

Ariyasajjakorn, Danupon; Pitchaya Sirivunnabood; Molineris, Matteo

Working Paper

Evolution of ASEAN financial integration in the comparative perspective

ADB Working Paper Series, No. 1123

Provided in Cooperation with:

Asian Development Bank Institute (ADBI), Tokyo

Suggested Citation: Ariyasajjakorn, Danupon; Pitchaya Sirivunnabood; Molineris, Matteo (2020) : Evolution of ASEAN financial integration in the comparative perspective, ADB Working Paper Series, No. 1123, Asian Development Bank Institute (ADBI), Tokyo

This Version is available at:

<https://hdl.handle.net/10419/238480>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/3.0/igo/>



ADB Working Paper Series

**EVOLUTION OF ASEAN FINANCIAL
INTEGRATION IN THE COMPARATIVE
PERSPECTIVE**

Danupon Ariyasajakorn,
Pitchaya Sirivunnabood,
and Matteo Molineris

No. 1123
April 2020

Asian Development Bank Institute

Danupon Ariyasajjakorn is an associate professor at the Faculty of Economics of Chulalongkorn University, Thailand. Pitchaya Sirivunnabood is a capacity building and training economist at the Asian Development Bank Institute (ADBI). Matteo Molineris is a research associate at ADBI.

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of ADBI, ADB, its Board of Directors, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

Working papers are subject to formal revision and correction before they are finalized and considered published.

The Working Paper series is a continuation of the formerly named Discussion Paper series; the numbering of the papers continued without interruption or change. ADBI's working papers reflect initial ideas on a topic and are posted online for discussion. Some working papers may develop into other forms of publication.

In this report, "\$" refers to United States dollars.

Suggested citation:

Ariyasajjakorn, D., P. Sirivunnabood, and M. Molineris. 2020. Evolution of ASEAN Financial Integration in the Comparative Perspective. ADBI Working Paper 1123. Tokyo: Asian Development Bank Institute. Available: <https://www.adb.org/publications/evolution-asean-financial-integration-comparative-perspective>

Please contact the authors for information about this paper.

Email: psirivunnabood@adbi.org

We would like to thank John Beirne for his advice and information on EU financial integration and EU financial statistics.

Asian Development Bank Institute
Kasumigaseki Building, 8th Floor
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

© 2020 Asian Development Bank Institute

Abstract

Since the Asian financial crisis of 1997–1998, the Association of Southeast Asian Nations (ASEAN) has continuously worked on the context of financial integration and put tremendous effort into ensuring financial stability in the region. Two ASEAN Economic Community (AEC) blueprints have been endorsed with elements of financial integration and liberalization, toward its goal of achieving regional financial integration and the complement of financial inclusion and financial stability. Though the effort seems ambitious, regional initiatives have been agreed and partly implemented in the areas of banking, insurance, capital accounts, capital markets, payment and settlement systems, taxation, financial inclusion, financial stability, financial resilience, and sustainable finance.

Given the long-standing process of financial integration of the European Union (EU), and the proven tangible economic benefits associated with a significant degree of financial integration, ASEAN could learn from the EU's experience, particularly under the current global challenges. This paper reviews ASEAN's process, which includes financial integration and financial stability, in comparison with that of the EU. The paper examines the effectiveness of the initiatives agreed and implemented by ASEAN against the EU's success story as an institutional benchmark. A set of conclusions and policy recommendations are derived at the end of this paper.

Keywords: financial integration, EU, ASEAN, economic integration, ASEAN Economic Community, financial stability

JEL Classification: F360

Contents

1.	INTRODUCTION	1
2.	COMPARISON BETWEEN THE EUROPEAN UNION AND ASEAN: POLICY MEASURES AND REGIONAL INITIATIVES	3
2.1	Money Market.....	4
2.2	Banking Integration	5
2.3	Payment and Settlement Systems	6
2.4	Capital Market Integration	7
2.5	Regional Financial Stability	8
3.	STATISTIC COMPARISON BETWEEN THE EU AND ASEAN: EMPIRICAL EVIDENCE	9
3.1	Financial Integration in European Union	9
3.2	Financial Integration in ASEAN	15
4.	CONCLUSION AND POLICY RECOMMENDATIONS	26
4.1	Institutionalization and Standardization	26
4.2	Regional Financial Integration Framework and Implementation	27
4.3	Monitoring and Evaluation Process	28
4.4	Financial Surveillance System for Financial Stability	28
4.5	Regional Cooperation.....	29
	REFERENCES	30

1. INTRODUCTION

For 20 years since the Asian financial crisis in 1997–1998, the Association of Southeast Asian Nations (ASEAN) has continuously worked on the context of financial integration and put tremendous effort into ensuring financial stability in the region. Firm development started after the Asian financial crisis with the endorsement of the Roadmap for Monetary and Financial Integration of ASEAN (RIA-FIN) by the ASEAN Finance Ministers in 2003. The RIA-FIN covers the three primary financial areas of financial services liberalization, capital account liberalization, and capital market development. In parallel, to ensure financial stability in the region, ASEAN established the Macroeconomic and Finance Surveillance Office in June 2010, which was renamed and restructured as the ASEAN Integration Monitoring Directorate (AIMD) in 2016.

Paving the way toward regional economic integration, ASEAN has endorsed two ASEAN Economic Community (AEC) blueprints, which incorporated major elements of financial integration and taxation cooperation, for different timelines, i.e., 2007–2015 and 2016–2025 (post AEC realization in 2015). In addition to these AEC blueprints, ASEAN has endorsed the ASEAN Banking Integration Framework and the ASEAN Insurance Integration Framework 2020 as a part of financial services liberalization while the initiatives to ensure regional financial stability have been implemented through regional economic surveillance and crisis management and the ASEAN+3 (i.e., ASEAN in cooperation with the People's Republic of China [PRC], Japan, and the Republic of Korea) Finance Cooperation.

Learning, to some extent from the experience of the European Union, ASEAN has changed its approach from counting the number of implemented policy measures indicated in the blueprint to designing detailed action plans with targeted timelines. The idea of sectoral action plans was proposed for an effective implementation process in achieving its regional integration goal. Taking on this idea, the ASEAN Finance Ministers and Central Bank Governors approved the **Strategic Action Plans (SAPs) for Financial Integration 2016–2025**, followed by the **SAP for Taxation Cooperation**. With this approach, the initiatives settled upon in the SAPs for financial integration range beyond the ones in the RIA-FIN. The extended documents include those of the banking sector with a focus on the regional-bank concept (i.e., Qualified ASEAN Banks or QABs), safe, secure, and innovative payment and settlement systems, financial inclusion, taxation cooperation, and financial stability. To accommodate the initiatives enhancing the regional financial stability and promoting the local currency debt markets, the ASEAN+3 Finance Cooperation also established working bodies with the support of the Asian Development Bank (ADB) and the ASEAN+3 Macroeconomic Research Office (AMRO) as the macroeconomic and financial surveillance body.

Additionally, in terms of a monitoring process, ASEAN has endorsed the AEC Monitoring and Evaluation Framework, conducted and managed by the AIMD, to measure the implementation progress and ensure timely implementation with respective timelines. At the financial sector level, ASEAN established seven working bodies under the ASEAN Finance Ministers and Central Bank Governors (AFMGM) for each respective financial area to implement the action plans as identified in the SAPs and to ensure sensible action plans/policies in response to the current global circumstances. The macroeconomic and financial risk monitoring process is also undertaken under the ASEAN central banks' supervision. The regional financial safety net, also known as the "Chiang Mai Initiatives Multilateralization" (CMIM), is operated by AMRO.

With these efforts and the ongoing initiatives, ASEAN shows its determination to achieve regional financial integration with the complement of financial inclusion and financial stability. Though the effort seems ambitious, regional initiatives have been agreed and partly implemented in all relevant coverage of banking and insurance sectors, capital account liberalization, capital market development, payment and settlement systems, taxation, financial inclusion, financial stability, financial resilience, and sustainable finance. Despite these efforts, statistics still show a low degree of financial integration at the regional level; however, different levels of integration are demonstrated across the markets and economies in the region. For example, on the one hand, different levels of financial liberalization are evident among the ASEAN member states. On the other hand, the capital market and portfolio investment seem to be more integrated than banking and money markets.

Similarly to ASEAN, the European Union (EU) expended numerous resources to achieve its goal of regional financial integration. Priority was given to the creation of a single market and an economic and monetary union accommodating a single currency framework. The introduction of a single currency, i.e., the euro, has played a big part in stimulating the deeper and more unified European financial markets. The EU's long-standing process of financial integration has provided tangible economic benefits associated with an increase in investment flows, improved efficiency led by a decrease in financial costs, particularly in the banking sector and capital market, and a rising trend of financial professional movement in the region. The development of an efficient system for policy coordination has played the biggest role in the integration process. A remarkable convergence of regulatory and supervisory frameworks, as well as macroeconomic prudential policies, was evident in the region to support the progress of this integration process. With its success, the monetary policy has been completely pooled and new institutions created, i.e., the European Monetary System (EMS), the European Monetary Union (EMU), and the European Central Bank (ECB). The harmonization and standardization of economic and monetary policies have driven the EU to become the most homogeneous economic group in the world economy. A concern, however, has been raised about the financial stability and the spillover channel once uncertainty happens. The EMS, therefore, strengthens the policy cooperation in the region and reinforces financial assistance to the members.

With its ambitious initiatives for regional financial integration, coupled with financial risks, new challenges, and disruption, e.g., financial technologies (FinTech) and artificial intelligence (AI), ASEAN can learn from the EU's experience, particularly when it comes to monitoring and surveillance systems. Putting these systems in place not only helps in tracking implementation progress but also ensures financial stability. Though some commonalities are pronounced between the two regions, e.g., complex economic and social models, and the goal to pursue stability-oriented economic and financial systems as well as open regionalism, a major variance between the regions is the fundamental difference in organization and institutionalization. Although both ASEAN and the EU are regional organizations founded with the original goal of promoting peace, and hence economic integration, ASEAN is only an intergovernmental organization while the EU is a supranational one. In other words, EU member states have agreed to pool their sovereignty, which is exercised by the European Commission on their behalf. In addition, the EU has a Parliament as a central organization that exercises power to legislate and to veto. The major difference between the EU and ASEAN is the role of the European Commission (EC) versus that of the ASEAN Charter. While the EC functions like a central government and is entitled to enter into treaties as well as putting forward proposals for legislation, the ASEAN Charter is only an agreement that gives the Secretary-General the responsibility to report back to the member states on the progress of their compliance with their obligations. There is

also a difference in the decision-making process of the two regions. ASEAN's decision-making process is based on consensus while the EU's process is based on voting (Koh 2017).

These differences in both political cooperation and the decision-making process lead to different abilities to pursue economic integration in the region. This also implies difference in the political ambition and timing of efforts made toward deeper financial integration. ASEAN's financial integration process can be described as market-driven integration, where the process happens when it is beneficial to all parties, while the EU's financial integration is based on economically and politically set arrangements subject to firm commitments and sanctioning mechanisms.

This paper proceeds with a comparison analysis of the financial integration between the EU and ASEAN, which includes a review of EU and ASEAN initiatives for regional financial integration, empirical evidence of the financial integration trends in each economy, and the process of financial integration. The paper also examines the effectiveness of the initiatives that ASEAN has agreed to and implemented compared to the EU's success stories, through a set of financial indicators, as an institutional benchmark. A set of conclusions and policy recommendations are derived based on the findings of the analysis to strengthen the regional financial integration in Southeast Asia.

2. COMPARISON BETWEEN THE EUROPEAN UNION AND ASEAN: POLICY MEASURES AND REGIONAL INITIATIVES

There is a long-standing history of financial integration in both the EU and ASEAN. Though the end goal of regionalism is similar and the common interests are evident, the processes and approaches are different. Both regions aim for an open and integrated economic and financial system complemented by stability-oriented economic and financial strategies that enhance sustainable growth and improve economic welfare. On the other hand, economic diversity is more noticeable in Southeast Asia while the homogeneous economic grouping has appeared to be a foundation for the European Union. The significant differences can be pinned down to two major areas. The first is the political willingness – in other words, the extent of the efforts made toward deepening regional integration. Europe has shown itself to be more ambitious in regard to economic integration than ASEAN in making explicit a sovereign and political goal of building social and economic ties. Second, unlike the EU, institutionalization does not appear to be a priority for ASEAN in terms of integration. The perspective of regional integration being supported by institutions imposing legally binding rules and norms on their members seems trivial in ASEAN. As already mentioned, the EC is granted the power to legislate and enter into treaties, which can accelerate the integration process and make it more effective and successful than purely relying on consensus.

As a result, some economists have referred to the process as hard economic integration in the EU based on politically set arrangements while suggesting that Asia, including ASEAN, have only pursued a concept of soft integration or strategies of open regionalism and open integration or coming together when it fits their interests (Berkofsky 2005). The economic integration in Asia thus described as market-driven integration. We should then be cautious about comparing the progress between the two regions.

This section generally compares the policy measures and regional initiatives developed and/or adopted by the EU and ASEAN in the selected financial areas. A comparison of approaches and progress between the two regions is also described here. An assessment shows a board comparison of how the two regions design their policy frameworks and pursue the implementation of regional financial integration. The section focuses on the main sectors of the money market, banking, payment and settlement systems, capital markets, and financial stability.

2.1 Money Market

Since the announcement of monetary union and the circulation of the euro in 2002, the European money market has become the fastest financial market segment to achieve financial integration. The Eurosystem was established as the monetary authority of the eurozone (19 EU member states that adopted the euro as their sole official currency) with the main objective of price stability, followed by financial stability and financial integration. The Eurosystem plays a significant intermediary role in providing liquidity in the regional money market through its monetary policy operations. The European Central Bank (ECB), on the other hand, is in charge of monetary and financial stability in the eurozone. The ECB enacts the monetary policy measures to achieve money market integration in the region. The measures include, for example, forward guidance on key interests, i.e., lending and borrowing rates, the Asset Purchase Programme (APP), targeted long-term refinancing operations (TLTROs), and prolongation of the fixed rate tender procedure with full allotment in regular refinancing operations (ECB 2018). In addition, the EU established central clearing settlement through central counterparties (CCPs) for money market operation. The CCPs help to facilitate money market activities while limiting risk exposure. To facilitate assessment of the degree of money market integration, the ECB has recently created Money Market Statistics (MMS). The data collection started in 2016 to be used for examining both the volume of cross-border transactions and interest rate convergence. With these policy measures, evidence shows an increasing number of cross-border transactions in the eurozone along with a modestly declining divergence of money market rates captured by better statistical tools.

ASEAN, on the other hand, does not have a common currency like the euro, nor unified or institutionalized policy frameworks for its money market at the regional level. Instead, ASEAN is moving toward financial integration and enhancing regulatory convergence in the region by developing a set of shared principles and regional frameworks as well as maintaining financial systems. ASEAN has established official working bodies, which are under the supervision of central bank and the ministry of finance of the ASEAN member states (AMS), to undertake these processes. Although the idea of an Asian common currency was proposed once with the inclusion of three other Asian countries, i.e., the PRC, Japan, and the Republic of Korea, the idea did not push through due to different stages of economic development in the region and unclear discussion on which country should lead this common-currency initiative. Nevertheless, ASEAN has recently announced a local-currency settlement framework to promote the use of local currencies to enhance trade and direct investment in the region. This framework could be the closest initiative for money market integration or, at least, minimize exchange rate risk in the region.

The operationalization of the ECB and the euro has proved strong integration in the money market in the eurozone. At the same time, the official issuances of regulatory frameworks, guidelines, and measures have ensured transparency and financial stability in the region. Although ASEAN has developed a set of shared principles, which are mostly based on international frameworks, it does not entirely guarantee the compliance

of the AMS with these shared principles. In addition, the initiative of a local-currency settlement framework is implemented on a volunteer and readiness basis, which is nothing near to being considered integrated as regards the use of a common currency.

2.2 Banking Integration

After the global financial crisis in 2008 and the subsequent sovereign debt crisis in Europe, the idea of a banking union was discussed in the European Union. This idea emerged mainly due to a concern over the spillover effect from one EU member state to another given the close links between public-sector finances and the banking sector. The main goal of the banking union is a more transparent, unified, and safer European banking system. As a result, two pillars were introduced as a foundation that all EU countries needed to adopt in order to establish the European Banking Union. First, the Single Supervisory Mechanism (SSM) is the banking supervisory system for Europe, comprising the ECB and the national supervisory authorities of participating countries. The second pillar is the Single Resolution Mechanism (SRM),¹ which ensures the resolution of failing banks with minimal costs for taxpayers and the real economy. The ECB is a supervisory body that evaluates a bank's performance and decides whether a bank is failing or likely to fail, while the Single Resolution Board will ensure prompt decision-making procedures once the failing occurs. The Single Resolution Fund, financed by contributions from banks, will be available to pay for resolution measures. In addition to these two pillars, a set of prudential, legal, administrative, and supervisory rules is developed in the form of the so-called "Single Rulebook" to govern and supervise the financial sector in all EU economies more efficiently. Consequently, the banking union enables harmonization and standardization of the application of EU banking rules, starting with participating countries.

For ASEAN, the ASEAN Banking Integration Framework (ABIF) was established to facilitate operationalization of the banking integration process. The so-called *2+X approach* was designed based on the readiness of the AMS for the integration process. In other words, ASEAN agreed to proceed with bilateral reciprocal arrangements under the ABIF to create Qualified ASEAN Banks (QABs) rather than having one multilateral agreement on banking integration for all. Two participating AMS can start negotiations on the bilateral arrangement; once agreed and signed, in principle, a list of qualifications will be announced for interested local banks in both countries to comply with in order to set up the QABs in the other partner country. If a third AMS is interested in joining this bilateral arrangement, a request can be made to the existing AMS parties. The objective of these bilateral reciprocal arrangements is to provide the QABs with greater market access and operational flexibility similar to that accorded to indigenous banks in the host country. In terms of banking regulatory frameworks, ASEAN has established a working committee on the ABIF to formulate initiatives that will promote the effectiveness of the supervisory framework as well as improving regional cooperation on a prudential framework and financial stability arrangement for regional financial integration. Unlike the EU, there is no central authority to impose, implement, and monitor the progress of the policy measures. There is also no single supervisory mechanism in ASEAN.

¹ More details on the SSM and SRM are available at <https://www.bankingsupervision.europa.eu/about/bankingunion/html/index.en.html>.

It is clear that, when it comes to banking integration, ASEAN is still far behind the integration in the EU. To date, there are no QABs operating in ASEAN while European banks can operate and be treated like local banks anywhere in the eurozone. Furthermore, for transparency and financial stability, there are various banking supervisory and regulatory frameworks across ASEAN. All AMS are encouraged to adopt the Basel Standards but there is no single framework like the one developed by the EU.

2.3 Payment and Settlement Systems

The vision of a Single Euro Payments Area (SEPA) was initiated in 2002 to harmonize euro payments in the region. Though it is an ongoing initiative as the EU members can gradually participate when ready, more than 520 million citizens live in the SEPA and make 22 billion electronic payments every year (<https://www.europeanpaymentscouncil.eu>). The SEPA road map was first adopted during the period 2004–2010, starting with credit transfer and direct debit schemes or a single set of interbank rules, practices, and standards to be observed by credit institutions and the banking industry in Europe. The timelines were set for the adoption of SEPA or SEPA migration for both EU and non-EU members in 2014 and 2016, respectively. In December 2013, the ECB announced the creation of the Euro Retail Payments Board (ERPB) to help foster the development of an integrated, innovative, and competitive market for retail payments in euros in the European Union.

In ASEAN, a working committee on payment and settlement systems (PSS) was established to implement the interconnected payment systems in the region. The main objective is to achieve a safe, innovative, competitive, efficient, and more interconnected payment system. However, there is no single framework for rules and practices. Instead, ASEAN tries to achieve the interconnection of the payment and settlement systems through the adoption of international standards (ISO20022),² bilateral/multilateral payment system linkages while developing settlement infrastructure for cross-border transactions, i.e., trade, remittance, retail payments, and capital markets. ASEAN has recently developed the ASEAN Payment Policy Framework as guidelines for cross-border real-time retail payments across AMS to facilitate a competitive economic environment. AMS are encouraged to use these guidelines as a standard framework for their payment and settlement systems; however, this is voluntary.

While SEPA is the single payment settlement system in the EU operated by a single set of regulations, ASEAN as yet has no connected payment and settlement system in the region. One possibility is being developed between the PayNow system of Singapore and the PromptPay system of Thailand. In addition, the definitions of real-time settlement are still varied across the region, which leads to delays in financial transactions, less efficiency, and less interoperability. ASEAN also relies on the member states' compliance with international standards rather than developing a regulatory framework for the region.

² ISO20022 is an ISO standard for electronic data interchange between financial institutions. The standards cover financial information transferred between financial institutions that includes payment transactions, securities trading and settlement information as well as credit and debit card information and other financial information.

2.4 Capital Market Integration

The EU adopted a resolution on building a Capital Markets Union (CMU) in 2015 as a major initiative for the region's capital market integration, with the aim of reducing market barriers and facilitating saving flows for cross-border investments in the region. It also set out to foster sustainable finance via direct investment in environmentally friendly projects. The Action Plan on Building a CMU, published in 2015, is built around the four key principles of: (i) creating more opportunities for investors, (ii) connecting financing to the real economy, (iii) fostering a stronger and more resilient financial system, and (iv) deepening financial integration and increasing competition (EU Commission 2015). Three main components are included in the Action Plan on Building a CMU: making the most of a single market for consumers and investors through new European products, supporting businesses and entrepreneurs through clearer and simple rules, and a more efficient supervisory body of EU capital markets. To achieve these components, 13 CMU legislative initiatives and three sustainable finance legislative initiatives are proposed, covering a wide range of financial areas such as a bond framework, pension products, cross-border distribution of collective investment funds, SME access to finance, anti-money laundering, supervisory regimes, crowdfunding, transparency and standardization, taxonomy, etc. To monitor progress and effective implementation as well as increasing public awareness, the EU Commission launched a public consultation on the CMU midterm review in 2017.

The capital market integration in ASEAN, on the other hand, is implemented through policy measures supervised and monitored by three main working bodies. First, the working committee on capital account liberalization (CAL) aims for a freer flow of capital in the region by gradually removing restrictions on current accounts, foreign direct investments, and portfolio investments. Second, the working committee on capital market development (CMD) focuses on initiatives to integrate bond markets in the region. These initiatives are developed to build capacity and lay infrastructure for the development of capital markets in ASEAN. Lastly, the ASEAN Capital Markets Forum (ACMF) targets a liquid and integrated capital market, particularly in equity markets. Several initiatives have been completed as part of capital market integration in ASEAN, i.e., the ASEAN Trading Link (ATL) among three ASEAN economies (Malaysia, Singapore, and Thailand), the ASEAN Collective Investment Scheme (CIS) Framework, and the ASEAN Green Bond Standards.

In addition, when it comes to regulatory and supervisory frameworks, each working body has developed a framework to ensure capital market stability. For example, CAL has created the ASEAN CAL heat map to monitor the progress of capital market integration via the relaxation of capital controls and restrictions. A policy dialogue process and safeguard mechanism are in place to monitor capital flows in the region and exchange experiences on capital market management. The CMD has implemented the ASEAN Bond Market Development Scorecard for regulatory regimes. The ACMF adopted the ASEAN Corporate Governance Scorecard to raise corporate governance standards and practices.

Beyond the ASEAN cooperation for capital market integration, ASEAN is working with the PRC, Japan, and the Republic of Korea (ASEAN+3) on the development of local currency bonds. The Asian Bond Markets Initiative (ABMI) was launched in 2003 to develop the local-currency-dominated bond markets and to build more accessible and well-functioning regional bond markets both for issuers and investors. The ABMI road map was endorsed and implemented by task forces under the supervision of ASEAN+3 finance ministries and central banks.

Compared to the development in other financial markets, ASEAN's capital markets have progressed the most, in terms of products and regulatory standardization and harmonization. However, compared to the capital market development in the EU, the integration among the member states is still low. While the CMU is operated based on the Action Plans covering a wide range of capital market pillars, ASEAN's initiatives are only adopted by some AMS whose financial infrastructure and system are ready. The monitoring process implemented by ASEAN is mostly based on a scorecard approach, which is considered simpler than the EU's supervisory regime that involves complex modeling and periodical public consultations.

2.5 Regional Financial Stability

The European System of Financial Supervision (ESFS) was established in 2010 to monitor and maintain financial stability in the EU. The ESFS is a multilayered system of micro- and macro-prudential authorities, consisting of the European System Risk Board (ESRB), three European Supervisory Authorities (i.e., the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA), and the European Insurance and Occupational Pensions Authority (EIOPA)), and national supervisors. The main function is to ensure consistent and coherent financial supervision implemented across the region in preserving financial stability. The micro-prudential supervision is conducted by the EBA, ESMA, and EIOPA as a joint committee while the ESRB performs the macro-prudential oversight of the EU financial system. As for the financial safety net, the European Financial Stability Facility (EFSF) was established to safeguard financial stability in the EU by providing financial assistance to EU member states in economic difficulty. Contributions to the fund are made by 16 EU member states subject to the size of their economy.

ASEAN, on the other hand, does not have a central authority for financial supervision. However, the element of financial stability is clearly stated in the SAP for financial integration 2016–2025 as the policy actions are or will be undertaken by the respective working committee. The main goal is similar to the EU's mandate, i.e., encouraging regulatory and supervisory coherence, harmonization, and standardization. ASEAN also aims to promote financial stability coordination and cooperation on supervision and crisis recovery, management, and resolution. To strengthen the macroeconomic and financial surveillance system at the regional level, ASEAN established the ASEAN Integration Monitoring Office in 2011, which was restructured to the ASEAN Integration Monitoring Directorate (AIMD) in 2016. Furthermore, the Chiang Mai Initiative Multilateralization (CMIM) was established under the ASEAN+3 Finance Cooperation to create a regional safety net. The CMIM is a network of bilateral currency swap arrangements to help the ASEAN+3 member states address economic difficulty or short-term liquidity shortage. Like the EU, the contribution of the CMIM comes from the ASEAN+3 members mainly subject to the size of their economy. The CMIM is operated and monitored by the so-called ASEAN+3 Macroeconomic Research Office (AMRO), based in Singapore.

The complexity of supervisory systems in both regions is significantly different. The ESFS is a multilayered system with micro- and macro-prudential authorities while the AIMD and AMRO are not prudential authorities but rather monitoring bodies designated by AMS. Although, in principle, the EFSF and AMRO may play similar roles for regional financial stability, AMRO seems to have a limited capacity, with a much smaller number of economists and financial specialists. The AIMD, on the other hand, is a monitoring office attached to the ASEAN Secretariat to oversee the progress of all the initiatives under the ASEAN Economic Community, not just the financial integration and financial

stability. Thus, the AIMD has limited coverage in financial integration and its associated policy measures and implementation.

From the stocktaking of EU and ASEAN initiatives and policy measures for financial integration in this section, a number of conclusions can be derived. First, the existing and ongoing approaches adopted by both regions confirm the previously highlighted point on different political ambitions to deepen financial cooperation between the two regions. Institutionalization can be a catalyst to stimulate the financial integration process. Thus, the EU has established relevant authorities for operation, implementation, and supervision while ASEAN relies on the regional financial integration process of the working official bodies that gather for policy and progress updates approximately twice a year. Second, the EU undertakes the implementation process with solid timelines and a range of sanctions; ASEAN, however, proceeds with a degree of flexibility based on the readiness of its member states and peer pressure. Lastly, without capacity building for the younger economies, the difference in financial development across the region will be a major obstacle for ASEAN that hampers its financial integration. This is probably one of the reasons why ASEAN has adopted a financial inclusion element, which includes financial literacy, in its SAP for financial integration in 2016–2025.

3. STATISTIC COMPARISON BETWEEN THE EU AND ASEAN: EMPIRICAL EVIDENCE

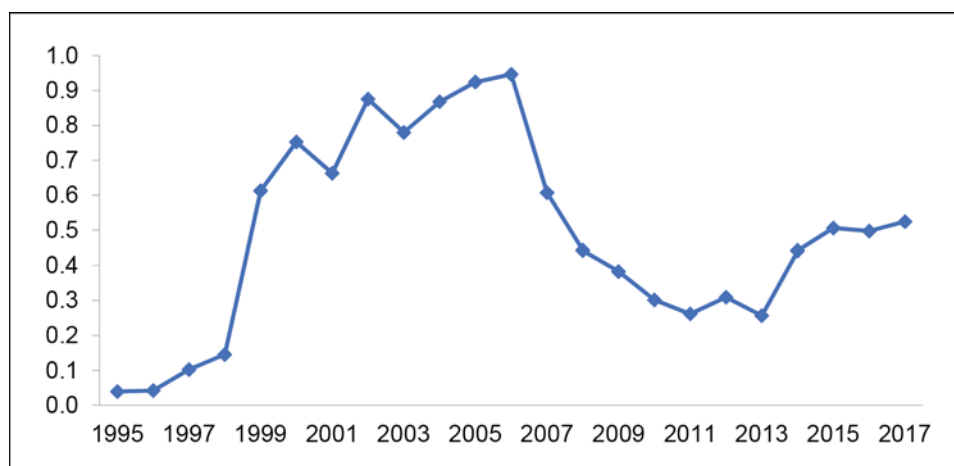
This section applies statistical explanation as empirical evidence to demonstrate the degree of financial integration between the EU and ASEAN as well as to evaluate the performance in forming regional financial integration in both regions. The degrees of financial integration in both regions are assessed in this section through selected financial integration indices. The analysis also serves as background documentation to derive the policy recommendations and conclusions later in the paper.

3.1 Financial Integration in European Union

This development of financial integration in the European Union (EU) that took place in the money, bond, equity, and banking markets between 1995 and 2017 is presented through the statistical trends in the past 20 years in this subsection. The overall assessment of the state of integration shows insufficiently integrated or a not yet exhibited status in the EU's policy dynamics. Empirically, the statistical evidence gathered suggests that the degree of integration varies across the market segments. According to the European Central Bank (ECB), the market for financial instruments is fully integrated as all participants follow a single set of rules when buying or selling those financial instruments or services, have equal access to this set of financial tools, and are treated equally while operating in the market (European Central Bank 2007).

3.1.1 Money Market

Before the recent financial crises, the unsecured money market was the most central channel for transferring liquidity among the banks. Following the first circulation of the euro in 2002, the European money market was the fastest financial market segment to achieve financial integration as it reached a stage of “near-perfect” integration (European Central Bank 2008).

Figure 1: Subindex for the Money Market (yearly average: 1995–2017)

Source: Authors' summary from the European Central Bank 2018.

The high level of integration highlighted by price-based indicators for the European money market was accompanied by a high degree of integration of the large-value payment systems (LVPS). Before the euro was adopted in 1998, the LVPS market was fragmented, with only domestic LVPS operating in legacy currencies. With the introduction of the euro, the principles for the provision of payment services within the euro area changed with the existence of a single currency and the effective conduct of the single monetary policy (European Central Bank 2007).

To harmonize the euro payment systems, the Single Euro Payments Area (SEPA) was introduced in 2002 and the SEPA road map was also adopted for 2004–2010. This road map aimed for the harmonization of credit transfer in the region, and later on, the SEPA Coordinating Committee was established in 2008 for a single direct debit system.

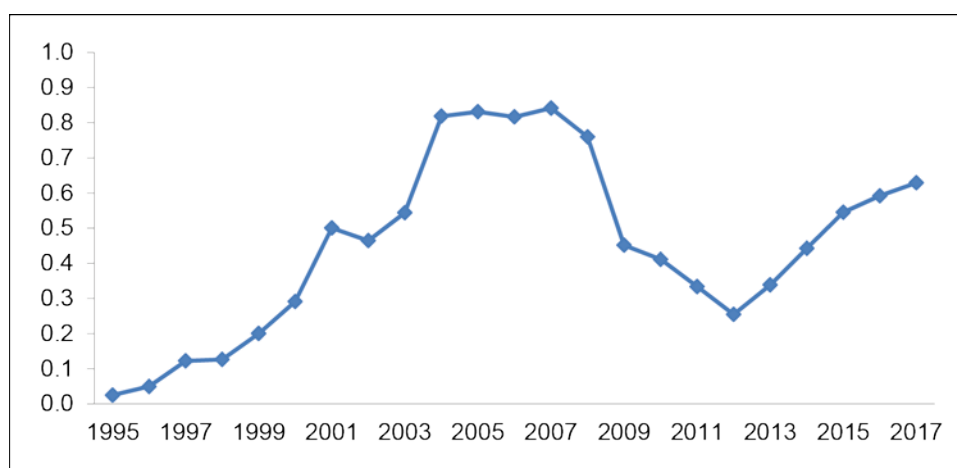
After 2011, the trend in the movement toward financial development and integration of the European Union continued despite the financial crisis. As several financial institutions started to face liquidity constraints, the ECB's Governing Council introduced nonstandard monetary policy measures to repair the transmission mechanism and provide liquidity support, particularly with the two three-year long-term refinancing operations (LTROs) conducted in December 2011 and February 2012. This drove excess liquidity in the banking system to very high levels, with the ECB increasing its intermediation role in the financial system (European Central Bank 2012). The integration in the money market has continued steadily since 2013 due to a series of monetary policy measures implemented by the ECB.

Taking into account lessons learned from the past financial crises and their impact on money markets, the European Parliament approved the implementation of money market funds (MMFs) in 2006, ensuring better protection for MMF investors as well as safeguarding the integrity of the internal market by preventing these risks.

3.1.2 Banking Market

During the 1990s, the European banking sector experienced a rapid process of consolidation. The deregulation of banking activities, the completion of an integrated European financial market, financial globalization, technological innovations, and the introduction of the euro are some of the key drivers that started the process of banking consolidation in Europe. In the 1990s, a period of domestic concentration focused on creating active local players led to several banks expanding across borders and sectors. By 2001, the banking sector accounted for over 23% of total merger and acquisition (M&A) transactions in Europe, and this made it one of the most active sectors in M&A activity in the world economy. However, the worldwide economic downturn experienced since 2001 brought M&A activity to its lowest level compared to that of the mid-1990s (European Central Bank 2007).

Figure 2: Subindex for the Banking Market (yearly averages: 1995–2017)



Source: Authors' summary from the European Central Bank 2018.

Specific regulatory or policy frameworks for the banking sector were yet formed for banking integration in the early 2000s. A fluctuating trend of profitability among EU banks was demonstrated between 2001 and 2011, which showed a lack of policy flexibility resulting in market vulnerability to external shocks. The external shocks in the period refer to the global subprime crisis in 2008 and the EU sovereign debt crisis in 2011. This called for deeper integration of the banking system for EU members, particularly considering their interdependent nature (European Central Bank 2009).

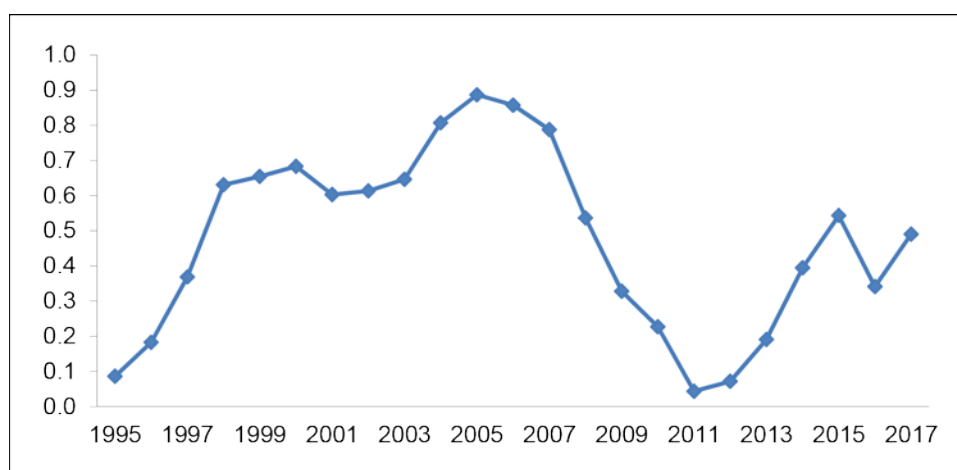
As a result, the European Commission endorsed the Banking Union Roadmap in 2012 to create a more stable banking sector for the single market. This set of initiatives is the foundation of the banking union, which is an essential step toward a genuine economic and monetary union. Through the banking union, EU members are provided with a benchmark for consistent application of banking rules, and a tool for a more transparent, unified, and safer market for banks, which is an essential step toward improved decision-making procedures. Two main mechanisms, the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM), were launched in 2014 and 2016, respectively, to deepen the banking integration and ensure financial stability. The SSM deals with banking supervision in the European Union to provide safety in the banking system by increasing financial integration and by ensuring monitoring in the European banking system. The SRM deals with the restructuring of banks when they are

failing or likely to fail in a way that will harm the broader economy or that will cause financial distress (European Central Bank 2008).

3.1.3 Bond Market

The introduction of the euro has been one of the driving forces behind the strong development of the European corporate bond market. Government bond markets became integrated primarily in the run-up to the Economic and Monetary Union (EMU). With the removal of exchange rate risk, yields in the government bond market have converged in all countries, although the importance of local factors has not entirely disappeared. Differences in liquidity and in the availability of developed derivative markets tied to the various individual bond markets may partly account for these divergences (European Central Bank 2009).

Figure 3: Subindex for the Bond Market (yearly averages: 1995–2017)



Source: Authors' summary from the European Central Bank 2018.

Divergence in the yield curves has been evident since 2007 driven mainly by liquidity concerns related to the financial market turmoil, though it has been argued that credit concerns could have played an increasing role in the divergence of yields. The sovereign yields diverged further in 2011 due to the sovereign debt crisis in 2010–2011. The overshoot yields could have been caused by the overestimated associated risk, in which the effect was also extended to the corporate bond markets. Indicators suggest that country-level effects have become more critical in driving yield developments, reflecting the differences in the fiscal situation and economic outlook of euro area sovereigns. New tensions arose in 2011 in the money and sovereign bond markets amid a resurgence of risk aversion and market volatility (European Central Bank 2012).

The ECB Governing Council adopted several measures to support the smooth transmission of monetary policy and to restore market confidence. In addition to several adjustments in the modalities of liquidity provision, the Securities Markets Program was formed in 2010 to reduce volatility in sovereign bond markets caused by sizable credit risk and significant fiscal imbalance.

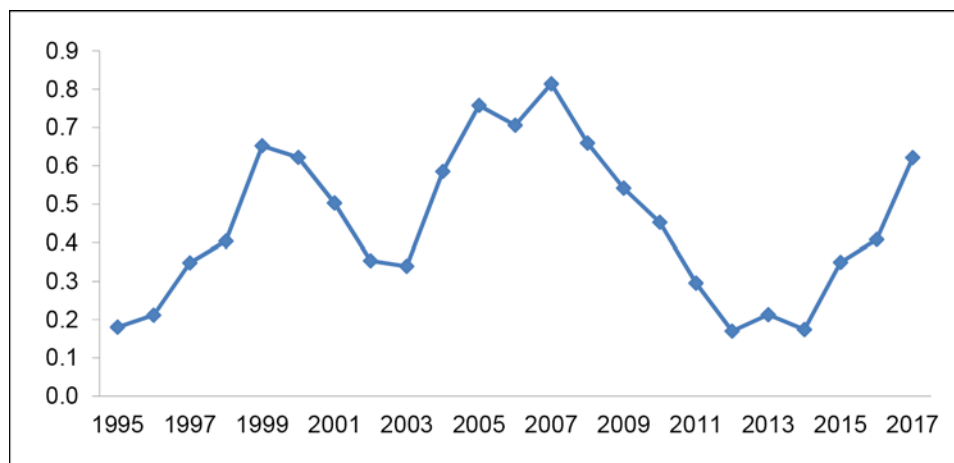
The degree of convergence of European bond markets significantly stabilized around its 2014 levels. It could be argued that the ECB's monetary policy has significantly shaped the dispersion of European sovereign and corporate bond yields, particularly since the announcement of Outright Monetary Transactions (OMTs) in 2012 (European Central Bank 2015).

Sovereign bond yields showed evidence of a return to cross-country convergence, while the trend of narrowing spreads of nonfinancial corporate bond yields continued on balance. The sovereign bond yield dispersion across Europe, which had increased from late 2015 until the beginning of 2017, decreased steadily for the remainder of the year, reaching once again the level seen around the announcement of the PSPP in January 2015 (European Central Bank 2018).

3.1.4 Equity Market

In the first three years of EMU, favorable developments in equity markets and strong M&A activities acted as a catalyst for the development of market-based financing sources in the euro area. Quantity-based measures also indicate a rising degree of integration in equity markets. During the decade following 1997, EU residents doubled their holdings of equity issued in other euro area countries as the share of their total portfolio of shares issued in their own country and elsewhere in the euro area increased to 29% (European Central Bank 2007).

Figure 4: Subindex for the Equity Market (yearly averages: 1995–2017)



Source: Authors' summary from the European Central Bank 2018.

In 2006, though progress was made in the integration of euro area equity markets, more needed to be done to further financial integration, particularly for securities infrastructure underpinning both bond and equity markets.

Despite the sharp decline in equity prices in 2008–2009, the cross-border integration of equity markets was hardly affected as the ECB's most available indicators suggested that integration strengthened in 2010. In 2013, the level of equity market integration improved while the price-based-indicator-related cross-country heterogeneity declined, and the negative trend in quantity-based indicators leveled off. However, most of the indicators remained somewhat distant from pre-crisis levels (European Central Bank 2014).

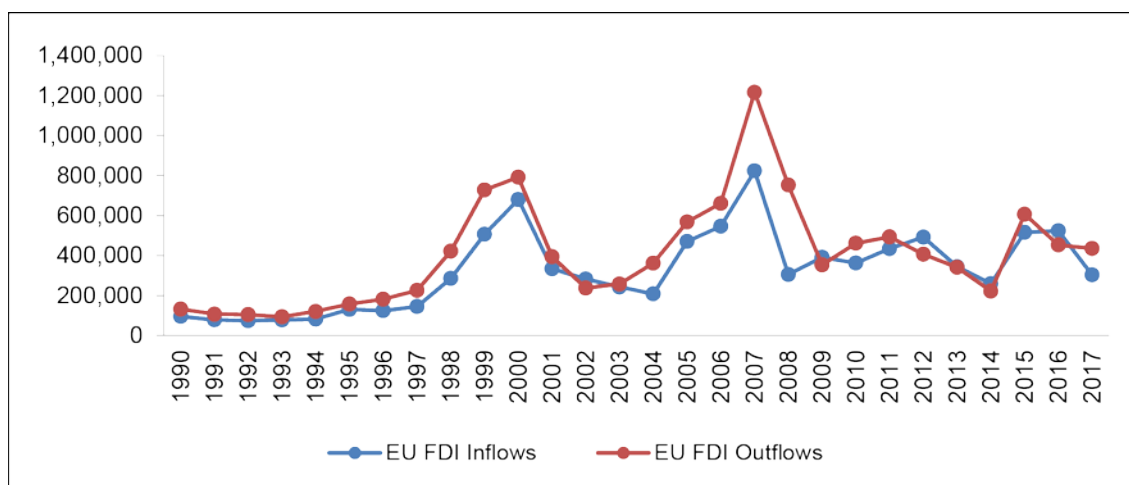
In 2015, the EU announced its green paper on the Capital Markets Union (CMU), aimed at facilitating the intraregional capital flows along with ensuring capital market stability. The resolution on building the CMU was released soon after with further comprehensive goals to channel savings in the region to small entrepreneurs and protect cross-border investors in the EU. These show the EU’s intention to boost capital flows through investor confidence, along with an attempt to enhance financial inclusion. The action plan on building the CMU was endorsed by the EU Commission, with the four priorities to be achieved by 2019. The endorsement of this major initiative has increased investor confidence and helped to stabilize capital flows in the region as well as improving integration in this market. As part of the integration monitoring process, a public consultation with all stakeholders was carried out in 2017 as a midterm review of the CMU Action Plan.

Accommodated by the aforementioned policy measures and activities, trends in the euro area equity/securities markets generally signaled further financial integration in 2017, as indicated by the price convergence. A considerable degree of integration was achieved in European equity markets in 2018, which led to greater capital movements in the region.

3.1.5 Foreign Direct Investment

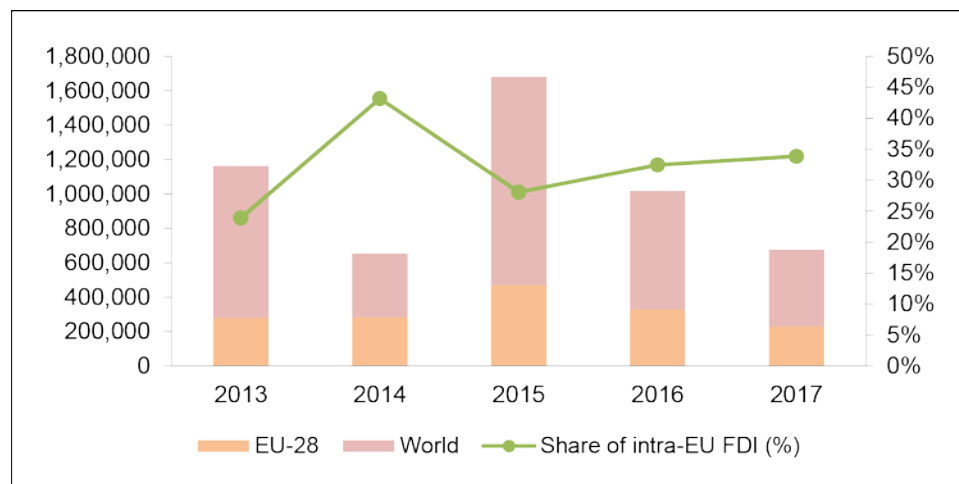
As acknowledged by the Organisation for Economic Co-operation and Development (OECD), the EU has one of the most progressive/open investment regimes. The EU has been the world’s leading source and destination for FDI for decades. Figure 5 shows the EU’s FDI flows since 1990.

Figure 5: FDI Flows of the European Union, 1990–2017 (\$ million)



Source: World Investment Report, UNCTAD, June 2018.

Given the EU’s advanced foreign investment policies, EU investors have always held the biggest investment share in the region. The investment flows across the region are facilitated by EFTA agreements. The regional investors need to follow the investment rules as negotiated in EFTA. Basically, the EU investment policies aim to secure a level playing field in the region as well as facilitating an effective investment environment through a favorable regulatory framework, transparency, good governance, social responsibility, and innovation. A change in percentage of the EU’s intraregional FDI has also been evident in the last couple of years (Figure 6), showing the more intraregional FDI in the EU.

Figure 6: Intra-EU FDI (million euro, %)

Source: Eurostat May 2019.

In recent years, evidence has shown a growing number of non-EU investments in the region. Though the number is still small, their economic impacts are increasingly significant due to their larger than average size and their focus on high-technology sectors. To ensure a safe and effective investment environment, the EU recently launched the EU Framework for Screening Investments. The key requirements include regulatory transparency, nondiscrimination practices, confidentiality of information exchanged, the possibility of recourse against screening decisions, and measures to identify and prevent circumvention by foreign investors.

3.1.6 Some Remarks

The significant progress in terms of financial integration in the EU is brought about and supported by the main and strong institutions established by the EU and the EU Commission. Many indicators in various financial markets, including the money market, banking market, bond market, and equity market, lead to a similar conclusion of deepening financial markets. With these strong institutions to monitor progress, and enforce and supervise rules and regulations, the financial integration process in the EU became the most successful in the global market. The results show not only integration in the eurozone but also the integration of financial markets. After the global financial crisis in 2008, the indicators displayed a sign of deintegration. However, the EU's strong institutional backups and the accommodative policies helped stabilize the financial market and possibly the integration as shown through improving trends of the above indicators roughly since 2013.

3.2 Financial Integration in ASEAN

With the endorsement of the SAPs, ASEAN has been moving toward greater integration in the financial markets. ASEAN's financial markets have tended to converge with each other, especially in the last 10 years, according to the statistical evidence. Although moving gradually, the integration of ASEAN financial markets takes a similar route when compared to those of the EU, albeit over a more extended period of time. This section shows some statistical evidence regarding the integration in the selected sectors with selected indices, including money and banking markets, bond and stock markets, foreign direct investment (FDI), and portfolio investments.

With the different level of development in ASEAN members' financial markets, some statistical evidence suggests that the markets tend to move along with each other. Indicators adopted in this section are commonly used to measure the degree of financial integration, including correlation coefficients and coefficients of variation, for instance, with some additional indicators subject to availability.³ A correlation coefficient normally shows how two variables move along with each other. Since the correlation takes a value from -1 to 1 , a negative value close to -1 represents a negative relationship between those variables, meaning those variables respond to each other quite closely in the opposite direction. A correlation of 0 shows no relationship between the two variables and a correlation close to 1 indicates close movement in the same direction between the two variables. Thus, in order to capture the degree of integration between markets, the correlation of the selected indices should be close to 1 .

Dispersion of the indices is determined by the coefficient of variation (CV). CV is a standardized measurement of dispersion using the ratio of the standard deviation to the mean. In contrast to the correlation coefficient, CV measures how a group of variables diverge from each other. A higher CV indicates scatteredness of the variables. In the case of financial integration, a declining CV value of the indices suggests less dispersion, meaning more integration of the respective markets.

The data from the Asia Regional Integration Center (ARIC) are mainly used for calculation and interpretation in order to demonstrate financial integration in ASEAN. Most common data are gathered from five main ASEAN members (referred to as the "ASEAN 5" from this point onward), namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand. The discussion also adopts the data from member states other than the ASEAN 5 for some indicators, if available. Moreover, investment data, including foreign direct investment (FDI) and portfolio investment, are also discussed as additional indicators of financial integration within the region. The FDI and portfolio investment data are collected from the United Nations Conference on Trade and Development (UNCTAD) and ASEANstats.

This subsection discusses indicators of integration in each financial market in ASEAN, namely the money market, corporate lending market, bond market, stock market, portfolio investment, and foreign direct investment.

3.2.1 Money Market

Money market rates in ASEAN 5 are used to calculate correlation coefficients among the markets. The three-month interbank offer rates or similar indices are used to represent the money market. Correlation coefficients of money market rates are shown in Table 1.

Correlation coefficients of money market rate present mixed signals across the ASEAN 5. The coefficients in some years, e.g., 2005 and 2009, show a converging trend in ASEAN's money market. However, after 2010, an inconclusive result for market integration is derived from the presented correlation coefficients. The correlation coefficient trends are presented in Figure 7.

³ Poenisch (2014); Pungulescu (2013); Beck, Demirguc-Kunt, and Levine (2009), Berkofsky (2005), Flood and Rose (2003).

Table 1: Correlation Coefficient of Money Market Rate in ASEAN 5 Pairwise: 2000–2012^a

Country Pair ^b	Time						
	2000	2001	2002	2003	2004	2005	2006
IND-MAL	0.72	0.58	0.92	0.97	0.71	0.75	-0.48
IND-PHI		-0.16	0.35	-0.01	0.22	0.78	0.52
IND-SIN	0.33	-0.95	0.75	0.86	-0.53	0.91	-0.67
IND-THA			0.82	0.90	-0.35	0.98	-0.56
MAY-PHI		-0.22	0.37	0.03	0.63	0.48	0.24
MAY-SIN	0.54	-0.54	0.74	0.86	-0.89	0.76	0.93
MAY-THA			0.69	0.83	-0.68	0.78	0.95
PHI-SIN		0.06	0.02	0.06	-0.58	0.65	0.04
PHI-THA			-0.22	0.15	-0.45	0.76	0.13
SIN-THA			0.94	0.78	0.94	0.95	0.98
MEAN ^c	0.530	-0.207	0.536	0.543	-0.100	0.780	0.208
SD	0.198	0.522	0.396	0.424	0.660	0.146	0.635

Country Pair ^b	Time					
	2007	2008	2009	2010	2011	2012
IND-MAL	0.84	-0.24	0.74	-0.54	-0.20	0.71
IND-PHI	-0.73	-0.78	0.62	0.78	0.04	-0.71
IND-SIN	0.31	-0.25	0.92	-0.02	-0.97	-0.38
IND-THA	0.92	0.46	0.93	-0.64	-0.34	-0.23
MAY-PHI	-0.58	-0.08	0.63	-0.46	0.47	-0.46
MAY-SIN	0.14	0.50	0.47	0.31	0.17	-0.14
MAY-THA	0.94	0.61	0.88	0.79	0.94	-0.35
PHI-SIN	-0.11	0.04	0.45	0.22	-0.01	0.84
PHI-THA	-0.76	-0.62	0.72	-0.68	0.31	0.64
SIN-THA	0.15	0.45	0.78	-0.21	0.30	0.81
MEAN ^c	0.112	0.008	0.714	-0.044	0.071	0.071
SD	0.659	0.490	0.173	0.557	0.512	0.603

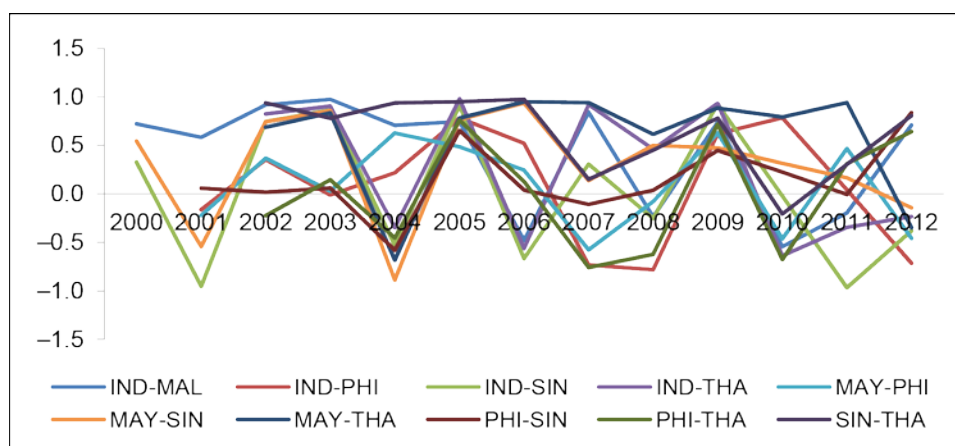
^aMoney market rates are three-month interbank offer rates or equivalent money market rate.

^bCountry abbreviations: IND = Indonesia, MAL = Malaysia, PHI = the Philippines, SIN = Singapore, and THA = Thailand.

^cMEAN is arithmetic means across nation pair each year.

Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC) database.

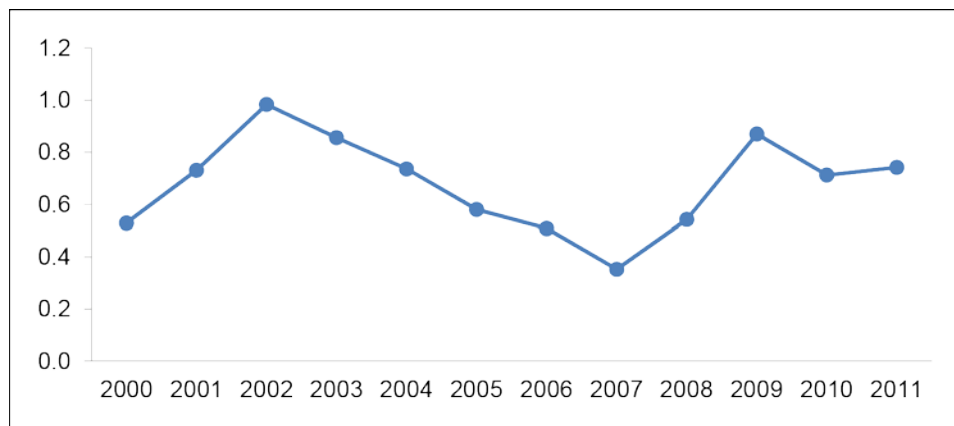
Figure 7: Correlation Coefficients of Money Market Rate in ASEAN 5



Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC) database.

Figure 7 shows the fluctuating trends of the correlation coefficients in most selected economies from 2000 to 2012. There are some pairs of correlation coefficients demonstrating deeper integration in 2012, namely Indonesia-Malaysia, the Philippines-Singapore, the Philippines-Thailand, and Thailand-Singapore. Additionally, the CV of the money market is shown in Figure 8.

Figure 8: Coefficient of Variation of Money Market Rates in ASEAN: 2000–2011



Source: Authors' summary from ASIA Regional Integration Center (ARIC).

The figure shows convergence (less variation) in the money market rates of ASEAN in two periods: 2002–2007 and after 2010. There is a constant downward trend of variation in money market rates from 2002 until 2007. Given that money and banking markets are the fastest-growing financial markets in the region, this increasing trend of this financial depth could be inferred from the active transactions in these markets. An increase in variation during the period 2007–2009 might be an effect from external shocks caused by the global financial crisis, similarly to the EU's experience. Even though changes in CV during this period are not as obvious as the one in 2002–2007, a slight downward trend of CV after 2009 implies convergence in the money markets within ASEAN.

Although correlation of the money market index does not show any sign of integration, the CV reveals a positive sign of less variation of the money market rates. This change in pattern of CV from Figure 8 is somewhat in line with the pattern in the EU's trend. As seen in the previous section, the trend of the EU's composite price subindicator in the money market has shown signs of improvement toward greater integration, i.e., declining for a certain period, then rising again.⁴ In the case of ASEAN, the downward CV trend during the period 2002–2007 suggests a more integrated market. Afterward, the movement of the CV follows the EU's pattern as it increased in 2007–2009 then declined toward 2011.

3.2.2 Corporate Lending Market

Correlations of short-term corporate lending rates across ASEAN 5 do not suggest the same movement. The correlation coefficients are shown in Table 2 and Figure 9.

⁴ Comparisons are made between the CV of the money market indicator of ASEAN 5 and the price-based subindex in the EU's money market. This is done just to capture the pattern regardless of time period.

Table 2: Correlation Coefficient of Short-Term Corporate Lending Rate in ASEAN 5 Pairwise: 2000–2012^a

Country Pair ^b	Time						
	2000	2001	2002	2003	2004	2005	2006
IND-MAL							
IND-PHI							
IND-SIN							
IND-THA							
MAY-PHI							
MAY-SIN							
MAY-THA							
PHI-SIN	-0.52	0.25	-0.89	-0.45	0.00	0.00	-0.22
PHI-THA	-0.83	0.89	0.32	0.18	0.00	-0.55	0.15
SIN-THA	0.24	0.36	-0.33	0.69	0.00	0.00	0.56
MEAN ^c	-0.368	0.501	-0.299	0.140	0.000	-0.185	0.163
SD	0.547	0.338	0.603	0.569	0.000	0.320	0.388

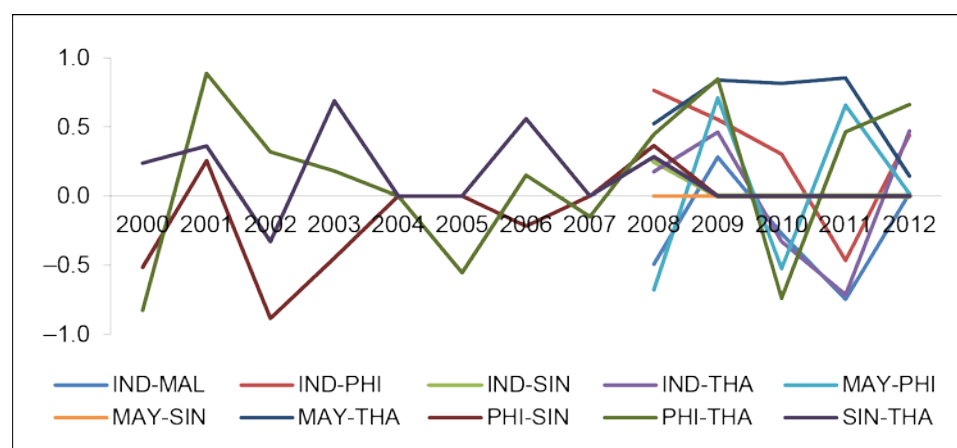
Country Pair ^b	Time					
	2007	2008	2009	2010	2011	2012
IND-MAL		-0.49	0.28	-0.27	-0.75	0.02
IND-PHI		0.76	0.55	0.30	-0.47	0.44
IND-SIN		0.25	0.00	0.00	0.00	0.00
IND-THA		0.18	0.46	-0.33	-0.71	0.47
MAY-PHI		-0.68	0.71	-0.52	0.66	0.02
MAY-SIN		0.00	0.00	0.00	0.00	0.00
MAY-THA		0.52	0.84	0.81	0.85	0.14
PHI-SIN	0.00	0.36	0.00	0.00	0.00	0.00
PHI-THA	-0.15	0.45	0.85	-0.74	0.46	0.66
SIN-THA	0.00	0.28	0.00	0.00	0.00	0.00
MEAN ^c	-0.050	0.164	0.369	-0.075	0.005	0.175
SD	0.087	0.447	0.359	0.435	0.543	0.251

^aLending rates are prime rates or equivalent short-term corporate lending rates.

^bCountry abbreviations: IND = Indonesia, MAL = Malaysia, PHI = the Philippines, SIN = Singapore, and THA = Thailand.

^cMEAN is arithmetic means across nation pair each year.

Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC) database.

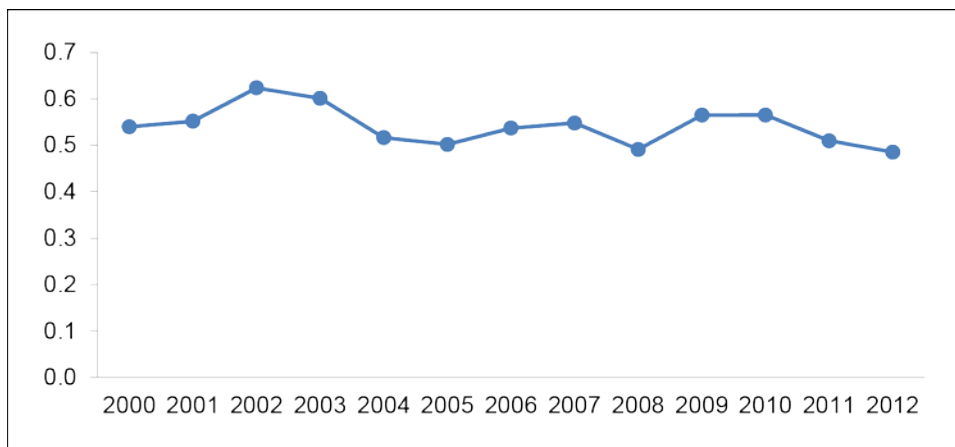
Figure 9: Correlation Coefficients of Short-Term Corporate Lending Rate in ASEAN 5

Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC) database.

According to the coefficients, there is no clear co-movement in the lending market among ASEAN 5 countries. Similarly to the correlation coefficients in the money market, the result does not lead to a solid conclusion toward more integrations in the ASEAN 5 lending market.

The CV of the lending rates in ASEAN is shown in Figure 10.

Figure 10: Coefficient of Variation of Lending Market Rates in ASEAN 5: 2000–2012



Source :Authors' summary from ASIA Regional Integration Center (ARIC).

Figure 10 shows a steady trend of lending rates in the past decade as the slope is flat and not statistically significant.⁵ Thus, there is no sign of considerable convergence in ASEAN's lending market.

Consequently, a degree of integration is not captured in the ASEAN 5 lending market. The correlations in the lending rate above do not show convincing signs of integration and the CV insignificantly indicates a slight tendency for the lending markets to collide across ASEAN 5.

3.2.3 Bond Market

Correlation coefficients of yields for 10-year bonds across five ASEAN nations from 2000 to 2012 are shown as Table 3.

According to Table 3, after 2010, all coefficients indicate a positive correlation with an increasing trend. The standard deviations of the coefficient become smaller during the same period. The result implies increasingly integrated bond markets in ASEAN 5 since 2010. However, during the period 2000–2010, there were no significant signs showing financial integration in this market. Only some pairs of the indicators show a degree of bond market integration in some ASEAN 5 countries. The correlation coefficients of bond market rates show a sign of improvement in correlation, particularly between Malaysia and Singapore, and Singapore and Thailand. The rest of the coefficients during that period show mixed signals.

⁵ Not significant at 5% significance level; p-value = 0.015.

Table 3: Correlation Coefficients of Bond Market Rate in Five ASEAN Nations Pairwise: 2000–2012^a

Country Pair ^b	2000	2001	2002	2003	2004	2005	2006
IND-MAL				0.83	0.03	−0.80	0.51
IND-PHI				−0.11	−0.70	−0.59	0.77
IND-SIN				0.67	0.67	0.28	0.64
IND-THA				0.89	0.15	0.75	0.69
MAY-PHI	−0.67	−0.13	0.60	−0.51	0.12	0.41	0.75
MAY-SIN	0.22	0.54	0.76	0.91	0.45	0.07	0.71
MAY-THA	0.57	−0.34	0.80	0.82	0.54	−0.42	0.75
PHI-SIN	−0.35	−0.28	0.68	−0.61	−0.53	−0.53	0.54
PHI-THA	−0.48	0.01	0.59	−0.22	0.02	−0.48	0.61
SIN-THA	0.82	−0.19	0.92	0.64	0.41	0.62	0.79
MEAN ^c	0.019	−0.065	0.724	0.330	0.117	−0.069	0.676
SD	0.610	0.319	0.126	0.618	0.444	0.560	0.099
Country Pair ^b	2007	2008	2009	2010	2011	2012	
IND-MAL	0.48	0.20	−0.44	0.85	0.84	0.29	
IND-PHI	−0.40	0.71	0.00	0.85	0.89	0.70	
IND-SIN	0.35	0.26	−0.81	0.67	0.87	0.28	
IND-THA	0.45	−0.14	−0.54	0.70	0.67	0.38	
MAY-PHI	−0.38	0.47	0.74	0.72	0.81	0.37	
MAY-SIN	0.26	0.87	0.68	0.79	0.96	0.63	
MAY-THA	0.85	0.64	0.65	0.84	0.57	0.34	
PHI-SIN	−0.25	0.57	0.26	0.62	0.79	0.58	
PHI-THA	−0.31	0.29	0.30	0.46	0.65	0.44	
SIN-THA	0.25	0.69	0.66	0.69	0.61	0.33	
MEAN ^c	0.131	0.456	0.149	0.720	0.765	0.434	
SD	0.433	0.303	0.573	0.122	0.132	0.148	

^aBond market rates are yields for domestic 10-year sovereign bonds.

^bCountry abbreviations: IND = Indonesia, MAL = Malaysia, PHI = the Philippines, SIN = Singapore, and THA = Thailand.

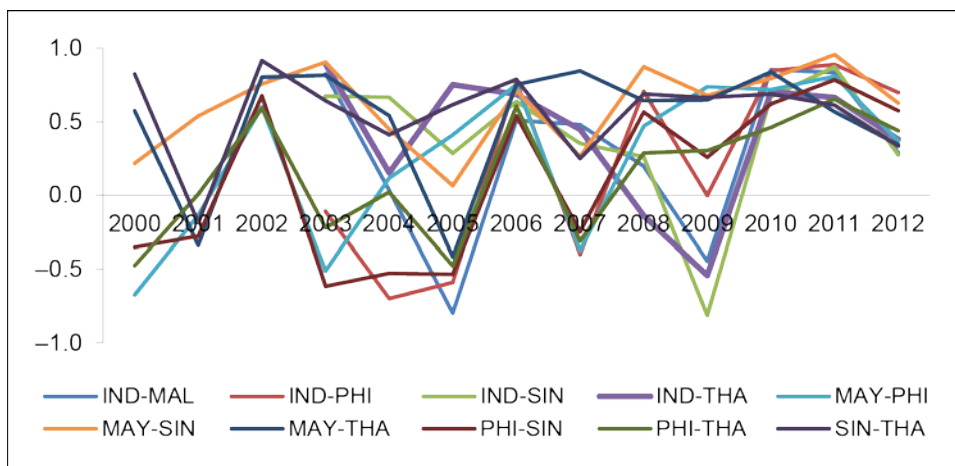
^cMEAN is arithmetic means across nation pair each year.

Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC) database.

To assess the above correlation coefficients further, Figure 11 shows that, after 2009, the correlation coefficients of ASEAN 5's bond market rates indicate an increasing degree of financial integration in this market.

Though the link is not entirely conclusive, ASEAN, under the ASEAN+3 Finance Cooperation, established the Credit Guarantee and Investment Facility (CGIF) in 2010 to facilitate and support the issuance of local currency denominated (LCY) bonds in the region under the ABMI Framework. The main function of the CGIF is to provide credit enhancement to allow issuers to issue local currency bonds in the ASEAN+3 region. Further to this, many initiatives are undertaken by the ABMI Taskforce under the ASEAN+3 Finance Cooperation to broaden the investor base for LCY bonds. Together, all AMS work toward removing/relaxing the restrictions on their local currency bond markets. According to Asian Bonds Online (<https://asianbondsonline.adb.org>), the LCY bond markets in the region, particularly in emerging East Asia, have grown rapidly in the past decade in terms of size and the diversity of issuers. The bond outstanding grew from \$3.71 trillion in 2008 to \$13.1 trillion at the end of December 2018. The growth in the corporate bonds was evident while new products such as Sukuk bonds (Islamic bonds) are available in the markets.

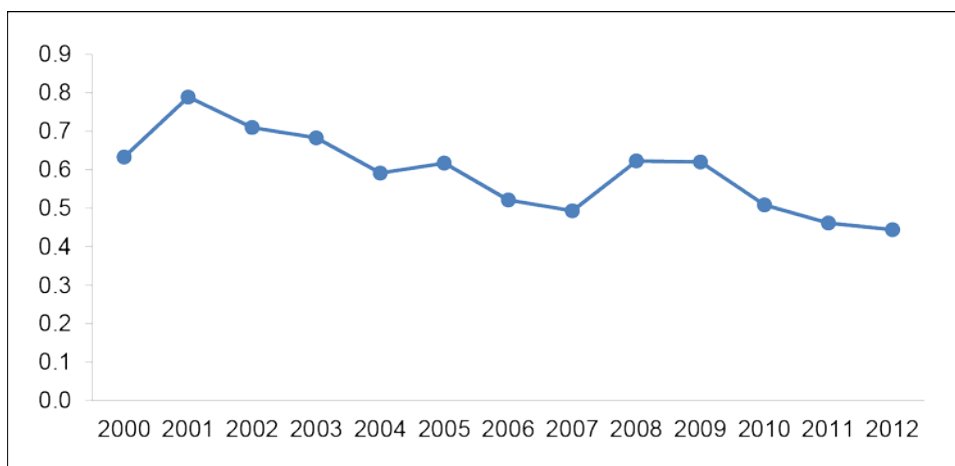
Figure 11: Correlation Coefficients of Bond Market Rates in Five ASEAN Nations



Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC) database.

The above results are supported by the CV of the bond rates in the region. The coefficient of variation is shown in Figure 12.

Figure 12: Coefficient of Variation of Bond Market Rates in ASEAN: 2000–2012



Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC).

Figure 12 shows a consistently downward trend of the CV of the bond market rates in ASEAN. A statistically significant⁶ negative trend indicates less variation in bond market rates, implying convergence of the bond markets in the region. Correlation coefficients and the CV of bond market rates display a changing pattern toward the same direction in ASEAN 5 markets. A positive trend of bond market integration is visible after 2010.

3.2.4 Equity/Stock Market

Correlation coefficients of stock market returns in ASEAN 5 with Viet Nam are shown in Table 4.

⁶ Significance at 5% significance level; p-value = 0.001.

Table 4: Correlation Coefficient of Return on Stock Market in ASEAN 5 with Viet Nam, Pairwise: 2001–2012^a

Country Pair ^b	Time					
	2001	2002	2003	2004	2005	2006
IND-MAL	0.60	0.85	0.97	0.80	0.41	0.81
IND-PHI	-0.08	0.13	0.93	0.71	0.57	0.90
IND-SIN	0.00	0.48	0.95	0.90	0.60	0.65
IND-THA	0.91	0.50	0.96	0.86	0.08	0.16
MAY-PHI	-0.53	0.17	0.92	0.60	0.00	0.70
MAY-SIN	-0.39	0.68	0.94	0.90	0.42	0.75
MAY-THA	0.61	0.57	0.96	0.80	0.10	0.21
PHI-SIN	0.45	0.60	0.97	0.75	-0.04	0.49
PHI-THA	0.00	0.56	0.95	0.70	-0.22	0.13
SIN-THA	-0.49	0.67	0.96	0.90	0.55	0.48
VIE-IND	-0.07	-0.27	0.24	-0.41	-0.73	0.34
VIE-MAL	-0.41	-0.49	0.36	0.03	0.02	0.56
VIE-PHI	0.74	0.02	0.17	-0.31	-0.60	0.40
VIE-SIN	-0.09	-0.32	0.17	-0.18	-0.35	0.25
VIE-THA	-0.21	-0.47	0.30	-0.34	-0.10	0.16
MEAN 5 ^c	0.107	0.521	0.950	0.791	0.246	0.528
SD 5	0.509	0.222	0.017	0.102	0.297	0.279
MEAN 6 ^d	0.068	0.245	0.717	0.447	0.047	0.466
SD 6	0.474	0.455	0.345	0.519	0.413	0.255

Country Pair ^b	Time					
	2007	2008	2009	2010	2011	2012
IND-MAL	0.61	0.97	0.99	0.95	0.94	0.53
IND-PHI	0.35	0.93	0.98	0.91	0.96	0.74
IND-SIN	0.67	0.96	0.99	0.96	0.94	0.55
IND-THA	0.83	0.96	0.99	0.93	0.95	0.70
MAY-PHI	0.67	0.96	0.98	0.89	0.94	0.67
MAY-SIN	0.86	0.93	0.98	0.97	0.97	0.92
MAY-THA	0.46	0.91	0.98	0.90	0.94	0.87
PHI-SIN	0.73	0.92	0.98	0.89	0.93	0.75
PHI-THA	0.00	0.89	0.97	0.83	0.96	0.83
SIN-THA	0.47	0.96	0.99	0.90	0.95	0.88
VIE-IND	-0.24	0.75	0.92	0.89	0.13	-0.23
VIE-MAL	-0.25	0.86	0.93	0.92	0.00	0.32
VIE-PHI	0.40	0.86	0.95	0.76	0.09	0.25
VIE-SIN	0.01	0.73	0.91	0.94	0.25	0.40
VIE-THA	-0.52	0.64	0.91	0.83	0.17	0.23
MEAN 5 ^c	0.564	0.937	0.984	0.915	0.948	0.743
SD 5	0.257	0.026	0.007	0.042	0.011	0.134
MEAN 6 ^d	0.336	0.881	0.964	0.899	0.676	0.560
SD 6	0.433	0.099	0.031	0.056	0.402	0.317

^aStock market returns are year-on-year percentage change of daily stock price indices.

^bCountry abbreviations: IND = Indonesia, MAL = Malaysia, PHI = the Philippines, SIN = Singapore, THA = Thailand, and VIE = Viet Nam.

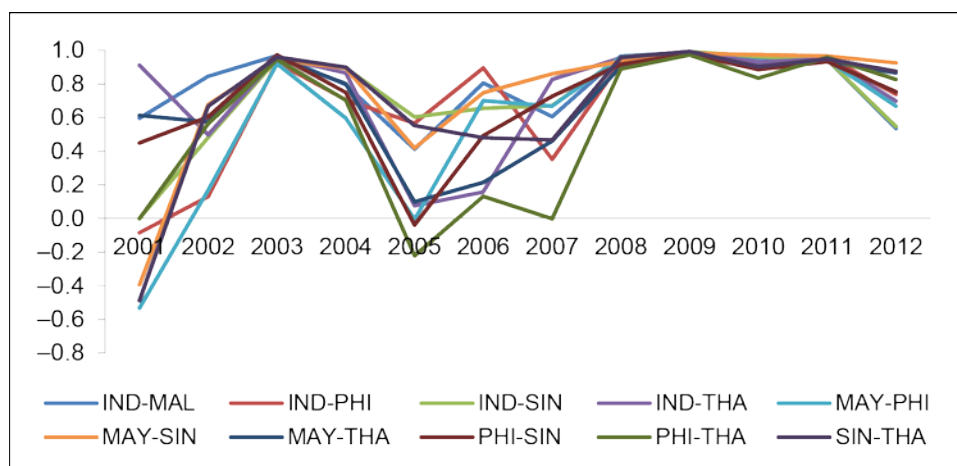
^cMEAN 5 is arithmetic means across nation pair each year for five ASEAN nations.

^dMEAN 6 is arithmetic means across nation pair each year for six ASEAN nations.

Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC).

Compared to other financial markets, equity or stock markets could be the most progressive for regional financial integration. As previously mentioned, many initiatives have been implemented by the ACMF to promote the progressive and connected capital markets in the region. Using the correlation of stock market returns as an indicator, the result shows substantially integrated signs in ASEAN capital markets. The correlation coefficients of many selected ASEAN country pairs in Table 4 since 2001 show a positive sign with a positive trend over the years. Moreover, the returns on the stock market have shown a highly positive correlation since 2008, indicating movement in the same direction as stock returns among the ASEAN 5 as well as that of ASEAN 5 with Viet Nam. Though there was a drop in 2012, which may well have been caused by the shocks originating from US markets in 2012, the stock market index indicates overall deeper capital market integration in the region. More data availability would allow us to explore more comprehensively the trend of capital market integration in ASEAN, particularly with the introduction of the stock market linkages through the ASEAN Trading Link and the CIS Framework. The emerging trend stated above is clearly shown in Figure 13.

Figure 13: Correlation Coefficient of Return on Stock Market in ASEAN 5

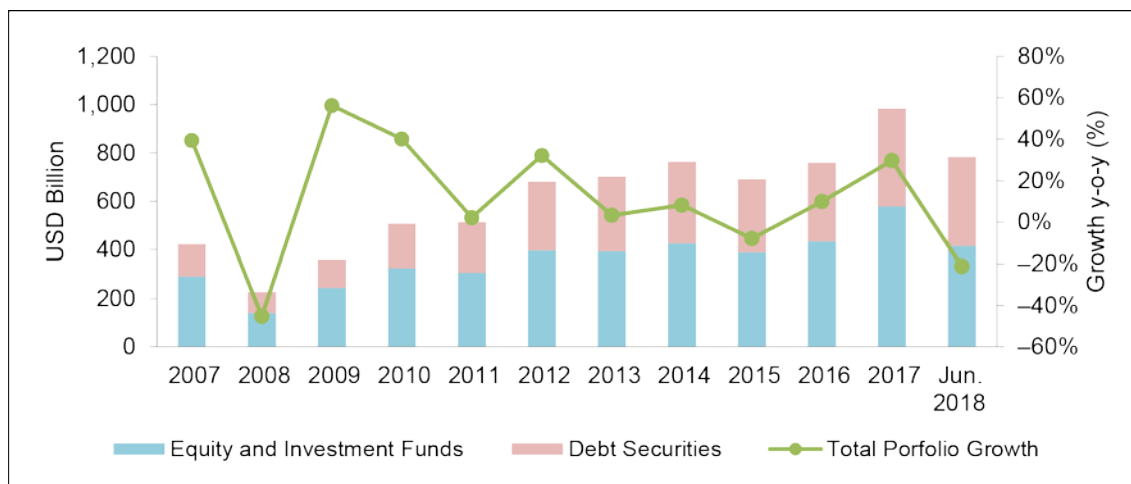


Source: Authors' summary and calculations from ASIA Regional Integration Center (ARIC).

3.2.5 Portfolio Investment

Portfolio investment is one of the indicators used to identify a regional financial integration. Higher intraregion portfolio investment implies higher financial integration. The portfolio investment in ASEAN is shown in Figure 14.

From 2008 onward, an increase in portfolio investment in ASEAN is evident with the positive growth from 2008 to 2017. The growing trend of portfolio investment suggests a higher degree of financial depth in ASEAN. Nonetheless, to determine the degree of financial integration, the intra-ASEAN portfolio investment must be taken into account. It is expected that most of the intra-ASEAN portfolio investment would flow primarily within ASEAN 5 countries. The share of intra-ASEAN portfolio investment received by each AMS is shown in Table 5. The ASEAN average shows a lower degree of integration in the regional portfolio investment since 2014.

Figure 14: Portfolio Investment in ASEAN from 2007 to 2017

Source: Authors' summary and calculations from CPIS, IMF.

Table 5: Share of Intra-ASEAN Portfolio Investment Received by Each ASEAN Country (percentage)

Country	2010	2011	2012	2013	2014	2015	2016	2017
Brunei Darussalam	0.0	5.2	2.9	0.0	35.0	33.3	21.9	27.1
Cambodia	1.5	0.3	0.7	0.4	0.2	1.5	1.6	1.1
Indonesia	20.9	16.3	21.2	15.5	14.7	14.3	12.9	12.3
Lao PDR	65.4	9.4	10.2	15.9	34.8	97.0	93.8	97.4
Malaysia	14.2	15.1	19.3	21.8	17.5	15.3	16.0	15.8
Myanmar	99.8	100.0	0.0	0.0	100.0	92.2	93.5	88.8
Philippines	9.3	8.9	8.3	13.6	9.4	8.3	10.2	8.6
Singapore	6.4	7.0	8.0	8.5	8.5	8.9	9.3	6.7
Thailand	11.8	11.2	12.4	12.6	8.7	9.7	9.2	7.9
Viet Nam	6.8	8.1	6.7	8.8	19.5	11.2	14.2	14.3
ASEAN	12.2	11.5	13.8	13.8	11.7	11.3	11.5	9.8

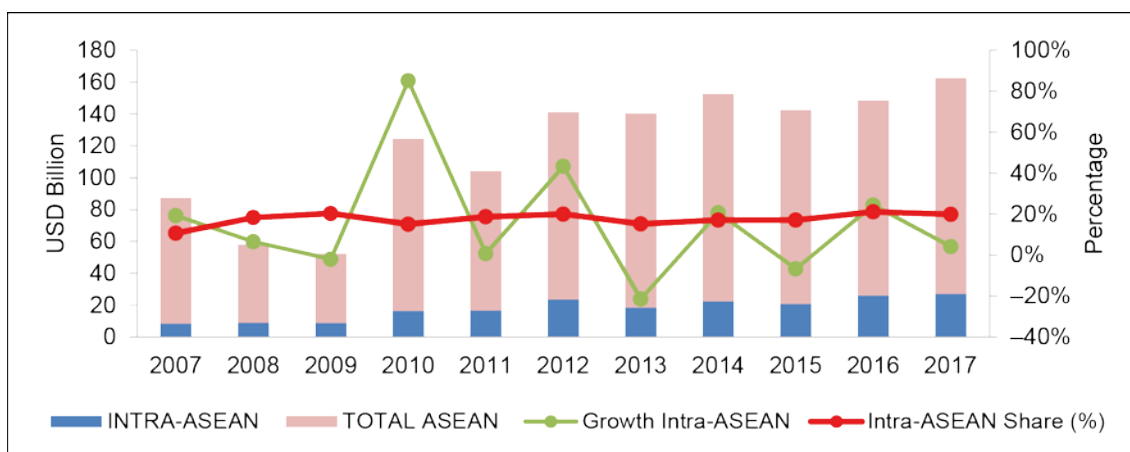
Source: Coordinated Portfolio Investment Survey December 2018.

3.2.6 Foreign Direct Investment

A real-sector indicator that is commonly used to identify financial integration is FDI. An increase in the intra-ASEAN FDI indicates movement toward more integration of current accounts. The intra-ASEAN FDI is shown in Figure 15.

According to Figure 15, the share of intra-ASEAN FDI in the past decade stayed constant, which indicates moderate improvement in financial integration. The growth of intra-ASEAN FDI has fluctuated but remained at a positive figure for most of the time within the period of focus. Furthermore, signaling from 2007, the figure shows that the share of intra-ASEAN FDI seems to improve slightly, from 11% in 2007 toward 20% in 2017. The FDI figure could potentially lead to the conclusion that greater integration in the ASEAN financial market is achievable in the future.

Figure 15: FDI in ASEAN from 2007 to 2017



Source: Authors' summary from ASEAN Secretariat database.

3.2.7 Some Remarks

The ASEAN financial markets are likely to be more integrated since the adoption and implementation of the Strategic Action Plan (SAP) for ASEAN Financial Integration 2016–2025. Many selected indicators in this discussion, although not all, show convincing signs of financial integration and/or a degree of financial depth. The more advancing financial market seems to be the capital markets among ASEAN 5 members. The indicators from ASEAN capital markets show strong supportive results on financial integration within the region. The indices from the bond market also give a significant, albeit quite slight, improvement toward integration. The foreign direct investment and portfolio investment figures support the above conclusion as well. Nevertheless, there are inconclusive signs of financial integration in ASEAN money and lending market indicators.

4. CONCLUSION AND POLICY RECOMMENDATIONS

After reviewing the policy measures and assessing the relevant indices to determine the degree of financial integration in selected markets, some conclusions can be drawn along with a number of policy recommendations for ASEAN.

4.1 Institutionalization and Standardization

One explicit difference between the two regions when it comes to economic or financial integration is the concept of institutionalization. The EU assertively adopts this concept to expedite its integration process. The establishment of the ECB, ERPB, ESFS, etc. helps ensure the enforcement of the regional regulatory and supervisory frameworks as well as the alignment of national policies to the regional policies. This approach emphasizes the importance of having an independent central body in the integration process to impose the policy measures and monitor the related progress.

It is also worth noting that the standardization and/or harmonization of supervisory and regulatory frameworks across the region drive effective financial integration. When implementing policy measures or developing policy actions, it is essential to ensure that these policies are in line with the regional frameworks for the achievement of financial integration in the region. Evidently, the EU has developed major action plans for each financial market, i.e., the Banking Union, CMU, and SEPA, in reference to international standards. These master plans are applied to, and must be adopted by, all EU member states to make sure that everyone is on the same page and to minimize complication and confusion among the member states while translating these rules to their national agenda for the agreed same goals.

Though ASEAN establishes many working committees to drive the regional agenda for financial integration by developing policy actions in line with the end goals as embedded in the SAPs, there is no such central authority to monitor the implementations and enforce sanctions if deadlines are missed and the policy measures are not implemented. Many guidelines are issued to share among the member states, but there is no guarantee that these guidelines will be adopted properly due to the flexibility ASEAN gives to its member countries. Given this difference, ASEAN may want to think about reviewing its approach to financial integration. Though many international standards are referred to as the benchmarks for ASEAN authorities, the single master plan is rarely adopted in the region. As a result, the absence of institutionalization and of the adoption of single standards could hinder the process of financial integration.

It is obvious, at least for the time being, that it is difficult for ASEAN to follow the EU's practices and establish a similar central institution. However, strengthening the capacity of the ASEAN Secretariat may be an option to think about to accelerate the financial integration process in the region. Although no penalties or sanctions would be imposed on any member states if they could not achieve what has been agreed, a stronger monitoring process for financial integration could be conducted and strictly implemented by the ASEAN Secretariat. The most important thing is to provide capacity-building programs to improve such capacity. In addition, the continuity of working committees is critical for the integration process to be successful.

In terms of improving standardization and harmonization, regional frameworks should be developed along with narrowing development gaps among the AMS. Capacity-building and training programs in the priority areas and international frameworks and guidelines should be encouraged further in a continuous manner. This will help the newer AMS to catch up with ASEAN 5 and build up their ability to develop regulatory frameworks in line with international standards.

4.2 Regional Financial Integration Framework and Implementation

As previously mentioned, regional frameworks and a single set of rules and standards are necessary to achieve financial integration. Both the EU and ASEAN have master plans for the integration in their region. While the EU has developed a comprehensive set of regulations and rules for each market, e.g., the Eurosystem, Banking Union, CMU, and SEPA, ASEAN endorses two strategic action plans for their financial integration, i.e., the SAP for Financial Integration 2016–2025 and the SAP for Taxation Cooperation 2016–2025.

The implementation of these action plans is even more important for achieving regional financial integration. Having reviewed the chronological implementation process of each

region, evidence shows that the EU has laid down far more precise policy measures and rules that the member states need to comply with, subject to its strict timelines for implementation. Its serious implementation is visible through the sanctions and penalties they put in place. ASEAN, on the other hand, has developed a broad set of end goals and associated timelines. The policy actions included in the SAPs are deliberated broadly to give the member states flexibility to adopt and comply with. To achieve the end goals in a timely manner, a firm implementation process must be inaugurated to induce transparency, manage expectation, and thus boost investor confidence. This strict implementation can be strengthened by stronger commitment from AMS to the same goal of financial integration in the near future.

4.3 Monitoring and Evaluation Process

In relation to the implementation process for financial integration, both regions use their own process as a monitoring and evaluation mechanism. The EU conducts regular midterm reviews and a public consultation when new initiatives or regulatory frameworks come out. The ECB also produces regular reports on financial integration with comprehensive data and indices. ASEAN established the ASEAN Integration Monitoring Directorate as a monitoring body to keep track on the progress of economic integration in the region according to its master plans/blueprints. Under the finance track, the working body called the Senior Level Committee on Financial Integration also implements the monitoring process by adopting the key performance indicators for each financial market to capture the degree of financial integration.

The concern, however, is not about the monitoring body and the process, but rather the comprehensive data set and its availability to be used for the assessment. It is recommended to develop comprehensive database for monitoring and evaluation purposes. The available database will enhance transparency, reduce speculation, and improve investor confidence. ASEAN should also encourage transparent sharing of public information through periodic reports. This information sharing and raising public awareness are part of the effective process of financial integration. A regular public–private consultation should also be conducted not only to upgrade the process of reaching out to the public, but also to get feedback and inputs from stakeholders to develop and improve the existing regulatory frameworks and policy measures.

4.4 Financial Surveillance System for Financial Stability

The assessment of the financial indices in Section 3 shows that integration in both regions could be affected by external shocks, e.g., a global financial crisis. The creation of robust macroeconomic and financial surveillance systems is crucial for a stable financial integration process. Given the possible spillovers channeled from the integrated economy, the robust surveillance systems will help limit the uncertainty related to such shocks that may occur during the process. In addition, the complement of a regional financial safety net helps facilitate financial stability through the process by guaranteeing liquidity during the crisis time for the member countries.

All these safeguard mechanisms are available in both the EU and ASEAN, with the only difference being the operationalization. The most important thing is to make sure that the surveillance system and the risk-pooling funds are operated efficiently and promptly. One recommendation for ASEAN is to strengthen the capacity of an operating body by equipping it with relevant knowledge and international cooperation with international organizations, e.g. the IMF, World Bank, ADB, etc.

4.5 Regional Cooperation

To achieve financial integration, political will is mandatory because it reflects the willingness and efforts that all nations in the region put in to reach the targeted destination. The European Union has obviously been giving maximum effort to implementing regional financial integration through institutionalization, regional cooperation, and standardization.

Due to diverse levels of economic and financial development across the region, ASEAN emphasizes the importance of capacity-building programs to help the newer member countries catch up with current developments and the global and regional environment. This is to ensure that no one is left behind in this integration process. However, the willingness to adopt and implement the regional frameworks is still questionable. It is certainly recommended for ASEAN to consider strengthening the regional cooperation to advance its financial integration process, particularly in capacity-building and training programs, to enhance financial literacy and narrow the development gaps across the AMS. Enhanced capacity that is equipped with improved knowledge and best practices will help AMS at least to adopt international standards and catch up with technological advancements, which are key factors in successful regional financial integration.

Though ASEAN's integration formula of ASEAN minus X or 2+X is intended to provide the newer ASEAN member countries with flexibility and allow more times to adopt the regional framework and catch up with others, it could also delay the integration process, particularly when these countries are not able to deliver the required outcomes according to the indicated timelines. ASEAN's working committees in respective financial subsectors should play more assertive roles in expediting the implementation of the measures identified in the SAPs. The monitoring process of the integration progress must be implemented effectively to ensure the desirable outcomes in a timely manner as scheduled in the blueprint and SAPs.

REFERENCES

- ASEAN Secretariat. 2016. ASEAN Economic Community 2025 Strategic Action Plans (SAP) for Financial Integration from 2016–2025. <https://asean.org/storage/2012/05/SAP-for-Financial-Integration-2025-For-publication.pdf> (accessed 1 April 2019).
- . 2019. Joint Statement of the Fifth ASEAN Finance Ministers' and Central Bank Governors Meeting. <https://asean.org/joint-statement-5th-asean-finance-ministers-central-bank-governors-meeting-afmgm/> (accessed 15 April 2019).
- Bank Governors' Meeting (AFMGM) in Chiang Rai, Thailand on 5 April 2019.
- Beck, Thorsten, Demirguc-Kunt, A., and Levine, R. 2009. Financial Institutions and Markets across Countries and Over Time: Data and Analysis. The World Bank Development Research Group, Finance and Private Sector Team Working Paper 4943. Washington, DC: The World Bank.
- Berkofsky, A. 2005. Comparing EU and Asian Integration Processes – The EU a Role Model for Asia? European Policy Centre Issue Paper 23. Brussels: European Policy Centre.
- European Central Bank. 2019. Banking Supervision, Banking Union. <https://www.bankingsupervision.europa.eu/about/bankingunion/html/index.en.html> (accessed 12 April 2019).
- . 2019. Banking Supervision, Milestones. <https://www.bankingsupervision.europa.eu/about/milestones/html/index.en.html> (accessed 10 April 2019).
- . 2008. Eurosystem, Indicators of Financial Integration in the Euro Area. https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/financial_integration/html/index.en.html (accessed 18 March 2019).
- . 2007. Financial Integration in Europe, 2007. <https://www.ecb.europa.eu/pub/pdf/fie/financialintegrationineurope200703en.pdf?1470741bc6dcc84cb69ab158c75f5a7e> (accessed 25 March 2019).
- . 2008. Financial Integration in Europe. <https://www.ecb.europa.eu/pub/pdf/fie/ecb.financialintegrationineurope201805.en.pdf> (accessed 28 March 2019).
- . 2009. Financial Integration in Europe. <https://www.ecb.europa.eu/pub/pdf/fie/financialintegrationineurope200904en.pdf?76a140d39b48b74a95a8791ddb6bb275>. (accessed 26 March 2019).
- . 2010. Financial Integration in Europe. <https://www.ecb.europa.eu/pub/pdf/fie/financialintegrationineurope201004en.pdf?01f86cdcbc2374e6393d14ee991e411b> (accessed 1 April 2019).
- . 2011. Financial Integration in Europe. <https://www.ecb.europa.eu/pub/pdf/fie/financialintegrationineurope201105en.pdf?591311b39bee05e41ee76cac91faab54> (accessed 7 April 2019).
- . 2012. Financial Integration in Europe. <https://www.ecb.europa.eu/pub/pdf/fie/financialintegrationineurope201204en.pdf?555d50a5346bd5a322c47e8df4f9e223> (accessed 9 April 2019).
- . 2013. Financial Integration in Europe. <https://www.ecb.europa.eu/pub/pdf/other/financialintegrationineurope201304en> (accessed 6 April 2019).
- . 2014. Financial Integration in Europe <https://www.ecb.europa.eu/pub/pdf/other/financialintegrationineurope201404en.pdf> (accessed 2 April 2019).

- . 2015. Financial Integration in Europe https://ec.europa.eu/info/system/files/financialintegrationineurope-042015_en.pdf (accessed 6 April 2019).
- . 2016. Financial Integration in Europe, 2016 <https://www.ecb.europa.eu/pub/pdf/other/financialintegrationineurope201604.en.pdf> (accessed 8 April 2019).
- . 2017. Financial Integration in Europe <https://www.ecb.europa.eu/pub/pdf/other/ecb.financialintegrationineurope201705.en.pdf> (accessed 3 April 2019).
- . 2018. Financial Integration in Europe <https://www.ecb.europa.eu/pub/pdf/fie/ecb.financialintegrationineurope201805.en.pdf> (accessed 11 March 2019).
- . 2008. Measuring Financial Integration in New EU Member States. Occasional Paper Series No. 81. <https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp81.pdf> (accessed 9 March 2019).
- . 2019. Migrating to the Single Euro Payments Area: Key Facts. <https://www.ecb.europa.eu/paym/retpaym/paymint/migration/html/index.en.html>.
- European Commission. 2019. Commission Staff Working Document on Foreign Direct Investment in EU. https://trade.ec.europa.eu/doclib/docs/2019/march/tradoc_157724.pdf.
- . 2019. Delivering on the Capital Markets Union. Available via https://ec.europa.eu/info/sites/info/files/181128-cmu-factsheet_en.pdf.
- . 2015. The Action Plan on Building a Capital Markets Union. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0468>.
- European Parliament. 2019. Fact Sheets on the European Union. <http://www.europarl.europa.eu/factsheets/en/sheet/88/banking-union>.
- . 2019. Legislative Train Schedule – Deeper and Fairer Internal Market with a Strengthened Industrial Base/Financial Services. <http://www.europarl.europa.eu/legislative-train/theme-deeper-and-fairer-internal-market-with-a-strengthened-industrial-base-financial-services/package-action-plan-for-capital-markets-union>.
- European Payments Council. 2019. SEPA Timeline. <https://www.europeanpayments-council.eu/about-sepa/sepa-timeline>.
- Eurostat. 2019. European Union Direct Investments Database. <https://ec.europa.eu/eurostat/web/balance-of-payments/data/database> (accessed 24 May 2019).
- Flood, R. P. and Rose, A.K. 2003. Financial Integration: A New Methodology and an Illustration. NBER Working Paper Series 9880.
- International Monetary Fund. 2018. Coordinated Portfolio Investment Survey.
- Koh, T. 2017. ASEAN and the EU: Differences and Challenges. *The Straits Times*. <https://www.straitstimes.com/opinion/asean-and-the-eu-differences-and-challenges>.
- Poenisch, H. 2014. Monitoring Financial Integration: EU and ASEAN Compared. *SEACEN Financial Stability Journal* 3:59–80.
- Pungulescu, C. 2013. Measuring Financial Market Integration in the European Union: EU15 vs. New Member States. *Emerging Market Review* 106–124.
- United Nation Conference on Trade and Development (UNCTAD). 2018. World Investment Report. <http://unctad.org/fdistatistics>.