Monitoring Financial Integration: EU and ASEAN Compared

By Herbert Poenisch

Financial integration within ASEAN has been declared a goal within the framework of the ASEAN Economic Community (AEC), to be achieved by 2015. It is desirable from the point of view of consumers of financial services who can tap broader and deeper financial markets to finance economic growth. It should also be desirable from the investors' point of view, recycling Asian savings within the region. Finally, it is also desirable from the perspective of policy makers as it provides risk sharing between participating countries and regions. The issue of whether it adds to financial stability, the risk sharing aspect, or adds instability, the contagion aspect has not been resolved, neither in the theoretical discussion nor in practice. The SEACEN 30th Anniversary Conference, held on 22 October 2013, was devoted to the relationship of financial integration and financial stability.

The recent EU crisis highlighted the potential for contagion risk, once one sector, the sovereign debt market or interbank market became impaired (indicators are shown below).

The Global Financial Crisis (GFC) reminded us once again of how interconnections within the financial sector can amplify shocks. When the financial dominoes do begin to fall, they do not respect national borders. Thus, by its nature, interconnectedness demands a policy response that goes beyond the national level. International cooperation is essential to *monitor* and respond to vulnerabilities.[1]

This article will not address the vulnerabilities, but rather confine itself to the *monitoring* of financial integration with technical measures. With better frameworks and tools for identifying and measuring interconnectedness, our understanding of how such systemic risk is transmitted has advanced considerably. However, this understanding still remains incomplete.[2] Once we have a clearer idea on how to measure where we are on the way towards financial integration, the discussion can revert back to financial stability aspects.

The European Central Bank (ECB), in charge of monetary and financial stability in the Eurozone has already compiled such financial integration indices since 2005. They publish annual price-based measures as well as quantity-based measures for various segments of the financial markets, the money markets, the banking (credit) markets and the bond and equity markets.

The Asian Development Bank (ADB) also publishes annual economic integration indicators. It operates a website called Asia Regional Integration Centre (ARIC)[3] as well as publishes its annual Asian Economic Integration Monitor (AEIM). In the finance area, these include quantitative indicators, such as regional cross-border bank lending and holdings of financial assets (bonds and equities) as well as price indicators, such as the correlations in money market rates, in lending market rates, in bond market rates, in stock market returns and portfolio indicators.

This article will show the availability of financial integration indicators, comparing those published by the ECB and the ADB. This will give an impression where financial integration stands, in the Eurozone after 15 years of existence of a common currency and within ASEAN on the eve of the AEC. The BIS International Banking Statistics are added as measure of banking integration.

1. Measures of Financial Integration

The European Central Bank (ECB) defines financial integration as:[4]

The market for a given set of financial instruments and/or services that is fully integrated if all potential market participants with the same relevant characteristics:

(1) face a single set of rules when they decide to deal with those financial instruments and/or services;
(2) have equal access to the above-mentioned set of financial instruments and/or services; and
(3) are treated equally when they are active in the market.

1.1 The Financial Landscape[5]

Any comparison should include the importance of various financial segments in the national systems. Both the Eurozone and ASEAN have financial systems dominated by banking systems. This is in contrast to market based system, such as the US system, where intermediation by capital markets overshadows banking intermediation. The banking assets over GDP amount to some 300% in the Eurozone, 200% in Japan and 100% in the US.[6]

A general comment is that Eurozone countries' economies were far more homogenous at the start of the integration process in the 1970s than ASEAN economies are today. However, ASEAN policy makers claim merit in diversity.

With significantly more diverse economies and financial systems, promoting greater regulatory convergence in Asia is more likely to proceed on the basis of a set of shared principles for developing and maintaining sound financial systems.[7]

Reflecting the diversity of their economies, some standard metrics of financial development—such as deposit money banks' assets, stock market capitalization, and the value of bonds outstanding as a proportion of GDP—show considerable differences across ASEAN.[8]

1.1.1 Banking Systems

Comparing the importance of banking in the financial system for the EU, the ratios of total banking assets range between 2 and 4 times of their GDP. In financial centres, such as Luxembourg, the ratio even reaches 12 times the GDP.[9] The banking assets for the Eurozone are in between at some 3 times the GDP. There are major differences between more market based systems, such as the UK, Netherlands, France, etc., and more bank-based systems, such as Germany, Austria, etc.[10]

In ASEAN, commercial banks are by far the most important type of financial institutions. Overall, they accounted for more than 82% of total financial assets in 2009.[11] As in the EU, there is great dispersion between Singapore at 110% and Malaysia at 102% on the one hand and Indonesia and Philippines at some 30% on the other.[12]

Measured in terms of assets, ASEAN banks are, on average, rather small on an international scale. In terms of market capitalization, only three Singaporean banks and one Malaysian bank rank among the world's top 100 banks. Moreover, the market capitalization of all of the 24 ASEAN commercial banks combined is smaller than that of Industrial and Commercial Bank of China (ICBC), China Construction Bank, or Hong Kong and Shanghai Banking Corporation (HSBC).[13]

Other banking indicators which should be compared up front are the different funding structures. European banks rely far more on wholesale funding, interbank market as well as issuing money market papers and longer term securities. Asian banks mostly rely on domestic deposits, which are a stable source of funding but less regionally integrated.[14]

The penetration by foreign banks, for this purpose only from other regional member countries is reflected on both sides of the balance sheet: cross-border loans (including interbank loans) and security purchases on the asset side and cross-border deposits, interbank borrowing and securities issued on the liability side. These data should include intra bank funding within the same bank holding, such as branches, subsidiaries and joint ventures.

The Committee on the Global Financial System (CGFS) in its Report on banking systems and regional financial integration concludes that various indicators suggest that EME banking sector internationalization is increasing. For example, aggregate cross-border claims (which include loans, deposits, debt securities and other financial instruments) on economies in the three major EME regions have increased almost threefold in the past decade. Although cross-border claims dipped sharply in 2008, they have since surpassed pre-crisis levels.[15] The EME Asian region in this case comprises ASEAN plus China, Hong Kong SAR and Korea.

The CGFS also highlights that banks in Singapore and Hong Kong provide important intermediation services for the Asian region, illustrating the supporting role played by financial centres as a conduit for financing to regional economies, especially among EMEs. Cross-border flows between the two financial centres and the rest of Asia, both emerging and developed, have increased since the global financial crisis, reflecting greater regional integration.[16]

Although the ASEAN 5 states have taken steps to open up their banking industry, cross-border banking and the cross-border penetration of ASEAN-based banks within ASEAN have been slow to develop. In 2010, not a single ASEAN-based commercial bank had either a branch or a subsidiary in all ASEAN member states. The three ASEAN banks with the widest regional presence (Maybank of Malaysia, Bangkok Bank of Thailand, and United Overseas Bank of Singapore) have operations in seven ASEAN member states.[17]

1.1.2 Bond Markets

The size of total outstanding bonds issued in Euro by Eurozone residents, i.e. bonds issued by sovereigns, financials and corporates is approximately 130% of GDP for all Eurozone countries.[18]

In ASEAN, only a few have developed bond markets, notably Malaysia (93%), Singapore (55%) and Thailand (57%).[19]

1.1.3 Equity Markets

The size of equity markets in the Eurozone trails the size of banking markets and also the equity markets in ASEAN. For the EU as a whole, the stock market capitalization is only 43%, with the highest value in Sweden at 88%.[20] In ASEAN, they are highly developed only in a few countries, Singapore 172%, Malaysia 180%, Philippines 77% and Thailand 73%.[21]

1.1.4 Portfolio Investment Assets

While available statistics do not enable a breakdown between advanced economy and EME portfolio investors, the IMF's Coordinated Portfolio Investment Survey suggests a growing role for EME investors in same-region activities.[22] Reflecting the gradual pace of financial integration, intra-ASEAN portfolio investments as a proportion of the region's total investments have been relatively small. Among the ASEAN 5, Singapore and Malaysia are the two largest portfolio investors, with 84.2% and 12.1% of the total intra-ASEAN portfolio investments in 2009.[23] Asian Bond Funds 1 and 2 were designed as a boost for Asian savings to be recycled in Asia. The issuers are high quality Asian borrowers, in the first Asian Bond Fund issuing in USD, in the second Asian Bond Fund in local currency. The purchasers initially were Asian central banks. Later on private investors were admitted to the Funds.[24] More popular than the securities themselves was the Pan Asian Index Fund (PAIF),[25] which is actively traded.

In all security markets, market liquidity matters. It is defined as the willingness of market participants to trade. A liquid market is one where large volumes can be bought and sold without affecting the price (such as US Treasuries). The degree of market liquidity varies across market segments, from country to country and through time. Periods of stress have seen market liquidity drying up completely.

Measurements of integration, such as dispersion and co-movements of price-based indicators reflect the underlying market sentiment, i.e. they vary from tranquil periods to turbulent periods. They are affected by national, regional or global news.

Finally, financial account liberalization varies between the EU and ASEAN.

Whereas the capital account has been liberalized in the EU since the late 1980s, various financial account impediments remain in place in ASEAN. These drive a wedge between national price-based measures which can be sustained over time.

Even if capital is substantially allowed to move across national borders, as is the case in many ASEAN countries, capital mobility is still considered not free if it is subject to control in the form of permission, ex ante reporting requirements, or quantity restrictions, even if permission is generally granted.[26]

1.2 Types of Measures

The first category is *price-based measures,* which measure discrepancies in prices or returns on assets caused by the geographic origin of the assets.[27]

A second category is *quantity-based measures* such as ease of market access, and cross-border holdings of securities.

A third category refers to *news-based* measures. In a financially integrated area, portfolios should be well diversified. Hence, one would expect news (i.e. arrival of new economic information) of a regional character to have little impact on prices, whereas common or global news should be relatively more important.[28]

2. Financial Integration in the Eurozone

The European Central Bank publishes an Annual Report on Financial Integration in Europe (latest 2014). The key observations were that the process of financial integration in Europe was reversed somewhat in 2012 because of concerns of the breakup of the Euro. This reversal demonstrates that financial integration is not a one way process but subject to backlashes due to volatility in market confidence.

Although fears of a breakup of the Euro subsided in 2013, significant financial fragmentation still remains in the euro area, especially in some market segments. Further progress towards financial integration and stability cannot be taken for granted but should be underpinned by sustained policy action, especially on two fronts: effective implementation of the Banking Union in all its components and continuous effort, at the national level, towards fiscal consolidation and structural reforms aiming also at reducing competitiveness imbalances.[29]

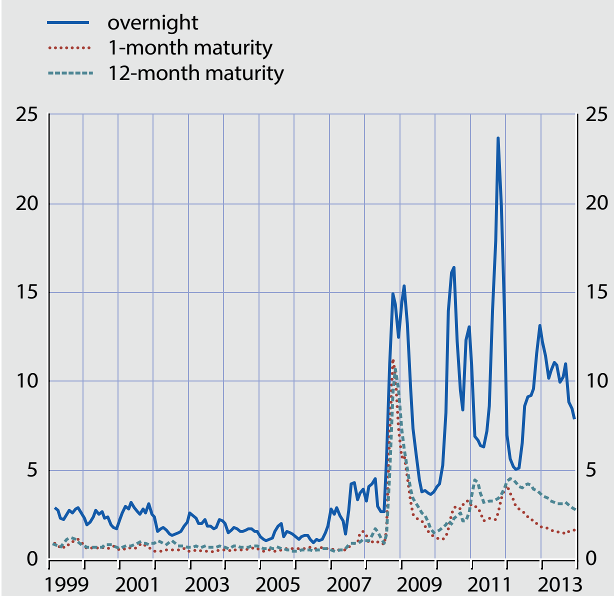
2.1 Price-based Measures

2.1.1 Money Market Rates

As expected, in a currency union, money markets rates of unsecured as well as secured lending should converge, the cross-country standard deviation should be low. As the graphs below[30] shows, since the GFC, money market rates in the Euro area have diverged significantly, compared with previously stable values. This reflects the risk differentiation across countries and banks.

Chart 2: Cross-country standard deviation of average unsecured interbank lending rates across euro area countries (EONIA, EURIBOR)

(61-day moving average: basis points)



Sources: EBF-Euribor and ECB calculations.

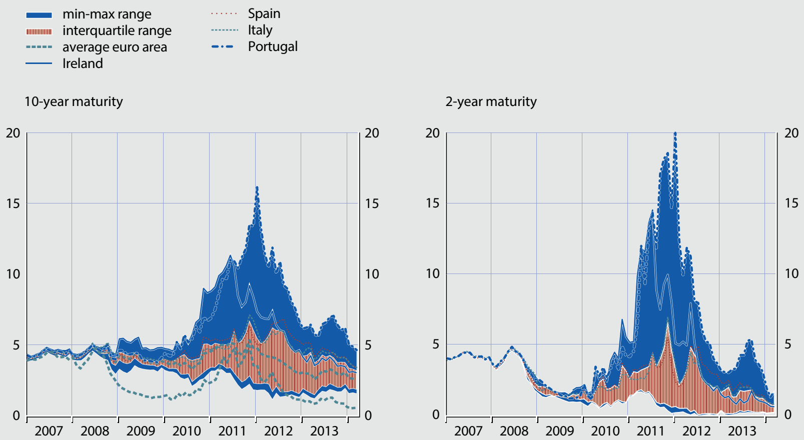
Source: ECB, (2014), pp. 15.

2.1.2 Sovereign Bond Yields

As a result of the European debt crisis, these indicators showed the reversal of integration, most clearly in the dispersion of sovereign bond yields in 2011 and 2012. However, these have declined markedly recently for the 2 year as well as the 10 year maturity.[31]

Chart 6: Dispersion of Euro area sovereign bond yields

(percentage points)



Sources: Thomson Reuters and ECB.
Notes: The data used are based on euro area country composition as in 2011. The yields for Greece, Cyprus, Estonia, Luxembourg, Malta and Slovenia are excluded owing to infrequent or a lack of observations.

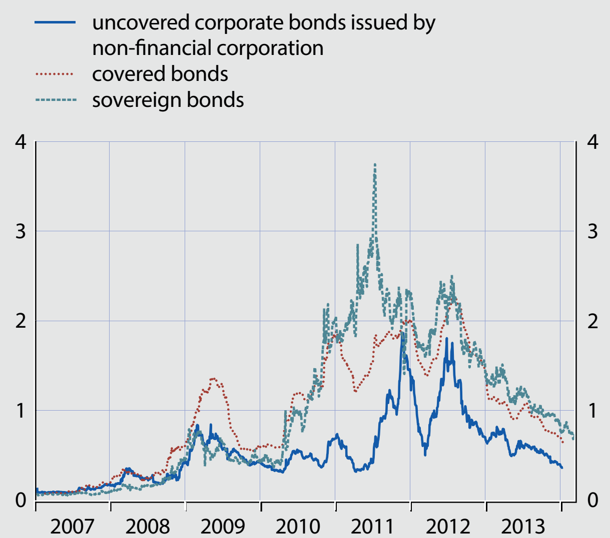
Source: ECB, (2014), pp. 19.

2.1.3 Corporate Bond Yields

Non-financial corporate bond markets and covered bonds suffered an increase, albeit lower, in dispersion of yields compared with sovereigns.[32]

Chart 10: Cross-country dispersion in bond yields among non-financial corporations and banks in the euro area

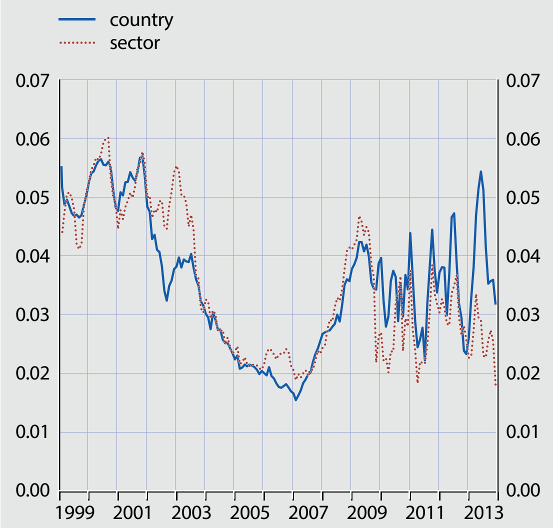
(daily data; standard deviation, percentage points)



Source: ECB,(2014), pp. 21.

Chart 19: Country and sector dispersions in euro area equity returns

(percentages)

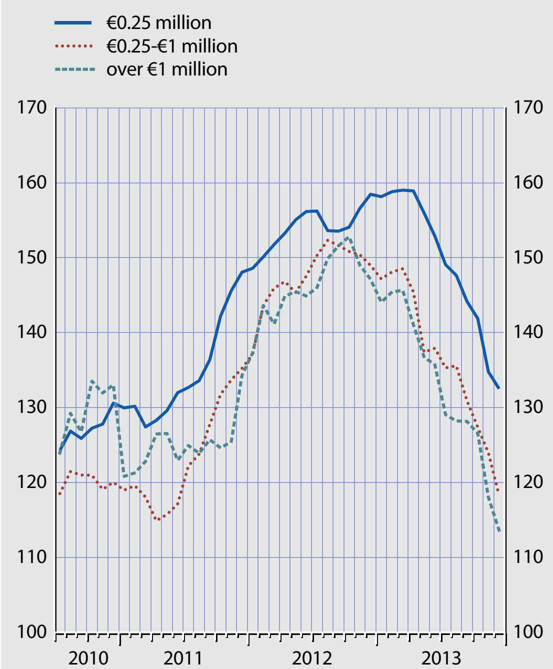


Source: ECB, (2014), pp. 26.

Equally, country and sector dispersion of equity returns in the Eurozone show the reversal in integration, with the country dispersion exceeding the sectoral dispersion.[33]

Chart 25: Cross-country standard deviations of MFI interest rates on new loans to non-financial corporations

(unweighted three-month moving averages, basis points)



Source: ECB, (2014), pp. 30.

2.1.4 Credit Markets

The cross country standard deviation of interest rates charged by Monetary Financial Institutions (MFI) increased markedly during the EU debt crises, more so for small loans than for medium sized loans and large loans.[34]

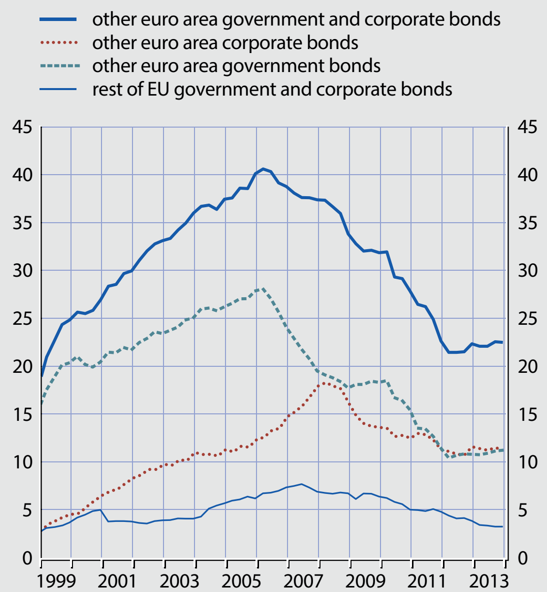
2.2 Quantity-based Measures

2.2.1 Cross-border Holdings of Debt Securities

The decline in the share of cross-border holdings by MFI of Euro area and EU issued debt securities, both sovereign as well as corporate started during the GFC and has been stabilized only recently.[35]

Chart 9: Share of MFI cross-border holdings of debt securities issued by euro area and EU corporates and sovereigns

(percentage of total holdings, excluding the Eurosystem)



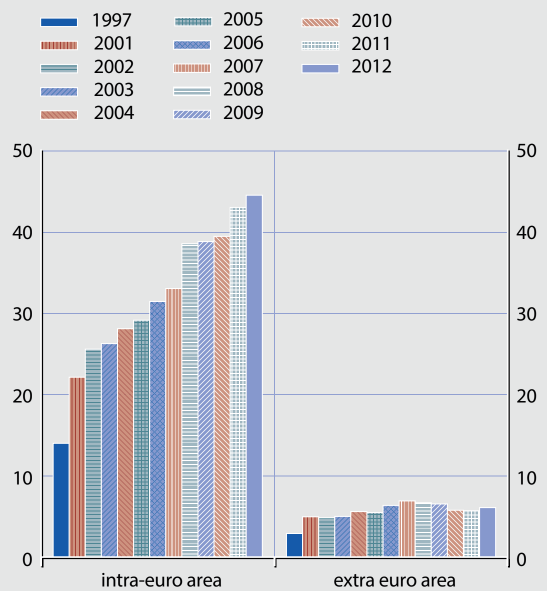
Source: ECB, (2014), pp. 26.

2.2.2 Cross-border Equity Holdings

The cross-border holdings of equity issued by Eurozone residents has increased steadily and been unaffected by the GFC as well as by the EU debt crisis.[36]

Chart 23: Cross-border holdings of equity issued by euro area residents

(percentages)



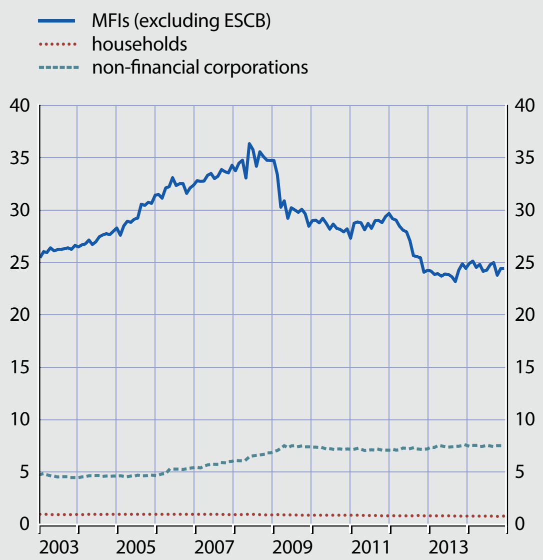
Source: ECB, (2014), pp. 28.

2.2.3 Cross-border Credit Markets

The share of cross-border loans by MFI has declined during the GFC as well as following the EU debt crisis as there was some reversal towards more domestic lending. The already low share of cross-border lending to non-financial corporates and households has remained unchanged.[37]

Chart 28: Share of cross-border loans for different sectors in the euro area

(monthly; percentage)



Source: ECB, (2014), pp. 32.

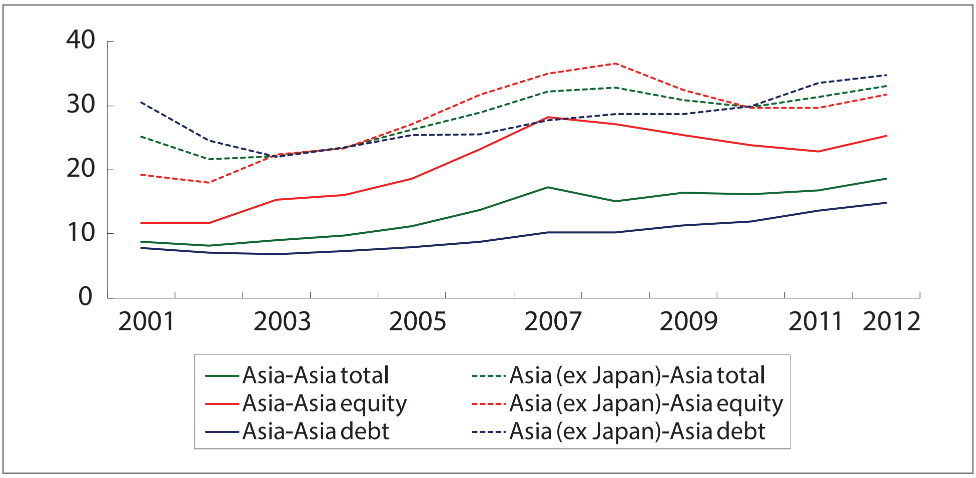
3. Financial Integration in ASEAN+3

The ADB publishes an annual update of its Asian Economic Integration Monitor (2014). Regarding financial integration, it publishes the following quantity based and price based indicators.

3.1 Quantity-based Indicators: Cross-border Portfolio Holdings

While Asian investors continue to prefer investing in their own markets ("home bias") or outside the region ("global bias"), intraregional holdings of equity and debt securities continued to rise in 2012, as global risk aversion waned and the region's growth differential with advanced economies attracted more investors. In particular, intra-Asian bond holdings rose from 13.6% in 2011 to 14.8% in 2012. Excluding Japan (which tends to hold a large share of US assets), intra-Asian bond holdings is even higher at 31.6% in 2012. During the same period, intra-Asian equity holdings also rose from 22.8% to 25.2%.[38]

Figure 15: Cross-Border Portfolio Holdings—Asia (% share)

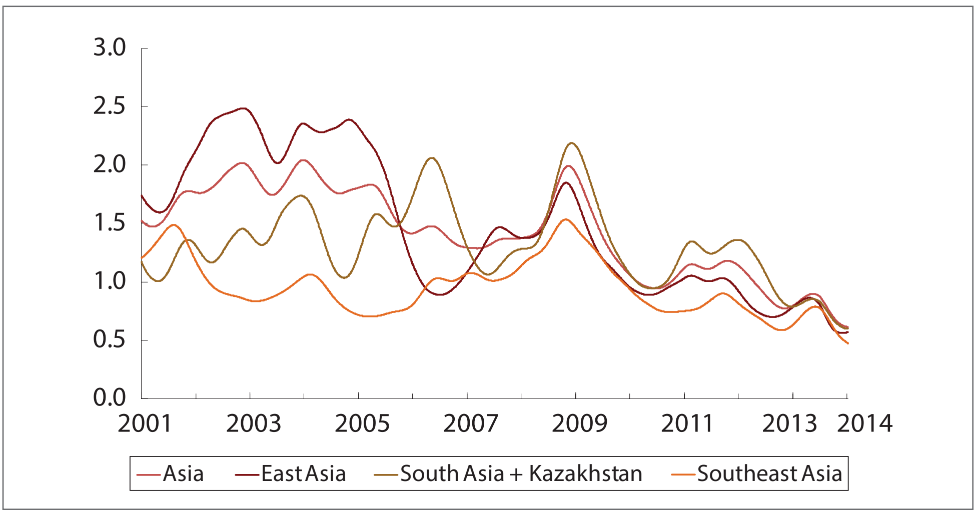


Source: ADB, (2014), pp. 24.

3.2 Price-based Indicators: Co-movements or Cross-market Dispersion

The extent of integration in Asian financial markets can also be measured through price indicators such as the co-movements of financial asset returns—specifically by cross-market dispersion of daily stock-index returns and of 10-year bond yields. The trend shows a declining dispersion with a major setback after the GFC when foreign investors (both regional and global) sold Asian equity.

Figure 17: Cross-Market Dispersion of Equity Returns (%)

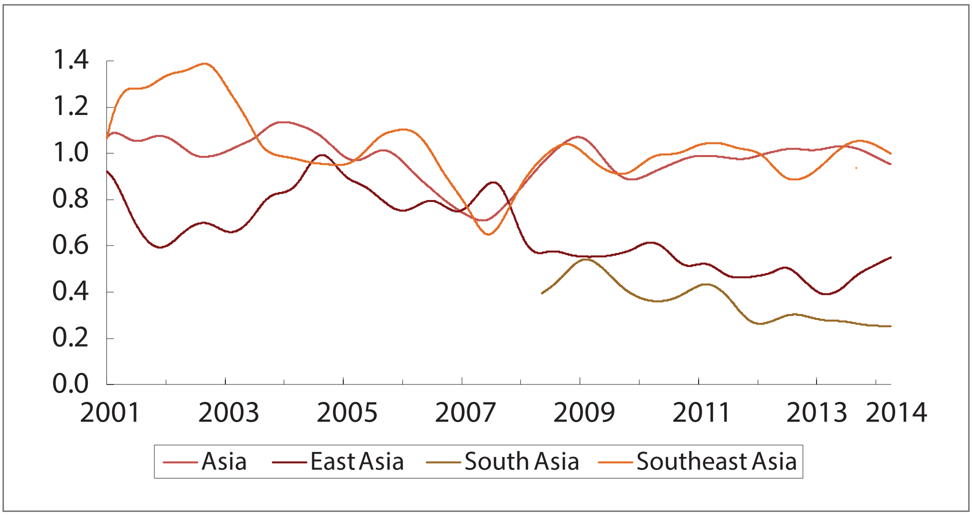


Source: ADB, (2014), pp. 25.

3.3 Price Indicators: Coefficient of Variation of 10-year Bond Yield Spreads

In 2013, the coefficient of variation for 10-year bond yield spreads had increased due to the massive sell-off by foreign investors (both regional and global) which affected economies with weaker macroeconomic fundamentals more. The coefficient of variation of bond yields in South Asia remains relatively stable (albeit slightly declining). In contrast, the coefficient of variation of 10-year bond yield spreads on East Asian bonds has increased, yet remained lower than that in Southeast Asia.[39]

Figure 18: Coefficient of Variation of 10-Year Bond Yield Spreads



Source: ADB, (2014), pp. 31.

4. The BIS Banking Statistics

Since the 1970s, the Bank for International Settlements has been collecting cross-border banking flows from major financial centres in two formats. The first reporting is on locational basis which captures activities of international banks on a geographic basis, which is comparable to the balance of payments statistics of the IMF.[40]

The second reporting is based on ownership of banking systems. The series are called consolidated banking statistics and they are comparable to supervisory returns of national banking systems.[41]

The first series can be used as a measure for financial integration as it captures the cross-border activities of banks resident in a certain country (locational). If vis-a-vis data are used they would even capture the penetration of banking system (assets as well as liabilities) within a certain region. The bilateral flows include transactions with their own affiliates (branches, subsidiaries, joint ventures). The locational statistics even offer a nationality breakdown.

The consolidated data are less indicative of mutual penetration as they net out the inter-office flows of banks. However, they were used extensively by the CGFS to highlight the regional ownership of banks.

Of the 28 EU countries,[42] the major 16 are reporters to the BIS banking statistics, the locational as well as the consolidated statistics. Out of the 18 Eurozone countries, 12 major ones are reporters to the locational as well as consolidated statistics. The bilateral flows (which are confidential and thus only available to the reporting central banks) can be analyzed in such a way as to establish a degree of mutual banking penetration.

Out of 10 ASEAN countries, only 3 are reporters to the locational statistics, i.e., Singapore, Malaysia and Indonesia and only 1, Singapore also reports to the consolidated statistics. For ASEAN+3, one can add Japan and Korea, which report to both the locational as well as the consolidated statistics. In this case again, the bilateral data (which are confidential except for the reporting central banks) can be used for measuring the mutual banking penetration.

At present, the BIS banking statistics would allow the extraction of the following information regarding ASEAN banking: the claims and liabilities of Singapore based banks on Malaysian banks and Indonesian banks; claims and liabilities of Malaysian banks on Singaporean and Indonesian banks; and finally, claims and liabilities of Indonesian banks on Singaporean and Malaysian banks. These mutual claims and liabilities could be compounded in a penetration index.

The BIS banking statistics were extensively used in the Report by the CGFS on EME banking and financial integration. As a result, the activities of Hong Kong and Singapore based banks feature far more prominently and capture the dynamic impact of these two financial centres on the rest of Asia. Regarding penetration, the share of banking activities by foreign banks from outside the Asian region is still rather high,[43] thus confirming the ADB findings of 2013.

5. Available Indicators of Financial Integration Compared

The major difference between the two surveyed regions is in the process of integration. Whereas the EU chose to adopt a common currency, the Euro, before embarking on financial integration, ASEAN promoted the drive towards financial integration without even mentioning the possibility of adopting a common currency any time in the future.

As a result of the common currency, many measures of financial integration which are of prime importance for the conduct of monetary policy, such as the dispersion of money market rates do not apply in ASEAN. The Euro has undoubtedly played a very important role as a catalyst for financial integration in general – integration is most advanced in those market segments that are closer to the single monetary policy, notably the money market. The Eurozone had already achieved full integration of the money markets and the related derivatives, such as the interest rate swap market, in 2005.[44]

In 2005, integration across other financial market segments was uneven – it was very strong in the money market; has progressed significantly in government bond markets; has improved for the corporate bond market; is slow but progressing in the case of the equity market; and is much less advanced in a range of banking market segments.[45]

Progress on banking integration rests on the EU Banking Union to which the ECB devotes a whole chapter of its 2014 Report.

Regional financial integration among emerging market economies (EMEs) is on the rise. Specifically, there are signs that banking groups headquartered in EMEs have started a process of expansion that will tend to increase their importance in regional financial systems; for example, by raising the intra-regional share of portfolio investment or of foreign bank ownership.[46]

While regional bank expansion has the potential to affect the global financial system in a variety of ways, the still small overall footprint of regional banking groups suggests that current trends are unlikely to have significantly changed the risk profile of EME banking systems at this stage. Yet, broader effects are possible over time, as balance sheet capacity for further cross-border expansion exists and as business models of the larger, more systemically important EME bank affiliates have started to converge with those of similarly sized, more regionally focused advanced economy peers.[47]

The ADB notes in the 2013 Road on Integration Report that ASEAN's banking market has so far seen little integration.[48] Subsequently, the ADB AEIM 2014, devotes only one paragraph to bank credit flows, which focuses on the role of Japanese banks in the region.[49] The increasing activity of Chinese banks in the ASEAN region as well as the rapid expansion of regional banks in the region, such as Singaporean banks, Malaysian banks and Thai banks does not even get mentioned in the report.

The usefulness of the BIS International Banking Statistics (IBS) remains largely untapped in the region. Equally, any efforts to replicate these statistics for ASEAN have not been pursued by any of the regional international organizations.[50]

5. Conclusion

While the publication of financial integration indicators in the EU and ASEAN cover bond and equity markets reasonably well and give some idea about intra-regional portfolio investments, the money market and banking market integration in ASEAN remains in the dark. As ASEAN banks from some countries have been very active in promoting banking activities in other ASEAN countries, it would be recommended to enhance the banking indicators. Once the horizon is extended to ASEAN+3, the role of Japanese banks in the region is well documented but reporting on Korean Banks and, above all on the expansion of activities of Chinese owned banks in the region need better coverage in order to capture market driven integration of banking systems.

The necessary data can be obtained from national central banks which report banking activities of foreign owned banks in their statistics. However, the key impediment to gaining a clear picture of cross-border activities in ASEAN or extended ASEAN+3 is that no regional organization, neither ADB, through its Asian Regional Integration Center (ARIC) nor ASEAN through its Initiative for Asian Integration (IAI) nor ASEAN+3 Macroeconomic Research Office (AMRO) has a mandate to collect cross-border (BIS) type of statistics to monitor banking developments.

Any concerns about loss of confidentiality can be met by publishing only aggregate data, such as lending by all other ASEAN banks, either by location or by ownership to residents of a certain ASEAN country. Equally, ownership by other ASEAN countries of banks operating in a certain ASEAN country can be captured this way. This type of reporting condition can also be extended to ASEAN+3 countries. The BIS has successfully published global cross-border banking statistics under this constraint and thus greatly facilitated monitoring of global banking developments.

Herbert Poenisch was Senior Economist in the Monetary and Economic Department of the Bank for International Settlements (BIS), which he joined in 1990. He served in various capacities including assisting the integration of the transition economies into the international financial system, organizing workshops and seminars for officials from these countries to learn about the functioning of market economies, mainly at the Joint Vienna Institute. In support of the BIS' decision to disseminate the research and discussions conducted by the Bank to non-member central banks with the help of regional central bank organizations, such as SEACEN, he was in charge of organizing and delivering such workshops and seminars.

Prior to joining the BIS, Mr. Poenisch worked in various capacities at the Austrian National Bank. This included the analysis of commercial banks, research of global economic developments as well as foreign exchange control. He represented the Austrian National Bank in various international conferences at the International Monetary Fund (IMF), the Organization for Economic Co-operation and Development (OECD) and the BIS. This work covered mainly statistical issues for the compilation of internationally comparable statistics, such as on cross-border capital flows, indicators of banking systems and also the liberalization of capital movements. During this time he was sent on short-term assignments to international organizations, notably the IMF, OECD and Asian Development Bank.

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