The Foreign Bias Puzzle in ASEAN

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Introduction

By Balance of Payment Accounting countries with current account surplus have domestic savings exceeding domestic investments. Hence, these countries would be exporting capital to the rest of the world. Neoclassical theory further suggests that capital should flow from a rich to poor country, as investors search for higher returns with a higher marginal product of capital. With financial globalization, we should expect downstream flows from developed countries to less developed countries.

Nonetheless, puzzles of upstream capital flows and global imbalances have been well studied. For instance, Lucas's Paradox (1990) highlighted that capital moves "uphill" from poor to rich countries in a global scale. Gourinchas and Jeanne's Allocation Puzzle (2007) further demonstrated that capital flows to emerging markets are allocated to countries that grow less than others. This is contrary to the expectation of the neoclassical framework.

In this paper, we show that we have a Foreign Bias Puzzle in ASEAN, whereby capital is recycled. In particular, capital first move upstream from ASEAN to developed countries, before returning back to the home countries. We would examine the 5 largest countries in ASEAN (Singapore, Thailand, Philippines, Malaysia, and Indonesia) as they have much more developed financial and economic structures in place.

These countries are experiencing current account surplus, which implies that savings exceed investments in these countries. Hence, they are sending new savings to the rest of the world. However, they are also dependent on other countries outside the region for investments. Hence, the question is why they are not able to channel the resources domestically.

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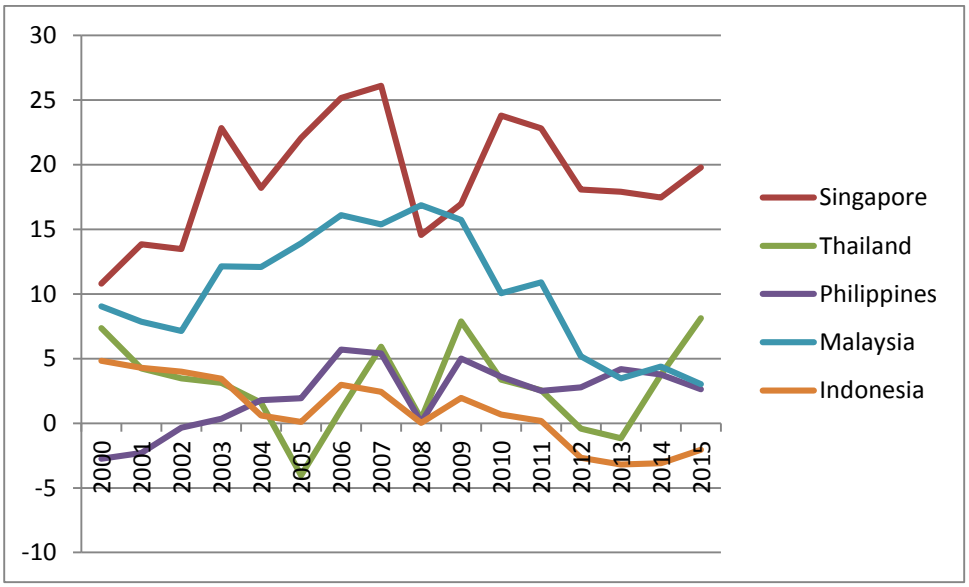
We call this a Foreign Bias Puzzle, as compared to the Home Bias Puzzle, whereby investors prefer to invest in their home country due to familiarity. Assets such as Treasury bills (which pay a paltry return) are preferred over bonds issued domestically (which have a higher return).

With the launch of the ASEAN Economic Community in December 2015, there is an opportunity for the bloc to integrate the regional financial system, providing a more liberalized capital account and interlinked capital markets. This is especially important given that capital flows have not been distributed efficiently for the past decades. Consequently, this paper seeks to shed light on the capital recycling nature of monetary flows in the region and plausible reasons for this puzzle.

The Foreign Bias Puzzle

With reference to Figure 1 below, we can see that ASEAN-5 countries (Singapore, Thailand, Philippines, Malaysia, and Indonesia) experienced high current account surpluses (as a percentage of GDP) during the past 15 years.

Figure 1: Current Account Surpluses (as a percentage of GDP)

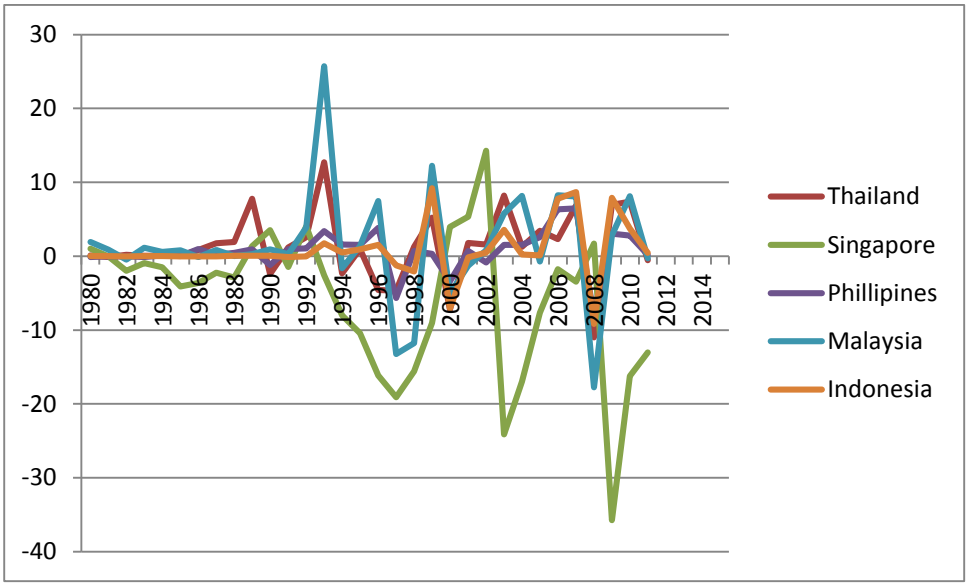


Source: International Monetary Fund

This suggests that ASEAN-5 countries are exporting more goods and services than they are importing, leading to higher aggregate demand. From an accounting standpoint, current account surplus also translate to a capital and financial accounting deficit. This implies that these countries have high national savings relative to investment, as they export their excess capital to the world.

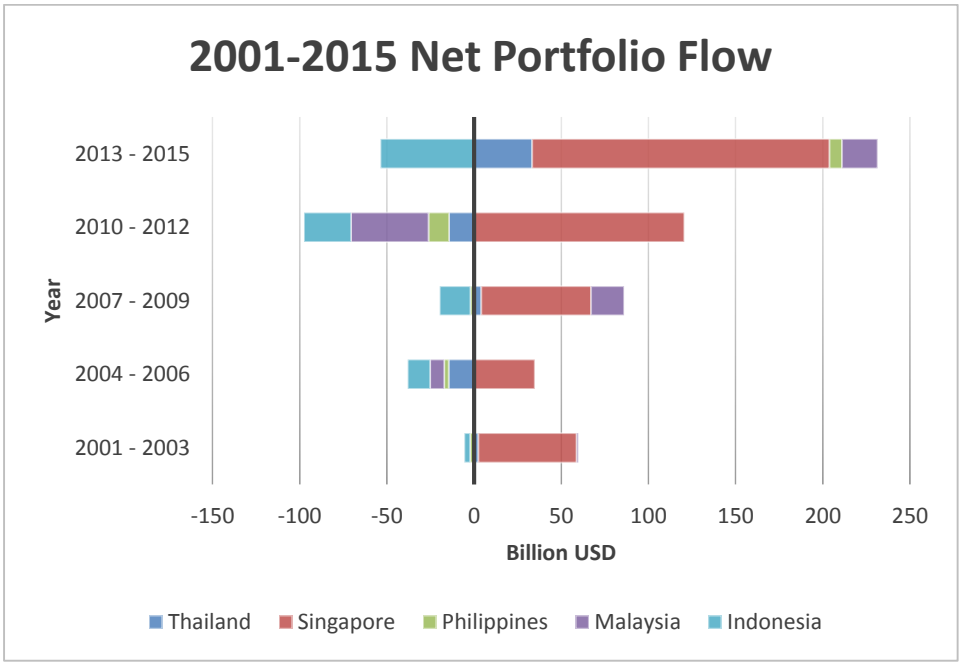
This can be seen from the fact that there is high net portfolio outflow in recent years. Investors are purchasing foreign bonds and equity.

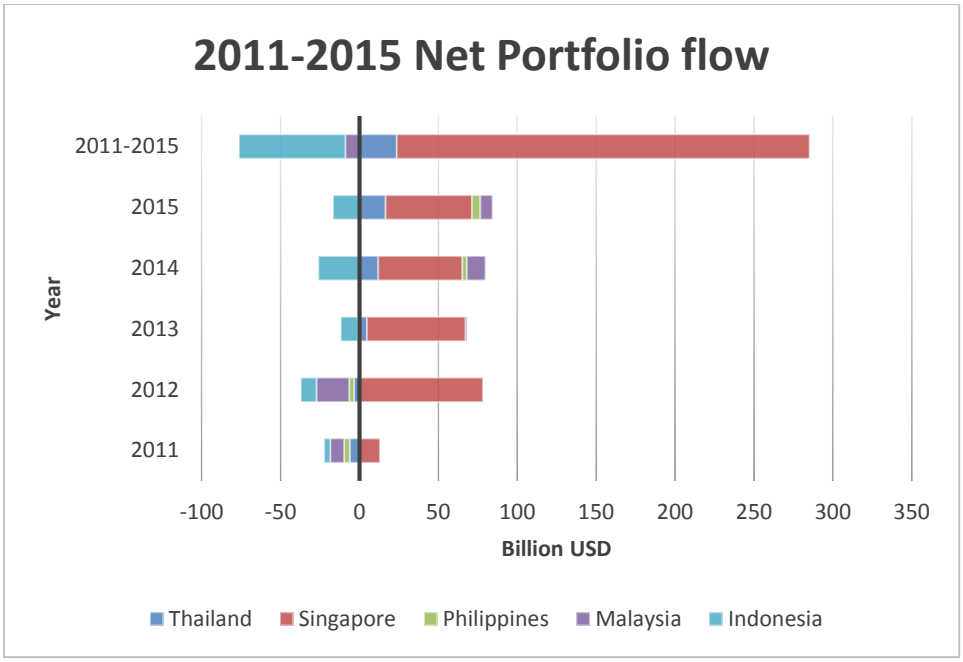
Figure 2: Portfolio Equity Capital Net Flows (as a percentage of GDP)



Source: Alfaro et. al (2014) .

Figure 2: Portfolio Equity Capital Net Flows





Source: IMF.

Note: Positive figure indicates outflow while negative figure means inflow.

Nonetheless, ASEAN countries are still heavily dependent on other countries for Foreign Direct Investment (FDI). With reference to Table 1, we can see that ASEAN countries are still heavily dependent on countries outside the region for FDI, even though the share from the region is increasing over time.

Table 1: Foreign direct investment net inflows in ASEAN from selected partner countries/regions

Country/region[1/]	Value			Share to total inflows		
	2013[3/]	2014	2015	2013[3/]	2014	2015
ASEAN	19,562.2	22,134.5	22,232.2	15.7	17.0	18.4
European Union (EU)	24,511.3	24,989.9	20,127.6	19.6	19.2	16.7
Japan	24,750.2	15,705.4	17,559.4	19.8	12.1	14.5
USA	7,157.2	14,748.5	13,646.0	5.7	11.3	11.3
China	6,426.2	6,990.1	8,256.5	5.1	5.4	6.8
Republic of Korea	4,303.3	5,750.7	5,710.4	3.4	4.4	4.7
Australia	2,587.7	6,281.5	5,246.7	2.1	4.8	4.3
Total top ten sources	96,267.1	110,217.7	102,370.0	77.1	84.8	84.7
Total FDI inflow to ASEAN	**124,864.5**	**129,995.1**	**120,818.8**	**100.0**	**100.0**	**100.0**

Source: ASEAN.

The peculiar case in ASEAN can be further illustrated by the seminal Feldstein Horioka Model (1980). It has been argued that there would be low correlation between domestic investments and savings in a model with perfect capital mobility. This is because savers

would show no preference for investing within their own country, but rather one with higher returns globally. In their model, they estimated the following equation

$$\left[\frac{I}{Y}\right]_i = \alpha + \beta\left[\frac{S}{Y}\right]_i$$

whereby $(I/Y)_i$ is the ratio of gross domestic investment to gross domestic product, while $(I/Y)_i$ is the ratio of savings to gross domestic product for country i.

Our interest is in β. If β is close to 1, it would indicate that most of the savings would have remained there. If β is close to 0, it would indicate that there is perfect world capital mobility. Using OECD countries, estimates of β for the entire 15 year sample was 0.89 when gross savings and investments were used, and the coefficient is not significant from 1. This illustrates a home bias in investment, as investors would prefer to invest in their home countries and not internationally with the higher return.

However, looking at the investments and savings relationships of ASEAN-5 countries for the past 15 years (2000 to 2015), our β value is statistically insignificant from zero (Table 2). This signal perfect capital mobility, and that savings are not channelled to productive investments in the home country. This is contrary to other countries/regions which exhibit a home bias in investment.

Table 2: Feldstein Horioka Model

Parameters	Coefficient	Std. Error	t-Statistic
α	25.65888	2.021765	12.69133
β	0.053830	0.056585	0.951320

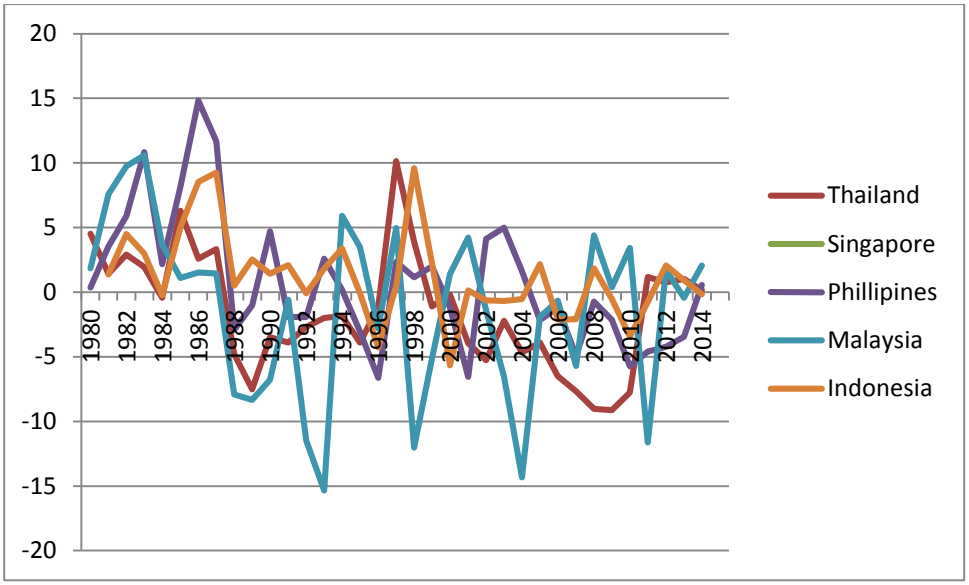
Source: World Bank.

Government and Private Flows

The foreign bias puzzle can be best explained by understanding the role of the government, Using data from Alfaro et al (2014), we are able to identify that sovereign-to-sovereign transactions account for the majority of the upstream flows, while private capital flows account for the downstream flow.

Figure 3 illustrates the net public debt from the government. A deficit implies that the government is investing overseas. Here, we can see that the government is the main exporter of capital (especially in recent years) as it is mostly in deficit. The data for Singapore is not available. But we should expect the Singapore's government to play a major role in exporting capital with major overseas acquisitions by Singapore's sovereign wealth funds in recent years. Hence, government transactions account for the majority of capital outflows from ASEAN-5 to foreign countries.

Figure 3: Public Debt (as a percentage of GDP)

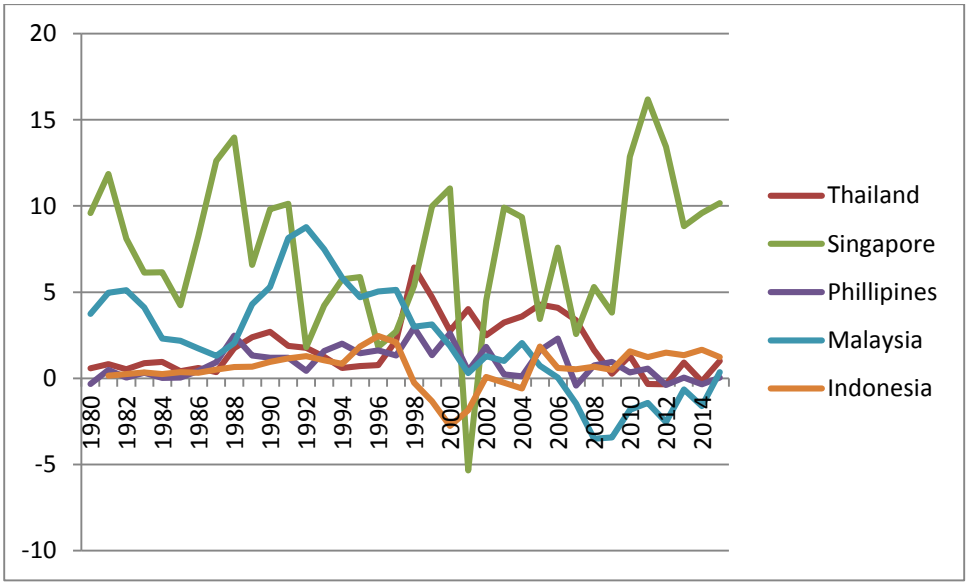


Source: Alfaro et. al (2014)

Nonetheless, these countries experienced capital inflows from private investors. Figure 4 illustrates net Foreign Direct Investments (FDI) from private investors, while Figure 5 presents the net private capital flows. Here, it includes both portfolio equity investments as well as net FDI by private investors. In both diagrams, we can see that there is a huge capital inflow from private investors (except during the crisis years: 1997- Asian Financial Crisis, 2000 – Dot-com Bubble Crisis, 2008 – Global Financial Crisis).

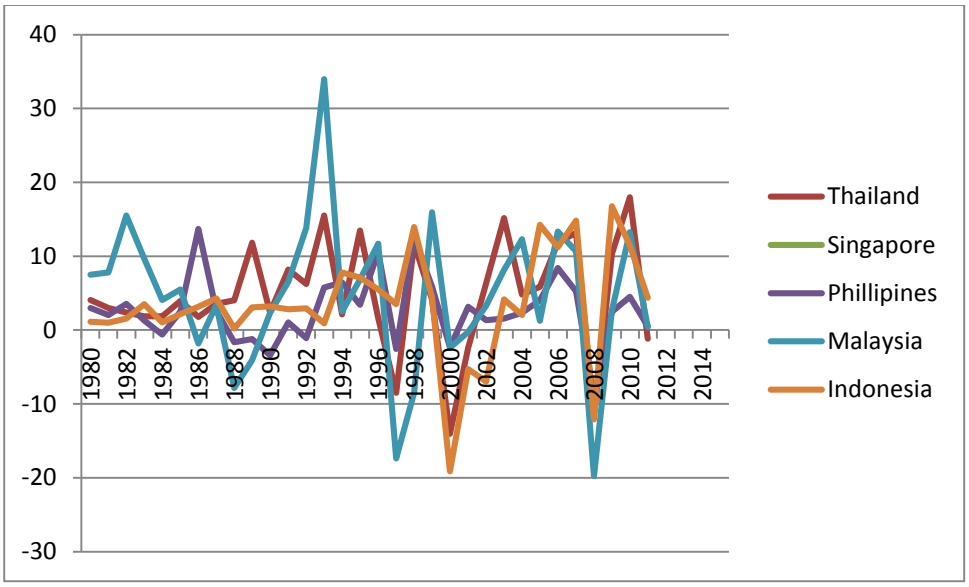
Hence, it is evident that while these countries are exporting capital to the rest of the world, it is mainly due to sovereign transactions. Government might purchase bonds and assets of other countries to strengthen their foreign reserves, or to diversify their assets. In this case, the rate of return is not of top priority. On the other hand, private capital is still flowing into ASEAN-5 in line with neo-classical theory. Private investors continue to invest into the region as they enjoy a higher marginal product of capital.

Figure 4: Net FDI (as a percentage of GDP)



Source: Alfaro et. al (2014)

Figure 5: Net Private Capital Flows (as a percentage of GDP)



Source: Alfaro et al (2014)

Financial Development and Productivity

We have shown that domestic savings are invested overseas in terms of bonds and equities (by governments), and they subsequently returned to the domestic countries as Foreign Direct Investment (FDI) by private firms. This is not beneficial for the region in the long run.

Even though Foreign Direct Investment creates job for the domestic economy, it is unclear whether domestic firms benefited from the technology spillovers. While Aitken and Harrison (1999) showed that the productivity of domestic firms in Venezuela actually fell as a consequence of foreign invested joint ventures, Javorcik (2004) showed that there is a positive spillover effect from foreign invested joint ventures to domestic firms in Lithuania in upstream industries.

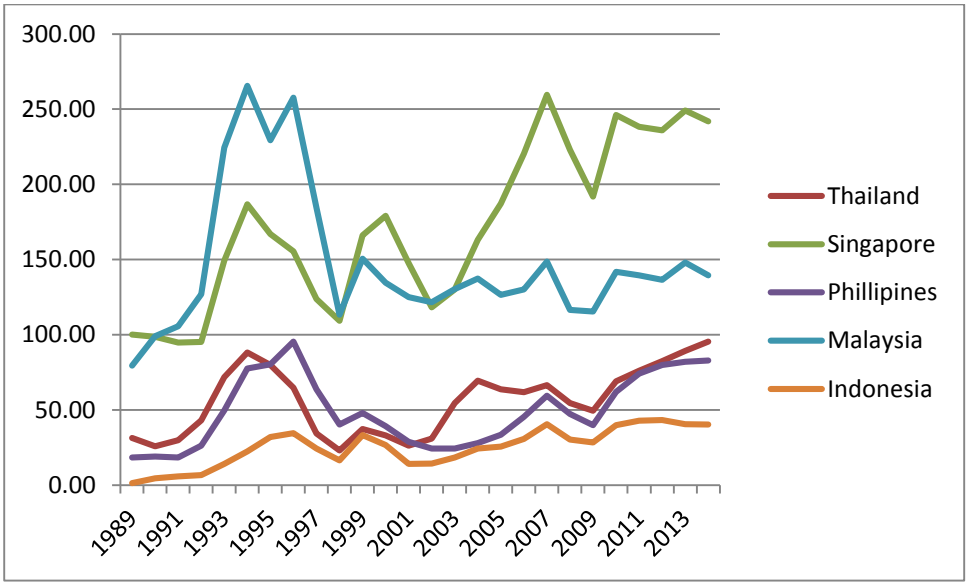
It is worrying that the domestic savings do not get invested in domestic equity and bond markets due to an underdevelopment of bonds and equity markets. Studies such as Levine (2005) have shown that the development of financial markets such as stock markets, bond markets and derivative markets have a significant impact on economic development. As financial systems lower transaction cost, it will lead to technological innovation and higher productivity in the economy.

Hermes and Lensink (2003) argue that the development of the financial system of the recipient country is an important precondition for FDI to have a positive impact on economic growth of host countries. Alfaro et al. (2004) estimate that having better financial markets would have allowed FDI host countries to experience an annual growth rate increase of 0.60% points during 1975-1995. They emphasize well-developed financial intermediaries' role as an

important source of finance for costly technology reform, potential entrepreneurs and backward linkages. Alfaro et al. (2009) further find that host countries with sufficient financial markets can reap the benefits of direct inflows of foreign capital precisely via TFP gains. Giovanni (2005) find positive association between domestic financial market depth and outward M&A flows. In particular, stock market appears to have a greater effect.

Figure 6 shows the market capitalization of the country's stock market as a percentage of GDP. It is evident that the equity markets in Thailand, Indonesia and Philippines are smaller than that of Singapore and Malaysia. However, we note that the ratio is increasing over time.

Figure 6: Stock Market Capitalization (as a percentage of GDP)

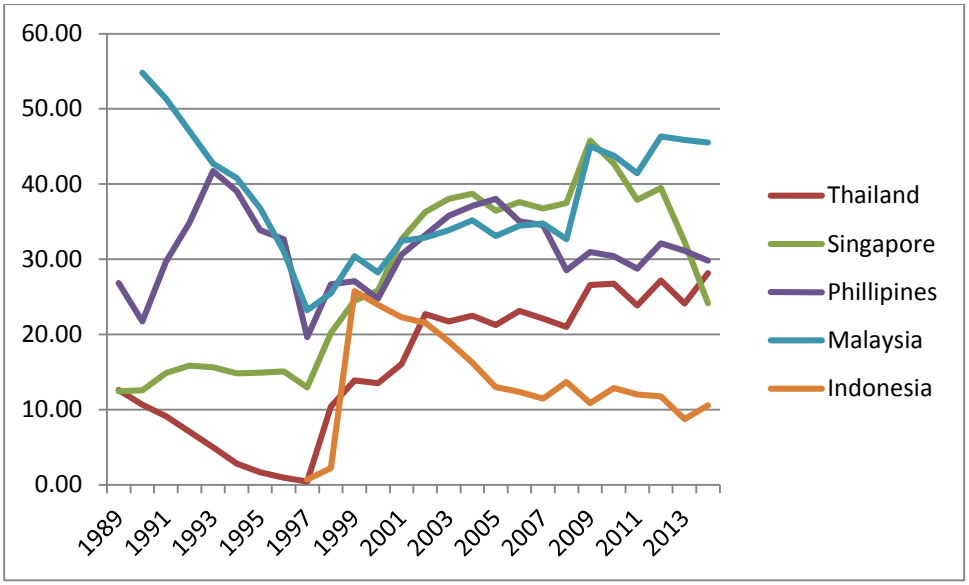


Source: Global Financial Development Database

Figure 7 illustrates the public bond market capitalization as a percentage of GDP. Here, it is worrying that there is a downward trend in all countries in the region. Consequently, with a lack of well developed bond markets in ASEAN, we would expect to see continued outflow of portfolio investments.

Notwithstanding the above, local governments are cognizant of the importance in developing local currency bond markets. To develop liquid and well functioning bond markets, initiatives such as the Asian Bond Market Initiative (ABMI) have been launched under ASEAN+3. This is particularly important to channel local savings into productive use.

Figure 7: Public Bond Market Capitalization (as a percentage of GDP)



Source: Global Financial Development Database

The Role of MNCs

MNCs of the United States account for more than 25% of the gross product of all nonfarm private businesses and about 40% of nonfinancial corporate gross product (Corrado et al. (2007)). All the increase in the labor productivity of nonfinancial corporations in the late 1990s and more than half of the increase for all nonfarm private business are from MNCs (Corrado et al. (2007)).

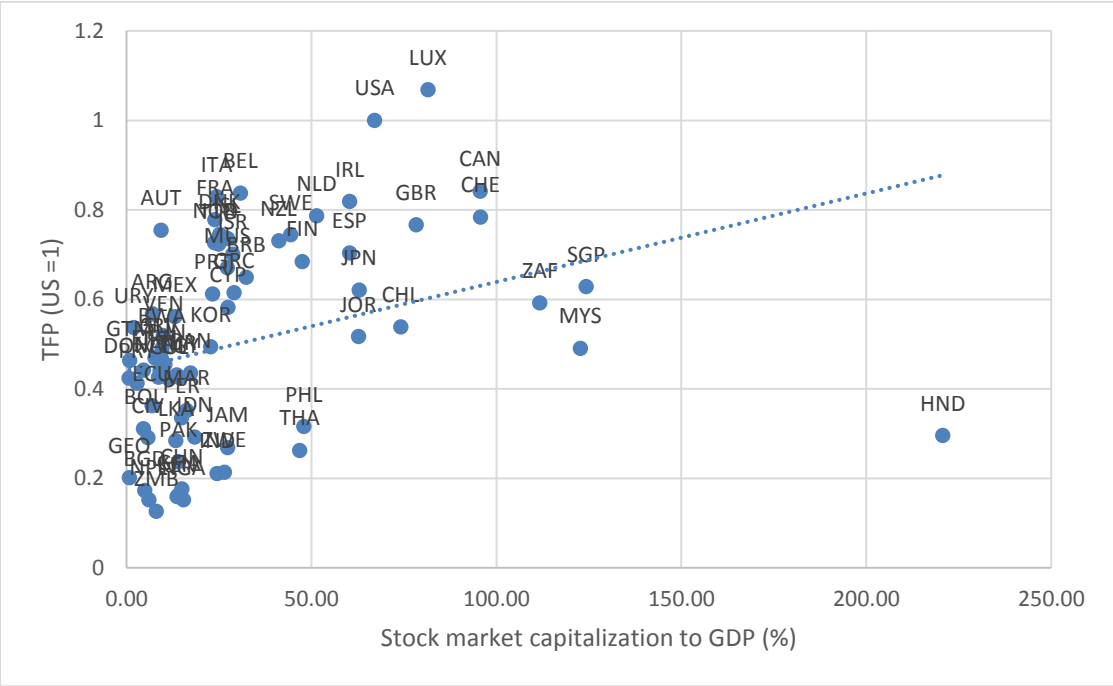
Capital market growth has been associated mainly with a growth in the intensive margin: a small number of firms have materially increased their use of capital markets since the 1990s. And there has not been much of an increase in the extensive margin, in the number of firms issuing securities (Didier et al. (2015)).

At the firm level, Didier et al. (2015) find that there is a direct, positive connection between capital raising activity and growth of a firm's assets, sales and employment for 45,527 firms from 51 countries during 2003-2011. Their findings suggest that firms do not simply issue securities to adjust their balance sheets.

Despite of the sparse literature, the existing evidence shows a positive relationship between TFP and firm size. Large African manufacturing firms are found to have significant higher productivity over small firms (Van Biesebroeck (2005)). Lee and Tang (2001) find that in manufacturing industry, firms with more than 500 employees, and firms with between 100 and 500 employees are 17% and 15% more productive than firms with less than 100 employees in Canada, respectively. Similar productivity advantage is also found for firms in the United Sates (Lee and Tang (2001)). Leung et al. (2008) expand the study to all major industries in Canada and find 8.4% gap between the TFP of firms with more than 100 employees and firms with less than 100 employees during 1984-1997. At aggregate level,

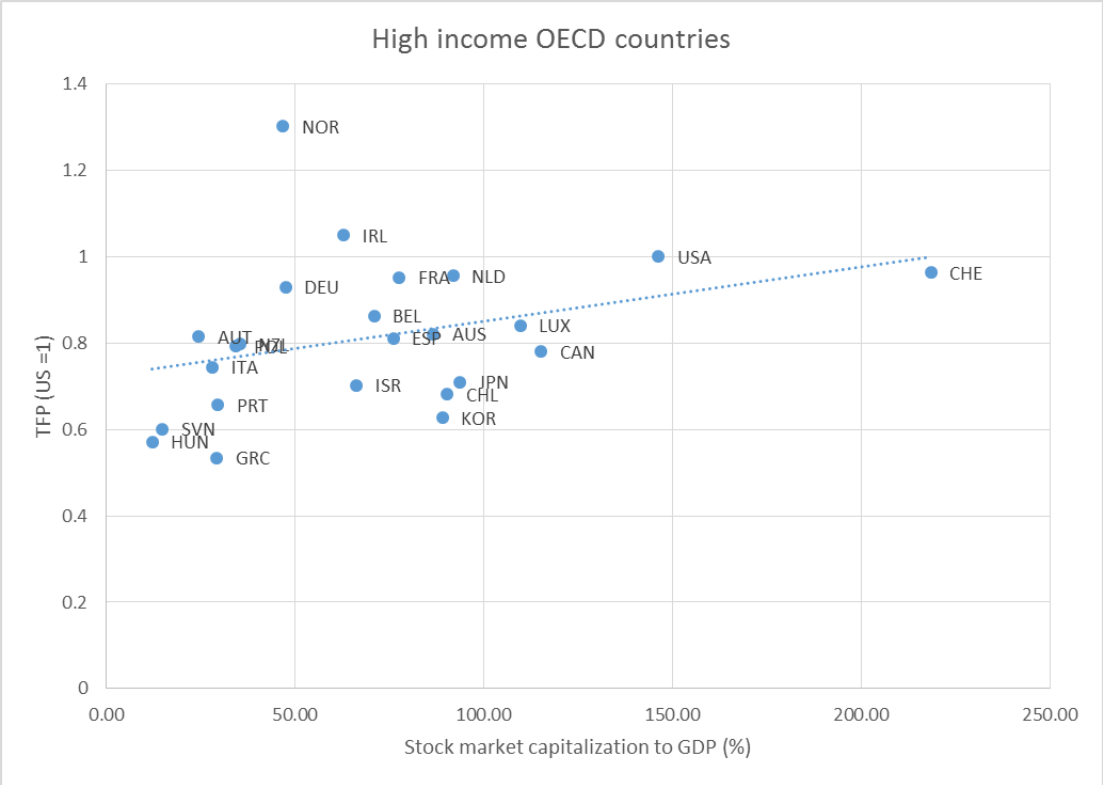
they find that the contribution of large firms to productivity growth exceeds their share of employment.

Figure 8: Stock market capitalization as a percentage of GDP vs. TFP (average 1977-2000), 75 countries



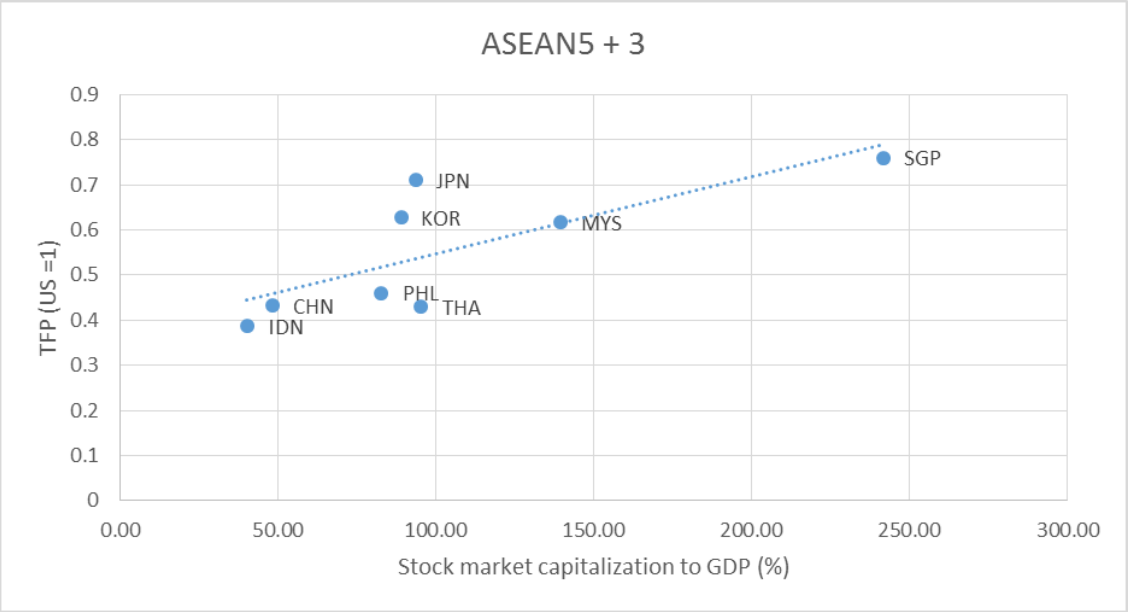
Source: UNIDO and World Bank.

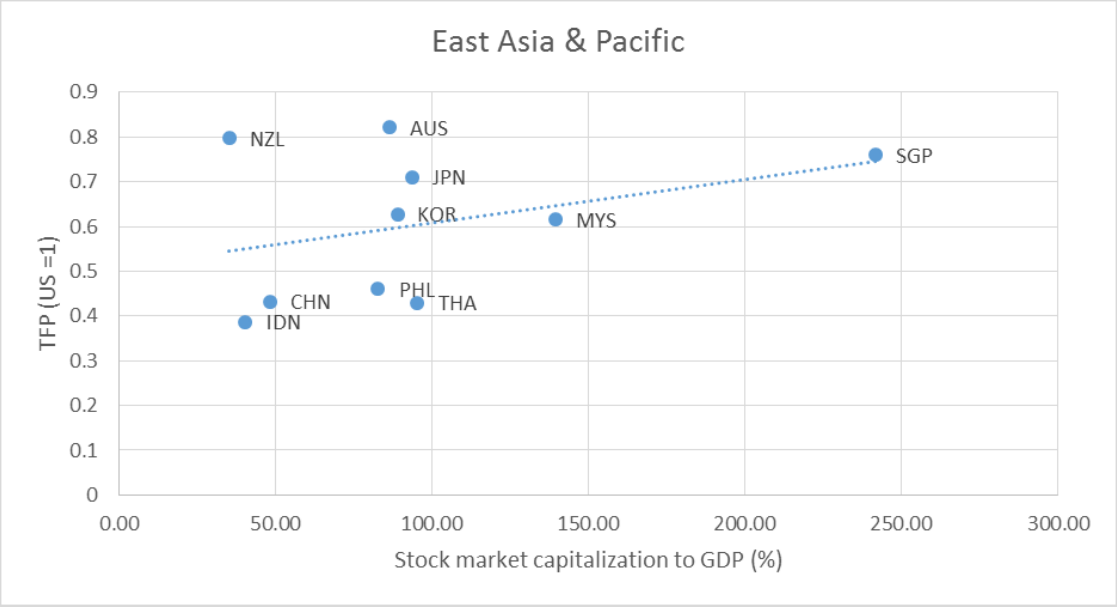
Among all the income groups (high income OECD, high income non-OECD, upper middle income, and lower middle income), only high income OECD group shows positive correlation.



By geographical region, ASEAN 5 + 3(Japan, China and Korea), East Asia & Pacific, and Europe & Central Asia show positive relation.

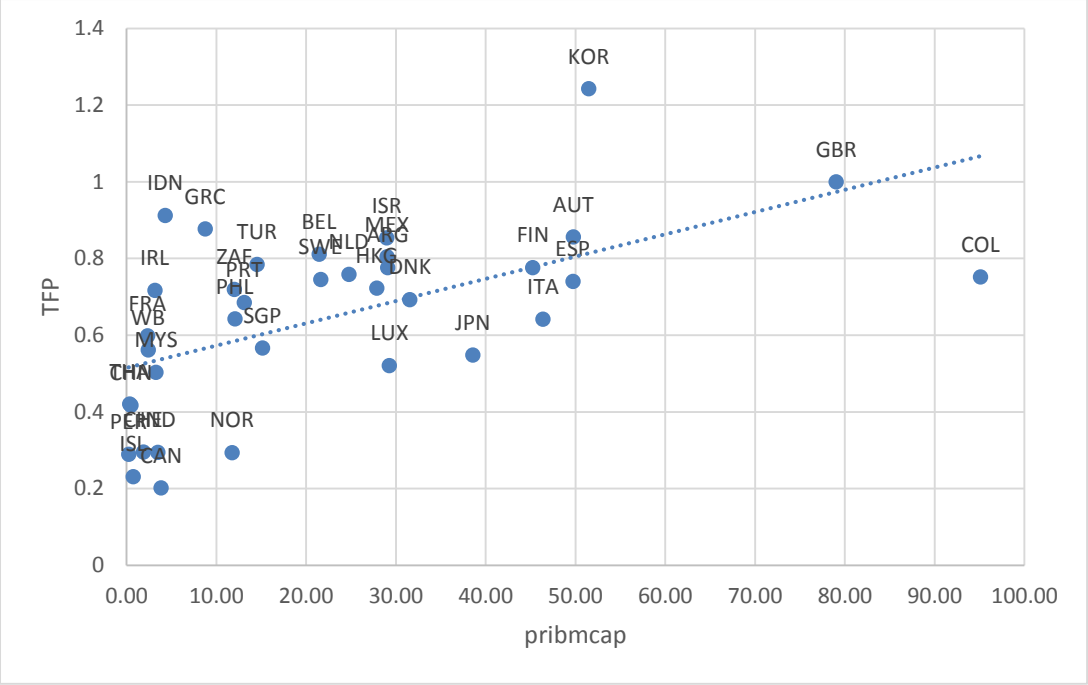
Figure 9: TFP vs. Stock market capitalization as a percentage of GPD, 2014





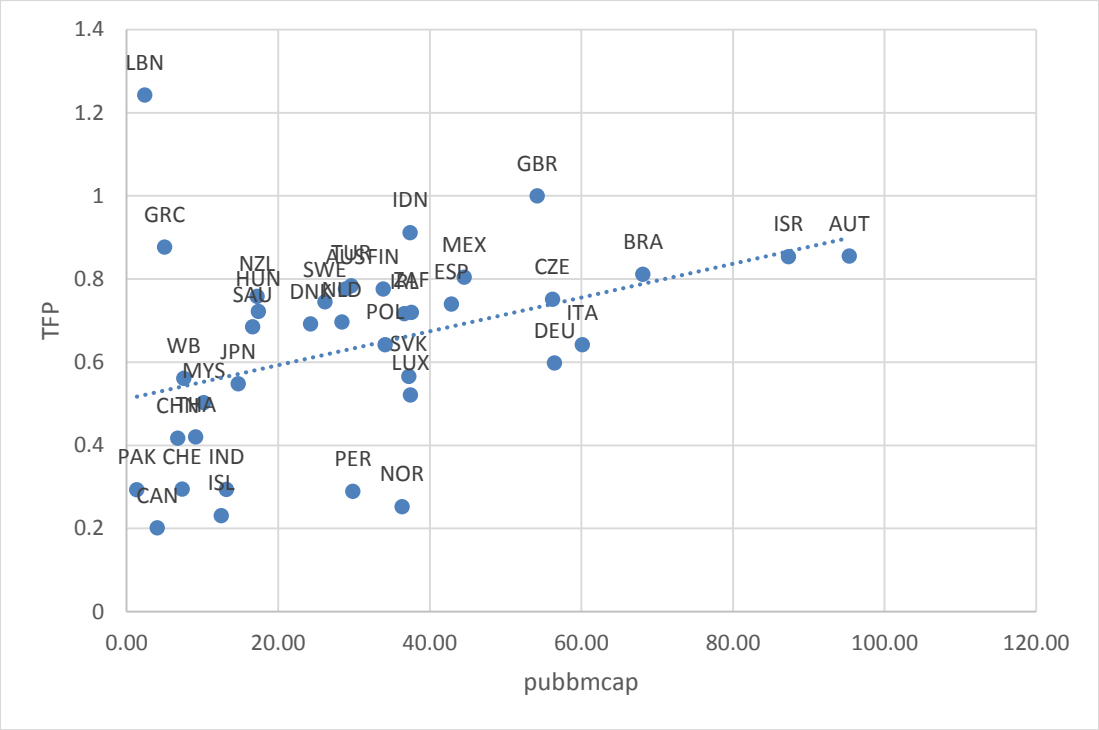
Source: UNIDO and World Bank.

Figure 10: Private bond market capitalization as a percentage of GDP vs. TFP (average 1989-2000), 31 countries



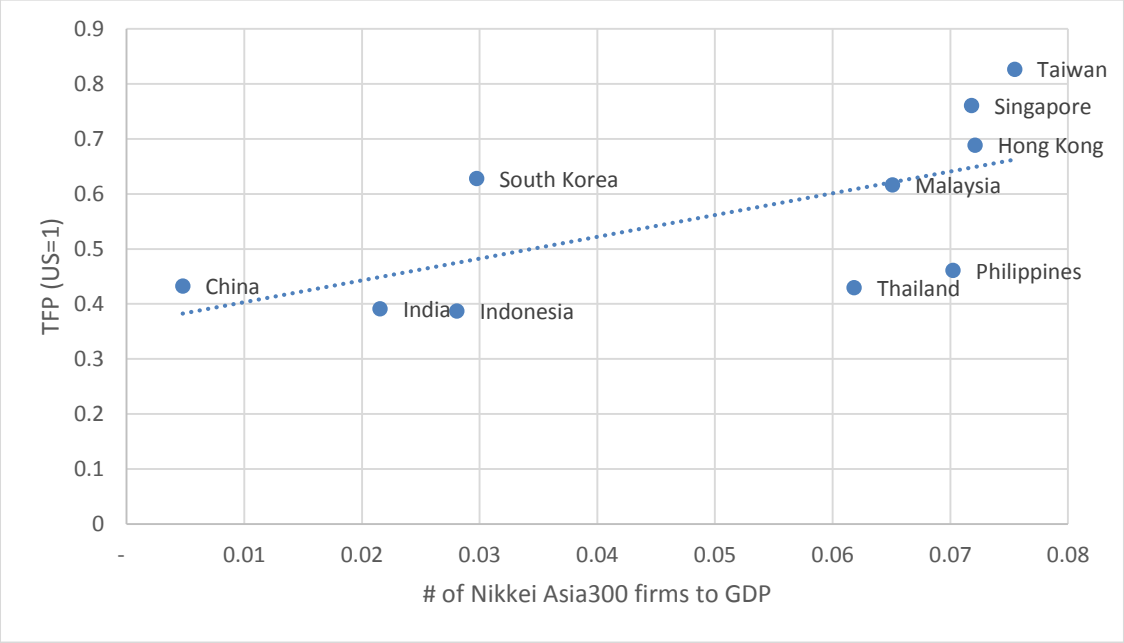
Source: UNIDO and World Bank.

Figure 11: Public bond market capitalization as a percentage of GDP vs. TFP (average 1989-2000), 39 countries



Source: UNIDO and World Bank.

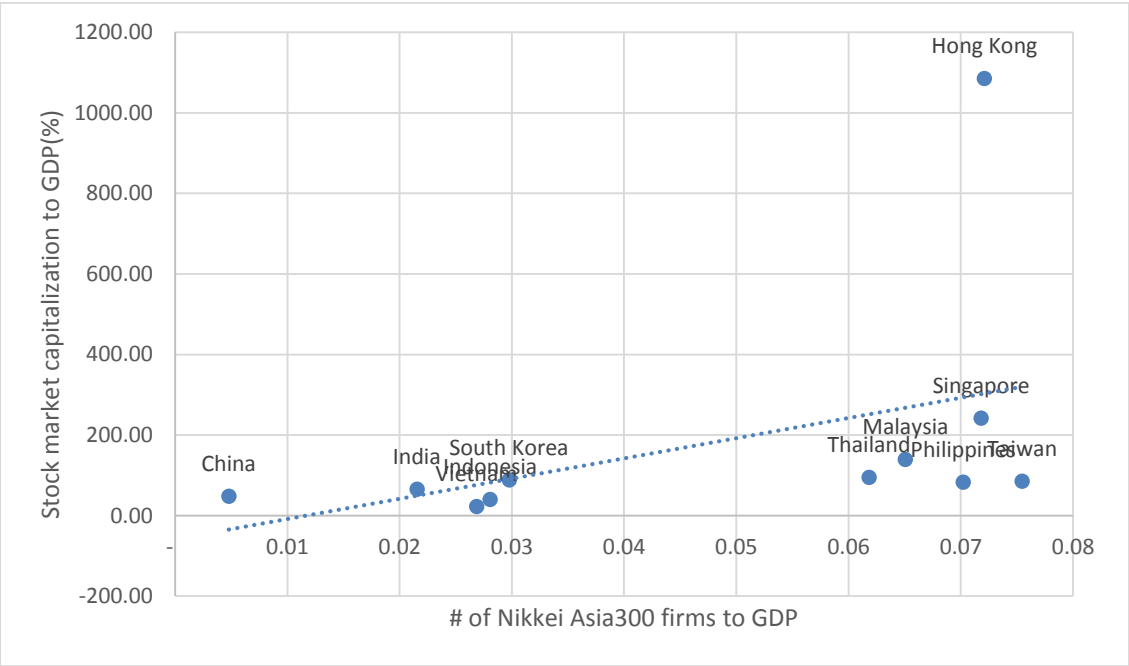
Figure 12: Nikkei Asia 300 firms to GDP vs. TFP, 2014, 11 countries, 316 firms



Source: UNIDO and World Bank.

Note: No TFP data for Vietnam, which contains 5 firms in Nikkei Asia300 Index

Figure 13: Nikkei Asia 300 firms to GDP vs. Stock market capitalization to GDP (%), 2014, 10 countries, 311 firms



Source: UNIDO and World Bank.

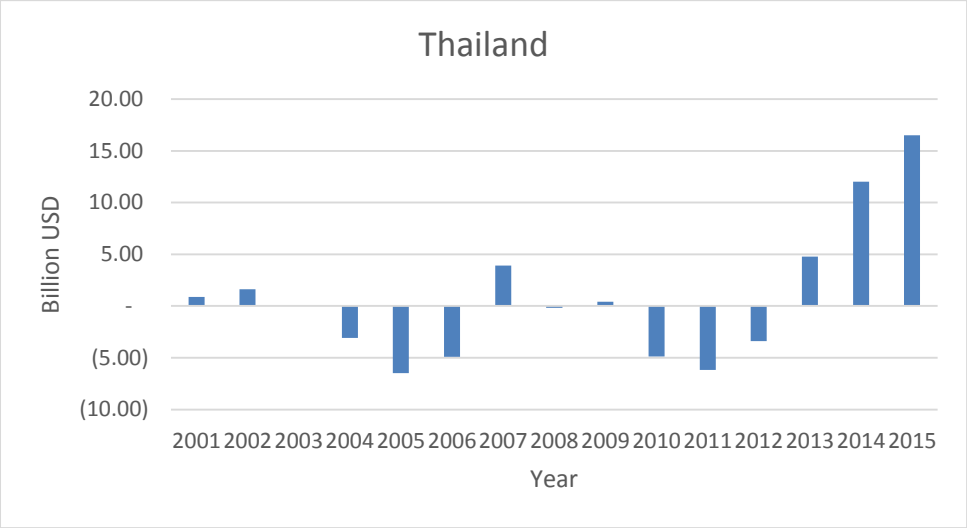
Conclusion

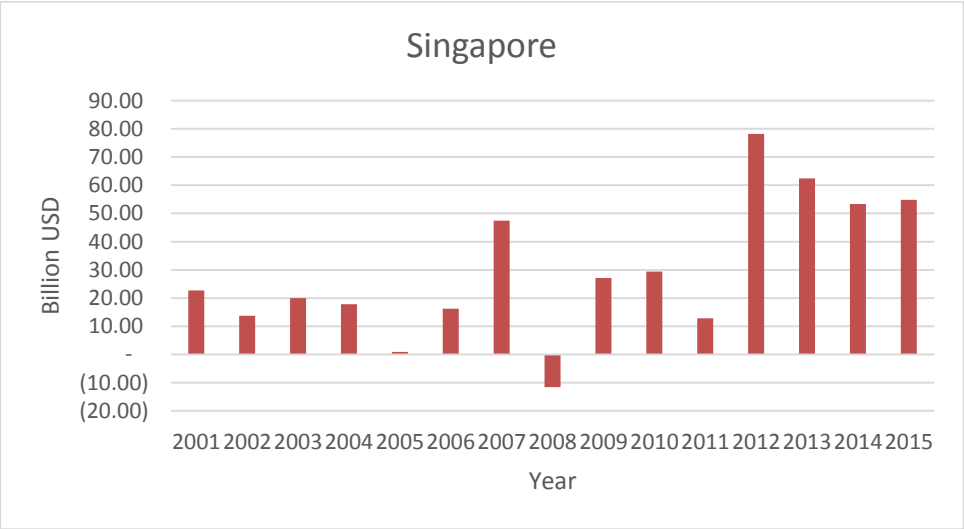
In conclusion, the Foreign Bias Puzzle in ASEAN-5 can be demystified by looking at the different behavior of sovereign and private agents. Sovereign actors may desire to purchase foreign assets in order to build up their foreign reserves. This led to an overall export of capital from ASEAN-5 countries. On the other hand, private investors continue to invest in the region (except during crisis years). This is in line with neo-classical theory.

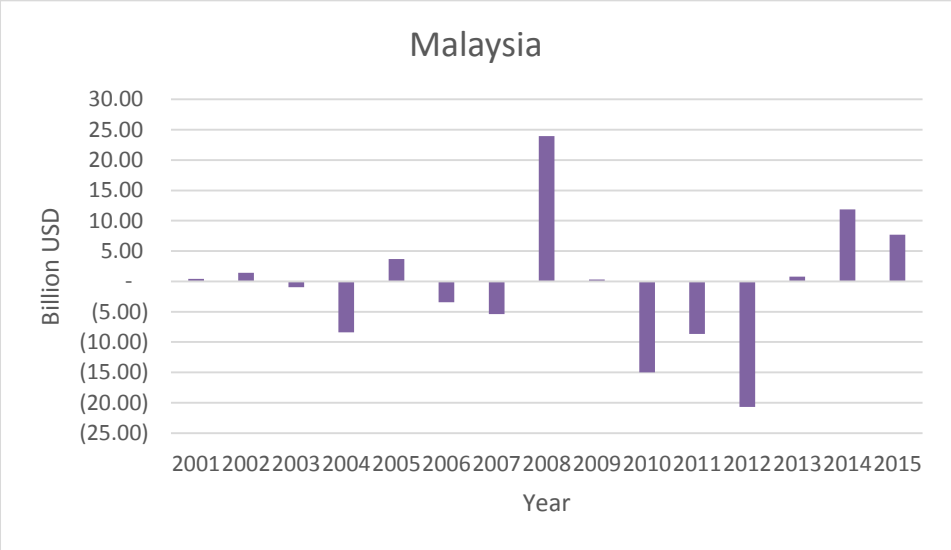
We expect the Foreign Bias Puzzle to persist until the domestic bond and equity markets are well developed. Nonetheless, this is sub-optimal for the ASEAN countries as FDI inflows by private investors might not increase the productivity of these countries. It is also important to make sure that governments invest in the regional bond and equity markets. This will increase efficiency and effectiveness of investments in stimulating economic growth.

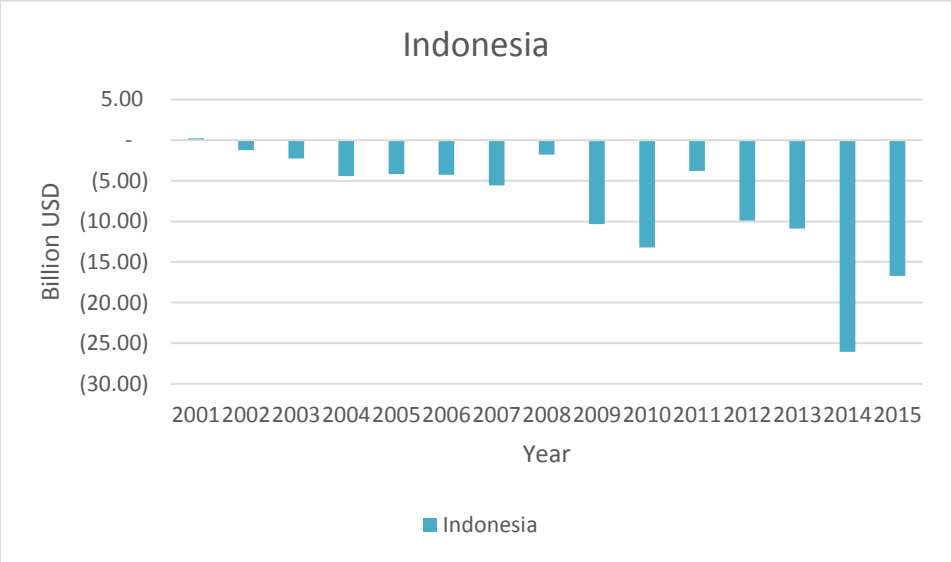
Appendix

Figure: Net portfolio flow









Source: IMF

Note: Positive figure indicates outflow while negative figure means inflow.

Summary of Nikkei Asia300 Index

Name of the Index	Number of the Companies
Nikkei Asia300 Index	316
Nikkei Asia300 ASEAN Index	119
Nikkei Asia300 China Index	50
Nikkei Asia300 Hong Kong Index	21
Nikkei Asia300 South Korea Index	42
Nikkei Asia300 Taiwan Index	40
Nikkei Asia300 Indonesia Index	25
Nikkei Asia300 Malaysia Index	22
Nikkei Asia300 Philippines Index	20
Nikkei Asia300 Singapore Index	22
Nikkei Asia300 Thailand Index	25
Nikkei Asia300 Vietnam Index	5
Nikkei Asia300 India Index	44
	(Data as of Mar 1, 2017)

Data source

Total factor productivity (TFP): World Productivity Database of United Nations Industrial Development Organization. https://www.unido.org/data1/wpd/Index.cfm

Stock market capitalization, public bond market capitalization, and private bond market capitalization: World Bank Financial Structure Database. http://www.worldbank.org/en/publication/gfdr/data/financial-structure-database

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