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Impact of Eurozone Financial Shocks on Southeast Asian Economies

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Five years after the global financial crisis, the economies of the United States and the eurozone continue to struggle. How will Southeast Asian economies be affected should there be a further deterioration in conditions in the eurozone? In this paper, we present estimates using a Global Vector Autoregression (GVAR) model of the direct impacts of a further shock to the eurozone. We find that although the direct impacts are likely to be muted, it could trigger a much larger adjustment should it lead to a reassessment of risks and asset valuations. This is a real possibility given that vulnerability in the region has increased following massive inflows of capital and build-up of debt, related to successive bouts of quantitative easing in the United States initially, and now Japan. Should this happen, and with the IMF's resources already stretched, there is a pressing need to improve regional financial safety nets, which are currently unworkable, to deal with the fallout.

Keywords: Eurozone crisis, asset bubbles, contagion, regional financial safety nets, Chiang Mai Initiative, ASEAN, ASEAN+3.

I. Introduction

Five years after the Global Financial Crisis (GFC), the economies of the United States and the eurozone continue to struggle, with the eurozone recovery lagging behind that of the United States. The financial crisis wreaked havoc on the balance sheets of households and banks. Faced with large losses and a weak capital base, American and European banks have been deleveraging. This has considerably reduced lending growth and slowed the process of recovery in their respective economies.

European banks' funding conditions have been worsening as evinced by slower bond issuance (Bank for International Settlements 2012). Worries about the health of the banking system have also led to a rash of withdrawals by bank depositors. The recent events in Cyprus, where some depositors stand to lose a significant share of their savings, could potentially heighten concerns in countries where banks are facing similar losses. The banking system in the United States is relatively healthier as losses have been recognized and banks have undertaken recapitalization. Nevertheless, the troubles facing European banks could also affect the liquidity situation in the United States. After all, the major European banks are also big lenders in the U.S. interbank markets (Shin 2012).

Monetary authorities have responded by sharply easing monetary policy. This has brought policy interest rates down to close to zero. Having quickly reached the interest rate floor, both the Federal Reserve and the European Central Bank (ECB) have resorted to unconventional monetary policy through episodes of quantitative easing. The Bank of Japan, under new leadership, has also followed suit more recently. This has further increased liquidity in the banking system.

However, these policy moves have yet to produce the desired effect in the home countries, as private lending has failed to increase as expected. Banks are still hesitant to lend given lingering uncertainty about future economic prospects. Consumers and businesses are also reluctant to borrow as uncertainty remains high and confidence in the recovery remains low. As a result, increased liquidity from the asset purchase programmes of the central banks has only increased the banking system's holding of reserves. That most of the funds have been placed in very low yielding reserves at the central banks shows a continued lack of confidence in the economic recovery.[1] All of this suggests that the problems in the eurozone are unlikely to end anytime soon. It also points to the very real possibility that the situation could indeed worsen.

It is with this global backdrop that we turn our attention to the situation in Southeast Asia. What has the impact been of the global financial turmoil on the Asian economies? Is there a real risk that a similar crisis could hit the region? Given the fragility of the financial system, what are the possible impacts of a shock to the financial system in the eurozone on the economies of Southeast Asia? This is a real possibility given that vulnerability in the region has increased following massive inflows of capital and build-up of debt related to successive bouts of quantitative easing in the United States initially, and now Japan. Furthermore, should East Asia succumb, is it ready to deal with the fallout, or will it again have to seek support from the IMF as it did during the Asian Financial Crisis (AFC), but at a time when global resources are even more stretched?

The paper is in six parts. Section II of the paper focuses on the impact of monetary policy easing in advanced economies on capital flows in Southeast Asia. It will also examine the trend in bank lending in Southeast Asia, as governments in the region attempt to stabilize growth through various stimulus measures. Section III will examine the possible implications of a crisis in the financial system in Europe. During the 2007/08 GFC, the region's financial systems were hit hard but showed their resilience with a strong rebound. Can they once again deal with the fallout from another crisis in Europe? To answer this question, section IV presents results from a Global Vector Autoregression (GVAR) model, which is used to explore the possible spillover effects of a financial shock in Europe on the region's financial sector. In section V, we look at the readiness of the region to deal with any possible fallout by examining the adequacy of regional financial safety nets. A final section concludes with a discussion of policy implications.

II. Southeast Asia after the Global Financial Crisis

The initial impact of the 2007/08 GFC was felt more on the real side. A huge decline in exports led to a sharp slowdown in the region's economic growth. However, this impact was short lived. The rebound was swift and sharp (Figure 1). This was aided by a partial shift of the region's exports away from the United States and eurozone towards the region and other developing regions.

On the financial side, there was also an initial outflow of foreign capital from the region's economies. However, fund inflows resumed quickly. The region's financial system has become more resilient following the reforms carried out after the 1997/98 AFC. Furthermore, prudent management minimized the Asian financial system's exposure to the toxic financial assets that caused heavy losses for American and European banks. The initial outflows from the region likely reflect a flight of safety given the large uncertainties following Lehman Brothers' collapse. As global financial markets became calmer, fund inflows to the region soon resumed (Figure 2).

FIGURE 1
Merchandise Exports Growth
(Annual growth %, 3 month moving average)

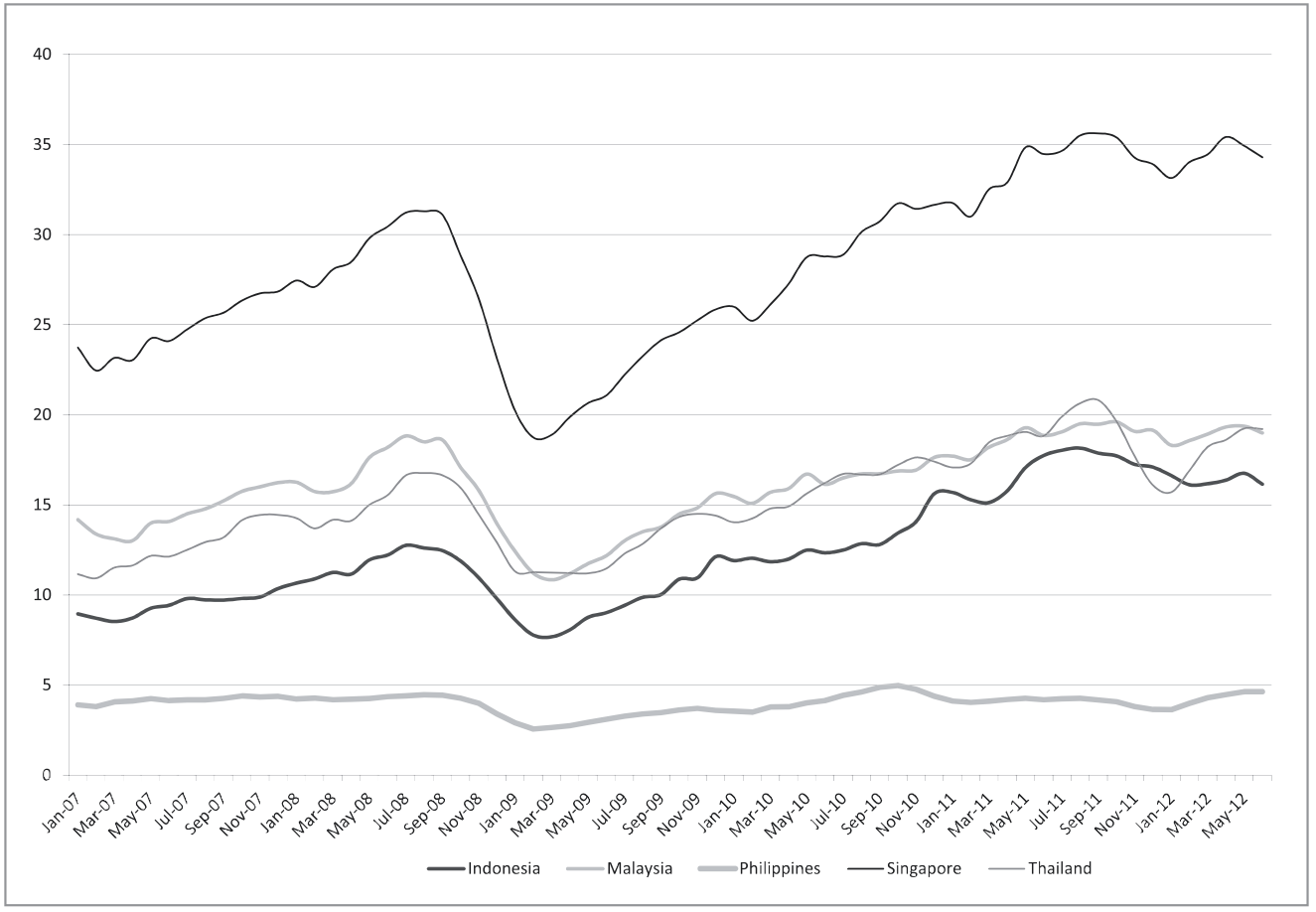
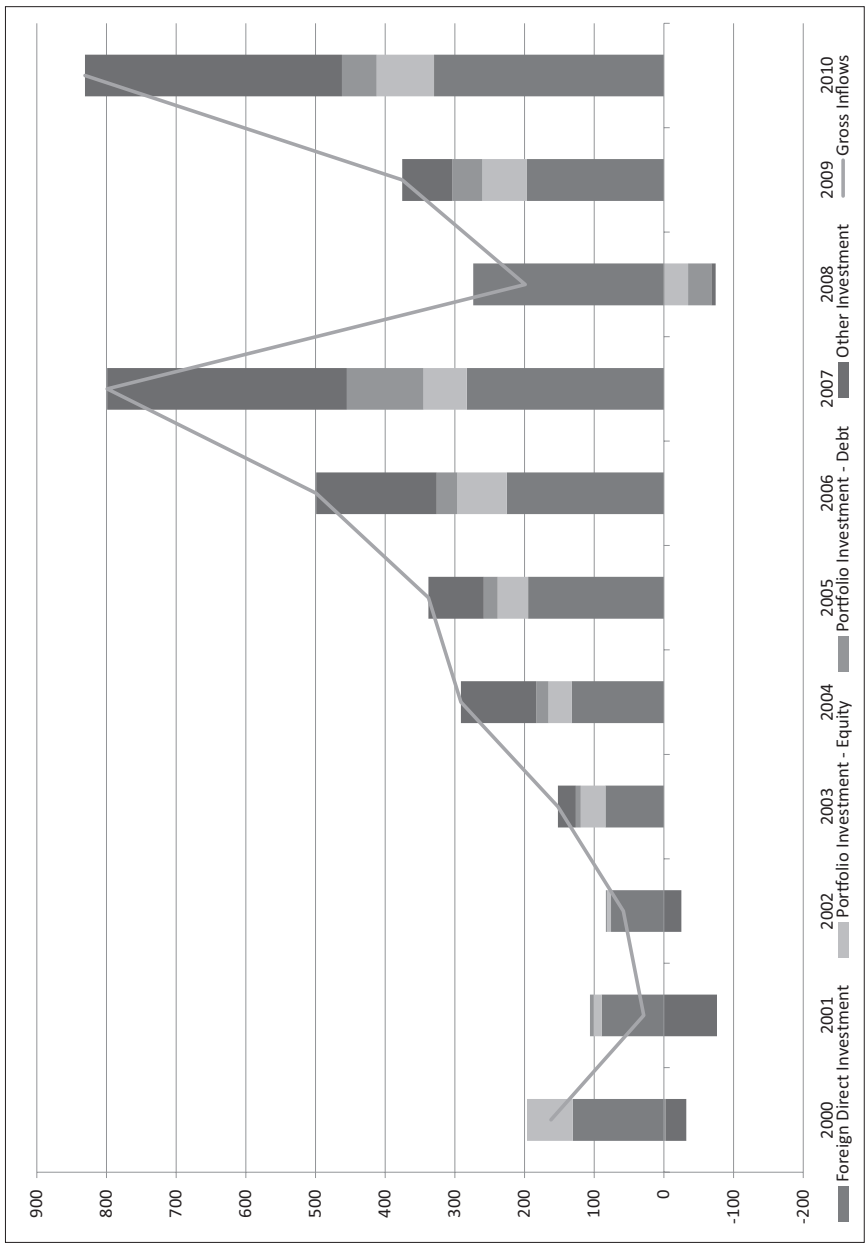


FIGURE 2
Emerging Asia: Composition of Inflows (In US$ billion)



Nevertheless, capital inflows to the region have remained volatile. The Federal Reserve's announcement of further quantitative easing in September 2012 is likely to spur more capital inflows to the region as investors seek higher yields. However, the recent decision by the Federal Reserve to begin winding back quantitative easing combined with further uncertainty in the eurozone is likely to mean that investors' confidence remains fragile. The sentiment could easily change and capital inflows could suddenly reverse and turn into outflows.

The inflow of foreign capital to the region can be beneficial as it supplements the domestic resource base and facilitates the transfer of technological knowledge and managerial expertise from abroad. However, sudden stops and reversals in capital flows could disrupt financial systems and lead to macroeconomic instability. There is a need to carefully weigh the benefits and costs of greater capital inflows to the region.

Caution is necessary as the region has experienced volatile capital flows in the past, particularly during the 1997/98 AFC and more recently during the 2008/09 GFC. Large inflows to the region before the AFC suddenly reversed and turned into outflows. This sudden reversal precipitated currency and banking crises in several countries in Southeast Asia and plunged most affected countries into a deep recession.

The swift resumption of capital inflows in 2009 is seen as a sign of confidence in the region's economies, underscoring economic resilience in the face of the GFC. However, as the size of the capital inflows continues to increase, especially in 2010, concerns about a repeat of the 1997/98 AFC have also been growing. The rapid surge in short-term capital inflows will make it increasingly difficult to manage risks. An attempt to sterilize inflows will only create excess liquidity in domestic financial markets, resulting in exchange rate misalignments, and ultimately derailing economic stability and growth. Policy-makers fear that the surge in capital flows could lead to asset bubbles and exert upward pressure on the exchange rate. For instance, easy credit combined with strong demand driven by speculative motives has raised property prices in many Southeast Asian cities like Bangkok, Ho Chi Minh, Phnom Penh, Kuala Lumpur, and Singapore, in some cases surpassing peaks reached in 2007. This increases the risk of a price bubble that could lead to drastic losses in terms of both real output and price levels (Menon and Chongvilaivan 2011).

There are also concerns about sudden reversals of capital inflows which could destabilize asset and financial markets. Ng (2011) has shown that capital inflows to the region are strongly affected by global risk perception. As can be seen from the severe recession following the AFC, the cost of the volatility of capital flows can be very high indeed.

Given the threat to the region's economies, governments acted quickly to implement fiscal and monetary stimulus. Higher initial policy rates compared to those in the United States and Europe provided ample room for the region's monetary authorities to reduce interest rates. As a result, the region's policy rates have fallen considerably (Figure 3). Despite recent improvements in economic performance, policy rates in many countries have remained way below the pre-crisis level. Given the uncertain state of the global recovery, many of the region's governments have been hesitant to raise interest rates quickly.

Monetary policy easing has had the desired impact of increasing bank lending in the Asian economies (Figure 4). This likely reflects the region's stronger macroeconomic fundamentals and possibly the more optimistic outlook held by the region's consumers and businesses. The resilience of the region's financial system in the aftermath of the GFC has also likely helped shore up confidence. As Figure 4 shows, while bank lending slowed down considerably after the GFC, the easing of monetary policy has led to an increase in bank lending.

Consequently, although Asia had relatively low debt at the beginning of the GFC, it is now more highly leveraged. Domestic bank lending has soared, particularly in Thailand, Malaysia, and Singapore (Figure 5). At the same time, given the weakness in global financial institutions, we have seen a considerable cutback in loans by European banks to the region. This has particularly affected

FIGURE 3
Policy Rates

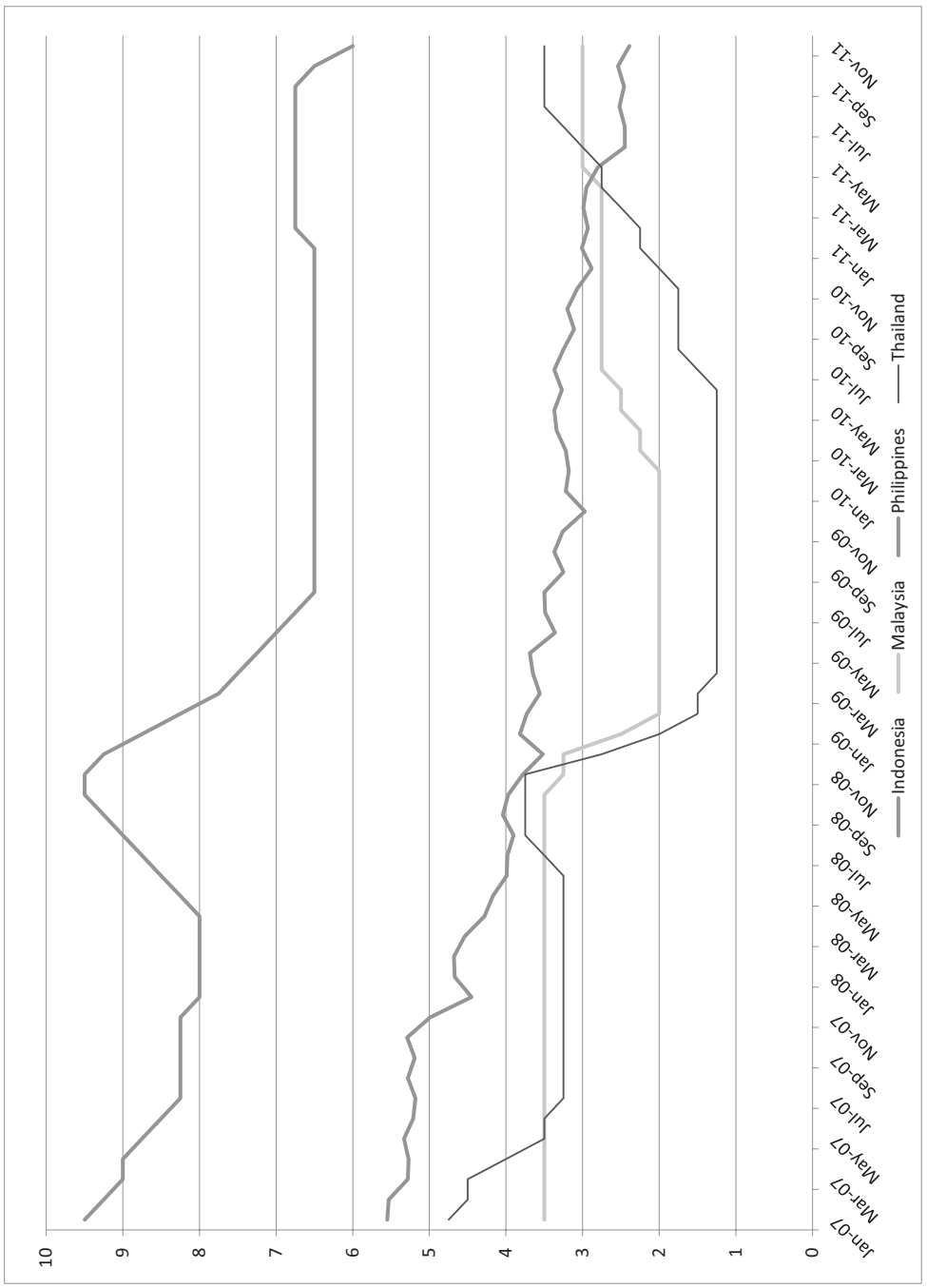


FIGURE 4
Growth in Bank Lending (Year on Year % change)

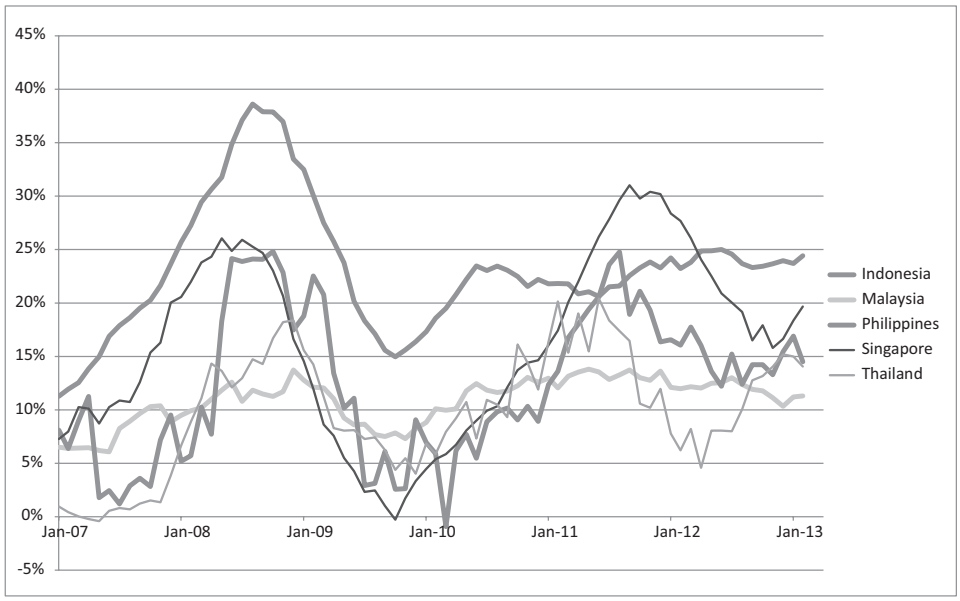
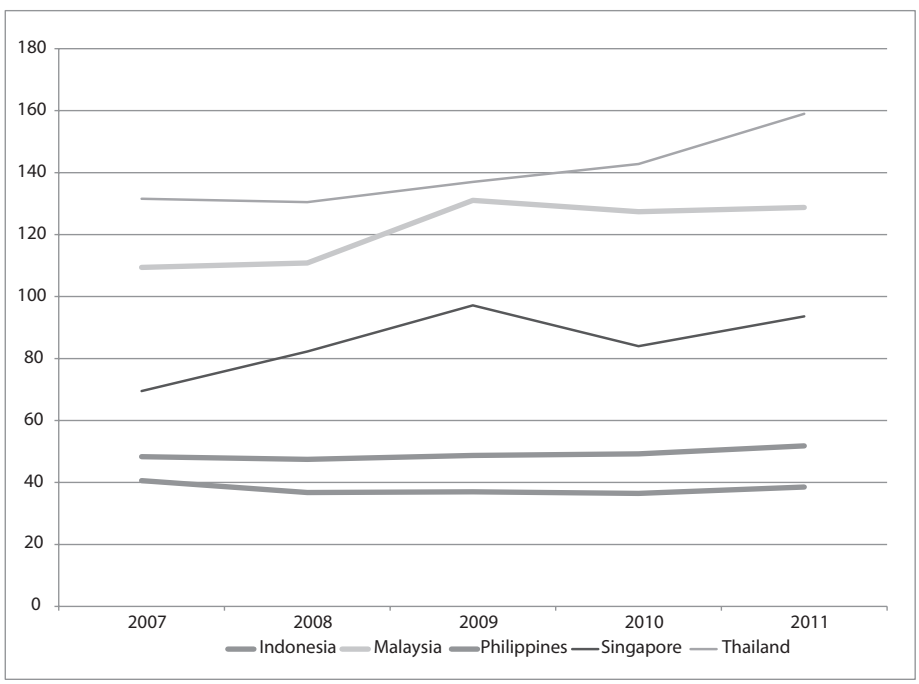


FIGURE 5
Domestic Credit Provided by Banking Sector (% of GDP)



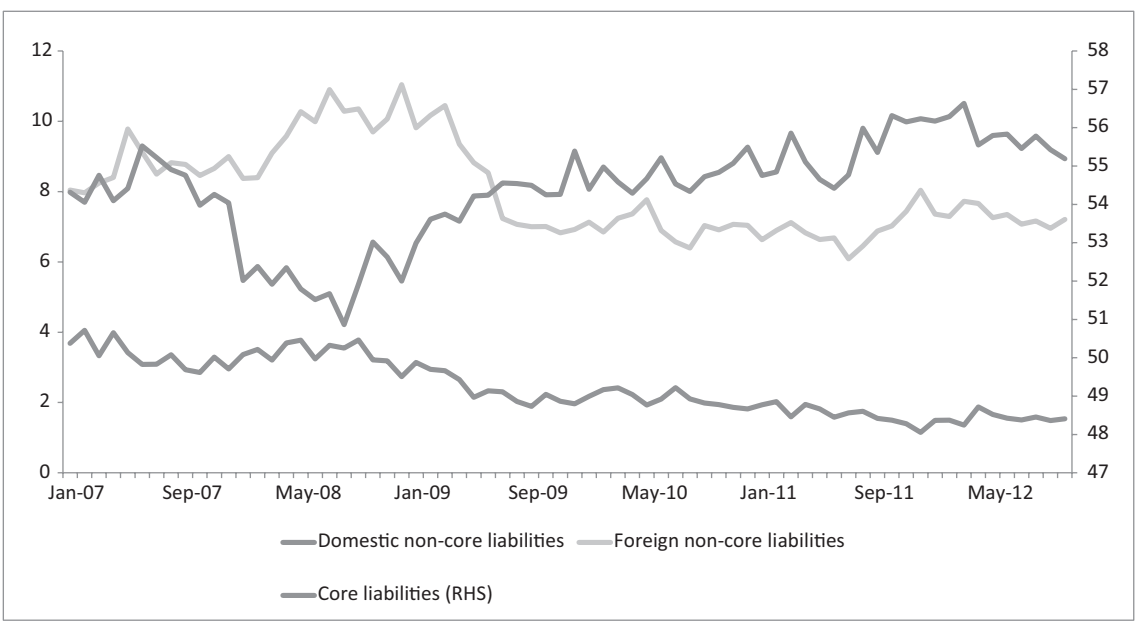
the use of trade finance in the region. Basel III regulations are aiming to increase the capital cushion that banks will have to carry. This means that European banks will have to raise more capital in a difficult environment. Alternatively, the banks may opt to reduce their asset base by reducing lending. This is a big concern for the region.

Another cause for concern is non-core liabilities (usually consisting of interbank borrowings), which have been increasing significantly even prior to the 2007/08 GFC. There are concerns that with European banks deleveraging, the banking system in Southeast Asia will find it more difficult to continue borrowing funds from abroad. We have seen that the share of other investment flows have declined in the region. Given the importance of the banking system in the region, the trend in non-core liabilities must be carefully examined.

One issue that arises when looking at the trend in non-core liabilities is the lack of a consistent definition of what non-core liabilities encompass. It does not help that different countries also have different classifications of liabilities in their published banks' balance sheets. In this paper, the definition used attempts to capture the scale of interbank borrowings in the country. Where possible, a distinction is drawn between domestic and foreign interbank borrowings, as the latter is seen to be much riskier.

Reliance on deposits for funding varies considerably across countries. Singapore, being an international financial centre, has a smaller proportion of its liabilities in deposits — less than 60 per cent (Figure 6). Not surprisingly, banks in Singapore rely more heavily on foreign interbank borrowings compared with domestic interbank borrowings.

FIGURE 6
Singapore: Percent of Total Liabilities



NOTE: Liabilities refer to those of Domestic Banking Units. Domestic non-core liabilities refer to amounts due to banks in Singapore. Foreign non-core liabilities refer to amounts due to banks outside Singapore. Core liabilities refer to deposits.

SOURCE: ADB calculations using data from the Monetary Authority of Singapore.

In Malaysia, non-core liabilities represent only a small proportion of liabilities (Figure 7). Deposits are the main source of funding for the banks' operations there, accounting for almost three-quarters of total liabilities. Domestic and foreign interbank borrowings are roughly comparable in scale.

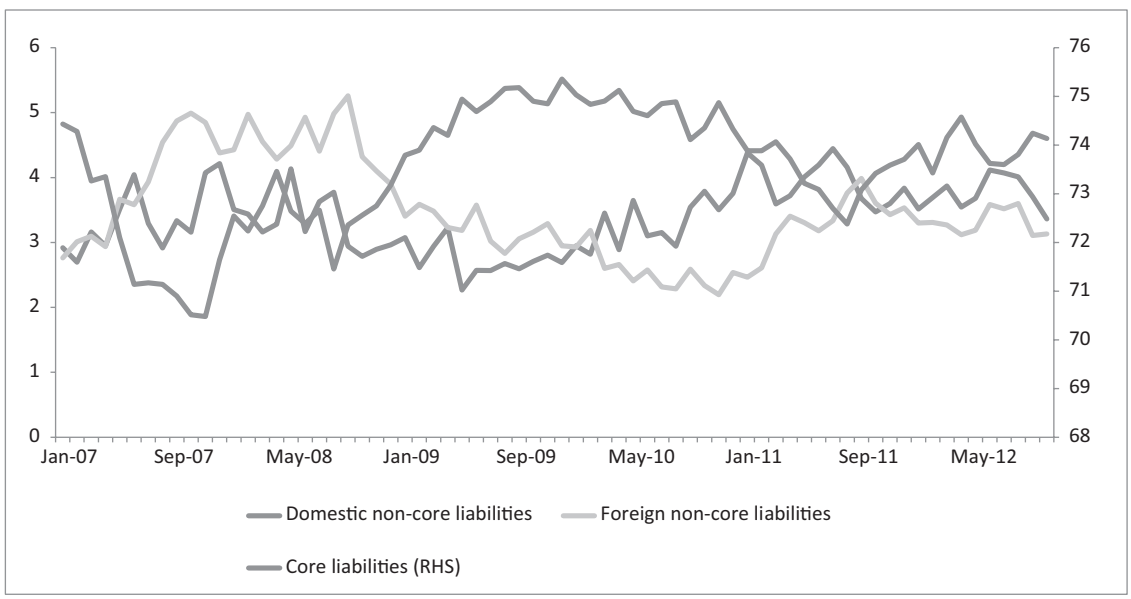
In Thailand, non-core liabilities have risen substantially since the 2007/08 GFC. Non-core liabilities account for almost 20 per cent of the bank's total liabilities. Recently, the rise in non-core liabilities has stabilized somewhat (Figure 8).

Both the Philippines and Indonesia have relied more heavily on deposits to fund their operations at more than 80 per cent and 90 per cent, respectively (Figures 9 and 10). Hence, the source of funding for these two countries is likely to be more stable and less affected by global financial shocks. These two countries have also seen less of a surge in bank lending compared to other countries.

III. Impact of Financial Crisis in Europe

Fears of a eurozone debt crisis have receded somewhat but the threat of a financial crisis remains. While liquidity provision by the ECB and the successful restructuring of Greek debt have helped to calm financial markets, the stability could be short-lived. Several European economies continue to have high fiscal deficits and public debt, leaving them vulnerable to future crises of confidence. The recent bailout in Cyprus has resulted in huge losses for large depositors (i.e., those with deposits in excess of €100,000). This has set an alarming new precedent, where depositors are expected to

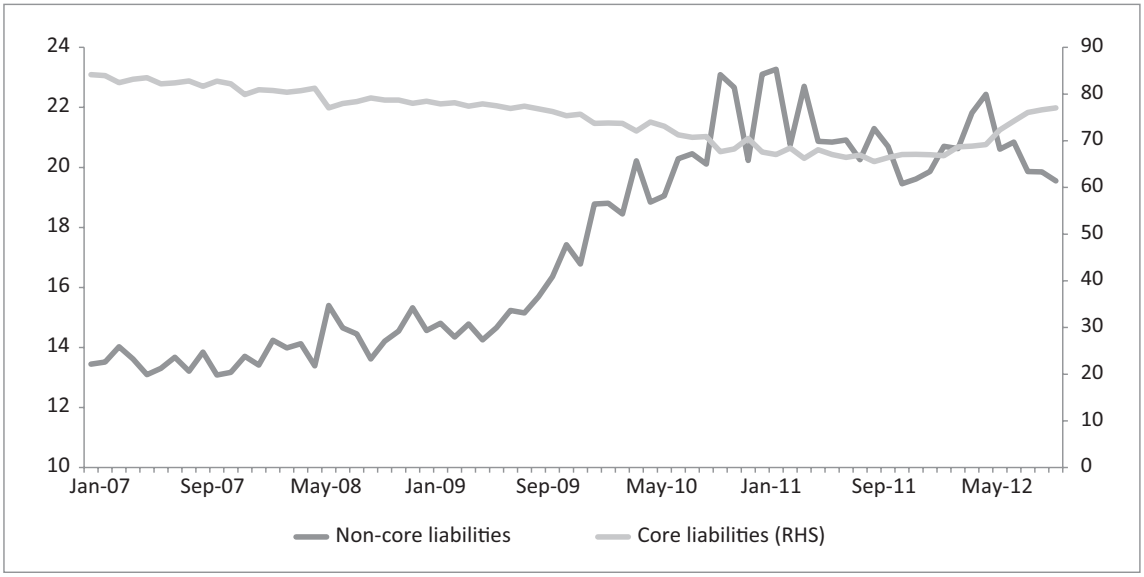
FIGURE 7
Malaysia: Percent of Total Liabilities



NOTE: Liabilities refer to those of Commercial banks including Islamic finance. Domestic non-core liabilities refer to sum of amounts due in Malaysia and bills payable in Malaysia. Foreign non-core liabilities refer to sum of amounts due outside Malaysia and bills payable outside Malaysia. Core liabilities refer to deposits.

SOURCE: ADB calculations using data from Bank Negara Malaysia.

FIGURE 8
Thailand: Percent of Total Liabilities



NOTE: Liabilities refer to those of Commercial banks. Total liabilities comprise deposits included in broad money, deposits excluded from broad money, demand deposits, securities excluding shares, loans, other accounts payable, and accrued interest on deposit. Non-core liabilities refer to Loans plus Other Accounts Payable. Core liabilities refer to deposits included in broad money, deposits excluded from broad money, and demand deposits.

SOURCE: ADB calculations using data from Bank of Thailand.

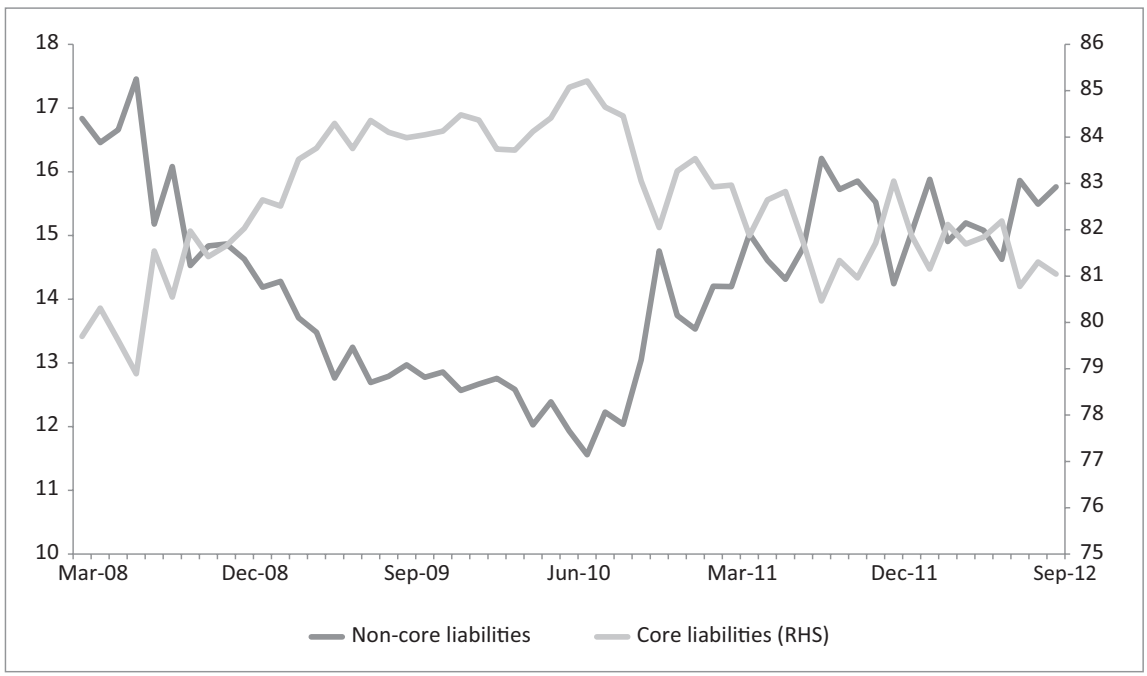
bear losses in the case of bank failures. This could raise fears among depositors and result in more bank runs in the future.

The concern had been whether the Cyprus bailout will have a significant impact on financial market stability in Europe, particularly on the equity and banking sectors. But the rise in yields starting June 2013 has reignited investor concerns of deteriorating conditions in eurozone countries that received assistance earlier. With the global financial system closely linked, any distress in Europe would likely be transmitted to Asia. Over the past decade or so, the Asian economies have liberalized and opened up their financial systems. While this has brought certain benefits, it has also increased the region's vulnerability to external shocks.

Skittish European financial markets will likely withdraw capital from Asia as risk aversion sets in. In 2008, soon after the collapse of Lehman Brothers, capital rapidly flowed out of Asia as a result of increased global risk perception. Most capital outflows were in the form of bank lending and portfolio investment. Outflows of portfolio funds will likely depress equity markets. Correlations of stock returns and volatilities for the region's economies increased dramatically in the second half of the 2000s (Table 1). This suggests that there is likely to be stronger contagion effect from eurozone financial markets to the region in the event of a crisis.

If the eurozone debt crisis worsens, it could result in a rise in global investor risk aversion which would have an impact on Asian economies

FIGURE 9
Philippines: Percent of Total Liabilities



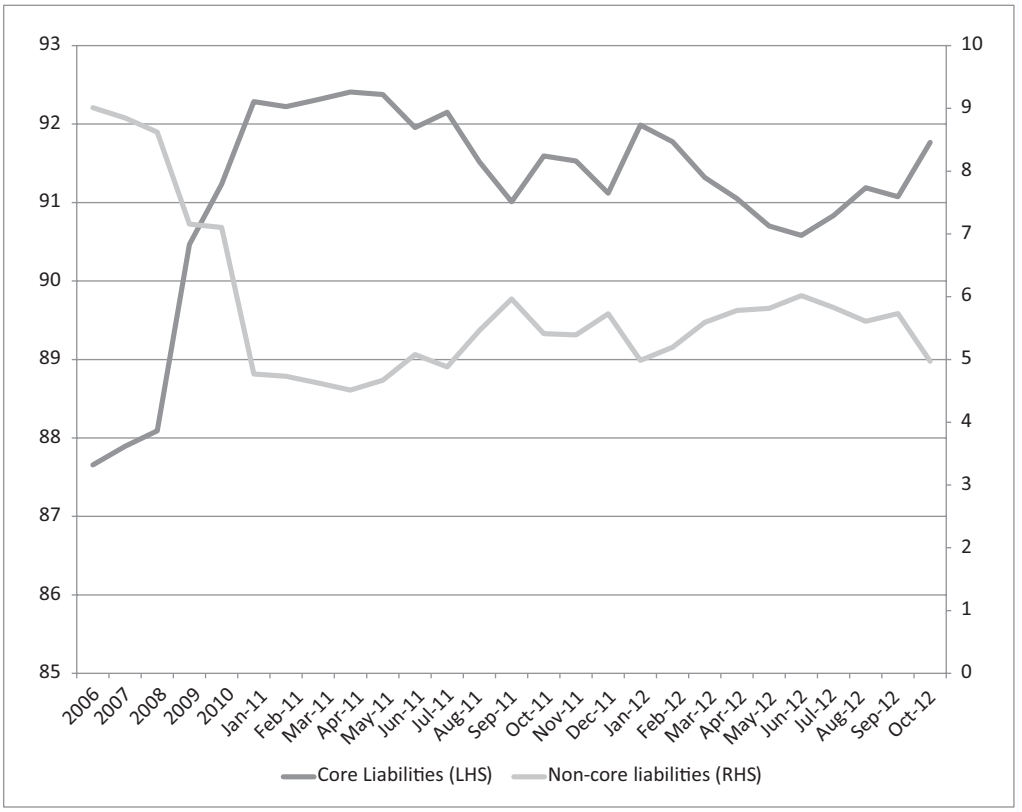
NOTE: Liabilities refer to those of Universal and Commercial banks. Non-core liabilities refer to Bills Payable and Other Liabilities. Core liabilities refer to deposits.
SOURCE: ADB calculations using data from Bangko Sentral ng Pilipinas.

TABLE 1
Average Simple Correlation of ASEAN-4 Stock Price Index Weekly Returns and Volatility

Economies	*Period*	*Returns*	*Period*	*Volatility*
ASEAN-4	2002–05	0.36	2003–05	0.15
	2006–11	0.66	2006–11	0.78
Japan	2002–05	0.37	2003–05	0.30
	2006–11	0.58	2006–11	0.68
Europe	2002–05	0.26	2003–05	–0.02
	2006–11	0.56	2006–11	0.65
US	2002–05	0.20	2003–05	–0.01
	2006–11	0.43	2006–11	0.66

NOTE: ASEAN-4 refers to Indonesia, Malaysia, Philippines and Thailand.

FIGURE 10
Indonesia: Percent of Total Liabilities



NOTE: Liabilities refer to those of Commercial Banks. Total liabilities comprise third-party funds (deposits), liabilities owed to Bank Indonesia, interbank liabilities, issued securities, loans received, spot and derivatives liabilities, other liabilities, and margin deposits. Non-core liabilities refer to interbank liabilities and loans received. Core liabilities refer to third-party funds.

SOURCE: ADB calculations using data from Bank Indonesia.

as well. A key concern for policy-makers is that capital flows can suddenly reverse, as they did the wake of the 2008/09 GFC. This was not caused by fundamental weaknesses in the region's economy or financial system, but by a global rise in risk aversion following the financial crisis in the United States (Milesi-Feretti and Tille 2010). Using a large sample of seventy-five countries, Milesi-Feretti and Tille (2010) found that the size of capital outflows during the GFC is linked to the degree of financial integration, trade flows, macroeconomic conditions, and the composition of external liabilities. Countries that have a higher amount of bank borrowings were the worst hit.

IV. Estimating Impact of Spillovers from Eurozone Financial Crisis

To estimate the potential impact of spillovers from a financial crisis in the eurozone, we employ the GVAR model originally introduced by Pesaran, Schuermann and Weiner (2004) and further

developed by Dees et al. (2007). The advantage of the GVAR model is that it not only incorporates the economic structures and global interdependencies of the world economy into a VAR model, but also avoids the identification problem found in VAR models. Furthermore, there are major differences in the cross-country correlations of various real variables. For instance, equity returns are much more closely correlated across countries than real GDP growth and inflation rates. This suggests that different channels of transmission should be considered. The GVAR approach allows us to model these different types of links directly using trade-weighted observable macroeconomic aggregates and financial variables.

The advantage of performing a quantitative assessment of this type is that it allows us to identify which economies are likely to be most vulnerable in the event of a crisis, as well as providing an estimate of the magnitude of the impact on the economies. These estimates can provide policy-makers with a quantitative assessment of the extent of their vulnerability, and can serve as an important incentive to implement timely remedial policy actions.

The GVAR approach has been used by several researchers to examine spillover effects of this type. Galessi and Sgherri (2009), for instance, analysed the transmission of shocks across financial sectors in Europe. They used bilateral bank lending as the weights in their model. Chen et al. (2010), on the other hand, used the GVAR model to examine how banks' and non-financial private companies' default risk could spread among countries. In their case, a combination of trade and financial variables were used as the weights in conducting the estimation.

To estimate the spillovers from an external financial shock, we construct a GVAR model for thirteen economies consisting of: the United States; the United Kingdom; the eurozone; and ten Asian economies — the East Asian economies of the People's Republic of China (PRC), Hong Kong, China; Japan and Republic of Korea; the five original ASEAN economies of Indonesia, Malaysia, Philippines, Thailand, and Singapore; and India. The model uses real GDP growth, equity prices, lending to the private sector, and interbank rates. It is estimated using monthly data over the period 1999–2011. As GDP growth is only available quarterly, we used interpolation methods to convert quarterly GDP growth into monthly figures, following Smith and Galessi (2011). Since we are interested in examining the impact of financial linkages across countries, we use the share of portfolio investment in the economy — obtained from the Coordinated Portfolio Investment Survey — as the weights for the GVAR model.

In order to examine the impact of a shock from the European financial markets, we estimate generalized impulse response functions (GIRFs) as suggested by Pesaran and Shin (1998). Within the GVAR framework, GIRFs are widely used as they are not affected by the ordering of the variables and countries. In a large model with many countries and variables, there is no obvious way to identify the ordering of countries. Furthermore, the focus of our analysis is to examine the spillover effects from the eurozone on Asian economies rather than to identify the effects of a specific shock.

Figures 11a and 11b present the GIRFs of a negative one standard deviation shock on eurozone equity markets on Asian stock markets. Our dynamic analysis shows that the equity market shocks from the eurozone are transmitted quickly to the region through stock prices. There are substantial co-movements in Asian stock markets following a negative shock in eurozone equities. The transmission is rapid, with the peak effect occurring about five to seven months after the onset of a shock. One exception is the PRC, which is less affected by a fall in eurozone stock prices. This suggests that the PRC's relatively closed equity markets are driven more by domestic factors, making them less vulnerable to external factors.

Another way to gauge the impact of a eurozone equity shock is to compare the impacts of the shock on Asian economies relative to that in the eurozone. For each economy, the biggest impact on the region's stock markets is compared with the largest impact from the eurozone equity market. The results are shown in Figure 12. The impact on the region's stock markets is found to be about

FIGURE 11a
Response of ASEAN Equity Returns from a Negative Eurozone Equity Shock

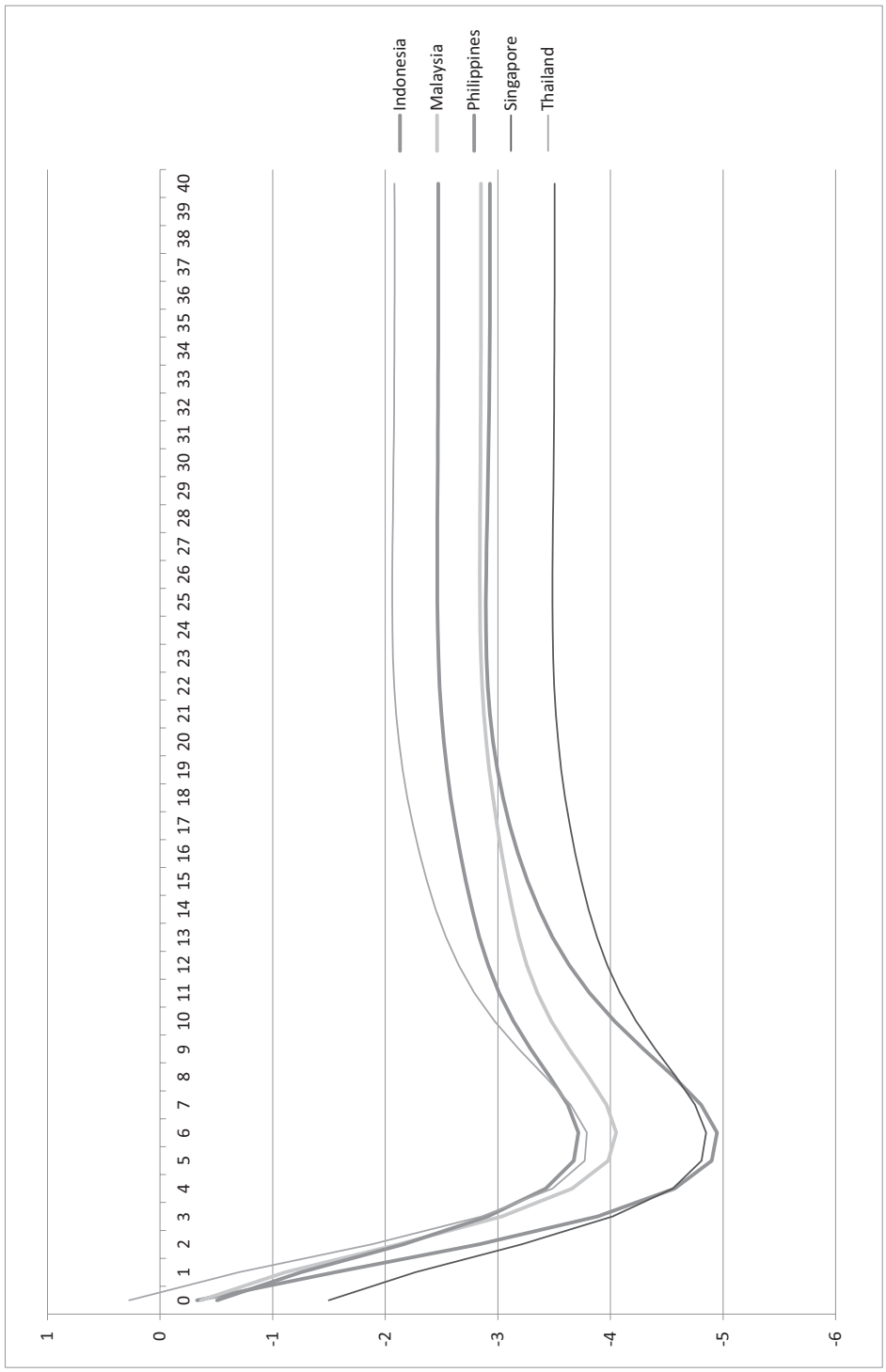


FIGURE 11b
Response of Equity Return from a Negative Eurozone Equity Shock

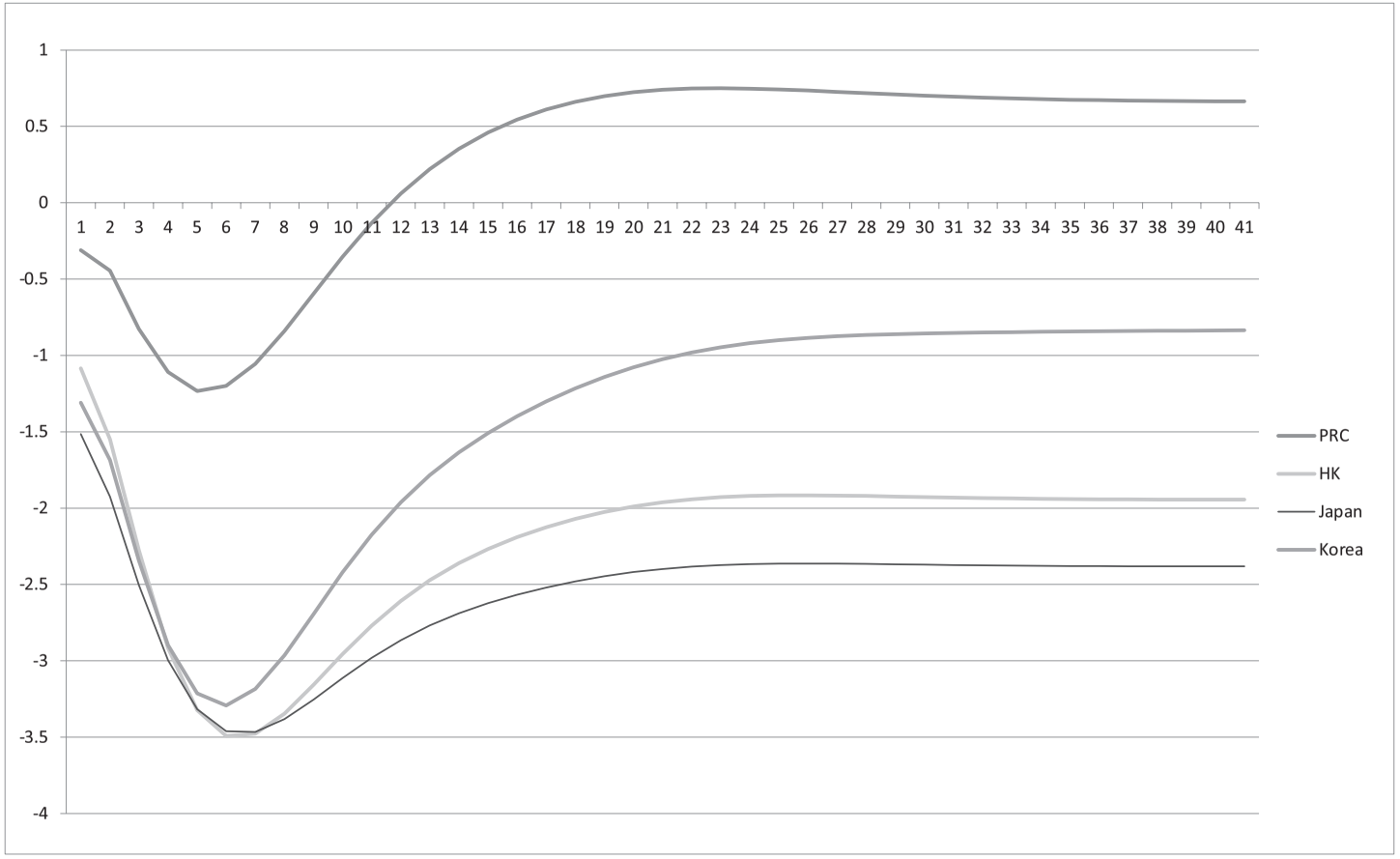
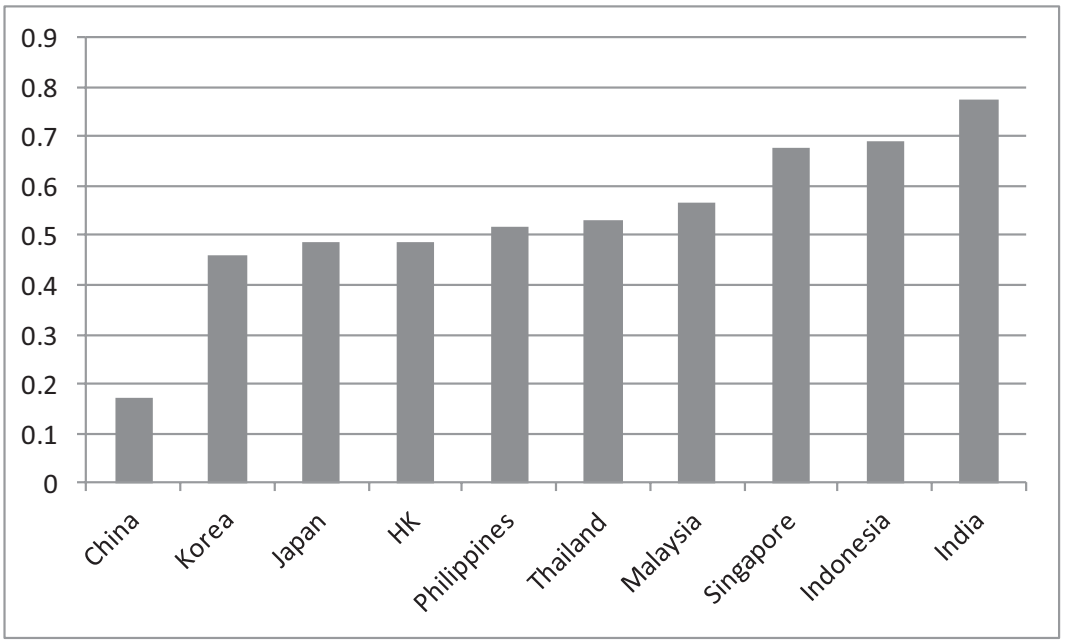


FIGURE 12
Impact Elasticity of Asian Equity Markets to a Negative Eurozone Equity Shock



half the level of the eurozone stock market impact. We find that equity markets of India, Indonesia, and Singapore are most affected by a eurozone shock while there seems to be less of a spillover effect on the PRC stock market.

Next, we examine the impact of Asia's economic growth from a eurozone financial shock. We find that the responses of the region's economies are mostly similar (Figures 13a and 13b). However, the impact of the shock is transmitted over a longer period, taking seven to nine months to reach its trough. Growth in Malaysia and Singapore are the most affected by a eurozone equity shock. In contrast, Indonesia, the PRC, and the Philippines — with their relatively large domestic sectors — appear to be better insulated against a financial shock from Europe.

Our empirical results show that a eurozone financial crisis will have a small but non-negligible impact on the region's stock markets and economic growth. This will affect countries in the region to varying degrees, with ASEAN economies such as Malaysia, Thailand, Indonesia, and Singapore showing more vulnerability to the financial fallout. In terms of real economic impact, however, Singapore and Malaysia are more exposed given the greater reliance on global markets. These are the effects that we can directly attribute to a further shock to the eurozone. What we cannot quantify are the indirect effects that may flow from adjustments that take place which feed through via changes in value assessments and confidence. Since asset prices — both real and financial — have undergone significant rises resulting frm the large inflows of capital following quantitative easing in the advanced economies, there could be an underlying perception of overheating resulting in a bubble. If the direct impacts lead to a reassessment of asset valuations in the region and perceptions of risk, this could lead to further corrections. Although difficult to quantify, the possibility of such indirect effects are real, and could accumulate to produce a much greater negative impact on the region.

FIGURE 13a
Response of Output Growth from a Eurozone Equity Shock: ASEAN Countries

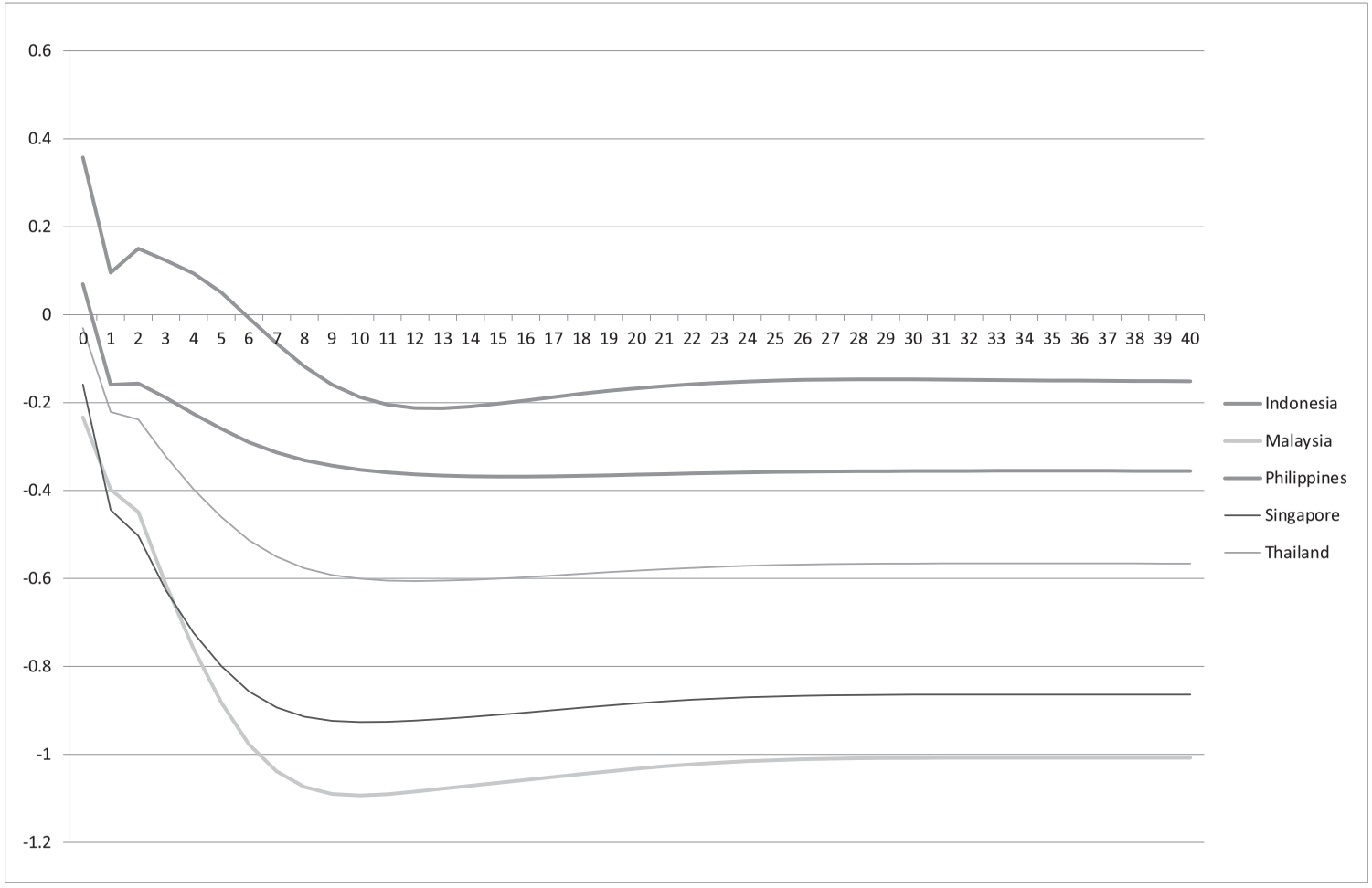
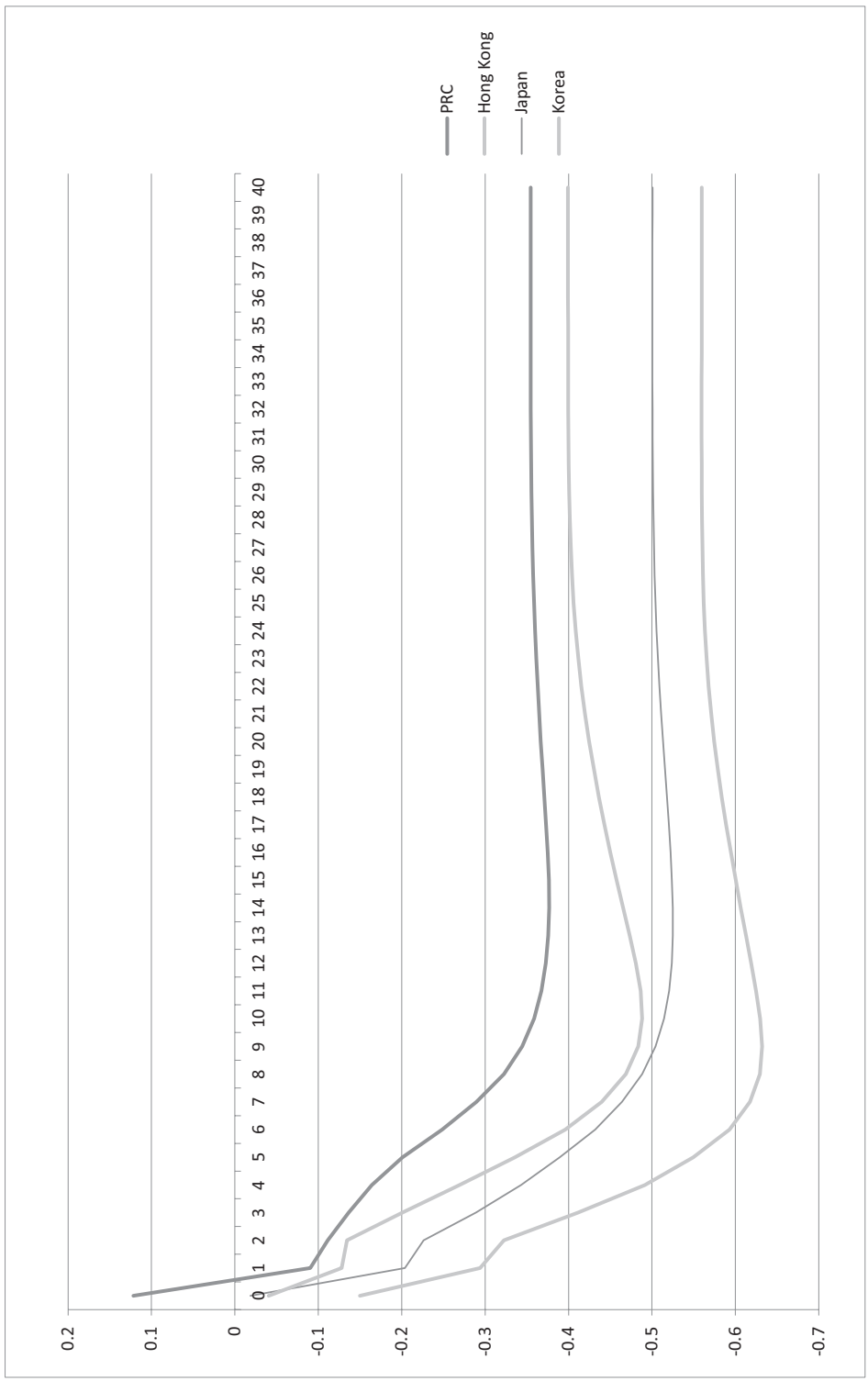


FIGURE 13b
Response of Output Growth from a Eurozone Equity Shock: PRC, Hong Kong, Japan and Korea



V. Is East Asia Ready to Deal with Any Fallout?

How prepared is the region to deal with a shock in the eurozone that translates into a liquidity crisis in East Asia? Although our analysis points to a small but non-negligible direct impact from a further shock to the eurozone, this can easily be amplified into a significant one through indirect channels. In this section, we look at whether the region is ready to deal with such a fallout. The ability to fend for itself is heightened if such a contagious crisis sees a significant share of the world competing for scarce global resources. The current situation in Europe has already seen the troika (IMF, European Commission and the European Central Bank) expend €303 billion in bailout funds to Greece (€130 billion; IMF share €28 billion); Portugal (€78 billion; IMF share €27.5 billion); Ireland (€85 billion; IMF share €22.5 billion); and Cyprus (€10 billion; IMF share €1 billion). Given the sheer size of the amounts involved, it is easy to see how a worsening of the situation in Europe will constrain the IMF's ability to serve as lender of last resort should Asia also require emergency support.

When the AFC hit, the ASEAN Swap Arrangement (ASA) proved sorely inadequate in providing the liquidity needed by its members, given its small size. There was little choice but to resort to the IMF. Following disenchantment with the way in which the IMF dealt with the AFC, the region has been working on bolstering its own financial safety net. The first step towards establishing such a scheme was taken soon after in May 2000 with the launch of the Chiang Mai Initiative (CMI), as part of the ASEAN+3 process. The CMI grew from just $1 billion to $84 billion by the time the next crisis hit, which was the fallout from the GFC.

If the AFC lit the fuse for the need to transform the ASA into the CMI, then the GFC of 2008 highlighted the continued shortcomings of that transformation. Despite the CMI having grown rapidly in size, it was still too small and the absence of rapid-response mechanisms forced affected countries to turn to bilateral swaps with the United States, China, Japan, and regional agencies (Hill and Menon 2012). What followed was a radical transformation of the CMI. First, it was multilateralized so that the CMIM would be a self-managed reserve pooling arrangement governed by a single contract, reducing costly and wasteful duplication. Second, the size of the pool was increased to US$120 billion in May 2009. A decision was taken to establish an ancillary institution in the form of an independent regional surveillance unit — the ASEAN+3 Macroeconomic Research Office (AMRO), which came into being in May 2011.

The continuing problems in the eurozone and risks of further deterioration have highlighted the need to strengthen the CMIM's capacity to act as a regional financial safety net (Azis 2012). To address this need, the 15th Meeting of ASEAN+3 Finance Ministers in May 2012, agreed to (i) double the total size of the CMIM to US$240 billion; (ii) increase the IMF delinked portion to 30 per cent in 2012, with a view to increasing it to 40 per cent in 2014, subject to review should conditions warrant; and (iii) introduce a crisis prevention facility.

These are impressive developments over a relatively short period of time. However, the critical question that needs to be answered is whether these reforms are sufficient to provide the region with a working alternative in the event of a crisis? Is it likely that the CMIM will be called upon when the next crisis strikes? Unfortunately, the CMIM still appears unuseable, either as a co-financing facility in tandem with the IMF or as a stand-alone alternative. There are a number of reasons, and therefore an equal number of issues, that need to be addressed to make it viable.

First, as a reserve-pooling arrangement, there is no fund but a series of promises (Hill and Menon 2012). This is not a problem per se but it is when there are no rapid response procedures to handle a fast-developing financial emergency. Unless these procedures are streamlined, the CMIM is unlikely to be called upon even as a co-financing facility but if the IMF's resources are already committed elsewhere, especially if conditions in Europe deteriorate and require further bailouts, then the role of the CMIM becomes critical. If the

CMIM is to be a real substitute for the IMF and serve its role as a true regional alternative, then the size of the fund, or the portion delinked from a IMF programme, also needs to be increased substantially.[2] Unlike with the IMF, the CMIM does not have an exceptional access clause which allows a country to borrow amounts above their quota in exceptional circumstances provided that the country satisfies a predetermined set of conditions. If there is a full-blown systemic crisis in East Asia which spreads across several members, then this clause will not be of much value either. This is another reason why membership would also need to increase beyond ASEAN+3, not just to bolster the size of the fund but also to diversify it.

Without these changes, ASEAN+3 is unlikely to turn to the CMIM as a co-financier or a substitute to the IMF, which explains why countries continue to take the high-cost mercantilist route of self-insurance through excessive holdings of foreign exchange reserves, or why they continue to pursue bilateral swaps separately, often with other CMIM members. Japan is also looking to strengthen bilateral relations with ASEAN directly, by-passing the ASEAN+3 process, and is expected to revive bilateral currency swap agreements with Malaysia, Singapore and Thailand and to strengthen existing bilateral arrangements with Indonesia and the Philippines. Some see this as early warning signs of an unraveling of the CMIM, as a result of rising tensions involving territorial disputes, as well as competition amongst the "+3" to gain influence in Southeast Asia.[3] If this process continues or spreads, we could see a return of the "noodle bowl" of bilateral swap agreements that the CMIM's single agreement was designed to replace. In fact, bilateral swaps are quickly becoming the main instrument in Asia's financial safety net, although somewhat ad hoc. However, shifting national reserves to a regional fund that is unlikely to be used could actually be counter-productive as it weakens a country's first line of defense. Although ASEAN+3 may appear to have a co-financing facility with the IMF in the CMIM, it is not a useable one. If it wants its own regional safety net, then it has a long way to go. How long is still unclear, but hopefully it can be made workable before, rather than because of, the next crisis.

VI. Conclusions

While Southeast Asia entered the GFC with relatively low debt, it is now more highly leveraged following large inflows of capital resulting from successive rounds of quantitative easing in advanced countries. The recent decision by the Bank of Japan to also pursue monetary easing aggressively is likely to lead to further flows to the region. At the same time, given the weakness of global financial institutions, we have seen considerable cutbacks in loans by European banks to the region. Trade finance is also being affected. The recent decision by the Federal Reserve to begin winding back quantitative easing is already being felt in the region. If there is a worsening of a eurozone debt crisis, and there are signs of this with yields beginning to increase again starting June 2013, it could result in a rise in global investor risk aversion which would have an impact on Southeast Asian economies as well.

To estimate the impact, we use a GVAR regression model to quantify possible spillover effects from a crisis in Europe. We find that while the overall impact of a worsening in the eurozone crisis is likely to be quite limited, the larger impact is on equity markets in the region. There is also the possibility that such spillovers, while relatively small in the aggregate, could lead to a second round of adjustments involving re-evaluation of other asset prices. In other words, even a muted direct impact could result in a magnified overall impact through indirect means, involving adjustments to asset prices viewed to be at inflated levels.

For this reason, the region needs to remain vigilant against financial spillovers, even if initially small in size. Given the potential for shocks in eurozone financial markets to affect Asia both directly and indirectly, policy-makers need to ensure that they respond quickly to bolster financial stability and avoid deterioration in market confidence. They should also continue to carefully monitor banks' portfolios, especially in countries where lending has risen sharply, to

ensure that there has not been excessive risk-taking. A further real side contraction driven by a trade slowdown could compound the debt situation in many Asian countries.

In light of this, there is a pressing need to ensure that crisis management frameworks are strengthened and are ready for use. Despite significant progress over a relatively short period of time, East Asia's financial safety net still appears unuseable. Further reforms are necessary in order to make the CMIM workable should a crisis hit the region, especially if resources are scarce in the event of a global meltdown. With the IMF's resources already stretched in bailing out Europe, a further shock there will leave a lot less for countries in Asia should contagion hit.

NOTES

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1. That is not to say that quantitative easing has not had any positive effects. In Europe, the ECB's Long Term Refinancing Operations (LTRO) initiatives have been credited for restoring confidence in the banking system and helping to reduce yields in the peripheral economies. However, while the ECB policy response has calmed the financial markets somewhat, there remain serious structural problems in the eurozone that cannot be addressed through monetary policy actions alone. Continued austerity measures have sapped demand in the eurozone economies. Rising unemployment threatens to further widen government deficits by increasing the cost of supporting the unemployed, ultimately hampering economic recovery. While a Keynesian style reflationary programme has been called for by commentators such as Paul Krugman (2012), even the IMF has recently started raising concerns about the impact that austerity is having on recovery prospects, *albeit* in the context of the United Kingdom and not the European countries it is involved in bailing out (IMF 2013).
2. During the AFC, Thailand received over US$17 billion in emergency liquidity. Yet, Thailand (and the four other original ASEAN members) can access only a fraction of this amount, about US$7 billion in 2012 U.S. dollars, from the CMIM without a IMF programme. Indonesia received almost six times (US$40 billion) the amount of its delinked portion of the CMIM, or an even greater multiple if converted into today's dollars. The Republic of Korea was the other crisis-hit country that availed of a IMF-led programme and bilateral support that totaled US$57 billion, while today its full quota with the CMIM is about US$38 billion (Hill and Menon 2012).
3. See, for instance, Park (2013) and "Japan, ASEAN to launch new Framework for Financial Cooperation in May, *Kyodo News*, 25 April 2013. <http://english.kyodonews.jp/news/2013/04/221835.html>.

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