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CROSS-BORDER PORTFOLIO INVESTMENT AND FINANCIAL INTEGRATION IN ASIA AND THE PACIFIC REGION

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Abstract

This paper examines the developments of cross-border portfolio assets and liabilities in the Asia and Pacific region over the periods of 2001–2017. Rapid increases in both portfolio foreign assets and liabilities have taken place particularly after the 2008–2009 global financial crisis. These cross-border portfolio investments have the following characteristics. First, equity has been a dominant source of foreign liabilities notwithstanding efforts to develop bond markets in the region. One exception is Australia, where foreign liabilities have been largely in the form of debt securities. Limited capital inflows to debt securities issued by emerging Asia may be attributable to the early stages of bond market development. Second, in contrast, debt securities have remained dominant as foreign assets held by the region. This mostly reflects Japan's preference toward debt securities. Other Asia and Pacific economies have invested more heavily in foreign equity. Third, the region's assets and liabilities linkages have remained overwhelmingly strengthened against the United States and Europe. Nonetheless, the post-crisis period has witnessed greater financial integration within the region. The intra-regional linkages have been deepest between Hong Kong, China and the People's Republic of China (PRC), where the former has become a major financier of equity issued by the latter. Singapore increasingly plays a role as an equity investor toward the PRC, Japan, ROK, and other ASEAN economies. Albeit from the low level, the intra-ASEAN integration has been noticeable. Fourth, Japan with largest abundant domestic capital has remained predominantly exposed to the United States and Europe. Within the region, debt securities issued by Australia have increasingly attracted Japan's capital. To conclude, intra-regional financial integration has risen at the center of the PRC with growing linkages with Hong Kong, China and Singapore.

Keywords: portfolio investment, financial market integration, Asia and the Pacific

JEL Classification: F36, G15

Contents

1. INTRODUCTION

The Asia and Pacific region have deepened economic integration through trade and foreign direct investment since the early 1990s. The momentum has emerged since the early 2000s thanks to the participation of the People's Republic of China (PRC) in the World Trade Organization. The ratio of intra-regional trade has risen from about 55% in 2000 to 65% in 2016, with the latter ratio having become comparable to that of the European Union (EU). Intra-regional FDI has also grown fast from about 10% to 20% over the same period (ADB 2017).

In contrast, the degree of intra-regional financial market integration within the Asia and Pacific region has remained small. Among Asia and Pacific economies, Hong Kong, China has been a major financier of cross-border capital to the securities issued by the region, followed by Japan, and Singapore. Among these economies, Hong Kong, China has acted as a major equity financier to the PRC. Singapore has been an active equity investor to the PRC, Japan, Republic of Korea (ROK), and other economies in the ASEAN (Association of Southeast Asian Nations). Meanwhile, Japan's exposure to the region has remained largely in the form of debt securities issued by Australia. Limited capital inflows to debt securities issued by emerging Asia may reflect the early stages of bond market developments (such as lack of liquidity, wide range of maturity, and depth). Japan, Hong Kong, China, and Singapore have major international financial centers. Among them, portfolio-based financial integration has been rapidly growing at the center of the PRC with closer linkages with Hong Kong, China and Singapore.

The global financial crisis of 2008–2009 and the subsequent unconventional monetary easing adopted by advanced economies in the United States, Europe, and Japan have affected the movements of cross-border portfolio capital flows in the Asia and Pacific region. In the initial phase of the crisis, the region faced an outflow of portfolio investment. In the later phase of the crisis (when advanced economies have eased monetary policies) and in the post-crisis period, the region has witnessed a new wave of cross-border portfolio inflows from investors in the United States and Europe in search of higher yields in the region.

This paper explores the characteristics of the movements of cross-board portfolio assets and liabilities in the Asia and Pacific region over the period of 2001–2016—by dividing into the three periods: 2001–2007 (before the global financial crisis), 2008–2009 (during the crisis), and 2010–2016 (after the crisis). In this paper, Asia and Pacific region includes ten economies: Japan; Hong Kong, China; the PRC; the ROK; Indonesia; Malaysia; the Philippines; Singapore; Thailand; and Australia. Of these, ASEAN-5 covers Indonesia, Malaysia, the Philippines, Singapore, and Thailand. This paper also pays attention to Japan; the PRC; Hong Kong, China; Singapore; and Australia due to the presence of large international financial centers. According to the *Global Financial Center Index* published by Z/Yen (2018) released in March 2018, Hong Kong, China and Singapore are the third and fourth ranked financial centers in the world (following London and New York). Tokyo is ranked the fifth, while the three financial centers in the PRC are ranked as follows: Shanghai (sixth), Beijing (eleventh), and Shenzhen (eighteenth). Australia's Sydney and Melbourne are ranked ninth and twelfth.

The analysis is mainly based on cross-border portfolio assets and liabilities data from the Coordinated Portfolio Investment Survey (CPIS) compiled by the International Monetary Fund (IMF). The data excludes portfolio assets managed under foreign reserves. The CPIS data are obtained from the holdings of portfolio investment classified by the investor (creditor) country/economy so that the IMF provides derived liabilities data for all countries/economies from the investor information. Caution is necessary as investor country/economy does not necessarily indicate the residency of the investors; rather, it may indicate the country/region of foreign custodians or other intermediaries. Another caution is that data reflect both the effects of price changes (including exchange rates) and investment shifts.

The paper is organized into five sections. Section 2 offers an overview of the initiatives to develop capital markets in the region launched since the Asian economic crisis of 1997–1998, followed by the current performance of the capital markets. Section 3 first highlights the overall features of cross-border portfolio assets and liabilities in the Asia and Pacific region in the post-crisis period, before discussing the changes of portfolio assets and liabilities prior to, during, and post the crisis. Section 4 discusses features of cross-border portfolio investment assets and liabilities in Asia and the Pacific by differentiating them based on the type instrument. Section 5 concludes.

2. DEVELOPING CAPITAL MARKETS SINCE THE ASIAN ECONOMIC CRISIS OF 1997–1998

The Asian economic crisis was attributable to domestic firms' high dependence on domestic bank loans that borrowed heavily from abroad, as well as the absence of proper supervisory and prudential regulations on domestic commercial banks amid crony relations among banks, firms, and governments. Having learned from the crisis, economic authorities in the region improved the soundness of their banking sector through better supervision and prudential regulations, and simultaneously found it necessary to diversify the sources of financing for their domestic firms. Particularly, the following five consensus views emerged in Asia.

2.1 Rationales for Developing Capital Markets

First, the Asia and Pacific region should develop domestic bond markets to reduce firms' excessive dependence on the banking system (Yoshitomi and Shirai 2001). Developing local currency-denominated corporate bond markets would be essential to minimize "double mismatches" borne by commercial banks. Prior to the 1997–1998 crisis, banking systems in many of the Asia and Pacific countries were exposed to the double mismatches risks without being adequately recognized by the authorities. Double mismatches here refer to the currency mismatch and maturity mismatch. A currency mismatch arose from commercial banks borrowing in foreign currencies from abroad and lending into the private sector in local currencies. A maturity mismatch was associated with commercial banks' borrowing in short-term from foreign banks and lending into the private sector in longer-term loans.

Developing corporate bond markets enables the economies to minimize double mismatches since firms would issue local currency-denominated longer-term bonds. Achieving this goal requires the presence of more efficient, liquid, deep government bond markets that could provide benchmark for pricing corporate bonds.

Maturity transformation from short-term liabilities to long-term assets is one of banks' essential roles. However, there are some limitations because banks' liabilities are short-term and mostly in the form of liquid deposits, which can be drawn on demand. Banks also bear credit risk that cannot be transferred to depositors. In addition, information on borrowers is highly idiosyncratic, adding complications for banks in measuring the credit risk. This stands in sharp contrast to the case of bond finance, where investment risks can be spread among many investors and corporate bond issues enable firms to finance long-term risky projects.

In practice, commercial banks manage to make a de-facto maturity transformation to some extent through rolling-over short-term loans based on interim monitoring about their borrowing firms and reducing loan risks by obtaining more credible information through repeated relational transactions. However, banks in Asia did not function properly due to the following factors: (1) governments' heavy intervention in directing bank credit to the government-selected finance projects and industries; (2) governments' policy of bailing out distressed financial institutions regardless of their viability; (3) inadequate prudential regulations and supervision and their ineffective enforcement mechanisms; (4) heavy dependence on collateral-based financing; and (5) concentrated lending by banks owned by family businesses.

Second, a well-developed government bond market would enable central banks to conduct a more modernized, effective monetary policy – by shifting from the practice of heavy intervention in the foreign exchange markets to the practice of open market operations using government bonds and other bonds as collateral. Well-developed government and private bond markets would contribute to developing the repurchase agreement (Repo) markets and diverse asset backed securities (ABS) markets, thereby contributing to the interbank markets and economic activities. Developing longer-term debt securities markets is also essential for fostering the pension funds and insurance industries to match their long-term liabilities.

Third, the authorities in the region should make efforts to develop viable domestic bond markets through collective efforts, since it would take time to develop such markets independently. The bond markets are still underdeveloped in emerging economies as there are only a small number of large, reputable private firms that would enable the issuing of a large amount of corporate bonds regularly. Demand for longer-term bonds is also relatively limited due to the early stage of financial asset accumulation from pension funds and insurance industries. Supervisory, legal infrastructures, and corporate governance codes are also still underdeveloped. Therefore, simultaneous development in the corporate bond markets in the region could attract more sustainable capital inflows from various types of investors from abroad.

Fourth, equity markets should be developed further to promote more diversified capital inflows to the region. The number of listed firms are still limited in emerging Asia. Liquidity in equity markets is also limited due to the concentrated ownership of shares, and lack of adequate transparency and investor protection. Concentrated ownership is associated with risks, primarily through the possible extraction of undue private benefits for the controlling owner (OECD 2017). Firms wishing to lower leverage by reducing short-term and foreign debt would benefit from equity market development. Household and institutional investors (such as pension funds and insurance firms) would also diversify financial risk and raise returns.

Fifth, the region should utilize their accumulated large savings more efficiently to realize sustainable economic growth, for example by increasing infrastructure and productive business investment – rather than strengthening capital flow relationships from advanced economies/regions such as the United States and the European Union. As for advanced Asian economies with relatively developed capital and financial markets, abundant domestic savings should be invested more heavily in the Asia and Pacific region to promote intra-regional financial integration. While trade and foreign direct investment (FDI) linkages within the Asia and Pacific region have developed rapidly, it was clear that financial linkages fell behind intra-regional trade and FDI linkages.

2.2 Initiatives to Develop Capital Markets in the Asia and Pacific Region

In line with the afore-mentioned consensus views, the authorities in the Asia and Pacific region have made deliberate efforts to increase the issues of government bonds with a wide range of maturity, aiming to establish effective benchmark yield curves essential for pricing corporate bonds. Some economies – such as Hong Kong, China and Singapore, whose fiscal balances have been positive most of the time – also made efforts to issue government bonds. For example, the ROK standardized the coupon rates and maturities of government bonds under the Fungible Issue System in 2000. The system aimed at raising liquidity in the government bond market and stabilizing the reference interest rate (BlackRock 2017). This initiative was followed by a conversion offer system where off-the-run government bonds were exchanged for on-the-run bonds. Meanwhile, Singapore has attempted to establish the yield curve up to 30-year maturity by issuing longer-term government bonds, and introduced a calendar issuing system with the scheduled size of each issue announced prior to the issuance.

In addition to these country-level initiatives, the governments and central banks in the Asia and Pacific region have also made joint efforts to develop their capital markets. The governments in the ASEAN plus three (PRC, Japan, and ROK) introduced the Asian Bond Market Initiative (ABMI) in 2002 to investigate concrete measures to promote domestic bond markets. Issuing local currency bonds by multilateral developing agencies was promoted under this framework.

Meanwhile, the Executives' Meeting of East Asian Pacific Central Banks (EMEAP), which comprises eleven central banks in the Asia and Pacific economies, launched the Asian Bond Fund (ABF1) to develop US dollar-denominated sovereign and quasi-sovereign bond markets under the management of the Bank for International Settlements (BIS) in 2003, as a first step. The eleven economies in the EMEAP are: Australia; Hong Kong, China; PRC; Indonesia; Japan; ROK; Malaysia; New Zealand; the Philippines; Singapore; and Thailand. The EMEAP then introduced ABF2 to develop local currency-denominated bond markets – through Pan-Asian Bond Index and tight single-market funds – managed by private sector fund managers and administered by the BIS in 2004. Both the ABF1 and the ABF2 exclude bonds issued in Japan, Australia, and New Zealand. As local currency-denominated bonds were developed, the EMEAP decided to close the ABF1 and transferred the funds registered in ABF1 to ABF2 in 2016.

2.3 Performance of Capital Market Developments in the Asia and Pacific Region

Reflecting these initiatives, the local currency-denominated bond markets have grown in the Asia and Pacific region over time (Table 1). The 2008–2009 global financial crisis encouraged the authorities in the region to implement fiscal stimulus measures to cope with recession, thereby increasing government bond issues. While Japan has the largest government bond market in the region, the pace of growth in other bond markets has been greater than that of Japan. Between end-December 2007 and end-December 2017, for example, the government bond market grew by 745% in Hong Kong, China, 313% in the PRC (313%), 144% in Singapore – as compared with Japan with the growth rate of only 39%.

Table 1: Size of Local Currency Bond Market in Asia and Pacific Economies
(Unit: US$ Billions, %)

	December 2007		December 2017		% Change	
	Government	Corporate	Government	Corporate	Government	Corporate
Japan	6,874	773	9,523	692	39	–10
People's Republic of China	1,532	157	6,327	2,413	313	1,441
Hong Kong, China	18	80	148	96	745	19
Republic of Korea	498	529	827	1,193	66	125
Indonesia	77	8	156	29	102	244
Malaysia	95	70	166	152	75	118
Philippines	55	3	89	20	63	473
Singapore	68	54	166	106	144	98
Thailand	111	28	252	95	126	243

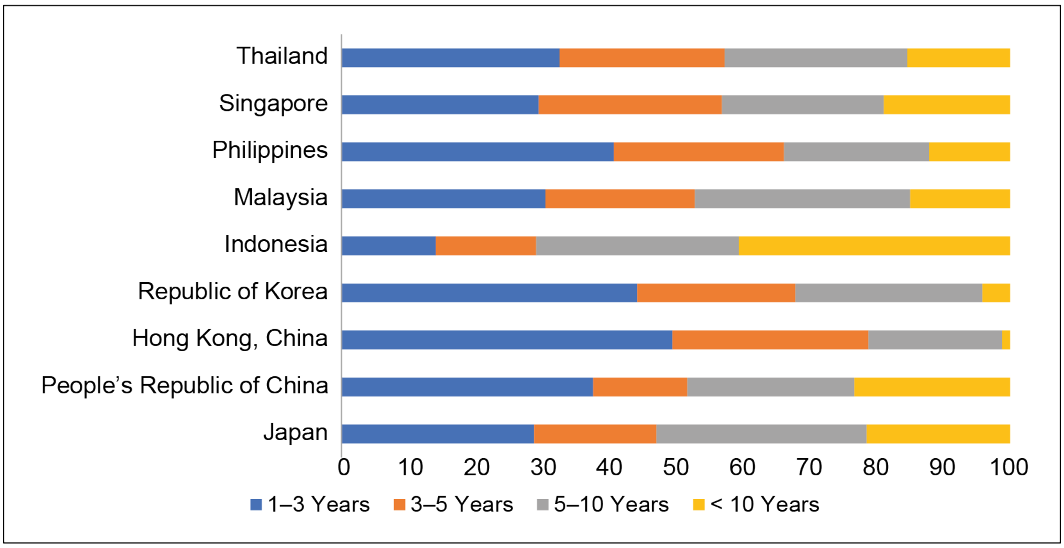
Source: Asian Bond Monitor March 2018, ADB.

In addition, some economies have lengthened the maturity of government bonds between 2007 and 2017, suggesting that a wide range of government bonds have been issued and thus the longer-end of the yield curve has been formed. For example, the share of government bonds with maturity more than 10 years has increased in Thailand, Singapore, the Philippines, Malaysia, the ROK and Japan (Figure 1). These economies excluding Japan have reduced the share of government bonds with maturity of 1–3 years over the same period.

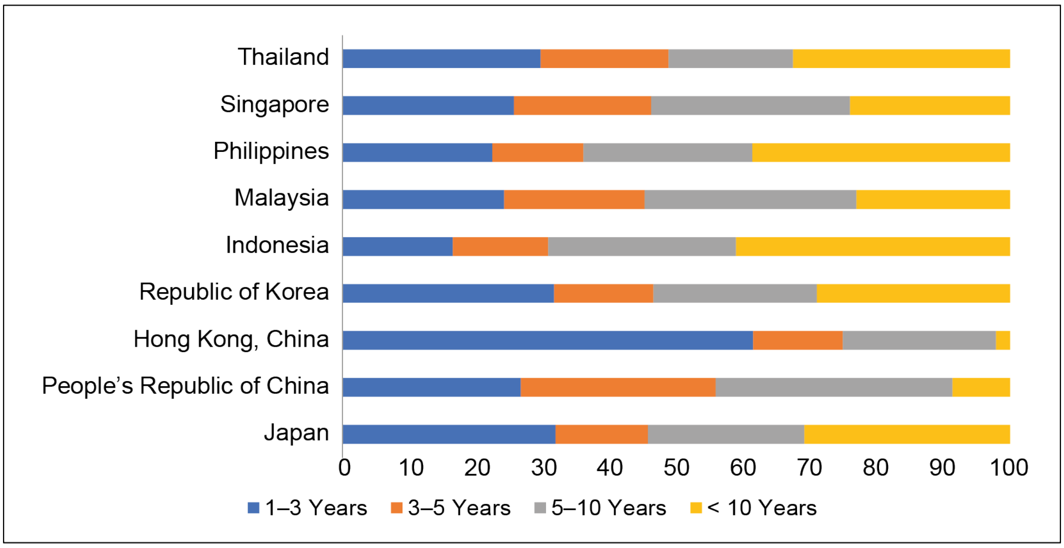
The financial crises triggered in the United States and Europe reduced cross-border banking capital inflows from banks in these economies to the region. Consequently, some banks in the region became more cautious in extending loans domestically. Some large firms in the region, therefore, increased the issuance of securities, which invited capital inflows from advanced economies to the region in search for higher yields in the low-interest rate environment. This contributed to the rapid growth in the corporate bond market in the region. For example, the corporate bond market grew by 1,441% in the PRC, 473% in the Philippines, about 244% in Indonesia and Thailand (Table 1).

Figure 1: Maturity Profile of Government Bonds
(Unit: % of Total)

(1) December 2007



(2) December 2017



Note: Data on the Philippines refer to September 2017.
Source: Asian Bonds Online, ADB.

The investor base for government bonds has widened in some economies. Table 2 shows that the share of contractual savings institutions (including pension funds and life insurance firms) has risen in Indonesia, the Philippines, and Thailand over the past ten years. In the case of the PRC, banks' share has remained dominant, accounting for more than 60% throughout the same period. The rising share of contractual savings institutions reflects an improvement in per capita income and progress made on wealth accumulation managed by insurance companies and pension funds. Households are increasingly able to diversify their assets away from liquid and short-term bank deposits to wider options of investment instruments, as pension funds and insurance firms continue to develop.

Table 2: Investor Profile of Government Bonds in Asia and Pacific Economies
(Unit: % of Total)

		Central Bank	Government	Banks	Contractual Savings Institutions	Others
Japan	December 2007	9	12	37	20	21
	December 2010	9	11	41	21	18
	December 2017	41	5	17	22	16
People's Republic of China	December 2007	0	0	63	7	30
	December 2010	0	0	72	9	20
	December 2017	0	0	66	3	30
Republic of Korea	December 2007	3	26	22	24	24
	December 2010	3	26	19	27	25
	December 2017	2	20	16	36	26
Indonesia	December 2007	3	–	56	14	26
	December 2010	3	–	34	18	45
	December 2017	7	–	23	17	53
Malaysia	December 2007	–	–	–	–	–
	December 2010	1	0	34	40	24
	December 2017	1	0	32	38	29
Thailand	December 2007	5	3	17	39	36
	December 2010	2	2	23	43	30
	June 2017	4	1	15	54	25

Source: Asian Bonds Online, ADB.

Most of the government and corporate bonds issued by the Asia and Pacific economies are denominated in local currencies. According to the ADB Bonds Online data, the PRC had the largest amount outstanding of government and corporate bonds issued denominated in foreign currencies (about US$659 billion), but the amount accounted for only 7% of the total amount outstanding issued denominated in both local and foreign currencies in 2017 (Table 3). Similarly, Japan had the second largest amount outstanding denominated in foreign currencies (US$403 billion), but the amount accounted for only 4% of the total in 2017. In contrast, Hong Kong more actively issued bonds denominated in foreign currencies (US$167 billion), accounting for about 40% of the total. The issuance of bonds denominated in foreign currencies were predominantly conducted by firms in the PRC, Japan, and Hong Kong, China. These foreign-currency denominated bonds are largely issued in US dollars; small amounts are issued in euro and Japanese yen. The PRC has been the largest issuer of foreign currency-denominated bonds.

Foreign investors have become major investors in the securities issued by the Asia and Pacific region economies. According to the ADB Bonds Online data, foreign investors hold about 40% of outstanding government bonds issued in Indonesia, 29% in Malaysia, and 16% in Thailand as of December 2017. Government bonds issued by Indonesia, Malaysia, ROK, the Philippines, and Thailand are included in various emerging market local currency sovereign bond indices – such as the Bloomberg Emerging Market Local Currency Sovereign Bond Index. Indonesian and Malaysian bonds are preferred among foreign investors due to attractive yields. While steadily growing, foreign ownership of government bonds issued by the PRC accounts for only slightly above 3.5% due to capital controls.

Table 3: The Size of Local and Foreign Currency Bond Market in Asia and Pacific Economies
(Unit: US$ Billions, % of Foreign Currency Bonds in Total)

	Local Currency			Foreign Currency			% of Foreign Currency Bonds
	Government Bonds	Corporate Bonds	Total	Government Bonds	Corporate Bonds	Total	
Japan	9,523	692	10,215	62	341	403	4
People's Republic of China	5,928	2,293	8,221	58	601	659	7
Hong Kong, China	143	98	241	0	167	167	41
Republic of Korea	827	1,193	2,020	31	122	153	7
Indonesia	156	29	184	66	35	101	35
Malaysia	166	152	318	10	31	41	11
Philippines	83	20	102	*29*	11	40	28
Singapore	166	106	272	66	0	66	19
Thailand	252	95	346	2	14	16	4

Note: Data on the People's Republic of China; Hong Kong, China; and the Philippines refer to September 2017; the remaining refer to December 2017.

Source: Asian Bonds Online, ADB.

Government bonds have remained dominant in most of the Asia and Pacific economies. The exception is the ROK, where the size of corporate bond market exceeds the size of the government bond market. This is attributable to the ROK government's various initiatives to develop the corporate bond market since the early 1970s, including: (i) introduction of the system of bond guarantee in 1972; (ii) elimination of restrictions on investment in domestic bonds by foreign investors after the Asian Economic Crisis; (iii) introduction of asset-backed securities in 1998; (iv) provision of support on the corporate bond market in the early 2000s (when Daewoo Group collapsed in 2000 and accounting scandals involving SK Group erupted in 2003) with the adoption of the Korea Development Bank Prompt Underwriting Scheme; and (v) introduction of high-yield bond funds and qualified institutional buyers' market (BlackRock 2017). In Asia, most corporate bonds are high-rated (very few junk bonds) and shorter term than government bonds.

Although the bond markets have been growing in the Asia and Pacific economies, liquidity problems have remained due to relatively low trading volumes in both the government and corporate bond markets. Meanwhile, the region's equity markets have grown more rapidly than bond markets. Table 4 exhibits the rapid growth in the market capitalization of domestic stock exchanges in the region.

Table 4: Domestic Market Capitalization in Asia and Pacific Economies
(Unit: US$ Million, %)

		2003	2017	% Change
Japan	Japan Exchange Group Inc.	2,953,098	6,222,825	111
PRC	Shanghai Stock Exchange	360,106	5,089,631	1,313
	Shenzhen Stock Exchange	152,872	3,621,636	2,269
Hong Kong, China	Hong Kong Exchanges and Clearing	714,597	4,350,515	509
ROK	Korea Exchange	298,248	1,771,796	494
Indonesia	Indonesia Stock Exchange	54,659	520,687	853
Malaysia	Bursa Malaysia	160,814	455,772	183
Philippines	Philippine Stock Exchange	23,176	290,401	1,153
Singapore	Singapore Exchange	148,503	787,255	430
Thailand	The Stock Exchange of Thailand	119,017	548,795	361
Australia	Australian Securities Exchange	585,530	1,508,463	158

Source: World Federation of Exchange.

3. CROSS-BORDER PORTFOLIO ASSETS AND LIABILITIES IN THE ASIA AND PACIFIC REGION

This section focuses on the recent features of cross-border portfolio assets and liabilities in the Asia and Pacific region by focusing on the period of 2010–16. Given the region's strong linkages with the United States and the EU, the analysis also pays attention to the region's holdings of foreign portfolio assets issued by the two advanced economies as well as the region's portfolio liabilities financed by these advanced economies.

3.1 Cross-Border Portfolio Investment Assets and Liabilities After the Global Financial Crisis

Recent cross-border portfolio assets and liabilities in the region are exhibited in Table 5. It shows the average amount of those assets and liabilities. Some data are not available, as described in detail in the footnotes of the tables. Table 4(1) shows ***foreign assets classified by creditor economies on the vertical side and foreign liabilities classified by debtor economies on the horizontal side*****.**

For example, Japan's cross-border portfolio assets vis-à-vis the world amounted to US$3.5 trillion, while Japan's cross-border portfolio liabilities against the world recorded the total amount of US$1.7 trillion. Table 4(3) shows each economy's foreign portfolio assets issued by other economies as a percentage of the respective economy's total foreign portfolio assets issued by the world. For instance, in the case of Japan, the United States and the EU accounted for 36% and 30% of Japan's total foreign portfolio assets issued by the world (US$3.5 trillion), respectively. Table 4(3) shows each economy's portfolio liabilities against other economies as a percentage of the respective economy's total cross-border portfolio liabilities against the world. For example, in the case of Japan, the United States and the EU accounted for 39% and 34% of Japan's total foreign liabilities (US$1.7 trillion), respectively.

The following features can be observed from Tables 5(1), 5(2), and 5(3):

Relations between Foreign Liabilities and Assets

- Japan's cross-border portfolio assets (US$3.5 trillion) were about twice that of Japan's portfolio liabilities (about US$1.7). Thus, Japan is a large net cross-border portfolio investor (creditor). Similarly, Hong Kong, China is a net cross-border portfolio investor. Its cross-border portfolio assets (US$1.1 trillion) exceeded its liabilities (US$390 billion).
- By contrast, ROK's cross-border portfolio liabilities (US$449 billion) were 2.5 times their assets (US$181 billion). Australia's total cross-border portfolio investment liabilities was 1.7 times of its portfolio assets. Australia's cross-border portfolio liabilities recorded US$966 billion while its assets amounted to US$572 billion. Moreover, the PRC remains a net cross-border portfolio debtor as its cross-border portfolio liabilities (US$710 billion) was 2.2 times greater than its portfolio assets (US$320 billion). Higher amount of cross-border portfolio liabilities than portfolio assets reflects the country's capital account regulations, which encourage more capital inflows than outflows.

Foreign Assets Classified by Creditor Economies

- Regarding total cross-border portfolio assets, Japan's total assets (US$3.5 trillion) were largest in the region, followed by Hong Kong, China (US$1.1 trillion); ASEAN-5 (US$946 billion); and Australia (US$572 billion). The United States and the EU were the two largest investors in securities issued by the region, but the region's dependence on these two advanced economies was much smaller than the case of cross-border portfolio liabilities for some economies. The United States and the EU together accounted for over 60% of total cross-border portfolio assets in the case of Japan, ROK, and Australia.
- In contrast, the shares of the United States and the EU were much smaller in the case of Hong Kong, China (24%); ASEAN-5 (37%); and PRC (50%). About 28% of ASEAN-5's total cross-border portfolio assets were placed within the Asia and Pacific region, 27% in the United States, and 10% in the EU. Among the ASEAN-5 economies, Singapore was the biggest portfolio investor to the securities issued by the United States and the EU. Investment by other ASEAN economies remained small.
- Within the Asia and Pacific region, Hong Kong, China was the largest investor on securities issued by the region with the amount recording US$404 billion, followed by Japan (US$235 billion) and Singapore (US$218 billion). The PRC's cross-border portfolio assets were small (US$103 billion), suggesting that its large cross-border assets were largely in the form of foreign reserves (which remains largest in the world and amounted to about US$3.1 trillion in March 2018 despite falling from its peak of almost US$4 trillion throughout 2014).
- Relative to the amount of foreign assets issued in the United States and/or the EU, Hong Kong, China; the PRC; and Singapore held larger amounts of foreign portfolio assets issued in the region. For example, cross-border portfolio assets held by Hong Kong, China vis-à-vis the region amounted to US$404 billion – greater than those against the EU (US$165 billion) and the United States (US$99). The PRC's cross-border portfolio assets vis-à-vis the region recorded US$103 billion, which was slightly below that vis-à-vis the United States (US$118 billion) but larger than that vis-à-vis the EU (US$42 billion).

- Singapore's cross-border portfolio assets vis-à-vis the United States indicated US$231 billion – roughly equivalent to that vis-à-vis the region (US$218 billion) and much greater than that vis-à-vis the EU (US$85 billion). Singapore also plays a role as major financiers to other ASEAN economies – especially to Indonesia and Malaysia.
- In contrast, Japan's total cross-border portfolio assets vis-à-vis the region amounted to only US$235 billion (as compared with US$1.3 trillion in the United States and US$1 trillion in the EU). Within the region, Japan's portfolio assets were largest to Australian securities (US$142 billion), but it accounted for only 4% of Japan's total foreign portfolio assets. Japan's cross-border portfolio investment is heavily weighted towards advanced economies (the United States, the EU, and Australia), reflecting Japanese investors' strong preference to safe, liquid fixed income assets.
- Like Japan, Australia's foreign assets were concentrated on the securities issued by the United States and the EU, accounting for 42% and 26%, respectively.

Foreign Liabilities Classified by Debtor Economies

- Regarding total cross-border portfolio liabilities, Japan's total liabilities (US$1.7 trillion) were largest in the Asia and Pacific region; followed by Australia (US$966 billion); the PRC (US$710 billion); ASEAN-5 (US$656 billion); the ROK (US$449 billion); and Hong Kong, China (US$390 billion). Most of Japan's cross-border portfolio liabilities were financed by the United States and the EU, together accounting for 73% of Japan's total cross-border portfolio liabilities according to Table 4 (3).
- With an exception of the PRC, other Asia and Pacific economies also showed a similar tendency like Japan. Their dependence on the United States and the EU as financiers of securities was large, accounting for over 60% of their total cross-border portfolio liabilities. ROK's cross-border portfolio liabilities were mostly against the United States (38% of total portfolio liabilities) and the EU (29%). In addition, Australia's portfolio liabilities against the United States and the EU accounted for 33% and 29% of total foreign portfolio liabilities. Australia's foreign liabilities against Japan was the third largest, accounting for 15% of total portfolio liabilities.
- Most of ASEAN-5's total cross-border portfolio liabilities were vis-à-vis the United States (33% of total foreign portfolio liabilities) and the EU (31%). Singapore was also the largest recipient of global portfolio capital. Having the most developed financial market in the Southeast Asia region, Singapore attracts substantial portfolio capital from the United States and the EU.
- Hong Kong, China's portfolio liabilities against the United States and the EU remained the largest, together accounting for 66% of total foreign portfolio liabilities. The PRC was the third largest portfolio investor in Hong Kong, China, whose share was about 19%.
- The PRC's portfolio liabilities were mainly financed by Hong Kong, China (42% of total cross-border portfolio liabilities). The shares of the United States and the EU were only 15% and 18% of the total. Singapore held the fourth largest securities issued by the PRC (10% of total cross-border liabilities). Hong Kong, China strengthened its role in providing portfolio capital to the PRC as the main gateway from the world to the PRC. Nonetheless, other Asia and Pacific economies such as ASEAN-5 (especially Singapore) increased direct exposure to the PRC rather than indirectly exposing to the PRC through Hong Kong, China.

Cross-border portfolio investment patterns between the PRC and Hong Kong, China are different from those of other Asia and Pacific economies, due to a growing and high degree of mutual dependence between the two economies. The PRC has undertaken various liberalization measures over time, which appear to have contributed to active portfolio investment flows from Hong Kong, China. The measures include the following: (i) Qualified Foreign Institutional Investor (QFII) Scheme in 2002; (ii) the Qualified Domestic Institutional Investor (QDII) Scheme in 2006; (iii) the RMB Qualified Foreign Institutional Investor (RQFII) Scheme in 2011; (iv) the Shanghai-Hong Kong Stock Connect in 2014; (v) the Shenzhen-Hong Kong Stock Connect in 2016; (vi) the China Interbank Bond Market (CIBM) Direct Access Scheme in 2016; and (vii) the Bond Connect that enables investment from Hong Kong, China to the CIBM in the PRC in 2017. The RQFII Scheme in Hong Kong, China allows investment in PRC's securities market by using RMB funds raised in Hong Kong by fund management companies, securities companies, commercial banks, and insurance companies operating in Hong Kong, China whose headquarters located in the PRC (Hong Kong, China subsidiaries and branches) as well as foreign financial institutions registered in Hong Kong, China.

The PRC's dependence on Hong Kong, China as a source of external financing is much greater than the situation vice versa, since various capital account and foreign exchange restrictions remain in the PRC. Hong Kong, China also obtains some funds from the PRC, and presumably intermediates some of those funds from the PRC to the rest of the world. This suggests that Hong Kong, China continues to play an essential role as a gateway to the PRC – intermediating funds between the PRC and the rest of the world.

3.2 Cross-Border Portfolio Investment Assets and Liabilities Prior to, During, and Post the Global Financial Crisis

This section examines whether there are significant differences between features of cross-border portfolio investment in the Asia and Pacific region prior to, during, and after the global financial crisis. The average number of cross-border portfolio positions prior to the crisis (2001–2007) are exhibited in Appendix Table 1, for the crisis period (2008–2009) in Appendix Table 2, and for the post-crisis period (2010–2016) in Table 5.

Table 5: Total Cross-Border Portfolio Investment Assets and Liabilities in Asia and the Pacific, 2010–2016 Average

(1) Amount (Unit: US$ Million)

		Foreign Liabilities Classified by Debtor														Total Foreign Assets
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	**WORLD**
Foreign Assets Classified by Creditor	Japan	---	18,098	13,774	23,554	7,020	6,300	2,725	16,345	4,847	*37,237*	142,069	*234,732*	1,267,394	1,043,679	**3,492,484**
	Hong Kong, China	34,689	---	294,904	17,756	1,413	7,545	1,161	14,670	2,123	*26,911*	30,025	*404,284*	98,614	164,800	**1,094,546**
	People's Republic of China	11,293	75,350	---	2,975	1,722	268	278	4,094	516	*6,879*	6,670	*103,167*	118,416	41,927	**320,245**
	Republic of Korea	8,510	7,582	10,228	---	584	725	282	1,869	516	*3,976*	4,546	*34,843*	71,362	42,818	**180,741**
	Indonesia	64	361	790	71	---	104	12	732	15	*862*	88	*2,237*	1,433	3,025	**11,653**
	Malaysia	393	3,291	818	1,888	1,790	---	316	17,856	709	*20,671*	1,964	*29,024*	16,137	4,621	**56,670**
	The Philippines	97	315	368	260	1,325	65	---	84	89	*1,562*	133	*2,735*	2,814	906	**7,709**
	Singapore	---	24,322	72,348	39,384	18,636	21,992	5,950	---	9,001	*55,580*	26,839	*218,473*	230,563	85,433	**838,749**
	Thailand	911	2,771	2,699	4,144	117	260	58	931	---	*1,365*	1,371	*13,261*	4,385	4,825	**31,277**
	ASEAN-5	*1,466*	*31,060*	*77,023*	*45,747*	*21,868*	*22,420*	*6,336*	*19,603*	*9,813*	---	*30,394*	*265,730*	*255,331*	*98,810*	**946,057**
	Australia	24,058	7,935	5,366	7,703	965	1,818	5,473	3,140	1,385	*12,781*	---	*57,842*	240,879	148,773	**571,676**
	Asia Pacific	*80,015*	*140,025*	*401,295*	*97,735*	*33,573*	*39,075*	*16,255*	*59,721*	*19,201*	*167,824*	*213,704*	---	*2,051,995*	*1,540,807*	**6,605,749**
	United States	645,974	134,969	107,364	168,701	44,618	36,497	21,648	85,377	31,567	*219,707*	321,920	*1,598,635*	---	3,258,378	**8,478,740**
	European Union	560,244	121,413	124,677	131,741	45,909	41,485	19,599	63,665	33,997	*204,656*	278,559	*1,421,291*	3,641,619	---	**20,635,413**
Total Foreign Liabilities	**WORLD**	**1,667,028**	**389,838**	**709,576**	**448,517**	**133,691**	**128,421**	**65,852**	**236,569**	**91,560**	**656,092**	**965,944**	**4,836,995**	**10,167,502**	**20,834,409**	---

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Table 5 *continued*

(2) % of Total Cross-Border Portfolio Investment Assets

		Foreign Liabilities Classified by Debtor														Total Foreign Assets (100%)
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	**WORLD**
Foreign Assets Classified by Creditor	Japan	---	1	0	1	0	0	0	0	0	*1*	4	*7*	36	30	**100**
	Hong Kong, China	3	---	27	2	0	1	0	1	0	*2*	3	*37*	9	15	**100**
	People's Republic of China	4	24	---	1	1	0	0	1	0	*2*	2	*32*	37	13	**100**
	Republic of Korea	5	4	6	---	0	0	0	1	0	*2*	3	*19*	39	24	**100**
	Indonesia	1	3	7	1	---	1	0	6	0	*7*	1	*19*	12	26	**100**
	Malaysia	1	6	1	3	3	---	1	32	1	*36*	3	*51*	28	8	**100**
	The Philippines	1	4	5	3	17	1	---	1	1	*20*	2	*35*	37	12	**100**
	Singapore	---	3	9	5	2	3	1	---	1	*7*	3	*26*	27	10	**100**
	Thailand	3	9	9	13	0	1	0	3	---	*4*	4	*42*	14	15	**100**
	ASEAN-5	*0*	*3*	*8*	*5*	*2*	*2*	*1*	*2*	*1*	---	*3*	*28*	*27*	*10*	**100**
	Australia	4	1	1	1	0	0	1	1	0	*2*	---	*10*	42	26	**100**
	Asia Pacific	*1*	*2*	*6*	*1*	*1*	*1*	*0*	*1*	*0*	*3*	*3*	---	*31*	*23*	**100**
	United States	8	2	1	2	1	0	0	1	0	*3*	4	*19*	---	38	**100**
	European Union	3	1	1	1	0	0	0	0	0	*1*	1	*7*	18	---	**100**

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Table 5 *continued*

(3) % of Total Cross-Border Portfolio Investment Liabilities

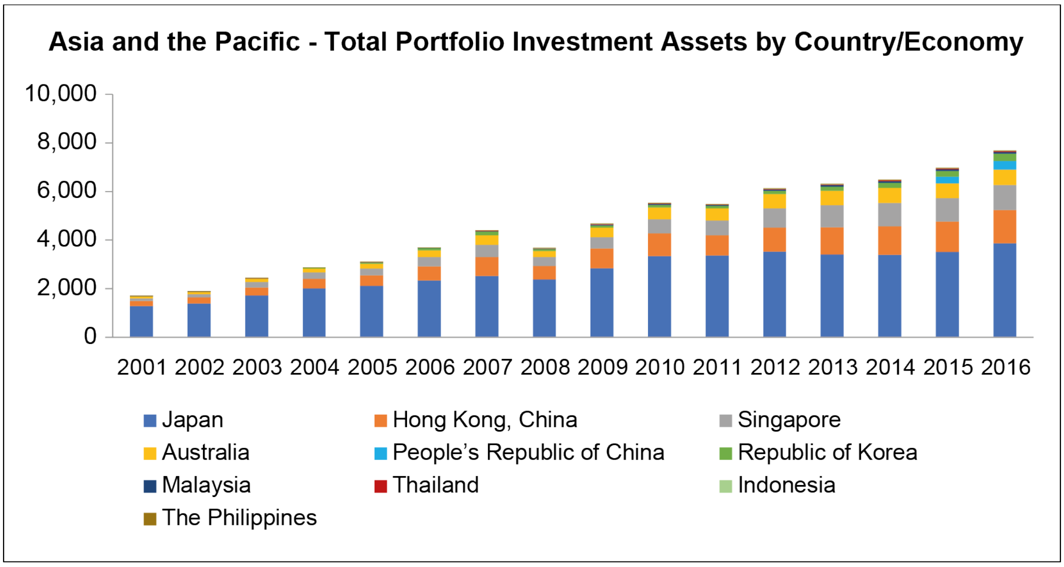
		Foreign Liabilities Classified by Debtor													
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union
Foreign Assets Classified by Creditor	Japan	---	5	2	5	5	5	4	7	5	*6*	15	*5*	12	5
	Hong Kong, China	2	---	42	4	1	6	2	6	2	*4*	3	*8*	1	1
	People's Republic of China	1	19	---	1	1	0	0	2	1	*1*	1	*2*	1	0
	Republic of Korea	1	2	1	---	0	1	0	1	1	*1*	0	*1*	1	0
	Indonesia	0	0	0	0	---	0	0	0	0	*0*	0	*0*	0	0
	Malaysia	0	1	0	0	1	---	0	8	1	*3*	0	*1*	0	0
	The Philippines	0	0	0	0	1	0	---	0	0	*0*	0	*0*	0	0
	Singapore	---	6	10	9	14	17	9	---	10	*8*	3	*5*	2	0
	Thailand	0	1	0	1	0	0	0	0	---	*0*	0	*0*	0	0
	ASEAN-5	*0*	*8*	*11*	*10*	*16*	*17*	*10*	*8*	*11*	---	*3*	*5*	*3*	*0*
	Australia	1	2	1	2	1	1	8	1	2	*2*	---	*1*	2	1
	Asia Pacific	*5*	*36*	*57*	*22*	*25*	*30*	*25*	*25*	*21*	*26*	*22*	---	*20*	*7*
	United States	39	35	15	38	33	28	33	36	34	*33*	33	*33*	---	16
	European Union	34	31	18	29	34	32	30	27	37	*31*	29	*29*	36	---
Total Foreign Liabilities	**WORLD**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	***100***	**100**	***100***	**100**	**100**

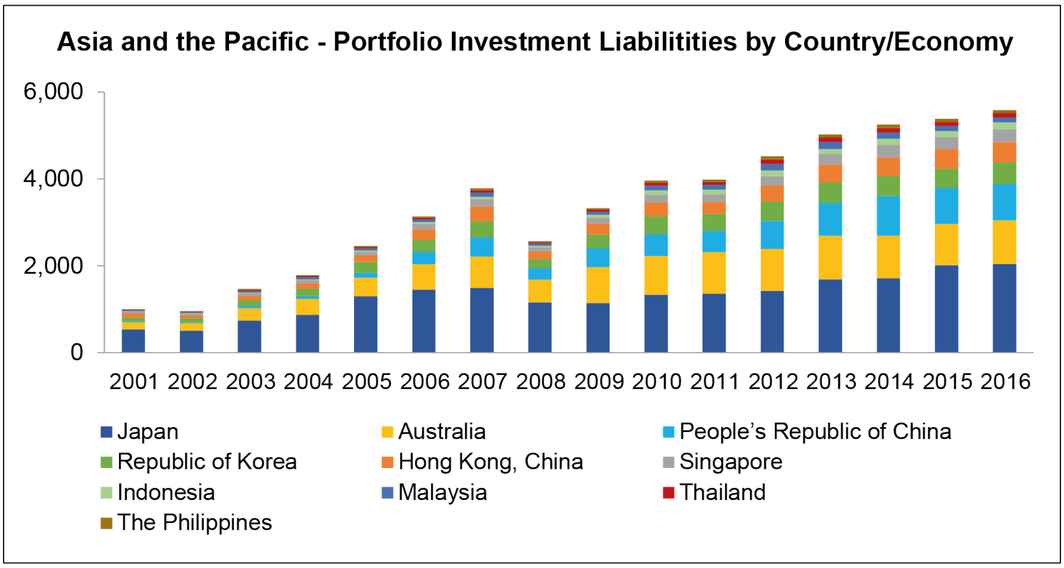
Note: Data on total cross-border portfolio investment from the following countries are unavailable:

The People's Republic of China's investment to all countries (2010-–2014); Singapore's investment to Japan (2010–2016); Australia's investment to Malaysia (2011), the Philippines (2016), and Thailand (2012, 2014); some EU-27 countries for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Figure 2: Cross-border Portfolio Investment Assets and Liabilities in Asia and the Pacific by Country/Economy
(US$ Billion)

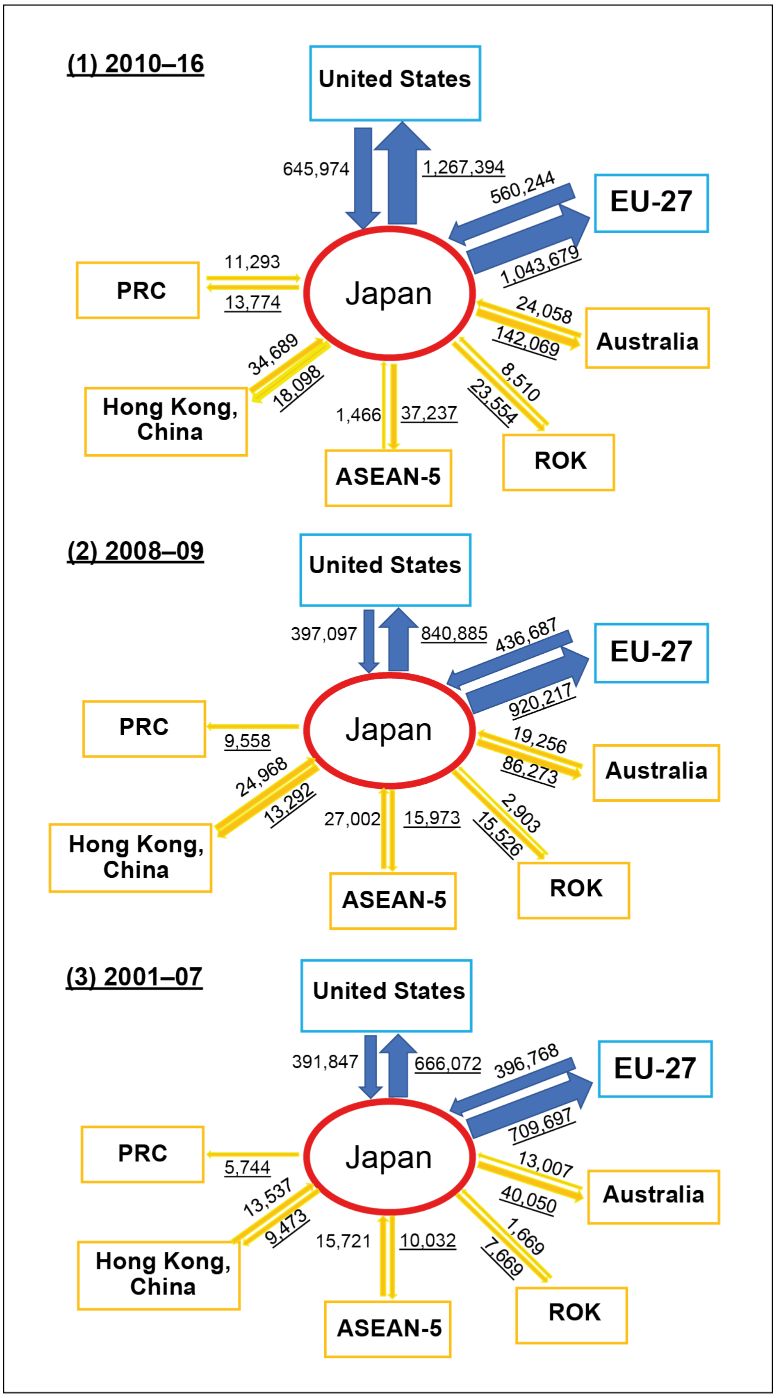




Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

To see the actual amounts of cross-border portfolio investment assets and liabilities of Asia and Pacific economies, this paper prepares diagrams (Figures 3 to 7) that show the ***average amount*** of outstanding cross-border portfolio investment asset and liabilities during the pre-crisis, the crisis, and the post-crisis periods. The diagrams are drawn on the five economies with major global financial centers: (1) Japan; (2) PRC; (3) Hong Kong, China; (4) Singapore; and (5) Australia. PRC's time-series analysis is limited due to the lack of data on its cross-borders assets for the pre-crisis and the crisis periods.

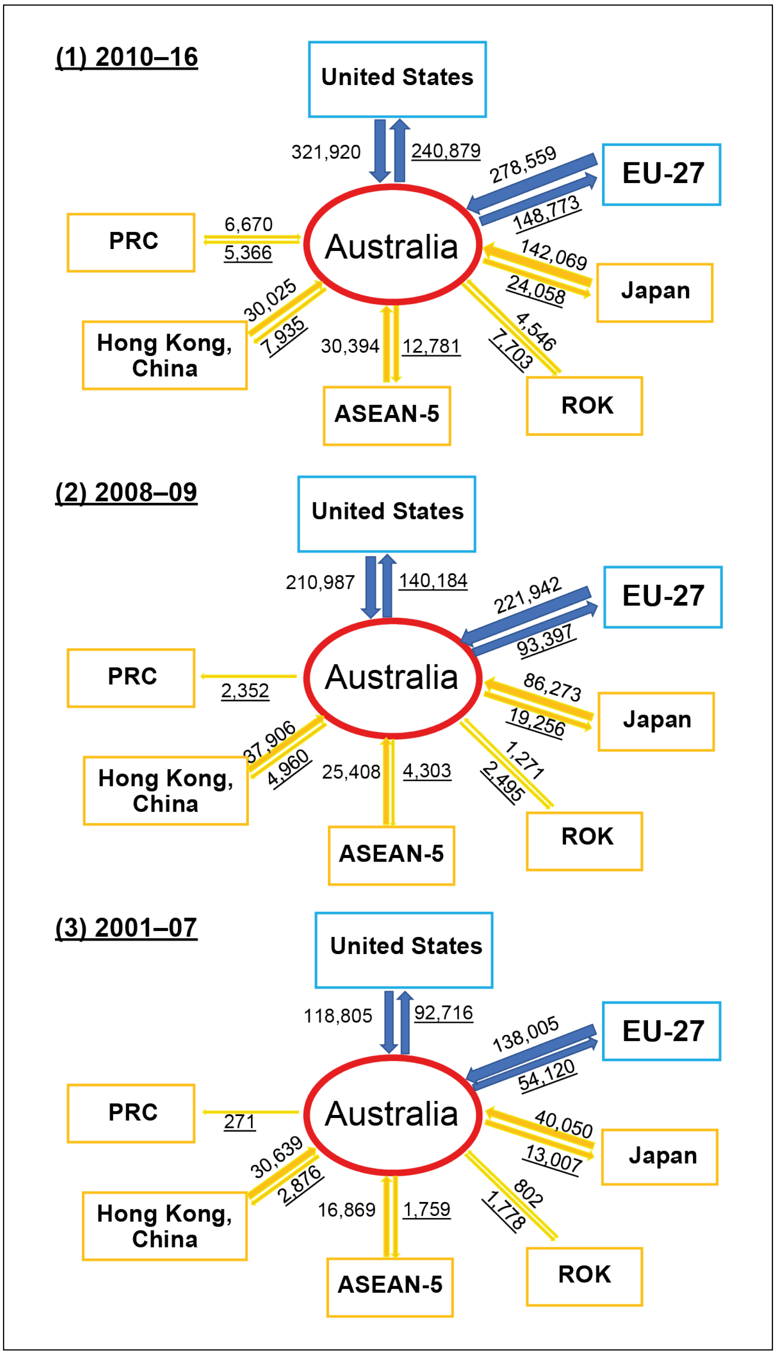
Figure 3: Japan: Cross-Border Portfolio Investment Assets and Liabilities
(Unit: US$ Million)



Note: Data on Japan's portfolio investment liabilities from the following countries are unavailable: People's Republic of China (2001–2014); Singapore (2009–2017); Indonesia (2006); Bulgaria, Latvia, Lithuania, Romania, Slovenia (EU-27 member countries) for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

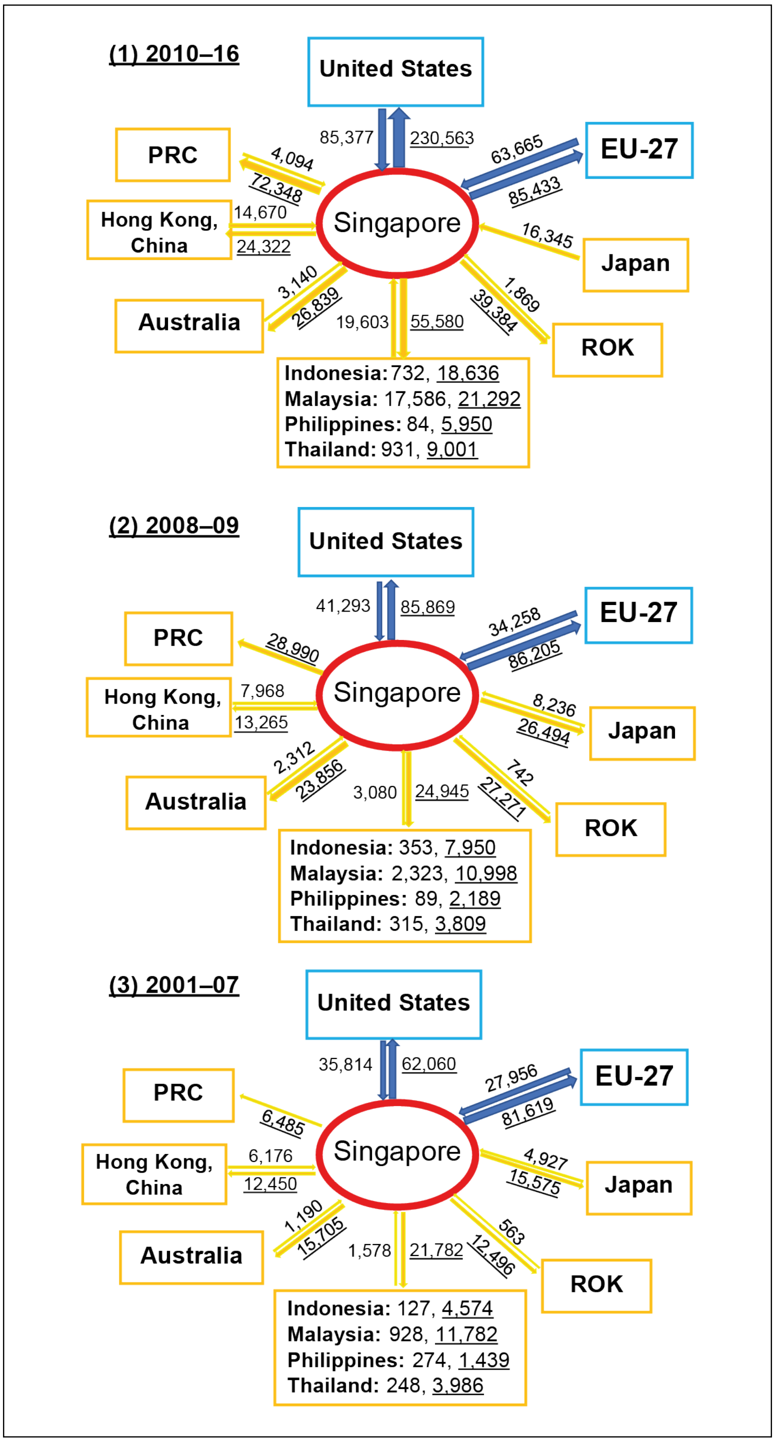
Figure 4: Australia: Cross-Border Portfolio Investment Assets and Liabilities
(Unit: US$ Million)



Note: Data on Australia's portfolio investment liabilities from the following countries are unavailable: PRC (2001–2014); Bulgaria, Latvia, Lithuania, Romania, Slovenia (EU-27 member countries) for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

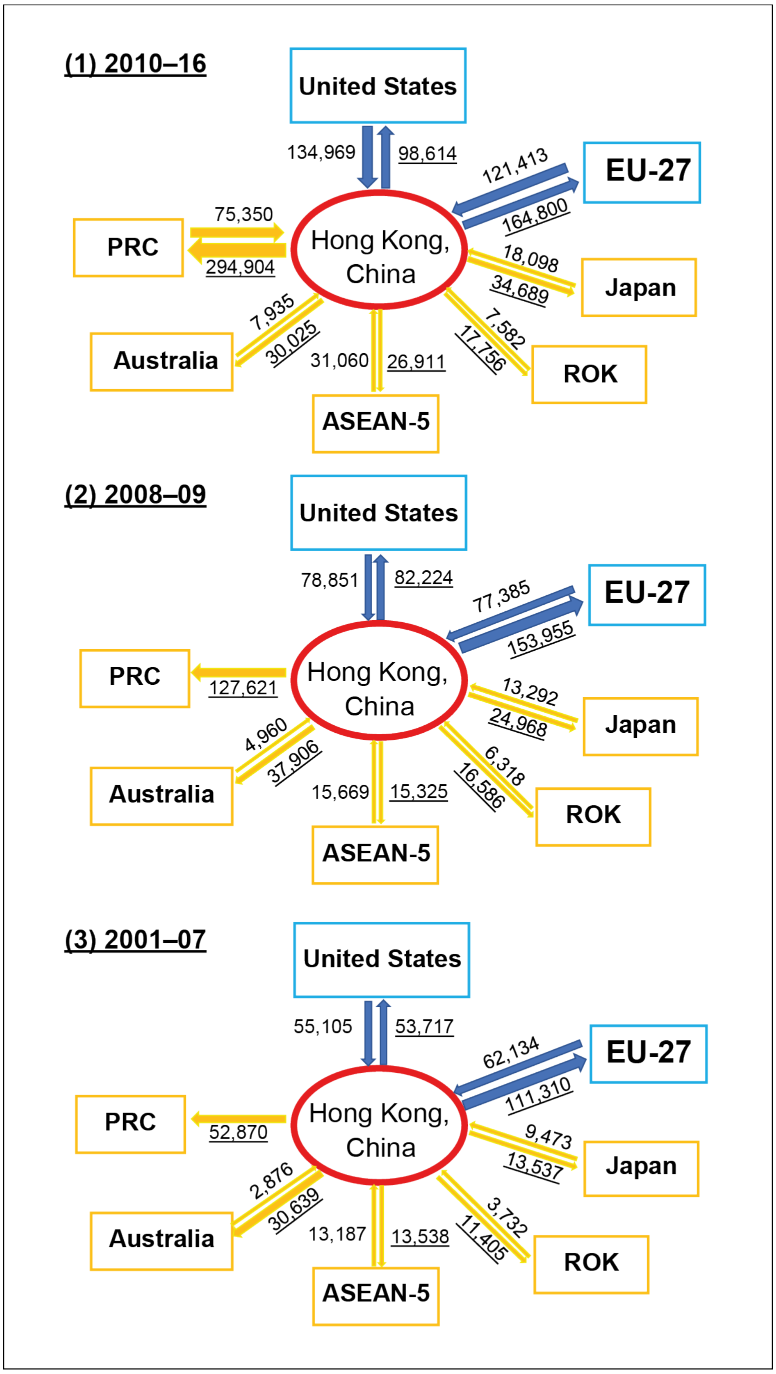
Figure 5: Singapore: Cross-Border Portfolio Investment Assets and Liabilities
(Unit: US$ Million)



Note: Data on Singapore's portfolio investment liabilities from the following countries are unavailable: PRC (2001–2014); Bulgaria, Estonia, Finland, Latvia, Lithuania, Romania, Slovenia (EU-27 member countries) for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

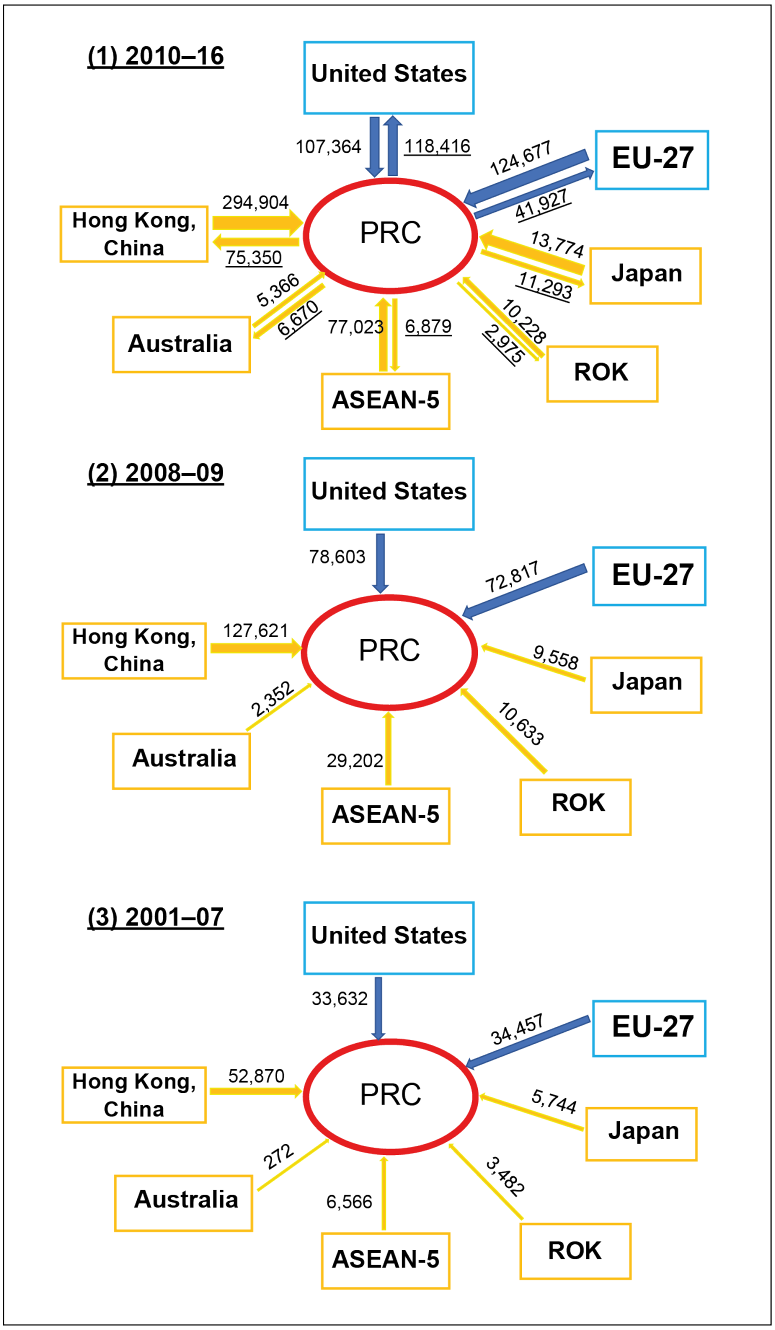
Figure 6: Hong Kong, China: Cross-Border Portfolio Investment Assets and Liabilities
(Unit: US$ Million)



Note: Data on Hong Kong, China's portfolio investment liabilities from the following countries are unavailable: PRC (2001–2014); Bulgaria, Latvia, Lithuania, Romania, Portugal, Slovenia (EU-27 member countries) for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Figure 7: PRC: Cross-Border Portfolio Investment Assets and Liabilities
(Unit: US$ Million)



Note: Data on PRC's cross-border portfolio liabilities from the following countries are unavailable: the Philippines (2001); Indonesia (2002); Bulgaria, Finland, Latvia, Lithuania, Romania, Portugal, Slovak Republic, Slovenia (EU-27 member countries) for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

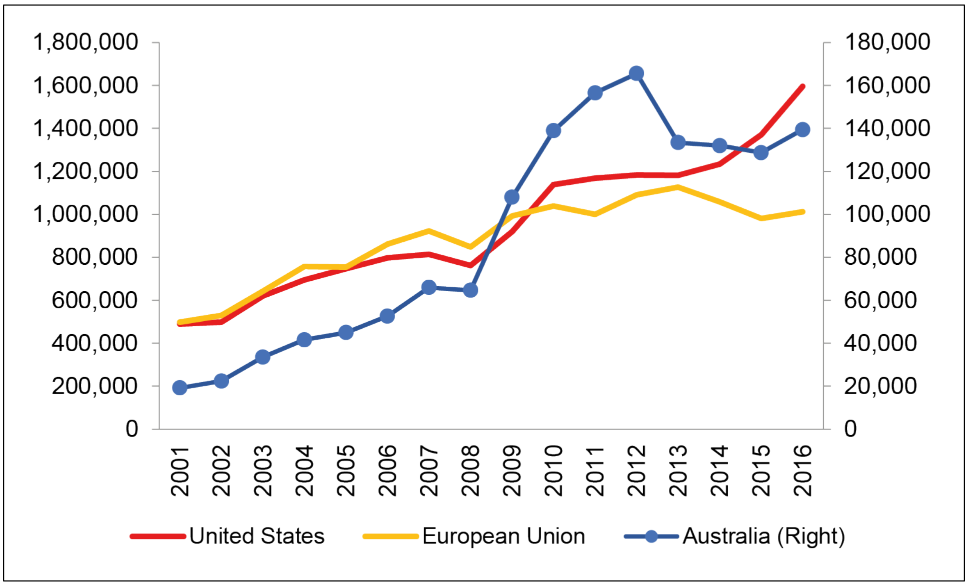
The following features were observed:

Case of Japan (Figure 3):

- Among the Asia and Pacific economies, Japan had been the largest portfolio investor to the world as well as the largest recipient of global money before, during, and after the global financial crisis. Japan's cross-border portfolio assets (liabilities) to the world rose by 82% (69%) during the crisis and the post-crisis periods. Japan's cross-border portfolio assets and liabilities remained heavily biased toward the United States and the EU prior to, during, and after the crisis. Japan's cross-border portfolio liabilities (assets) from the United States and the EU in the post-crisis period were 1.5 times (1.9 times) of the pre-crisis level.
- While the United States and the EU remained as Japan's portfolio investment top partners, their collective share in Japan's total cross-border portfolio assets dropped from 72% in the pre-crisis period to 66% in the post-crisis period. Their share in Japan's cross-border foreign portfolio liabilities also fell from 80% to 73% over the same time span. These trends suggest that Japan diversified its investment destinations and sources of financing over time. Namely, Japan's foreign assets issued by the Asia and Pacific region has rapidly expanded over time. Australia has been Japan's preferred investment destination (Figure 8). Comparing the pre-crisis and post-crisis periods, Japan's cross-border portfolio assets grew toward ASEAN-5 (by 271%), Australia (by 255%), ROK (by 207%), the PRC (by 140%), and Hong Kong (by 91%). Similarly, Japan's portfolio investment liabilities against the Asia and Pacific region grew at impressive rates: 410% against the ROK, 156% against Hong Kong, China, and 85% against Australia. Singapore did not release data on foreign portfolio assets vis-à-vis Japan during 2010–2016; data on Japan's liabilities against the PRC during 2001–2007 was not available. Japan's rapid growth of foreign portfolio assets and liabilities vis-a-vis the Asia and Pacific economies confirm its rising exposure to the region.
- As foreign assets always exceeded foreign liabilities, Japan remained a net international creditor of cross-border portfolio investment over the period. This is true not only against the United States and the EU, but also against almost all of the Asia and Pacific economies except for Hong Kong, China – where Japan's cross-border portfolio liabilities exceeded its assets. Overall, Japan has functioned as an "investor nation" to the world – namely as a provider of capital to the world.
- In the pre-crisis period, Japan's net cross-border portfolio creditor position was biggest against the EU (US$313 billion), followed by the United States (US$274 billion). In contrast, Japan's net assets in the post-crisis period were largest vis-à-vis the United States, with net assets of US$621 billion, or 2.3 times of the pre-crisis level. It was then followed by the EU (US$483 billion), which was 1.5 times of the pre-crisis level. A switch of Japan's positions between the EU and the United States between the pre-crisis and the post-crisis period reflects slower economic recovery in the EU than in the United States as well as the long-lasting impact of the global financial crisis and the European Sovereign Debt Crisis of 2010–2012.
- Vis-à-vis the Asia and Pacific region, Japan's net portfolio assets remained relatively small over the same time span. Australia remained as Japan's biggest investment destination economy throughout 2001–2016. Japan's net assets vis-à-vis Australia in the post-crisis period reached US$118 billion, or 4.4 times of the pre-crisis level. Meanwhile, Japan's net assets vis-à-vis the ROK during 2010–2016 reached US$15 billion, or 2.5 times the pre-crisis level. Albeit from a low level, Japan's net portfolio assets of portfolio investment vis-à-vis the ASEAN

economies (Indonesia, Malaysia, the Philippines, and Thailand) rose by 280% – from US$5 billion during 2001–2007 to US$19 billion during 2010–2016. The significant increases in net assets from Japan to the ASEAN economies are attributable to: (i) Japan's low interest rate environment driven by a series of monetary easing since 1999 (Shirai 2017); (ii) increased attractiveness of portfolio securities issued by the ASEAN due to higher yields and reasonable stock prices based on price earning (P/E) ratios; and (iii) deliberate efforts by central banks and governments of these economies to attract capital inflows for boosting foreign reserves and deepening their financial markets.

Figure 8: Japan's Total Cross-Border Portfolio Investment Assets by Major Destinations
(Unit: US$ Million)



Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Case of Australia (Figure 4):

- As foreign liabilities persistently exceeded foreign assets, Australia has been a net debtor of cross-border portfolio investment to the world. Australia's foreign asset expanded by about 200% from the pre-crisis period to the post-crisis period. Its foreign liabilities rose by about 150% over the same time span.
- Australia maintained large exposure to the United States and EU with regards to foreign portfolio assets, together accounting for over 70% before and after the global financial crisis. As for foreign liabilities, Australia's dependence on the United States rose from 31% in the pre-crisis period to 33% in the post-crisis period, but its dependence on the EU dropped significantly from 36% to 29% over the same period. However, the relative importance of Asia and the Pacific in terms of Australia's foreign assets and liabilities did not rise throughout the period. Namely, the share of Asia and the Pacific remained 10% on foreign assets and about 22% on foreign liabilities.
- Australia remained a net debtor of portfolio investment against the EU, the United States, and many of the Asia and Pacific economies before, during, and after the global financial crisis. ROK was one among the exceptions, where Australia remained a net creditor of portfolio investment throughout the three periods.

Case of Singapore (Figure 5):

- Singapore remained a net investor of international portfolio before, during, and after the global financial crisis. Singapore's foreign assets grew by 208% from the pre-crisis period to the post-crisis period. Its foreign liabilities rose by 175% over the same time span.
- As for foreign assets, Singapore increased the share of foreign assets vis-à-vis the United States from 23% before the global financial crisis to 27% after the crisis. In contrast, the share of foreign asset vis-à-vis the EU dropped significantly from 30% to 10% over the same time span. After the crisis, the United States took over the EU as Singapore's top destination for portfolio investment. The share of the foreign assets vis-à-vis the PRC increased from 2% before the crisis to 9% after the crisis. Singapore's role as a financier in the Asia and Pacific region has also grown not only within the ASEAN, but also with the PRC, Hong Kong, China, and Japan. Especially, Singapore's growing direct exposure to securities issued by the PRC is noticeable.
- Regarding foreign liabilities, the United States and the EU remained as major financiers of Singapore's securities. Nonetheless, Singapore's portfolio liabilities against the Asia and Pacific region grew at an impressive pace between the crisis and post-crisis periods: 476% against Indonesia; 275% against Thailand; 232% against the ROK; 232% against Japan; 164% against Australia; and 138% against Hong Kong, China. Albeit from a small level, Singapore's liabilities vis-à-vis Malaysia have grown rapidly over time. The share of Malaysia's assets in securities issued by Singapore to its total cross-border portfolio assets rose from 19% in the pre-crisis period to 32% in the post crisis period.
- As foreign assets constantly exceeded foreign liabilities, Singapore remained a net investor nation against the United States, the EU, and the Asia and Pacific region. However, its net portfolio assets vis-à-vis the United States and the EU fell between the pre-crisis period and the post-crisis period – from US$236 billion to US$145 billion in the case of the United States and from US$54 billion to US$22 billion in the case of the EU.
- Singapore had net portfolio assets of US$68 billion vis-à-vis the PRC during 2010–2016 (the pre-crisis foreign liabilities data on the PRC is not available). Over the same period, the PRC was Singapore's third largest destination of portfolio investment (after the United States and the EU), while Singapore's portfolio liabilities against the PRC were relatively small. Singapore's portfolio assets in the securities issued by the PRC in the post-crisis period were 11 times those of the pre-crisis period. Singapore's net cross-border portfolio assets rose steadily against the Asia and Pacific economies during the crisis and the post-crisis periods. Singapore's net assets between the pre-crisis and the crisis periods were: 4.0 times against Indonesia; 3.1 times against the ROK; 2.2 times against Thailand; 1.5 times against Hong Kong, China; and 1.6 times against Australia. Singapore appears to play an increasingly important role in Asia and the Pacific as a major investor in the region

Case of Hong Kong, China (Figure 6):

- Among the Asia and Pacific economies, Hong Kong, China is the second largest portfolio investor to the world after Japan. Cross-border portfolio assets (liabilities) of Hong Kong, China to the world grew by 157% (142%) between the crisis and the post-crisis periods. The rapid growth performance of foreign portfolio assets and liabilities of Hong Kong, China has been comparable to that of Singapore; both economies' assets and liabilities growth rates exceeded those of Japan. This suggests that international financial centers in Singapore and Hong Kong, China are rapidly growing over time.

- Hong Kong, China has a strong financial relationship with the PRC. During 2010–2016, Hong Kong, China's portfolio assets in the securities issued by the PRC reached US$295 billion, exceeding those issued by the EU (US$165 billion) and the United States (US$99 billion). Hong Kong, China's assets in the securities issued by the PRC rose from US$53 billion in the pre-crisis period, to US$128 billion during the crisis, and further to US$295 billion in the post-crisis period, indicating relations between the two economies have forged solid footing over time.
- Hong Kong, China was a net creditor of cross-border portfolio investment vis-à-vis the EU prior to, during, and after the crisis. The EU was the most important investment destination for Hong Kong, China in the pre-crisis period and during the crisis period. Hong Kong, China's strong attachment to the EU was attributable to the economy's history as a British colony during 1841–1997. After the crisis, Hong Kong, China's biggest cross-border portfolio investment destination shifted from the EU to the PRC.
- Hong Kong, China was a net debtor of cross-border portfolio investment against the United States prior to and after the crisis but was a net creditor during the crisis due to capital reversal from the economy to the United States. Hong Kong, China's portfolio assets in the United States were never as large as its assets in the EU.
- The ASEAN-5 economies, particularly Singapore, have been a relatively large investor of securities issued by Hong Kong, China. ASEAN-5's assets in the securities issued by Hong Kong, China grew from US$13 billion before the crisis to US$16 billion during the crisis, and further to US$31 billion in the post-crisis period. ASEAN-5's assets in the securities issued by Hong Kong, China have been greater than those securities held by Japan, the ROK, and Australia. This may be associated with the interest of the ASEAN-5 economies through deep trade and FDI relationships with the PRC and Hong Kong, China as well as presence of overseas Chinese in the Southeast Asia region.
- It is worth noting that out of the ASEAN-5's portfolio assets in the securities issued by Hong Kong, China, Singapore's share has gradually fallen from 94% in the pre-crisis period, to 85% during the crisis period, and further to 78% in the post-crisis period. This decline was mainly due to the rapid increase of Malaysia's and Thailand's portfolio assets in the securities issued by Hong Kong, China.
- Hong Kong, China appears to be playing a role as a regional financial center. It serves not only as a gateway of portfolio investment from the advanced economies to the PRC, but also for investment from the ASEAN-5 and investment to the PRC.

Case of the People's Republic of China (Figure 7):

- The PRC has been a net debtor of cross-border portfolio investment to the world. The PRC's cross-border portfolio assets recorded US$320 billion while its liabilities amounted to US$710 billion in the post-crisis period. The PRC's cross-border portfolio liabilities to the world grew by 394% between the crisis and the post-crisis periods. The impressive growth rate indicates not only that the securities markets grew rapidly but also that the capital account liberalization had progressed over time.

- There are strong interests by other Asia and Pacific economies to invest in securities issued by the PRC. Foreign portfolio liabilities of the PRC vis-à-vis Hong Kong, China rose substantially by 457%, from US$53 billion in the pre-crisis period to US$295 billion in the post-crisis period. Albeit from the low level, the PRC's foreign portfolio liabilities against Australia grew by 1,880% over the same period (from US$271 million to more than US$5 billion), while its liabilities against the ASEAN-5 grew by 1,073% (from almost US$7 billion to US$77 billion).
- The PRC's foreign portfolio liabilities against the EU and the United States also grew substantially between the pre-crisis and the post-crisis periods: by 262% and 219%, respectively. This indicates the rising interest by the EU and the United States with regards to investing in securities issued by the PRC.

4. CROSS-BORDER PORTFOLIO ASSETS AND LIABILITIES CLASSIFIED BY TYPES OF INSTRUMENTS IN THE ASIA AND PACIFIC REGION

This section decomposes data on cross-border portfolio investment asset liabilities data classified by types of investment instrument: equity; long-term debt securities; and short-term debt securities. Tables 5 to 9 provide information on the amount of cross-border portfolio assets and liabilities in the Asia and Pacific region over the period of 2001–2016. The composition of cross-border portfolio investment in Asia and the Pacific is shown in terms of period average in Table 6 and on annual basis in Appendix Chart 1 3. The following features are observed.

Table 6: Average Cross-Border Portfolio Investment Assets and Liabilities in Asia and Pacific Economies by Instrument
(Unit: US$ Million)

Assets				
	Equity	Long-term Debt Securities	Short-term Debt Securities	Total Portfolio Investment
2001–2007	880,135	1,882,461	110,034	2,872,632
2008–2009	1,356,317	2,665,775	152,884	4,174,976
2010–2016	2,769,654	3,523,966	312,128	6,605,749

Liabilities					
	Equity	Long-term Debt Securities	Short-term Debt Securities	Statistical Discrepancy	Total Portfolio Investment
2001–2007	1,421,451	530,855	140,926	–7,540	2,085,692
2008–2009	1,754,025	841,765	317,700	33,983	2,947,472
2010–2016	2,880,510	1,452,655	552,895	–49,065	4,836,995

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Table 7: Cross-Border Equity Investment Assets and Liabilities in Asia and the Pacific, 2010–2016 Average

(1) Amount (Unit: US$ Million)

		Foreign Liabilities Classified by Debtor														Total Foreign Assets
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	ASEAN-5	Australia	Asia Pacific	United States	European Union	WORLD
Foreign Assets Classified by Creditor	Japan	---	13,659	11,191	6,974	2,983	1,926	519	7,209	1,772	14,409	21,799	68,033	338,716	196,296	943,082
	Hong Kong, China	6,423	---	174,382	1,515	704	892	373	6,658	1,203	9,830	2,706	194,856	22,482	94,526	681,493
	People's Republic of China	8,562	45,614	---	1,778	967	138	238	1,220	447	3,010	3,468	62,431	64,214	30,204	187,205
	Republic of Korea	6,766	6,031	8,217	---	424	293	137	945	368	2,166	2,305	25,486	49,075	26,784	121,458
	Indonesia	30	265	432	1	---	13	10	91	1	114	23	865	412	260	2,474
	Malaysia	255	2,509	571	410	1,026	---	105	11,733	362	13,226	959	17,930	13,800	3,062	38,148
	The Philippines	0	19	4	3	0	0	---	8	2	11	6	43	140	101	291
	Singapore	22,595	11,152	57,974	19,781	7,566	7,222	2,340	---	5,283	22,412	10,814	144,728	110,536	41,297	428,204
	Thailand	188	590	257	24	29	89	46	700	---	864	752	2,673	3,114	3,257	9,861
	ASEAN-5	23,068	14,534	59,238	20,220	8,622	7,324	2,501	12,532	5,649	---	12,554	166,240	128,002	47,977	478,977
	Australia	18,019	7,344	4,353	5,363	817	960	650	2,441	1,377	6,245	---	41,324	161,024	62,694	357,440
	Asia Pacific	62,838	87,182	257,381	35,849	14,516	11,532	4,418	31,006	10,815	72,286	42,833	---	763,513	458,481	2,769,654
	United States	549,816	129,605	104,433	137,779	27,894	22,810	13,869	68,653	28,659	161,885	144,282	1,227,800	---	2,064,430	5,917,215
	European Union	316,401	102,350	106,019	92,179	20,684	16,688	2,501	38,186	24,530	102,589	87,705	807,243	1,664,772	---	7,963,446
Total Foreign Liabilities	WORLD	1,054,489	324,024	512,239	293,201	68,424	56,337	28,422	153,252	68,581	375,015	321,543	2,880,510	3,542,289	7,972,222	---

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Table 7 *continued*

(2) % of Cross-Border Equity Investment Assets

		Foreign Liabilities Classified by Debtor														Total Foreign Assets (100%)
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	**WORLD**
Foreign Assets Classified by Creditor	Japan	---	1	1	1	0	0	0	1	0	2	2	7	36	21	**100**
	Hong Kong, China	1	---	26	0	0	0	0	1	0	1	0	29	3	14	**100**
	People's Republic of China	5	24	---	1	1	0	0	1	0	2	2	33	34	16	**100**
	Republic of Korea	6	5	7	---	0	0	0	1	0	2	2	21	40	22	**100**
	Indonesia	1	11	17	0	---	1	0	4	0	5	1	35	17	11	**100**
	Malaysia	1	7	1	1	3	---	0	31	1	35	3	47	36	8	**100**
	The Philippines	0	6	1	1	0	0	---	3	1	4	2	15	48	35	**100**
	Singapore	5	3	14	5	2	2	1	---	1	5	3	34	26	10	**100**
	Thailand	2	6	3	0	0	1	0	7	---	9	8	27	32	33	**100**
	ASEAN-5	5	3	12	4	2	2	1	3	1	---	3	35	27	10	**100**
	Australia	5	2	1	2	0	0	0	1	0	2	---	12	45	18	**100**
	Asia Pacific	2	3	9	1	1	0	0	1	0	3	2	---	28	17	**100**
	United States	9	2	2	2	0	0	0	1	0	3	2	21	---	35	**100**
	European Union	4	1	1	1	0	0	0	0	0	1	1	10	21	---	**100**

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Table 7 *continued*

(3) % of Cross-Border Equity Investment Liabilities

		Foreign Liabilities Classified by Debtor													
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union
Foreign Assets Classified by Creditor	Japan	---	4	2	2	4	3	2	5	3	*4*	7	*2*	10	2
	Hong Kong, China	1	---	34	1	1	2	1	4	2	*3*	1	*7*	1	1
	People's Republic of China	1	14	---	1	1	0	1	1	1	*1*	1	*2*	2	0
	Republic of Korea	1	2	2	---	1	1	0	1	1	*1*	1	*1*	1	0
	Indonesia	0	0	0	0	---	0	0	0	0	*0*	0	*0*	0	0
	Malaysia	0	1	0	0	1	---	0	8	1	*4*	0	*1*	0	0
	The Philippines	0	0	0	0	0	0	---	0	0	*0*	0	*0*	0	0
	Singapore	2	3	11	7	11	13	8	---	8	*6*	3	*5*	3	1
	Thailand	0	0	0	0	0	0	0	0	---	*0*	0	*0*	0	0
	ASEAN-5	2	4	12	7	13	13	9	8	8	---	4	*6*	4	1
	Australia	2	2	1	2	1	2	2	2	2	*2*	---	*1*	5	1
	Asia Pacific	6	27	50	12	21	20	16	20	16	*19*	13	---	22	6
	United States	52	40	20	47	41	40	49	45	42	*43*	45	*43*	---	26
	European Union	30	32	21	31	30	30	9	25	36	*27*	27	*28*	47	---
Total Foreign Liabilities	**WORLD**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	***100***	**100**	***100***	**100**	**100**

Note: Data on cross-border equity investment from the following countries are unavailable:

The People's Republic China's investment to all countries (2010–2014); the Philippines' investment to Japan (2010–2012), the People's Republic of China (2010, 2011), Republic of Korea (2010), Thailand (2010) and Australia (2010); Australia's investment to the People's Republic of China (2010, 2011) and the Philippines (2010–2012); some EU-27 countries for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Table 8: Cross-Border Long-Term Debt Securities Investment Assets and Liabilities in Asia and the Pacific, 2010–2016 Average

(1) Amount (Unit: US$ Million)

		Foreign Liabilities Classified by Debtor														Total Foreign Assets
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	**WORLD**
Foreign Assets Classified by Creditor	Japan	---	3,623	929	15,921	3,939	4,368	2,180	8,420	2,691	*21,598*	119,831	*161,902*	917,585	837,347	**2,516,123**
	Hong Kong, China	14,625	---	40,185	11,689	372	3,380	651	4,873	368	*9,645*	22,727	*98,871*	67,850	55,664	**267,225**
	People's Republic of China	2,178	19,443	---	903	741	107	33	1,377	62	*2,319*	1,687	*26,531*	49,602	9,942	**108,420**
	Republic of Korea	1,735	1,489	1,956	---	160	427	145	913	148	*1,793*	2,238	*9,211*	21,815	16,003	**58,536**
	Indonesia	2	46	68	42	---	74	0	539	4	*617*	49	*825*	561	2,226	**6,975**
	Malaysia	125	764	252	1,461	752	---	210	6,094	346	*7,403*	992	*10,997*	1,815	1,473	**17,786**
	The Philippines	0	265	366	239	1,319	63	---	64	101	*1,547*	143	*2,560*	1,570	757	**6,050**
	Singapore	---	7,819	8,527	14,282	8,847	8,944	2,147	---	2,802	*22,741*	12,628	*65,997*	104,057	52,705	**328,155**
	Thailand	474	1,060	1,756	3,409	54	149	10	153	---	*366*	396	*7,462*	1,167	1,183	**13,924**
	ASEAN-5	*601*	*9,954*	*10,969*	*19,434*	*10,973*	*9,230*	*2,368*	*6,850*	*3,254*	---	*14,209*	*87,840*	*109,170*	*58,344*	**372,891**
	Australia	4,466	659	718	3,357	127	636	---	860	83	*1,707*	---	*10,907*	76,589	47,704	**200,771**
	Asia Pacific	*23,606*	*35,168*	*54,757*	*51,303*	*16,313*	*18,148*	*5,377*	*23,292*	*6,606*	*69,735*	*160,693*	---	*1,242,611*	*1,025,004*	**3,523,966**
	United States	57,367	3,071	1,748	29,270	16,687	10,872	7,214	8,674	2,824	*46,271*	128,831	*266,558*	---	880,065	**2,198,598**
	European Union	147,498	15,414	12,472	36,279	23,848	21,753	2,368	15,718	8,612	*72,299*	163,470	*447,431*	1,699,540	---	**11,437,385**
Total Foreign Liabilities	**WORLD**	**375,299**	**47,953**	**93,088**	**139,110**	**61,230**	**56,121**	**29,759**	**55,811**	**20,076**	**222,996**	**574,209**	**1,452,655**	**5,891,399**	**11,496,142**	---

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Table 8 *continued*

(2) % of Cross-Border Long-Term Debt Securities Investment Assets

		Foreign Liabilities Classified by Debtor														Total Foreign Assets (100%)
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	WORLD
Foreign Assets Classified by Creditor	Japan	---	0	0	1	0	0	0	0	0	*1*	5	*6*	36	33	100
	Hong Kong, China	5	---	15	4	0	1	0	2	0	*4*	9	*37*	25	21	100
	People's Republic of China	2	18	---	1	1	0	0	1	0	*2*	2	*24*	46	9	100
	Republic of Korea	3	3	3	---	0	1	0	2	0	*3*	4	*16*	37	27	100
	Indonesia	0	1	1	1	---	1	0	8	0	*9*	1	*12*	8	32	100
	Malaysia	1	4	1	8	4	---	1	34	2	*42*	6	*62*	10	8	100
	The Philippines	0	4	6	4	22	1	---	1	2	*26*	2	*42*	26	13	100
	Singapore	---	2	3	4	3	3	1	---	1	*7*	4	*20*	32	16	100
	Thailand	3	8	13	24	0	1	0	1	---	*3*	3	*54*	8	8	100
	ASEAN-5	*0*	*3*	*3*	*5*	*3*	*2*	*1*	*2*	*1*	---	*4*	*24*	*29*	*16*	*100*
	Australia	2	0	0	2	0	0	---	0	0	*1*	---	*5*	38	24	100
	Asia Pacific	*1*	*1*	*2*	*1*	*0*	*1*	*0*	*1*	*0*	*2*	*5*	---	*35*	*29*	*100*
	United States	3	0	0	1	1	0	0	0	0	*2*	6	*12*	---	40	100
	European Union	1	0	0	0	0	0	0	0	0	*1*	1	*4*	15	---	100

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Table 8 *continued*

(3) % of Cross-Border Long-Term Debt Securities Investment Liabilities

		Foreign Liabilities Classified by Debtor													
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union
Foreign Assets Classified by Creditor	Japan	---	8	1	11	6	8	7	15	13	*10*	21	*11*	16	7
	Hong Kong, China	4	---	43	8	1	6	2	9	2	*4*	4	*7*	1	0
	People's Republic of China	1	41	---	1	1	0	0	2	0	*1*	0	*2*	1	0
	Republic of Korea	0	3	2	---	0	1	0	2	1	*1*	0	*1*	0	0
	Indonesia	0	0	0	0	---	0	0	1	0	*0*	0	*0*	0	0
	Malaysia	0	2	0	1	1	---	1	11	2	*3*	0	*1*	0	0
	The Philippines	0	1	0	0	2	0	---	0	1	*1*	0	*0*	0	0
	Singapore	---	16	9	10	14	16	7	---	14	*10*	2	*5*	2	0
	Thailand	0	2	2	2	0	0	0	0	---	*0*	0	*1*	0	0
	ASEAN-5	*0*	*21*	*12*	*14*	*18*	*16*	*8*	*12*	*16*	---	*2*	*6*	*2*	*1*
	Australia	1	1	1	2	0	1	---	2	0	*1*	---	*1*	1	0
	Asia Pacific	*6*	*73*	*59*	*37*	*27*	*32*	*18*	*42*	*33*	*31*	*28*	---	*21*	*9*
	United States	15	6	2	21	27	19	24	16	14	*21*	22	*18*	---	8
	European Union	39	32	13	26	39	39	8	28	43	*32*	28	*31*	29	---
Total Foreign Liabilities	**WORLD**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	***100***	**100**	***100***	**100**	**100**

Note: Data on cross-border long-term debt securities investment from the following countries are unavailable:

The PRC's investment to all countries (2010–2014); Singapore's investment to Japan (2010–2016); Australia's investment to Japan (2010–2012, 2014), Hong Kong, China (2010–2013, 2015, 2016), the PRC (2010–2013, 2015, 2016), Republic of Korea (2010–2013), Indonesia (2012, 2013, 2015, 2016), Malaysia (2010, 2013, 2014, 2016), the Philippines (2010–2016), Singapore (2010–2012), Thailand (2013–2015); the Philippines' investment to the PRC (2010), Thailand (2010), Australia (2010); some EU-27 countries for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Table 9: Cross-Border Short-Term Debt Securities Investment Assets and Liabilities in Asia and the Pacific, 2010–2016 Average

(1) Amount (Unit: US$ Million)

		Foreign Liabilities Classified by Debtor														Total Foreign Assets
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	ASEAN-5	Australia	Asia Pacific	United States	European Union	WORLD
Foreign Assets Classified by Creditor	Japan	---	815	1,654	659	97	6	26	716	385	1,230	439	4,797	11,093	10,036	33,278
	Hong Kong, China	13,640	---	80,337	4,552	336	3,273	136	3,138	552	7,436	4,592	110,557	8,282	14,451	145,828
	People's Republic of China	553	10,293	---	295	15	22	7	1,498	7	1,550	1,514	14,204	4,600	1,781	24,621
	Republic of Korea	9	62	55	---	0	5	0	11	0	16	3	145	472	30	747
	Indonesia	32	50	290	28	---	18	2	102	10	132	15	548	460	539	2,204
	Malaysia	13	18	15	23	11	---	2	29	1	43	13	124	522	86	736
	The Philippines	0	32	56	18	8	2	---	21	0	31	8	145	1,104	49	1,368
	Singapore	11,694	5,351	5,847	5,321	2,223	5,827	1,462	---	915	10,427	3,397	42,037	15,969	11,869	82,390
	Thailand	350	1,121	686	711	34	38	5	77	---	155	223	3,245	104	384	7,492
	ASEAN-5	*12,089*	*6,572*	*6,894*	*6,101*	*2,276*	*5,884*	*1,471*	*230*	*925*	---	*3,655*	*46,099*	*18,159*	*12,927*	*94,189*
	Australia	4,085	59	149	14	0	471	---	155	0	626	---	4,933	3,266	1,774	13,466
	Asia Pacific	*30,376*	*17,801*	*89,090*	*11,620*	*2,725*	*9,660*	*1,640*	*5,749*	*1,870*	*21,645*	*10,203*	---	*45,871*	*40,999*	*312,128*
	United States	38,791	2,293	1,182	1,652	37	2,815	566	8,050	83	11,551	48,807	104,277	---	165,061	362,927
	European Union	85,405	85,405	4,362	1,061	430	1,824	1,468	9,723	148	13,594	26,962	216,789	0	---	1,234,581
Total Foreign Liabilities	WORLD	268,802	17,480	101,905	18,131	3,228	14,615	2,501	27,870	2,164	50,378	96,199	552,895	730,776	1,320,529	---

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Table 9 *continued*

(2) % of Cross-Border Short-term Debt Securities Investment Assets

		Foreign Liabilities Classified by Debtor														Total Foreign Assets (100%)
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	ASEAN-5	Australia	Asia Pacific	United States	European Union	WORLD
Foreign Assets Classified by Creditor	Japan	---	2	5	2	0	0	0	2	1	4	1	14	33	30	100
	Hong Kong, China	9	---	55	3	0	2	0	2	0	5	3	76	6	10	100
	People's Republic of China	2	42	---	1	0	0	0	6	0	6	6	58	19	7	100
	Republic of Korea	1	8	7	---	0	1	0	1	0	2	0	19	63	4	100
	Indonesia	1	2	13	1	---	1	0	5	0	6	1	25	21	24	100
	Malaysia	2	2	2	3	2	---	0	4	0	6	2	17	71	12	100
	The Philippines	0	2	4	1	1	0	---	2	0	2	1	11	81	4	100
	Singapore	14	6	7	6	3	7	2	---	1	13	4	51	19	14	100
	Thailand	5	15	9	9	0	1	0	1	---	2	3	43	1	5	100
	ASEAN-5	13	7	7	6	2	6	2	0	1	---	4	49	19	14	100
	Australia	30	0	1	0	0	3	---	1	0	5	---	37	24	13	100
	Asia Pacific	10	6	29	4	1	3	1	2	1	7	3	---	15	13	100
	United States	11	1	0	0	0	1	0	2	0	3	13	29	---	45	100
	European Union	7	7	0	0	0	0	0	1	0	1	2	18	0	---	100

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Table 9 *continued*

(3) % of Cross-Border Short-term Debt Securities Investment Liabilities

		Foreign Liabilities Classified by Debtor													
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union
Foreign Assets Classified by Creditor	Japan	---	5	2	4	3	0	1	3	18	*2*	0	*1*	2	1
	Hong Kong, China	5	---	79	25	10	22	5	11	26	*15*	5	*20*	1	1
	People's Republic of China	0	59	---	2	0	0	0	5	0	*3*	2	*3*	1	0
	Republic of Korea	0	0	0	---	0	0	0	0	0	*0*	0	*0*	0	0
	Indonesia	0	0	0	0	---	0	0	0	0	*0*	0	*0*	0	0
	Malaysia	0	0	0	0	0	---	0	0	0	*0*	0	*0*	0	0
	The Philippines	0	0	0	0	0	0	---	0	0	*0*	0	*0*	0	0
	Singapore	4	31	6	29	69	40	58	---	42	*21*	4	*8*	2	1
	Thailand	0	6	1	4	1	0	0	0	---	*0*	0	*1*	0	0
	ASEAN-5	*4*	*38*	*7*	*34*	*71*	*40*	*59*	*1*	*43*	---	*4*	*8*	*2*	*1*
	Australia	2	0	0	0	0	3	---	1	0	*1*	---	*1*	0	0
	Asia Pacific	*11*	*102*	*87*	*64*	*84*	*66*	*66*	*21*	*86*	*43*	*11*	---	*6*	*3*
	United States	14	13	1	9	1	19	23	29	4	*23*	51	*19*	---	12
	European Union	32	489	4	6	13	12	59	35	7	*27*	28	*39*	0	---
Total Foreign Liabilities	**WORLD**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	***100***	**100**	***100***	**100**	**100**

Note: Data on cross-border short-term debt securities investment from the following countries are unavailable:

The PRC's investment to all countries (2010–2014); Thailand's investment to Japan (2012 and 2013), Malaysia (2011–2013), Thailand (2011–2015); Australia's investment to Japan (2010–2012, 2014), Hong Kong, China (2010–2013, 2015, 2016), Republic of Korea (2010–2013), Indonesia (2012, 2013, 2015, 2016), Malaysia (2010, 2011, 2013, 2014, 2016), the Philippines (2011–2016), Singapore (2010–2012), Thailand (2012–2016); Malaysia's investment to the PRC (2010, 2012), Republic of Korea (2010, 2011), Thailand (2010); the Philippines's investment to the PRC (2010), Indonesia (2011, 2012), Malaysia (2012, 2014, 2016), Singapore (2011, 2012, 2014), Australia (2010, 2011, 2014); some EU-27 countries for various years.

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

4.1 Overall Features of Cross-Border Portfolio Assets and Liabilities in the Region

First, cross-border portfolio assets held by the Asia and Pacific region to the world have remained dominated by debt securities. The amount of both equity and debt securities assets have increased over the period of 2001–2016, but equity securities assets have grown faster than debt securities assets. During and after the crisis, debt securities investors from Asia and the Pacific's advanced economies (such as Japan) have continued to invest heavily in the United States and the EU, as well as have sought for higher yields in the Asia and Pacific region. On the other hand, equity investors in the region have become more aggressive investing in emerging markets that underwent major corrections during the crisis. As a result, the share of debt securities to total foreign portfolio assets held by the Asia and Pacific region has gradually declined from 69% in the pre-crisis period to 58% in the post-crisis period. Instead, the share of equity to total portfolio assets held by the Asia and Pacific region rose from 31% in the pre-crisis period to 42% in the post-crisis period.

Second, portfolio investment liabilities of the Asia and Pacific region toward the world have been dominated by equity. This may reflect that the early stages of bond market development in many emerging Asian economies. Nonetheless, it is noticeable that the amount of debt securities investment liabilities has grown faster than the amount of equity investment liabilities over the period of 2001–2016. Namely, the shares of equity in portfolio investment liabilities have dropped from 68% in the pre-crisis period to 59% in the post-crisis period; and the shares of debt securities rose from 32% to 41% over the same period. This is a result opposite to the case of portfolio investment assets. A relative shift of the portfolio investment liabilities from equity to debt securities may reflect that equity prices in the Asia and Pacific region have become more expensive or overvalued in many economies (as shown by the rising price to earnings (P/E) ratios in Table 10) while debt securities yields have become more attractive (as shown by the rising real yields of government bonds in Table 11).

In general, global fund managers that invest heavily in debt securities issued by the Asia and Pacific region are different from those fund managers that predominantly invest in equity issued by the region. Namely, the degree of substitutability between debt securities and equity investment is rather low in the Asia and Pacific region since these foreign investors in each segment of capital markets focus only on their own niche rather than actively making cross-market trading. Hence a gradual increase in the share of debt securities to total cross-border portfolio liabilities in the Asia and Pacific region implies that debt securities-oriented global investors have found more attractive to invest in those debt securities issued by the region and thus have increased the amount of investment as compared with equity-oriented global investors. It does not indicate that the same foreign portfolio investors have switched their investment portfolio from equity to debt securities. A further increase in investing in debt securities issued by the region may attract greater foreign capital if the progress is made on the development of bond markets in emerging Asia.

Table 10: Price to Earnings Ratios of Equity Markets in Asia and the Pacific, United States, and the European Union 2001–2016

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Nikkei 225 (Japan)	35.9	80.2	43.2	15.9	26.7	23.0	17.6	27.4	n.a.	18.4	22.1	20.8	22.1	19.9	21.2	22.5
Hang Seng (Hong Kong, China)	19.0	14.5	18.0	14.5	11.7	15.0	16.7	13.0	15.7	12.8	9.1	11.2	11.0	9.9	10.7	12.3
Shanghai Composite (People's Republic of China)	48.8	42.5	33.5	21.4	19.1	27.7	39.6	17.3	26.0	16.0	11.8	12.4	10.4	15.4	18.0	17.1
KOSPI (Republic of Korea)	n.a.	6.7	10.0	7.2	10.9	12.7	15.2	16.4	16.3	8.3	12.7	20.5	15.1	11.9	14.1	16.3
Indonesia Composite Index (Indonesia)	7.8	6.6	11.8	14.4	16.5	16.7	19.0	17.0	17.1	18.5	17.3	18.2	19.9	22.1	27.9	23.3
Kuala Lumpur Composite Index (Malaysia)	20.0	16.8	15.8	14.9	14.1	13.4	16.1	12.1	18.7	17.0	15.8	15.1	17.6	16.3	18.0	16.5
Philippines Composite Index (the Philippines)	301.4	21.8	17.8	13.6	13.4	12.8	16.0	12.3	14.0	13.5	16.0	18.1	17.3	20.5	20.7	19.6
Strait Time Index (Singapore)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.5	13.9	10.5	8.8	12.7	13.5	14.9	13.3	11.9
Stock Exchange of Thailand Index (Thailand)	9.7	11.4	19.1	9.8	11.0	11.1	17.8	11.8	13.5	14.1	13.2	16.3	14.7	19.9	17.6	16.5
S&P / ASX 200 (Australia)	24.7	20.1	22.9	14.4	14.9	14.3	15.8	20.1	29.7	16.6	13.5	19.3	20.0	20.7	22.8	19.3
S&P 500 (United States)	26.7	19.1	20.6	18.5	16.9	16.6	17.5	16.7	18.9	15.4	13.4	14.4	17.5	18.3	18.8	20.6
Dow Jones Industrial Average (United States)	23.5	17.6	18.9	17.6	19.3	15.9	16.4	16.0	16.1	13.5	12.6	12.8	15.9	16.2	16.0	18.2
EURO Stoxx 50 (Euro Area)	45.2	220.3	19.0	12.7	12.8	13.2	12.7	12.5	15.6	11.2	13.3	16.0	22.9	18.9	21.4	19.0
FTSE 100 (United Kingdom)	63.9	35.9	28.4	15.3	13.3	15.6	13.1	27.8	20.0	14.1	10.9	17.7	17.0	22.4	34.5	34.8

Source: Bloomberg.

Table 11: Real Yields of 10Y Government Bond in Asia and the Pacific, United States, and the European Union 2001–2016

	Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	Australia	United States	European Union
2000	2.4	8.5	n.a.	4.1	n.a.	n.a.	8.6	2.0	4.2	-0.3	1.7	1.5
2001	2.4	9.8	n.a.	3.9	n.a.	n.a.	11.0	4.6	4.0	2.9	3.5	2.3
2002	1.4	5.9	n.a.	1.9	n.a.	n.a.	10.2	2.1	1.8	2.1	1.2	1.7
2003	1.7	6.2	n.a.	2.0		n.a.	8.9	3.0	3.0	3.2	2.3	2.1
2004	0.9	3.3	n.a.	0.8	4.0	n.a.	6.8	1.3	1.9	2.7	1.0	1.2
2005	2.2	2.8	1.7	3.0	-3.5	1.0	4.0	2.0	-0.4	2.5	0.7	0.9
2006	1.3	1.4	0.3	3.0	3.6	0.6	2.0	2.2	1.8	2.5	2.5	1.8
2007	0.9	-0.3	-2.0	2.1	4.0	1.9	2.6	-1.4	1.9	3.3	-0.1	1.1
2008	0.1	-0.9	1.6	0.1	0.8	-1.3	-0.4	-3.7	2.2	0.3	1.5	0.7
2009	3.3	1.1	1.7	2.6	7.1	3.3	3.6	3.4	0.7	3.6	1.9	2.0
2010	1.4	0.0	-0.7	1.5	0.6	1.9	2.2	-1.3	0.6	2.9	1.6	0.4
2011	1.3	-4.3	-0.7	-0.4	2.2	0.7	0.9	-3.9	-0.2	0.7	-1.2	-1.2
2012	1.0	-3.2	1.1	1.7	1.5	2.3	1.2	-2.7	-0.1	1.2	-0.1	-1.1
2013	-0.7	-1.9	2.1	2.4	0.4	0.9	-0.6	0.5	2.2	1.6	1.7	0.9
2014	-2.2	-3.0	2.2	1.8	-0.6	1.5	1.2	2.3	2.1	1.0	1.6	0.6
2015	0.1	-1.6	1.3	1.0	5.6	1.5	2.6	3.3	3.4	1.2	1.5	0.5
2016	-0.3	-1.2	1.0	0.8	4.9	2.4	2.0	2.4	1.5	1.4	0.3	-0.9

Source: Bloomberg, IMF.

Table 12: Debt Securities Outstanding in Asia and the Pacific, United States, and the European Union as of Q3-2017
(Unit: US$ Billion)

	Financial Corporation	Non-Financial Corporation	General Government	Statistical Discrepancy	Total
Japan	2,440	723	9,433	0	12,596
People's Republic of China	4,273	2,755	4,130	0	11,158
Hong Kong, China	249	67	145	0	461
Republic of Korea	n.a.	n.a.	n.a.	n.a.	n.a.
Indonesia	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	40	146	163	0	349
Philippines	5	40	85	0	130
Singapore	183	128	86	1	398
Thailand	135	88	132	0	355
Australia	1,105	205	650	0	1,960
United States	15,351	6,088	17,252	215	38,906
EU-27	12,707	2,113	12,830	30	27,680

Note 1: Regarding Japan's data, Fiscal Investment and Loan Program (FILP) bonds, which constitute part of Japanese Government Bonds, are included in the category "financial."

Note 2: Data include both domestically and internationally issued.

Source: Bank for International Settlements.

4.2 Cross-Border Portfolio Assets and Liabilities Classified by Asian and the Pacific Economies

The following features are observed from Tables 7, 8, and 9, as well as Appendix Chart 1 with regards to Japan, Australia, Singapore (and other ASEAN economies), and the PRC and Hong Kong, China.

Case of Japan:

- Japan has been a net portfolio creditor against the world, having more cross-border portfolio assets than liabilities. Japan has persistently preferred holding a greater amount of cross-border portfolio assets in the form of long-term debt securities, while having its liabilities dominated by equity. In other words, Japan has remained a net international creditor in terms of cross-border debt securities as foreign debt securities investment assets have exceeded foreign debt securities investment liabilities. In contrast, Japan has remained a net international debtor in terms of cross-border equity as foreign equity liabilities have exceeded foreign equity assets.
- Japan has actively invested in sovereign bonds and other semi-government bonds (such as agency bonds and agency mortgage-based securities [MBS]) issued by the United States, the EU, and Australia. Meanwhile, the United States and the EU have been the biggest investors in Japan's equity assets. This means that investors from Japan tend to be more risk-averse than investors from the United States and the EU.
- Regarding Japan's foreign assets, Japanese debt securities investors have been heavily skewed toward advanced economies that have large, deep, mature debt securities markets. Japan's debt securities assets in the United States and the EU have been disproportionately large as compared to its assets in the Asia and Pacific region in the post-crisis period; as depicted in Table 8(1) for long-term debt securities and Table 9(1) for short-term debt securities. Beside these two

investment destinations, Australia has become Japan's preferred investment destination in terms of long-term debt securities over the same period. In general, Japanese investors prefer high-rated bonds. Table 13 shows that credit ratings of long-term bonds in the United States, the EU (credit ratings of Germany, France, and the United Kingdom), and Australia have been very high.

- Having large pension and life insurance industries in Japan, these institutional investors have been major investors investing in other economies and generally prefer well-developed bond markets. The United States has large, liquid, and safe treasury securities and agency securities markets. Agency securities in the United States include the agency debt securities and the agency MBS issued by congressionally-chartered government-sponsored enterprises (GSEs). Agency MBS have higher coupons than Treasury securities because of embedded borrower prepayment options that make the timing of cash flows uncertain (Cavallo et al. 2018). MBS issued by the GSEs have benefited from strong investor perceptions of an implied federal guarantee of the debt obligations, owing to various charter provisions and past government actions. The EU has diverse sovereign bond markets whose creditworthiness varies depending on member countries' profiles. Other debt securities markets – including covered bonds, financial bonds, corporate bonds, and asset-backed securities – are relatively developed in some EU member countries. Germany, France, and the United Kingdom have larger and more liquid bond markets than the other EU members.
- Although Japan's cross-border portfolio assets are mainly in the form of debt securities, its equity assets have grown faster than its debt securities assets. Japan's equity holdings have rapidly increased since 2014. To some extent, these rapid growths were attributable to change in Japanese investors' behavior, which has become more aggressive in searching for higher yields. It was also due to the Japanese Government's pension fund reform – namely, changing the basic portfolio of public pension reserve assets (about ¥145 trillion) managed by the Government Pension Investment Fund (GPIF) in October 2014. The target allocation of domestic bonds (mainly comprising Japanese government bonds) dropped from 60% previously to 35% (with a permissible range of ±10%). Instead, the target allocations for domestic equity and foreign equity were increased: from 12% to 25% and from 12% to 25%, respectively. The target allocations for foreign bonds was raised from 11% to 15%.
- As for Japan's foreign liabilities, Japanese equity investment liabilities toward the United States have remained large, rising from 50% of Japan's cross-border equity investment liabilities in the pre-crisis period to 52% in the post-crisis period. United States' investment in Japan's equity assets has grown by 55% throughout 2001–2016. Rising demand for Japanese equity was reflected in a rapid increase of Japanese stock prices after the launch of Abenomics from late 2012 and the subsequent unconventional monetary easing adopted by the Bank of Japan since April 2013 – including massive purchase of the Japanese Government Bonds and ETF purchases (largely indexed to Nikkei 225 and TOPIX).
- In anticipation of the Abenomics massive monetary easing and stimulus economic package, the exchange rate of the yen vis-à-vis the US dollar and the yen's nominal effective exchange rates began to depreciate sharply from late 2012. These exchange rate movements were initiated by short-term oriented foreign investors that took a short position in the yen against the US dollar and

a long position in Japanese stocks (Shirai 2017). Given that major listed firms are Japanese multinational corporations, the yen's depreciation has helped to raise their overseas profits and hence domestic equity prices. According to the Survey Report on Overseas Business Operations by Japanese Manufacturing Companies compiled by the Japan Bank for International Cooperation (JBIC), the ratio of foreign production, sales, and profits of Japanese manufacturers has risen steadily since 2001 and has currently accounted for about 40% each (JBIC, 2017). The automobile sector is more dependent on foreign markets than other sectors, with these ratios accounting for about a half.

Table 13: Sovereign Rating of Long-Term Local Currency-Denominated Government Bonds in Asia and the Pacific and Advanced Economies

Country	Rating Agency	Government Bond Sovereign Rating	Latest Rating Change Date
Japan	Fitch	A	27 April 2017
	Moody's	A1	6 December 2017
	S&P	A+	16 September 2015
People's Republic of China	Fitch	A+	13 July 2017
	Moody's	A1	24 May 2017
	S&P	A+	21 September 2017
Hong Kong, China	Fitch	AA+	3 September 2017
	Moody's	Aa2	24 May 2017
	S&P	AA+	21 September 2017
Republic of Korea	Fitch	AA–	11 October 2017
	Moody's	Aa2	18 December 2015
	S&P	AA	7 August 2016
Indonesia	Fitch	BBB	20 December 2017
	Moody's	Baa2	13 April 2018
	S&P	BBB–	19 May 2017
Malaysia	Fitch	A–	17 August 2017
	Moody's	A3	7 December 2017
	S&P	A	27 July 2011
Philippines	Fitch	BBB	10 December 2017
	Moody's	Baa2	27 June 2017
	S&P	BBB	8 May 2014
Singapore	Fitch	AAA	19 September 2017
	Moody's	Aaa	8 December 2016
	S&P	AAA	6 March 1995
Thailand	Fitch	BBB+	14 June 2017
	Moody's	Baa1	18 July 2017
	S&P	A–	14 April 2009
Australia	Fitch	AAA	12 May 2017
	Moody's	Aaa	17 August 2016
	S&P	AAA	27 July 1992
United States	Fitch	AAA	11 April 2017
	Moody's	Aaa	18 July 2013
	S&P	AA+	5 August 2011
France	Fitch	AA	26 January 2018
	Moody's	Aa2	18 September 2015
	S&P	AA	8 November 2013
Germany	Fitch	AAA	9 February 2018
	Moody's	Aaa	24 February 2017
	S&P	AAA	27 July 1992
United Kingdom	Fitch	AA	27 October 2017
	Moody's	Aa2	22 September 2017
	S&P	AA	27 June 2016

Source: countryeconomy.com

Case of Australia:

- As depicted in Appendix Chart 2, Australia's foreign portfolio assets are dominated by equity, although the ratio of equity to total foreign portfolio assets dropped from 69% in the pre-crisis period to 63% in the post-crisis period. In contrast, Australia's foreign portfolio investment liabilities are largely in the form of debt securities, rising from 51% of total foreign portfolio liabilities in the pre-crisis period to 59% in the post-crisis period.
- Between the pre-crisis and the post-crisis periods, Australia's cross-border debt securities assets rose by 265% (from US$59 billion to US$214 billion), while its equity assets grew by 170% (from US$132 billion to US$357 billion). Over the same time span, Australia's cross-border debt securities liabilities rose by 173% (from US$246 billion to US$670 billion), while its equity liabilities grew by 111% (from US$152 billion to US$322 billion).
- Australian investors take more risks than Japanese investors, as evidenced by their tendency to invest more actively in equities than in debt securities. This may reflect that major Australian investors are superannuation funds (mostly based on defined contribution schemes) sand other funds However, the global financial crisis substantially reduced Australia's appetite for investing in riskier assets.
- Australia has been a net debtor of cross-border debt securities investment vis-à-vis the world throughout the period of 2001–2016. The size of Australia's net debt of cross-border debt securities investment reached US$456 billion in post-crisis period, compared to US$187 billion in the pre-crisis period. Meanwhile, Australia was a net debtor of cross-border equity investment before the crisis (with net debt of US$20 billion) and during the crisis period (with net debt of US$17 billion) but has become a net creditor of US$36 billion after the crisis.

Case of Singapore and Other ASEAN Economies:

- The ASEAN-5 has received significant inflows of cross-border portfolio investment from the United States, the EU, and Japan during and after the global financial crisis. As depicted in Table 14, portfolio investment regulations in the ASEAN-5 economies in general are friendly to foreign portfolio investors. For example, there are few or no restrictions for foreign investors with regards to purchasing debt securities and equity. Low investment tax rate is applied to foreign investors, particularly for investors from foreign countries with tax treaty agreements. No capital controls on foreign exchange movements are imposed. Except for Singapore, which already has well-advanced capital markets, other ASEAN economies are liberalizing their capital markets to attract foreign portfolio investment in order to deepen and broaden their markets.
- In addition to the growing role of Singapore in the Asia and Pacific region, it should be mentioned that other ASEAN economies have also increased their linkages with other Asia and Pacific economies over time. For example, the Philippines has increased its portfolio investment in Indonesia, where Indonesia's share of the Filipino total portfolio assets rose from about 0% in the pre-crisis period to 17% in the post-crisis period. Meanwhile, Thailand has increased its portfolio assets to the ROK from 3% of Thai total foreign portfolio assets in the pre-crisis period to 13% in the post-crisis period.

- Singapore was a net creditor of portfolio investment against the world before, during, and after the global financial crisis. Singapore's cross-border portfolio investment assets are largely equally divided into equity and long-term debt securities (where Singapore remains a net creditor in both types of assets). Singapore's net equity assets rose by around 382%, from US$57 billion in the pre-crisis period to US$275 billion in the post-crisis period. Over the same time span, Singapore's net debt securities assets increased by 152% from almost US$130 billion to almost US$327 billion. Singapore's interest in equity issued by the PRC grew by almost ten times, from almost US$6 billion in the pre-crisis period to almost US$58 billion in the post-crisis period. The share of the PRC in Singapore's cross-border equity investment to the world grew from 5% in the pre-crisis period to 14% in the post-crisis period. Nevertheless, Singapore's holding of equity assets in the United States was larger, at US$111 billion during 2010–2016.
- Indonesia is a net international debtor of both equity and debt securities investment as its foreign portfolio investment assets are much smaller than its liabilities. Indonesia's net liabilities on equity against the world rose by 265%, from US$18 billion in the pre-crisis period to US$66 billion in the post-crisis period. Over the same period, Indonesia's net liabilities on debt securities against the world soared by 665% from around US$7 billion to around US$55 billion perhaps due to attractive yields. Most of Indonesia's debt securities are issued by the government. Bank Indonesia (central bank) and firms also issue debt securities, but the sizes of issuance have been much smaller than that of the government securities. Bank Indonesia has issued short-term certificates to conduct open market operations since 1983 – before the (new) government debt securities and a bond market was formally introduced in 2002. Bank Indonesia has started to reduce the amount of issuance and the frequency of auctions since 2010 in line with the long-run goal to use solely government securities for open market operations.
- Foreign holdings of Indonesian bonds accounted for about 40% of outstanding tradable government bonds during 2010–2016. In addition to attractive yields, this is attributable to (1) portfolio investment regulations that are relatively friendly to foreign investors; (2) efforts by the Government is actively promoting government bonds to foreign investors (including through roadshows in the United States, the EU, Hong Kong, and Japan; and (3) stable macroeconomic performance and prudent budget deficit management (with a maximum cap on budget deficit at 3% of nominal GDP). Holdings of Indonesian sovereign bonds by Japan and the ROK have risen following the upgrade in credit rating from S&P Global in May 2017.
- Malaysia has been a net international debtor of both equity and debt securities investment. Malaysia's net liabilities on equity against the world fell from US$22 billion during 2001–2007 to US$18 billion during 2010–2016, as Malaysia aggressively increased its equity investment abroad. Malaysia's net debt on debt securities investment against the world rose from US$20 billion to US$52 billion. Debt securities dominated Malaysia's total cross-border portfolio liabilities in the post-crisis period with a share of 56%, versus 47% in the pre-crisis period. On annual basis, the share of debt securities to Malaysia's total foreign portfolio liabilities rose from 48% in 2010 to 59% in 2016.

- The Philippines is a net international debtor of both equity and debt securities investment. Its net liabilities on equity against the world rose four times, from US$7 billion in the pre-crisis period to US$28 billion in the post-crisis period. Meanwhile, the Filipino net liabilities on debt securities investment against the world grew 2.6 times from almost US$10 billion to almost US$25 billion over the same time span. Debt securities dominated Filipino total cross-border portfolio liabilities in the post-crisis period with a share of 57%. This share fell from 60% in 2010 to 46% in 2016, while the share of equity rose from 40% to 54%.
- Thailand is a net international debtor of both equity and debt securities investment. Its net foreign liabilities on equity vis-à-vis the world increased by 155%, from US$23 billion in the pre-crisis period to US$59 billion in the post-crisis period. Equity constituted 75% of Thailand's total foreign portfolio liabilities in the post-crisis period. The share of equity liabilities to Thai total cross-border portfolio liabilities gradually declined from 81% in 2010 to 73% in 2016, while the share of debt securities liabilities rose from 19% to 27%.

Case of the People's Republic of China and Hong Kong, China:

- Hong Kong, China has been a net international creditor. Its cross-border assets and liabilities are mainly in the form of equity. In the post-crisis period, equity constituted 62% of Hong Kong, China's portfolio assets vis-à-vis the world. This suggests that Hong Kong, China is more of a risk taker than Singapore.
- The relationship between the PRC and Hong Kong, China has strengthened over the period of 2001–2016. Hong Kong, China has remained the largest investor in equity issued by the PRC. Its foreign assets in equity issued by the PRC swelled by 3.7 times from US$47 billion in the pre-crisis period to US$174 billion in the post-crisis period. While Hong Kong, China has been the largest investor in equity issued by the PRC, the United States, and the EU have been the largest investors in equity issued by Hong Kong, China (although data on the PRC are available only for 2015–2016). This suggests that Hong Kong, China's relationship with the PRC is rather one-sided. Meanwhile, the PRC has relatively heavily invested in short-term debt securities issued by Hong Kong, China.
- The PRC has the largest debt securities market in emerging Asia. PRC's long-term sovereign rating has deteriorated due to rating agencies' growing concerns over the country's rising debt levels (including firms and households). The PRC's rating was downgraded from Aa3 to A1 by Moody's in May 2017, and from AA– to A+ S&P Global Ratings in September 2017 (Table 13). Given its sheer size, a further capital account liberalization is likely to attract greater investment from abroad. The inclusion of the PRC's yuan-denominated Chinese stocks (the so-called 'A' shares) by the MSCI into its key Emerging Markets and World from June 2018 is expected to boost equity investment to the country. Global fund managers have issued various MSCI-based fund indexes by selecting prospective stocks in the PRC.

Table 14: Cross-Border Portfolio Investment Regulation in Selected Asia and Pacific Economies

	Capital Inflow			Capital Outflow	
Market	**Money Market Instruments**	**Bond Market Instruments**	**Equity Instruments**	**Resident Investors**	**Non-resident Investors**
Japan	Nonresidents are free to purchase money market securities.	Nonresidents are free to purchase debt securities.	Controls will only apply if the purchase of equity instruments is affected by inward direct investment.	Residents are allowed to purchase capital instruments issued abroad.	No restrictions on repatriation of capital, profits, dividends, and interest.
Hong Kong, China	There are no specific restrictions on portfolio investments and foreign investors may place funds directly in money market instruments.	Nonresidents are free to purchase debt instruments.	Nonresidents are free to purchase equity securities. Investment in banks require Hong Kong Monetary Authority (HKMA) approval.	Residents are generally free to invest abroad. Overseas investment by institutional investors (e.g., insurance companies, banks) must be within certain limits and may require HKMA approval.	No restrictions on repatriation of capital and profits.
People's Republic of China	Qualified Foreign Institutional Investors (QFII) may purchase money market funds, subject to a lockup period.	QFIIs are allowed to invest in exchange-traded subject to quotas but interbank-traded bonds purchases have no limits.	QFIIs are allowed to invest in A-shares subject to quotas. No single QFII may hold more than 10% of a listed company. Foreign investors may not own more than 30% of a single company.	Qualified Domestic Institutional Investors (QDII) are allowed to buy and hold offshore securities subject to certain quotas.	QFII pension and insurance funds, mutual funds, charitable foundations, endowment funds, government investment management companies, and opened funds have a principal lock-up of 3 months.
		Renminbi Qualified Foreign Institutional Investors (RQFII) are allowed to invest in exchange traded bonds subject to quotas and in interbank-traded bonds without limits.	There is an overall limit for all QFIIs at USD150 billion and a single QFII may invest up to USD1 billion, sovereign wealth funds, central banks and monetary authorities can invest beyond USD1 billion. Foreign investors may also make strategic investments in A-shares of listed companies subject to certain criteria and restrictions.	Insurance companies may invest subject to approval and total overseas investment cannot exceed 15% of the insurance company's total assets.	Other QFIIs are required to keep their investments in the People's Republic of China (PRC) for 1 year. There is no holding period for RQFIIs.

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Table 14 *continued*

	Capital Inflow			Capital Outflow	
Market	**Money Market Instruments**	**Bond Market Instruments**	**Equity Instruments**	**Resident Investors**	**Non-resident Investors**
		Financial institutions, such as commercial banks, insurance companies, securities companies, fund management companies, other asset management institutions and People's Bank of China-approved institutions such as pension funds, charitable funds, endowment funds, and other medium- and long-term institutional investors may invest in the interbank bond market subject without limits.	RQFIIs are allowed to invest in listed equities subject to quotas. RQFIIs are allowed to fund investments using renminbi sourced abroad.		Repatriation of foreign exchange requires the approval of the State Administration for Foreign Exchange.
Republic of Korea	Nonresidents are allowed to invest in domestic money market instruments. The sale of foreign currency-denominated money market instruments abroad requires notification to a designated foreign exchange bank. Sale of foreign currency-denominated money market instruments exceeding USD30 million or local currency denominated money market instruments by residents abroad requires notification to the Ministry of Strategy and Finance.	Nonresidents are allowed to buy bonds and other debt securities sold by residents, but notification to a foreign exchange bank or The Bank of Korea is required if the purchase is not made through an account exclusively for investment.	Nonresidents are freely allowed to invest in shares of local companies, but notification to a foreign exchange bank or The Bank of Korea is required if the purchase is not made through an account exclusively for investment. The purchase of listed shares issued by resident public sector utilities in the process of privatization is subject to controls.	Residents are allowed to buy bonds issued abroad, but notification to The Bank of Korea is required if the purchase is not made through an account exclusively for investment.	Effective January 1, 2015, proceeds from capital transactions in excess of USD500,000 or its equivalent must be repatriated within 3 years of the settlement date.

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Table 14 *continued*

	Capital Inflow			Capital Outflow	
Market	**Money Market Instruments**	**Bond Market Instruments**	**Equity Instruments**	**Resident Investors**	**Non-resident Investors**
Indonesia	Foreign investors are allowed to purchase money market instruments in the secondary market. For Bank Indonesia Certificates, the minimum holding period is one week.	Foreign investors are allowed to purchase debt securities without limit except for retail bonds for which they are only allowed to purchase in the secondary market.	Foreign investors are allowed to purchase shares without limit with the exception of shares in finance company joint ventures.	Pension funds are not allowed to invest in securities abroad. Mutual funds investments are limited to 15% of their net asset value while protected mutual fund has a limit of 30% of their net asset value.	No restrictions apply to repatriation of capital, remittance of dividends, and profits.
Malaysia	Nonresidents are allowed to purchase money market instruments without any restrictions.	Nonresidents are allowed to purchase bond market instruments without any restrictions.	Nonresidents are allowed to purchase equity instruments without any restrictions.	Residents with domestic borrowing, and has funded the investment through conversion of Malaysian ringgit into foreign currency, may invest abroad but subject to certain limits.	Nonresidents are free to repatriate funds from divestment of local currency-denominated assets or profits and dividends arising from investments.
The Philippines	Registration of money market instruments purchased by nonresidents is required only if the foreign exchanged needed for capital repatriation and remittance of profits and earnings will be purchased from Bangko Sentral ng Pilipinas' Authorized Agent Banks (AAB) and AAB-forex corporations.	Nonresidents are allowed to purchase bond market instruments without any restrictions.	Registration of equity instruments purchased by non-residents is required only if the foreign exchanged needed for capital repatriation and remittance of profits and earnings will be purchased from AABs and AAB forex corporations.	A resident's investments abroad in excess of USD60 million a year requires prior regulatory approval.	No restrictions on repatriation of capital, profits, dividends, and interest if the foreign exchange needed will be purchased from AABs and AAB-forex corporations

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Table 14 *continued*

	Capital Inflow			Capital Outflow	
Market	**Money Market Instruments**	**Bond Market Instruments**	**Equity Instruments**	**Resident Investors**	**Non-resident Investors**
Singapore	No restrictions for nonresidents to purchase money market instruments.	No restrictions for nonresidents to purchase bond market instruments.	No restrictions for nonresidents to purchase equity instruments.	No restrictions on investments by residents abroad.	Nonresident financial entities must convert Singapore dollar proceeds, from Singapore dollar loans (exceeding SGD5 million), equity listings, and bond issuances into foreign currency before using such funds to finance activities outside Singapore.
Thailand	Nonresidents can invest in THB-denominated money market instruments, except bills of exchange issued by domestic financial institutions. Investment of a nonresident group in THB-denominated money market instruments issued by a domestic financial institution is subject to the overall outstanding THB-denominated borrowing limit of THB10 million.	Nonresidents can invest in THB denominated debt securities. Investment of a nonresident group in THB-denominated debt securities issued by a domestic financial institution is subject to a overall outstanding THB-denominated borrowing limit of THB10 million.	Nonresidents can invest in equities, but foreign equity participation may be limited if a company is subject to the provisions of the Foreign Business Act or other related laws. Financial institutions' foreign equity participation is limited to 25% of total shares in locally-incorporated banks, credit finance companies, and finance companies. Nonresidents can invest up to 100% of the shares of an asset management company or a securities company. For most other Thai corporations, foreign equity participation is up to 49%.	Institutional investors—the Government Pension Fund, Social Security Fund, companies listed on the Stock Exchange of Thailand, insurance companies, mutual funds, provident funds, securities companies, specialized financial institutions, and Thai companies with asset size of at least THB5 billion—may invest freely in foreign securities issued abroad, up to a certain limit imposed by the directors, management, or supervisory authority of the institutional investors. Individual and corporate investors may invest through private funds or securities companies or commercial banks holding relevant securities business licenses. In September 2014, the Bank of Thailand authorized the Securities and Exchange Commission to allocate foreign investments within an overall limit of USD75 billion.	There is no provision for timeline on repatriation of profits. However, profits from foreign indirect investment must be repatriated via foreign exchange accounts at authorized credit institutions.

Source: Asia Bonds Online, ADB.

5. CONCLUSION

This paper has examined cross-border portfolio investment assets and liabilities in the Asia and Pacific region before, during, and after the global financial crisis. There were significant flows of cross-border portfolio investment to and from the region over time. Both equity and debt securities investment from the world to the region have increased throughout 2001–2016, and so have equity and debt securities investment from the region to the world.

The region's cross-border portfolio liabilities have been largely in the form of equity. Major investors in equity issued by the region have been from the United States and the EU. One exception is the PRC, where major equity investors have been from Hong Kong, China. Foreign investors' preference of equity over debt securities may reflect early stages of bond market development and attractive P/E ratios of equity securities. With regards to the regions' cross-border asset instruments, debt securities have exceeded equity. This mostly reflects Japan's strong bias toward debt securities issued by the United States, the EU, and Australia. Excluding Japan, many economies in the region invested more heavily in cross-border equity than debt securities.

Albeit from a low level, the intra-regional financial integration has been growing at the center of the PRC, which has attracted equity investment from Hong Kong, China and Singapore. Indonesia has increased its investment in equity issued by the PRC. Meanwhile, the PRC has relatively heavily invested in short-term debt securities issued by Hong Kong, China. Within the AEAN-5, Malaysia has increased equity investment to Singapore; Singapore has increased equity investment in Indonesia, Malaysia, and Thailand; while Malaysia has increased investment in Singaporean equity. Singapore has also increasingly invested in debt securities issued by Indonesia and Malaysia.

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APPENDIX

Appendix Table 1: Total Cross-Border Portfolio Investment Assets and Liabilities in Asia and the Pacific, 2001–2007 Average

(1) Amount (Unit: US$ Million)

		Foreign Liabilities Classified by Debtor														Total Foreign Assets
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	WORLD
Foreign Assets Classified by Creditor	Japan	---	9,473	5,744	7,669	513	1,960	1,555	4,927	1,077	*10,032*	40,050	*72,968*	666,072	709,697	**1,913,883**
	Hong Kong, China	13,537	---	52,870	11,405	451	3,953	979	6,176	1,979	*13,538*	30,639	*121,989*	53,717	111,310	**425,886**
	People's Republic of China	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Republic of Korea	1,669	3,732	3,842	---	154	411	68	563	134	*1,330*	802	*11,376*	20,538	14,073	**54,389**
	Indonesia	8	105	17	4	---	3	7	127	7	*145*	51	*330*	243	392	**1,447**
	Malaysia	92	435	27	231	86	---	38	928	50	*1,101*	161	*2,047*	605	1,313	**4,833**
	The Philippines	21	118	23	58	11	136	---	274	13	*433*	123	*777*	2,581	950	**4,725**
	Singapore	15,575	12,450	6,485	12,496	4,574	11,782	1,439	---	3,986	*21,782*	15,705	*84,493*	62,060	81,619	**271,983**
	Thailand	25	79	13	111	44	45	2	248	---	*339*	829	*1,396*	906	1,556	**4,356**
	ASEAN-5	*15,721*	*13,187*	*6,566*	*12,901*	*4,714*	*11,966*	*1,486*	*1,578*	*4,056*	---	*16,869*	*89,043*	*66,395*	*85,830*	***287,344***
	Australia	13,007	2,876	271	1,778	131	192	106	1,190	140	*1,759*	---	*19,691*	92,716	54,120	**191,129**
	Asia Pacific	*43,935*	*29,267*	*69,294*	*33,753*	*5,963*	*18,482*	*4,194*	*14,434*	*7,385*	*50,458*	*88,360*	---	*899,438*	*975,029*	**2,872,632**
	United States	391,847	55,105	33,632	83,290	8,353	11,595	7,419	35,814	8,691	*71,873*	118,805	*754,551*	---	1,927,958	**4,171,926**
	European Union	396,768	62,134	34,457	66,722	8,125	14,919	8,777	27,956	11,027	*70,804*	138,005	*768,891*	2,069,030	---	**12,238,782**
Total Foreign Liabilities	WORLD	**985,883**	**160,816**	**143,512**	**197,117**	**26,883**	**47,319**	**21,947**	**86,065**	**28,700**	**210,915**	**387,450**	**2,085,692**	**4,673,083**	**12,309,571**	---

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Appendix Table 1 *continued*

(2) % of Total Cross-Border Portfolio Investment Assets

		Foreign Liabilities Classified by Debtor														Total Foreign Assets (100%)
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	**WORLD**
Foreign Assets Classified by Creditor	Japan	---	0	0	0	0	0	0	0	0	*1*	2	*4*	35	37	**100**
	Hong Kong, China	3	---	12	3	0	1	0	1	0	*3*	7	*29*	13	26	**100**
	People's Republic of China	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Republic of Korea	3	7	7	---	0	1	0	1	0	*2*	1	*21*	38	26	**100**
	Indonesia	1	7	1	0	---	0	1	9	0	*10*	4	*23*	17	27	**100**
	Malaysia	2	9	1	5	2	---	1	19	1	23	3	*42*	13	27	**100**
	The Philippines	0	3	0	1	0	3	---	6	0	*9*	3	*16*	55	20	**100**
	Singapore	6	5	2	5	2	4	1	---	1	*8*	6	*31*	23	30	**100**
	Thailand	1	2	0	3	1	1	0	6	---	*8*	19	*32*	21	36	**100**
	ASEAN-5	*5*	*5*	*2*	*4*	*2*	*4*	*1*	*1*	*1*	---	*6*	*31*	*23*	*30*	***100***
	Australia	7	2	0	1	0	0	0	1	0	*1*	---	*10*	49	28	**100**
	Asia Pacific	*2*	*1*	*2*	*1*	*0*	*1*	*0*	*1*	*0*	2	3	---	*31*	*34*	***100***
	United States	9	1	1	2	0	0	0	1	0	*2*	3	*18*	---	46	**100**
	European Union	3	1	0	1	0	0	0	0	0	*1*	1	*6*	17	---	**100**

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Appendix Table 1 *continued*

(3) % of Total Cross-Border Portfolio Investment Liabilities

		Foreign Liabilities Classified by Debtor													
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union
Foreign Assets Classified by Creditor	Japan	---	6	4	4	2	4	7	6	4	*5*	10	*3*	14	6
	Hong Kong, China	1	---	37	6	2	8	4	7	7	*6*	8	*6*	1	1
	People's Republic of China	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Republic of Korea	0	2	3	---	1	1	0	1	0	*1*	0	*1*	0	0
	Indonesia	0	0	0	0	---	0	0	0	0	*0*	0	*0*	0	0
	Malaysia	0	0	0	0	0	---	0	1	0	*1*	0	*0*	0	0
	The Philippines	0	0	0	0	0	0	---	0	0	*0*	0	*0*	0	0
	Singapore	2	8	5	6	17	25	7	---	14	*10*	4	*4*	1	1
	Thailand	0	0	0	0	0	0	0	0	---	*0*	0	*0*	0	0
	ASEAN-5	*2*	*8*	*5*	*7*	*18*	*25*	*7*	*2*	*14*	---	*4*	*4*	*1*	*1*
	Australia	1	2	0	1	0	0	0	1	0	*1*	---	*1*	2	0
	Asia Pacific	*4*	*18*	*48*	*17*	*22*	*39*	*19*	*17*	*26*	*24*	*23*	---	*19*	*8*
	United States	40	34	23	42	31	25	34	42	30	*34*	31	*36*	---	16
	European Union	40	39	24	34	30	32	40	32	38	*34*	36	*37*	44	---
Total Foreign Liabilities	**WORLD**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	***100***	**100**	***100***	**100**	**100**

Note: Data on total cross-border portfolio investment from the following countries are unavailable:

The PRC's investment to all countries (2001–2007); Hong Kong, China's investment to Indonesia (2006); Indonesia's investment to Japan (2006), the PRC (2002), Republic of Korea (2002), the Philippines (2001), and Thailand (2002 and 2004); the Philippines's investment to PRC (2001); Australia's investment to the PRC (2001, 2004, 2005, 2007), Indonesia (2004–2005), the Philippines (2004, 2005, 2007); and Thailand (2005, 2007); some EU-27 countries for various years.

Source: Coordinated Portfolio Investment Survev (CPIS). IMF.

Appendix Table 2: Total Cross-Border Portfolio Investment Assets and Liabilities in Asia and the Pacific, 2008–009 Average

(1) Amount (Unit: US$ Million)

		Foreign Liabilities Classified by Debtor														Total Foreign Assets
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	WORLD
Foreign Assets Classified by Creditor	Japan	—	13,292	9,558	15,526	1,778	2,898	1,597	8,236	1,464	*15,973*	86,273	*140,622*	840,885	920,217	**2,611,250**
	Hong Kong, China	24,968	—	127,621	16,586	495	5,112	813	7,968	937	*15,325*	37,906	*222,406*	82,224	153,955	**684,319**
	People's Republic of China	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Republic of Korea	2,903	6,318	10,633	—	327	359	86	742	214	*1,728*	1,271	*22,852*	28,649	18,552	**88,130**
	Indonesia	212	160	0	10	—	7	5	353	31	*396*	130	*908*	505	1,127	**4,252**
	Malaysia	102	1,950	168	1,460	422	—	204	2,323	272	*3,221*	315	*7,216*	4,635	2,797	**21,595**
	The Philippines	78	92	0	91	0	28	—	89	25	*143*	46	*450*	2,135	794	**4,818**
	Singapore	26,494	13,265	28,990	27,271	7,950	10,998	2,189	—	3,809	*24,945*	23,856	*144,821*	85,869	86,205	**417,452**
	Thailand	116	201	44	10,768	27	113	16	315	—	*471*	1,061	*12,662*	1,818	2,292	**18,451**
	ASEAN-5	*27,002*	*15,669*	*29,202*	*39,601*	*8,399*	*11,146*	*2,415*	*3,080*	*4,137*	—	*25,408*	*166,058*	*94,962*	*93,216*	**466,568**
	Australia	19,256	4,960	2,352	2,495	390	489	1,111	2,312	—	*4,303*	—	*33,366*	140,184	93,397	**324,709**
	Asia Pacific	*74,128*	*40,238*	*179,366*	*74,209*	*11,390*	*20,003*	*6,022*	*22,339*	*6,752*	*66,506*	*150,859*	—	*1,186,905*	*1,279,337*	**4,174,976**
	United States	397,097	78,851	78,603	80,441	16,951	15,427	8,212	41,293	10,921	*92,802*	210,987	*938,779*	—	2,155,253	**5,110,366**
	European Union	436,687	77,385	72,817	88,819	15,916	18,514	8,404	34,258	12,925	*90,017*	221,942	*987,667*	2,731,305	—	**17,480,738**
Total Foreign Liabilities	WORLD	**1,153,752**	**214,525**	**353,291**	**263,729**	**55,995**	**60,062**	**26,076**	**111,775**	**38,917**	**292,825**	**669,351**	**2,947,472**	**6,863,940**	**17,916,853**	—

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Appendix Table 2 *continued*

(2) % of Total Cross-Border Portfolio Investment Assets

	Foreign Liabilities Classified by Debtor														Total Foreign Assets (100%)
	Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union	**WORLD**
Japan	---	1	0	1	0	0	0	0	0	*1*	3	*5*	32	35	**100**
Hong Kong, China	4	---	19	2	0	1	0	1	0	*2*	6	*33*	12	22	**100**
People's Republic of China	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Republic of Korea	3	7	12	---	0	0	0	1	0	*2*	1	*26*	33	21	**100**
Indonesia	5	4	0	0	---	0	0	8	1	*9*	3	*21*	12	27	**100**
Malaysia	0	9	1	7	2	---	1	11	1	*15*	1	*33*	21	13	**100**
The Philippines	2	2	0	2	0	1	---	2	1	*3*	1	*9*	44	16	**100**
Singapore	6	3	7	7	2	3	1	---	1	*6*	6	*35*	21	21	**100**
Thailand	1	1	0	58	0	1	0	2	---	*3*	6	*69*	10	12	**100**
ASEAN-5	*6*	*3*	*6*	*8*	*2*	*2*	*1*	*1*	*1*	---	*5*	*36*	*20*	*20*	***100***
Australia	6	2	1	1	0	0	0	1	---	*1*	---	*10*	43	29	**100**

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Appendix Table 2 *continued*

(3) % of Total Cross-Border Portfolio Investment Liabilities

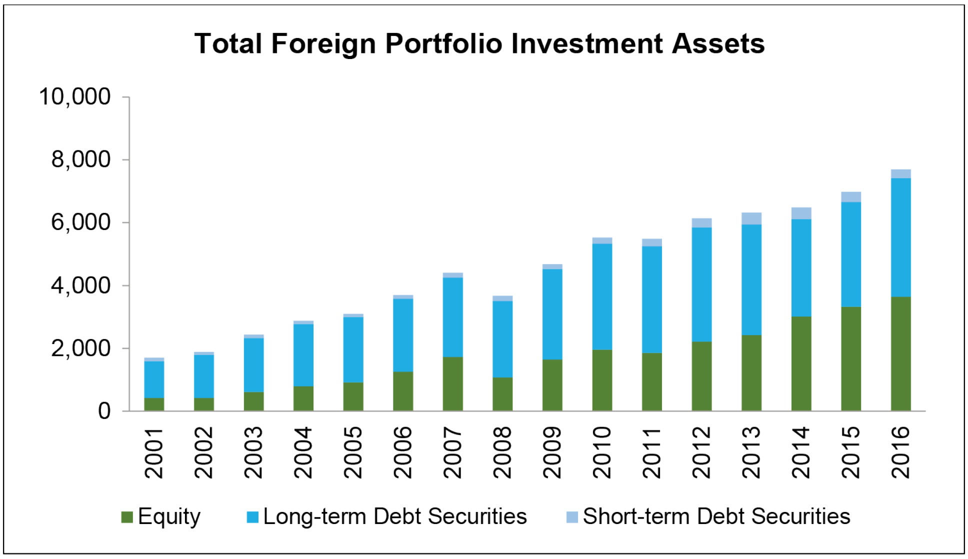
		Foreign Liabilities Classified by Debtor													
		Japan	Hong Kong, China	People's Republic of China	Republic of Korea	Indonesia	Malaysia	The Philippines	Singapore	Thailand	*ASEAN-5*	Australia	*Asia Pacific*	United States	European Union
Foreign Assets Classified by Creditor	Japan	---	6	3	6	3	5	6	7	4	*5*	13	*5*	12	5
	Hong Kong, China	2	---	36	6	1	9	3	7	2	*5*	6	*8*	1	1
	People's Republic of China	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Republic of Korea	0	3	3	---	1	1	0	1	1	*1*	0	*1*	0	0
	Indonesia	0	0	0	0	---	0	0	0	0	*0*	0	*0*	0	0
	Malaysia	0	1	0	1	1	---	1	2	1	*1*	0	*0*	0	0
	The Philippines	0	0	0	0	0	0	---	0	0	*0*	0	*0*	0	0
	Singapore	2	6	8	10	14	18	8	---	10	*9*	4	*5*	1	0
	Thailand	0	0	0	4	0	0	0	0	---	*0*	0	*0*	0	0
	ASEAN-5	*2*	*7*	*8*	*15*	*15*	*19*	*9*	*3*	*11*	---	*4*	*6*	*1*	*1*
	Australia	2	2	1	1	1	1	4	2	---	*1*	---	*1*	2	1
	Asia Pacific	*6*	*19*	*51*	*28*	*20*	*33*	*23*	*20*	*17*	*23*	*23*	---	*17*	*7*
	United States	34	37	22	31	30	26	31	37	28	*32*	32	*32*	---	12
	European Union	38	36	21	34	28	31	32	31	33	*31*	33	*34*	40	---
Total Foreign Liabilities	**WORLD**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	***100***	**100**	***100***	**100**	**100**

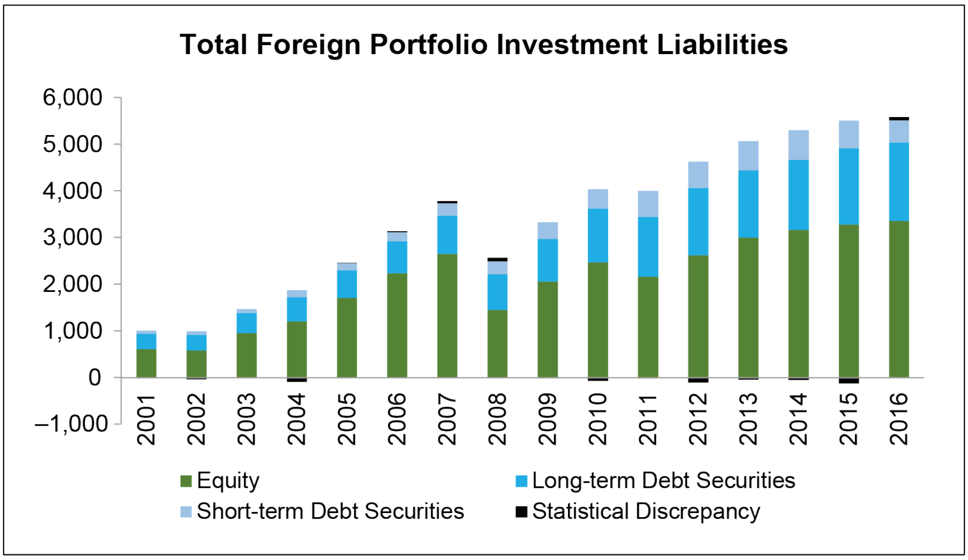
Note: Data on total cross-border portfolio investment from the following countries are unavailable:

The PRC's investment to all countries (2008 and 2009); Singapore's investment to Japan (2009); Australia's investment to the PRC (2008), the Philippines (2008), and Thailand (2008 and 2009).

Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Appendix Chart 1: Cross-Border Portfolio Investment Assets and Liabilitiesin Asia and Pacific Economies by Type of Instruments
(US$ Billion)

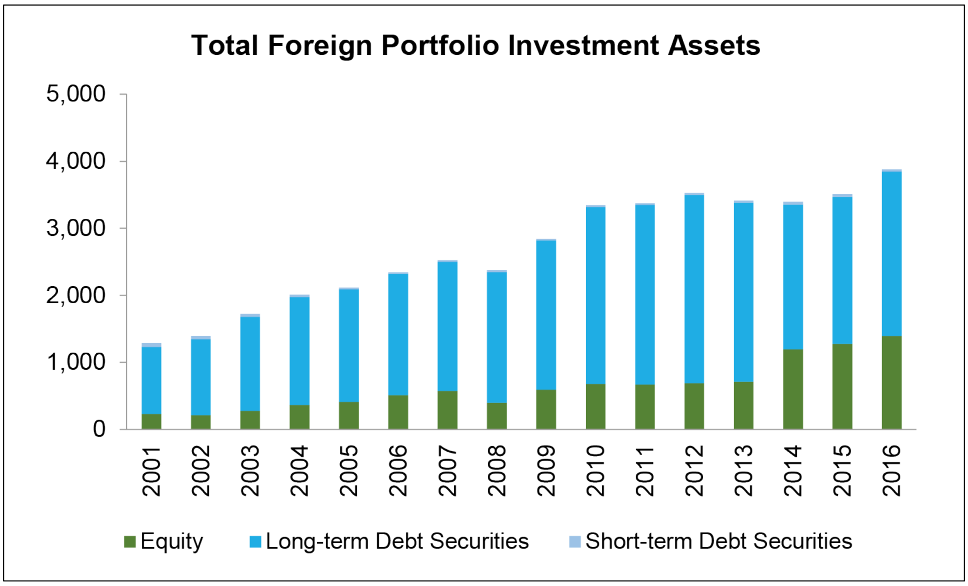


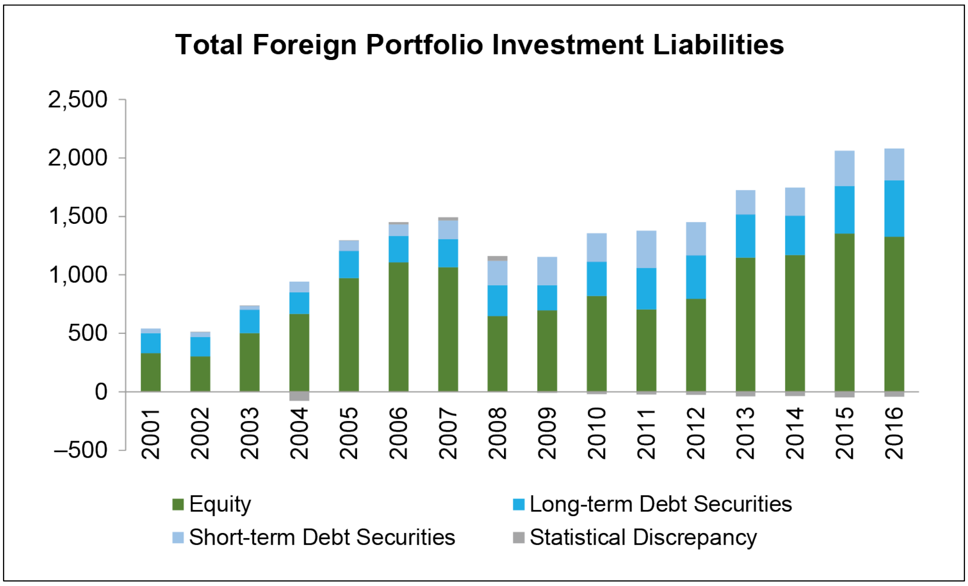


Source: Coordinated Portfolio Investment Survey (CPIS), IMF.

Appendix Chart 2: Cross-Border Portfolio Investment Assets and Liabilities in Asia and the Pacific by Country/Economy and Type of Instrument
(US$ Billion)

Japan





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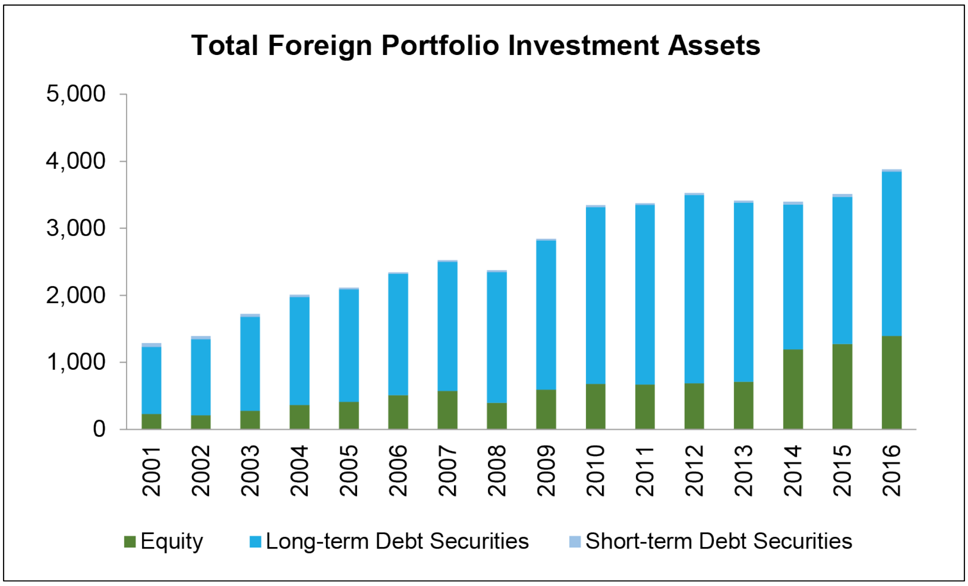
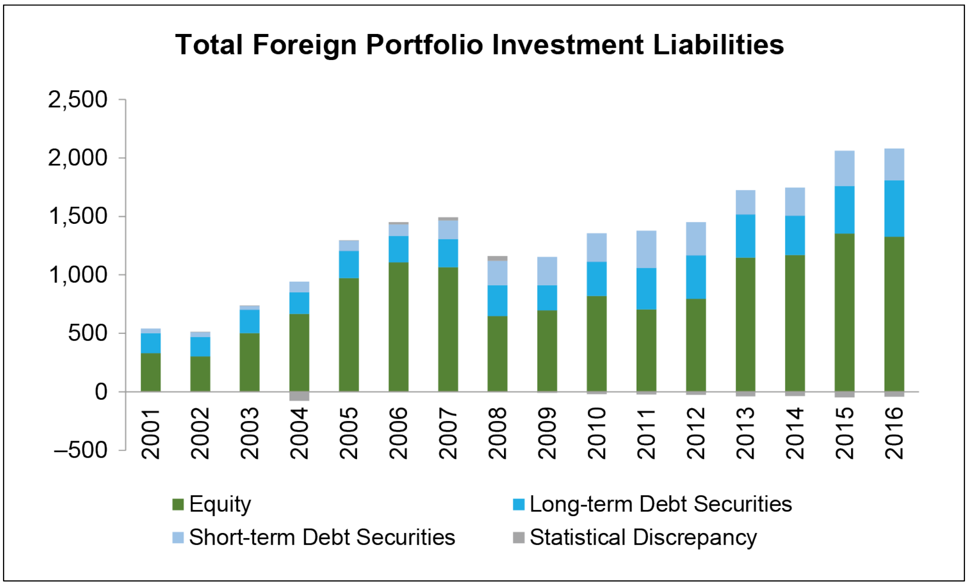
Appendix Chart 2 *continued*

Hong Kong, China





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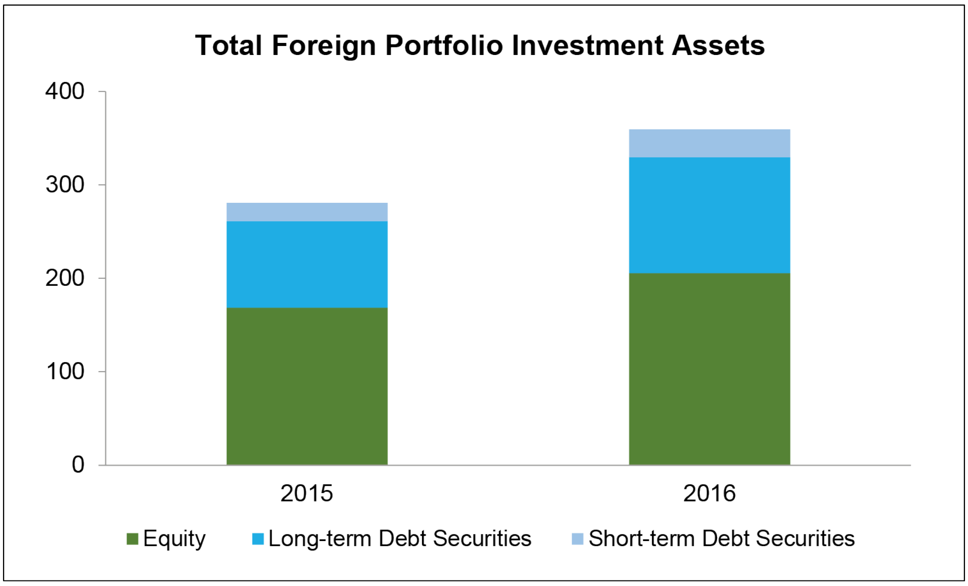
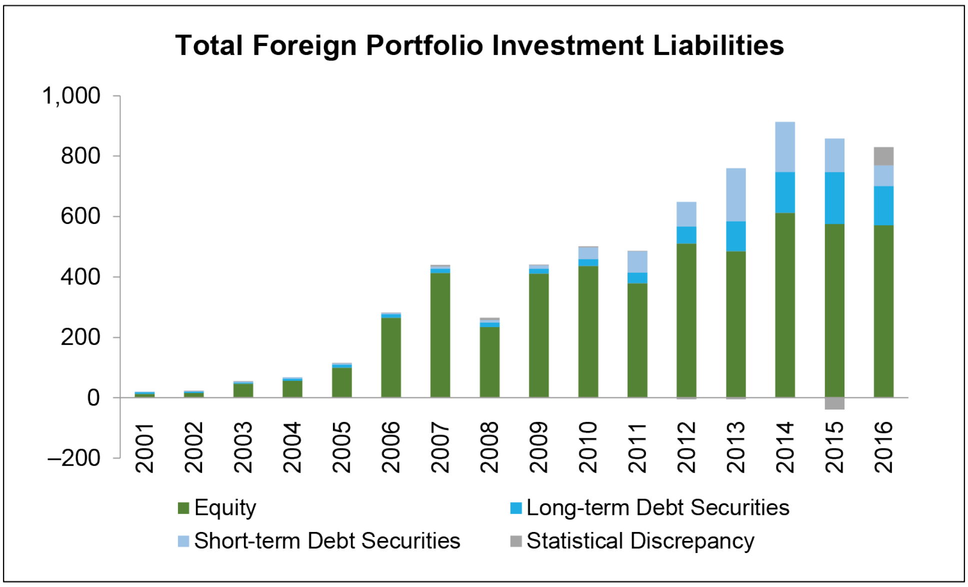
Appendix Chart 2 *continued*

People's Republic of China





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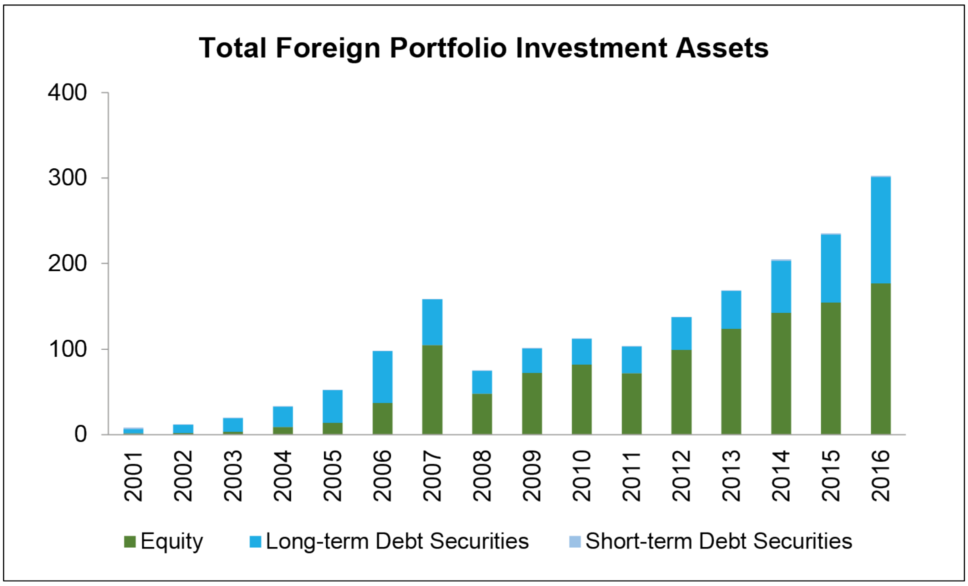
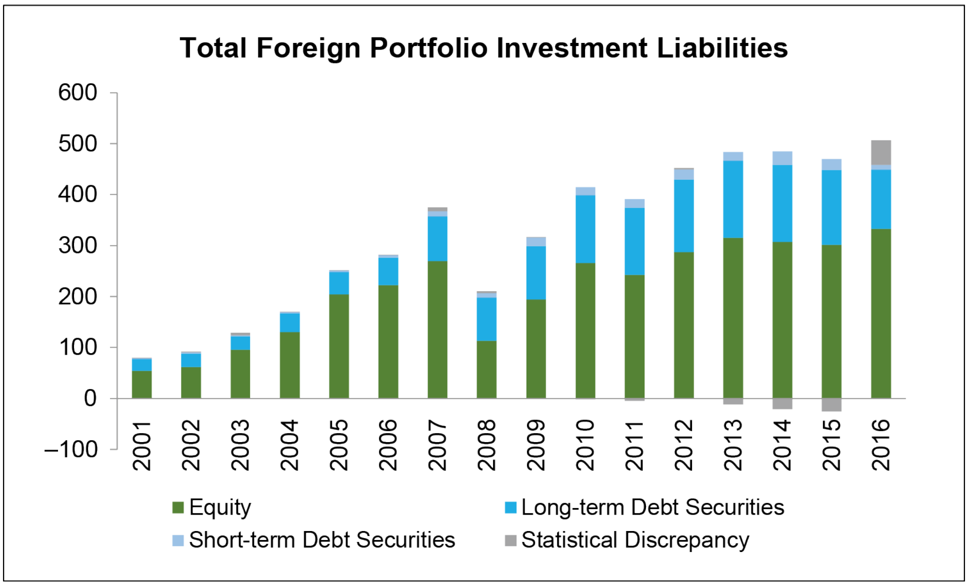
Appendix Chart 2 *continued*

Republic of Korea





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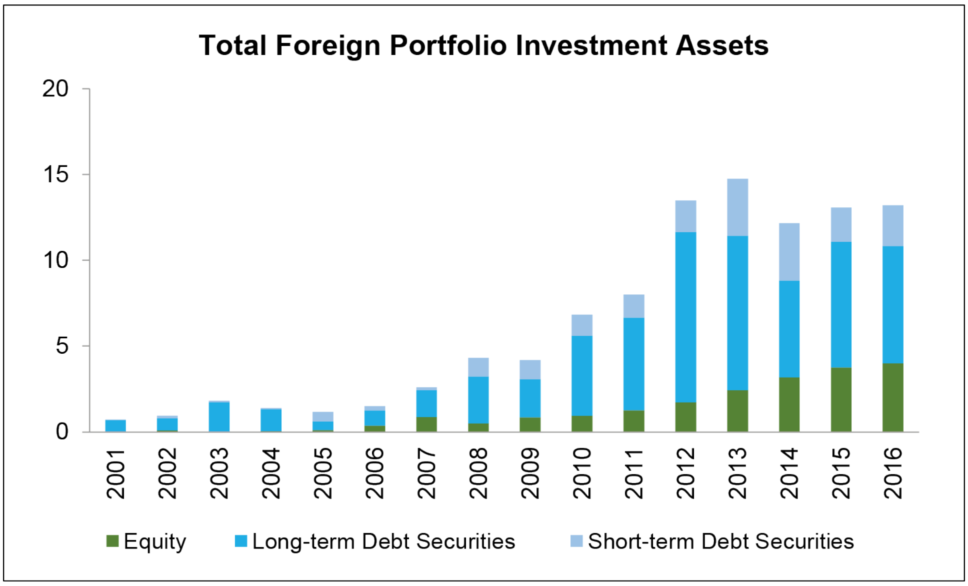
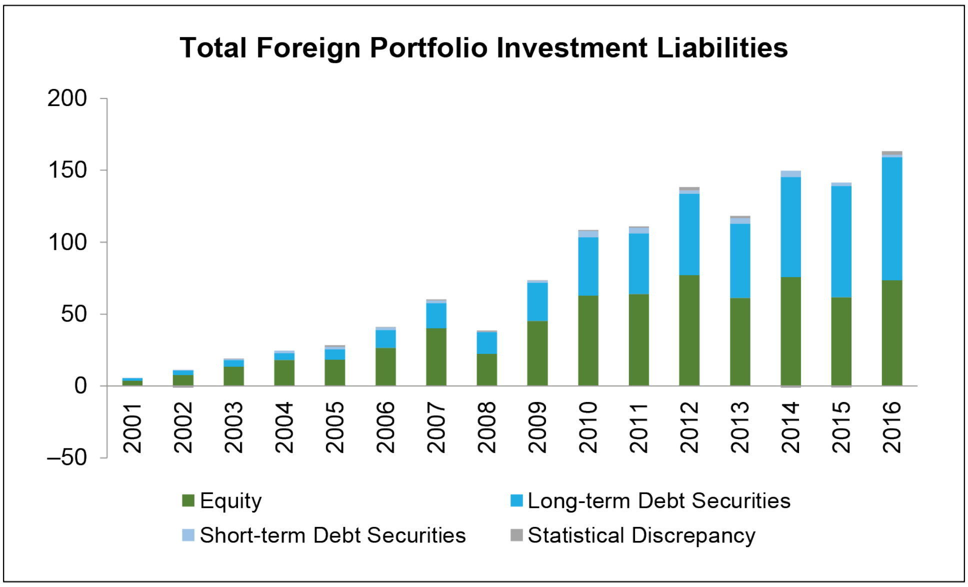
Appendix Chart 2 *continued*

Indonesia





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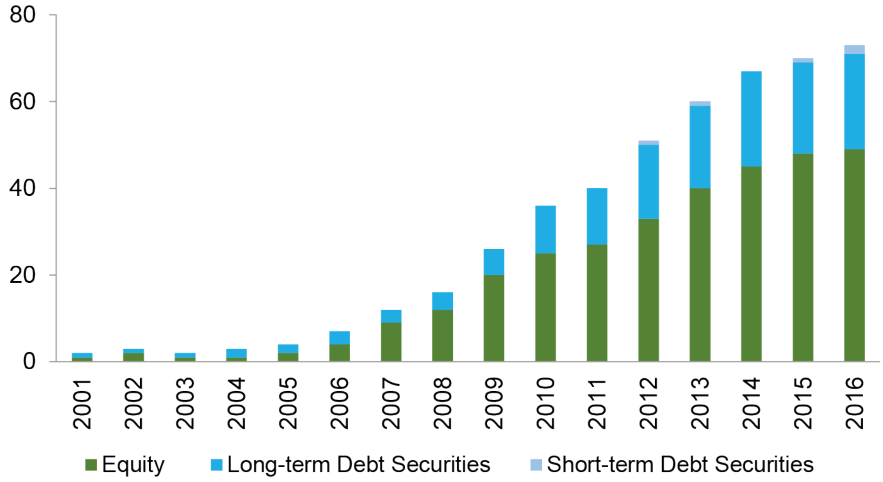
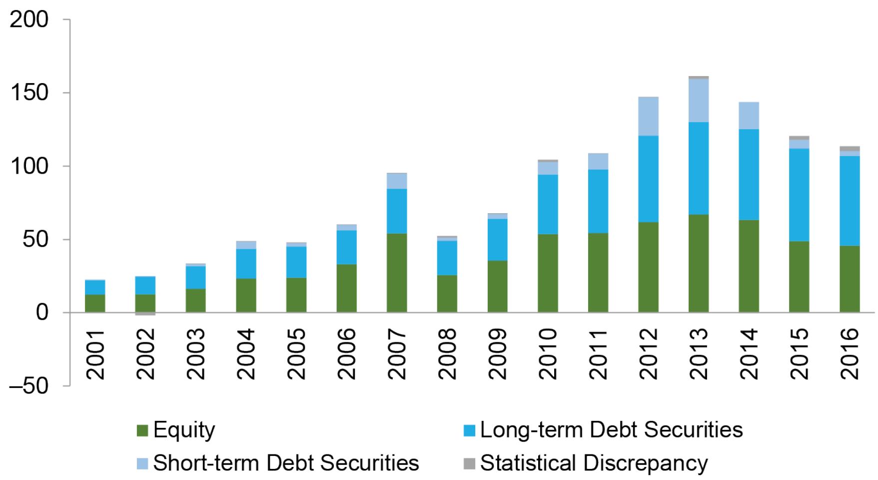
Appendix Chart 2 *continued*

Malaysia

Total Foreign Portfolio Investment Assets



Total Foreign Portfolio Investment Liabilities



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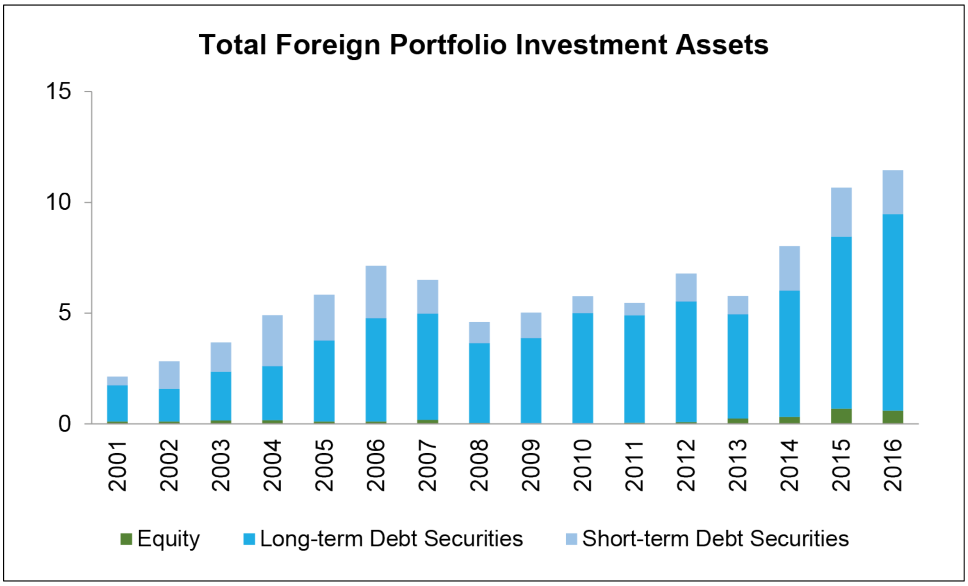
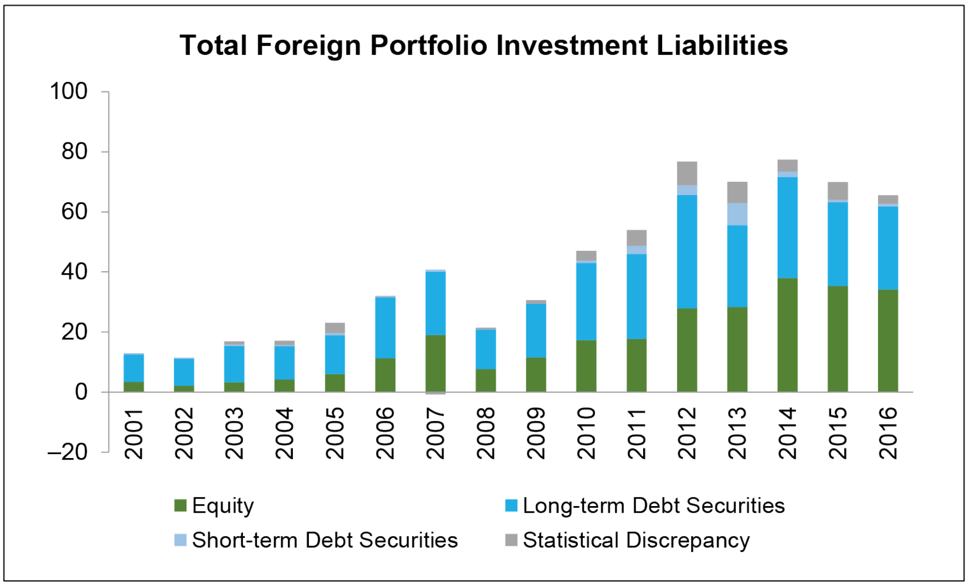
Appendix Chart 2 *continued*

Philippines





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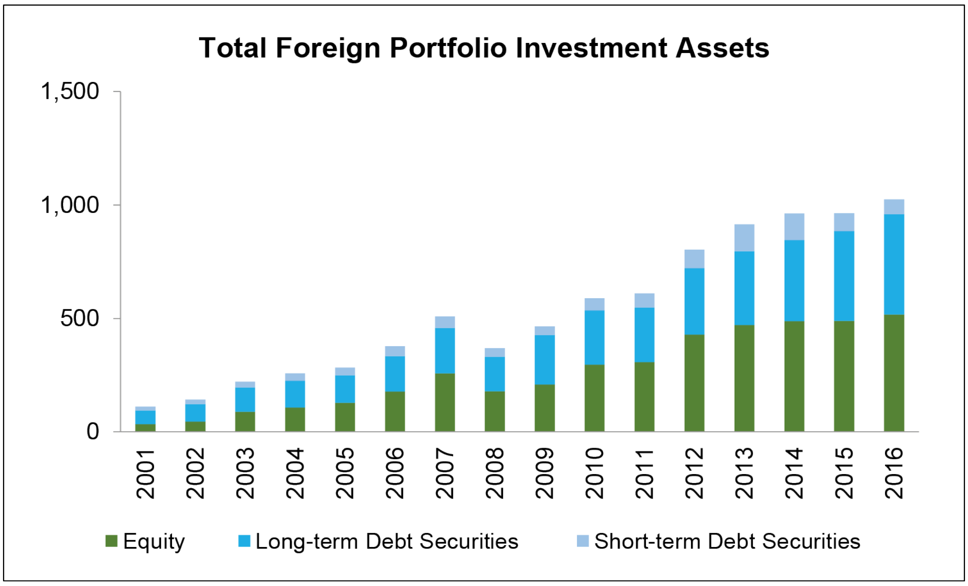
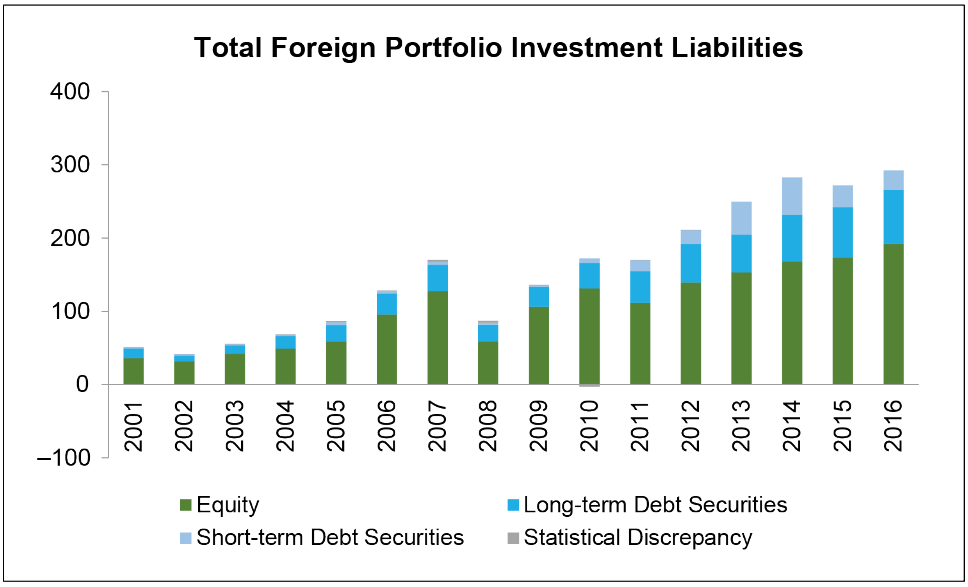
Appendix Chart 2 *continued*

Singapore





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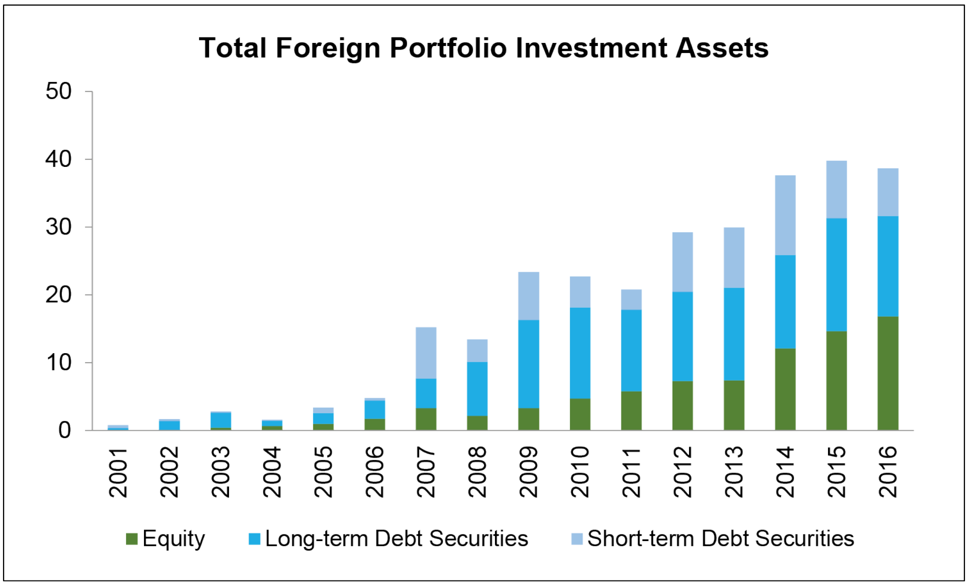
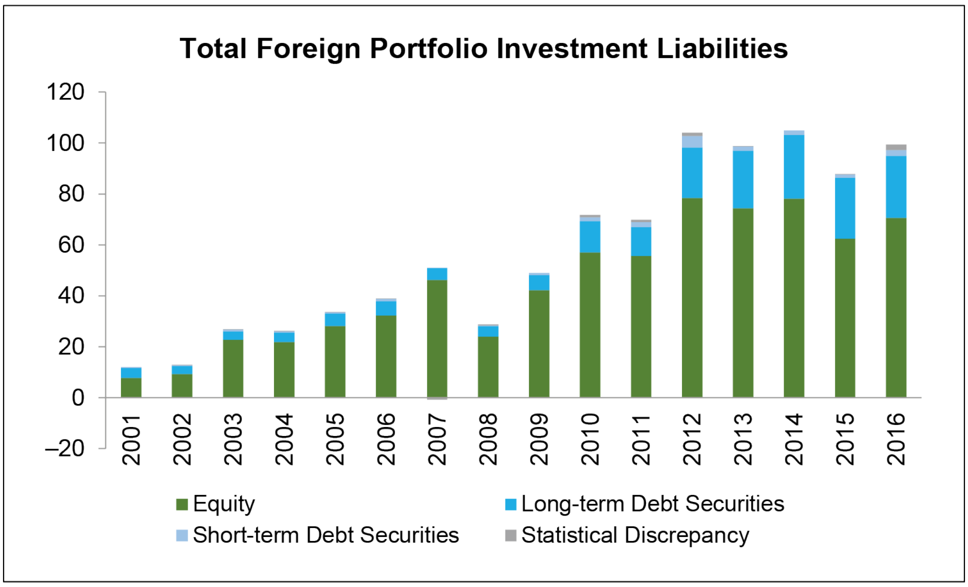
Appendix Chart 2 *continued*

Thailand





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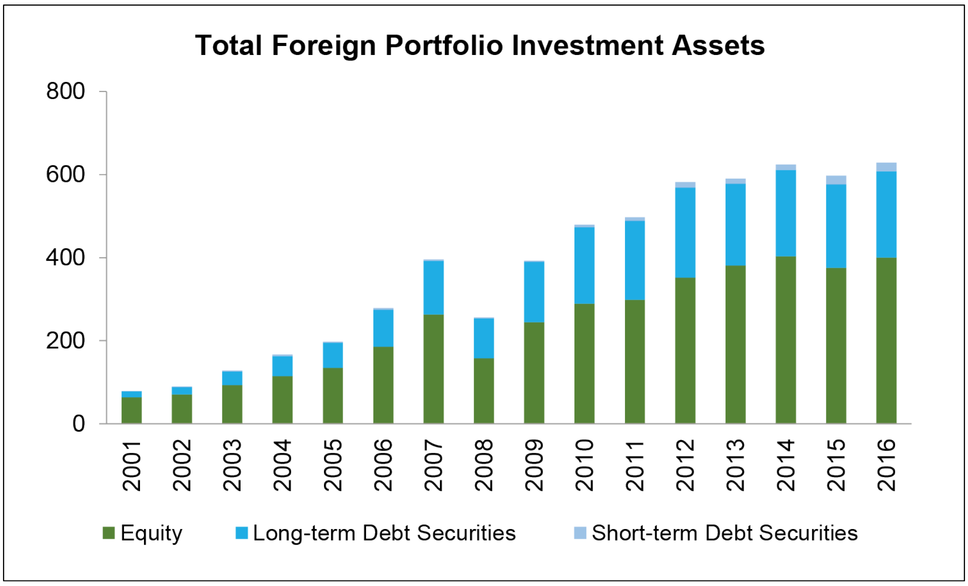
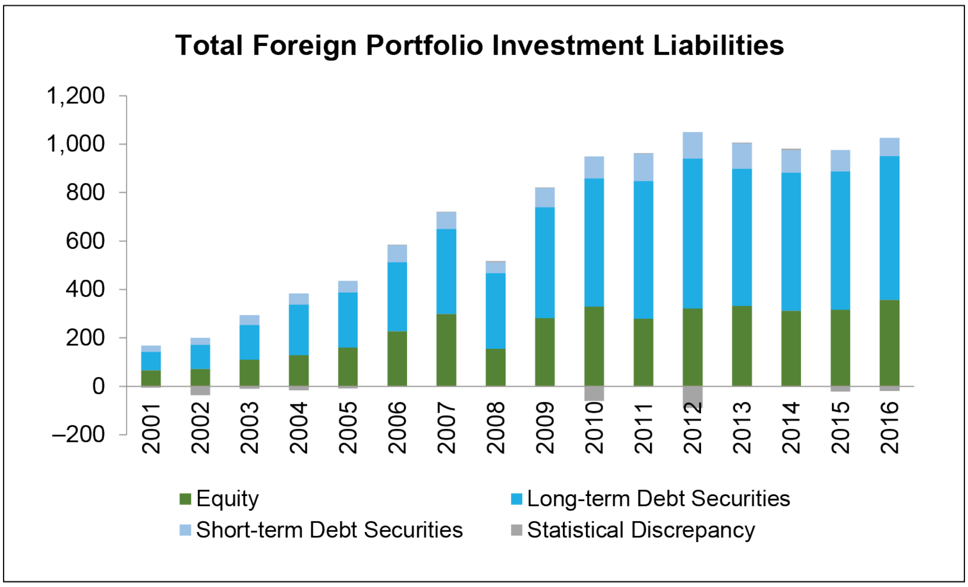
Appendix Chart 2 *continued*

Australia





Source: Coordinated Portfolio Investment Survey (CPIS), IMF.