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# SPECIAL CHAPTER: REGIONAL FINANCIAL INTEGRATION AND CRISIS IN ASIA AND EUROPE—A COMPARATIVE ANALYSIS

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The European Union (EU) represents the most advanced stage of regional financial integration in the world today. From its first formal agreement signed in 1951—the six-member European Coal and Steel Community—Europe has developed into an extremely tight 28-member regional political, economic, and financial union.<sup>40</sup> Moreover, the EU experience in creating its extensive structure provides by far the richest source of information about regional financial cooperation and integration.

The policy process driving integration has been very different in Europe and Asia. While EU economic and financial integration is more advanced, both can draw policy lessons from each other. This includes lessons learned from the 1997/98 Asian financial crisis (AFC), and the 2009 eurozone sovereign debt and banking crisis (EDC). In this special chapter, we compare integration between Europe and Asia based on joint-research with Bruegel, a European think-tank, by focusing on financial integration. Given varying levels of development in the two regions, the challenges and policy repercussions may be different. But the common goal remains an efficient, inclusive, and stable financial system.

The analysis first summarizes drivers of economic integration in Europe and Asia. Then financial integration and development are discussed. The third section discusses crisis lessons related to capital flows and financial integration. Building on that, the case for macroprudential policy is presented at the last section.

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<sup>40</sup>In this Special Chapter, Europe and the EU are used interchangeably. In general, the discussion refers to the EU15—Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom—because these countries represent the heart of European integration.

## Drivers of Economic Integration

European regionalism emerged from the experience of two world wars and the imperative of preventing future conflict. Coordinating Europe's economies was the basis of Jean Monnet's pre-war vision of a united and peaceful Europe. But it was the far more encompassing 1958 Treaty of Rome that triggered the integration process—as manufactured goods was added to the free movement of steel and coal. In 1962, the Common Agricultural Policy (CAP) was established to manage Europe's market for agricultural products. Europe adopted an approach that focused on 'setting institutions and procedures' to integrate economies.

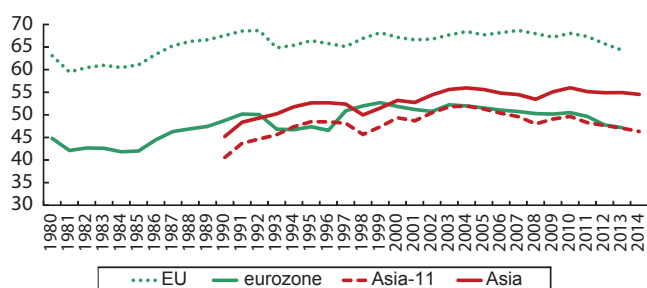
Asia's regionalism is much more modest in scope and ambition. After World War II, as economies in the region gained independence, national identity was paramount. This explains why Asia remains cautious over creating strong supranational institutions for economic and political integration. Market-driven private activities facilitated by unilateral liberalization and deepening value chains dominate the drive toward integration. Emphasis is on access and harmonizing rules and regulations across economies. Institutions in Asia were primarily established to promote market activities and to prevent or manage crisis.

Despite the historical differences, intraregional trade was a key driver of economic integration in both Europe and Asia. In Europe, after the Bretton Woods system ended in 1971, policymakers began a process of limiting exchange rate fluctuations, particularly between their relatively small, open economies.<sup>41</sup> This was expected to promote trade, support CAP, reduce transaction costs, and thereby deepen the single market. Between 1980 and 1999, Europe's customs union and deepening single market brought a significant increase in intra-EU trade.

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<sup>41</sup>This started the bumpy ride toward the 1992 Treaty of Maastricht—the basis for the 1 January 1999 monetary union and euro launch.

**Figure 17: Intra-regional Trade—European Union, eurozone, Asia, and Asia-11 (share in total trade, %)**



Asia-11 = the People’s Republic of China; Hong Kong, China; India; Indonesia; Japan; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand; and EU=European Union. Note: Both the EU and the eurozone are in changing composition. EU: data for Croatia and Slovenia (1980 to 1992), and for Estonia, Latvia and Lithuania (1980 to 1991) are not available. Eurozone: data for Estonia and Latvia (1980 to 1991), and for Slovenia and the Slovak Republic (1980 to 1992) are not available. 2014 data for Asia and Asia-11 is up to May. Source: ADB and Bruegel’s calculations based on *Direction of Trade Statistics*, International Monetary Fund.

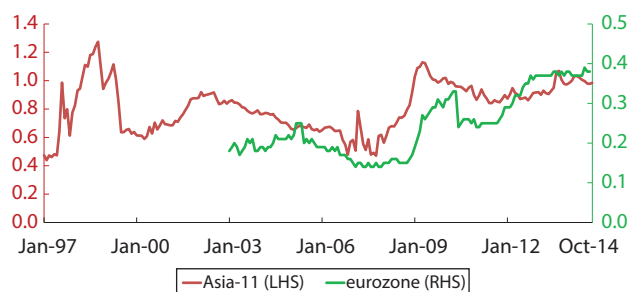
However, since the 1999 monetary union and full adoption of the euro in 2002, growth in intra-EU trade first stagnated and then decreased (**Figure 17**). Interestingly, there seems to be no marked difference in intraregional trade between Asia-11 and the eurozone—both below 50%.<sup>42</sup> In the case of Asia and the EU, the figures are 54% and 64%, respectively. The most significant trend after the euro’s introduction was the emergence of structural divergence between groups of EU economies—a fast-growing trade deficit in the Periphery and huge surplus in the Core; with the Core’s rising share of manufacturing production.<sup>43</sup>

In Asia, despite diverse stages of economic development, integration has been largely driven by market forces. No ‘heavy’ institutions were established, let alone a monetary union. Growth in

<sup>42</sup>Here, “Asia” generally refers to “Integrating Asia”, which includes the People’s Republic of China (PRC); Hong Kong, China; India; Indonesia; Japan; Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand (ADB 2008).

<sup>43</sup>The EU ‘Core’ includes Austria, Belgium, Finland, Germany, Luxemburg, and the Netherlands; the ‘Periphery’ includes Cyprus, Greece, Ireland, Portugal, and Spain.

**Figure 18: Interest Rate Dispersion—Asia-11 and eurozone**



Notes: Series refer to coefficient of variation of the average interbank lending rates in Asia and coefficient of variation of MFI interest rates on new euro-denominated loans to eurozone non-financial corporations. Asia-11 is comprised of the People’s Republic of China; Hong Kong, China; India; Indonesia; Japan; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand. Time series data is from 1 January 1997 to 31 July 2014 unless otherwise stated. Series used are Chibor 1D (PRC), Hibor overnight (HKG), NSE IOR Overnight (IND; from 12 June 1998), JIBOR Overnight (INO), BoJ Unsecured Call Rate Overnight (JPN), Call Rate Overnight-All Trades (KOR), KL IOR Ave Overnight (MAL; from 2 Jan 1997), ABS Swap Offer Rate Overnight (SIN; from 20 March 2000), Interbank Call Rate Overnight (PHI), Interbank Call Rate Overnight (TAP), and BIBOR Fixings Overnight (THA; from 30 May 2002). Source: European Central Bank and ADB calculations using data from Bloomberg, CEIC, and national sources.

intraregional trade came from private sector-driven regional production networks—multinationals seeking greater efficiency by exploiting each economy’s comparative advantage. These networks were also supported by foreign direct investment (FDI), particularly from Japan to the People’s Republic of China (PRC) and Southeast Asia. After 1990, Asia’s intraregional trade grew rapidly until interrupted by the AFC. It grew steadily from recovery to 2004, slowly decreasing through the global economic crisis (GFC), before rising again afterward. So it appears intraregional trade tends to increase after a crisis.

## Financial Integration and Financial Development

Macro-financial condition was extraordinarily benign from 2000 to 2008 during the so-called ‘great moderation’. Both Asia and Europe saw regional financial integration deepen. The coefficient of variation of cross-country money market rate differentials in Asia-11 dropped considerably after 1999 (**Figure 18**). There was a spike in 2008/09 attributed to GFC-induced

market volatility but have moderated since then. For Europe, the coefficient of variation for monetary and financial institution (MFI) interest rates on new euro-denominated loans to nonfinancial eurozone corporations stayed low until the GFC spike, and continued upward as the eurozone crisis deepened.

In Europe, financial integration was unequal across financial intermediation channels. For example, on one hand, the interbank market rapidly integrated after the euro's introduction. On the other hand, retail banking remained largely fragmented along national lines, as were bank mergers. In general, EU corporate bond and equity markets also remained fragmented along national lines, despite increased efforts to deepen integration. But integration advanced significantly in terms of debt flows, allowing some economies to finance their large current account deficits (this also explains why risk-sharing via the financial system remained limited).

It is fair to say the euro's introduction advanced financial integration beyond what would have happened without a common currency. Since the euro, for example, Europe's cross-border capital flows rapidly increased for three basic reasons:

- (i) market complacency: risk aversion dropped and spreads narrowed considerably;
- (ii) policy complacency: the policy structure for macroeconomic stability and crisis prevention could not identify the risks posed by the buildup of macro and financial imbalances; and
- (iii) institutional upgrading: electronic-trading platforms were installed for sovereign bonds, the euro adoption, and single payment systems while regulatory frameworks continued to converge.

This made financial systems increasingly interdependent. As cross-border intermediation flowed through debt instruments and banks, the risk of contagion also increased.

In Asia, the AFC became the impetus for closer regional financial cooperation and integration. The lack of strong capital markets and developed domestic financial systems (except in Singapore

and Hong Kong, China) helped cause the crisis and problems in channeling the region's savings into productive investments. As banking reforms and capital market initiatives took hold following the AFC, Asia's financial base began to diversify. Capital market financing expanded and bank-efficiency improved. Asia's intraregional portfolio investment increased and home bias declined—though it remained strong. Co-movements of equity indexes based on simple correlations—another indicator of financial integration—also strengthened **(Figure 19)**.

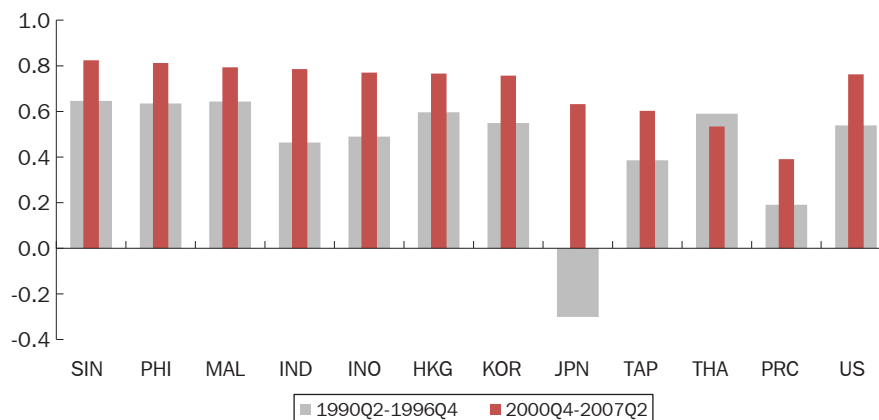
Asia's cross-border portfolio investment is much smaller than Europe's—although Asia's share has increased over the past decade, especially among ASEAN+3 and ASEAN+6 economies **(Table 8)**. Indeed, Asia's financial markets are more integrated with markets outside the region—particularly the US (for equity markets) and Europe (for bond markets). Asia's local-currency bond markets remain largely segmented, and regional consumption smoothing also remains limited. Although Asia's financial openness is much less than Europe's (0.18 versus 1.02, see Kawai & Morgan, 2014), it cannot fully explain the low degree of risk-sharing. Even with a high degree of openness, risk-sharing in Europe remains persistently weak.

Europe's financial sector is also generally more developed than Asia's. A recent study shows that, while Asia's financial systems have developed over the past 2 decades—becoming deeper and more complex—there remains a lack of convergence in financial development with advanced economies (Didier and Schmukler, 2014). It is often hypothesized that there is a threshold level of financial development before the benefits of greater financial integration exceed its costs. But the precise link between the two remains debatable. One study (Obstfeld, 2007) shows a higher correlation between growth and use of foreign capital in industrial economies than in low-income economies. But even this does not prove the precise link.

Nonetheless, Asia needs to further develop its financial sector to help reach its multiple development goals and to support real sector growth. Importantly, it should be done either for

**Figure 19: Average Correlation of Stock Price Indexes—Asia-11 and the US**

(pre- and post-Asian financial crisis)



PRC = People's Republic of China; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; KOR = Republic of Korea; MAL = Malaysia; PHI = Philippines; SIN = Singapore; TAP = Taipei, China; THA = Thailand; US = United States.

Note: Time series data begin 2 April 1990 except for the PRC series which begins 19 December 1990.

Source: ADB calculations using data from Bloomberg.

**Table 8: Intraregional Portfolio Investment—Asia vs Europe**

(share in total cross-border portfolio investments, %)

Assets	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ASEAN	10.5	9.2	7.0	8.5	9.0	7.7	8.4	6.7	6.8	9.3	8.7	10.3	9.8
ASEAN+3 and HKG	5.2	4.8	5.3	5.7	6.9	9.1	12.4	10.5	9.9	10.5	11.1	12.9	14.0
ASEAN+6 and HKG	8.5	8.1	8.9	9.4	10.9	13.3	16.9	14.8	15.0	15.6	16.2	17.8	18.1
Asia-11	5.5	5.1	5.7	6.2	7.5	9.9	13.7	11.6	11.2	12.0	12.3	14.3	15.4
Asia	8.8	8.4	9.1	9.7	11.2	13.7	17.3	15.1	15.5	16.2	16.5	18.3	18.5
EU15	60.0	62.6	63.8	64.2	62.3	61.9	61.7	65.0	65.4	60.6	60.5	60.4	58.3
EU27	60.5	63.1	64.5	65.1	63.3	62.8	62.7	66.0	66.4	61.8	61.7	61.7	59.6
Liabilities	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ASEAN	11.9	13.8	10.7	12.4	12.1	10.1	10.8	11.8	9.8	12.1	11.3	13.0	14.0
ASEAN+3 and HKG	10.1	10.8	10.3	10.2	9.8	12.2	16.2	17.5	16.8	17.2	18.1	19.8	20.1
ASEAN+6 and HKG	14.0	15.5	14.0	13.7	12.9	14.8	18.0	19.6	19.2	19.6	20.7	21.8	21.6
Asia-11	10.0	11.0	10.1	10.1	9.6	11.8	15.4	16.9	16.0	16.5	17.8	19.4	19.5
Asia	13.9	15.7	13.9	13.6	12.8	14.5	17.6	19.4	18.9	19.2	20.4	21.6	21.2
EU15	57.1	60.1	61.5	63.1	62.8	62.8	62.5	64.0	63.6	60.5	59.4	60.3	60.5
EU27	57.3	60.4	61.9	63.5	63.3	63.4	63.1	64.6	64.4	61.3	60.2	61.1	61.1

ASEAN = Brunei Darussalam, Cambodia, Indonesia, the Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam. ASEAN+3 = ASEAN, PRC, Japan and the Republic of Korea. ASEAN+6 = ASEAN+3; Australia; India; and New Zealand. Asia-11 = PRC, Hong Kong, China, India, Indonesia, Japan, the Republic of Korea, Malaysia, the Philippines, Singapore, Thailand, Taipei, China. EU15 = Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom. EU27 = EU15 plus Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovak Republic, and Slovenia. HKG = Hong Kong, China.

Source: ADB calculations using data from *Coordinated Portfolio Investment Survey*, International Monetary Fund.

financial sector development per se or to promote financial integration. Financial integration can deepen by strengthening the harmonization of rules and regulations. Thus, financial development and integration can progress in sequence irrespective of causality (that one causes the other). In this context, Europe's experience can provide Asia useful lessons in determining which institutions better foster financial development and how they influence financial integration.<sup>44</sup>

## Crisis Lessons

Despite relatively sound macroeconomic fundamentals prior to the AFC, Asian economies were still drawn into crisis. One major reason was investor overconfidence and the resulting mispriced risk on the Asian economy. The surge in capital inflows prior to the crisis gave banks and corporations an ample source of new credit. At the time, Asia's major economies followed *de facto* dollar pegs. This caused widening fluctuations in effective exchange rates against trading partners—even as it stabilized bilateral exchange rates against the US dollar. These fluctuations weakened price competitiveness, deteriorating current account balances in economies like Thailand. The system of dollar pegs also made domestic financial institutions less circumspect over exchange rate risk, causing currency mismatches—misplaced confidence that dollar-denominated loans could readily be repaid out of local currency earnings.

But the key factor was the surge in private sector, foreign currency-denominated debt. These capital inflows were largely short-term (less than 1-year maturity) and unhedged. Again, the main force behind the inflows was investor overconfidence in Asia's economic prospects. Combined with additional domestic sources of funds—facilitated by the lack of prudential supervision—much of these inflows were invested in unproductive sectors,

including housing and real estate. The resulting boom created bubbles. Once they burst, the AFC began to unravel. The double mismatch amplified the impact. This occurred despite the region's relatively sound macroeconomic conditions. The Thai baht was first to collapse, followed by the Indonesian rupiah, Malaysian ringgit, and other currencies in the region. When the true size of short-term debt in the Republic of Korea was finally exposed, this new OECD member also fell into crisis.

Learning from the AFC—and understanding the importance of avoiding double mismatches and providing emergency short-term liquidity in times of crisis, ASEAN+3 policymakers grew determined to develop stronger bond markets regionally through the Asia Bond Markets Initiative—thus fostering financial integration—and provide emergency liquidity through the Chiang Mai Initiative Multilateralization (CMIM). In other Asian subregions, financial safety nets through regional cooperation have also been either promoted or discussed. Thus, the AFC was impetus for greater regional cooperation and integration.

Europe's debt problem can be directly linked to the GFC, which led to a sovereign debt crisis in several eurozone economies in early 2010 (Volz, 2012). To offset the sharp fall in gross domestic product (GDP), governments responded with countercyclical fiscal policies that increased budget deficits. Fiscal positions worsened as tax revenues declined and transfer payments grew due to rising unemployment. In some economies, governments bailed out banks, boosting public debt.

Europe's banking problems can be attributed, among others, to removing the exchange rate risk associated with large capital flows from the core to periphery. Diverging inflation between countries and converging yields implied lower real interest rates. This drove large capital inflows to the periphery. Given Germany's dominance in eurozone GDP (28%) and low inflation (1.7%) over the euro's first decade, the European Central Bank (ECB)—through policy decisions based on eurozone-wide inflation—kept its interest rate excessively low (in retrospect) for many members. So financial integration eventually led to large imbalances—a

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<sup>44</sup>The EU established the European Regional Development Fund with four components: (i) the European Social Fund, focusing on skills training and further education; (ii) the Financial Instruments for Fisheries Guidance; (iii) the European Agricultural Guidance and Guarantee Fund; and (iv) the Cohesion Fund, emphasizing transport and environmental projects.

**Figure 20: The Sequence of Crisis and Financial Integration in Asia**



Source: ADB.

credit boom in the periphery, financed by the surpluses in core economies.

When the bubbles burst, private debt became public debt, creating a “doom loop” between sovereigns and banks, both nationally and regionally. This interdependence between banks and sovereigns made the European crisis much deeper and difficult to resolve. Periphery banks held sizeable amounts of government bonds and bills. Stress on government bond markets meant stress on the country’s banks. The national bank resolution regimes that mandated governments to stabilize the banking system further strained fiscal positions.

Clearly, a common feature of the AFC and EDC was the role played by massive capital inflows followed by “sudden stops.” Merler and Pisani-Ferry (2012) argue that sudden-stop episodes in the eurozone fall into three periods: (i) the GFC, (ii) the period following the initial Greek bailout, and (iii) the summer of 2011. The timeline suggests contagion was at work. ECB provision of central bank liquidity significantly mitigated private capital outflows. But large external imbalances left a difficult legacy. Lacking an exchange rate adjustment tool—due to the euro and fixed exchange rates in the Baltics—correcting imbalances was both difficult and painful, as adjustments were limited to prices, wages, employment, and productivity. Moreover, the stock of external assets and liabilities accumulated over a decade of large current account imbalances ballooned, exposing economies to valuation risks and/or long-term deleveraging.

In retrospect, there is a fundamental difference between Asia and Europe, at least in the following sense. In Europe, low real interest rates in the periphery attracted most of the capital flows. The biggest impetus for capital flows in Asia before the AFC was investor over-confidence in the region’s economic prospects. Unlike in Europe, the surge in capital flows in Asia had nothing to do with regional financial integration. It was the crisis that actually led to cooperation and further financial integration (**Figure 20**). The reverse happened in the eurozone, where financial integration through monetary union came before the crisis.

## The Case for Macroprudential Policy

Crises and contagion build the case for macroprudential policies to support sound macroeconomic policies—which includes effective financial regulation and supervision. Macroprudential policy can safeguard financial stability, particularly in handling credit- and asset-price cycles driven by global capital flows. In Europe, there was no concerted national effort to implement macroprudential policy. Efforts to dampen credit growth and housing bubbles were limited because of the prevailing view at the time that a balance of payments crisis will not happen under a currency union. The EU’s relative financial openness may also explain its disinclination toward macroprudential policy.

EU-wide macroprudential regulation was introduced only in 2011 with the creation of the European Systemic Risk Board (ESRB). The ESRB is mandated to study macroprudential risks to financial stability. It has a surveillance function but no binding powers. It can issue risk warnings to prompt early policy responses that avoid the buildup of systemic problems and lower the risk of future crisis. And it can recommend specific measures to address any identified risk. While the ESRB cannot impose measures on national authorities, it can expect a response. But without authority, the ESRB cannot be considered a “systemic stability regulator”.

Although Asia has made greater use of macroprudential tools over time—especially on housing and real estate (Zhang and Zoli, 2014), in most cases standard measures are used—loan-to-value ratios, housing tax measures, and foreign currency-related measures. While these asset-side tools may help reduce the risk of financial instability—and other countries (including those in the EU) could have used them, most asset side measures failed to prevent risky behavior of banks when capital flows affect bank liabilities—as with rising non-core liabilities during massive bank-led flows in the 2000s.

So the risk of pro-cyclicality increased. This has happened in Europe, and to a lesser extent in Asia, since the mid-2000s. The debt build-up in the eurozone periphery and Eastern Europe at the time largely came via the surge in non-core liabilities. In this case, a new set of better targeted macroprudential policies should have been used (Azis and Shin, 2014).

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