

**ERIA Discussion Paper Series****Financial Reforms in Myanmar and Japan's  
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**Abstract:** Since 2011, under the Thein Sein government, Myanmar has started to build financial institutions almost from scratch. Japan has played a leading role in this transition, writing off debt, opening the Yangon Stock Exchange, vying for the entry of Japanese banks, and laying out finance-related laws. As in other Southeast Asian countries, Myanmar's oligopolistic economic structure and colonial past present considerable challenges. There is a rich literature on the relationship between well-functioning financial institutions and economic growth, but the causality of this relationship remains inconclusive. This paper examines the preconditions for financial institutions to be a vehicle for Myanmar's development.

**Keywords:** Financial development, economic development, financial reforms, Myanmar's economy, Japan–Myanmar relations

**JEL Classification:** N2; O2; P4

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## 1. Introduction

Soon after the Second World War, the British withdrew from Myanmar leaving little in the way of financial institutions behind. In the second half of the 20th century, no visible progress was made in the country's financial development under the socialist regime. In the late 1980s, although the junta finally initiated economic liberalisation, this was short-lived as the Asian financial crisis in 1997 and the banking crisis in 2003 disrupted progress.

Since President Thein Sein took office in March 2011, however, the country has implemented a series of financial reforms while the macroeconomic environment was reasonably stable. In this process, among multilateral entities, such as the Asian Development Bank, the International Monetary Fund, and the World Bank, Japan has played a critical role in both public and private sectors. As the biggest provider of foreign assistance, the Government of Japan wrote off US\$3.7 billion of Myanmar's debt; the Japan International Cooperation Agency assisted in introducing finance-related laws; Daiwa Institute of Research, the Japan Stock Exchange (JPX), and the Financial Services Agency (FSA) contributed to the establishment of the Yangon Stock Exchange (YSX); and all three Japanese mega banks (Mitsubishi UFJ Financial Group, Sumitomo Mitsui Banking Corporation, and Mizuho Bank) received the permission to enter the Myanmar market.

This paper attempts to examine (i) the factors that led Myanmar and Japan to cooperate on financial matters, and (ii) the preconditions for Myanmar's financial reforms to lead to economic development. In section 2, we review the literature to investigate the positive association between financial development and economic growth. We also consider why the per capita incomes of some East Asian (Northeast and Southeast Asia)<sup>1</sup> economies are lower than the aggregate financial indicators may suggest. Section 3 reflects on Myanmar's past financial development. Section 4 focuses on the interests both Japan and Myanmar have in fostering the financial sector based on bilateral cooperation. Section 5 concludes by taking stock of Myanmar's standing today and its future challenges.

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<sup>1</sup> In this paper we classify China, Japan, the Republic of Korea [henceforth Korea] and Taiwan as Northeast Asia, and Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam as Southeast Asia.

## **2. Financial development and growth**

### ***Banks, Securities Markets, and Growth***

Economists have long investigated how financial systems affect countries' economic performance. Numerous studies demonstrate a strong positive link between financial development and subsequent economic growth. To examine the link, studies were undertaken at the level of the firm, industry and individual country. On the other hand, there are more sceptical views. For instance, Robinson (1952) articulated, 'where enterprise leads finance follows' and Lucas (1988) argued economists 'badly over-stress' the role of financial factors in economic growth. Wachtel (2003) further noted 'it is curious how little solid evidence there is that relates the financial sector to economic growth and stability.'

Indeed, previous studies have failed to prove the existence of a direct causal relationship between a functioning financial system and long-term economic growth, nor have they adequately explained the mechanism behind the relationship i.e. what happens when the financial sector develops and how it can bring wealth to the nations. Thus, one can only infer a correlation between finance and growth, and examine the possibilities of artefact of simultaneity or reverse causality. In measuring the degree of financial development, scholars have primarily focused on the banking sector and stock exchanges.

How do financial institutions facilitate economic growth? Before the financial industry emerges, information and transaction costs often impede the allocation of capital. But, if functioning well, these financial institutions can channel capital into productive investment projects. More specifically, the financial industry improves the screening of capital seekers and monitoring of recipients. The financial industry also encourages the mobilisation of savings by providing attractive instruments and savings vehicles. In addition, economies of scale in financial institutions lower the costs of project evaluation and origination and facilitate monitoring of projects through corporate governance. Finally, financial intermediaries provide opportunities for risk management and liquidity (Wachtel, 2003).

However, not every country enjoys a well-functioning financial system. First and foremost, a sound legal system is required to protect both investors and creditors. La

Porta et al. (1997) concluded that the legal environment, such as legal rules and their enforcement, matters for the size and extent of a country's capital market. Their results show that civil law, particularly French civil law, has the weakest investor protections, and civil law countries have less-developed capital markets than common law countries. Likewise, cronyism is proven to hinder the development of financial intermediaries as collected funds would be channelled to politically connected, wealthy tycoons.

Other important elements of the financial sector include clear and universally applied accounting standards and auditing practices. With unhealthy corporate governance, the managers of financial intermediaries may choose to invest in poor projects that can generate personal benefits. Levine et al. (2000) conducted cross-country analysis and found that countries equipped with accounting system standards that produce high-quality, comprehensive, and comparable financial statements tend to have better developed financial systems. This is intuitive since accurate information about firms is crucial for exerting corporate governance and identifying the most promising investments.

Since the early 20th century, economists have debated whether a bank-dominated (the German model) or market-dominated (the Anglo-Saxon model) financial system generates faster economic growth. The bank-dominated model, where banks have close ties to the industry, could reduce the costs of acquiring information about firms. The market-dominated model, which is characterised by larger, more active securities markets, may offer an advantage in terms of enhancing risk-sharing functions. Levine (1997) argued 'this dichotomy is inappropriate' because it is not either banks or stock markets but indicators for both bank and stock market development that predict economic growth. Indeed, recent history suggests the two financial systems are converging around the world.

Moreover, the role of banks and securities markets evolves with economic development. Demirgüç-Kunt et al. (2012) summarised that banks are better at providing standardised and well-collateralised services, whereas securities markets are more capable of offering specific arrangements for innovative projects that are dependent on intangible inputs. They showed that as economies grow, both the banking sector and financial markets become more developed, but the association between economic performance and bank development tends to fall, and the link between

economic performance and securities market development tends to increase. This finding reconfirms patterns that financial intermediaries get larger before banks grow relative to the central bank in allocating credit, then non-banks such as insurance companies and investment banks grow, thus enabling stock markets to become larger and more liquid (Levine, 1997).

Since the Second World War, most economies in Northeast Asia adopted financial repression, realised industrialisation, and achieved sustainable economic growth and improved individual welfare. In these economies, governments introduced industrial competition and were relatively free from the influence of tycoons. Since late 1990s, as the above-mentioned studies suggest, Japan's financial system has gradually shifted its weight from the banking sector to securities markets.

In Southeast Asia, on the other hand, financial institutions have largely failed to create an industrial push thus far. Many countries in the region are burdened with weak institutions, their financial activities centred only around tycoons. Less-developed countries lack standard accounting procedures and credit practices. Such differences within East Asia help to clarify the preconditions for the finance–growth link.

### ***Financial Development in Southeast Asia***

East Asia's financial sector recorded impressive growth before the Asian financial crisis hit the region in 1997. In many countries, bank credit expanded while stock markets enjoyed rising share prices. The collapse of the Thai baht in the summer of 1997 triggered a financial catastrophe that spilled over from Thailand to Indonesia and Korea.

Following the crisis, scholars were divided over the Asian development strategy. Some justified government intervention and guidance in financial affairs, with special attention to industrialisation. The others criticised Asia's 'repressive' bank-based system, which was controlled by governments or big businesses, calling for better corporate governance and demanding further financial liberalisation<sup>2</sup>.

The so-called 'double mismatch' was identified as the root cause of the economic breakdown after the financial crisis. Traditionally, corporate borrowers in Asia's

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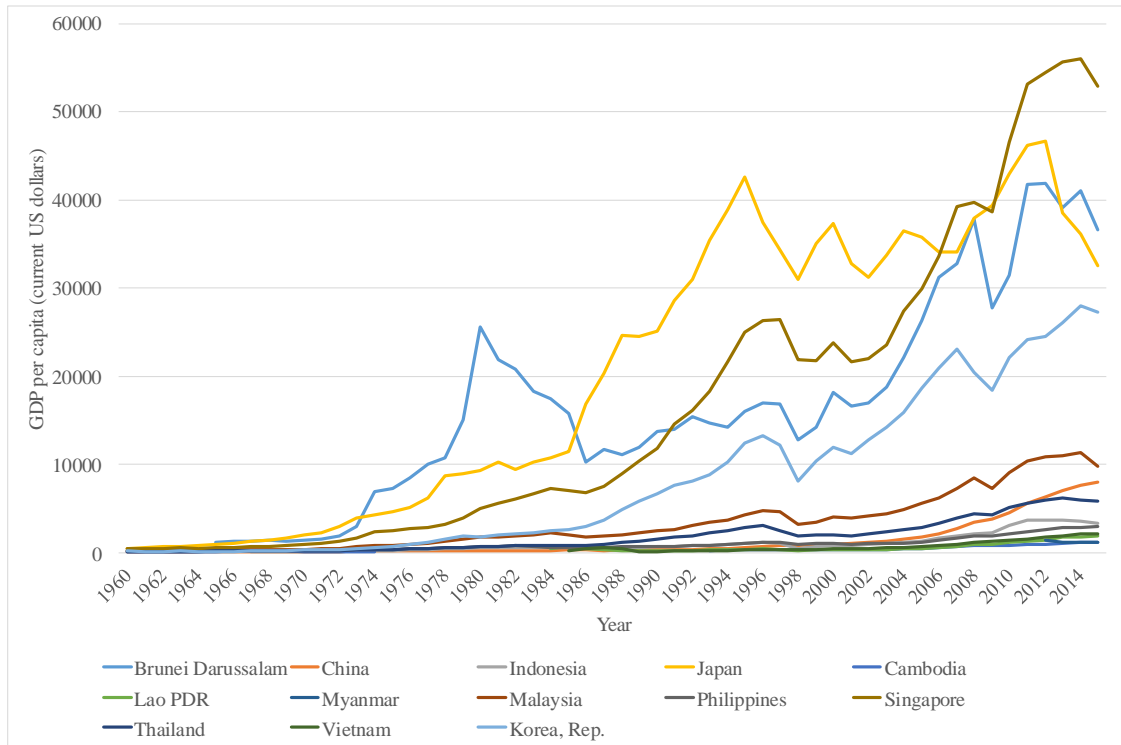
<sup>2</sup> This argument is often linked to "the Washington Consensus," which was coined by John Williamson in 1989 referring to a list of ten policies that were accepted as appropriate in Latin American countries by the Washington-based institutions such as the World Bank and the International Monetary Fund.

emerging economies depended on a short-term, foreign currency funding for a long-term investment in the local currency. They enjoyed a double benefit to their net worth if their economy and local currency remained strong, as the borrower's liability fell while its assets rose (Harwood, 2000). After learning lessons from the crisis, Asian economies vowed to develop a market for local currency-denominated bonds and to integrate financial markets in the region.

Today, aggregate data show positive financial development in Asia. In terms of its depth, the financial system in the region is less developed than in advanced economies but more developed than in Latin America and Eastern Europe. Bank credit to the private sector has accelerated, bond markets have expanded rapidly, and the number of listed companies has soared.

But, although the domestic credit and market capitalisation as a percentage of gross domestic product (GDP) are on an upward trend in most East Asian countries, GDP per capita has barely taken off except in Japan, Korea, Singapore, and Taiwan. Despite the growing banking sector and equity market, many Southeast Asian economies face the so-called 'middle-income trap.' This is illustrated by Figure 1, which shows a time series of GDP per capita (in current US dollars) of East Asian economies for 1960–2015. A clear divergence can be seen between Brunei Darussalam, Korea, Japan, Singapore, and the other countries from the mid-1980s.

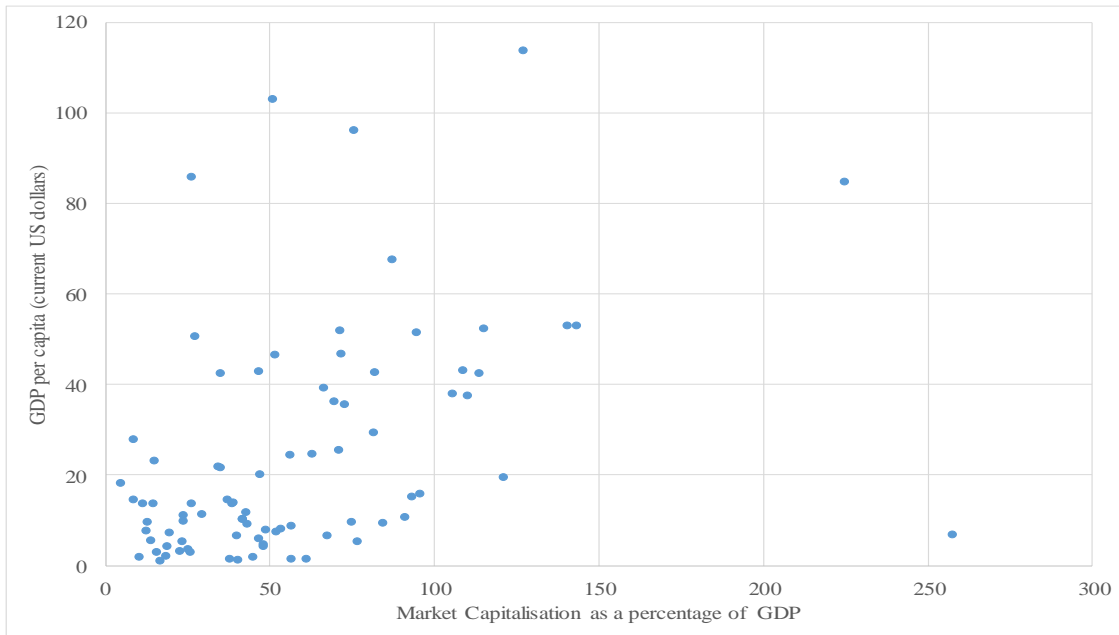
**Figure 1: GDP per Capita of East Asian Economies, (1960--2015)**



Source: World Bank.

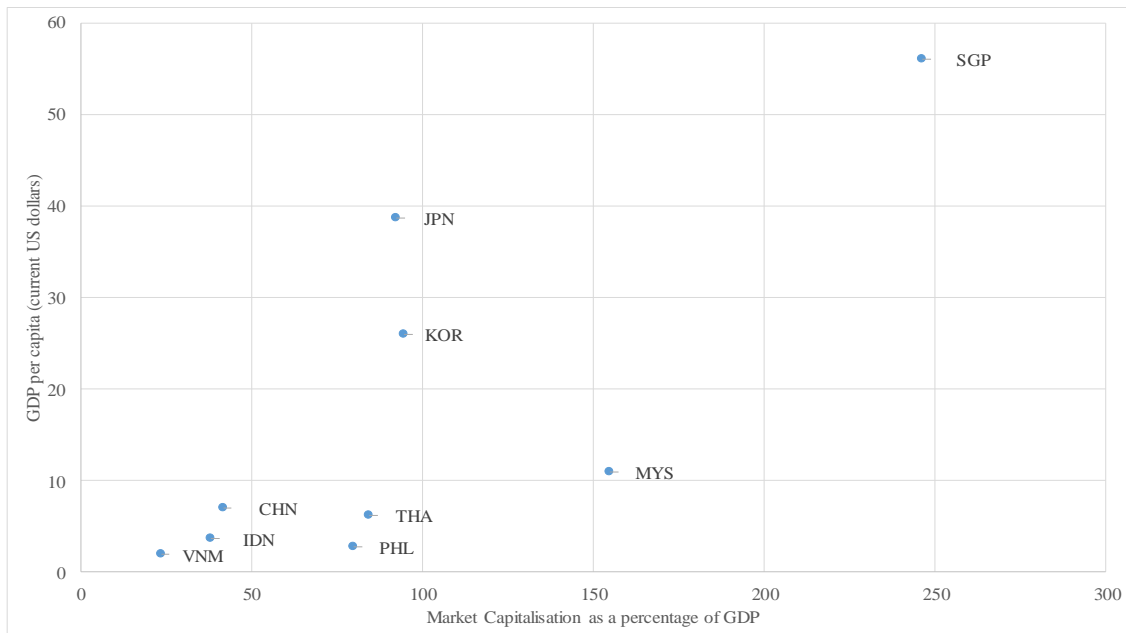
The following figures plot different measures of financial development and GDP per capita (in current US dollars) for 92 countries and for East Asian economies. Figure 2 plots market capitalisation as a percentage of GDP and GDP per capita for the world, while Figure 3 plots the same variables for East Asian economies.

**Figure 2: Market Capitalisation as a percentage of GDP vs. GDP per Capita (World, 2013).**



Source: World Bank.

**Figure 3: Market Capitalisation as a percentage of GDP vs. GDP per capita (East Asia, 2013)**



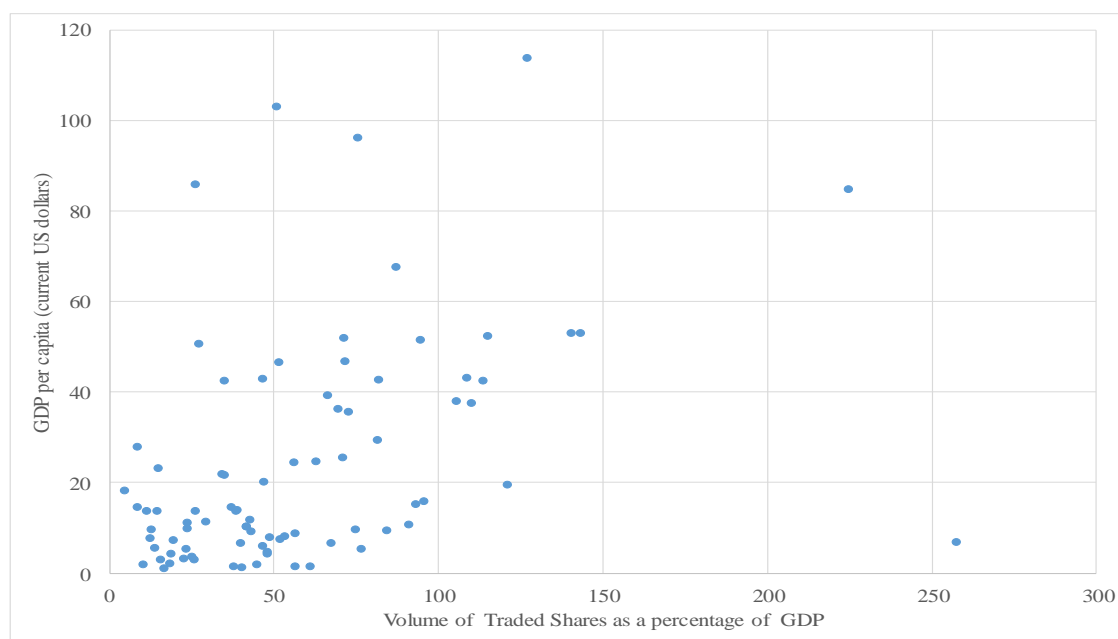
CHN = China, IDN = Indonesia, JPN = Japan, KOR = Republic of Korea, MYS = Malaysia, PHL = Philippines, SGP = Singapore, THA = Thailand, VNM = Viet Nam.

Source: World Bank.



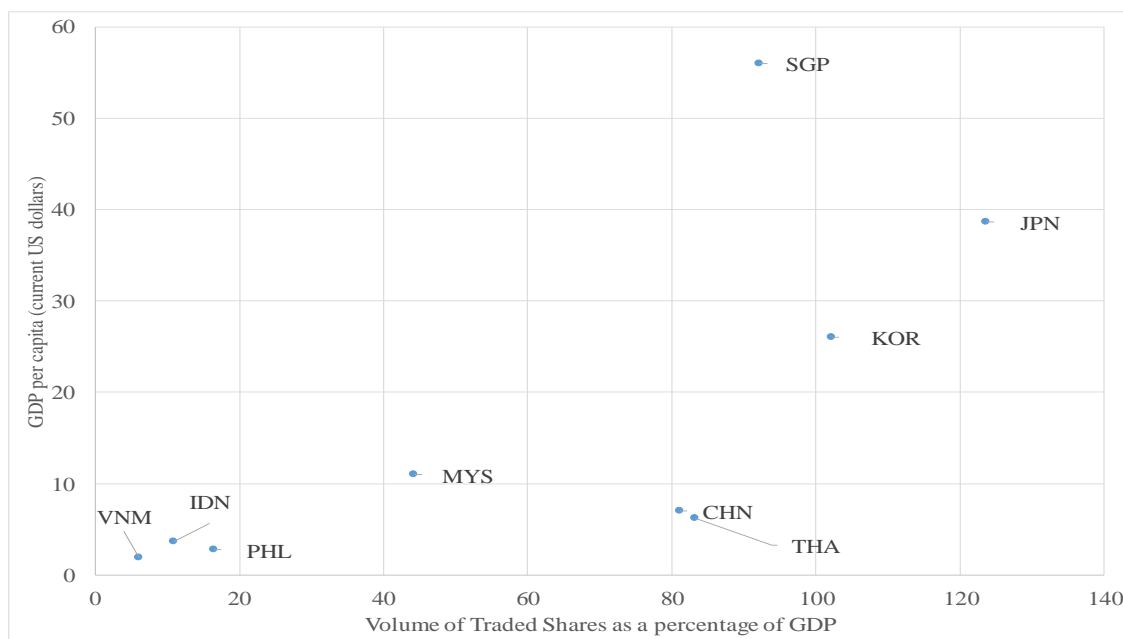
While there may be a positive correlation between the two variables, for Southeast Asian countries there seems to be no clear relationship. For example, Malaysia has a higher market capitalisation relative to GDP than Korea and Japan but a much lower GDP per capita. Figure 4 plots the volume of traded shares as a percentage of GDP, which reflect the depth of each stock market more accurately, and GDP per capita for the world. Figure 5 plots the same variables for East Asian economies. Neither graph shows a strong correlation between the two variables, and many Southeast Asian countries have a relatively low GDP per capita regardless of trade volume. For example, although Thailand's volume of traded shares is nearly as high as Singapore's, its GDP per capita is one-ninth of Singapore's.

**Figure 4: Volume of Traded Shares as a percentage of GDP vs. GDP per Capita (World, 2013)**



Source: World Bank.

**Figure 5: Volume of Traded Shares as a percentage of GDP vs. GDP per capita (East Asia, 2013)**

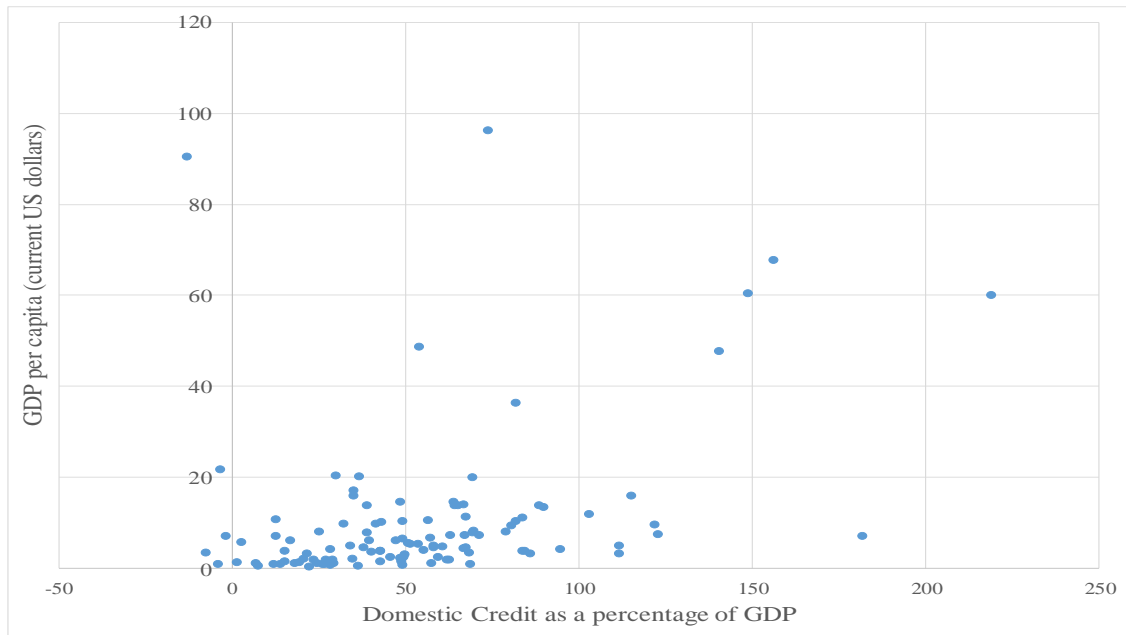


CHN = China, IDN = Indonesia, JPN = Japan, KOR = Republic of Korea, MYS = Malaysia, PHL = Philippines, SGP = Singapore, THA = Thailand, VNM = Viet Nam.

Source: World Bank.

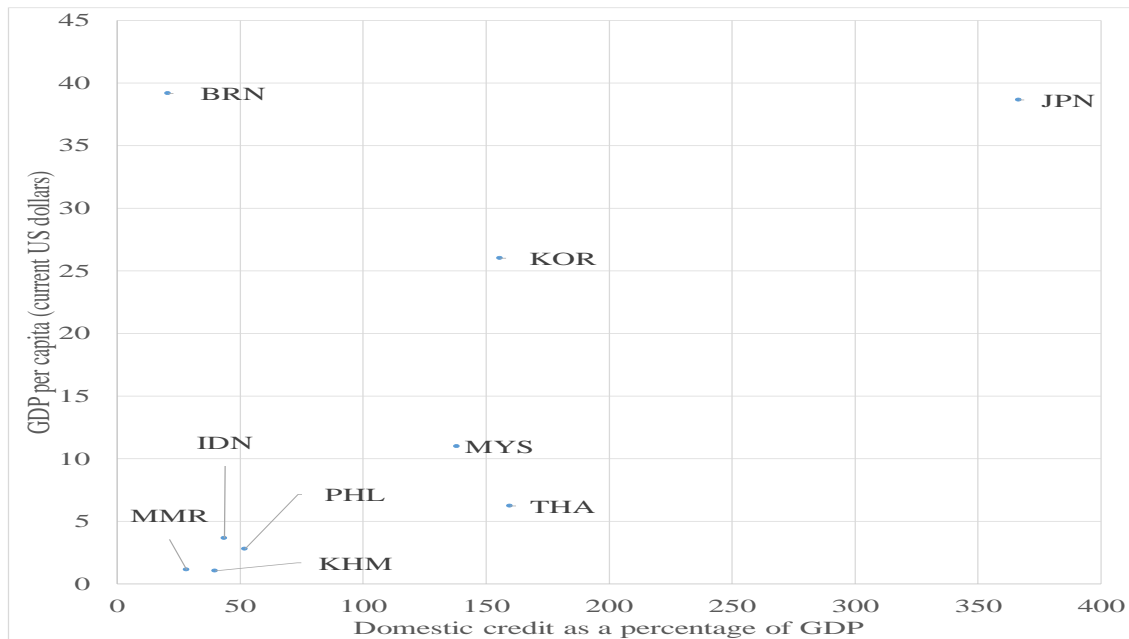
Figure 6 plots domestic credit as a percentage of GDP and GDP per capita (in current US dollars) for the world, while Figure 7 plots the same variables for East Asia. All Southeast Asian countries except Brunei have a relatively low GDP per capita no matter how high the domestic credit level.

**Figure 6: Domestic Credit as % of GDP vs. GDP per capita (World, 2013)**



Source: World Bank.

**Figure 7: Domestic Credit as % of GDP vs. GDP per capita (East Asia, 2013)**



BRN = Brunei Darussalam, IDN = Indonesia, JPN = Japan, KHM = Cambodia, KOR = Republic of Korea, MMR = Myanmar, MYS = Malaysia, PHL = Philippines, THA = Thailand.

Source: World Bank.

Why is income not on a par with financial development in most Southeast Asian countries as the finance–growth nexus predicts? Didier and Schmukler (2015) point out that ‘Asia’s financial systems remain less developed than aggregate measures suggest.’ This is because a few large companies continue to capture most of the issuance in capital markets and secondary markets remain relatively illiquid. In the end, most firms in countries with poor investor protection are controlled by large shareholders and only a small proportion of the shares are held by individual investors. As for the banking sector, lending to the private sector is somewhat skewed to large firms or firms belonging to a conglomerate in Southeast Asia. On the other hand, a closer look at the region’s bond markets reveals that the public sector occupies a large fraction of the bond market with few corporate bonds issued.

Financial development in Viet Nam confirms such a tendency. Although the number of listed firms is impressive, this is a result of the mass privatisation programmes as experienced in many other transition economies. Ownership in equitized state-owned enterprises was still concentrated with the government and insiders, posing various risks to minority shareholders (Bonin and Wachtel, 2003; Nguyen et al., 2014). Almost no bankruptcy was reported in Viet Nam after 15 years of the enactment of the Bankruptcy Law, implying that legislation does not necessarily lead to enforcement. On the banking front, state-owned commercial banks in Viet Nam discriminate against borrowings from the private sector in favour of state-owned enterprises. The banks can provide unsecured lending only to private firms with at least 2 consecutive years of profits. The loans of joint-stock banks often flow into speculative activities, such as real estate and stock markets, instead of going into productive investments (Leung, 2009).

Mieno (2015) argues that industrial and financial policies have been connected in Japan and Korea, whereas in Southeast Asia the two have been separate. He shows that the financial system in Southeast Asia is characterised by low dependency on bank loans and high dependency on self-financing. For instance, he finds that of the top 447 firms in terms of total assets in Thailand, only 33.3 percent are listed on the stock market, and commercial banks are strengthening their engagement in the finance, retail, or real estate sectors instead of manufacturing. Similarly, Studwell (2013) points out that the banking system did not support indigenous industrialisation effectively in Southeast

Asia. In addition, he notes that bond markets, and particularly stock markets, are harder for policy makers to control than the banking sector.

### **3. Historical Perspective on Myanmar's Financial Development**

No other Southeast Asian country demonstrates as well as Myanmar how difficult it is to set up a financial system. Almost every attempt to foster a financial system has failed. The country suffered from an unsustainable money lending mechanism, socialistic nationalisation of banks, abrupt demonetisation, and the most recent banking crisis. The central bank remained subject to the government, and trust in the national currency was impaired significantly. Like many other Southeast Asian countries, Myanmar's economy has been insulated from industrialisation and is largely agricultural with a reliance on natural resources.

#### ***Chettians and agricultural finance***

In Myanmar, whenever their operations were allowed, foreign lenders dominated financial markets. During the British colonial years of 1826 to 1948, Chettians (moneylenders from Tamil Nadu state, India) played a central role in rural Burma as financiers. They started to serve as a primary money lender to farmers, taking Burmese land as collateral. Especially after the Suez Canal opened in 1869, Burma became the most important exporter of rice, and was once responsible for almost two-fifths of total world exports. In 1930, the outstanding loans of the Chettians reached Rs650 million, equivalent to all British investment in Burma combined (Turnell, 2009). However, the arrival of the Great Depression triggered a fall in crop prices and the insolvency of Burmese farmers, thus the Chettians acquired most of the cultivatable land. This led to serious grievances among Burmese farmers.

#### ***British cooperative credit and commercial banks***

Around the same time, the British colonial administration attempted to set up a formal rural credit market in Burma. Cooperative credit, a top-down financial system introduced by Britain expanded its operation. The three-tier system, consisting of central banks, unions, and primary credit societies, reached a peak in 1925 with a shared capital of Rs3.56 million. Yet, the crunch occurred in 1927 before the Great Depression.

The local authority in retrospect attributed the failure of the system to the malfunctioning unions.

Meanwhile, there was a considerable number of commercial banks during the colonial times. British ‘exchange banks’, ‘president banks’ of British India, and other foreign banks, including Japan’s Yokohama Specie Bank, concentrated in Rangoon and mainly engaged in trade finance. Only a few indigenous banks were present in Burma. Again, affected by the Great Depression, the lending capacity of these banks shrank dramatically.

### ***Reserve Bank of India***

During the colonial years, Burma, as a province of British India, did not have its own central bank and the rupee was used as the local currency. Although there were advocates for Burma’s own central bank, it was never realised because Burma’s economy size was considered too small and the province lacked sufficient personnel (Turnell, 2009). Instead, the Reserve Bank of India was established in 1935 with responsibility for both India and Burma. Therefore, Burma’s essential problems, such as insufficient funding and high interest rates, persisted. As Wai (1953) observed, ‘the banks did not want to keep their money lying idle in Burma [...], they preferred to invest it in India.’

### ***Independence and the Socialist experiment***

In 1942, Rangoon fell to the Japanese army, and most foreign banks and Chettiers left Burma. Japan introduced the occupation currency and the well-connected Yokohama Specie Bank swiftly expanded its presence across Burmese territory. But the establishment of a proper financial system was not completed during the short-lived occupation period.

The British tackled the reconstruction of Burma’s financial system and set up the Burmese currency board and the first Union Bank of Burma in 1947. The currency board was given the function of a monetary policy maker, while the Union Bank of Burma had little authority as a central bank. In 1952, these institutions were replaced by the second Union Bank of Burma, which had slightly more autonomy as a central bank. The first national currency, the kyat, was issued in July of the same year.

Immediately after independence in 1948, the then-Prime Minister U Nu began to lead the country towards socialism and nationalism, and built the State Agricultural

Bank and the State Commercial Bank. Meanwhile, the Immovable Property Act of 1947 prohibited foreigners from owning title to immovable property, thereby preventing foreign banks from using title to land as collateral for long-term lending.

### ***Demonetisation under the military rule***

Military rule, which began in March 1962, only worsened the country's financial standing. Inspired by China's Bank of China, the new Revolutionary Council government established the People's Bank of the Union of Burma (PBUB). All existing banks were nationalised under the same name (PBUB no.1 to no.24). After rounds of mergers, by February 1970 the PBUB became 'the central bank that conducted monetary policy, regulated the note issue and was banker to the government; it was Burma's sole commercial bank, sole agricultural bank, sole foreign exchange bank, and sole savings bank' (Turnell, 2009). Financial destruction did not stop there. In May 1964, the junta went ahead with demonetisation, and the consequence was the nation's loss of confidence in holding kyat. After deteriorating economic performance, in 1975 the government broke up the monolithic PBUB into four entities: one central bank and other three state-owned banks with different specialisations.

Yet, demonetisations happened again in 1985 and 1987. It is noteworthy that the 1987 demonetisation came without exchange or compensation, and with bizarre new MK45 and MK90 currency notes. As a result, people shifted their preferred means of storage from cash to gold, jewellery, and other commodities under devastating economic circumstances. These demonetisations in part led to the 1988 uprising and new financial reforms under the State Law and Order Restoration Council and the State Peace and Development Council that followed.

### ***Failed attempts to reform the financial sector***

The Financial Institution of Myanmar Law of 1990 allowed the emergence of private banks for the first time since 1963.<sup>3</sup> Almost 50 foreign banks were operating in Myanmar at its peak in the mid-1990s. They later became aware of their limited business spectrum and Myanmar's underperforming economy, and many left the

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<sup>3</sup> Originally, the government was preparing to implement a three-stage reform process to (i) establish private domestic commercial banks and permit foreign banks to open representative offices, (ii) permit domestic banks to form joint ventures, and (iii) allow foreign banks to set up on their own. But only the first phase was partly realised.

country within few years. During this period, several Myanmar private banks came into existence. Turnell (2009) observed that the ‘big five’ at the time – Asia Wealth Bank, Yoma Bank, Myanmar Mayflower Bank, Kanbawza Bank, and Myanmar Universal Bank – shared similar features: they were often part of a conglomerate, and many of them had been founded by Burmese Chinese who were often associated with money laundering.

Furthermore, the Central Bank of Myanmar Law apparently rendered the Central Bank of Myanmar (CBM) all the modern central bank functions. These impressive rules and regulations were not implemented or enforced, however, and the bank was merely a lending machine for the government.

In such imperfect financial settings, a spectacular liquidity crisis swept Myanmar in 2003. The Financial Action Task Force for Money Laundering under the Organisation for Economic Co-operation and Development in 2001 categorised Myanmar as a ‘non-cooperative’ country, and the U.S. State Department repeatedly accused the Myanmar banking system of connections with international narcotics trading. In a response, the Government of Myanmar introduced the Law to Control Money and Property Obtained by Illegal Means, which ignited large-scale deposit flights among Myanmar nationals. Finally, the operations of Asia Wealth Bank and Mayflower Bank were prohibited on 9 December 2003. Regrettably, the CBM’s countermeasures to tap liquidity did not come promptly and adequately. As a result, total lending to the private sector fell significantly in the following years.

#### **4. Japan’s Assistance for Financial and Capital Market Reforms in Myanmar**

##### *Japan’s perspective*

After Myanmar’s quasi-civilian government under the new President Thein Sein restored the relationship with the political opposition in March 2011, Japan acted quickly to improve its bilateral ties with Myanmar.

The Japan–Myanmar summit was held in November that year, and President Thein Sein visited Japan in April 2012, ahead of other G8 countries. From a geopolitical



perspective, Japan was well-positioned because Myanmar started to distance itself from its north-eastern neighbour China and the economic sanctions introduced by Western countries were still in place. The Abe government also started its first diplomatic outreach to Myanmar as the deputy prime minister was sent to the country during the new year holidays in January 2013. First, as the biggest development assistance provider to Myanmar, Japan wrote off about US\$3.7 billion in yen-denominated loans, making it the first developed nation to reach a deal on the country's unpaid debt.<sup>4</sup>

In Tokyo, the FSA started to eye Asia. The prototype of Japan's public-private assistance for financial development in Myanmar emerged in one of the FSA working groups specialising in 'international expansion,' launched in 2012. The working group proposed a collection of policy suggestions, such as offering technical assistance for financial development and support for financial deregulation in Asia to promote the internationalisation of business activities by Japanese firms and financial institutions.<sup>5</sup>

Reflecting these policy suggestions, the Japanese cabinet approved Japan's Revitalization Strategy in 2013, where it articulated that 'by taking in the growth of Asia, the government will vitalise stock markets and improve asset management markets to build a No.1 financial/capital market in Asia.' In 2014, the revised growth strategy further pledged that 'the government will also support Japanese firms' and financial institutions' activities in Asia.'

In recent years, Southeast Asia has become a key foreign direct investment destination of for Japanese firms, partly because of rising labour costs in China. Since 2013, the ASEAN-4 nations, comprised of Indonesia, Malaysia, the Philippines, and Thailand, has been attracting more foreign direct investment from Japan than China. Likewise, Japanese financial institutions, particularly banks, were shifting their weight towards Southeast Asia. The move is seen as the second wave of cross-border activities following the first wave of expansion of Japanese banks in 1980s before the bubble economy burst. For example, in 2013 the Bank of Tokyo-Mitsubishi UFJ acquired Bank

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<sup>4</sup> In December 2013, Japan resumed development assistance to support Myanmar's democratic and economic reforms. Throughout the years of the Burmese military rule, the Japan International Cooperation Agency stayed in the country while the Asian Development Bank and the World Bank were absent.

<sup>5</sup> In the long term, the FSA also wanted to create an 'Asian voice' in relevant international conferences including the Financial Stability Board, an international body that monitors and makes recommendations about the global financial system.

of Ayudhya, Thailand's the fifth-ranked commercial bank.<sup>6</sup> The claims of Japanese banks on Asia have witnessed outstanding growth of 105 percent since the end of 2008 (IMF 2013). The latest wave of Japanese bank expansion occurred when the banks exerted efforts to expand their client base from Japanese firms to local entities and even individual customers. The International Monetary Fund (2013) predicts that this expansionary trend is likely to continue over the medium term.

In 2014, the FSA signed memoranda of understanding (MOUs) on financial cooperation with several counterparts in Asian countries such as Indonesia, Thailand, and Viet Nam. It has also established the Asian Financial Partnership Center, where officials from financial authorities in Asia are invited for training and research. The FSA hopes these officials will facilitate Japanese business activities in their home countries by deregulating their markets. To date, more than 30 officials have been trained by the FSA, including several Myanmar officers.

With regard to financial development in Myanmar, Japan's Daiwa Securities had a stake as early as early 1990s.<sup>7</sup> Daiwa Securities Group and Myanmar Economic Bank planned to evolve the Myanmar Securities Exchange Centre into a stock exchange, but the 1997 Asian financial crisis and the 2003 banking crisis disrupted the schedule. Nonetheless, in 2012, the CBM, the Tokyo Stock Exchange, and Daiwa Institute of Research signed an MOU to assist the establishment of a stock exchange.<sup>8</sup> This suggests that the long-term cordial relations between Daiwa Securities and the Myanmar authority eventually paid off.

Meanwhile, in August 2012, the Policy Research Institute under the Government of Japan's Ministry of Finance and the CBM signed an MOU to assist the introduction

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<sup>6</sup> Propelled by the Bank of Japan's monetary easing policy and the decline in Japan's domestic population, Japanese banks have been keen to expand their overseas businesses. Also, because of the global financial crisis, European banks were retreating from Asia, and the American banks cut off some businesses in the region, leaving a void for Japanese banks.

<sup>7</sup> During this period, as a rival securities firm Nomura expanded to Viet Nam, Daiwa was seeking an opportunity in the region. Daiwa deepened a tie with then Myanmar's minister of National Planning and Economic Development David Abel, and that facilitated the establishment of the Myanmar Securities Exchange Centre, a joint-venture between Myanmar Economic Bank and Daiwa Securities Group to operate the country's sole over-the-counter stock exchange.

<sup>8</sup> Myanmar signed similar MOUs with Korea and Thailand but these were limited to human capacity building.

of the Securities Exchange Law in Myanmar.<sup>9</sup> The law was put into effect in August 2013. It was the first time Japan had drafted a finance-related law for a foreign country from scratch.

By the end of 2013, the FSA dispatched their officers to station in Yangon to establish the oversight agency for capital market. In January 2014, the FSA and the Government of Myanmar's Ministry of Finance signed another MOU to cooperate on securities, insurance, and microfinance, thus Japan's public-private engagement in financial development in Myanmar officially commenced.

In 2014, 25 banks from 12 countries and regions in Asia and the Pacific applied for operating licenses in Myanmar. In October of the same year, Myanmar gave permission to nine foreign banks to open branches. While many countries obtained only one license, all of three Japanese mega banks received licenses, and therefore Japan was regarded by the Myanmar local media as the big winner.<sup>10</sup>

Currently, foreign banks are only allowed to operate for foreign entities. Among other business opportunities, Japanese banks can lend to Japanese firms to open factories in Thilawa Special Economic Zone, a Japanese-led industrial zone. For instance, Mitsubishi UFJ Financial Group is trying to utilise the purchased Bank of Ayudhya given that Thai foreign direct investment to Myanmar is sizable. Mitsubishi UFJ Financial Group is also trying to increase savings in CB Bank, its local partner, by compelling factory workers in Thilawa Special Economic Zone to open personal accounts.

The Yangon Stock Exchange (YSX) opened in December 2015. First Myanmar Investment, Myanmar Thilawa SEZ Holdings, and Myanmar Citizens Bank became the first listed companies in 2016. The Japanese side believes conditions are better in the YSX than in the stock exchanges of Cambodia and Lao PDR, which have only a few listed companies. By comparison, the counterpart in Viet Nam – the Ho Chi Minh City Stock Exchange, established in 2000 – now has more than 300 listed companies. Myanmar has about 200 public companies whose stocks are tradable, and they are seen

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<sup>9</sup> Based on the MOU, Japan and Myanmar set up working groups. Japan drafted the law based on the Japanese *Financial Instruments and Exchange Act*, and the Myanmar side modified it.

<sup>10</sup> Originally, Japan was supposed to get two spots, but Prime Minister Abe lobbied heavily for three.

as candidates for listing. One Japanese official foresees an upper limit of 100 companies for the time being.<sup>11</sup>

The Japan Stock Exchange (JPX) updated its Medium-Term Management Plan, released in 2014, and included the Asian Strategy as one of four business pillars. Lagging behind its Korean counterpart's participation in the establishment of the Cambodian and Lao PDR Stock Exchanges, the creation of the YSX was the JPX's first overseas attempt of its kind. A JPX staff member in Yangon believes that Western stock exchanges did not compete for the project because the low trading volumes meant it would take time to become profitable. For the JPX, it was more about accumulating experience than making profits.

### *Myanmar's perspective*

Under the Thein Sein government, Myanmar's financial sector underwent significant reforms. First, the CBM became an autonomous and independent regulatory body by the passing of the Central Bank of Myanmar Law in 2013. Previously, the Bank was under the guidance of the Ministry of Finance and its main duty was to finance the government deficit. Although it still lacks sufficient human capacity, the CBM now functions as a treasury bond issuer to be sold to private banks.

In providing foreign banks with operating licenses, Myanmar apparently allocated slots evenly among the countries of Asia and the Pacific, except Japan and Singapore, which received three and two respectively. In the first round of the selection in 2014, the CBM gave the permits to the three Japanese mega banks; two banks from Singapore; and one each to banks from Australia, China, Malaysia, and Thailand. On 4 March 2016, in the second round of selection, the CBM offered the same slots to four foreign banks from India, Korea, Taiwan, and Viet Nam. The minimum capital requirement was \$75 million – a large amount considering local banks' limited capacity.

Regarding Myanmar's intention to invite foreign bank branches, President Thein Sein's finance and economic advisor mentioned that Myanmar can gain access to foreign markets and that the foreign banks (i) are expected to bring about vibrant financial and capital markets, (ii) can provide Myanmar local banks with a technical

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<sup>11</sup> Myanmar Securities and Exchange Centre staff, including staff from Daiwa Securities Group, have been visiting 'hopeful' companies and providing advice for listing since 2013.

upgrade, (iii) can improve management expertise and corporate governance of Myanmar companies, and (iv) can bring responsible investors to the country.

However, the rapid pace of foreign banks' entry poses challenges as they might leave the country at times of financial crisis, and Myanmar's financial authority lags in terms of managing financial stability. Local banks largely remain fearful of competition from foreign banks for the existing small pie. Nonetheless, the International Monetary Fund (2015) advises that local banks are better positioned by virtue of their branch networks and knowledge of local business, and therefore they have time to develop their services and capabilities before the government fully liberalises the operations of foreign banks.<sup>12</sup>

Overall, the country's banks are far from playing a satisfactory role as financial intermediaries. In Myanmar, the penetration rate (percentage of people with bank accounts) is estimated to be less than 20 percent. Similarly, the ratio of private bank credits to GDP is as low as 32.5 percent (Turnell, 2014). Therefore, the primary objective is to enlarge the pie, increasing the number of bank accounts and enhancing lending capacity.

Why is Myanmar's penetration rate so low? First and foremost, Myanmar citizens lack trust in banking because of the financial fiascos in the past. Historically, Myanmar has been a cash society due to insufficient regulations for other means of money transfer. Local banks are concentrated in big cities and typically do not have branch networks throughout the country. For this reason, the Myanmar authority believes mobile banking and electronic banking could complement conventional banking.

More importantly, Myanmar's banking sector has relied on asset-based lending, which allows companies to borrow money based on the liquidation value of assets they hold. The sector needs to expand its cash-flow-based lending, which allows companies to borrow money based on the projected future revenues. It would require the establishment of credit bureaus and the enforcement of an effective accounting system.

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<sup>12</sup> Currently, foreign banks are only allowed to operate wholesale banking and not retail banking. They are permitted to serve only foreign companies and need to cooperate with domestic banks to extend loans to local companies. The main business for foreign banks is lending money to local companies through local banks. Local companies provide land or property as collateral for local banks to receive loans indirectly from foreign banks. In such a restricted environment, foreign banks struggle to make profits and they seek further regulatory liberalisation.

Departing from the traditional ‘banking first, capital market last’ approach, Myanmar is endeavouring to run a stock exchange at this nascent stage of financial development, instead of merely fostering the banking sector. The Myanmar government set up the Road Map for the Development of Capital Market in Myanmar, which identifies the necessary steps and a detailed timeline for 2008 to 2015.<sup>13</sup>

In August 2012, the general manager of Myanma Insurance, Dr Maung Maung Thein, was appointed Deputy Minister of Finance and Revenue and put in charge of establishing the YSX without detailed guidance from the President. In preparing for a sustainable stock exchange within 3 years, he worked on the three pillars: a legal framework, a physical structure, and education. Japan gave instructions for the drafting of the Securities Exchange Law based on a similar law in Japan. Before the law was enacted in July 2013, Dr Maung Maung Thein demanded adding Myanmar’s context, to reflect the country’s culture and political background.<sup>14</sup>

Myanmar saw Viet Nam’s stock exchange opening as a successful case but regarded those of Cambodia and Lao PDR as failures. Korea and Thailand approached the Myanmar authority for collaboration, but Japan was finally chosen as a partner because Daiwa and other Japanese entities persisted in Myanmar through difficult times in the 1990s and 2000s, and because Japan had an adequate information technology system.

Since its grand opening in December 2015, three companies have been listed on the YSX. Only 30 of the 200 public companies are eligible for listing, and most of them lack appropriate corporate governance according to a Myanmar policy maker.<sup>15</sup> In the Myanmar business context, it is not uncommon for one person to be a board member of several different companies, creating potential conflicts of interest. Myanmar shares

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<sup>13</sup> To learn lessons from the Asian financial crisis, Asian economies set up the Asian Bond Markets Initiative to discuss promotion of capital and bond markets. High-ranking officials from Myanmar who participated in related meetings found the necessity to build up its domestic markets. Burmese officials also appreciated Daiwa’s efforts to hold related seminars at different governmental levels since its entry into the country.

<sup>14</sup> Dr Maung Maung Thein also organized many seminars for securities companies, dealers, brokers, and consultants while continuously making a buzz about the stock exchange in the local media to keep the momentum high. He recalls that some argued it was too early and others claimed it was too late to set up a stock exchange, but his position was ‘we don’t need to wait for the perfect time’.

<sup>15</sup> From the Myanmar policymakers’ viewpoint, the lack of financial expertise is a big problem. The Japanese FSA dispatches staff to advise Myanmar’s newly established regulator – the Securities and Exchange Commission of Myanmar.

similar financial challenges with other Southeast Asian peers. Myanmar tycoons often stay away from the stock exchange because they do not wish to disclose their corporate information and lose their grip on management. Moreover, some of local banks function merely as a financial intermediary for a larger corporate group. In addition, Myanmar's legal system is fragile and investor protection is almost non-existent. The last part of the Securities Exchange Law stipulates that during an unclear 'transitional period' the Ministry of Finance 'may issue necessary notifications, orders, directives' in the supervision of the securities business during the period. Legal experts question the effectiveness of the law. To develop a financial sector, transparent laws and regulations must apply to everyone without exception.

## **5. Conclusion**

While there is in general a positive correlation between financial development and economic growth, the literature remains inconclusive about the causality. There is evidence that the significance of the securities market relative to the banking sector grows as the economy develops.

In Southeast Asia, Malaysia and Thailand have achieved a relatively high level of financial development. However, there is still a big income gap between Southeast Asian and Northeast Asian countries, such as Japan and Korea, except for Singapore. Hence, the contribution of financial development in Southeast Asia to GDP per capita seems limited. Looking closer, the financial markets are dominated by a few large companies and secondary markets remain relatively illiquid. Moreover, there is a missing link between financial and industrial policies, and law enforcement remains limited.

These challenges are greater in Myanmar, which is among the least developed countries. Myanmar's historical experience illustrates the difficulty and complexity of establishing a well-functioning financial system. Under President Thein Sein, the Myanmar government has undertaken a series of financial reforms since 2011. Given their prior engagement in Myanmar, Japanese financial institutions were heavily

involved in the process from drafting the Securities Exchange Law and opening the YSX, to the three Japanese mega banks' market entry. The process is an experiment to develop securities markets and the banking sector concurrently. There is a mountain of challenges ahead. Myanmar must simultaneously modernise its accounting procedures and credit practices, improve corporate governance, enhance financial inclusion, build up human resources, and strengthen law enforcement. In these fields, Japan's engagement in Myanmar should complement the ongoing financial reforms in Myanmar. Moreover, drawing lessons from other Southeast Asian countries, Myanmar must devise a more comprehensive growth strategy to link finance with industrialisation. For example, the Thilawa Special Economic Zone, driven by Japanese investments, may be used as a catalyst for a nationwide industrial policy. Resonating with Japan's Revitalization Strategy, the experience gained from its engagement in Myanmar will be instrumental for Japan, especially as its financial institutions seek a greater presence in Southeast Asia.



## Appendix: Myanmar's Financial Reforms and Japan's Engagement, 2011–2016

2011	3	Thein Sein took office as President of Myanmar.
	11	Japan–Myanmar Summit held.
		ODA Policy Consultation Meeting held between Japan and Myanmar.
	12	Japanese Foreign Minister Koichiro Gemba visited Myanmar.
		Both countries agreed to begin discussions on a bilateral investment agreement.
2012	4	President Thein Sein visited Japan.
		Japan agreed to forgive Myanmar's ¥303.5 billion (US\$3.72 billion) debt and restart ODA to Myanmar.
	5	CBM, DIR, and JPX signed an MOU on technical assistance for the development of financial and capital markets in Myanmar.
		CBM and PRI signed an MOU on technical cooperation on Myanmar's capital market development.
		Working group to draft Securities and Exchange Law was set up.
	12	Myanmar and Japan signed an MOU on cooperation in the development of the Thilawa SEZ project.
2013	1	Japan's Deputy Prime Minister and Finance Minister Aso visited Myanmar.
	4	Opposition Leader Aung San Suu Kyi visited Japan.
	7	The New Myanmar Central Bank Law was enacted.
		The Securities and Exchange Law was enacted to assist Myanmar with creating a regulatory authority for capital markets.
	12	A finance expert from the FSA was stationed in Yangon.
2014	8	The SECM was established under the Ministry of Finance.
		The Myanmar–Japan Bilateral Investment Treaty came into effect.
	10	12 foreign banks were granted operating licenses.
	12	Joint-Venture Agreement of YSX was signed by Myanma Economic Bank, DIR, and JPX.
2015	12	The YSX was officially launched.
2016	3	Four more foreign banks were granted operating licences.
		First Myanmar Investment was listed on the YSX.
	5	Myanmar Thilawa SEZ Holdings was listed on the YSX.
	8	Myanmar Citizens Bank was listed on the YSX.

CBM = Central Bank of Myanmar, DIR = Daiwa Institute of Research, FSA = Financial Services Agency, JPX = Japan Stock Exchange, MOU = memorandum of understanding, ODA = official development assistance, PRI = Policy Research Institute, SCEM = Securities and Exchange Commission of Myanmar, SEZ = special economic zone, YSX = Yangon Stock Exchange.

Source: Compiled by authors.

## References

- Asian Development Bank (2012), *Myanmar in Transition: Opportunities and Challenges*. Manila.
- Bonin, J., and P. Wachtel (2003), 'Financial sector development in transition economies: lessons from the first decades', *Financial Markets, Institutions and Instruments*, 12(1), pp. 1–66.

- Brown, I. (2013), *Burma's economy in the twentieth century*. Cambridge: Cambridge University Press.
- Demirgüç-Kunt, A., E. Feyen, and R. Levine (2012), The evolving importance of banks and securities markets, *NBER Working Paper Series* No. 18004, Cambridge, MA: NBER.
- Didier, T. and S. Schmukler (2015), Financial Development in Asia: Beyond Aggregate Indicators, in Edward Chen and Wendy Dobson (eds.), *Financial Development and Cooperation in Asia and the Pacific*, Pacific Trade and Development (PAFTAD) Conference Series, Routledge, pp 143–169.
- Fujita, K., F. Mieno, and I. Okamoto (eds.) (2001), *The economic transition in Myanmar after 1988: market economy versus state control*. Singapore: NUS Press in association with Kyoto University Press.
- Harwood, A. (ed.) (2000), *Building Local Bond Markets: An Asian Perspective*, International Finance Cooperation.
- Huff, W. G. (2003), 'Monetization and financial development in Southeast Asia before the Second World War', *Economic History Review*, 56(2), pp. 300–345.
- International Monetary Fund (IMF) (2013), Cross-border activity of Japanese banks. *IMF Country Report* No. 13/235.
- IMF (2015), Myanmar Selected Issues. *IMF Country Report* No. 15/268.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny (1997), 'Legal Determinants of External Finance', *Journal of Finance*, 52(3), pp. 1131–1150.
- Leung, S. (2009), 'Banking and financial sector reforms in Vietnam', *ASEAN Economic Bulletin*, 26(1), pp. 44–57.
- Levine, R. (1997), 'Financial development and economic growth: views and agenda', *Journal of Economic Literature*, 35(2), pp. 688–726.
- Levine, R., N. Loayza, and T. Beck (2000), 'Financial intermediation and growth: Causality and causes', *Journal of Monetary Economics*, 46, pp. 31–77.
- Lucas, R. J. (1988), 'On the mechanics of economic development', *Journal of Monetary Economics*, 22(1), pp 3–42.
- Mieno, F. (2013), 'Toward Myanmar's New Stage of Development: Transition from Military Rule to the Market', *Asian Economic Policy Review*, 8, pp. 94–117.
- Mieno, F. (2015), *Financial Reform and Southeast Asia: Analyzing Regional Long-term Trends and Cooperate Finance*. Tokyo: Keiso Shobo.
- Nguyen, H., G. Oates, and M. Dunkley (2014), 'A Review of the Establishment of the Stock Market in Vietnam – In Relation to other Transitional Economies', *International Journal of Economics and Finance*, 6(10), pp. 17–25.
- Odaka, K. and F. Mieno (2012), *Myanmaa keizai no atarashii hikari* [New light of the Myanmar Economy]. Tokyo: Keiso Shobo.
- Robinson, J. (1952), The Generalisation of the General Theory. In J. Robinson, *The Rate of Interest and Other Essays*. London: Macmillan.

- Slodkowski, A. (2013, January 3), Japan's finance minister in Myanmar with development pledges. *Reuters*. <http://www.reuters.com/article/us-myanmar-japan-idUSBRE90206620130103> (accessed 16 September 2016).
- Studwell, J. (2014), *How Asia Works Success: Success and Failure in the World's Most Dynamic Region*. London: CPI.
- Tun Wai, U. (1953), *Burma's Currency and Credit*. Calcutta: Orient Longmans.
- Turnell, S. (2009), *Fiery Dragons: Banks, Moneylenders and Microfinance in Burma*. Copenhagen: NIAS Press.
- Turnell, S. (2014), 'All that glitters...', *Myanmar Times*, 14 July. Available at: <http://www.mmtimes.com/index.php/special-features/194-your-money-2014/11021-all-that-glitters.html> (accessed 16 September 2016).
- Wachtel, P. (2003), 'How Much Do We Really Know about Growth and Finance?' *Federal Reserve Bank of Atlanta Economic Review*, 88, pp. 33–47.
- Wong, Y. (2016), *Money Matters in Myanmar*. Singapore: LexisNexis.

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