



SEACEN CAPITAL FLOWS MONITOR 2018 *UPDATE*

December 2018

The South East Asian Central Banks (SEACEN)
Research and Training Centre



The SEACEN Centre

SEACEN **CAPITAL FLOWS MONITOR** **2018 *UPDATE***

December 2018

**The South East Asian Central Banks (SEACEN)
Research and Training Centre**



The **SEACEN** Centre

© 2018 The South East Asian Central Bank Research and Training Centre
(The SEACEN Centre)
Level 5 Sasana Kijang, Bank Negara Malaysia,
2 Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia
Tel. No.: +603 9195 1888
Fax. No: +603 9195 1801
Email: enquiries@seacen.org

For comments and questions, please contact:
Rogelio Mercado, PhD
Senior Economist, MPPM
The SEACEN Centre
Email: rogelio.mercado@seacen.org

The **SEACEN Capital Flows Monitor 2018 Update** should not be reported as representing the views of the SEACEN Centre or its member central banks/monetary authorities. The views expressed in this report are those of the author(s) and do not necessarily represent those of SEACEN or its member central banks/monetary authorities.

Notes:

The SEACEN Centre recognizes “China” as People’s Republic of China; “Hong Kong” as Hong Kong SAR, China; and “Korea” as Republic of Korea.

USD and US\$ refer to U.S. dollar.

IMF data accessed through CEIC Database. Data cut-off as 30 November 2018.

SEG economies include the nineteen economies of SEACEN member central banks and monetary authorities in addition to Australia and Japan, which are also members of SEACEN Expert Group (SEG) on Capital Flows. The complete list of twenty-one economies include Australia, Brunei Darussalam, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand and Vietnam.

The economies included in this report are grouped by major analytical or geographic group.

- ◆ SEG Advanced Economies comprise Hong Kong, Korea, Singapore, and Chinese Taipei.
- ◆ ASEAN4 includes Indonesia, Malaysia, Philippines, and Thailand.
- ◆ BCLMV comprises Brunei Darussalam, Cambodia, Lao PDR, Myanmar, and Vietnam.
- ◆ SEG Other Economies include Mongolia, Nepal, Papua New Guinea, and Sri Lanka.
- ◆ Australia, China, India, and Japan are presented separately.

Abbreviations:

ASEAN	Association of Southeast Asian Nations
BCLMV	Brunei Darussalam, Cambodia, Lao PDR, Myanmar, and Vietnam
BoP	Balance of Payments
BPM6	Balance of Payments Manual 6
IIP	International Investment Position
IMF	International Monetary Fund
SEACEN	South East Asian Central Banks
SEG	SEACEN Expert Group

CONTENTS

Foreword	iv
Section I: Capital Flows Recent Trends And Outlook	1
Section II: Benchmarking Capital Inflows	9
Section III: Key Indicators	19
Table 3.1: Net Capital Outflows	19
Table 3.2: Financial Account Assets	20
Table 3.3: Financial Account Liabilities	21
Table 3.4: Current Account Balance	22
Table 3.5: Net International Investment Position	23
Table 3.6: Total International Investment Assets	24
Table 3.7: Total International Investment Liabilities	25
Table 3.8: Official Reserve Assets	26
References	27

FOREWORD

Capital flows inform us about the amount and patterns of cross-border financial transactions and investments. They facilitate portfolio diversification and risk-sharing; and aid economic growth, financial development and knowledge transfer. However, large capital inflows – as well as large capital outflows – can be disruptive, leading to sharp fluctuations in exchange rates, asset price bubbles, excessive credit growth, sudden reversals and cross-border spillovers. Monitoring and understanding recent trends, their underlying drivers as well as their outlook remain important steps in managing capital flows.

As the Secretariat of the SEACEN Expert Group (SEG) on Capital Flows, which is composed of SEACEN's 19 member central banks and monetary authorities (plus the Reserve Bank of Australia and the Bank of Japan), the SEACEN Centre is issuing a new bi-annual report on capital flows called "SEACEN Capital Flows Monitor". It covers SEG economies including Australia; Brunei Darussalam; Cambodia; China; Hong Kong, China; India; Indonesia; Japan; Korea; Lao PDR; Malaysia; Mongolia; Myanmar; Nepal; Papua New Guinea; the Philippines; Singapore; Sri Lanka; Chinese Taipei; Thailand and Vietnam. The report is released every June and December of the calendar year and covers specified review periods. The June issue reports on the previous year's trends and outlook for the current year; while the December issue focuses on the current year's quarterly developments and an updated outlook for the current year.

The report comprises three sections. The first section serves as a review of recent trends in the composition of capital flows and key internal and external drivers of cross-border flows. It also discusses international investment positions, which is the existing stock of international investment assets and liabilities. It highlights that SEG economies, as a group, remained net capital exporters in 1H2018, although its net position declined due to lower portfolio inflows and lower reserve accumulation. The second section is an analytical section which focuses on a specific topic related to capital flows and international investment positions. For this issue, the analytical section discusses benchmarking capital inflows. The section finds that actual capital inflows of most SEG economies oscillate around their respective benchmark, while for others, they are either persistently above or below benchmarks. The third section presents standard indicators of capital flows and international investment positions for all SEG economies.

This report has been reviewed and approved by the Executive Director. Dr. Ole Rummel (Director of Macroeconomic and Monetary Policy Division- MPPM) also reviewed the report. Dr. Rogelio Mercado (Senior Economist, MPPM) authored Sections I and II, and supervised the production of the report. Mrs. Jami'ah Jaffar (Research Associate, MPPM) provided excellent research assistance and compiled data for Section III. Ms. YunYee Seow gave editorial assistance and Mr. Zamri Abu Bakar designed, typeset and laid out the report.

The views expressed in this report are those of the authors and do not necessarily represent those of the SEACEN Centre's member central banks and monetary authorities.



Hans Genberg
Executive Director
The SEACEN Centre

December 2018

SECTION 1: CAPITAL FLOWS RECENT TRENDS AND OUTLOOK

This section reviews the recent trends and compositions of capital flows and international investment positions of selected SEG member economies for the first half of 2018.¹ It highlights that SEG economies, as a group, continued to be net capital exporters over the period. Although its net international investment position inched higher, the decrease in net resident capital flows during the review period reflected the decline in portfolio inflows and slowdown of reserve accumulation in line with weaker current account balances.

A. Recent Trends in Capital Flows and International Investment Positions

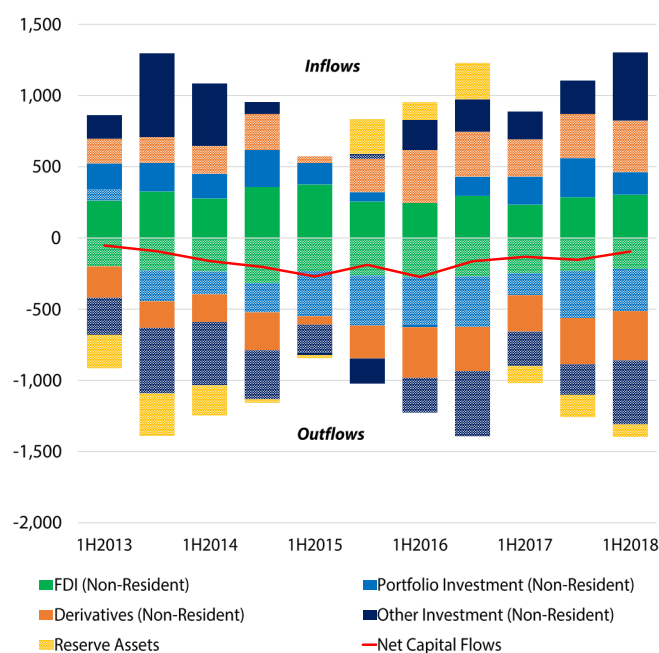
Net resident capital outflows of SEG member economies amounted to US\$96 billion as of mid-2018.² Net acquisition of foreign assets by residents (financial account assets) reached US\$690 billion, while net incurrence of liabilities to non-residents (financial account liabilities) summed up to US\$594 billion, bringing the net resident capital outflows to around US\$95 billion, excluding net errors and omissions (**Figure 1.1**).

1. SEG economies include the nineteen economies of SEACEN member central banks and monetary authorities in addition to Australia and Japan, which are also members of SEACEN Expert Group (SEG) on Capital Flows. The complete list of twenty-one economies include Australia, Brunei Darussalam, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand and Vietnam. However, since not all economies report quarterly Balance of Payments (BoP) and International Investment Position (IIP) data to the International Monetary Fund (IMF), all figures and data included in this section of the report correspond to the subset of SEG member economies with available quarterly data. These economies include Australia, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Mongolia, Nepal, Philippines, Singapore, Chinese Taipei, and Thailand. Data from the IMF (downloaded from the CEIC database) are consistently classified and standardised series in U.S. dollars across economies. The IMF BoP Statistics are largely the same as the SEG Database, although the IMF data provides a more detailed and granular presentation which is needed for the analysis in this report.

2. The value of US\$95 billion net capital flows refers to net acquisition of foreign assets by residents minus net incurrence of liabilities to non-residents. Based on the balance of payments identity, if net errors and omissions is nil, then the net financial account balance should take the opposite value of the current account plus capital account balance.

Most of net acquisition of foreign assets were in the form of other investments (including loans), followed by portfolio and direct investments, respectively. Likewise, net incurrence of liabilities to non-residents were mostly in the form of other investments, but followed by direct and portfolio investments, respectively. Net resident capital outflows in the first half of 2018 (1H2018) were considerably less compared to the first and second halves of 2017. It dropped by around 38% from 2H2017 and 28% from 1H2017. The decline reflects lower non-resident portfolio inflows and a slowdown in resident portfolio outflows compared to the second half of 2017 (2H2017).

Figure 1.1: Capital Flows - SEG Economies
(USD billions)



Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets. SEG economies include Australia; Cambodia; China; Hong Kong; India; Indonesia; Japan; Korea; Mongolia; Nepal; Philippines; Singapore; Chinese Taipei; and Thailand. Refer to IMF Balance of Payments Manual 6 for the definition of investor resident and non-resident.

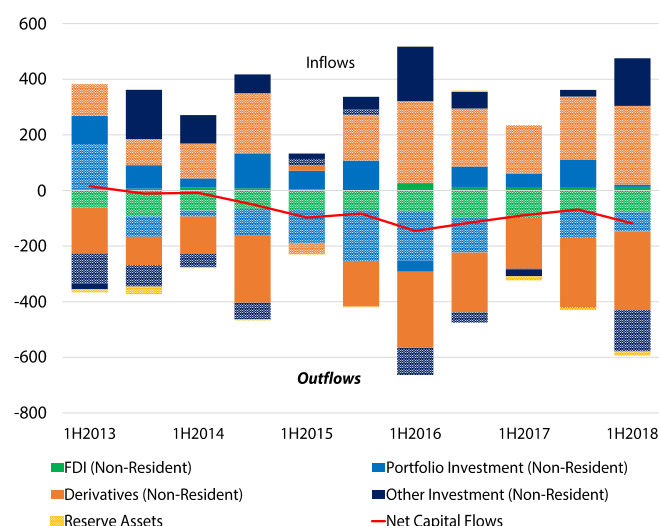
Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics and national source accessed through CEIC.

The decline in net resident capital outflows of SEG economies corresponded with the narrowing of current account surplus in the first half of 2018 to US\$128 billion, which was less than the surplus of US\$296 billion posted in second half of 2017. The trade surplus remained the key driver of the current account surplus, particularly for Korea, Singapore and Chinese Taipei. For Japan, the current account surplus came mainly from merchandise trade surplus and higher overseas investment earnings. Both Hong Kong and Thailand also registered current account surpluses in 1H2018, while China recorded its first current account deficit in 20 years in the period due to a large drop in merchandise trade surplus and larger deficit on trade in services. The rest of SEG economies had current account deficits. Except for Australia and Mongolia, the current account deficit widened in the first half of 2018 for India, Indonesia, Nepal and Philippines, compared to first and second halves of 2017. As a group, the surplus generated by some economies was larger than the deficits of others, resulting in an overall current account surplus in 1H2018.

U.S. interest rate hikes, stronger U.S. dollar, and trade tensions were the main drivers of lower net capital flows in SEG economies in the first half of 2018. The ongoing normalisation of U.S. monetary policy, through interest rate hikes in March and June 2018 and widening credit spreads, led to a decline in foreign portfolio inflows to SEG economies. The impact was first felt in the bond markets and then subsequently in the equity markets. Furthermore, the strengthening of the U.S. dollar and trade tensions contributed to growing trade deficits in some SEG economies, leading to slower accumulation of official reserve assets. Despite these downside factors, SEG economies continued to register continued growth, sustaining its position of offering higher return differentials in terms of other types of investment flows.

Although SEG economies posted continued net resident capital outflows in the first half of 2018, there appeared to be marked differences in the composition of capital flows across member economies. Japan posted net resident capital outflows of around US\$119 billion in 1H2018, mainly driven by large resident direct and portfolio investment abroad (**Figure 1.2a**). China recorded net non-resident capital inflows of around US\$78 billion, driven by non-resident direct and portfolio investment inflows. Its official reserve accumulation amounted to US\$50 billion, which marks its third straight semester of reserve accumulation after two years of decumulation in 2015-16 (**Figure 1.2b**). India also had net non-resident capital inflows in 1H2018, amounting to US\$28 billion. Foreign capital inflows were mostly in the form of other investment followed by foreign direct investment (**Figure 1.2c**). Australia, likewise, posted net non-resident capital inflows of US\$15 billion, which was significantly lower than the net non-resident capital inflows of US\$26 billion it received in 2H2017 (**Figure 1.2d**). Foreign capital inflows were mostly in the form of direct and portfolio investment. Australia's overall net capital inflows mirrored its current account deficit, which continued to narrow in 1H2018.

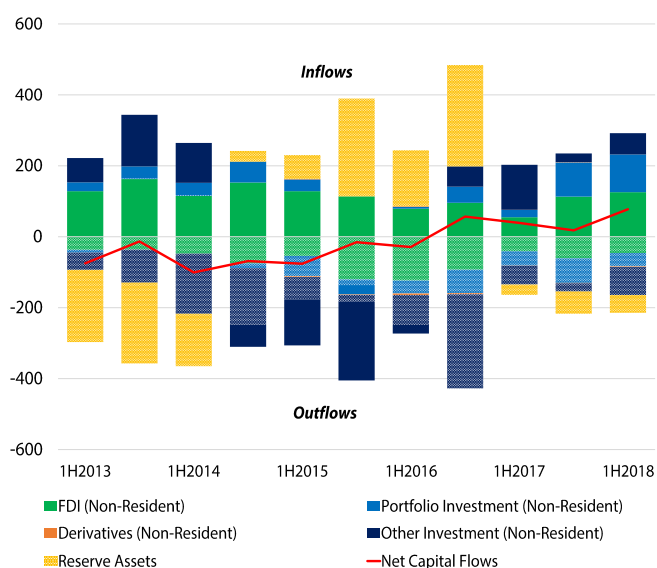
Figure 1.2a: Capital Flows - Japan
(USD billions)



Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets.

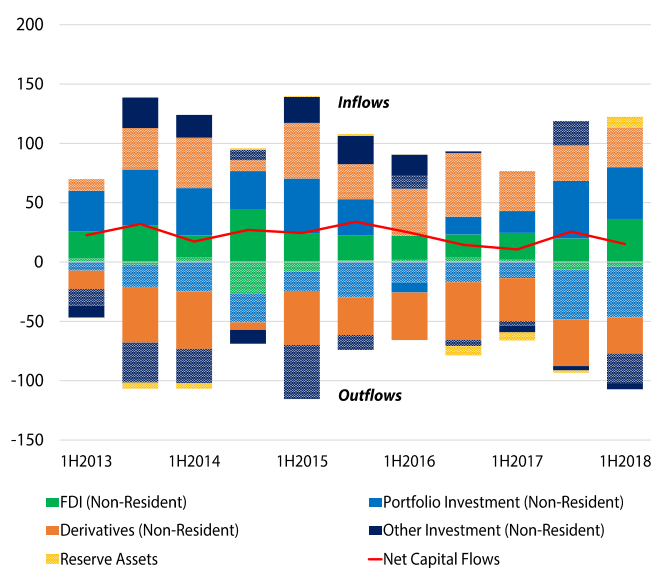
Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics.

Figure 1.2b: Capital Flows - China
(USD billions)



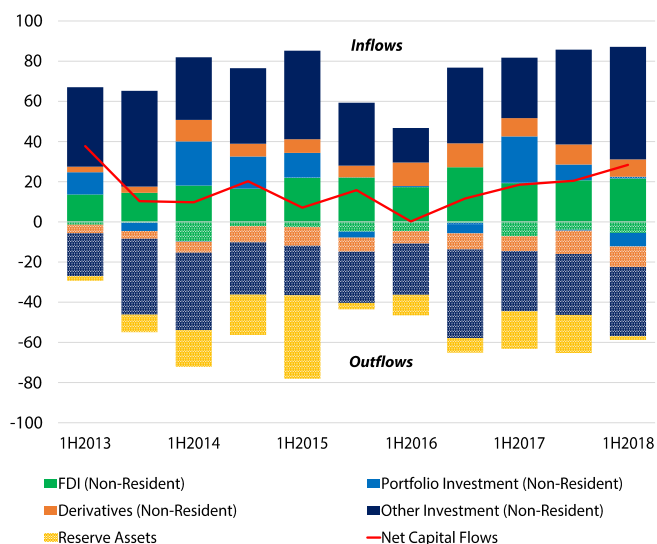
Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets.
Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics.

Figure 1.2d: Capital Flows - Australia
(USD billions)



Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets.
Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics.

Figure 1.2c: Capital Flows - India
(USD billions)



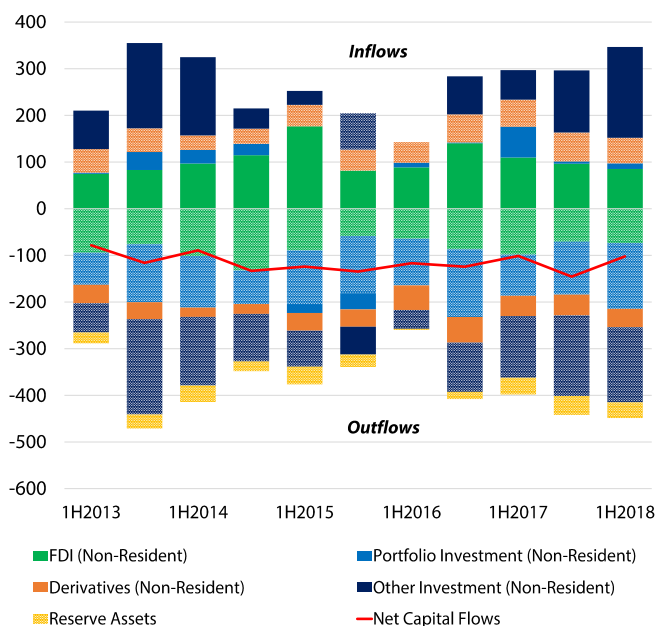
Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets.
Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics.

As a subgroup, SEG Advanced Economies, which include Hong Kong, Korea, Singapore and Chinese Taipei, registered net resident capital outflows of around US\$102 billion in the first half of 2018 (**Figure 1.2e**). The net capital outflows broadly corresponded to the subgroup's overall current account surplus. In fact, each of the member economies sustained their current account surplus during the period. Across investment types, net capital outflows from the highly-open economies were mainly in the form of other investment abroad, which include banking flows, followed by direct investment abroad. In contrast, ASEAN4 economies, which include only Indonesia, Philippines and Thailand, registered net non-resident capital inflows in the first half of 2018 amounting to US\$2 billion (**Figure 1.2f**).³ Within the group, net non-resident capital inflows to Indonesia and Philippines outweighed Thailand's net resident capital outflows, resulting in overall net non-resident capital inflows for the group. Foreign direct investment remained the largest investment type for the group. SEG Other

3. Malaysia does not report the breakdown of its other investment flows.

Economies, which include Cambodia, Mongolia, and Nepal, also reported net non-resident capital inflows of about US\$3 billion (Figure 1.2g). Net capital inflows were mostly in foreign direct and other investments.

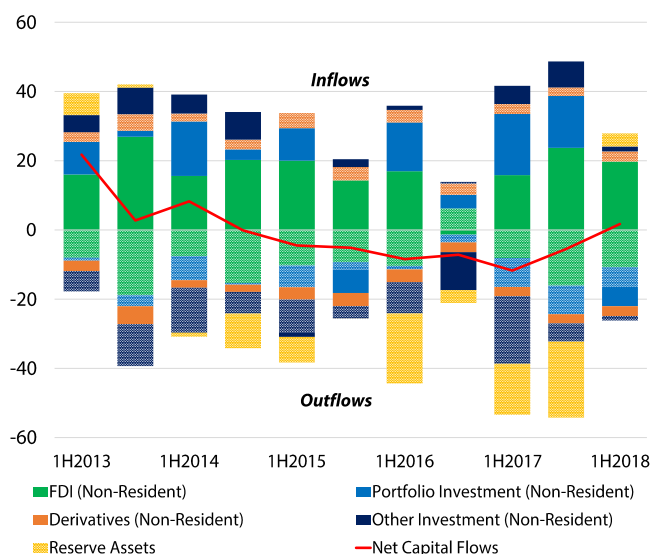
Figure 1.2e: Capital Flows - SEG Advanced Economies (USD billions)



Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets. SEG Advanced Economies include Hong Kong, Korea, Singapore, and Chinese Taipei.

Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics and national source accessed through CEIC Database.

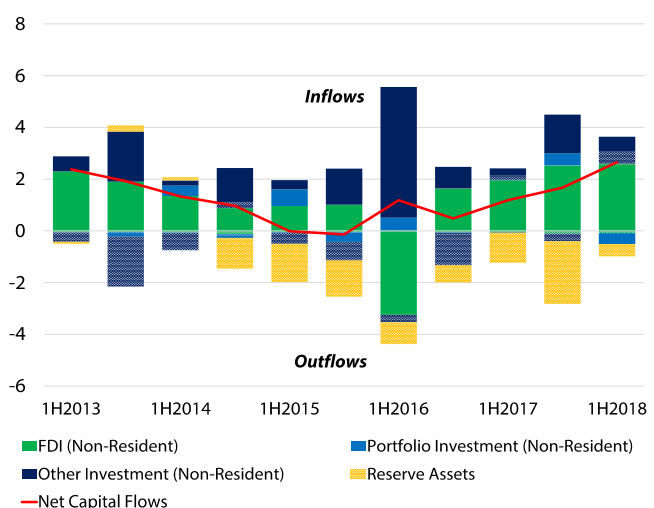
Figure 1.2f: Capital Flows - ASEAN4 (USD billions)



Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets. ASEAN4 includes Indonesia, Malaysia, Philippines and Thailand. However, Malaysia is excluded as it does not report resident (assets) and non-resident (liabilities) breakdown of some items in its Financial Account.

Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics.

Figure 1.2g: Capital Flows - SEG Other Economies (USD billions)



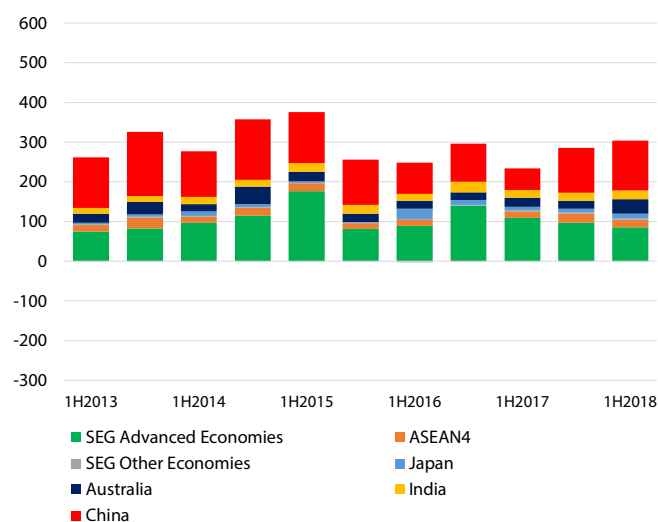
Notes: Solid fill refers to non-resident capital flows, while those with pattern fill refers to resident capital flows. Net capital flows are computed as financial account liabilities minus financial account assets. SEG Other Economies include Cambodia, Mongolia, and Nepal.

Source: SEACEN staff calculations using data from the IMF's Balance of Payment Statistics and national source accessed through CEIC.

Although net resident capital flows remained stable in recent years, gross capital inflows and outflows as well as the composition of gross flows showed greater variation during the first half of 2018. As a group, SEG economies registered net capital outflows of around 0.3% of the group's nominal GDP in the first half of 2018, which was less than 0.6% of the group's nominal GDP in 2H2017 and 0.5% in 1H2017. This was also significantly less than the group's five-year semiannual average net capital outflows of 0.7% of GDP. Moreover, as shown in Figures 1.1 to 1.2g, there have been varying magnitudes of gross capital inflows and outflows in the SEG economies as a whole as well as across individual and subgroups of economies. Furthermore, not only do the magnitudes of gross flows differ, the composition of capital flows also changes across periods and across economies and subgroupings.

The composition of non-resident capital inflows continued to vary within SEG member economies, reflecting diverse economic structures and different levels of financial development. Foreign direct investment inflows in the first half of 2018 mostly went to China and SEG Advanced Economies, reflecting their continued attractiveness as export-oriented investment destinations. ASEAN4 and India received roughly equal amounts of foreign direct investment at about US\$20 billion each, while Australia received US\$36 billion during the period. Both Japan and SEG Other Economies had less than US\$20 billion each (**Figure 1.3a**). In terms of portfolio investments, China received the most non-resident investments of more than US\$100 billion in the first half of the year, followed by Australia with around US\$40 billion portfolio inflows. The rest of SEG economies saw smaller foreign portfolio inflows; while ASEAN4 and India experienced a reversal of foreign portfolio inflows (Figure 1.3b). For other investments, SEG Advanced Economies and Japan posted the largest inflows of around US\$200 billion and US\$170 billion, respectively, during the first half of 2018 (Figure 1.3c). Other investment inflows to other SEG economies were significantly smaller. Among the SEG economies under review, China and SEG Advanced Economies accumulated the largest official reserve assets of about US\$50 billion and US\$30 billion, respectively. In contrast, Australia and ASEAN4 undertook official reserve decumulation in the first half of 2018 (Figure 1.3d).

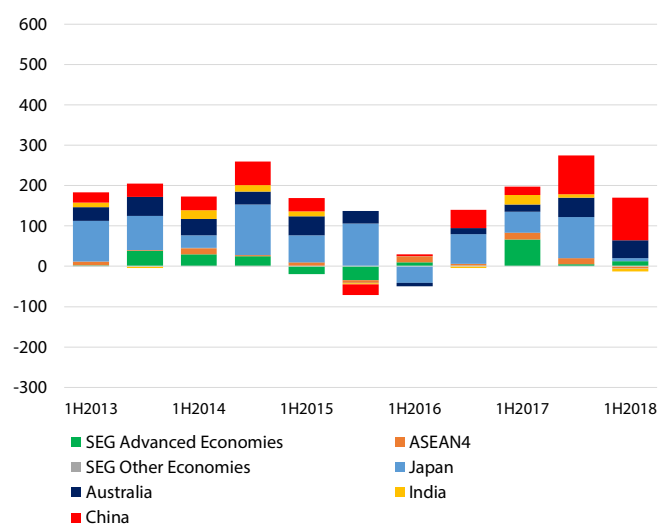
Figure 1.3a: Non-Resident Foreign Direct Investment Flows (USD billions)



Notes: SEG Advanced Economies include Hong Kong, Korea, Singapore, and Chinese Taipei. ASEAN4 includes Indonesia, Philippines, and Thailand. SEACEN Other Economies include Cambodia, Mongolia, and Nepal.

Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics, and national source accessed through CEIC Database.

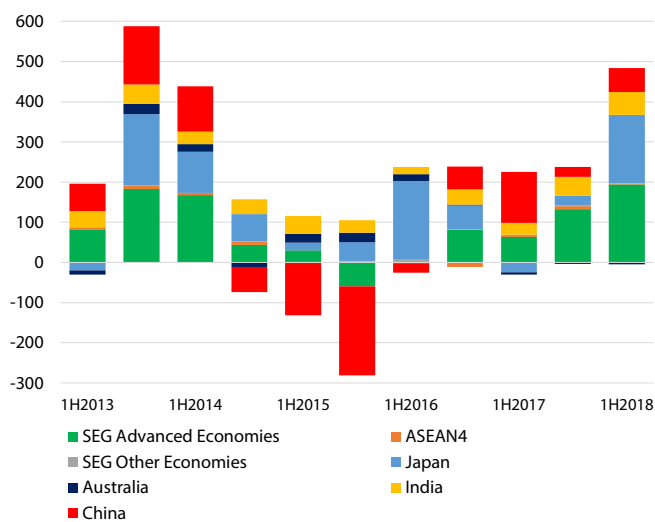
Figure 1.3b: Non-Resident Portfolio Investment Flows (USD billions)



Notes: SEG Advanced Economies include Hong Kong, Korea, Singapore, and Chinese Taipei. ASEAN4 includes Indonesia, Philippines, and Thailand. SEACEN Other Economies include Cambodia, Mongolia, and Nepal.

Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics, and national source accessed through CEIC Database.

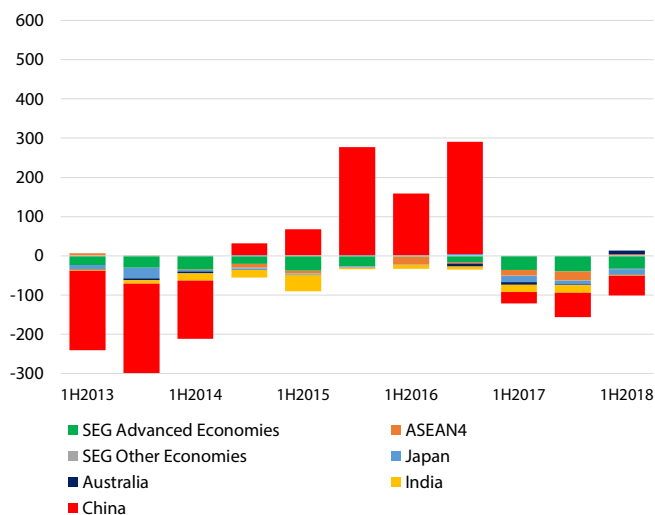
Figure 1.3c: Non-Resident Other Investment Flows (USD billions)



Notes: SEG Advanced Economies include Hong Kong, Korea, Singapore, and Chinese Taipei. ASEAN4 includes Indonesia, Philippines, and Thailand. SEACEN Other Economies include Cambodia, Mongolia, and Nepal.

Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics, and national source accessed through CEIC Database.

Figure 1.3d: Official Reserve Asset Flows (USD billions)



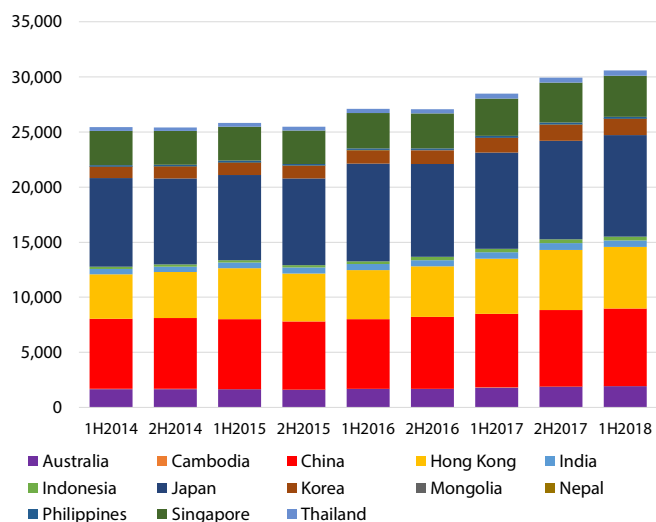
Notes: SEG Advanced Economies include Hong Kong, Korea, Singapore, and Chinese Taipei. ASEAN4 includes Indonesia, Philippines, and Thailand. SEACEN Other Economies include Cambodia, Mongolia, and Nepal.

Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics, and national source accessed through CEIC Database.

Total international investment assets of SEG economies reached US\$31 trillion as of the first half of 2018, up by 2.2% from US\$30 trillion at end-2017.

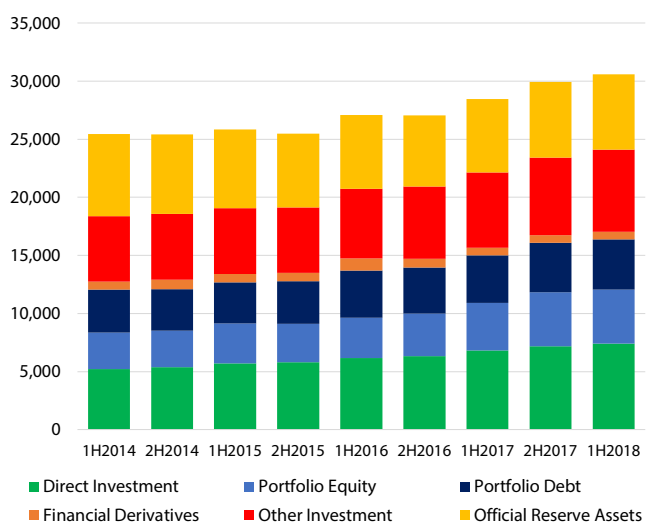
Among SEG economies, Japan had the highest international financial assets amounting to US\$9.2 trillion, followed by China and Hong Kong, China with US\$7.0 trillion and US\$5.6 trillion, respectively. These three SEG economies alone accounted for more than two-thirds of the group's total international investment assets as of the first half of 2018 (Figure 1.4a). Across asset types, portfolio investments dominated asset holdings, followed by foreign direct investment, other investment, and official reserve assets, each having around US\$7 trillion. But portfolio investment assets were equally distributed between portfolio equities and portfolio debt (Figure 1.4b). Excluding financial derivatives and official reserves, the debt-equity ratio stood at 0.94 as of the end-June 2018, which was slightly higher than 0.92 as of end-2017. Compared to 2014-16 when the debt-equity ratio stood at 1.0, the continued decline of debt-equity ratio for international assets indicates a growing preference for equity-type investments which could offer better returns during normal conditions.

Figure 1.4a: International Investment Assets (USD billions)



Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics.

Figure 1.4b: International Investment Assets, by Investment Type (USD billions)



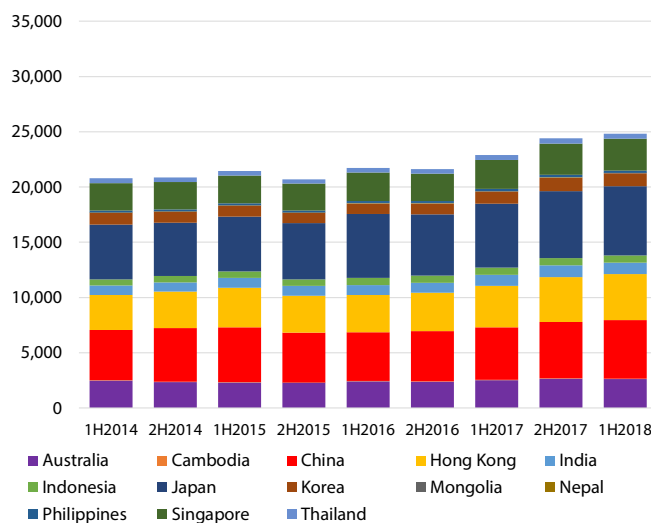
Notes: Sample includes Australia, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Mongolia, Nepal, Philippines, Singapore, and Thailand.

Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics.

Total international investment liabilities of SEG economies also increased to US\$24.8 trillion as of the first half of 2018, slightly up by 1.7% from US\$24.4 trillion at end-2017.

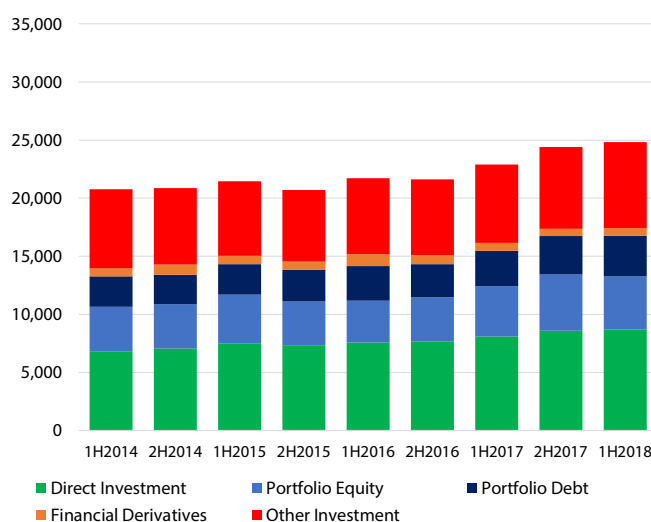
Among SEG economies, Japan had the highest international financial liabilities amounting to US\$6.2 trillion, again followed by China and Hong Kong, China with US\$5.3 trillion and US\$4.2 trillion, respectively. Both Australia and Singapore had around US\$2.7 trillion each (**Figure 1.5a**). Across investment types, foreign direct and portfolio investment liabilities had around US\$8.0 trillion each. But for portfolio investment, portfolio equities were significantly larger at US\$4.6 trillion than portfolio debt at US\$3.5 trillion (**Figure 1.5b**). The debt-equity ratio stood at 0.82 as of the first half of 2018, higher than 0.77 at end-2017, reflecting a tilt towards debt liabilities and a move away from equity-type liabilities.

Figure 1.5a: International Investment Liabilities (USD billions)



Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics.

Figure 1.5b: International Investment Liabilities, by Investment Type (USD billions)

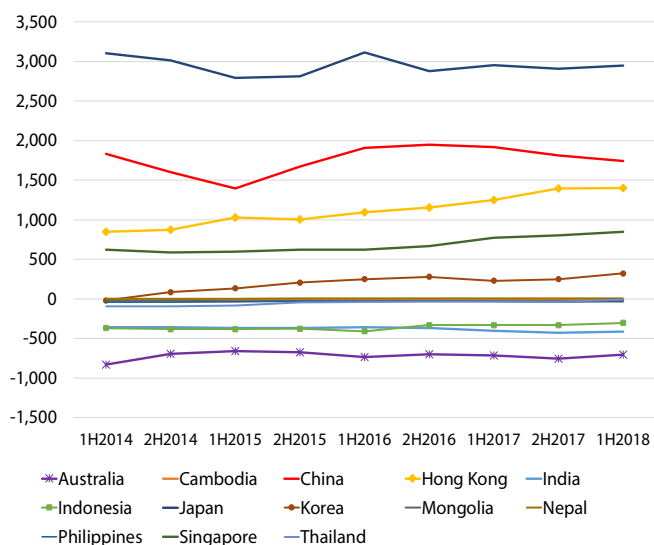


Note: Sample includes Australia, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Mongolia, Nepal, Philippines, Singapore, and Thailand.

Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics.

SEG economies remained a net capital exporter as of end-June 2018 with their positive net international investment position at US\$5.8 trillion, slightly higher than US\$5.5 trillion in end-2017. However, within SEG economies, there was a clear divide between net capital exporters and net capital importers (**Figure 1.6**). Japan, China, Hong Kong, Korea, and Singapore have been net capital exporters since 2014; whereas Australia, India, and Indonesia have been net capital importers since 2014. However, external positions not only depend on cumulative current account balances, but also on valuation effects, which could increase or decrease the value of international assets relative to international liabilities or vice-versa, thereby affecting the overall net position.

Figure 1.6: Net International Investment Position (USD billions)



Sources: SEACEN staff calculations using data from IMF's Balance of Payments Statistics.

B. Outlook on Capital Flows⁴

As a group, SEG economies will most likely sustain its net resident capital outflows and net foreign asset position in 2018, albeit narrower compared to 2017 due to heightened downside risk factors. First, interest rate hikes in U.S. will continue to pose a drag on non-resident portfolio inflows and could encourage greater resident portfolio outflows due to portfolio diversification. The interest rate increase in September 2018 will account for this scenario for the remainder of 2018, while another interest rate hike in December 2018 will have smaller impact on full year portfolio flows but will have an effect in 2019. Second, global trade tensions and policy uncertainties in notable advanced and emerging economies in the second half of 2018 will most likely weigh down on investors' decisions to undertake cross-border investments. In addition, tighter financial conditions due to higher U.S. interest rates and stronger U.S. dollar will also lower financial flows in the second half of the year.

Upside factors continued to offset downside risks to cross-border flows. First, economic growth in most SEG economies stayed buoyant in 2018, although some economies witnessed considerable slowdown. Sustained growth momentum in the near-term will remain the basis for continuous foreign investment inflows to the region in the coming years. Second, investor risk aversion remained subdued, despite tighter financial conditions. Lastly, investors continued to differentiate among emerging economies based on individual economy fundamentals and country-specific factors. In this regard, economic uncertainties in some of the largest emerging economies outside the region were contained.

4. The outlook discussed in this section is mostly based on SEACEN staff assessment of economic and financial projections and prospects from the IMF reports (World Economic Outlook, October 2018; and Global Financial Stability Report, October 2018).

SECTION II: BENCHMARKING CAPITAL INFLOWS

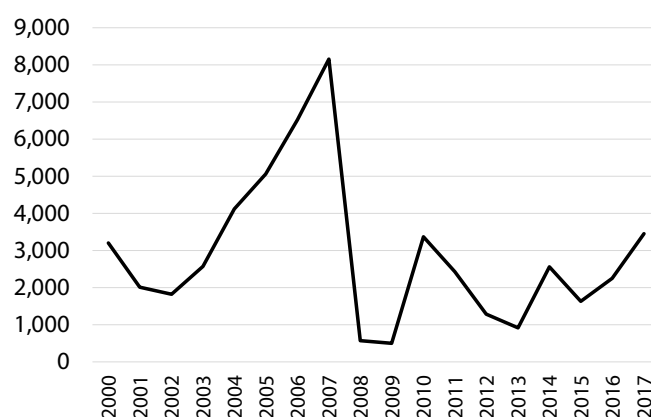
This section constructs total capital inflow benchmarks for each of the SEG economies, in line with the method of Burger, Warnock, and Warnock (BWW, 2018) for portfolio inflows. Comparing actual and benchmark inflows reveal that for most SEG economies, actual inflows oscillate around the benchmark; while for other economies, actual inflows are either consistently above or below benchmark reflecting varying degrees of economic and financial development as well as foreign investors' differentiation of SEG economies.

A. Benchmarking Capital Inflows

The 2015-16 drop in capital inflows raised concerns on whether the size of cross-border financial flows will continue to decline during the ongoing "normalisation" period. Aggregate world capital inflows slowed down to US\$1.6 trillion and US\$2.2 trillion in 2015 and 2016, respectively, which are significantly lower than the pre-crisis average inflows of about US\$6.0 trillion per year from 2004 to 2007 (**Figure 2.1**)¹. The decline raised questions on whether capital inflows are expected to settle at lower levels in the coming years as the United States normalises its monetary policy stance following years of very low interest rate and quantitative easing. But judging whether capital inflows have significantly dropped from the post-crisis levels relative to some reference period requires some benchmark values in which temporal comparisons of capital

flow size can be measured. More broadly, capital inflow benchmark can serve as a long-run anchor for which policy makers can assess whether actual capital inflows are either above or below expected values.

Figure 2.1: Capital Inflows - World
(in US billion)



Notes: World includes 66 advanced and emerging economies including 20 SEG economies. Values refer to the sum of individual country gross capital inflows.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Aside from making temporal comparisons, a capital inflow benchmark is also useful in differentiating between sharp movements away from the benchmark from those that are sharp movements toward the benchmark.

Conceptually, sharp movements away from the benchmark are most likely temporary, whereas sharp movements toward the benchmark are more likely sustainable. In this context, a benchmark will allow us to assess whether a sharp drop in capital inflow will most likely reverse or stabilise on some level. Consequently, benchmarking capital flows offer an alternative in predicting the future path of actual flows.

Burger, Warnock, and Warnock (2018) proposed a new method on benchmarking portfolio inflows. Their concept of a portfolio inflow benchmark (including bond and equity inflows) is neither purely statistical (e.g. trend) nor entirely model-based. Moreover, their proposed benchmark

1. Our world sample includes 66 advanced and emerging economies including 20 SEG economies. Advanced economies include Canada, Czech Republic, Denmark, France, Germany, Iceland, Israel, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom, and United States. Other emerging and developing economies include Angola, Argentina, Bangladesh, Botswana, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Croatia, Egypt, Guatemala, Hungary, Jordan, Kazakhstan, Kenya, Kuwait, Mexico, Morocco, Nigeria, Pakistan, Panama, Peru, Poland, Romania, Russia, Saudi Arabia, South Africa, Turkey, Ukraine, and Uruguay. SEG economies include twenty-member economies with available data. China, Japan, India, and Australia are reported separately. SEG Advanced Economies include Hong Kong, Korea, Singapore, and Chinese Taipei. ASEAN-4 includes Indonesia, Philippines, and Thailand. Malaysia does not report other investment assets and liabilities separately, only net other investment. BCLMV economies are Brunei, Cambodia, Lao PDR, Myanmar, and Vietnam. SEG Others include Mongolia, Nepal, Papua New Guinea, and Sri Lanka.

has several desirable properties. First, it shows the time series evolution of the benchmark for which actual inflows oscillate. Second, it is based on the portfolio growth proposition of Tille and van Wincoop (2010), which pertains to the amount of capital flows that an economy is expected to receive in the absence of shocks associated to expected returns and risks, known as *zero-order flows*.² This provides conceptual basis in explaining deviations from the reference value. Third, their benchmark performs well in predicting future path of capital inflows, particularly for emerging market economies.

BWW (2018) defined their portfolio inflow benchmark as the amount of new savings available for portfolio flows allocated across economies based on respective past portfolio weights. The benchmark was derived from individual economy nominal income multiplied by their respective saving rate, which pertains to the amount of new savings in the economy. It was then scaled by the proportion of savings going to equity and bond assets.³ The past portfolio weights were determined from individual economy share of the stock of equity and bond liabilities relative to the stock of world liabilities. Put simply, their benchmark for portfolio inflow is the amount of new savings allocated to equity and bonds portfolio flows scaled by individual economy past portfolio weights.⁴ Comparing BWW (2018) computed benchmark with actual portfolio inflows shows several noteworthy observations. First, the decline in portfolio inflows to emerging Asian economies in 2015-16 was below the regional benchmark, suggesting that the slowdown was temporary. In contrast, the slowdown in portfolio inflows to emerging Latin America was a move towards the benchmark, implying the slowdown closes the gap

between actual and benchmark portfolio inflows, and thereby, sustainable. For Euro Area economies, the drop in 2015-16 was a move away from the benchmark while for the U.S., it was a move towards the benchmark.

Benchmarking capital inflows on SEG economies requires relaxing some of the theoretical assumptions and practical choices followed by BWW (2018). First, instead of using national income and saving rate as a measure of new savings, we use the aggregate world gross capital inflows across a significant sample of economies, accounting for around 90% of world output. In other words, the world gross capital inflows can serve as a proxy for new available savings. This is a reasonable assumption as world gross capital inflows reflects the total amount of available new savings invested abroad of each economy. In addition, using aggregate world gross inflows has the advantage of not needing to scale new savings across various asset types, and of adjusting benchmark inflows to account for China's large savings but lower propensity of having international investments. Second, we assume that world gross capital inflows are zero-order flows as they do not depend on individual economy's shocks related to expected returns and risks, although they are mostly driven by global factors such as changes in the U.S. interest rate and shocks to global risk appetite and uncertainty.⁵ Third, BWW (2018) emphasizes the importance of zero-order flows as deviations of actual inflow from its reference value reflect shocks to expected returns and risks. Using aggregate gross capital inflows as a proxy for new savings, deviations of actual inflow from the benchmark could reflect a broader set of domestic shocks, not just on asset returns and risks. Consequently, deviations from the benchmark imbibe meaningful interpretation.⁶

2. Tille and van Wincoop (2010) used a dynamic stochastic general equilibrium (DSGE) model in decomposing capital inflows into portfolio growth and portfolio allocation components. Portfolio growth is based on new savings in line with zero-order portfolio shares, whereas portfolio reallocation is driven by first-order changes in portfolio shares associated with shocks to expected returns and risks.

3. BWW (2018) used data from McKinsey Global Institute (MGI) for a wide range of economies on their total financial assets (TFA) which includes equities, bonds, and loans. The proprietary nature of the MGI data on total financial assets further motivates the use of alternative measure of the benchmark.

4. Refer to BWW (2018) for detailed discussions on the concepts, methods, data sources, and assessment of benchmark portfolio inflows.

5. This assumption is consistent with Rey's (2013) conjectures.

6. Since new savings pertain to world gross inflow scaled by individual economy portfolio weights, global factors are the main drivers of benchmark flows. In contrast, deviations between actual and benchmark inflows are driven by both global and domestic factors.

Using aggregate world gross inflows as our measure for new savings, we construct our own benchmark inflows for SEG member economies; and compare them with actual inflows to assess deviations from benchmark.

World gross inflow is computed as the sum of individual economy gross capital inflows, which in turn is the sum of different types of flows including direct, portfolio equity and debt, derivatives, and other investments inflows. Annual data from 2000-2017 are taken from the IMF's Balance of Payments Statistics using BPM6, and they relate to incurrence of foreign liabilities, which are non-resident flows. Weights were calculated as the ratio of individual economy stock of foreign liabilities to world stock of liabilities (including direct, portfolio equity and debt, derivative, and other liabilities) taken from IMF's International Investment Position and supplemented by Lane and Milesi-Ferretti (2018) External Wealth of Nations Database. Our benchmark inflow is the individual economy weighted share of aggregate world capital inflows (total, direct, portfolio equity and debt, derivative, and other inflows), with weights referring to the ratio of individual economy foreign liabilities to total world liabilities. To account for cyclical fluctuations, our benchmark measures are one-year lagged values of five-year moving average values of the benchmark.⁷ Our computed benchmarks differ with BWW (2018) for portfolio equity and portfolio debt as we used total gross inflows instead of national savings.

The derived weights indicate that advanced economies dominate cross-border financial transactions as of end-2017.

Based on the computed weights, advanced economies should account for around 73% of world total capital inflows as of end-2017 (**Table 2.1**), of which United States alone should receive around 27% of the world total. The large share of advanced economies is not surprising as these economies represent some of the world's largest economies with high per capita income, fully developed financial systems, and large holdings of external assets. In contrast, SEG economies should receive around 20% of aggregate gross inflows, led by SEG Advanced Economies of Hong Kong, Korea, Singapore, and

Chinese Taipei; followed by Japan and China. Non-SEG other emerging and developing economies should receive around 8% of world gross inflows. These patterns hold across different types of inflows, including foreign direct, portfolio equity, and other investment inflows. However, for portfolio debt inflows, advanced economies should receive around 85% of world portfolio bond flows; whereas SEG economies should have around 10%. Advanced economies' larger share of bond inflows reflects the financial development and depth of their securities markets. Moreover, the larger weight placed on advanced economy bonds also reflects their safe-haven status.

Table 2.1: Individual and Grouping Benchmark Weights

(in percent of world total)

Economies/ Grouping	Total	FDI	Port- folio Equity	Port- folio Bonds	Other Invest- ment
United States	27.27	23.48	35.31	38.06	17.09
Advanced ex US	45.61	41.10	36.12	45.54	52.66
Japan	4.65	0.67	8.65	4.62	6.68
Australia	2.03	1.93	2.05	3.07	1.20
India	0.80	0.99	0.69	0.37	1.23
China	3.92	7.63	3.18	1.08	3.60
SEG Advanced	6.83	10.02	7.44	1.09	8.92
ASEAN4	1.06	1.48	1.32	0.75	0.92
BCLMV	0.21	0.40	0.04	0.02	0.34
SEG Others	0.10	0.09	0.02	0.06	0.22
Advanced Economies	72.89	64.58	71.42	83.60	69.75
EM/DEV Economies	7.51	12.21	5.19	5.35	7.15
SEG Economies	19.61	23.22	23.38	11.05	23.11
World	100.00	100.00	100.00	100.00	100.00

Note: Values refer to economy/group shares relative to world stock of liabilities for each type.

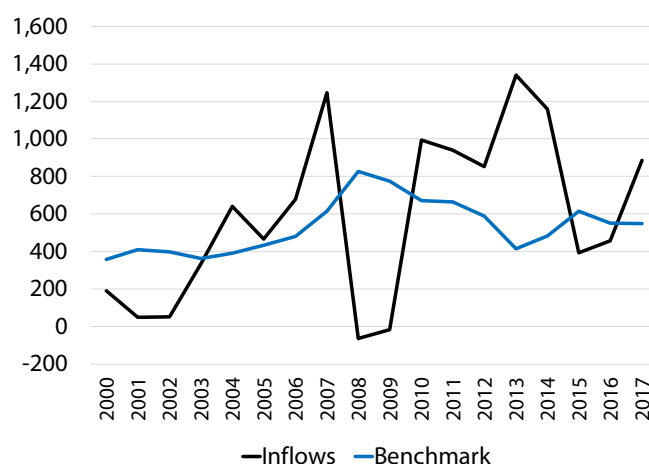
Source: SEACEN staff calculations using data from the IMF's International Investment Position and Lane and Milesi-Ferretti (2018).

7. BWW (2018) tested differences using one-year lag, three-year moving average lag and five-year moving average lag. The resulting benchmarks are highly similar although the five-year moving average lag yielded the smoothest benchmark.

B. Patterns, Trends, and Deviations of Actual and Benchmark Capital Inflows in SEG Economies

The actual drop below benchmark capital inflows for SEG economies in 2015-16 suggests that the slowdown should have been sustained in 2017, implying that the slowdown was a return to group benchmark inflows (Figure 2.2). However, the gap reversed in 2017 as the overall regional benchmark masks individual economy deviations from benchmark. The slowdown in capital inflows to China in 2015 was supposed to be a move closer to its reference value (Figure 2.3). But given that China receives substantially larger inflows relative to its benchmark in 2016-17, it contributed to the positive gap between regional inflows from the group benchmark in 2017. The same pattern holds true for India (Figure 2.4), albeit the decline in foreign capital inflows in 2015-16 was nowhere below its benchmark unlike in the case of China. Japan presents an entirely different case (Figure 2.5). Non-resident capital inflows have been below benchmark for most of the last two decades. But the deviations were wider for specific periods including 2008-09 and 2016-17. But given the significant deviation from its benchmark in 2017, it is expected that foreign capital inflows to Japan would most likely increase in the coming years, closing the gap between actual and benchmark inflows. In contrast to other economies, actual inflows to Australia oscillate around its benchmark (Figure 2.6). Although actual inflows are above benchmark from 2006 to 2014, the gap between the two is usually smaller compared to other large SEG economies. But based on its past actual inflows, the slowdown in 2016-17 is expected to reverse as gross capital inflows are significantly lower than the benchmark.

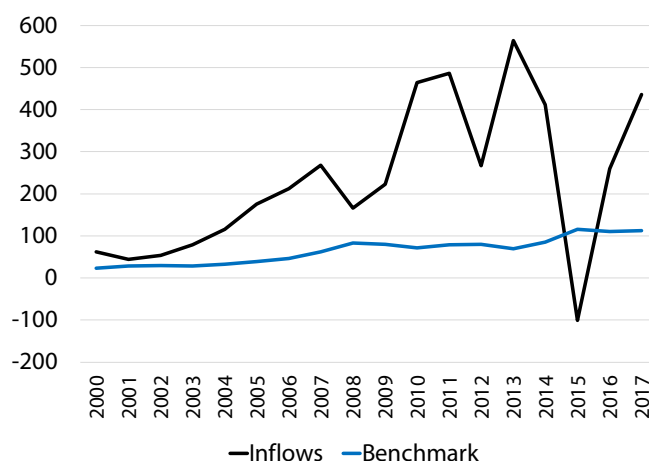
Figure 2.2: Capital Inflows - SEG Economies
(in US billion)



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Values refer to the sum of individual economy gross capital inflows. Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

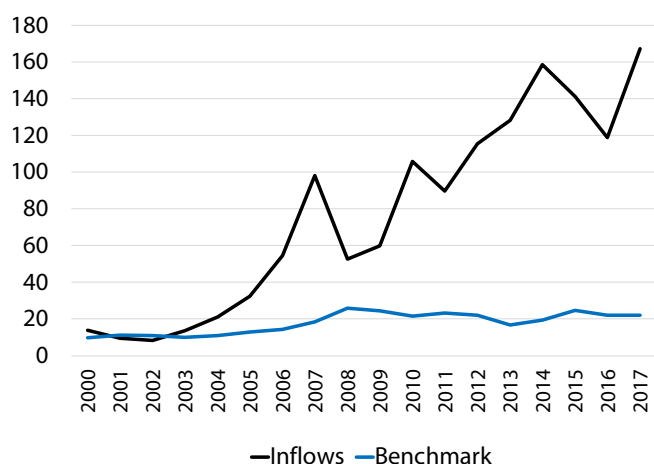
Figure 2.3: Capital Inflows - China
(in US billion)



Note: Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

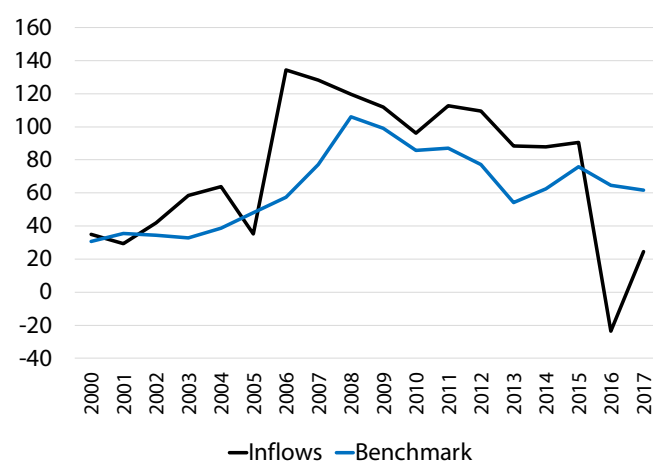
Figure 2.4: Capital Inflows - India
(in US billion)



Note: Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

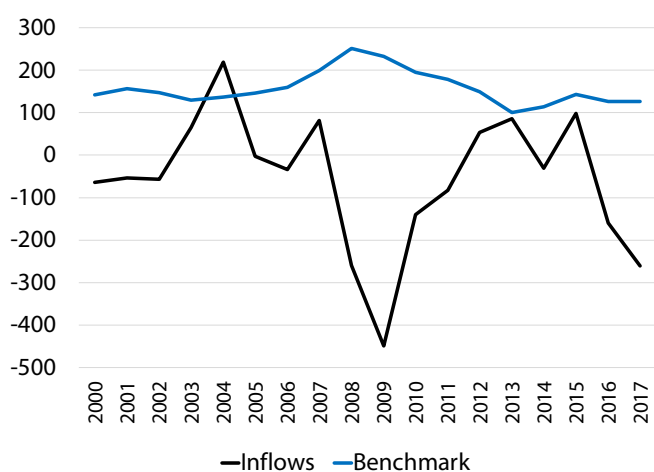
Figure 2.6: Capital Inflows - Australia
(in US billion)



Note: Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Figure 2.5: Capital Inflows - Japan
(in US billion)

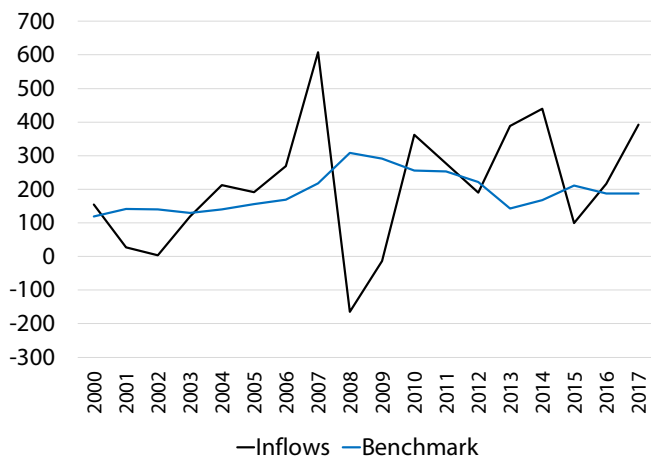


Note: Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

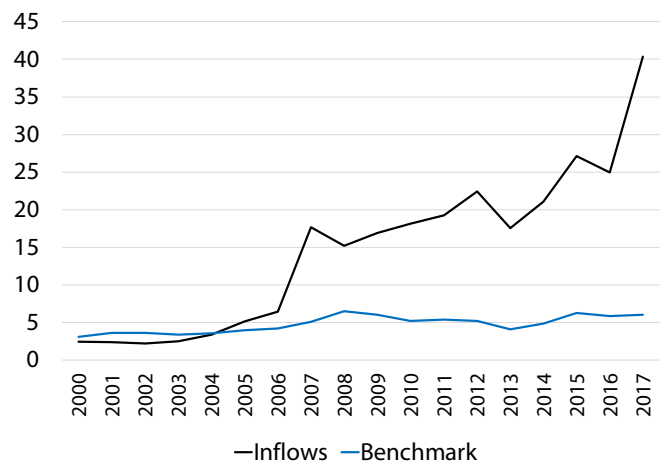
Individual economy patterns suggest that actual capital inflow can either oscillate around its benchmark value or have persistently lower or higher actual inflows relative to reference values. These broad patterns hold across SEG sub-groupings. Actual capital inflows fluctuate around benchmark flows for both SEG Advanced Economies and ASEAN4 economies as there are years when inflows are above or below their respective reference values (**Figures 2.7 and 2.8**). To illustrate, both sub-groups witnessed drops in capital inflows in early 2000s, 2008-09 and 2015-16, which were below their respective benchmark values; whereas for the remaining years, actual inflows were above benchmark flows. Across SEG Advanced Economies, fluctuations above and below respective economy benchmark appear more synchronised. For ASEAN4, there are differences across economies as to when actual inflows are above or below respective benchmarks. For BCLMV economies, actual inflows are always above benchmark values (**Figure 2.9**), while for SEG Other Economies, actual inflows are mostly below benchmark from 2000-10 but have since become consistently above benchmark (**Figure 2.10**). But the surge in gross capital inflows to SEG Other Economies in 2011-14 was temporary, and hence, the slowdown in gross inflows in 2015-16 suggests a return to the groups benchmark values.

Figure 2.7: Capital Inflows - SEG Advanced Economies
(in US billion)



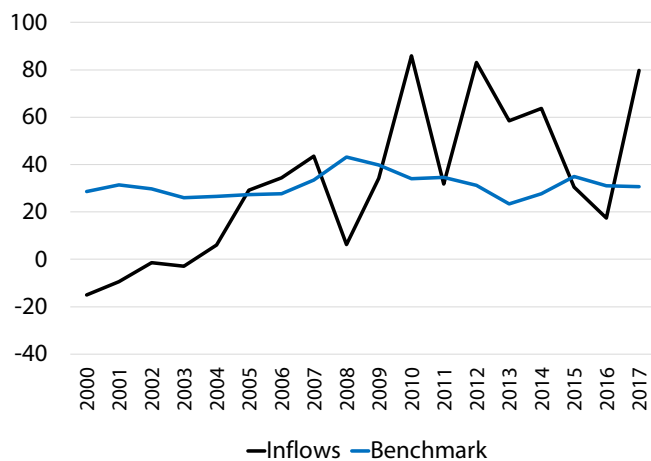
Notes: SEG advanced economies include Hong Kong, Korea, Singapore, and Chinese Taipei. Values refer to the sum of individual economy gross capital inflows. Benchmark values are lagged five-year moving average values.
Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Figure 2.9: Capital Inflows - BCLMV Economies
(in US billion)



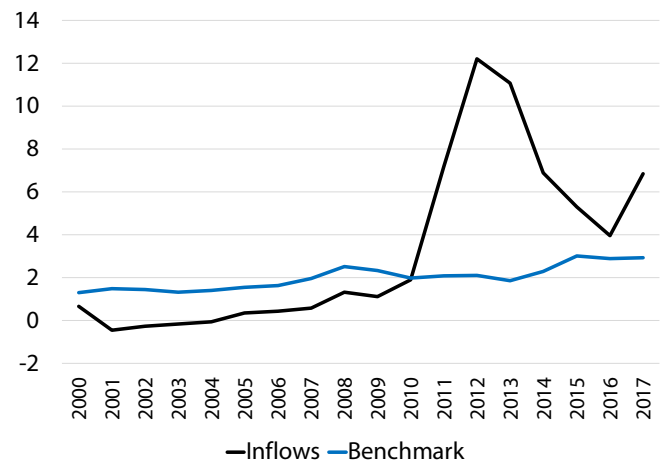
Notes: BCLMV economies include Brunei, Cambodia, Lao PDR, Myanmar, and Vietnam. Values refer to the sum of individual country gross capital inflows. Benchmark values are lagged five-year moving average values.
Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Figure 2.8: Capital Inflows - ASEAN4
(in US billion)



Notes: ASEAN4 economies include Indonesia, Philippines, and Thailand. Malaysia only reports net other investment inflows. Values refer to the sum of individual country gross capital inflows. Benchmark values are lagged five-year moving average values.
Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Figure 2.10: Capital Inflows - SEG Other Economies
(in US billion)



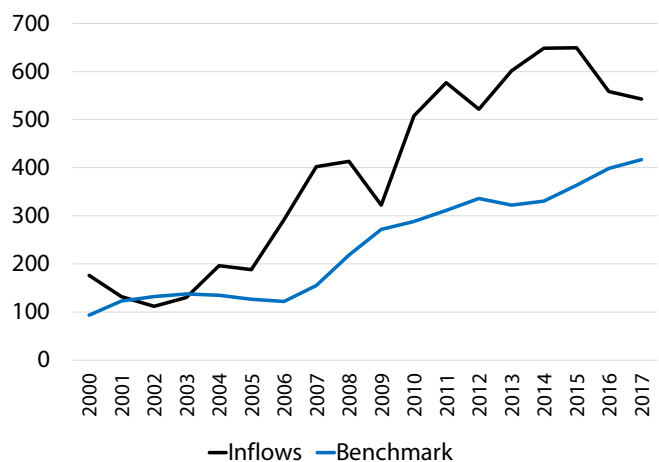
Notes: SEG other economies include Mongolia, Nepal, Papua New Guinea, and Sri Lanka. Values refer to the sum of individual country gross capital inflows. Benchmark values are lagged five-year moving average values.
Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Economies where capital inflows are persistently above or below benchmark values reflect their varying levels of economic and financial development, capital account openness, external positions, and even attractiveness to foreign investments. For both China and India, large positive gaps between actual and benchmark inflows can be accounted for by their robust economic growth for most years since 2000, which drew in more foreign investments. But in the case of China, its large positive deviation from the benchmark is in line with its smaller external liabilities compared to its larger external assets; thereby having a smaller share of liabilities relative to the world. For Japan, its consistently below benchmark inflows is most likely due to its financial derivative liabilities. For BCLMV and SEG Other Economies, their recent above benchmark inflows might possibly be due to their ongoing reforms including financial development and capital account liberalisation.

For both China and India, large positive gaps between actual and benchmark inflows can be accounted for by their robust economic growth for most years since 2000, which drew in more foreign investments. But in the case of China, its large positive deviation from the benchmark is in line with its smaller external liabilities compared to its larger external assets; thereby having a smaller share of liabilities relative to the world. For Japan, its consistently below benchmark inflows is most likely due to its financial derivative liabilities. For BCLMV and SEG Other Economies, their recent above benchmark inflows might possibly be due to their ongoing reforms including financial development and capital account liberalisation.

Across capital flow types, SEG economies receive substantially higher foreign direct investment inflows than what the regional benchmark values suggest. In contrast, other types of capital inflows fluctuate around their respective reference values. Foreign direct investment inflows to SEG economies are persistently above the regional benchmark since 2003, mainly due to China, India, and BCLMV economies whose FDI inflows are always above their respective reference inflows (**Figure 2.11**). For other types of capital inflows, e.g. portfolio equity, portfolio bond, and other investment inflows, actual inflows fluctuate either above or below their respective reference values. In relation to the slowdown in gross capital inflows in 2015-16, the drop in portfolio equity and other investment inflows represent a temporary movement below their benchmarks, which was duly reversed in 2017 (**Figures 2.12 and Figure 2.13**), while for portfolio bond inflows, the decline in 2015-16 suggests a return to its reference values (**Figure 2.14**).

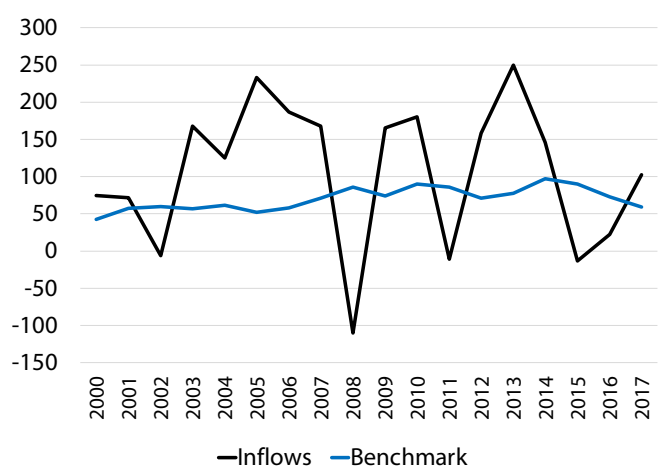
Figure 2.11: Foreign Direct Investment Inflows - SEG Economies
(in US billion)



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Values refer to the sum of individual economy foreign direct investment inflows. Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

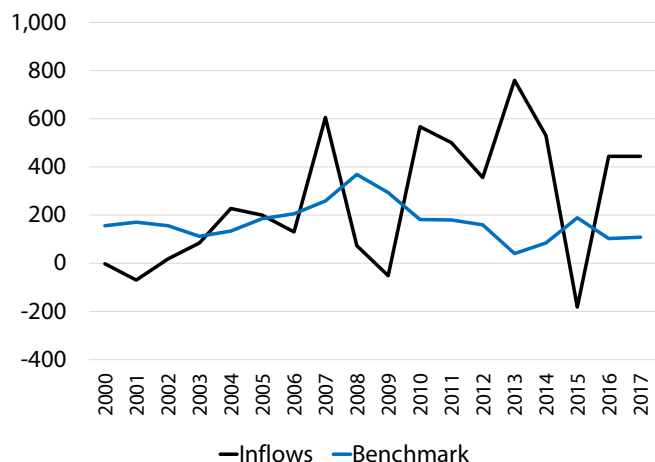
Figure 2.12: Portfolio Equity Inflows - SEG Economies
(in US billion)



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Values refer to the sum of individual economy portfolio equity inflows. Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

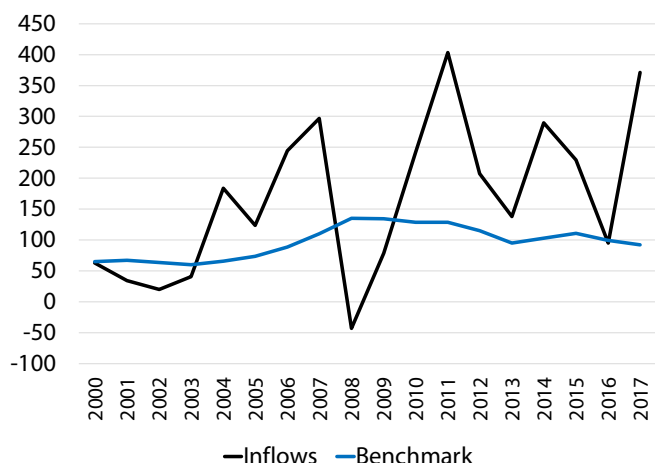
Figure 2.13: Other Investment Inflows - SEG Economies
(in US billion)



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Values refer to the sum of individual economy other investment inflows. Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Figure 2.14: Portfolio Bond Inflows - SEG Economies
(in US billion)



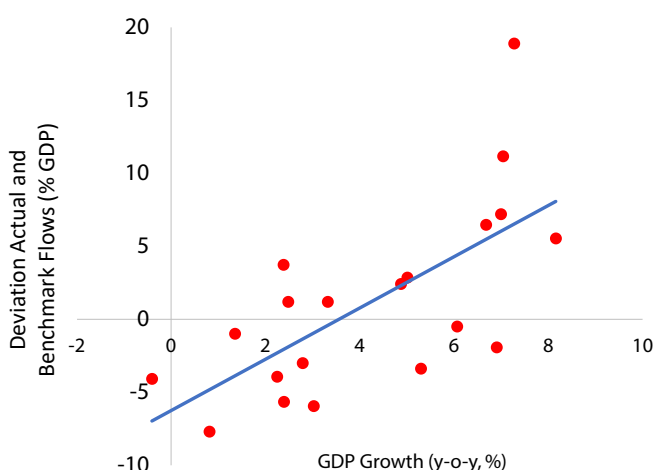
Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Values refer to the sum of individual economy portfolio bond inflows. Benchmark values are lagged five-year moving average values.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database.

Deviations from benchmark inflows are driven by global and domestic macroeconomic and financial conditions. BWW (2018) found that higher U.S. interest rate and risk aversion lead to below benchmark drops in portfolio inflows, particularly for emerging economies bond flows. Aside from global factors, domestic macroeconomic conditions also play an important role in widening or narrowing the gap between actual and benchmark values. To illustrate, the widening deviation between actual and benchmark capital inflows in 2015 strongly covaries with several domestic macroeconomic factors. Specifically, SEG economies with stronger economic growth and larger interest rate differential tend to have larger and positive deviations between actual and benchmark capital inflows (Figures 2.15 and 2.16). In contrast, economies with slower growth and smaller interest rate differential with the U.S. mostly receive capital inflows below benchmark values. In addition, SEG economies with larger current account surpluses tend to receive capital inflows less than their reference values, while those with current account deficits receive capital inflows in excess of their benchmark values (Figure 2.17). This is intuitive as those receiving above benchmark capital inflows are usually net borrowers; and, thereby, running current account deficits. These illustrate strong covariation between domestic factors and the deviation of capital inflows from benchmark values.⁸

8. We also considered covariation between actual and benchmark deviations, and domestic inflation and gross government debt but no clear patterns were observed.

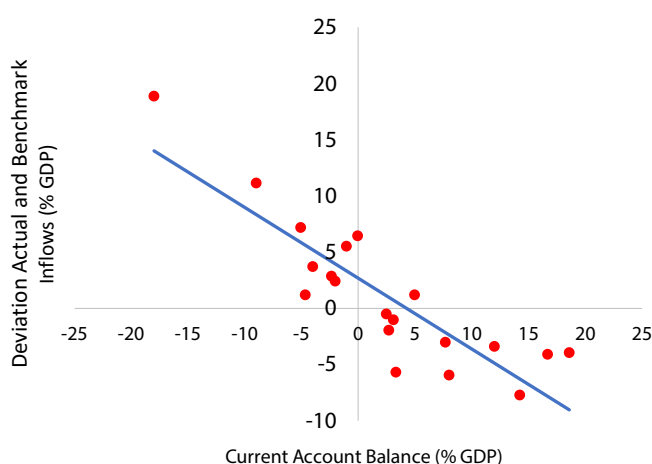
Figure 2.15: GDP Growth and Deviation from Benchmark - SEG Economies, 2015



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Lao PDR, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Deviation between actual and benchmark capital inflows in percent of nominal GDP. GDP growth refers to the year-on-year change in real GDP.

Source: SEACEN staff calculations using data from the Balance of Payments Statistics of IMF accessed through CEIC Database; and IMF's World Economic Outlook Database October 2018.

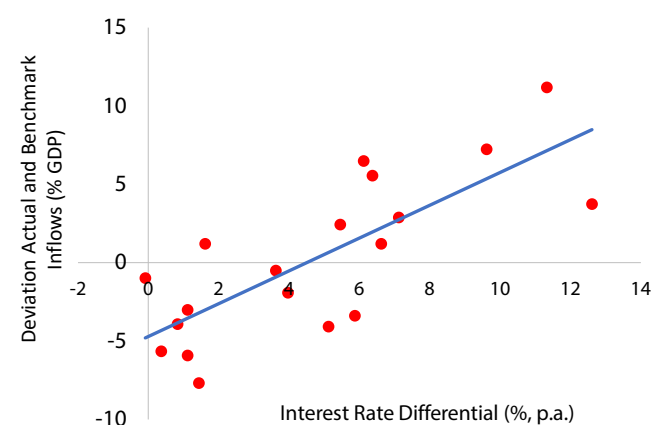
Figure 2.17: Current Account Balance and Deviation from Benchmark - SEG Economies, 2015



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Deviation between actual and benchmark capital inflows in percent of nominal GDP. Interest rate differential is the difference between domestic and U.S. interest rates in percent per annum.

Source: SEACEN staff calculations using data from the IMF's Balance of Payments Statistics and International Financial Statistics accessed through CEIC Database.

Figure 2.16: Interest Rate Differential and Deviation from Benchmark - SEG Economies, 2015



Notes: SEG economies include Australia, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, Korea, Mongolia, Myanmar, Nepal, Papua New Guinea, Philippines, Singapore, Sri Lanka, Chinese Taipei, Thailand, and Vietnam. Deviation between actual and benchmark capital inflows in percent of nominal GDP. Interest rate differential is the difference between domestic and U.S. interest rates in percent per annum.

Source: SEACEN staff calculations using data from the IMF's Balance of Payments Statistics and International Financial Statistics accessed through CEIC Database.

C. Empirical Considerations

This section illustrates the construction and interpretation of capital inflow benchmark, whilst considering the method of BWW (2018). Deviations between actual and benchmark inflows suggest that for most SEG economies, actual inflows fluctuate around their benchmark values, although there are economies where actual inflows are persistently above or below their benchmark. In addition, gaps between actual and benchmark levels tend to covary with global and domestic conditions. With these findings, there are several points to consider in refining the use of capital flow benchmarks, so they can be of better use in understanding current and expected patterns of capital inflows.

Alternative methods may be considered in deriving benchmarks. Specifically, country weights can reflect financial conditions in the domestic economy such as risk and return profile; financial development as well as financial openness. In these contexts, country weights could reflect "optimal" weights, instead of past weights. In addition, alternative ideas and methods of what "new

savings” should be must also be considered. In the case of BWW (2018), they used savings derived from new income. In contrast, this section uses world gross capital inflows as a measure of new world savings. Whatever alternative methodologies are used, capital inflow benchmark must be rooted in economic and theoretical intuitions as suggested by BWW (2018).

More importantly, understanding which factors drive the wedge between actual and benchmark flows rests on what the benchmark represents.

Determining whether benchmarks reflect optimal values, trend values, or expected values depends on their intended use. BWW (2018) and this section lean toward interpreting benchmarks as expected capital inflows. Consequently, deviations between actual and benchmark values are useful in assessing whether inflows are above or below what a country expects to receive. Thereby, fluctuations are

interpreted as either movement toward or away from expected values. This interpretation is useful in assessing whether current values will likely persist or reverse.

Lastly, we highlight that some economies tend to have persistently above or below benchmark inflows.

Understanding the relevant factors on why some economies exhibit such patterns is important in constructing and interpreting benchmarks. Moreover, differentiating between economies whose inflow fluctuates around their benchmarks versus those whose inflows are consistently above or below benchmarks also warrants attention. Varying macro-financial conditions might be at play as our benchmarks indicate that economies such as China, India, BCLMV and SEG Other Economies tend to have persistently above benchmark inflows, while Japan has persistently below benchmark.

SECTION III: KEY INDICATORS

Table 3.1: Net Capital Flows

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	-44.3	-58.3	-39.3	-36.2	-3.0	-4.7	-3.1	-2.6
Brunei	4.9	4.5	6.5	4.6	28.6	34.9	57.3	38.3
Cambodia	-1.1	-1.3	-1.4	-1.5	-6.7	-7.4	-6.9	-6.7
China	169.1	91.5	-27.6	-57.1	1.6	0.8	-0.2	-0.5
Hong Kong, China	9.4	16.6	13.0	19.8	3.2	5.4	4.0	5.8
India	-30.0	-22.9	-11.8	-39.0	-1.5	-1.1	-0.5	-1.5
Indonesia	-29.7	-17.9	-17.2	-17.6	-3.3	-2.1	-1.8	-1.7
Japan	58.7	180.9	261.7	157.5	1.2	4.1	5.3	3.2
Korea	89.3	106.3	102.6	87.1	6.3	7.7	7.2	5.7
Lao PDR	-1.8	-2.7	-2.7	-2.0	-13.2	-19.1	-17.0	-11.5
Malaysia	11.0	0.5	1.3	2.9	3.2	0.2	0.5	0.9
Mongolia	-2.0	-1.1	-0.8	-1.1	-16.2	-9.0	-7.4	-10.2
Myanmar	-0.6	-4.3	-3.9	-5.3	-1.0	-7.2	-6.1	-7.8
Nepal	0.8	2.6	0.5	-0.2	4.0	11.9	2.6	-1.0
Papua New Guinea	3.1	4.9	5.2	5.3	13.5	23.8	27.3	26.8
Philippines	6.8	4.9	-0.9	-3.5	2.4	1.7	-0.3	-1.1
Singapore	59.7	54.9	58.8	61.1	19.2	18.1	19.0	18.9
Sri Lanka	-1.5	-2.3	-2.2	-2.2	-1.9	-2.9	-2.7	-2.5
Chinese Taipei	63.5	81.0	66.5	78.1	12.0	15.4	12.5	13.6
Thailand	14.7	22.7	33.7	38.4	3.6	5.6	8.2	8.4
Vietnam	2.8	-7.6	-2.6	-7.7	1.5	-4.0	-1.3	-3.5

Notes: ... data unavailable from the IMF. Positive (negative) values mean an increase (decrease) in net capital outflows. Net capital flows refers to financial account assets minus financial account liabilities. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF BoP Statistics and World Economic Outlook Database, and national source.

Table 3.2: Financial Account Assets (Resident Capital Flows)

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	43.5	32.3	-63.0	-11.6	3.0	2.6	-5.0	-0.8
Brunei	5.2	4.2	6.2	5.2	30.6	32.8	54.4	43.0
Cambodia	0.6	1.2	1.5	2.0	3.7	6.5	7.6	8.8
China	580.6	-9.5	232.0	378.2	5.5	-0.1	2.1	3.1
Hong Kong, China	255.8	90.6	91.5	236.3	87.8	29.3	28.5	69.2
India	128.5	118.4	107.0	128.3	6.3	5.6	4.7	4.9
Indonesia	26.0	20.4	-3.8	29.7	2.9	2.4	-0.4	2.9
Japan	28.1	279.8	101.9	-102.8	0.6	6.4	2.1	-2.1
Korea	120.3	95.5	111.7	125.3	8.5	6.9	7.9	8.1
Lao PDR	0.5	0.4	0.1	0.5	3.9	2.6	0.3	2.9
Malaysia	...	...	...	...	...	...	...	...
Mongolia	-0.1	0.0	0.4	1.3	-0.6	0.0	3.7	11.2
Myanmar	1.8	0.5	-1.1	-0.1	2.7	0.9	-1.7	-0.2
Nepal	1.2	3.0	1.2	0.6	6.0	13.8	5.5	2.6
Papua New Guinea	2.8	5.0	4.9	4.4	12.1	24.3	26.0	22.2
Philippines	12.1	8.8	4.6	6.1	4.3	3.0	1.5	2.0
Singapore	192.4	114.0	158.8	163.7	61.8	37.5	51.3	50.5
Sri Lanka	2.6	0.9	0.0	2.9	3.3	1.1	0.0	3.4
Chinese Taipei	88.7	58.2	91.6	105.1	16.7	11.1	17.3	18.4
Thailand	17.5	11.1	32.2	61.1	4.3	2.8	7.8	13.4
Vietnam	17.1	9.3	14.4	23.0	9.2	4.9	7.1	10.4

Notes: ... data unavailable from the IMF. Positive (negative) value refers to an increase (decrease) in resident investment abroad. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF BoP Statistics and World Economic Outlook Database, and national source.

Table 3.3: Financial Account Liabilities (Non-Resident Capital Flows)

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	87.9	90.7	-23.6	24.6	6.0	7.4	-1.9	1.8
Brunei	0.3	-0.3	-0.3	0.6	2.0	-2.1	-2.9	4.6
Cambodia	1.7	2.5	2.9	3.4	10.5	13.9	14.4	15.5
China	411.5	-101.0	259.6	435.3	3.9	-0.9	2.3	3.6
Hong Kong, China	246.4	74.1	78.5	216.5	84.5	23.9	24.5	63.4
India	158.5	141.2	118.8	167.3	7.8	6.7	5.2	6.4
Indonesia	55.7	38.3	13.4	47.3	6.3	4.5	1.4	4.7
Japan	-30.5	98.8	-159.8	-260.3	-0.6	2.2	-3.2	-5.3
Korea	31.0	-10.8	9.2	38.2	2.2	-0.8	0.6	2.5
Lao PDR	2.3	3.1	2.8	2.5	17.1	21.8	17.3	14.4
Malaysia	...	...	...	...	...	...	...	...
Mongolia	1.9	1.1	1.2	2.4	15.5	9.0	11.2	21.4
Myanmar	2.4	4.8	2.8	5.1	3.7	8.1	4.4	7.6
Nepal	0.4	0.4	0.6	0.9	2.0	1.9	2.9	3.6
Papua New Guinea	-0.3	0.1	-0.3	-0.9	-1.4	0.5	-1.3	-4.7
Philippines	5.4	3.8	5.5	9.6	1.9	1.3	1.8	3.1
Singapore	132.7	59.1	100.0	102.6	42.6	19.4	32.3	31.7
Sri Lanka	4.1	3.2	2.2	5.1	5.2	4.0	2.7	5.9
Chinese Taipei	25.2	-22.8	25.1	27.0	4.8	-4.3	4.7	4.7
Thailand	2.7	-11.6	-1.5	22.7	0.7	-2.9	-0.4	5.0
Vietnam	14.3	16.9	16.9	30.6	7.7	8.8	8.4	13.9

Notes: ... data unavailable from the IMF. Positive (negative) value means an increase (decrease) in non-resident investment in the domestic economy. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF BoP Statistics and World Economic Outlook Database, and national source.

Table 3.4: Current Account Balance

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	-43.4	-57.3	-41.1	-36.4	-3.0	-4.6	-3.3	-2.6
Brunei	5.3	2.2	1.5	2.0	30.7	16.7	12.9	16.7
Cambodia	-1.4	-1.6	-1.7	-1.8	-8.5	-8.7	-8.4	-8.1
China	236.0	304.2	202.2	164.9	2.2	2.7	1.8	1.4
Hong Kong, China	4.1	10.3	12.7	14.7	1.4	3.3	4.0	4.3
India	-27.3	-22.5	-12.1	-38.2	-1.3	-1.1	-0.5	-1.5
Indonesia	-27.5	-17.5	-17.0	-17.3	-3.1	-2.0	-1.8	-1.7
Japan	36.4	136.5	194.0	195.8	0.7	3.1	3.9	4.0
Korea	84.4	105.9	99.2	78.5	6.0	7.7	7.0	5.1
Lao PDR	-1.9	-2.3	-1.4	-1.2	-14.5	-15.8	-8.7	-7.0
Malaysia	14.8	9.1	7.1	9.4	4.4	3.0	2.4	3.0
Mongolia	-1.9	-0.9	-0.7	-1.2	-15.8	-8.1	-6.3	-10.4
Myanmar	-2.1	-2.8	-1.8	-3.9	-3.2	-4.8	-2.8	-5.9
Nepal	0.5	2.4	-0.2	-0.8	2.5	11.4	-0.8	-3.3
Papua New Guinea	2.4	4.5	5.2	5.5	10.4	22.0	27.4	27.9
Philippines	10.8	7.3	-1.2	-2.2	3.8	2.5	-0.4	-0.7
Singapore	58.2	56.5	58.8	61.0	18.7	18.6	19.0	18.8
Sri Lanka	-2.0	-1.9	-1.7	-2.3	-2.5	-2.3	-2.1	-2.6
Chinese Taipei	60.4	74.9	72.8	82.9	11.4	14.2	13.7	14.5
Thailand	15.2	32.1	48.2	50.2	3.7	8.0	11.7	11.0
Vietnam	9.4	0.9	8.2	6.1	5.0	0.5	4.1	2.8

Notes: ... data unavailable from the IMF. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF BoP Statistics and World Economic Outlook Database, and national source.

Table 3.5: Net International Investment Position (Net IIP)

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	-695.2	-674.2	-699.8	-758.5	-47.8	-54.7	-55.3	-55.0
Brunei	...	...	...	...	...	...	...	...
Cambodia	-5.3	-8.5	-10.2	-15.0	-32.0	-47.2	-50.9	-67.9
China	1,602.7	1,672.8	1,950.4	1,814.1	15.2	14.9	17.4	15.1
Hong Kong, China	870.2	1,003.1	1,153.8	1,394.1	298.6	324.3	359.6	408.3
India	-361.5	-368.4	-367.5	-427.6	-17.7	-17.5	-16.2	-16.4
Indonesia	-384.0	-376.8	-333.8	-332.4	-43.1	-43.8	-35.8	-32.7
Japan	3,012.4	2,815.0	2,879.2	2,909.1	62.1	64.1	58.2	59.7
Korea	84.2	204.4	277.9	248.2	6.0	14.8	19.6	16.1
Lao PDR	...	...	...	...	...	...	...	...
Malaysia	-5.0	25.4	15.6	-6.2	-1.5	8.4	5.3	-2.0
Mongolia	-27.2	-28.6	-29.3	-32.0	-222.7	-243.7	-263.0	-287.6
Myanmar	-6.4	-9.4	-13.4	-18.3	-9.7	-15.9	-21.2	-27.3
Nepal	2.0	4.0	4.3	3.8	10.2	18.6	20.3	15.1
Papua New Guinea	...	...	...	...	...	...	...	...
Philippines	-40.9	-28.2	-28.0	-42.4	-14.4	-9.6	-9.2	-13.5
Singapore	584.9	622.5	666.7	804.3	187.7	204.7	215.2	248.3
Sri Lanka	-41.6	-43.0	-44.6	-48.4	-52.5	-53.5	-54.7	-55.4
Chinese Taipei	936.1	1,080.9	1,106.7	1,180.8	176.4	205.6	208.6	206.2
Thailand	-97.3	-42.8	-32.4	-41.6	-23.9	-10.7	-7.9	-9.1
Vietnam	...	...	...	...	...	...	...	...

Notes: ... data unavailable from the IMF. Net IIP refers to total international investment assets minus total international investment liabilities. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF International Investment Position and World Economic Outlook Database; and national source.

Table 3.6: Total International Investment Assets

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	1,662.3	1,621.0	1,685.1	1,882.1	114.2	131.5	133.3	136.4
Brunei	...	...	...	...	...	...	...	...
Cambodia	16.0	16.3	18.1	17.5	96.0	90.1	90.5	79.0
China	6,438.3	6,155.8	6,507.0	6,925.6	61.1	54.8	58.0	57.6
Hong Kong, China	4,176.6	4,364.2	4,609.1	5,469.0	1,433.1	1,410.7	1,436.3	1,601.7
India	493.0	531.3	543.1	613.5	24.2	25.3	23.9	23.6
Indonesia	201.9	212.4	300.5	338.5	22.7	24.7	32.2	33.3
Japan	7,811.7	7,883.1	8,444.1	8,967.4	161.1	179.4	170.6	184.0
Korea	1,078.5	1,144.0	1,244.5	1,453.7	76.4	82.7	88.0	94.4
Lao PDR	...	...	...	...	...	...	...	...
Malaysia	415.8	387.6	385.7	413.9	122.3	128.4	129.5	132.5
Mongolia	4.0	3.9	4.3	5.6	33.1	33.3	38.7	49.9
Myanmar	10.7	10.7	9.5	9.6	16.3	18.0	15.0	14.2
Nepal	7.2	9.4	10.2	10.7	36.2	43.7	48.4	43.0
Papua New Guinea	...	...	...	...	...	...	...	...
Philippines	148.0	155.1	161.3	171.6	52.0	53.0	52.9	54.7
Singapore	3,051.3	3,050.8	3,150.4	3,620.2	979.4	1,003.3	1,017.1	1,117.7
Sri Lanka	11.2	10.7	10.3	12.4	14.1	13.3	12.6	14.2
Chinese Taipei	1,568.9	1,664.6	1,789.3	1,982.7	295.7	316.7	337.2	346.3
Thailand	329.4	339.0	382.4	458.4	80.9	84.5	92.9	100.7
Vietnam	...	...	...	...	...	...	...	...

Notes: ... data unavailable from the IMF. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF International Investment Position and World Economic Outlook Database, and national source.

Table 3.7: Total International Investment Liabilities

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	2,357.5	2,295.1	2,384.9	2,640.6	162.0	186.2	188.6	191.4
Brunei	...	...	...	...	...	...	...	...
Cambodia	21.4	24.8	28.3	32.5	128.0	137.4	141.4	146.9
China	4,835.6	4,483.0	4,556.7	5,111.5	45.9	39.9	40.6	42.5
Hong Kong, China	3,306.4	3,361.0	3,455.3	4,074.9	1,134.5	1,086.5	1,076.7	1,193.4
India	854.5	899.8	910.6	1,041.1	41.9	42.8	40.1	40.0
Indonesia	585.9	589.3	634.3	670.9	65.8	68.5	68.0	66.1
Japan	4,799.3	5,068.1	5,564.9	6,058.4	98.9	115.3	112.4	124.3
Korea	994.3	939.5	966.6	1,205.4	70.5	67.9	68.3	78.3
Lao PDR	...	...	...	...	...	...	...	...
Malaysia	420.8	362.1	370.0	420.1	123.7	120.0	124.2	134.5
Mongolia	31.3	32.5	33.7	37.6	255.8	276.9	301.7	337.6
Myanmar	17.1	20.1	22.9	27.9	26.0	33.8	36.2	41.5
Nepal	5.2	5.4	5.9	6.9	26.0	25.2	28.0	27.9
Papua New Guinea	...	...	...	...	...	...	...	...
Philippines	188.9	183.3	189.3	214.0	66.4	62.6	62.1	68.3
Singapore	2,466.4	2,428.4	2,483.7	2,816.0	791.6	798.6	801.8	869.4
Sri Lanka	52.8	53.7	54.9	60.7	66.6	66.8	67.3	69.5
Chinese Taipei	632.8	583.7	682.5	801.8	119.3	111.1	128.6	140.0
Thailand	426.7	381.8	414.8	500.0	104.8	95.1	100.7	109.8
Vietnam	...	...	...	...	...	...	...	...

Notes: ... data unavailable from the IMF. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF International Investment Position and World Economic Outlook Database, and national source.

Table 3.8: Official Reserve Assets

	USD billion				% of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017
Australia	53.9	49.3	55.1	68.8	3.7	4.0	4.4	5.0
Brunei	...	...	...	...	...	...	...	...
Cambodia	4.4	5.1	6.8	8.8	26.3	28.2	33.7	39.8
China	3,899.3	3,406.1	3,097.8	3,235.9	37.0	30.3	27.6	26.9
Hong Kong, China	328.5	358.8	386.2	431.6	112.7	116.0	120.3	126.4
India	322.5	350.0	359.5	409.7	15.8	16.6	15.8	15.7
Indonesia	111.9	105.9	116.4	130.2	12.6	12.3	12.5	12.8
Japan	1,252.5	1,232.8	1,220.4	1,261.3	25.8	28.0	24.7	25.9
Korea	363.6	367.9	371.1	389.2	25.8	26.6	26.2	25.3
Lao PDR	...	...	...	...	...	...	...	...
Malaysia	116.0	95.3	94.5	102.1	34.1	31.6	31.7	32.7
Mongolia	1.7	1.3	1.3	3.0	13.5	11.3	11.7	27.1
Myanmar	4.5	4.4	4.9	5.2	6.8	7.4	7.8	7.7
Nepal	6.2	8.2	8.9	9.4	31.1	38.3	41.8	37.7
Papua New Guinea	...	...	...	...	...	...	...	...
Philippines	79.5	80.7	80.7	81.6	27.9	27.6	26.5	26.0
Singapore	257.7	248.2	246.3	279.8	82.7	81.6	79.5	86.4
Sri Lanka	8.2	7.3	6.0	8.0	10.3	9.1	7.4	9.1
Chinese Taipei	423.9	430.7	439.0	456.7	79.9	81.9	82.7	79.8
Thailand	157.1	156.5	171.9	202.6	38.6	39.0	41.7	44.5
Vietnam	...	...	...	...	...	...	...	...

Notes: ... data unavailable from the IMF. Data accessed through CEIC Dataset as of 30 November 2018.

Sources: SEACEN staff calculations using data from IMF International Investment Position and World Economic Outlook Database, and national source.

References

- Burger, J.D.; F. E. Warnock and V. C. Warnock, (2018), "[Benchmarking Portfolio Inflows](#)," *IMF Economic Review*, 66(3):527-563.
- International Monetary Fund, (2018), "[Global Financial Stability Report—A Decade After the Global Financial Crisis: Are We Safer?](#)", Washington DC, October.
- International Monetary Fund, (2018), "[World Economic Outlook: Challenges to Steady Growth](#)", Washington DC, October.
- Lane, P.R. and G. M. Milesi-Ferretti, (2018), "[The External Wealth of Nations Revisited: International Financial Integration in the Aftermath of the Global Financial Crisis](#)," *IMF Economic Review*, 66(1): 189-222.
- Rey, H., (2013), "[Dilemma Not Trilemma: The Global Financial Cycle and Monetary Policy Independence](#)," in Proceedings of the 2013 Federal Reserve Bank of Kansas City Economic Symposium at Jackson Hole, pp. 285–333.
- Tille, C. and E. van Wincoop, (2010), "[International Capital Flows](#)," *Journal of International Economics*, 80(2): 157–175.

SEACEN Capital Flows Monitor 2018 Update

The SEACEN Capital Flows Monitor 2018 is a bi-annual report on cross-border capital flows of SEACEN member economies, including Australia and Japan who are members of the SEACEN Expert Group (SEG) on Capital Flows. This issue discusses recent trends and outlook on capital flows and international investment positions; and includes a thematic section on benchmarking capital inflows. It also presents several tables on key external indicators related to the Balance of Payments Statistics and International Investment Position.

The SEACEN Centre

Since its inception in the early 1980's, The South East Asian Central Banks Research and Training Centre (the SEACEN Centre) has established its unique regional position in serving its membership of central banks in the Asia-Pacific region through its learning programmes in key central banking areas (including Macroeconomic and Monetary Policy Management; Financial Stability and Supervision, and Payment and Settlement System; and Leadership and Governance), research work, and networking and collaboration platforms for capability building in central banking knowledge.

**The South East Asian Central Banks (SEACEN)
Research and Training Centre**



The **SEACEN** Centre