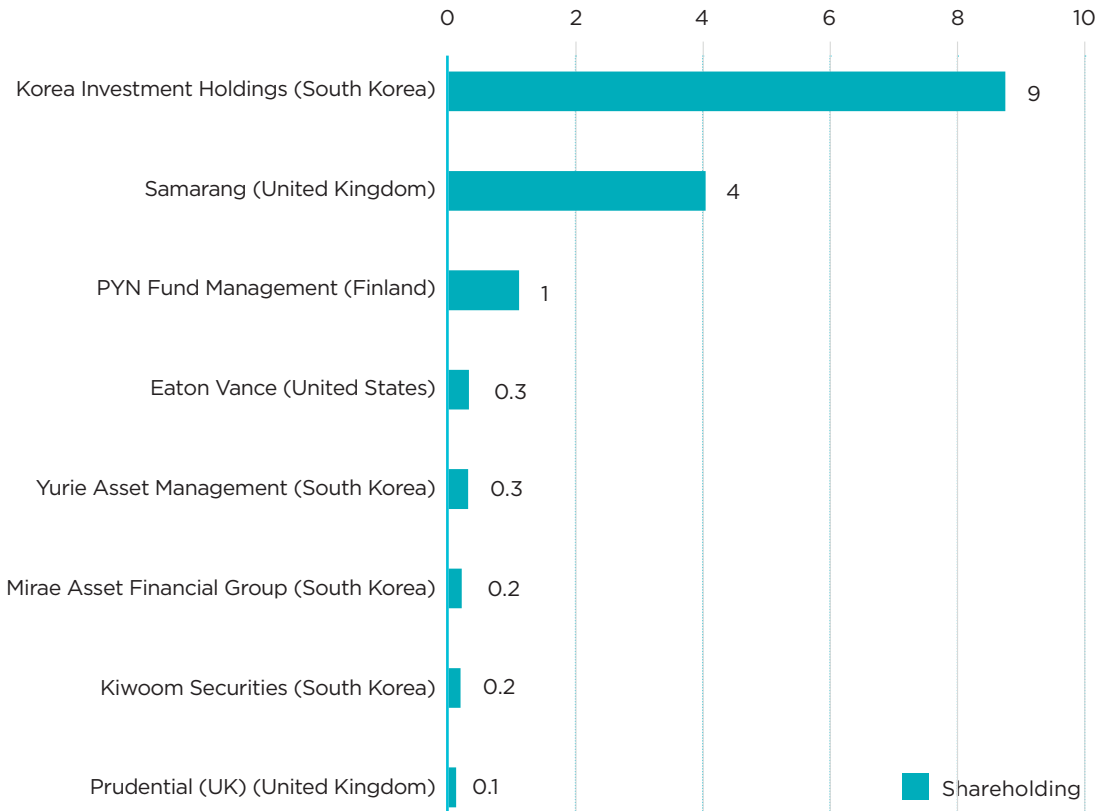


Figure 152: Top 15 agribusiness investors in Cambodia (2020 February, most recent filings, US\$ mln)



6.3 India

6.3.1 Creditors

In the period 2014-2019, the selected agriculture companies active in India attracted US\$ 102 billion in loans and underwriting services. 95% of this credit was in the form of loans, the remaining

5% was in issuance underwriting services. Figure 153 shows that around 20% (US\$ 21.5 billion) of all credit was provided by financial institutions from the United States (US\$ 21.5 billion). They were followed by financial institutions from India (US\$ 15.4 billion) and the United Kingdom (US\$ 14.5 billion).

Figure 153: Country of origin creditors of agribusiness in India (2014-2019)

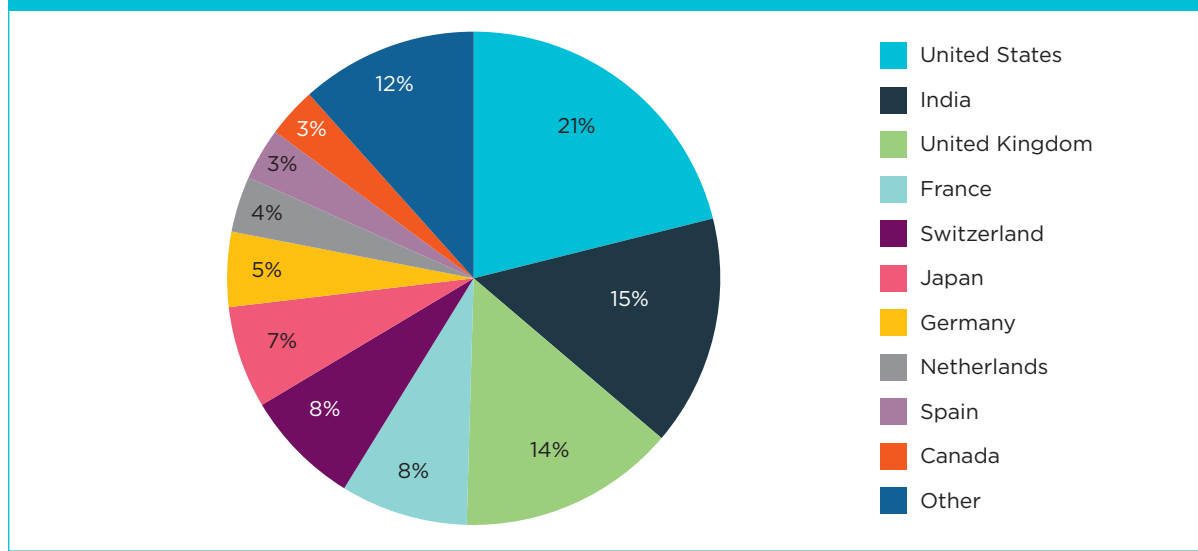


Figure 154: Top 15 agribusiness creditors in India (2014-2019, US\$ mln)

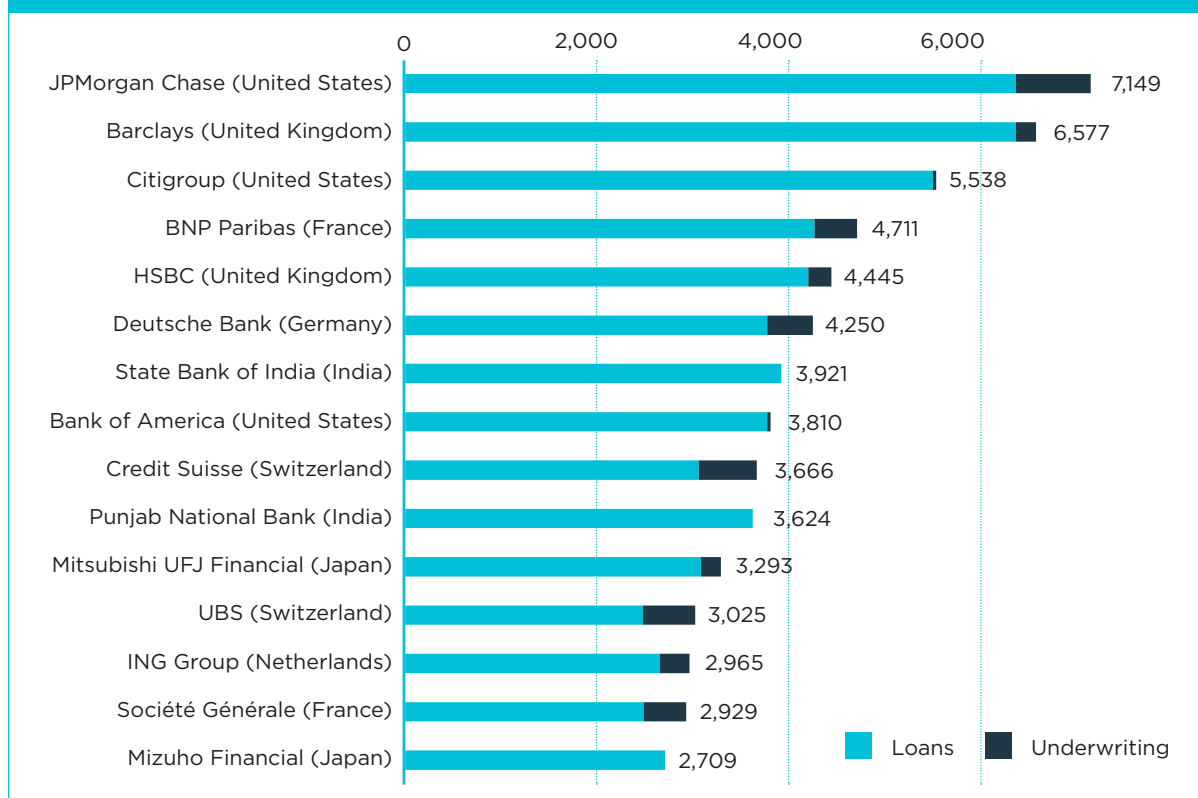
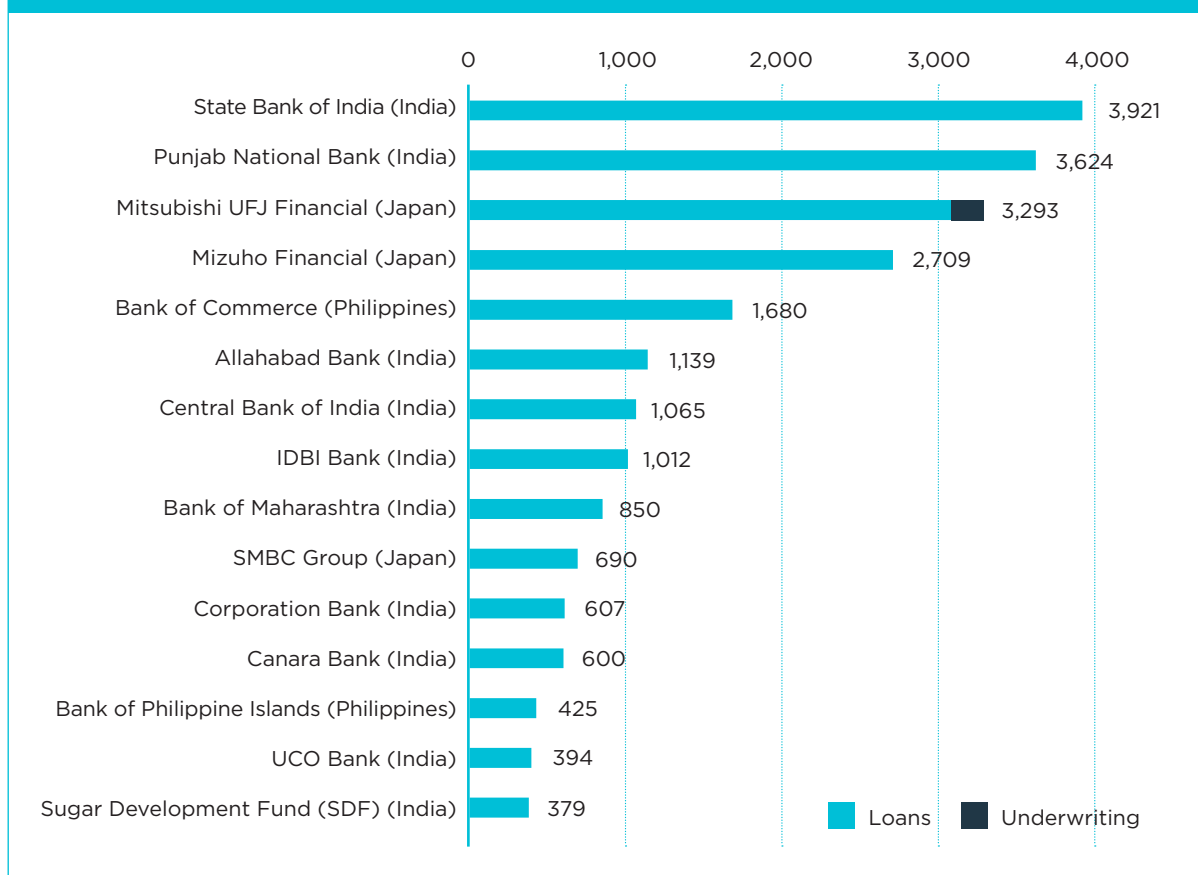


Figure 155: Top 15 FFA agribusiness creditors in India (2014-2019, US\$ mln)



The top 15 creditors of agribusiness companies in India provided 61% of all identified credit to the selected companies in the period 2014-2019. Together these financial institutions provided US\$ 62.6 billion in loans and underwriting services to agriculture companies active in India. The largest creditor was JPMorgan Chase, which provided loans and underwriting services worth US\$ 7.1 billion. It was followed by Barclays (US\$ 6.6 billion) and Citigroup (US\$ 5.5 billion).

Financial institutions from FFA countries provided 24% of all identified credit to the selected companies active in agriculture in India. Together these financial institutions provided US\$ 24.7 billion in loans and underwriting services. 10 of the top 15 creditors were Indian financial institutions. 3 were

from Japan and 2 from the Philippines. The largest creditor of agribusiness in India was the State Bank of India, which provided US\$ 3.9 billion in loans and issuance underwriting services to the selected companies. It was followed by compatriot Punjab National Bank (US\$ 3.6 billion) and Japanese Mitsubishi UFJ Financial (US\$ 3.3 billion).

6.3.2 Investors

At the most recent filing date in February 2020, agribusiness companies attracted US\$ 207 billion in investments in their bonds and shares. This is mainly driven by the presence of large international conglomerates among the companies active in agribusiness in India (see section 1.3 for details). 94% of all identified investments were in shares, the remaining 6% was investments in bonds issued by the company. As Figure 156 shows, more

than half of these investments (US\$ 119 billion) were made by financial institutions from the United States. These were

followed by financial institutions from Switzerland (US\$ 18.7 billion) and United Kingdom (US\$ 16.4 billion).

Figure 156: Country of origin investors in agribusiness in India (2020 February, most recent filings)

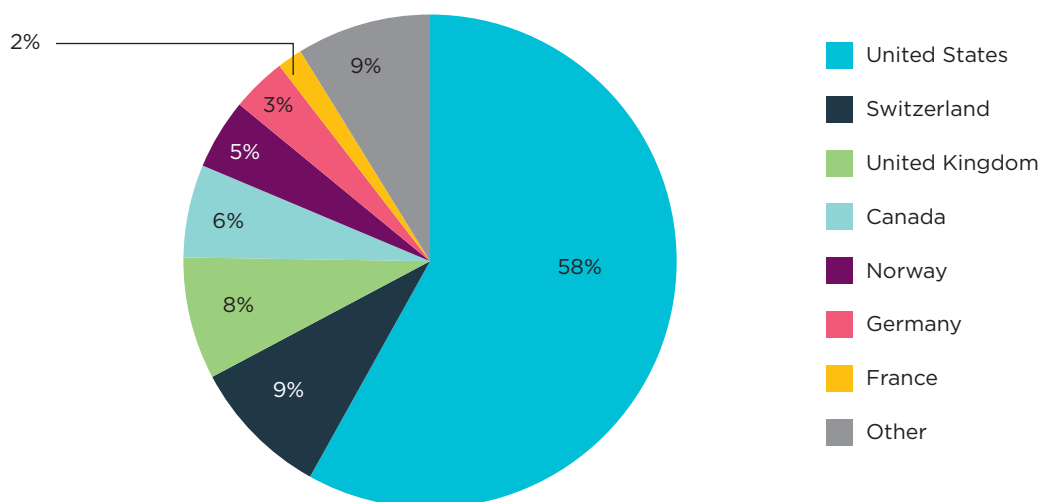


Figure 157: Top 15 agribusiness investors in India (2020 February, most recent filings, US\$ mln)

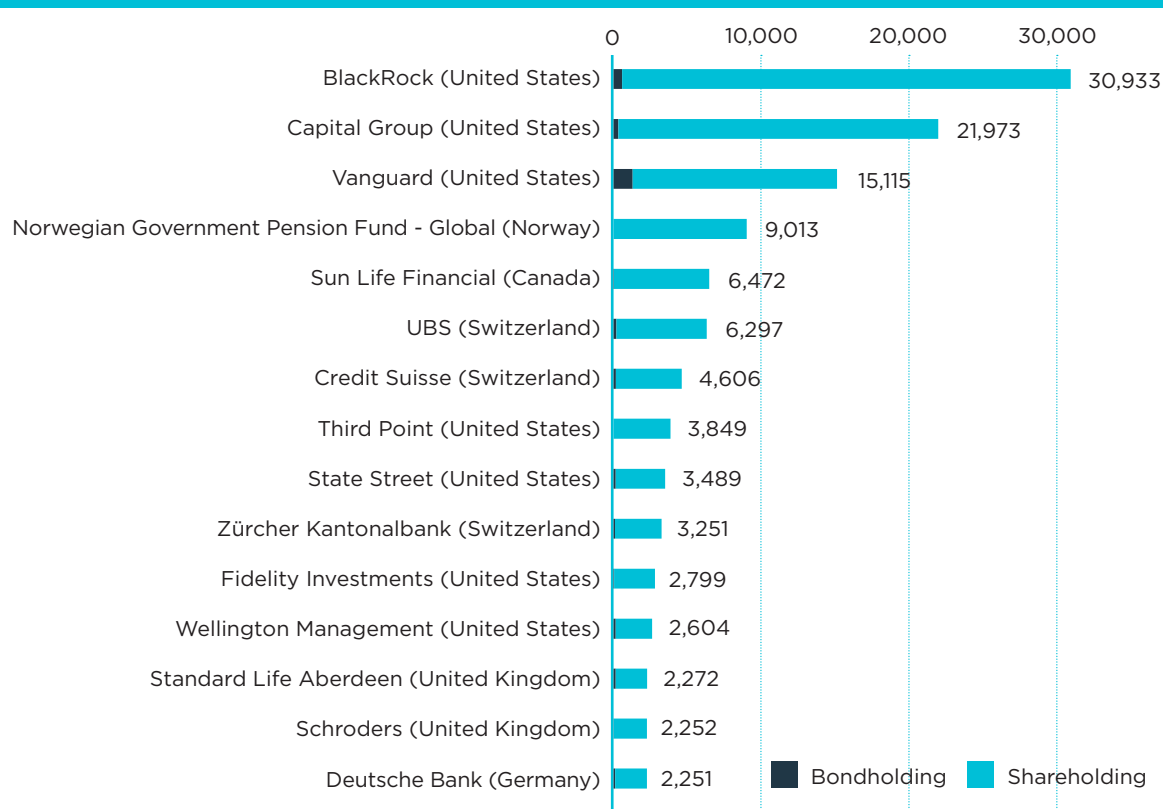
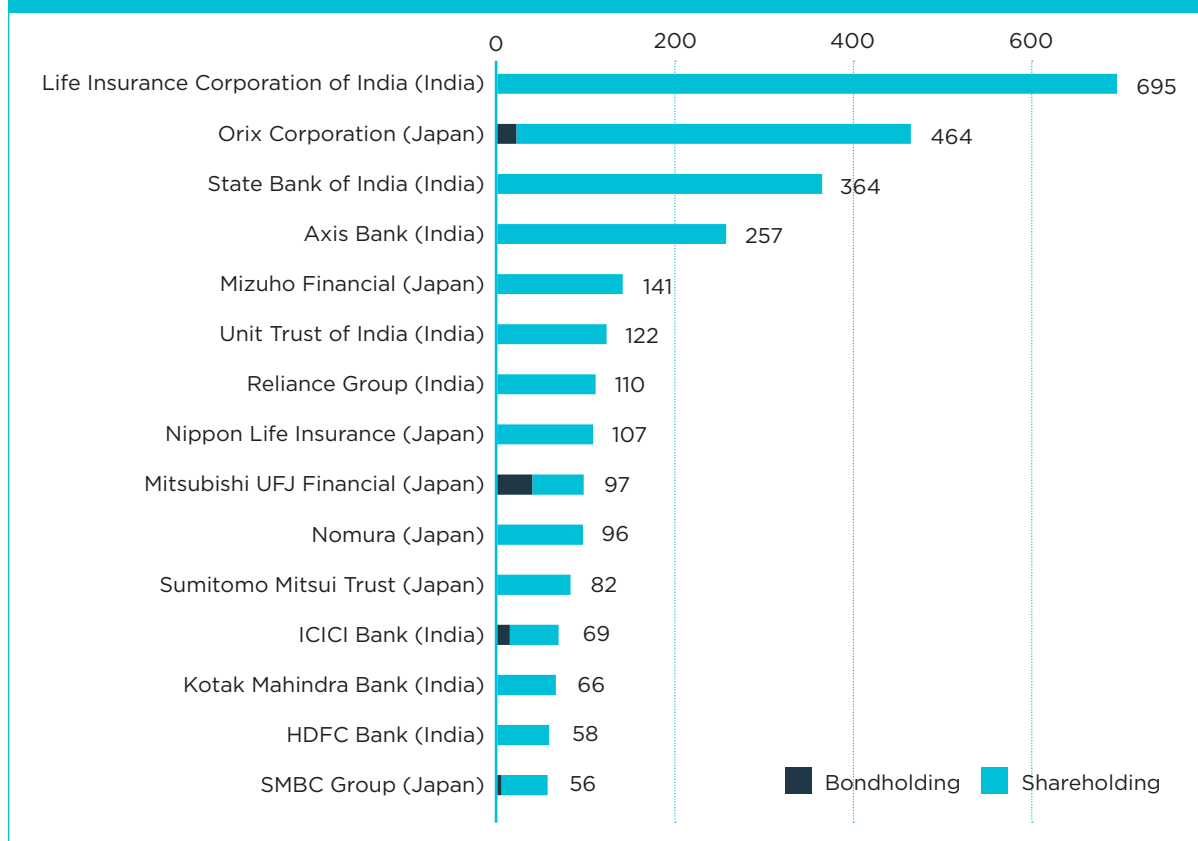


Figure 158: Top 15 FFA agribusiness investors in India (2020 February, most recent filings, US\$ mln)



The top 15 investors held 57% of the identified bond- and shareholdings of the selected agriculture companies active in India. Together these financial institutions had investments of US\$ 118 billion. The largest investor was US asset manager BlackRock, which held bonds and shares worth US\$ 30.5 billion (see Figure 157). It was followed by two other US asset managers Capital Group (US\$ 21.7 billion) and Vanguard (US\$ 14.0 billion).

Financial institutions from FFA countries accounted for 2% of all identified investments in the bonds and shares of agriculture companies active in India. Together they held investments of US\$ 3.2 billion at the most recent filing date in February 2020. Figure 158 shows that the largest investors was Life Insurance Corporation of India, which held bonds and shares of US\$ 695 million in the selected agribusiness companies. It was followed

by Orix Corporation (US\$ 464 million) and the State Bank of India (US\$ 364 million).

6.4 Indonesia

6.4.1 Creditors

The selected agriculture companies active in Indonesia attracted loans and underwriting services of US\$ 44.4 billion in the period 2014-2019. 72% of this credit was provided in the form of loans, and 28% in the form of credit. Figure 159 shows that approximately quarter of the identified credit (US\$ 10.1 billion) was provided by financial institutions from Indonesia. They were followed by financial institutions from Japan (US\$ 7.3 billion) and the Thailand (US\$ 7.0 billion).

The top 15 creditors of agriculture in Indonesia provided 59% of all identified loans and underwriting services to the selected companies. Together these financial institutions provided US\$ 26

billion in credit in the period 2014-2019. The largest creditor was Mizuho Financial, which provided US\$ 3.6 billion in loans and underwriting services to the selected companies during the period of study (see Figure 160). It was followed

by Bank Mandiri (US\$ 2.9 billion) and Krung Thai Bank (US\$ 2.4 billion). The significant role of Thai banks is explained by the role of Thai conglomerate Charoen Pokphand Group in Indonesia (see section 1.3 for details).

Figure 159: Country of origin creditors of agribusiness in Indonesia (2014-2019)

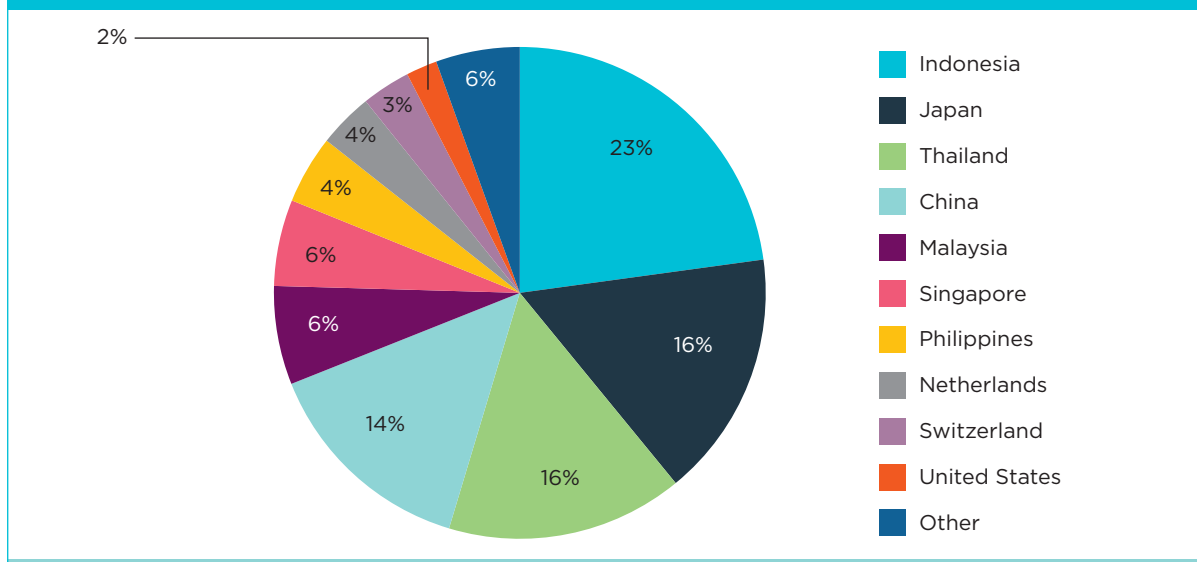


Figure 160: Top 15 agribusiness creditors in Indonesia (2014-2019, US\$ mln)

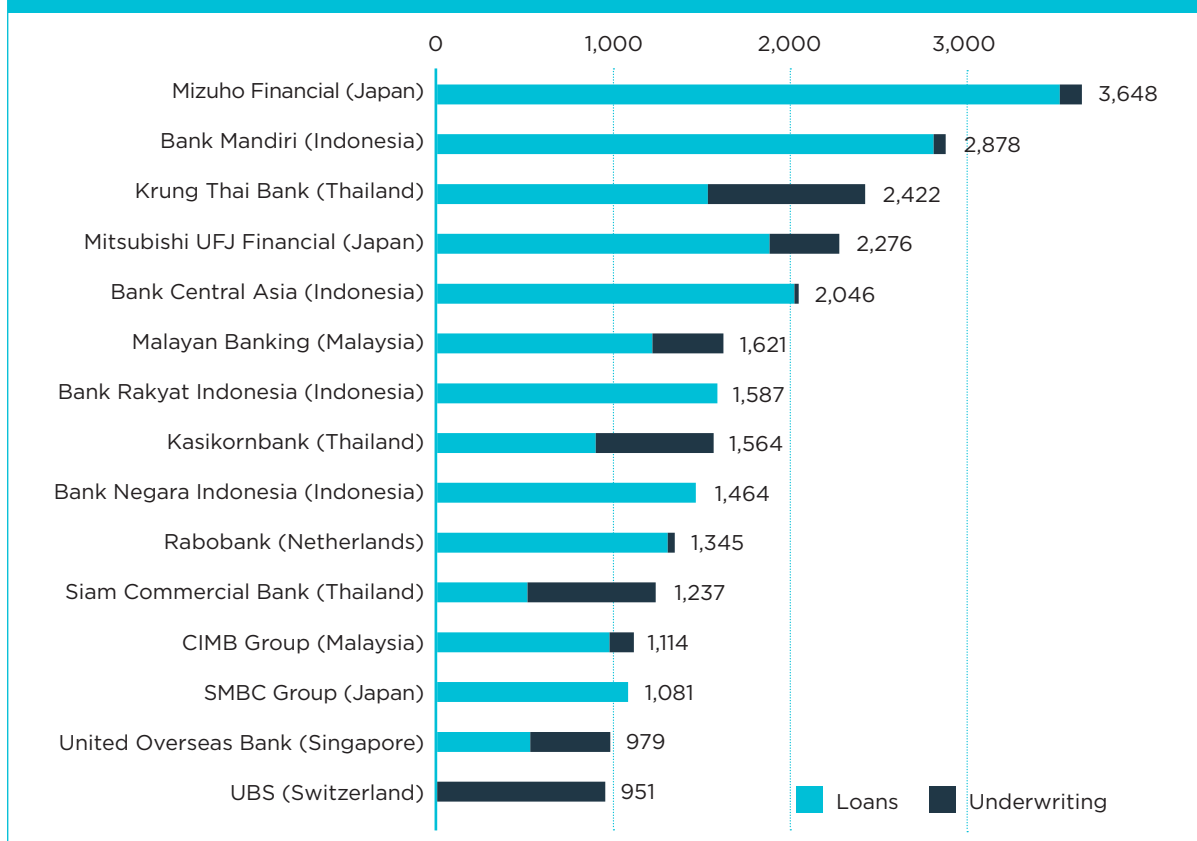
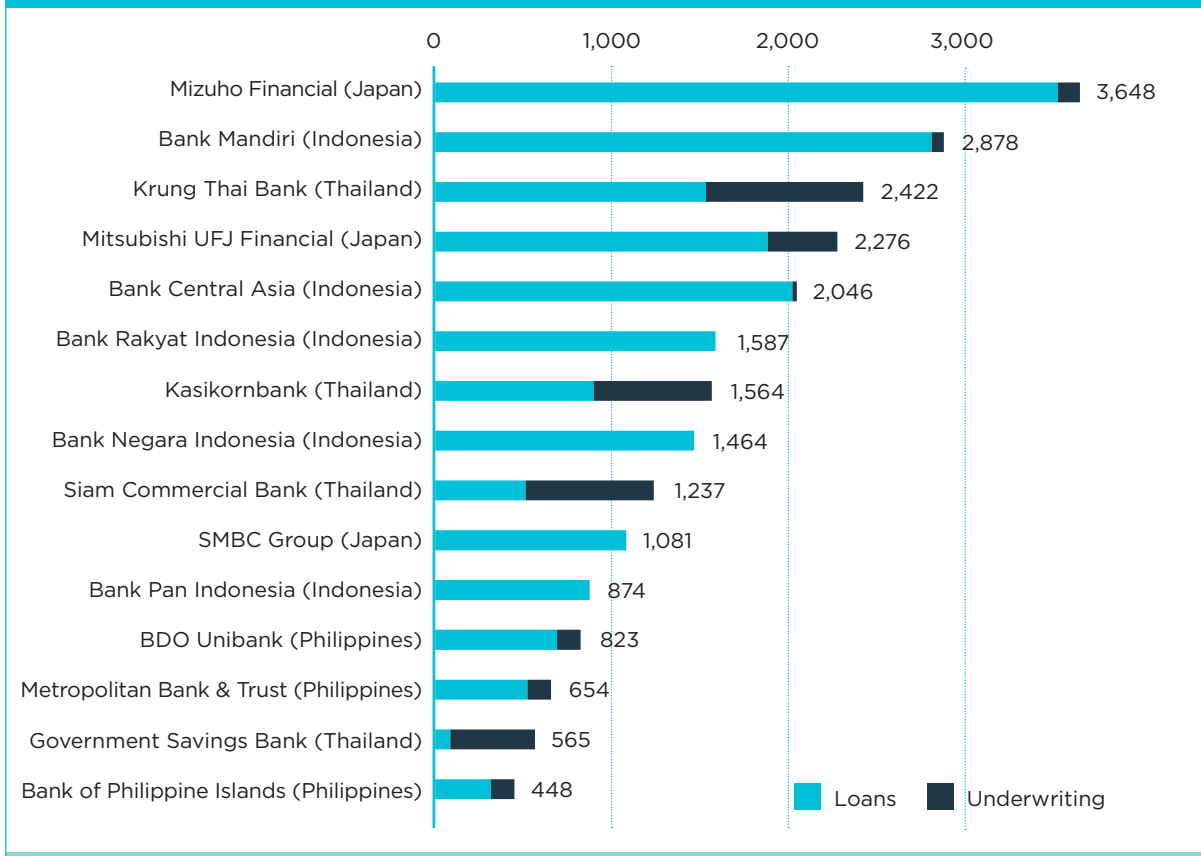


Figure 161: Top 15 FFA agribusiness creditors in Indonesia (2014-2019, US\$ mln)



Financial institutions from FFA countries provided 60% of the identified credit to the agribusiness companies in Indonesia in the period 2014-2019. Together they provided US\$ 26.3 billion in loans and underwriting services. Figure 161 shows that 5 of the top 15 FFA creditors were from Indonesia. 4 financial institutions came from Thailand, and 3 each from Japan and the Philippines. The top 3 creditors from FFA countries didn't differ significantly from the top 3 overall. The largest creditor was Mizuho Financial, which provided US\$ 3.6 billion in loans and underwriting services to the selected companies during the period of study. It was followed by Bank Mandiri (US\$ 2.9 billion) and Krung Thai Bank (US\$ 2.4 billion).

6.4.2 Investors

At the most recent filing date in February 2020, agriculture companies active in

Indonesia attracted US\$ 12.3 billion in investments in their bonds and shares. 97% of these investments were in the form of shareholdings, the remaining 3% was in bonds issued by the selected agribusiness companies. Figure 162 shows that 57% of these investments were held by financial institutions from the United States. These financial institutions held bonds and shares worth US\$ 7.0 billion. They were followed by financial institutions from the United Kingdom (US\$ 1.9 billion) and Bermuda (US\$ 619 million).

The top 15 agribusiness investors in Indonesia accounted for 63% of all identified investments in bonds and shares of the selected companies at the most recent filing date in February 2020. Together these financial institutions held investments worth US\$ 7.8 billion. As Figure 163 shows, the top 3 investors were

all US asset managers. The largest investor was Vanguard with investments of US\$ 1.3 billion in the bonds and shares of the

selected agriculture companies. It was followed by BlackRock (US\$ 1.1 billion) and Schroders (US\$ 866 million).

Figure 162: Country of origin investors in agribusiness in Indonesia (2020 February, most recent filings)

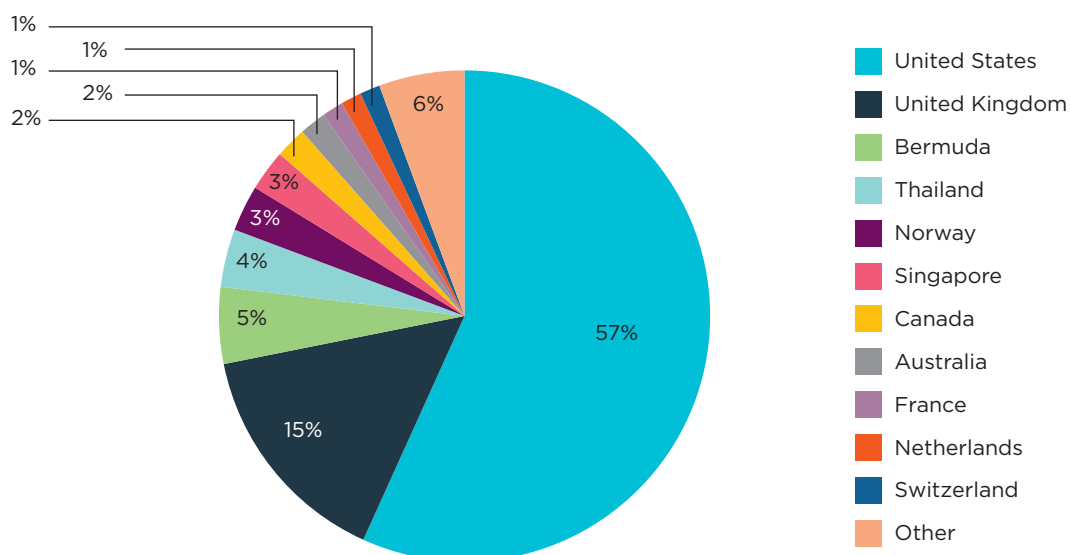


Figure 163: Top 15 agribusiness investors in Indonesia (2020 February, most recent filings, US\$ mln)

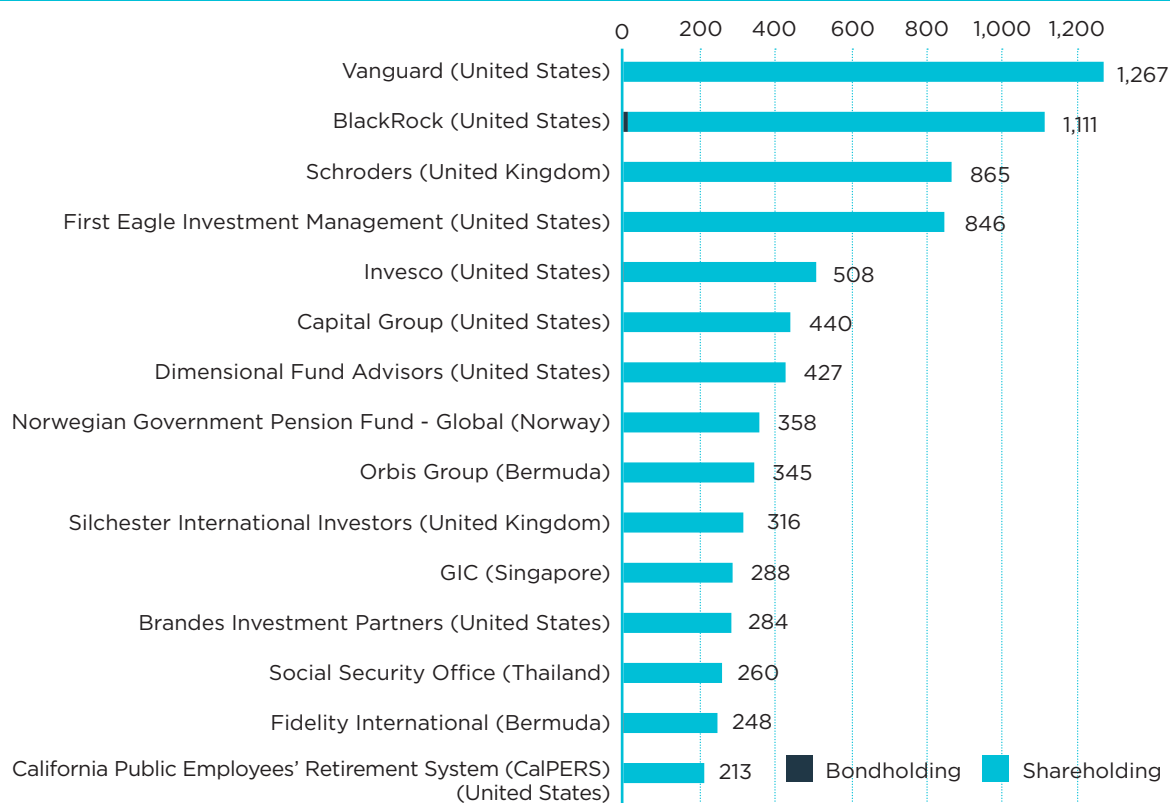
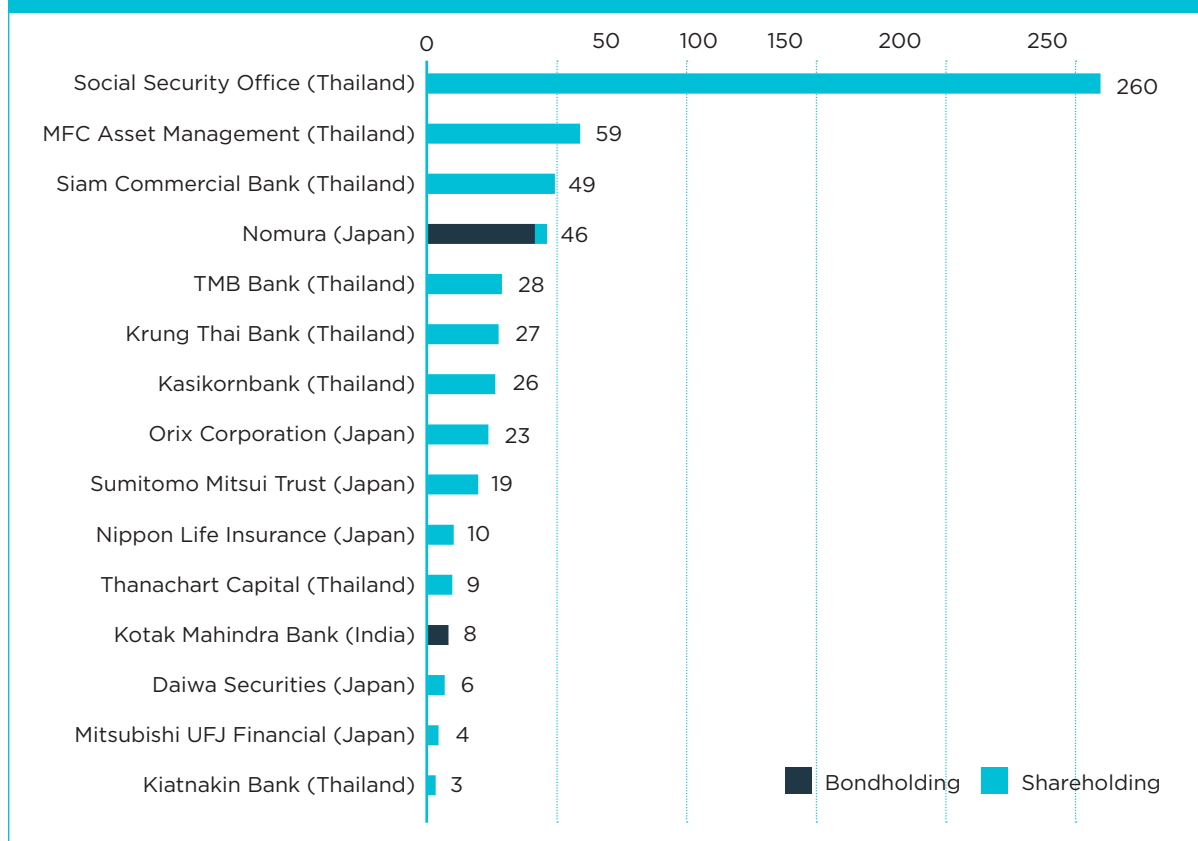


Figure 164: Top 15 FFA agribusiness investors in Indonesia (2020 February, most recent filings, US\$ mln)



Financial institutions from FFA countries accounted for 5% of all identified investments in the bonds and shares of agriculture companies active in Indonesia. Together they held investments of US\$ 599 million at the most recent filing date in February 2020. Figure 164 shows that the largest investors was the Social Security Office of Thailand, which held shares of US\$ 260 million in the selected agribusiness companies. It was followed by the MFC Asset Management (US\$ 59 million) and Siam Commercial Bank (US\$ 49 million).

6.5 Japan

6.5.1 Creditors

In the period 2014-2019, companies engaged in agribusiness in Japan attracted US\$ 81.2 billion in loans and underwriting services. 84% of this was

credit was provided in the form of loans, with the remaining 16% provided in the form of issuance underwriting services. Figure 165 shows that domestic financial institutions from Japan accounted for more than 81% of the identified credit to the selected companies. Together these Japanese financial institutions provided US\$ 65.7 billion in loans and underwriting services. They were followed by financial institutions from the United States (US\$ 8,665 billion) and France (US\$ 3.7 billion).

The top 15 agribusiness creditors in Japan provided approximately 90% of all identified loans and underwriting services to the selected companies. Together these financial institutions provided US\$ 75 billion in credit to agribusiness companies in active in Japan. Figure 166 shows that the largest

creditor was Mizuho Financial, which provided US\$ 27.5 billion in loans and underwriting services in the period 2014-

2019. It was followed by Mitsubishi UFJ Financial (US\$ 17.7 billion) and SMBC Group (US\$ 11.3 billion).

Figure 165: Country of origin creditors of agribusiness in Japan (2014-2019)

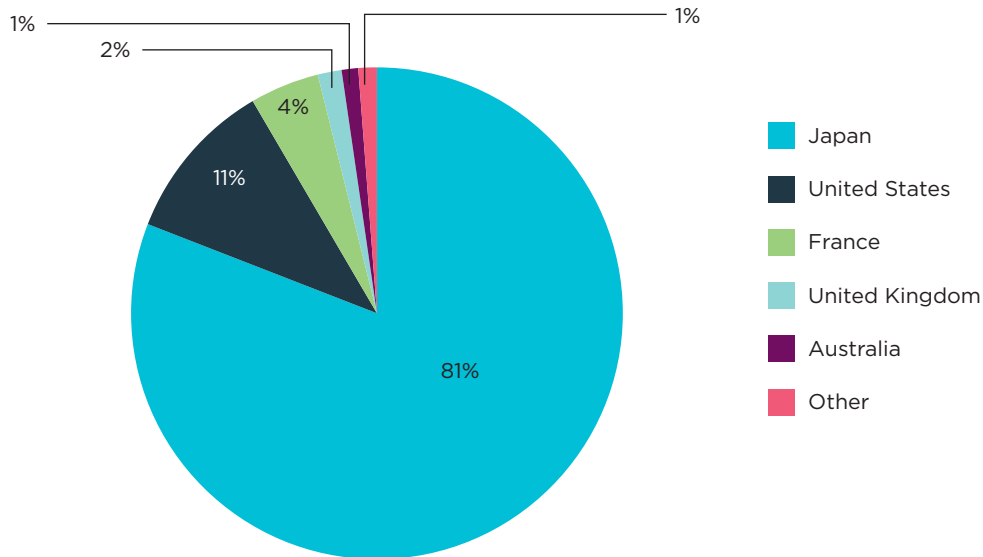


Figure 166: Top 15 agribusiness creditors in Japan (2014-2019, US\$ mln)

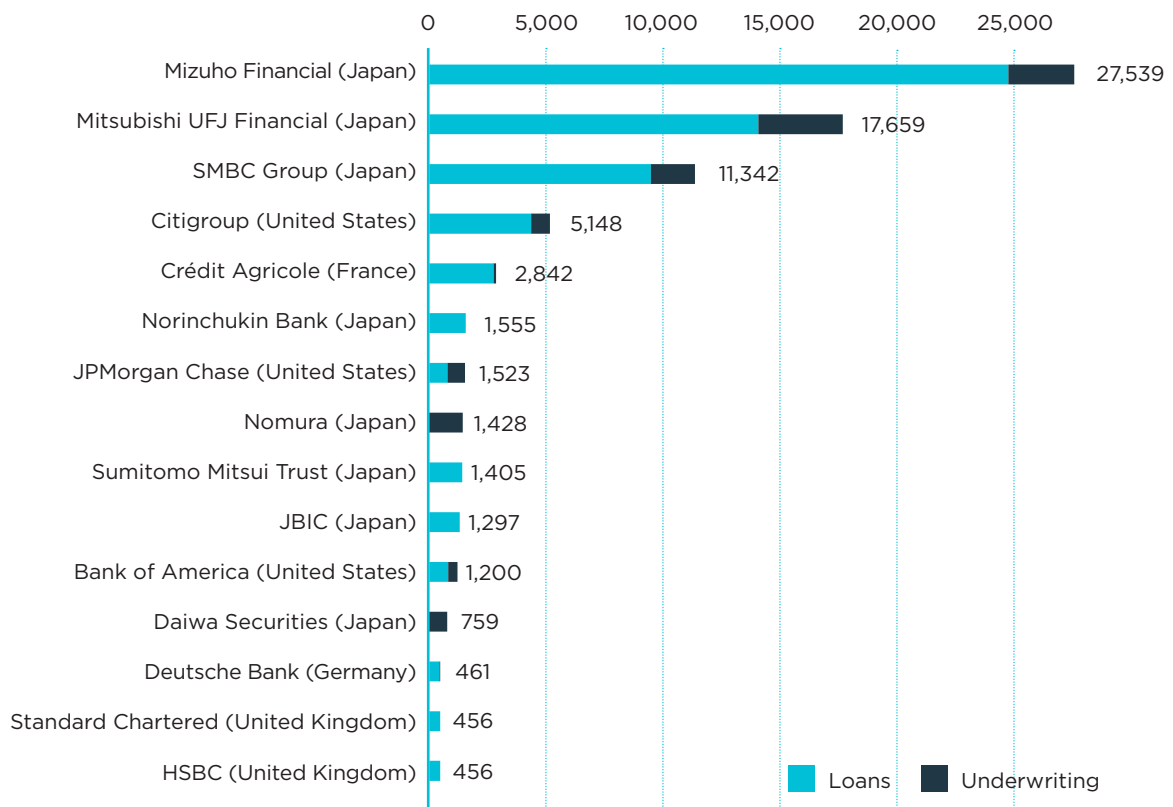
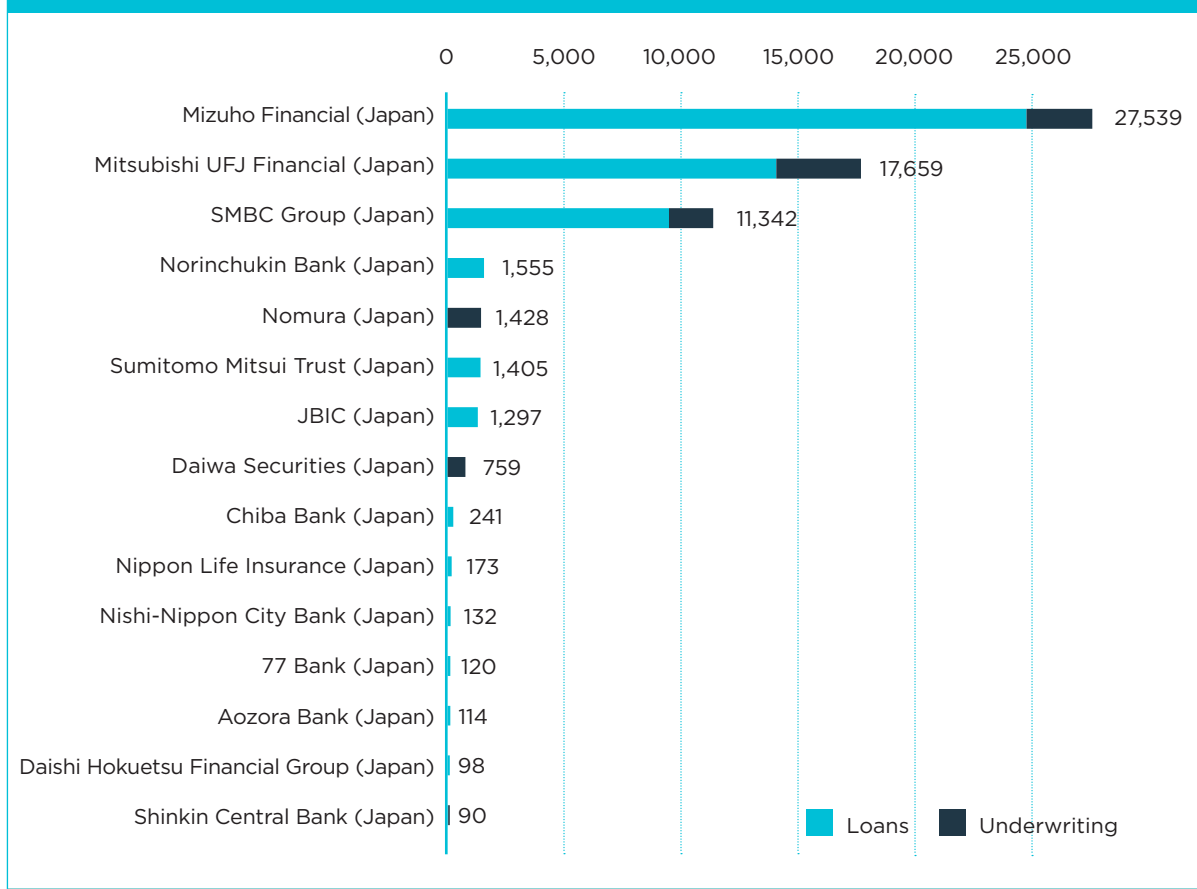


Figure 167: Top 15 FFA agribusiness creditors in Japan (2014-2019, US\$ mln)



Creditors from FFA countries provided 81% of all identified credit to the selected companies. Together these financial institutions provided US\$ 65.7 billion in loans and underwriting services during the period of study. Figure 167 shows that all of the financial institutions were domestic Japanese financial institutions. The top 15 FFA creditors doesn't differ significantly from the top 15 overall creditors of agribusiness companies in Japan. The largest creditor was Mizuho Financial, which provided US\$ 27.5 billion in loans and underwriting services in the period 2014-2019. It was followed by Mitsubishi UFJ Financial (US\$ 17.7 billion) and SMBC Group (US\$ 11.3 billion).

6.5.2 Investors

At the most recent filing date in February 2020, agriculture companies active in

Japan attracted investments of the US\$ 67 billion in their bonds and shares. Nearly all (99.8%) of these investments were in shares, with remaining 0.2% invested in bonds issued by the selected agribusiness companies. Figure 168 shows that financial institutions from Japan accounted for more than half of these investments. Japanese financial institutions held bonds and shares worth US\$ 34.7 billion in February 2020. They were followed by financial institutions from United States (US\$ 21.9 billion) and Norway (US\$ 2.1 billion).

The top 15 investors held almost three quarters (74%) of the identified bond- and shareholding positions in the selected agriculture companies active in Japan at the most recent filing date in February 2020. Together these financial institutions held investments worth

US\$ 49.8 billion. The largest investor was Nomura which held investments of US\$ 6.4 billion (see Figure 169). It was

followed by Sumitomo Mitsui Trust (US\$ 5.7 billion) and Mizuho Financial (US\$ 5.3 billion).

Figure 168: Country of origin investors in agribusiness in Japan (2020 February, most recent filings)

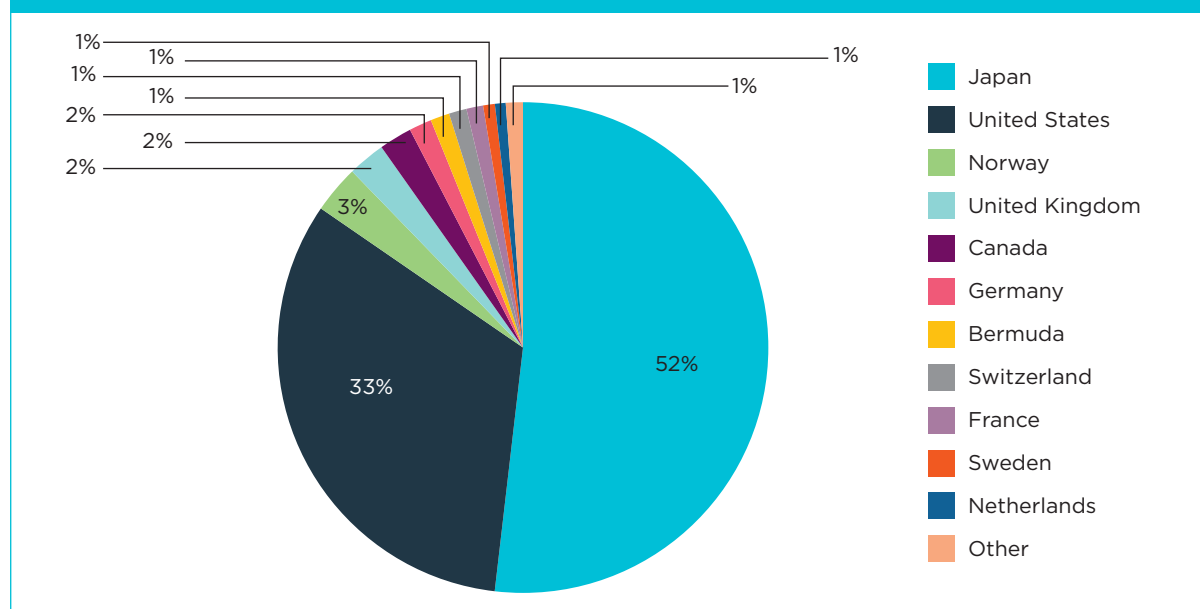


Figure 169: Top 15 agribusiness investors in Japan (2020 February, most recent filings, US\$ mln)

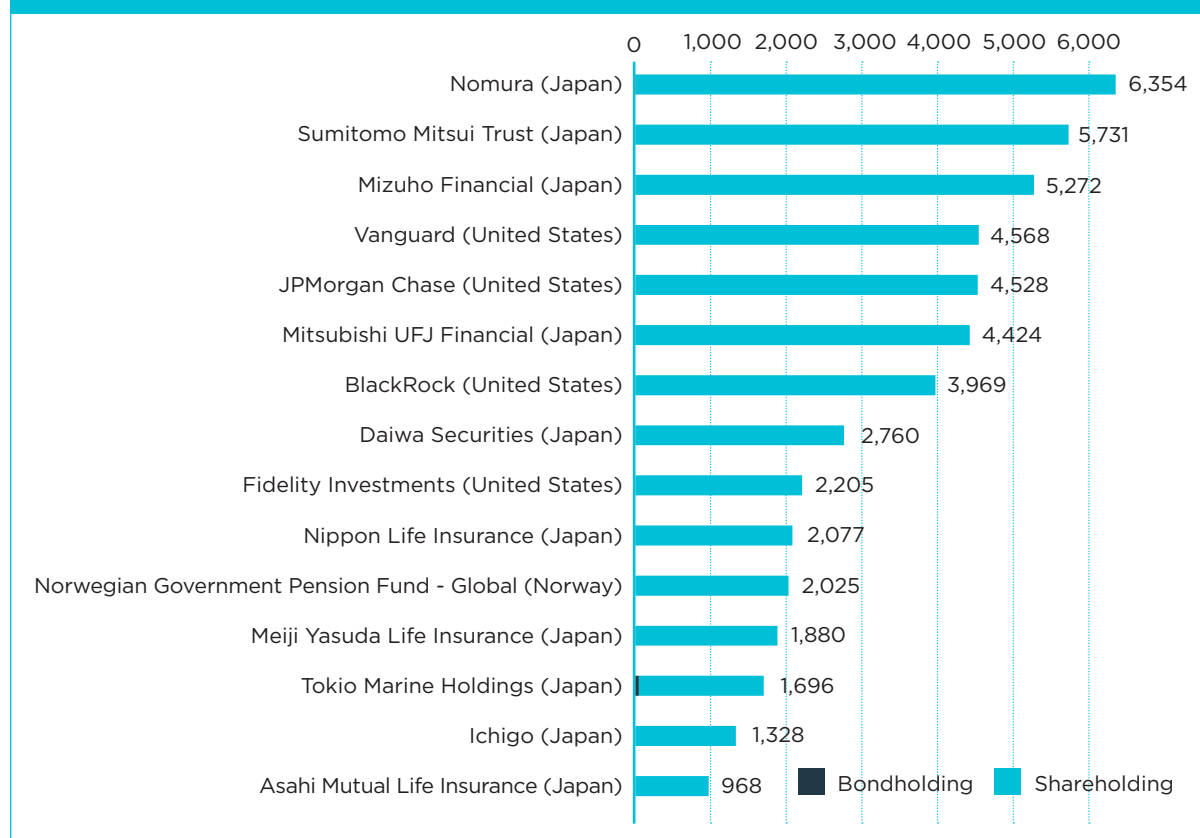
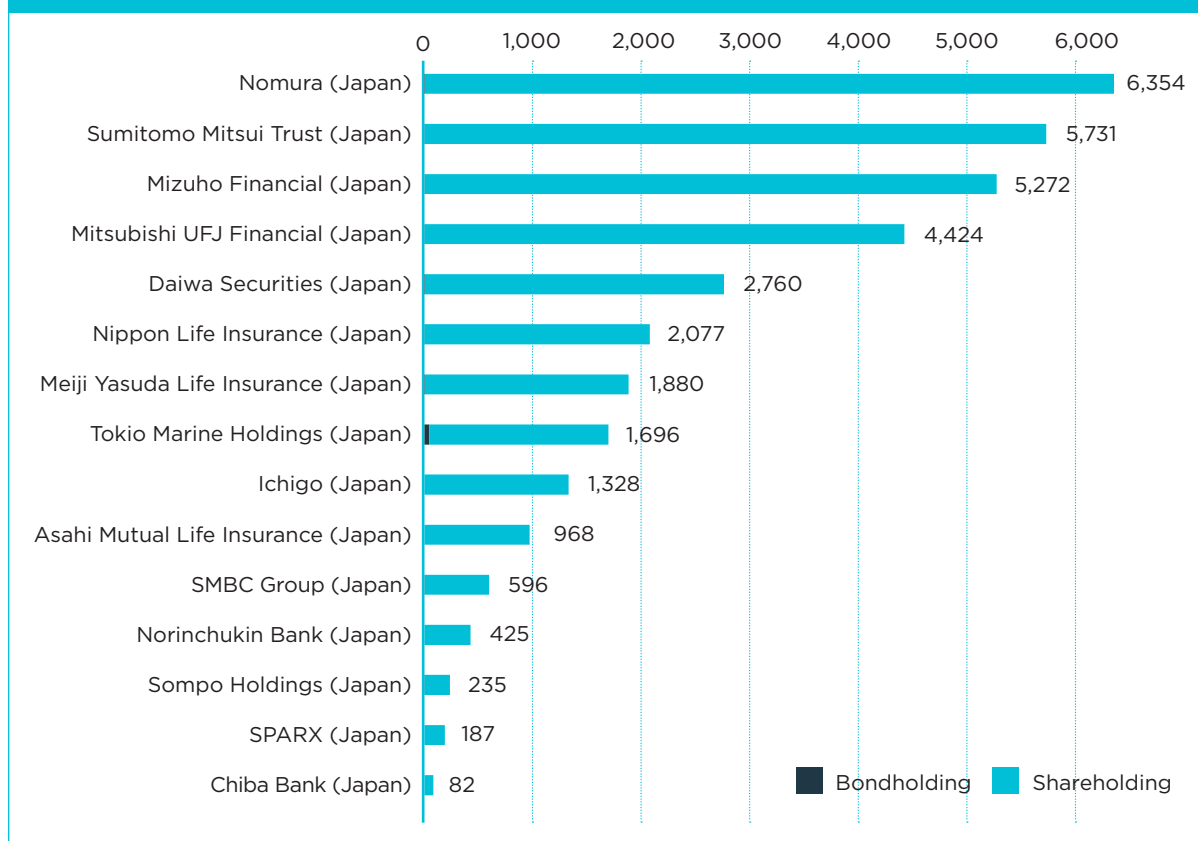


Figure 170: Top 15 FFA agribusiness investors in Japan (2020 February, most recent filings, US\$ mln)



The top 15 FFA investors held 52% of the bonds and shares of the selected agriculture companies active in Japan. Together these financial institutions held US\$ 34.7 billion in the bonds and shares of the selected companies at the most recent filing date in February 2020. Figure 170 shows that the top 15 FFA investors were all Japanese financial institutions. Therefore, the top 3 investors doesn't differ from the top 3 overall invests in agriculture in Japan. The largest investor was Nomura which held investments of US\$ 6.4 billion. It was followed by Sumitomo Mitsui Trust (US\$ 5.7 billion) and Mizuho Financial (US\$ 5.3 billion).

6.6 Philippines

6.6.1 Creditors

Between 2014 and 2019, financial institutions provided US\$ 11.3 billion in loans and underwriting services to

companies engaged in agriculture in the Philippines. 58% of this credit was provided in the form of loans, and the remaining 42% in issuance underwriting services. Figure 171 shows that financial institutions from the Philippines provided more than a third of all credit to the selected companies. These financial institutions together provided US\$ 4.1 billion in loans and underwriting services to the selected agribusiness companies. They were followed by financial institutions from Japan (US\$ 1.7 billion) and the United Kingdom (US\$ 1.2 billion).

The top 15 creditors provided 71% of all identified loans and underwriting services to the selected agriculture companies active in the Philippines in the period 2014-2019. Together these financial institutions provided credit worth US\$ 8.1 billion. The top 3 creditors were all financial institutions from the Philippines. The largest was BDO

Unibank, which provided US\$ 1.2 billion in loans and underwriting services to the selected companies (see Figure 172). It was

followed by Bank of Philippine Islands (US\$ 849 million) and Metropolitan Bank & Trust (US\$ 820 million).

Figure 171: Country of origin creditors of agribusiness in the Philippines (2014-2019)

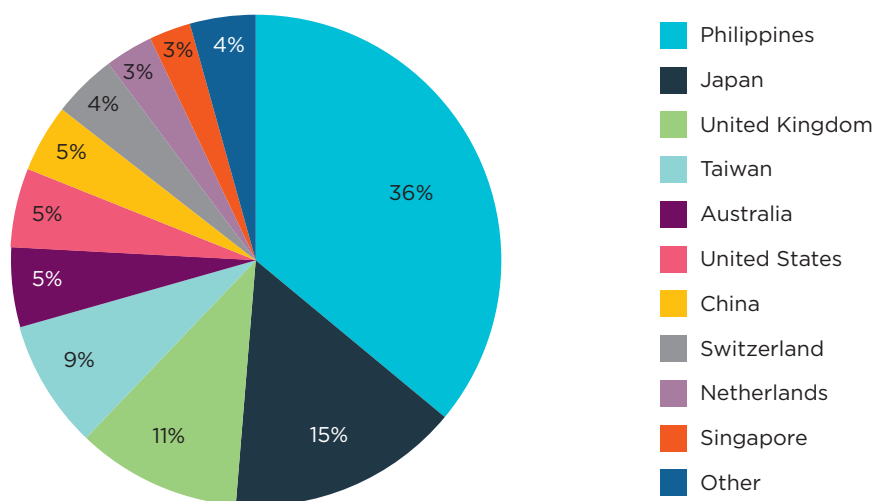


Figure 172: Top 15 agribusiness creditors in the Philippines (2014-2019, US\$ mln)

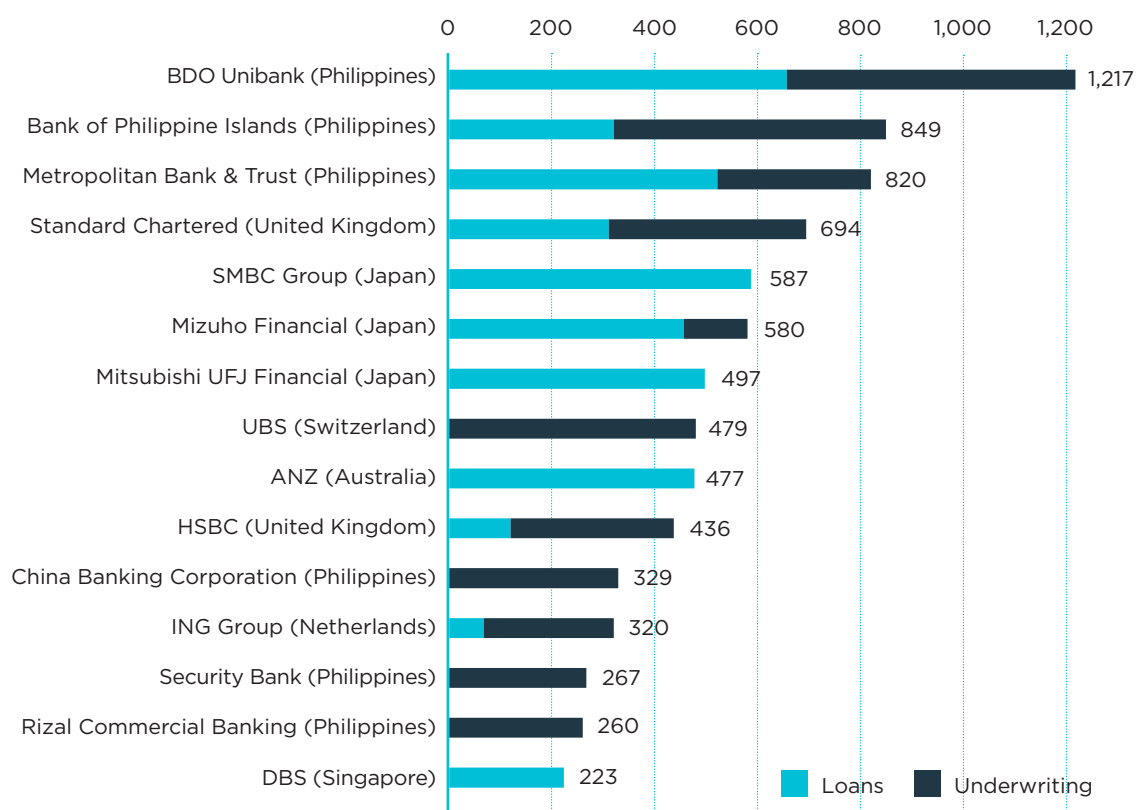
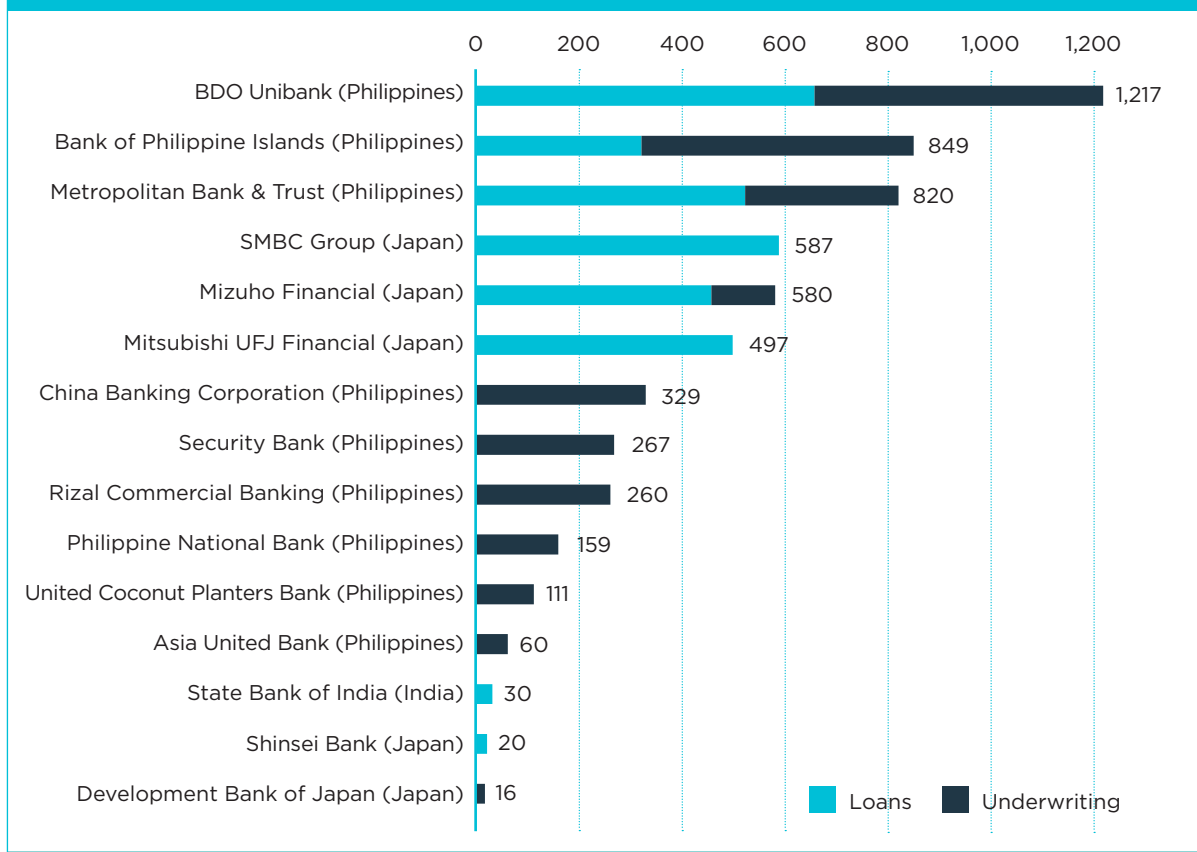


Figure 173: Top 15 FFA agribusiness creditors in the Philippines (2014-2019, US\$ mln)



Financial institutions from FFA countries provided more than half (52%) of all identified credit to the selected companies in the period 2014-2019. Together these financial institutions provided US\$ 5.8 billion in loans and underwriting services. 9 of the top 15 creditors were financial institutions from the Philippines. A further 5 were from Japan and 1 from India.

As with the top 3 overall, the top 3 creditors were all financial institutions from the Philippines. The largest was BDO Unibank, which provided US\$ 1.2 billion in loans and underwriting services to the selected companies (see Figure 173). It was followed by Bank of Philippine Islands (US\$ 849 million) and Metropolitan Bank & Trust (US\$ 820 million).

6.6.2 Investors

At the most recent filing date in February 2020, agriculture companies

active in the Philippines attracted investments of US\$ 1.5 billion in their bonds and shares. 98% of these investments were held in shares, and the remaining 2% in bonds issued by the selected companies. Figure 174 shows that just under three quarters of these investments were held by financial institutions from the United States. These financial institutions held investments of US\$ 1.1 billion. They were followed by investors from the United Kingdom (US\$ 122 million) and Bermuda (US\$ 89 million).

The top 15 investors in agribusiness in the Philippines together held approximately 80% of all identified investments in the bonds and shares of the selected companies. These financial institutions together held US\$ 1.2 billion in investments. The largest among these investors was Brandes Investment

Partners which held bonds and shares worth US\$ 284 million (see Figure 175). It was followed by two other US-based

asset managers – Vanguard (US\$ 243 million) and Dimensional Fund Advisors (US\$ 137 million).

Figure 174: Country of origin investors in agribusiness in the Philippines (2020 February, most recent filings)

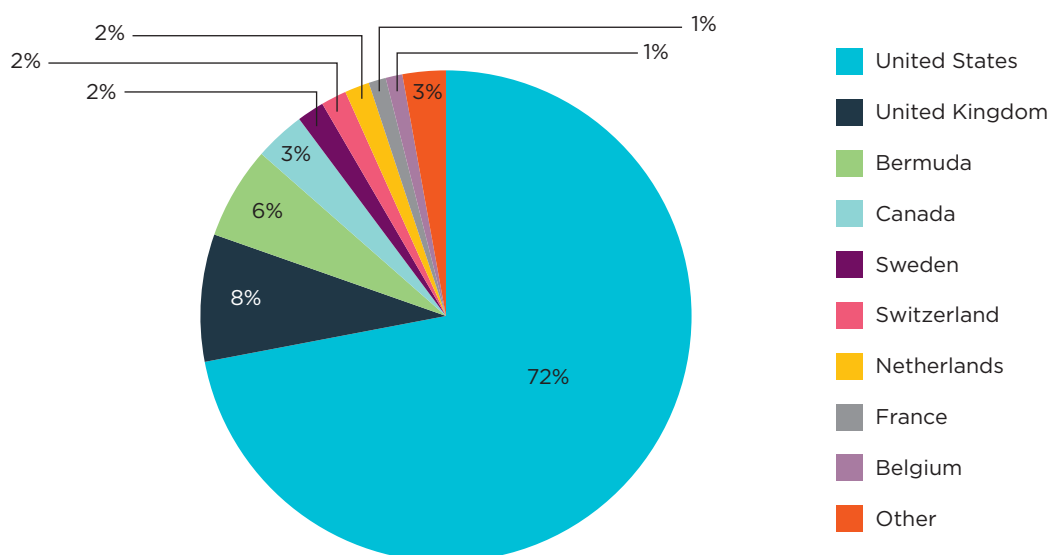


Figure 175: Top 15 agribusiness investors in the Philippines (2020 February, most recent filings, US\$ mln)

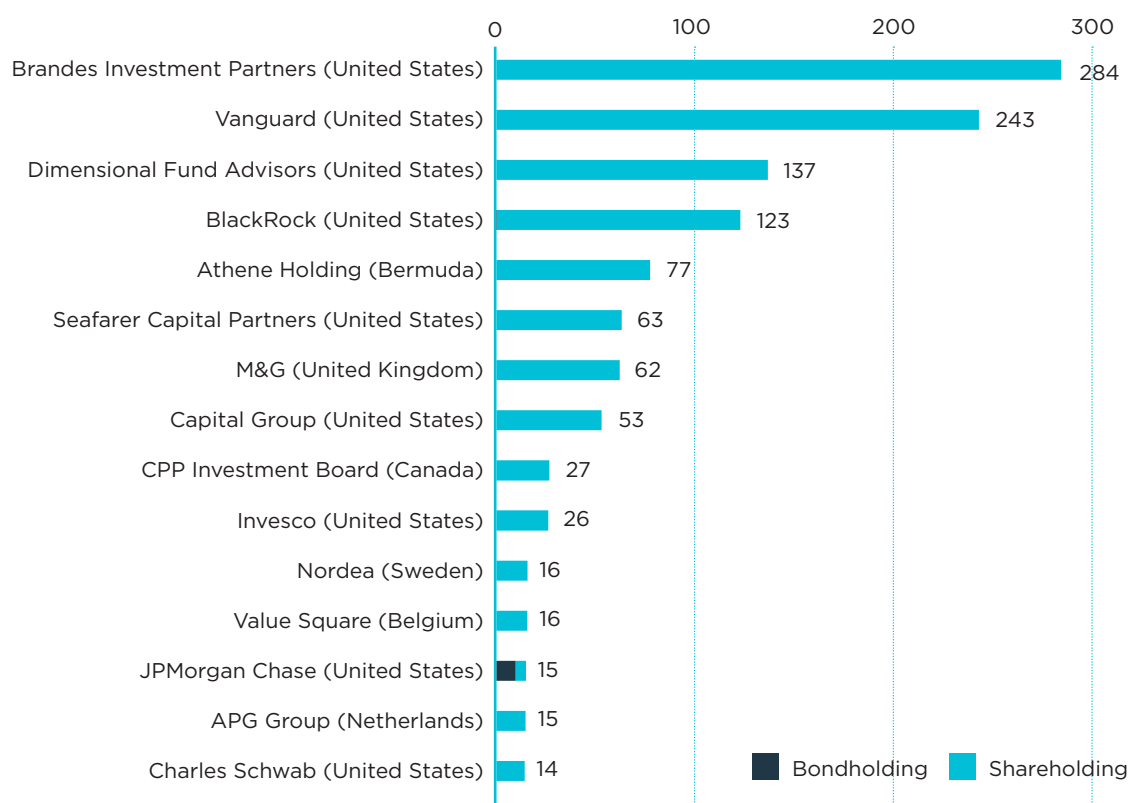
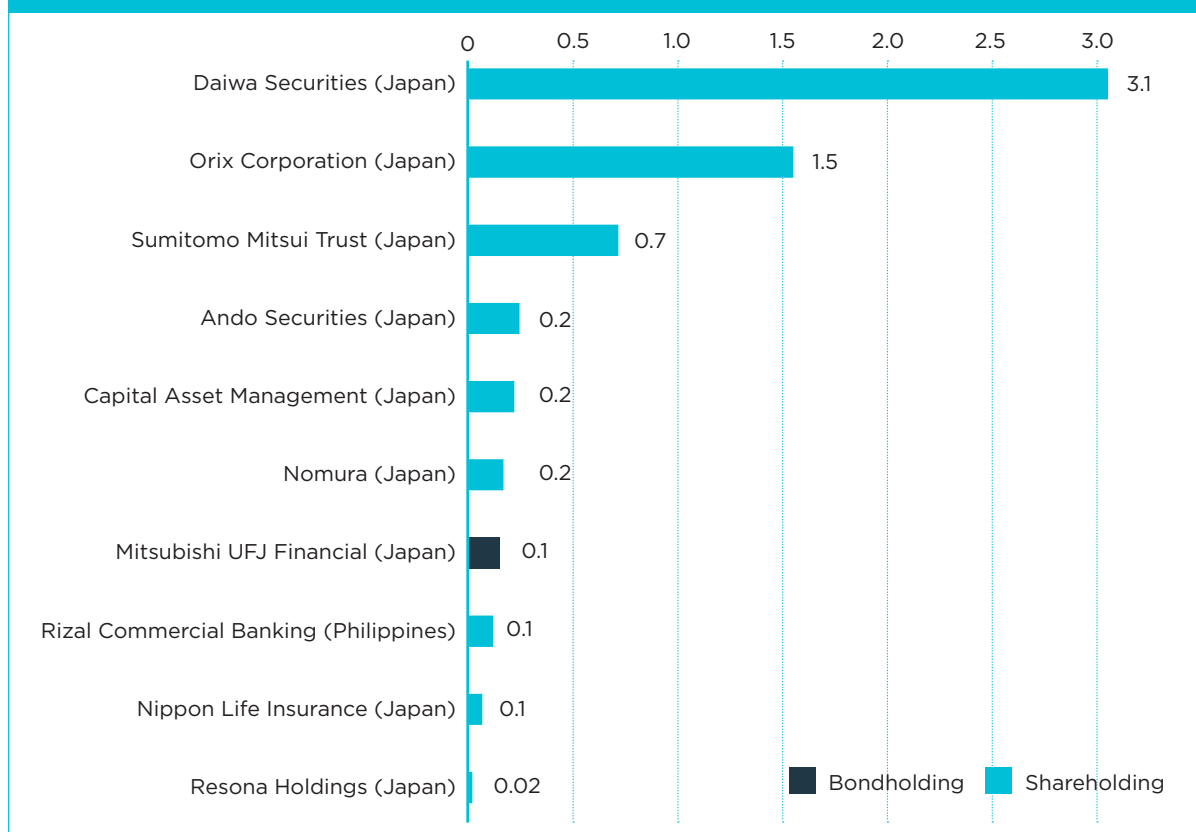


Figure 176: Top 15 FFA agribusiness investors in the Philippines (2020 February, most recent filings, US\$ mln)



Investors from FFA countries held 0.4% of the identified bond- and shareholdings of the selected agriculture companies active in the Philippines. Together these financial institutions held US\$ 6.3 million in the bonds and shares of the selected companies at the most recent filing date in February 2020. 10 investors from FFA countries were identified. Figure 176 shows that 9 of these investors were Japanese financial institutions, 1 was from the Philippines. The largest investor was Daiwa Securities which held investments of US\$ 3.1 million. It was followed by Orix Corporation (US\$ 1.5 million) and Sumitomo Mitsui Trust (US\$ 0.7 million).

6.7 Thailand

6.7.1 Creditors

The selected agriculture companies active in Thailand attracted US\$ 21.1 billion in loans and underwriting services in

the period 2014-2019. 60% of this credit was provided in the form of loans, and 40% in issuance underwriting services. As Figure 177 shows, more than half of this credit was provided by domestic financial institutions in Thailand. Together these financial institutions provided US\$ 10.9 billion in loans and underwriting services. They were followed by financial institutions from Japan (US\$ 3.3 billion) and the United States (US\$ 1.5 billion).

The top 15 creditors provided more than three quarters (79%) of the identified loans and underwriting services to the selected agriculture companies active in Thailand. Together these financial institutions provided US\$ 16.7 billion in credit to the selected companies. As Figure 178 shows, the three largest creditors are all domestic financial institutions from Thailand. The largest

was Krung Thai Bank which provided US\$ 2.82 billion in loans and underwriting services to the selected companies in

the period 2014-2019. It was followed by Siam Commercial Bank (US\$ 2.80 billion) and Kasikornbank (US\$ 2.0 billion).

Figure 177: Country of origin creditors of agribusiness in Thailand (2014-2019)

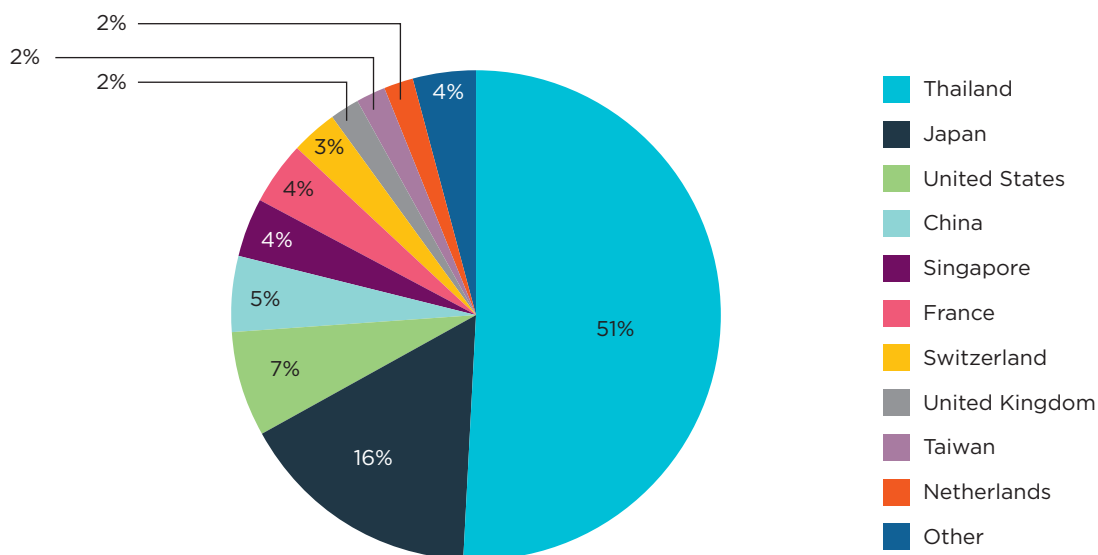


Figure 178: Top 15 agribusiness creditors in Thailand (2014-2019, US\$ mln)

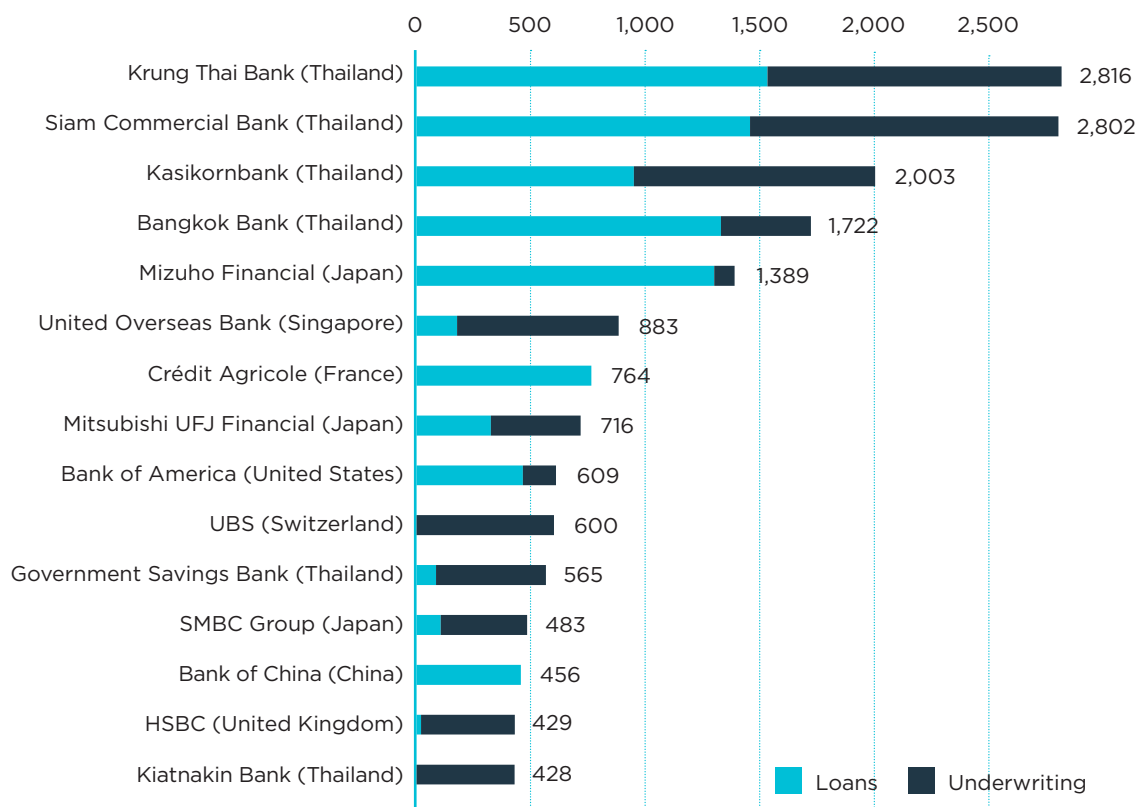
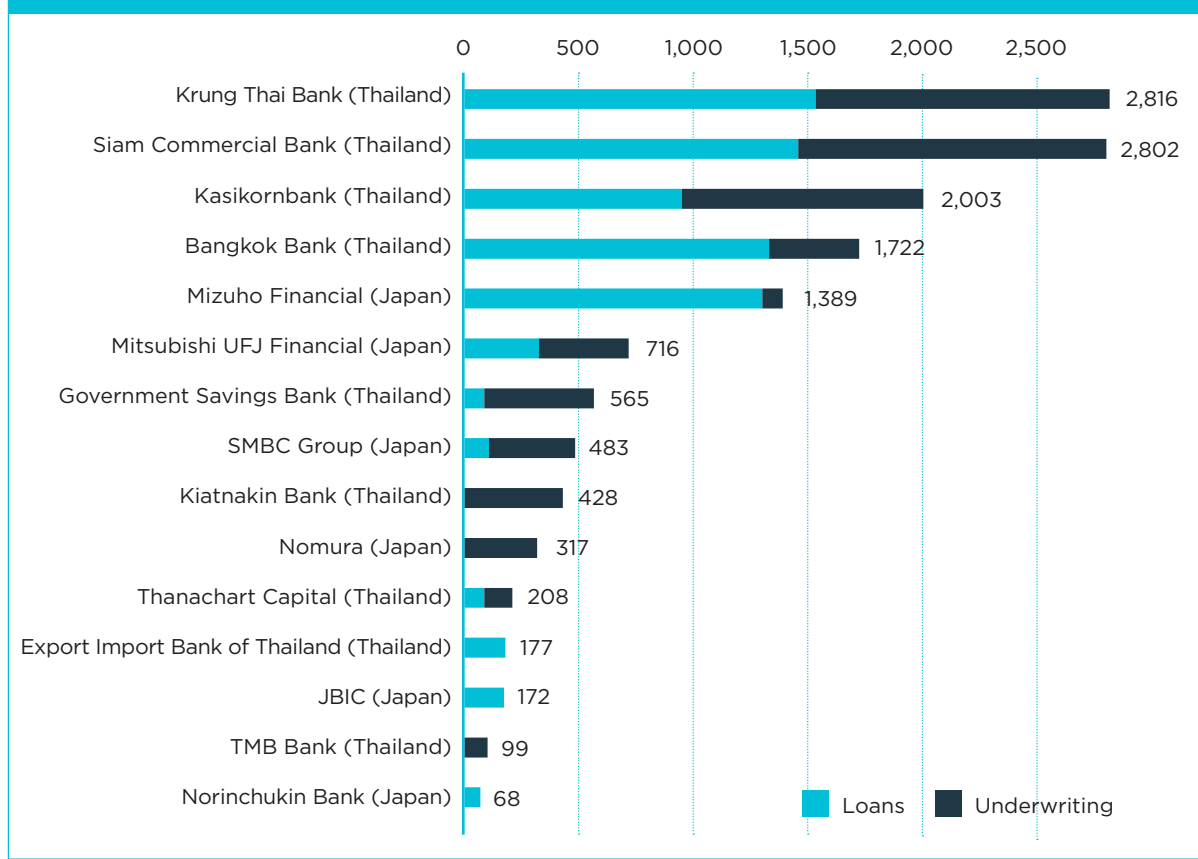


Figure 179: Top 15 FFA agribusiness creditors in Thailand (2014-2019, US\$ mln)



Financial institutions from FFA countries provided just over two thirds (68%) of all identified credit to the selected companies active in agriculture in Thailand. Together these financial institutions provided US\$ 14.2 billion in loans and underwriting services to the selected companies. Figure 179 shows that 9 of the top 15 FFA creditors were domestic Thai financial institutions. A further 6 financial institutions were from Japan. The top 3 creditors were the same as the top 3 creditors overall. The largest was Krung Thai Bank which provided US\$ 2.82 billion in loans and underwriting services to the selected companies in the period 2014-2019. It was followed by Siam Commercial Bank (US\$ 2.80 billion) and Kasikornbank (US\$ 2.0 billion).

6.7.2 Investors

Agriculture companies active in Thailand attracted US\$ 2.4 billion in investments in

their bonds and shares at the most recent filing date in February 2020. Almost all of the identified investments (99.8%) were in shareholdings. The remainder was investments in bonds issued by the selected companies. Figure 180 shows that just over a third of these investments were held by domestic financial institutions from Thailand. Together these financial institutions held investments worth US\$ 846 million in the bonds and shares of the selected companies active in agriculture in Thailand. They were followed by investors from the United States (US\$ 774 million) and Singapore (US\$ 409 million).

The top 15 investors held nearly 80% of the investments at the most recent filing date in February 2020. Together these financial institutions held bonds and shares of the selected companies worth US\$ 1.9 billion. The largest investor was

the Social Security Office of Thailand which held investment of US\$ 372 million (see Figure 181). It was followed by

Singaporean GIC (US\$ 344 million) and US asset manager Vanguard (US\$ 333 million).

Figure 180: Country of origin investors in agribusiness in Thailand (2020 February, most recent filings)

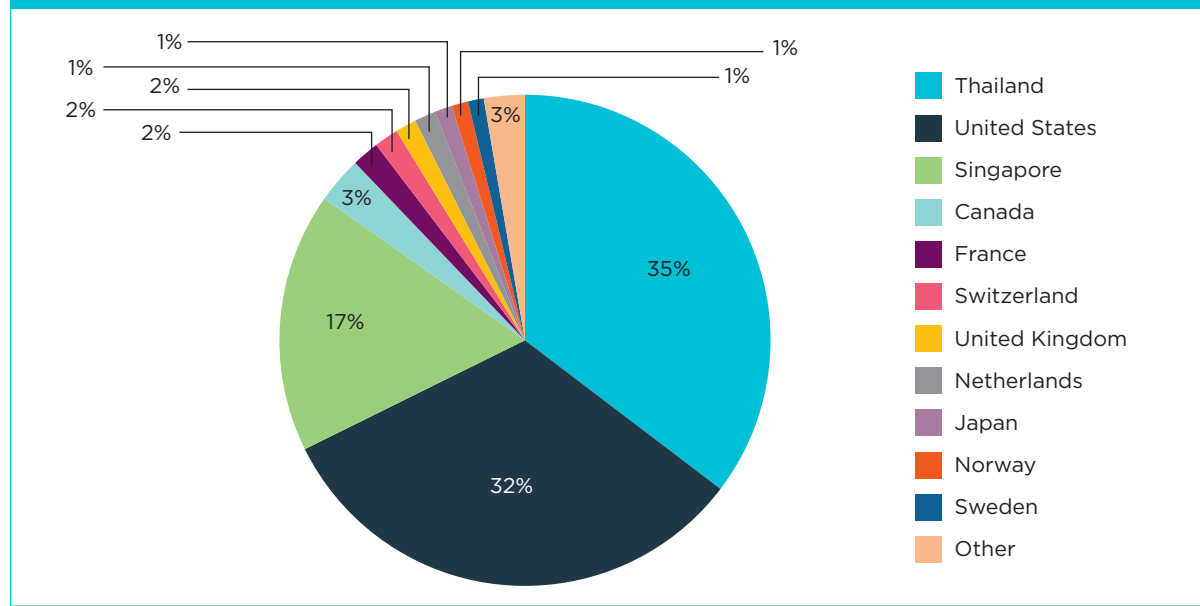


Figure 181: Top 15 agribusiness investors in Thailand (2020 February, most recent filings, US\$ mln)

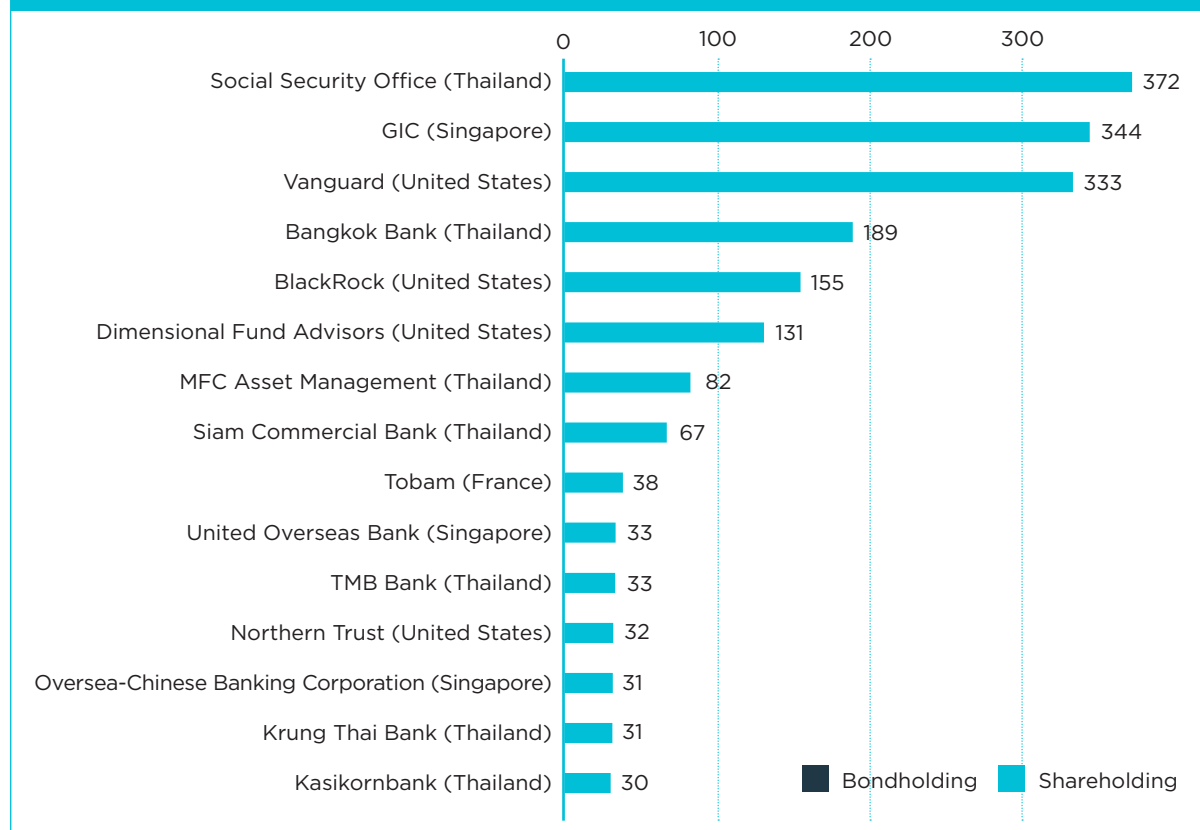
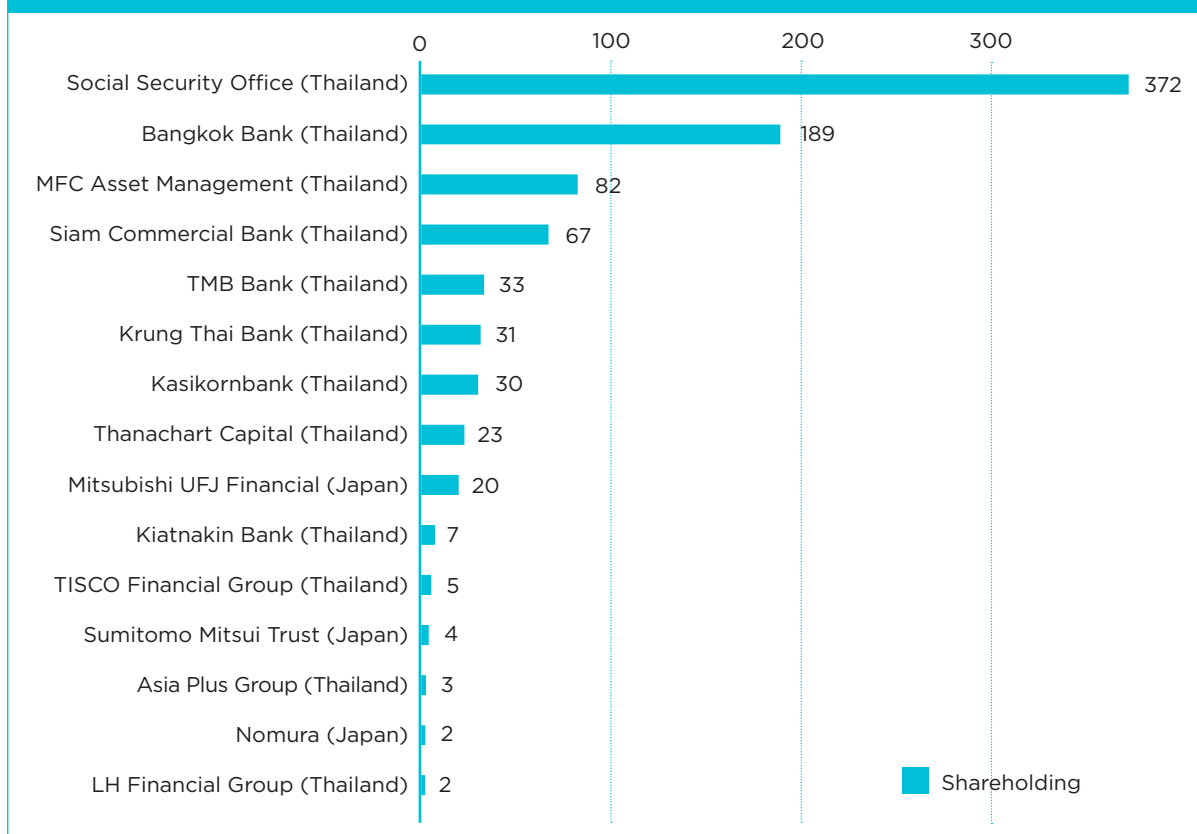


Figure 182: Top 15 FFA agribusiness investors in Thailand (2020 February, most recent filings, US\$ mln)



Financial institutions from FFA countries held more than one third (36%) of the identified investments in bonds and shares of the selected companies. Together these financial institutions held US\$ 871 million in investments at the most recent filing date. 12 of the top 15 FFA agribusiness investors were domestic Thai financial institutions (see Figure 182). The largest investor was the Social Security Office of Thailand which held investment of US\$ 372 million. It was followed by Bangkok Bank (US\$ 189 million) and MFC Asset Management (US\$ 82 million).

6.8 Vietnam

6.8.1 Creditors

In the period 2014-2019, the selected agriculture companies active in Vietnam attracted US\$ 1.1 billion in loans and underwriting services. Of this, 10% was

provided in the form of loans, and 90% in issuances underwriting services. Figure 183 shows that domestic financial institutions from Vietnam provided approximately 60% of the identified loans and underwriting services. Together these financial institutions provided US\$ 646 million in the period 2014-2019. They were followed by financial institutions from the United Kingdom (US\$ 147 million) and Switzerland (US\$ 105 million).

Credit provided by 11 financial institutions to the agriculture sector in Vietnam was identified. Figure 184 shows that the largest among these creditors was the Vietcombank, which provided US\$ 412 million in underwriting services to the selected companies engaged in agriculture in Vietnam. It was followed by Standard Chartered (US\$ 147) and Vietnamese Techcombank (US\$ 129).

Of the identified creditors of the companies engaged in agriculture in Vietnam, three were from FFA countries.

All three were Vietnamese financial institutions (see Figure 185).

Figure 183: Country of origin creditors of agribusiness in Vietnam (2014-2019)

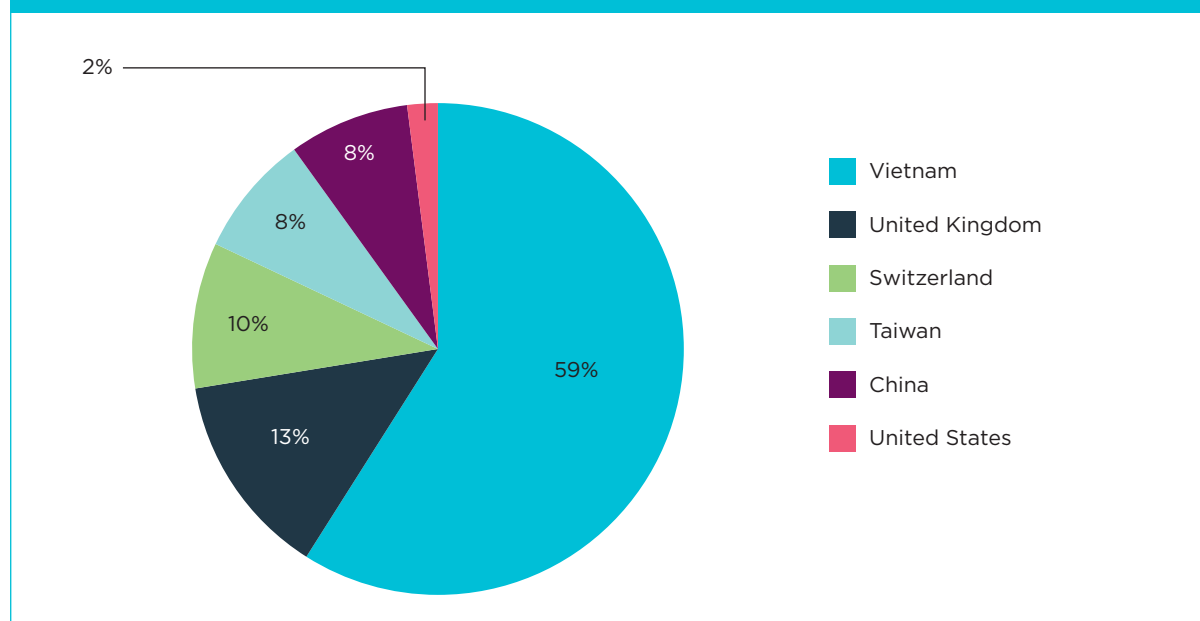


Figure 184: Top 15 agribusiness creditors in Vietnam (2014-2019, US\$ mln)

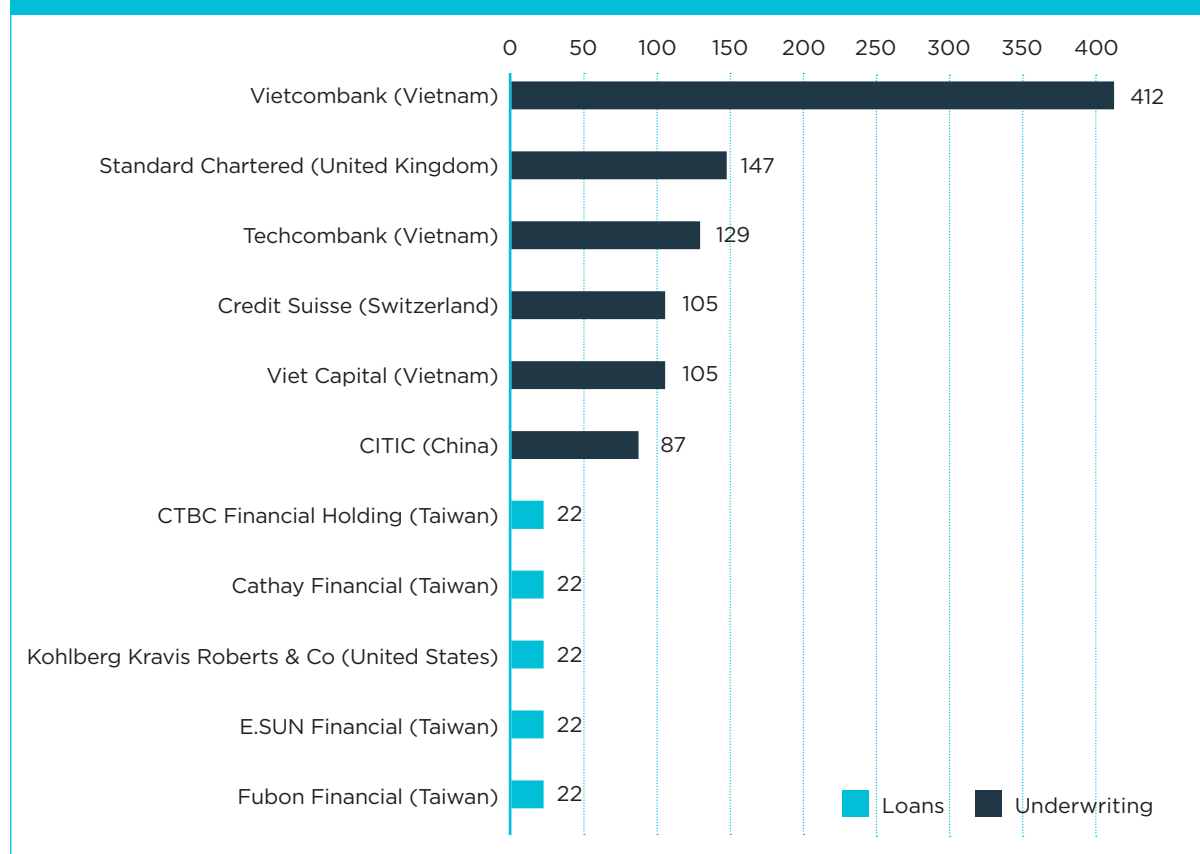
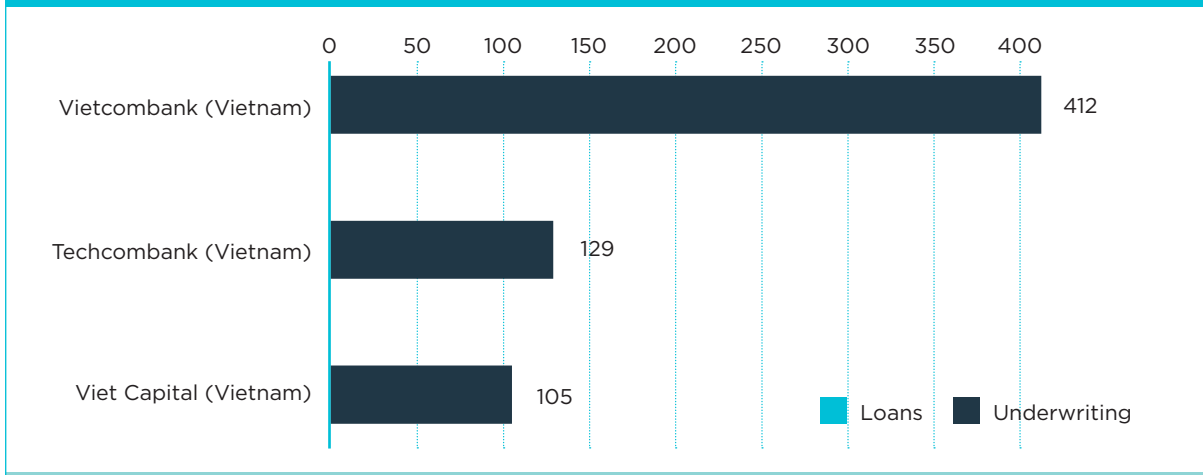


Figure 185: Top 15 FFA agribusiness creditors in Vietnam (2014-2019, US\$ mln)



6.8.2 Investors

At the most recent filing date in February 2020, financial institutions had investments of US\$ 2.4 billion in the bonds and shares of the selected companies engaged in agriculture in Vietnam. All of these investments were in shares. Figure 186 shows that 40% of these investments were held by financial institutions from the United States. These investors held shares of US\$ 947 million

in the selected companies. They were followed by investors from Singapore (US\$ 435 million) and South Korea (US\$ 170 million).

The top 15 investors held more than two thirds (69%) of the identified shareholdings. Together these financial institutions held US\$ 1.6 billion in shares of the selected agriculture companies active in Vietnam at the most recent

Figure 186: Country of origin investors in agribusiness in Vietnam (2020 February, most recent filings)

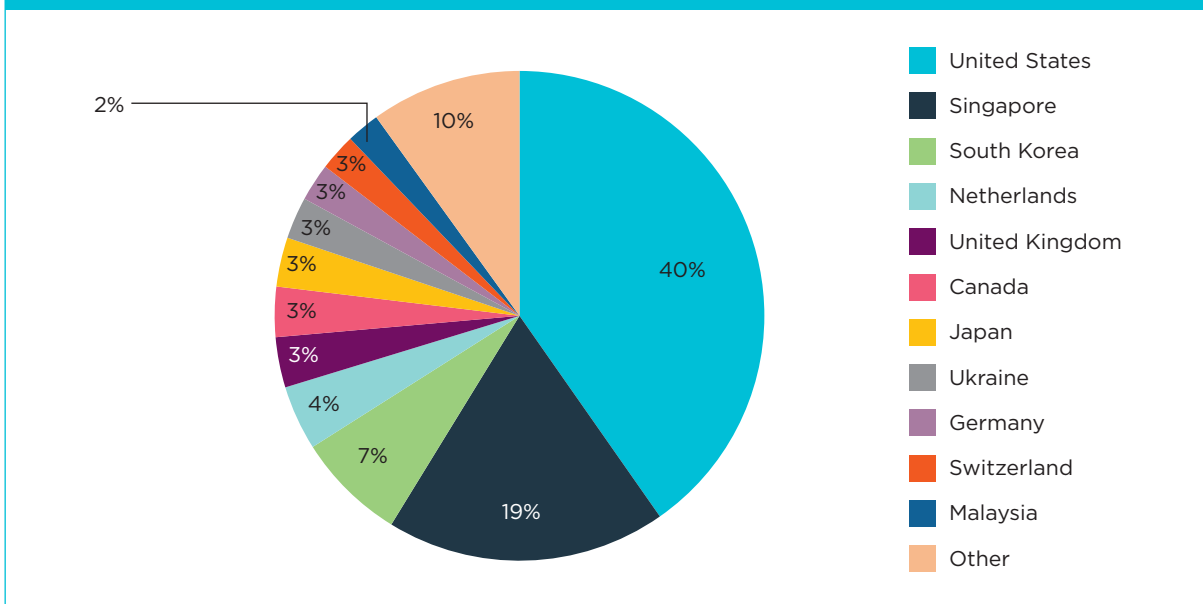


Figure 187: Top 15 agribusiness investors in Vietnam (2020 February, most recent filings, US\$ mln)

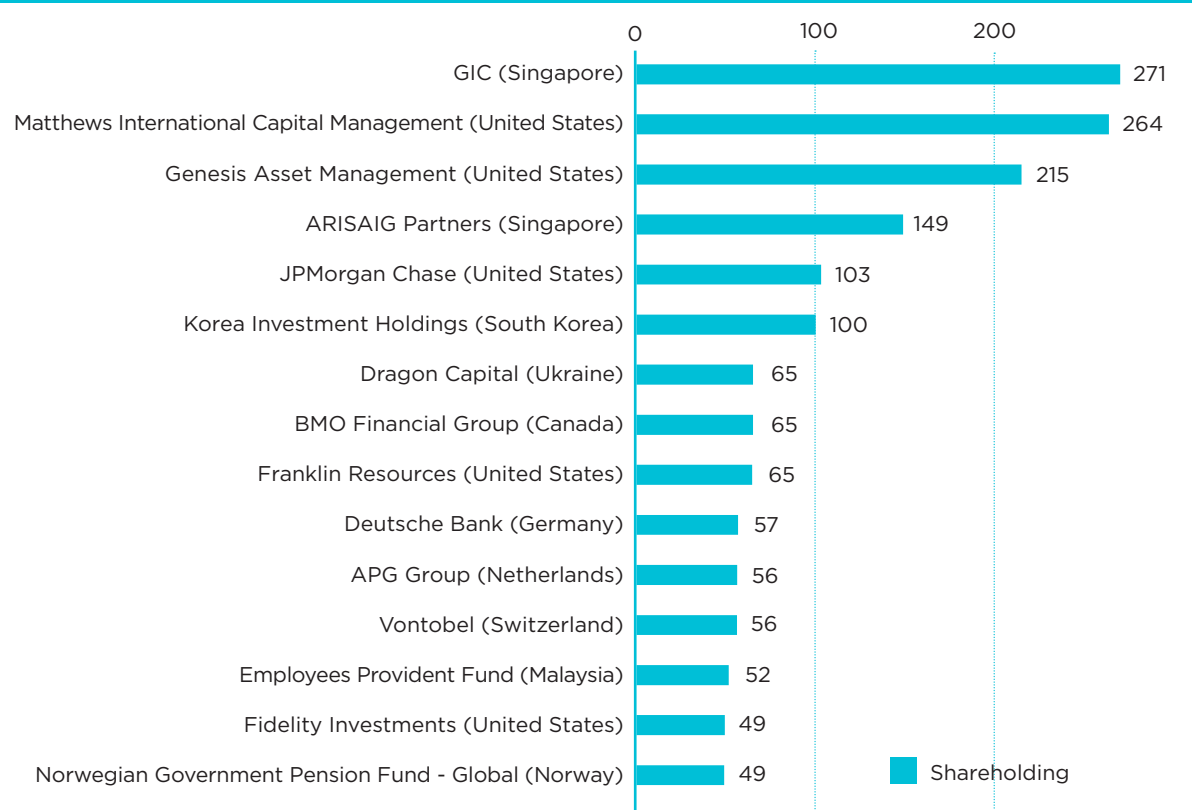
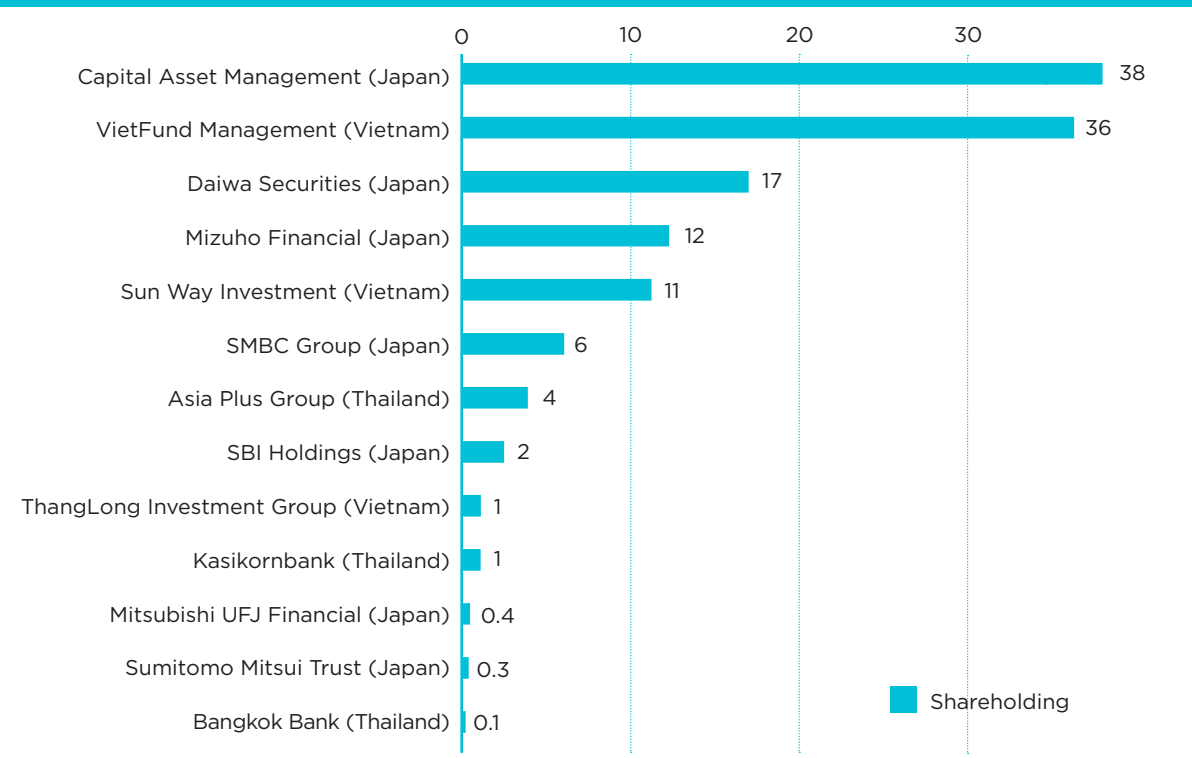


Figure 188: Top 15 FFA agribusiness investors in Vietnam (2020 February, most recent filings, US\$ mln)



filing date February 2020. Figure 187 shows that the largest among these investors was Singapore government-owned GIC, which held shares worth US\$ 271. It was followed by Matthews International Capital Management (US\$ 264 million) and Genesis Asset Management (US\$ 215 million).

Financial institutions from the FFA countries accounted for 6% of all identified investments in the shares of the selected companies active in agriculture

in Vietnam at the most recent filing date in February 2020. These investors held investments of US\$ 130 million. 13 FFA investors were identified. 7 of the top 13 FFA investors in agribusiness in Vietnam were Japanese financial institutions. A further 3 were from Vietnam and 3 from Thailand. Figure 188 shows that the largest FFA investor was Japanese Capital Asset Management, which held shares worth US\$ 38 million. It was followed by VietFund Management (US\$ 36 million) and Daiwa Securities (US\$ 17 million).

CHAPTER

7

REGIONAL TRENDS AND STRATEGIC OPPORTUNITIES

The objective of this research was to identify regional trends in financing to four sectors – infrastructure, power generation, fossil fuel extraction (oil & gas, and coal mining), and agribusiness – across FFA’s seven countries (Cambodia, India, Indonesia, Japan, Philippines, Thailand, and Vietnam). Analysis of these trends further identified financial institutions from the seven FFA countries financing the four sectors in multiple countries. This should allow regional level collaboration on promoting the integration of social and environmental considerations in the decision-making of respective financial institutions.

7.1 Summary of findings

7.1.1 Creditors

This study found that between 2014 and 2019, financial institutions from FFA countries provided US\$ 556 billion in loans and underwriting services to the selected companies active in the four focus sectors – agriculture, infrastructure construction, fossil fuels, and power. This includes financial flows to companies active in their own economies, as well as to other FFA countries. Financial institutions from Japan provided the most credit to the selected companies in other FFA countries with financing to all 6 countries. Financial institutions from Thailand, provided loans and underwriting services to 5 other countries. Indonesia, India, the Philippines and Vietnam received financing from the most different FFA countries.

The matrix of the credit flows between FFA countries per sector in section 2.1 showed that financial institutions from Japan provided credit to the most sectors in the greatest number of countries, followed by financial from Thailand. Japanese financial institutions provided credit to companies engaged in agriculture in 4 countries. They also provided credit to companies in 5 countries that were

engaged in fossil fuels, and in 5 countries they provided credit to companies engaged in power generation.

Financial institutions from India provided credit to companies in 4 countries engaged in fossil fuels, and to 2 countries engaged agriculture. Thai financial institutions provided credit to companies in 4 countries engaged power generation, 3 countries in fossil fuels, and 2 countries in agriculture.

Indonesia attracted financing from the greatest number of countries and in the most sectors. It was followed by the Philippines, India, Vietnam and Thailand.

Looking at the value of the financial flows to the selected companies – including financial flows to companies operating in their own economies – shows that financial institutions from Japan were by far the largest creditors. These financial institutions provided US\$ 366 billion in loans and underwriting to the selected companies. This accounts for 66% of all identified credit. Financial institutions from India provided the second most, with US\$ 83 billion. And Indonesian financial institutions provided approximately US\$ 67 billion in loans and underwriting services to the selected companies.

The top 15 FFA creditors of the selected companies engaged in the focus sectors accounted for three quarters of all financing from FFA countries. 7 of the top 15 FFA creditors were Japanese financial institutions. Of the remaining financial institutions, 4 were from India and 3 were from Indonesia. The three largest creditors are all Japanese financial institutions. The largest among these was Mizuho Financial, which provided a total of US\$ 103 billion in loans and underwriting services to the selected companies. It was followed by SMBC Group (US\$ 87 billion) and Mitsubishi UFJ Financial (US\$ 76 billion).

7.1.2 Investors

This study found that in total investors from FFA countries invested more than US\$ 118 billion in the bonds and shares of the selected companies. 97% of these investments were in shares, the remaining 3% was in bonds issued by the selected companies. Financial institutions from Japan, India and Thailand invested in the most other FFA countries, investing in 6, 4 and 4 other countries respectively. Companies in Indonesia and Vietnam received investments from financial institutions from the most other FFA countries.

The matrix of the investment flows between FFA countries per sector in section 2.2 showed that Japanese financial institutions invested in the most sectors in the different countries, followed by financial institutions from India. Japanese financial institutions invested in companies engaged in agriculture in 5 countries. They also invested in companies in 6 countries that were engaged in infrastructure construction, and in 5 countries they invested in companies engaged in fossil fuels.

Financial institutions from India invested in companies in 2 countries engaged in agriculture, and in 3 countries engaged in fossil fuels. Thai financial institutions invested in companies in 3 countries engaged in agriculture.

Indonesia attracted investment from the greatest number of countries and in the most sectors. It was followed by Vietnam and Thailand.

In terms of value, Japanese investors had invested the most in the selected companies. In they accounted for 64% (US\$ 76 billion) of the identified investments in the selected companies. They were followed by investors from India, who accounted for 27%, and Thai investors who accounted for 8%.

The top 15 investors had invested US\$ 90.8 billion in the bonds and shares of the selected companies. Together, this accounted for 77% of all identified investments. 8 of the top 15 investors were from Japan, 5 from India, and the remaining 2 were investors from Thailand. The largest investor was Sumitomo Mitsui Trust, with investments of over US\$ 14.1 billion. It was followed by Nomura (US\$ 13.0 billion) and Life Insurance Corporation of India (US\$ 11.6 billion).

7.2 Strategic opportunities

The sections below present a number of opportunities for regional collaboration among FFA partner countries to advocate for sustainable finance to foster more just and equitable corporate practices in Asia. The listed opportunities could be built upon by further analysis of the data prepared for this research, and complemented with further input from the partners, to developed into strategic collaboration action plans and case studies.

7.2.1 Japanese financial institutions as potential drivers of sustainable finance in Asia

In terms of regional financing, Japanese financial institutions play a role in almost every country and sector combination and in both credit and investment flows. Japanese financial institutions have invested in or established subsidiaries in all other FFA countries.

Mitsubishi UFJ has subsidiaries in Thailand (Bank of Ayudhya/Krungsri – 76.8%) and Indonesia (Bank Danamon – 94.1%), and affiliates in the Philippines (Security Bank – 20%) and Vietnam (VietinBank – 19.7%).²⁷⁸ Bank of Ayudhya also has activities in Cambodia through microfinance institution Hattha Kaksekar.²⁷⁹ Microfinance is a key source of finance for micro-entrepreneurs, SMEs and the agriculture sector in Cambodia.

Mizuho Financial has branches in all other FFA countries: Cambodia, India, Indonesia, the Philippines, Thailand and Vietnam.²⁸⁰

Similarly, SMBC Group also has subsidiaries and affiliates in all other FFA countries. These include a subsidiary in Indonesia (Bank BTPN – 98.49%), affiliates in Cambodia (ACLEDA Bank – 18.25%) and Vietnam (Vietnam Export Import Commercial Bank (Eximbank) – 15.07%), and branches in the Philippines and India.²⁸¹

Given this network of Japanese financial institutions in all FFA countries, and the role they play in financing each of the four key sectors, advocates of sustainable finance actors in this region could collaborate in promoting Japanese financial institutions to become drivers of sustainable finance practice in Asia. Engagement could revolve around not only improving sustainability risk management for its domestic financing, but also of its overseas financing.

7.2.2 Sector-based regional collaboration

The following are a number of opportunities for collaboration in FFA sub-groups around specific sectors:

- **Foreign financiers of agriculture in Indonesia**

As has been shown in section 6.1, financial institutions from four other FFA countries – India, Japan, the Philippines and Thailand – play a role in financing agriculture in Indonesia. This constellation of FFA countries could support Responsibank (Fair Finance Guide Indonesia), by engaging with financial institutions in their respective countries to promote sustainable agriculture finance both domestically and in Indonesia.

- **India, Japan, the Philippines and Thailand – financing of fossil fuels in other FFA countries**

Chapter 4 has shown that financial

institutions from these four countries finance fossil fuels in the most other FFA countries. Financial institutions from India provide credit to fossil fuel companies active in Vietnam, and to a lesser extent in Indonesia, the Philippines and Thailand. Financial institutions from Japan provide credit to companies engaged in fossil fuels in all FFA countries apart from Cambodia. Financial institutions from the Philippines provide credit to fossil fuels companies active in India, and to a lesser extent in Thailand and Vietnam. Finally, financial institutions from Thailand provide credit to companies engaged in fossil fuels in Indonesia, Japan and to a lesser extent in the Philippines and Vietnam.

Given these interconnections, and the high levels of domestic financing of fossil fuels in the respective countries, a case study could be developed on fossil fuel financing led by these four FFA countries. FFA Indonesia and Vietnam could provide further input from their position of recipients of fossil fuel financing by financial institutions from other FFA countries. The case study could call on financial institutions from the respective countries to foster a transition to a low carbon economy through their financing activities both domestically and in the other FFA countries they provide fossil fuel financing to.

- **Vietnam – Indian and Japanese financiers of fossil fuels**

This opportunity is similar to that posed above, but is more focussed on the national level in Vietnam. As has been shown in section 4.8.1, financial institutions from Japan and India play a sizeable role in financing fossil fuel development in Vietnam. These FFA partner countries could collaborate in promoting sustainable financing with regard to fossil fuel exploitation

in Vietnam, particularly with regard to upstream activities.

- **Foreign financiers of fossil fuels in the Philippines**

As has been shown in section 4.1, financial institutions from four other FFA countries play a role in financing fossil fuels in the Philippines. These countries are: Indonesia, Thailand, India and Japan. However, it should be noted that, as described in 4.6.1, key among these are financial institutions from Japan. Financial institutions from India, Thailand and Indonesia play a much less prominent role.

- **Cambodia-Thailand-Vietnam - Agriculture**

Thai and Vietnamese financial institutions play a key role in financing the selected agriculture companies active in Cambodia. The three FFA partner countries could collaborate to encourage Thai and Vietnamese financial institutions to implement sustainable financing

practices with regard to the agriculture sector both domestically and in neighbouring countries.

Many of the large Thai and Vietnamese banks have subsidiaries or branch offices in Cambodia. These include Bangkok Bank, Kasikornbank, Krungthai, Siam Commercial Bank, Bank for Investment and Development of Vietnam (BIDV), Vietnamese Agribank, and Saigon-Hanoi Bank (SHB).²⁸² These financial institutions likely provide more direct financing to companies active in agriculture in Cambodia than could be identified during this research. Given this network of financial institutions, and the already identified levels of Thai and Vietnamese financing of the selected agriculture companies active in Cambodia, the three FFA partner countries could engage with these financial institutions, and their offices in Cambodia, to promote sustainable financing of agriculture in Cambodia.

REFERENCES

- 1 EMIS (2019), India Construction Sector 2019/2023, p. 34.
- 2 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 30.
- 3 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 30.
- 4 Waskita Karya (2019), Annual Report 2018, p. 207.
- 5 MarketLine (2018, October), Philippines - Construction, p. 16.
- 6 Fitch Solutions (2019), Thailand Infrastructure Report, Q4 2019, p. 41.
- 7 Marketline (2018, October), Construction - Vietnam, p. 14.
- 8 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 9 Open Development (2015, November), "Cambodia - Infrastructure", online: <https://opendevelopmentcambodia.net/topics/infrastructure/>, viewed in December 2019.
- 10 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 11 Construction and Property (2017), Issue 26, online: https://www.construction-property.com/wp-content/uploads/2019/07/CMP_ISSUE_026.pdf.
- 12 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 13 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 14 Construction and Property (2017), Issue 26, online: https://www.construction-property.com/wp-content/uploads/2019/07/CMP_ISSUE_026.pdf.
- 15 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 16 Construction and Property (2017), Issue 26, online: https://www.construction-property.com/wp-content/uploads/2019/07/CMP_ISSUE_026.pdf.
- 17 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 18 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 19 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 20 EMIS (n.d.), "Industries/Companies", online: <https://www.emis.com/php/industries/companies?indu=23>, viewed in December 2019.
- 21 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 22 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 23 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 24 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 25 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 26 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 27 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 28 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 29 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 30 EMIS (2019), India Construction Sector 2019/2023, p. 35.
- 31 CGS CIMB (2019, May 28), Construction and Materials Indonesia, p. 14; EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 32 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 33 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 34 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 35 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.

- 36 CGS CIMB (2019, May 28), Construction and Materials Indonesia, p. 14; EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 37 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 38 CGS CIMB (2019, May 28), Construction and Materials Indonesia, p. 14; EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 39 Indonesia Investments (2018, January), "Indonesian Construction Companies in Focus: Wijaya Karya", online: <https://www.indonesia-investments.com/business/business-columns/indonesian-construction-companies-in-focus-wijaya-karya/item8496>, viewed in December 2019; CGS CIMB (2019, May 28), Construction and Materials Indonesia, p. 14; EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 40 EMIS (2019), Indonesia Real Estate & Construction Sector 2019/2020, p. 31.
- 41 Global Construction Review (2017, May), "Japan's top four contractors cash in on Olympic building boom", online: <http://www.globalconstructionreview.com/companies/japans-top-four-contractors-cash-in-on-olympic-building-boom/>, viewed in December 2019.
- 42 Global Construction Review (2017, May), "Japan's top four contractors cash in on Olympic building boom", online: <http://www.globalconstructionreview.com/companies/japans-top-four-contractors-cash-in-on-olympic-building-boom/>, viewed in December 2019.
- 43 Global Construction Review (2017, May), "Japan's top four contractors cash in on Olympic building boom", online: <http://www.globalconstructionreview.com/companies/japans-top-four-contractors-cash-in-on-olympic-building-boom/>, viewed in December 2019.
- 44 Global Construction Review (2017, May), "Japan's top four contractors cash in on Olympic building boom", online: <http://www.globalconstructionreview.com/companies/japans-top-four-contractors-cash-in-on-olympic-building-boom/>, viewed in December 2019.
- 45 Overseas Construction Association of Japan (n.d.), "About - Organization - Vice Presidents", online: <https://www.ocaji.or.jp/en/about/organization.php>, viewed in December 2019.
- 46 MarketLine (2018, October), Philippines - Construction, p. 16.
- 47 MarketLine (2018, October), Philippines - Construction, p. 18.
- 48 Eduardo, A. (2017, September 13), "Biggest Construction Companies in the Philippines", Medium.com, online: <https://medium.com/@aliceeduardo03/biggest-construction-companies-in-the-philippines-76c3218f88e6>, viewed in December 2019.
- 49 Eduardo, A. (2017, September 13), "Biggest Construction Companies in the Philippines", Medium.com, online: <https://medium.com/@aliceeduardo03/biggest-construction-companies-in-the-philippines-76c3218f88e6>, viewed in December 2019.
- 50 MarketLine (2018, October), Philippines - Construction, p. 21.
- 51 Manila Bulletin (2018, February 8), "Sta. Elena Construction: Formidable pillar of the construction industry", online: <https://news.mb.com.ph/2018/02/08/sta-elena-construction-formidable-pillar-of-the-construction-industry/>, viewed in December 2019.
- 52 Eduardo, A. (2017, September 13), "Biggest Construction Companies in the Philippines", Medium.com, online: <https://medium.com/@aliceeduardo03/biggest-construction-companies-in-the-philippines-76c3218f88e6>, viewed in December 2019.
- 53 MarketLine (2018, October), Philippines - Construction, p. 22.
- 54 DBS Group Research (2016, November 7), Thailand Construction Sector - Thailand Company Guide - CH. Karnchang PCL, p. 3.
- 55 Fitch Solutions (2019), Thailand Infrastructure Report, Q4 2019, p. 46.
- 56 Ktech (nd), "About us - Business Performance", online: <http://www.ktech.co.th/en/business-performance-2/>, viewed in December 2019.
- 57 Nawarat (n.d.), "Who we are?", online: <http://www.nawarat.co.th/web/index.php>, viewed in December 2019; Thai Contractors Association (n.d.), "Homepage", online: <https://www.tca.or.th/>, viewed in December 2019.
- 58 Ritta (nd), "About Ritta - History", online: <http://www.ritta.co.th/page.php?a=1&n=100>, viewed in December 2019.
- 59 DBS Group Research (2016, November 7), Thailand Construction Sector - Thailand Company Guide - Sino-Thai Engineering & Con., p. 2.
- 60 Bangkok Post (2019, March 15), "O-NES tower: The latest Japanese know-how commercial spaces by Thai Obayashi", online: <https://www.bangkokpost.com/business/1645152/o-nes-tower-the-latest-japanese-know-how-commercial-spaces-by-thai-obayashi>, viewed in December 2019.
- 61 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.

- 62 Marketline (2018, October), Construction - Vietnam, p. 16; Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 63 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 64 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 65 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 66 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 67 Marketline (2018, October), Construction - Vietnam, p. 18; Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 68 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 69 Marketline (2018, October), Construction - Vietnam, p. 21.
- 70 Marketline (2018, October), Construction - Vietnam, p. 23.
- 71 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 72 Unicons (2019, February 26), "Unicons ranked in top 3 largest private construction enterprises of Vietnam in 2018", online: <http://unicons.vn/en/unicons-ranked-in-top-3-largest-private-construction-enterprises-of-vietnam-in-2018/>, viewed in December 2019.
- 73 Real Estate Vietnam (2018, March 21), "Blog", online: <https://realestatevietnam.com.vn/announcing-list-10-prestigious-builders-2018/>, viewed in December 2019.
- 74 Fitch Solutions (2019), Cambodia Oil and Gas Report Q4 2019, p. 4.
- 75 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 45.
- 76 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 51.
- 77 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 25.
- 78 Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 59.
- 79 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 60.
- 80 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 81 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 82 Fitch Solutions (2019), Cambodia Oil and Gas Report Q4 2019, p. 9.
- 83 Fitch Solutions (2019), Cambodia Oil and Gas Report Q4 2019, p. 9.
- 84 Fitch Solutions (2019), Cambodia Oil and Gas Report Q4 2019, p. 9.
- 85 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 86 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 87 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 88 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 89 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 90 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 91 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 92 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 93 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 94 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 95 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.

- 96 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 97 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 98 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 99 EMIS (2018), India Oil & Gas Sector 2018/2022, p. 41.
- 100 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 101 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 102 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 103 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 104 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 105 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 106 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 107 EMIS (2018), Indonesia Oil & Gas Sector 2018/2022, p. 52.
- 108 EMIS (2018), Indonesia Oil & Gas Sector 2018/2022, p. 49.
- 109 EMIS (2018), Indonesia Oil & Gas Sector 2018/2022, p. 41.
- 110 EMIS (2018), Indonesia Oil & Gas Sector 2018/2022, p. 44.
- 111 EMIS (2018), Indonesia Oil & Gas Sector 2018/2022, p. 46.
- 112 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 113 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 114 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 115 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 116 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 117 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 118 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 119 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26.
- 120 Reuters (2016, 12 September), "Tokyo Gas imports first LNG from Australia's Gorgon", online: <https://uk.reuters.com/article/lng-gorgon-tokyo-gas/tokyo-gas-imports-first-lng-from-australias-gorgon-idUKL3N1B02EV>, viewed in November 2019.
- 121 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26; urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 122 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26; urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 123 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26; urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 124 Oxford Institute for Energy Studies (2018, February), A Review of the Evolution of the Japanese Oil Industry, Oil Policy and its Relationship with the Middle East, p. 20, 26; urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 125 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in

- December 2019.
- 126 Department of Energy of Republic of the Philippines (2018), "New oil players' market share fast eclipsing the 'Big 3'", online: <https://www.doe.gov.ph/energist/new-oil-players%E2%80%99-market-share-fast-eclipsing-%E2%80%98big-3%E2%80%99>, viewed in December 2019; Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 127 Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 128 Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 129 Department of Energy of Republic of the Philippines (2018), "New oil players' market share fast eclipsing the 'Big 3'", online: <https://www.doe.gov.ph/energist/new-oil-players%E2%80%99-market-share-fast-eclipsing-%E2%80%98big-3%E2%80%99>, viewed in December 2019; Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 130 Department of Energy of Republic of the Philippines (2018), "New oil players' market share fast eclipsing the 'Big 3'", online: <https://www.doe.gov.ph/energist/new-oil-players%E2%80%99-market-share-fast-eclipsing-%E2%80%98big-3%E2%80%99>, viewed in December 2019; Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 131 Department of Energy of Republic of the Philippines (2018), "New oil players' market share fast eclipsing the 'Big 3'", online: <https://www.doe.gov.ph/energist/new-oil-players%E2%80%99-market-share-fast-eclipsing-%E2%80%98big-3%E2%80%99>, viewed in December 2019; Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 132 Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 59.
- 133 Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 134 Department of Energy of Republic of the Philippines (2018), "New oil players' market share fast eclipsing the 'Big 3'", online: <https://www.doe.gov.ph/energist/new-oil-players%E2%80%99-market-share-fast-eclipsing-%E2%80%98big-3%E2%80%99>, viewed in December 2019; Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 135 Fitch Solutions (2019), Philippines Oil and Gas Report Q1 2020, p. 66-67.
- 136 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 137 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 138 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 8.
- 139 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 60.
- 140 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 19.
- 141 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 65.
- 142 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 60.
- 143 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 19.
- 144 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 65.
- 145 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 65.
- 146 Fitch Solutions (2019), Thailand Oil and Gas Report Q1 2020, p. 8 and 65; Urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 147 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 148 urgewald (2019), Global Coal Exit List , online: <https://coalexit.org/database-full?name=&page=0>, viewed in December 2019.
- 149 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 150 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 151 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 152 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 153 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 154 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 155 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 68.
- 156 Fitch Solutions (2019), Vietnam Oil and Gas Report Q4 2019, p. 7.
- 157 Thomson Reuters Practical Law (2019, July 1),"Electricity regulation in Vietnam: overview", online: [https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1), viewed in November 2019.

- 158 Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 159 Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 160 Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 161 Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 162 Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 163 Cambodia Investments (n.d.), “Investors Information - Infrastructure - Electricity”, online: <http://www.cambodiainvestment.gov.kh/investors-information/infrastructure/electricity.html>, viewed in November 2019; Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 164 Enerdata (2019, February), Country Energy Report Cambodia, p. 9.
- 165 Enerdata (2019, September), Country Energy Report India, p. 15.
- 166 Enerdata (2019, September), Country Energy Report India, p. 15.
- 167 Government of India, Ministry of Power (n.d.), “Public Sector Undertakings”, online: <https://powermin.nic.in/en/content/public-sector-undertakings>, viewed in November 2019; Enerdata (2019, September), Country Energy Report India, p. 15.
- 168 Enerdata (2019, September), Country Energy Report India, p. 15.
- 169 Enerdata (2019, September), Country Energy Report India, p. 15.
- 170 Enerdata (2019, September), Country Energy Report India, p. 15.
- 171 Enerdata (2019, September), Country Energy Report India, p. 15.
- 172 Enerdata (2019, September), Country Energy Report Indonesia, p. 13.
- 173 Institute for Energy Economics and Financial Analysis (2018, April), Perusahaan Listrik Negara (PLN): Out of Step With Global Trends, p. 3; Enerdata (2019, September), Country Energy Report Indonesia, p. 13.
- 174 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 175 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 176 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 177 Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 178 Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 179 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 180 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 181 Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 182 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 183 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 184 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 185 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 186 The Federation of Electric Power Companies of Japan (n.d.), “Homepage”, online: <https://www.fepec.or.jp/english/>, viewed in November 2019; Enerdata (2019, April), Country Energy Report Japan, p. 12-13.
- 187 Enerdata (2019, January), Country Energy Report Philippines, p. 10.
- 188 Enerdata (2019, January), Country Energy Report Philippines, p. 10.
- 189 Global Business Power (2017, May), “The Company”, online: <http://www.gbpc.com.ph/the-company/>, viewed in November 2019.
- 190 Enerdata (2019, January), Country Energy Report Philippines, p. 10.
- 191 Enerdata (2019, January), Country Energy Report Philippines, p. 10.
- 192 Enerdata (2019, January), Country Energy Report Philippines, p. 10.
- 193 Enerdata (2019, June), Country Energy Report Thailand, p. 12.
- 194 Enerdata (2019, June), Country Energy Report Thailand, p. 12.

- 195 Enerdata (2019, June), Country Energy Report Thailand, p. 12.
- 196 Enerdata (2019, June), Country Energy Report Thailand, p. 12.
- 197 Thomson Reuters Practical Law (2019, July 1), "Electricity regulation in Vietnam: overview", online: [https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1), viewed in November 2019; Enerdata (2019, May), Country Energy Report Vietnam, p. 12.
- 198 Thomson Reuters Practical Law (2019, July 1), "Electricity regulation in Vietnam: overview", online: [https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1), viewed in November 2019; Enerdata (2019, May), Country Energy Report Vietnam, p. 12.
- 199 Thomson Reuters Practical Law (2019, July 1), "Electricity regulation in Vietnam: overview", online: [https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/4-628-349?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1), viewed in November 2019; Enerdata (2019, May), Country Energy Report Vietnam, p. 12.
- 200 Open Development (2014), "Cambodia", online: <https://opendevdevelopmentcambodia.net/tag/vietnam-rubber-group/>, viewed in December 2019.
- 201 Open Development (n.d.), "Cambodia - Fishing, fisheries and aquaculture", online: <https://opendevdevelopmentcambodia.net/topics/fishing-fisheries-and-aquaculture/>, viewed in December 2019.
- 202 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 203 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 204 Terui, M. and Mellinger, G. (2019, December 12), "Japanese Agriculture's Rising Sun", Global AgInvesting, online: <http://www.globalaginvesting.com/contributed-content-japanese-agricultures-rising-sun/>, viewed in December 2019.
- 205 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 206 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 207 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 208 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 209 CJ Cambodia (n.d.), "Company Introduction", online: https://cjcambodia.en.ec21.com/company_info.html, viewed in December 2019.
- 210 Vietnam News (2019, June 20), "HAGL Agrico to sell rubber company to Thadi", online: <https://vietnamnews.vn/economy/521601/hagl-agrico-to-sell-rubber-company-to-thadi.html#bdQfi8SHJrrrxqDg.97>, viewed in December 2019.
- 211 Open Development (n.d.), "Cambodia - Fishing, fisheries and aquaculture", online: <https://opendevdevelopmentcambodia.net/topics/fishing-fisheries-and-aquaculture/>, viewed in December 2019.
- 212 LYP Group (2019), "Plantation", online: <https://www.lypgroup.com/plantation.php>, viewed in December 2019.
- 213 Sea-ex (n.d.), Commercial Fishing & Seafood Industry Contacts - Cambodia, online: <http://www.sea-ex.com/countryinfo/cambodia.htm>, viewed in December 2019.
- 214 Rujivanarom, P. (2018, March 4), "Two Thai companies face flak over practices in Cambodia and Myanmar", The Nation - Thailand, online: <https://www.nationthailand.com/national/30342484>, viewed in December 2019.
- 215 TTY Corporation (2012), "Background of company", online: <http://www.ttycorp.com/index.php?page=ttyc>, viewed in December 2019.
- 216 Open Development (2014), "Cambodia", online: <https://opendevdevelopmentcambodia.net/tag/vietnam-rubber-group/>, viewed in December 2019.
- 217 Intrafish (2017), "Bjorn Myrseth's Vitamar plans \$24 million fish farm in Cambodia", online: <https://www.intrafish.com/aquaculture/bjorn-myrseths-vitamar-plans-24-million-fish-farm-in-cambodia/1-1-1204632>, viewed in December 2019.
- 218 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 219 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 220 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 221 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 222 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 223 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.

- 224 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 225 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 226 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 227 Fitch Solutions (2019), India Agribusiness Report Q1 2020, p. 82.
- 228 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 229 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 230 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 231 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 232 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 233 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 234 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 235 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 236 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 237 Fitch Solutions (2019), Indonesia Agribusiness Report Q1 2020, p. 78.
- 238 Aeon (nd), "Corporate Profile - Group profile", online: <https://www.aeonmall.com/en/about/profile.html>, viewed in December 2019.
- 239 Forbes (2019), "Companies", online: <https://www.forbes.com/companies/itochu/#7f155ea115c9>, viewed in December 2019.
- 240 Terui, M. and Mellinger, G. (2019, December 12), "Japanese Agriculture's Rising Sun", Global AgInvesting, online: <http://www.globalaginvesting.com/contributed-content-japanese-agricultures-rising-sun/>, viewed in December 2019.
- 241 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 242 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 243 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 244 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 245 Mitsui (n.d.), "Company", online: <https://www.mitsui.com/jp/en/company/index.html>, viewed in December 2019.
- 246 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 247 McLuckie, M. and G. Thoumi (2019, October), Perfect Storm - Profits at risk in the Japanese seafood industry, Planet Tracker, p. 20.
- 248 Sojitz (nd), "Company - Corporate Profile", online: <https://www.sojitz.com/en/corporate/profile/index.php>, viewed in December 2019.
- 249 Terui, M. and Mellinger, G. (2019, December 12), "Japanese Agriculture's Rising Sun", Global AgInvesting, online: <http://www.globalaginvesting.com/contributed-content-japanese-agricultures-rising-sun/>, viewed in December 2019.
- 250 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 251 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 252 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 253 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 254 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 255 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 256 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 257 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 258 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 259 Fitch Solutions (2019), Philippines Agribusiness Report Q1 2020, p. 67.
- 260 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 261 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 262 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.

- 263 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 264 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 265 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 266 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 267 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 268 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 269 Fitch Solutions (2019), Thailand Agribusiness Report Q1 2020, p. 66.
- 270 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 271 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 272 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 273 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 274 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 275 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 276 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 277 Fitch Solutions (2019), Vietnam Agribusiness Report Q1 2020, p. 78.
- 278 Mitsubishi UJF (2019, August), MUFG Report 2019: Integrated Report, p. 51.
- 279 Mitsubishi UJF (2019, July), Form 20-F: Mitsubishi UFJ Financial Group, filed in July 2019, p. 15.
- 280 Mizuho Financial (2019, September), Integrated Report 2019: Annual Review, April 2018-March 2019, p. 120-121.
- 281 SMBC Group (2019, August), Annual Report 2019, p. 141-143.
- 282 Bangkok Bank (2020, March), Annual Report 2019: Creating Value, p. 4, 220-221; Kasikornbank (2020, March), Annual Report 2019: Bank of Sustainability, p. 299; Krungthai (n.d.), "Foreign branches", online: <https://krungthai.com/en/contact-us/foreign-branch>, viewed in May 2020; Siam Commercial Bank (n.d.), "Cambodian Commercial Bank", online: <https://www.scb.co.th/ccb/corporate-banking.html>, viewed in May 2020; Bank for Investment and Development of Vietnam (n.d.), "Countries with BIDV's commercial presences", online: <https://www.bidv.com.vn/en/ve-bidv/hien-dien-thuong-mai-nuoc-ngoai/>, viewed in May 2020; Agribank (2019, October), Annual Report 2018, p. 10; Saigon-Hanoi Bank (2019, June), Annual Report 2018: Grow Sustainably, Enable the Future, p. 7;

ANNEXURE

LIST OF FIGURES

	Page No.
Figure 1: Matrix of credit flows per country and per sector (2014-2019)	11
Figure 2: Matrix of investment flows per country and per sector (2014-2019)	12
Figure 3: Intra-regional credit flows to selected companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)	31
Figure 4: Matrix of credit flows per country and per sector (2014-2019)	32
Figure 5: FFA creditor countries of origin (2014-2019, US\$ mln)	32
Figure 6: Top 15 creditors of to selected companies (2014-2019, US\$ mln)	33
Figure 8: Matrix of investment flows per country and per sector (2014-2019)	34
Figure 7: Intra-regional investment flows to selected companies (no. of countries invested in & no. countries invested by)	34
Figure 9: FFA investor countries of origin (2020 February, most recent filings, US\$ mln)	35
Figure 10: Top 15 FFA investors in selected companies (2020 February, most recent filings, US\$ mln)	36
Figure 11: Intra-regional credit flows to infrastructure companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)	38
Figure 12: FFA infrastructure construction creditor countries of origin (2014-2019, US\$ mln)	39
Figure 13: Top 15 FFA infrastructure creditors (2014-2019, US\$ mln)	39
Figure 14: Intra-regional investment flows to infrastructure companies (no. of countries invested in & no. countries invested by)	40
Figure 15: FFA infrastructure construction investor countries of origin (2020 February, most recent filings, US\$ mln)	41
Figure 16: Top 15 FFA infrastructure investors (2020 February, most recent filings, US\$ mln)	41
Figure 17: Country of origin investors in infrastructure in Cambodia (2020 February, most recent filings)	42
Figure 18: Top 15 infrastructure investors in Cambodia (2020 February, most recent filings, US\$ mln)	43
Figure 19: Top 15 FFA infrastructure investors in Cambodia (2020 February, most recent filings, US\$ mln)	43
Figure 20: Country of origin creditors of infrastructure in India (2014-2019)	44
Figure 21: Top 15 infrastructure creditors in India (2014-2019, US\$ mln)	44
Figure 22: Top 15 FFA infrastructure creditors in India (2014-2019, US\$ mln)	45
Figure 23: Country of origin investors in infrastructure in India (2020 February, most recent filings)	46
Figure 24: Top 15 infrastructure investors in India (2020 February, most recent filings, US\$ mln)	46
Figure 25: Top 15 FFA infrastructure investors in India (2020 February, most recent filings, US\$ mln)	47

Figure 26: Country of origin creditors of infrastructure in Indonesia (2014-2019)	48
Figure 27: Top 15 infrastructure creditors in Indonesia (2014-2019, US\$ mln)	48
Figure 28: Top 15 FFA infrastructure creditors in Indonesia (2014-2019, US\$ mln)	49
Figure 29: Country of origin investors in infrastructure in Indonesia (2020 February, most recent filings)	50
Figure 30: Top 15 infrastructure investors in Indonesia (2020 February, most recent filings, US\$ mln)	50
Figure 31: Top 15 FFA infrastructure investors in Indonesia (2020 February, most recent filings, US\$ mln)	51
Figure 32: Country of origin creditors of infrastructure in Japan (2014-2019)	52
Figure 33: Top 15 infrastructure creditors in Japan (2014-2019, US\$ mln)	52
Figure 34: Country of origin investors in infrastructure in Japan (2020 February, most recent filings)	53
Figure 35: Top 15 infrastructure investors in Japan (2020 February, most recent filings, US\$ mln)	54
Figure 36: Top 15 FFA infrastructure investors in Japan (2020 February, most recent filings, US\$ mln)	54
Figure 37: Country of origin creditors of infrastructure in Philippines (2014-2019)	55
Figure 38: Top 15 infrastructure creditors in Philippines (2014-2019, US\$ mln)	55
Figure 39: Top 15 FFA infrastructure creditors in Philippines (2014-2019, US\$ mln)	56
Figure 40: Country of origin investors in infrastructure in Philippines (2020 February, most recent filings)	57
Figure 41: Top 15 infrastructure investors in Philippines (2020 February, most recent filings, US\$ mln)	57
Figure 42: Top 15 FFA infrastructure investors in the Philippines (2020 February, most recent filings, US\$ mln)	58
Figure 43: Country of origin creditors of infrastructure in Thailand (2014-2019)	59
Figure 44: Top 15 infrastructure creditors in Thailand (2014-2019, US\$ mln)	59
Figure 45: Country of origin investors in infrastructure in Thailand (2020 February, most recent filings)	60
Figure 46: Top 15 infrastructure investors in Thailand (2020 February, most recent filings, US\$ mln)	61
Figure 47: Top 15 FFA infrastructure investors in Thailand (2020 February, most recent filings, US\$ mln)	61
Figure 48: Country of origin creditors of infrastructure in Vietnam (2014-2019)	62
Figure 49: Top 15 infrastructure creditors in Vietnam (2014-2019, US\$ mln)	62
Figure 50: Country of origin investors in infrastructure in Vietnam (2020 February, most recent filings)	63
Figure 51: Top 15 infrastructure investors in Vietnam (2020 February, most recent filings, US\$ mln)	64
Figure 52: Top 15 FFA infrastructure investors in Vietnam (2020 February, most recent filings, US\$ mln)	64
Figure 53: Intra-regional credit flows to fossil fuel companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)	67

Figure 54: FFA fossil fuel creditor countries of origin (2014-2019, US\$ mln)	68
Figure 55: Top 15 FFA fossil fuel creditors (2014-2019, US\$ mln)	68
Figure 56: Intra-regional investment flows to fossil fuel companies (no. of countries invested in & no. countries invested by)	69
Figure 57: FFA fossil fuel investor countries of origin (2020 February, most recent filings, US\$ mln)	69
Figure 58: Top 15 FFA fossil fuel investors (2020 February, most recent filings, US\$ mln)	70
Figure 59: Country of origin creditors of fossil fuel in Cambodia (2014-2019)	71
Figure 60: Top 15 fossil fuel creditors in Cambodia (2014-2019, US\$ mln)	71
Figure 61: Country of origin investors in fossil fuel in Cambodia (2020 February, most recent filings)	72
Figure 62: Top 15 fossil fuel investors in Cambodia (2020 February, most recent filings, US\$ mln)	72
Figure 63: Country of origin creditors of fossil fuel in India (2014-2019)	73
Figure 64: Top 15 fossil fuel creditors in India (2014-2019, US\$ mln)	73
Figure 65: Top 15 FFA fossil fuel creditors in India (2014-2019, US\$ mln)	74
Figure 66: Country of origin investors in fossil fuel in India (2020 February, most recent filings)	75
Figure 67: Top 15 fossil fuel investors in India (2020 February, most recent filings, US\$ mln)	75
Figure 68: Top 15 FFA fossil fuel investors in India (2020 February, most recent filings, US\$ mln)	76
Figure 69: Country of origin creditors of fossil fuel in Indonesia (2014-2019)	77
Figure 70: Top 15 fossil fuel creditors in Indonesia (2014-2019, US\$ mln)	77
Figure 71: Top 15 FFA fossil fuel creditors in Indonesia (2014-2019, US\$ mln)	78
Figure 72: Country of origin investors in fossil fuel in Indonesia (2020 February, most recent filings)	79
Figure 73: Top 15 fossil fuel investors in Indonesia (2020 February, most recent filings, US\$ mln)	79
Figure 74: Top 15 FFA fossil fuel investors in Indonesia (2020 February, most recent filings, US\$ mln)	80
Figure 75: Country of origin creditors of fossil fuel in Japan (2014-2019)	81
Figure 76: Top 15 fossil fuel creditors in Japan (2014-2019, US\$ mln)	81
Figure 77: Top 15 FFA fossil fuel creditors in Japan (2014-2019, US\$ mln)	82
Figure 78: Country of origin investors in fossil fuel in Japan (2020 February, most recent filings)	83
Figure 79: Top 15 fossil fuel investors in Japan (2020 February, most recent filings, US\$ mln)	83
Figure 80: Top 15 FFA fossil fuel investors in Japan (2020 February, most recent filings, US\$ mln)	84
Figure 81: Country of origin creditors of fossil fuel in Philippines (2014-2019)	85
Figure 82: Top 15 fossil fuel creditors in Philippines (2014-2019, US\$ mln)	85

Figure 83: Top 15 FFA fossil fuel creditors in the Philippines (2014-2019, US\$ mln)	86
Figure 84: Country of origin investors in fossil fuel in Philippines (2020 February, most recent filings)	87
Figure 85: Top 15 fossil fuel investors in Philippines (2020 February, most recent filings, US\$ mln)	87
Figure 86: Top 15 FFA fossil fuel investors in the Philippines (2020 February, most recent filings, US\$ mln)	88
Figure 87: Country of origin creditors of fossil fuel in Thailand (2014-2019)	89
Figure 88: Top 15 fossil fuel creditors in Thailand (2014-2019, US\$ mln)	89
Figure 89: Top 15 FFA fossil fuel creditors in Thailand (2014-2019, US\$ mln)	90
Figure 90: Country of origin investors in fossil fuel in Thailand (2020 February, most recent filings)	91
Figure 91: Top 15 fossil fuel investors in Thailand (2020 February, most recent filings, US\$ mln)	91
Figure 92: Top 15 FFA fossil fuel investors in Thailand (2020 February, most recent filings, US\$ mln)	92
Figure 93: Country of origin creditors of fossil fuel in Vietnam (2014-2019)	93
Figure 94: Top 15 fossil fuel creditors in Vietnam (2014-2019, US\$ mln)	93
Figure 95: Top 15 FFA fossil fuel creditors in Vietnam (2014-2019, US\$ mln)	94
Figure 96: Country of origin investors in fossil fuel in Vietnam (2020 February, most recent filings)	95
Figure 97: Top 15 fossil fuel investors in Vietnam (2020 February, most recent filings, US\$ mln)	95
Figure 98: Top 15 FFA fossil fuel investors in Vietnam (2020 February, most recent filings, US\$ mln)	96
Figure 99: Intra-regional credit flows to power generation companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)	98
Figure 100: FFA power creditor countries of origin (2014-2019, US\$ mln)	99
Figure 101: Top 15 power generation creditors (2014-2019, US\$ mln)	99
Figure 102: Intra-regional investment flows to power generation companies (no. of countries invested in & no. countries invested by)	100
Figure 103: FFA power generation investor countries of origin (2020 February, most recent filings, US\$ mln)	100
Figure 104: Top 15 FFA power generation investors (2020 February, most recent filings, US\$ mln)	101
Figure 105: Country of origin creditors of power generation in Cambodia (2014-2019)	102
Figure 106: Top 15 power generation creditors in Cambodia (2014-2019, US\$ mln)	102
Figure 107: Country of origin investors in power generation in Cambodia (2020 February, most recent filings)	103
Figure 108: Top 15 power generation investors in Cambodia (2020 February, most recent filings)	103
Figure 109: Country of origin creditors of power generation in India (2014-2019)	104
Figure 110: Top 15 power generation creditors in India (2014-2019, US\$ mln)	105

Figure 111: Top 15 FFA power generation creditors in India (2014-2019, US\$ mln)	105
Figure 112: Country of origin investors in power generation in India (2020 February, most recent filings)	106
Figure 113: Top 15 power generation investors in India (2020 February, most recent filings, US\$ mln)	106
Figure 114: Top 15 FFA power generation investors in India (2020 February, most recent filings, US\$ mln)	107
Figure 115: Country of origin creditors of power generation in Indonesia (2014-2019)	108
Figure 116: Top 15 power generation creditors in Indonesia (2014-2019, US\$ mln)	108
Figure 117: Top 15 FFA power generation creditors in Indonesia (2014-2019, US\$ mln)	109
Figure 118: Country of origin investors in power generation in Indonesia (2020 February, most recent filings)	110
Figure 119: Top 15 power generation investors in Indonesia (2020 February, most recent filings, US\$ mln)	110
Figure 120: Top 15 FFA power generation investors in Indonesia (2020 February, most recent filings, US\$ mln)	111
Figure 121: Country of origin creditors of power generation in Japan (2014-2019)	111
Figure 122: Top 15 power generation creditors in Japan (2014-2019, US\$ mln)	112
Figure 123: Top 15 FFA power generation creditors in Japan (2014-2019, US\$ mln)	112
Figure 124: Country of origin investors in power generation in Japan (2020 February, most recent filings)	113
Figure 125: Top 15 power generation investors in Japan (2020 February, most recent filings, US\$ mln)	114
Figure 126: Top 15 FFA power generation investors in Japan (2020 February, most recent filings, US\$ mln)	114
Figure 127: Country of origin creditors of power generation in Philippines (2014-2019)	115
Figure 128: Top 15 power generation creditors in Philippines (2014-2019, US\$ mln)	115
Figure 129: Top 15 FFA power generation creditors in Philippines (2014-2019)	116
Figure 130: Country of origin investors in power generation in Philippines (2020 February, most recent filings)	117
Figure 131: Top 15 power generation investors in Philippines (2020 February, most recent filings, US\$ mln)	117
Figure 132: Top 15 FFA power generation investors in the Philippines (2020 February, most recent filings, US\$ mln)	118
Figure 133: Country of origin creditors of power generation in Thailand (2014-2019)	119
Figure 134: Top 15 power generation creditors in Thailand (2014-2019, US\$ mln)	119
Figure 135: Top 15 FFA power generation creditors in Thailand (2014-2019, US\$ mln)	120
Figure 136: Country of origin investors in power generation in Thailand (2020 February, most recent filings)	121
Figure 137: Top 15 power generation investors in Thailand (2020 February, most recent filings, US\$ mln)	121
Figure 138: Top 15 FFA power generation investors in Thailand (2020 February, most recent filings, US\$ mln)	122

Figure 139: Country of origin creditors of power generation in Vietnam (2014-2019)	123
Figure 140: Top 15 power generation creditors in Vietnam (2014-2019, US\$ mln)	123
Figure 141: Top 15 FFA power generation creditors in Vietnam (2014-2019, US\$ mln)	124
Figure 142: Intra-regional credit flows to agribusiness companies (no. of countries provide credit to & no. countries receive credit from, 2014-2019)	126
Figure 143: FFA agriculture creditor countries of origin (2014-2019, US\$ mln)	127
Figure 144: Top 15 agribusiness creditors (2014-2019, US\$ mln)	127
Figure 145: Intra-regional investment flows to agribusiness companies (no. of countries invested in & no. countries invested by)	128
Figure 146: FFA agribusiness investor countries of origin (2020 February, most recent filings, US\$ mln)	128
Figure 147: Top 15 FFA agribusiness investors (2020 February, most recent filings, US\$ mln)	129
Figure 148: Country of origin creditors of agribusiness in Cambodia (2014-2019)	130
Figure 149: Top 15 agribusiness creditors in Cambodia (2014-2019, US\$ mln)	130
Figure 150: Top 15 FFA agribusiness creditors in Cambodia (2014-2019, US\$ mln)	131
Figure 151: Country of origin investors in agribusiness in Cambodia (2020 February, most recent filings)	132
Figure 152: Top 15 agribusiness investors in Cambodia (2020 February, most recent filings, US\$ mln)	132
Figure 153: Country of origin creditors of agribusiness in India (2014-2019)	133
Figure 154: Top 15 agribusiness creditors in India (2014-2019, US\$ mln)	133
Figure 155: Top 15 FFA agribusiness creditors in India (2014-2019, US\$ mln)	134
Figure 156: Country of origin investors in agribusiness in India (2020 February, most recent filings)	135
Figure 157: Top 15 agribusiness investors in India (2020 February, most recent filings, US\$ mln)	135
Figure 158: Top 15 FFA agribusiness investors in India (2020 February, most recent filings, US\$ mln)	136
Figure 159: Country of origin creditors of agribusiness in Indonesia (2014-2019)	137
Figure 160: Top 15 agribusiness creditors in Indonesia (2014-2019, US\$ mln)	137
Figure 161: Top 15 FFA agribusiness creditors in Indonesia (2014-2019, US\$ mln)	138
Figure 163: Top 15 agribusiness investors in Indonesia (2020 February, most recent filings, US\$ mln)	139
Figure 162: Country of origin investors in agribusiness in Indonesia (2020 February, most recent filings)	139
Figure 164: Top 15 FFA agribusiness investors in Indonesia (2020 February, most recent filings, US\$ mln)	140
Figure 165: Country of origin creditors of agribusiness in Japan (2014-2019)	141
Figure 166: Top 15 agribusiness creditors in Japan (2014-2019, US\$ mln)	141
Figure 167: Top 15 FFA agribusiness creditors in Japan (2014-2019, US\$ mln)	142
Figure 168: Country of origin investors in agribusiness in Japan (2020 February, most recent filings)	143

Figure 169: Top 15 agribusiness investors in Japan (2020 February, most recent filings, US\$ mln)	143
Figure 170: Top 15 FFA agribusiness investors in Japan (2020 February, most recent filings, US\$ mln)	144
Figure 171: Country of origin creditors of agribusiness in the Philippines (2014-2019)	145
Figure 172: Top 15 agribusiness creditors in the Philippines (2014-2019, US\$ mln)	145
Figure 173: Top 15 FFA agribusiness creditors in the Philippines (2014-2019, US\$ mln)	146
Figure 174: Country of origin investors in agribusiness in the Philippines (2020 February, most recent filings)	147
Figure 175: Top 15 agribusiness investors in the Philippines (2020 February, most recent filings, US\$ mln)	147
Figure 176: Top 15 FFA agribusiness investors in the Philippines (2020 February, most recent filings, US\$ mln)	148
Figure 177: Country of origin creditors of agribusiness in Thailand (2014-2019)	149
Figure 178: Top 15 agribusiness creditors in Thailand (2014-2019, US\$ mln)	149
Figure 179: Top 15 FFA agribusiness creditors in Thailand (2014-2019, US\$ mln)	150
Figure 180: Country of origin investors in agribusiness in Thailand (2020 February, most recent filings)	151
Figure 181: Top 15 agribusiness investors in Thailand (2020 February, most recent filings, US\$ mln)	151
Figure 182: Top 15 FFA agribusiness investors in Thailand (2020 February, most recent filings, US\$ mln)	152
Figure 183: Country of origin creditors of agribusiness in Vietnam (2014-2019)	153
Figure 184: Top 15 agribusiness creditors in Vietnam (2014-2019, US\$ mln)	153
Figure 185: Top 15 FFA agribusiness creditors in Vietnam (2014-2019, US\$ mln)	154
Figure 186: Country of origin investors in agribusiness in Vietnam (2020 February, most recent filings)	154
Figure 187: Top 15 agribusiness investors in Vietnam (2020 February, most recent filings, US\$ mln)	155
Figure 188: Top 15 FFA agribusiness investors in Vietnam (2020 February, most recent filings, US\$ mln)	155

LIST OF TABLES

Table 1: Selected infrastructure construction companies	16
Table 2: Selected fossil fuel companies	19
Table 3: Selected power generation companies	22
Table 4: Selected agribusiness companies	24
Table 5: Commitment assigned to book runner groups	28

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