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# No. 254

# The Eurozone Crisis and Its Impact on Asia

# Pradumna B Rana and Michael Blomenhofer

# S. Rajaratnam School of International Studies Singapore

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## ABSTRACT

This paper uses root cause analysis to identify the root causes of the eurozone crisis and compares it with the causes of the Latin American, the Asian, and the sub-prime mortgage crisis in the US. Similarities and differences are identified. The paper argues that the root causes of the eurozone crisis were overleveraging, and the flaws in the design of the economic and monetary union. Although the crisis began over three years ago, it is only recently (July 2012) that actions have been initiated to fix the design flaws and deepen integration. Implementing these reforms will require strong political will on the part of member countries as they involve handing over authority to supranational institutions. Treaty changes may also be required. Progress is, therefore, expected to be slow. Whether these efforts to move from the economic and monetary union round one (EMU 1) to EMU 2, can save the euro is still an open question. The paper also examines the various channels through which the eurozone crisis has impacted Asia and concludes that the overall adverse impacts have been manageable so far, but cautions that it could be more serious in the future.

**Dr Pradumna B. Rana** is Associate Professor of International Political Economy (IPE) at the S. Rajaratnam School of International Studies (RSIS) of the Nanyang Technological University (NTU). He is also the Coordinator of the Master of Science in IPE programme and the Coordinator of Economic Multilateralism and Regionalism Studies at RSIS' Centre for Multilateralism Studies. Previously, he was the Senior Director of the Asian Development Bank's (ADB's) Office of Regional Economic Integration, which spearheaded the ADB's support for Asian economic integration. He obtained his PhD from Vanderbilt University where he was a Fulbright Scholar and a Masters in Economics from Michigan State University and Tribhuvan University. He has authored/edited 15 books, and published over 50 articles in international scholarly journals. Most recently, he edited a book entitled The Renaissance of Asia: Evolving Economic Relations between South Asia and East Asia (World Scientific Publishers). He also co-edited books on Pan-Asian Integration: Linking East and South Asia (Palgrave Macmillan) and National Strategies for Regional Integration: South and East Asian Case Studies (Anthem Press, UK).

**Michael Blomenhofer** is a Master's student in the International Political Economy programme at the S. Rajaratnam School of International Studies (RSIS). Being part of the newly established Warwick-NTU double degree programme, he was awarded a student research assistant scholarship for his stint at RSIS. Michael obtained his Bachelor's degree in European Studies from Maastricht University in 2011, and his research interests include the causes of the Eurozone crisis and its consequences for European integration, the international political economy of risk, as well as International Relations theory.

## The Eurozone Crisis and Its Impact on Asia

## I. Introduction

This paper has three objectives: (i) to demonstrate that in managing a financial crisis it is critically important to distinguish between the proximate and the root causes and to focus on the latter rather than the former, because otherwise the patient may be given the wrong medicine which could worsen the disease; (ii) to apply root cause analysis to recent financial crises and point out the similarities and differences with a focus on the on-going eurozone crisis; and (iii) to assess the impact of the eurozone crisis on Asia.

The paper is organized as follows: Section II of the paper discusses the methodology of root cause analysis and applies it to identify the root causes of the eurozone crisis in a comparative context, that is, by comparing it with the causes of several important crises of the past. Section III highlights the flaws in the design of the economic and monetary union (EMU) in the eurozone and the actions being taken to fix them. Section IV analyses the various channels through which the eurozone crisis has been transmitted to Asia and assesses the overall impact of the crisis on Asia. The conclusion is that, so far, the adverse impacts on Asia have been manageable, but future impacts are uncertain.

#### **II.** Root Cause Analysis and Application to Financial Crises

Any event has causes. Those that lead immediately to the event are called proximate causes or triggers. Proximate causes often result from another set of causes that could be intermediate causes, and these may be the result of still another set of causes. At each stage the question "why", taken to mean "what were the factors that directly resulted in the effect?" have to be asked. When a chain of cause and effect is followed from a known end-state, back to an origin, root causes can be identified. The process used to find root causes is called root cause analysis. The reason for conducting root cause analysis is that addressing it prevents recurrence of the event and is ultimately more effective than merely addressing the symptoms. Root cause analysis (RCA) has been used in medical sciences since the early 1900s (Lancet 1905) and for an application to sustainable development refer to Harrich (2010).

Application of RCA to recent financial crisis supports the argument that no two crises are the same and there are both similarities and differences between them.

#### Latin American Crisis

The trickle of private capital flows from industrialized to developing countries turned into a flood during the 1970s as commercial banks began lending to a select group of Latin American countries. The supply of petrodollars was abundant during the post-oil shock period and commercial banks which held them were more than willing to recycle these dollars to meet the financing needs of non-oil developing countries both for oil imports and development. In the course of the decade current account and fiscal deficits of Latin American countries increased significantly and their external debt grew dramatically. The debt service ratio also increased from 13 per cent of total exports in 1975 to 38 per cent in 1978 (Oatley 2008, Chapter 14). In response to the second oil shock of 1979 and the subsequent recession, Latin American countries should have adjusted by tightening fiscal and monetary policy but governments continued to borrow from global capital markets. The debt service ratios, therefore, increased to over 50 per cent of their exports. Mexico defaulted on 18 August 1982, which prompted international banks to stop lending not only to Mexico but other Latin American countries as well and had devastating economic consequences all over the region.

The proximate causes of the Latin American crisis were thus the large outflow of capital to service external debt and the large current account and fiscal deficits. The answer to the question - why Latin America experienced large twin deficits - is the large amounts borrowed by governments from international capital markets. Hence, the root cause of the Latin American crisis was the failure of regional governments to control their expenditure.

#### **Asian Financial Crisis**

For about a decade after the Latin American crisis, private capital flows to developing countries dried up. They resumed in the early 1990s and went mainly to the dynamic economies of Asia which received about one-half of total global capital flows. As in the case of Latin America, capital inflows initially fuelled rapid economic growth but ultimately led to bursts in real estate and property market bubbles in 1997-1998. Two of the affected countries in Asia (Thailand and Malaysia) had relatively large current account deficits; however, these deficits reflected large amounts of capital inflows and not expansionary monetary and fiscal policies. The bursting of the real estate and property bubbles and withdrawal of capital by private investors precipitated the Asian financial crisis (AFC) which began on 2 July 1997 and affected several Asian countries. The AFC had two root causes (Oatley 2008). The first was policy mistakes in the form of premature capital account liberalization and the choice of

pegged exchange rates. Indonesia defied the conventional wisdom of the time, and totally deregulated its capital account in the early 1970s even before deregulating its current account. Other countries such as Thailand and Malaysia deregulated their capital accounts in the early 1990s as part of their economic reform program. This led to a surge in short term capital inflow or "hot money" into these countries leading to a build-up of vulnerability. Maintenance of pegged exchange rates also contributed to excessive amount of short term capital inflows.

	Latin American Debt Crisis	Asian Financial Crisis	Subprime Mortgage Crisis	Eurozone Crisis		
Causes	Large capital outflows to service sovereign debt	Large withdrawal of capital by private investors	Bursting of housing bubble, subprime defaults and rising foreclosures	Large capital outflows to service sovereign debt	Bursting of property bubble (Spain)	
Proximate Causes	Large and growing fiscal and current account deficit			Large and growing fiscal and current account deficit		
	Unsustainable government expenditure	1. Policy mistakes: Pre-mature capital account liberalization; pegged exchange rates	1. Policy mistakes: Fed's loose monetary policy; repeal of the Glass-Steagall Act	1. Unsustainable government expenditure	1. Overleveraging: Weak financial supervision	
Root Causes			Veak financial sector e supervision	2. Flaws in the	design of EMU	
_			3. Large and growing payments imbalance			

 Table 1: Similarities and Differences between the Latin American Debt Crisis, Asian

 Financial Crisis, Subprime Mortgage Crisis, and the Eurozone Crisis

#### Source: Authors

The second root cause of the AFC was the weak regulation and supervision of banks (and corporates, mainly in Indonesia) which led to overleveraging (the incurrence of huge debt by borrowing funds at a lower rate of investment and using these funds in risky investments). Commercial banks had intermediated large amounts of foreign capital for domestic investment and projects with doubtful quality. This led to the so-called "double mismatch" problem, i.e., currency and maturity mismatches – short-term borrowing in foreign currency to finance long-term investment in domestic currency – and vulnerability in the balance sheets of debtors (banks and corporates), which exposed them to risks of sudden changes in currency values and interest rates. Rapid capital inflows had led to excess liquidity,

overinvestment and asset market bubbles. Once the market started to lose confidence about the sustainability of the exchange rates, however, there was a large withdrawal of capital by investors that exerted large downward pressure on the currencies and put a sudden brake on the overextended economic activities.

## Subprime Mortgage Crisis (SMC)<sup>1</sup>

The United States did not experience any significant capital flight during the SMC which preceded the global economic crisis (GEC) of 2008-2009, reflecting the safe haven role of the US dollar. Domestic investors, however, quickly sold-off their assets. US financial institutions deleveraged their activities abroad, after the onset of the crisis, and brought in capital to meet withdrawal needs at home. In broad terms, however, the root causes of the SMC and the AFC were similar – various policy mistakes and weak regulatory and supervisory framework of financial institutions.

The proximate cause of the SMC was the bursting of the housing bubble in the US during the summer of 2007 when subprime lenders (borrowers who did not meet credit quality requirements) began to default and foreclosures increased. It then spread to prime loans and other types of consumer credit. Various types of financial institutions, particularly those with large exposures to subprime related structured products, became affected leading to a series of failures of several large financial institutions (e.g., Bear Stearns, American Insurance Group, and Lehman Brothers).

The root causes of the SMC were, however, policy mistakes in the US, and the weaknesses in the regulation and supervision of the financial sector in the country. A number of policy mistakes had been made during the past few decades. First, after the bursting of the dot.com bubble in 1999-2000, the US Fed ran a loose monetary policy for several years. The Federal Funds rate dropped from 5.98% in January 2001 to 1.73% two years later and stayed at about that level until 2005. This fueled a credit boom in the US.

Second, the repeal of the Glass-Steagall Act in 1999<sup>2</sup> during the Clinton Administration opened the gates for US banks to take on the full range of risky assets (securities, derivatives, and structured products) either directly on the balance sheets or indirectly through off-balance sheet conduits. This worked well in Germany and the other European countries, but not in the

<sup>&</sup>lt;sup>1</sup> Based on Dowling and Rana (2010)

<sup>&</sup>lt;sup>2</sup> Introduced in 1933

US where many of the activities of investment banks and other types of financial institutions were generally outside the preview of regulators. So commercial banks and investment banks and others went into complex derivative securities and also extensively leveraged their operations. The existing regulatory system was too weak to cover investment banks.

Weak regulation of financial and corporate sectors that led to overleveraging was also very seriously at fault. Alan Greenspan, the Chief of the Federal Reserve System during 18 years of the boom period, confessed that he had had faith that financial institutions were prudent enough to make sure that they were not lending money cheaply to people who could not pay it back. But this is exactly what happened. This Anglo-Saxon belief on the "theory of efficient and rational markets" was shattered. Self-regulation meant an absence of regulation. Incentive compensation of CEOs of financial institutions was also very high. Much of this was possible because of the decision by the Securities and Exchange Commission in 2004 to permit these types of activities. The SEC also dismantled its supervisory unit during that year.

Banks and savings and loans provided money to home buyers through mortgage loans. In the bygone era, these financial institutions would have held on and collected interest and repayments. In the modern era, housing finance institutions repackaged mortgage loans into bundles of mortgage-backed securities (MBSs) with "triple A" ratings from credit rating agencies and sold them. Financial institutions did not hold on in this originate-and-distribute model. MBSs were further "sliced and diced" into derivative assets through the process of financial engineering and sold to investors all over the world. Major chunks of these assets were moved to the books of separate structured investment vehicles in order to make balance sheets of financial institutions look healthier than they actually were. Credit default swaps provided by large insurers such as the American Insurance Group were used to insure these assets against default risks. In hindsight, there was also excessive leveraging and irresponsible lending.

National financial regulators and supervisors failed to see the large buildup and concentration of systemic risks in the US (and the United Kingdom and several other European countries). The scope of regulation and supervision was narrowly focused on insured deposit-taking firms and did not adequately cover all financial activities that posed economy-wide risks. The "shadow banking" system—comprising investment banks, mortgage-brokers and originators, special investment vehicles, insurance companies writing credit default swaps, and other

private asset pools—grew, as it had long been lightly regulated by a patchwork of agencies and generally not supervised prudentially.<sup>3</sup> The financial supervisors failed to recognize interconnections and links across firms, sectors, and markets due to the lack of a more comprehensive macro-prudential approach.<sup>4</sup>

The SMC spread around the world especially in late 2008, as banks holding "toxic" assets engineered in the US faced difficulties. The SMC, therefore, became a GEC.

The large and growing global imbalances – the current account deficits in the US which reached the critical level of 5% of GDP or more over the past five years and surpluses in Asia – and the recycling of Asia surpluses through purchase of US Treasuries, added further fuel to the credit boom in the US. It is interesting to note that the often repeated warnings that the global imbalance could lead to a disorderly adjustment of the dollar (for example, made by the IMF staff) did not materialize. There were calls for a "shared approach" to address the problem, but little was done. The credit boom made possible by the imbalance led, however, to a build-up of vulnerability in the US by fuelling the housing boom and extension of credit to subprime lenders.

#### **Eurozone Crisis**

The eurozone crisis which is now approximately three years old broadly comprises two different types of crises. The first one is a Latin American type currency and sovereign debt crisis centered on Greece but also other countries in the southern euro area including Portugal. This crisis is mainly due to overspending by the public sector in the form of unsustainable wages and pensions, manifest in large and persistent fiscal and current account deficits. The second one is a banking crisis that was first evident in Ireland but then spread throughout the region because of concerns over sovereign solvencies, as governments had to bail out banks that had been ruined by the burst of the housing bubble. Hence the root causes

<sup>&</sup>lt;sup>3</sup> US regulators could not detect the overall growth of "shadow banking system" due to the highly fragmented nature of the US regulatory and supervisory framework; bank supervision was divided among five federal agencies and the states; insurance companies were supervised at the state level; investment banks were supervised by the Securities and Exchange Commission (SEC); and derivatives trading in organized exchanges were supervised by the Commodity Futures Trading Commission while over-the-counter derivatives were under no agency supervision.

Basel I encouraged the creation of off balance sheet special-purpose vehicles that contributed to the subprime crisis; the SEC lifted the net capital rule for investment banks, enabling them to double or even triple their leverage; credit rating agencies employed practices that were fraught with conflicts of interest; and mortgage banks, Fannie Mae and Freddie Mac employed lax lending practices.

<sup>&</sup>lt;sup>4</sup> Supervisors tend to focus only on their own limited responsibilities, overlooking the larger problem.

of the European crisis were expansionary government policies in several countries, at least initially, and then weak financial regulations that led to overleveraging.

Summing up, while the Latin American crisis was a traditional current account currency crisis, the AFC was a capital account crisis or associated with large inflows and sudden reversals of private capital flows. The SMC/GEC and the eurozone crisis were of a more hybrid nature comprising components of both a current account and capital account crisis.

In contrast to the Latin America currency crisis, the Asian crisis had little to do with unsustainably large government borrowing and current account deficits. As already mentioned several countries had relatively large current account deficits, but these were because of large amounts of short-term capital coming into these countries. The root cause of the Asian crisis was the weaknesses of domestic banking sectors that had recently been liberalized and encouraged to borrow from abroad. In Indonesia, however, it was the private corporate sector that was over-leveraged. In such a crisis, the appropriate remedy would have been to inject liquidity in the economy through easier monetary and fiscal policies – exactly opposite of what the IMF did, at least, initially (Krugman 1998, Sachs 1997). Regulatory failures could be handled subsequently.

Macroeconomic stabilization prescribed by the IMF not only failed to address the root cause of the crisis but, as critics contend, also pushed the countries into deep recessions (Krugman 1998). Rather than implement austerity measures, the crisis countries in Asia should have been encouraged to adopt "stable or even slightly expansionary macroeconomic policies" to counteract the macroeconomic consequences of the crisis (Sachs 1997).

As Henning and Khan (2011) write "Asian countries were convinced that the Fund misdiagnosed the problems the countries were facing and imposed excessively harsh and inappropriate conditions for the financing it was providing. Despite the fact that the Fund later on acknowledged the mistakes it has made during the Asian financial crisis, and changed its views, the damage had been done and the mistrust of the Fund by the Asian countries lingered" (page 3). The IMF has, among others, streamlined its conditionality, introduced new lending facilities, and retracted the proposed amendment seeking capital account liberalization and adopted a nuanced view on capital controls.

#### **III.** Flaws in the design of the Economic and Monetary Union (EMU)

Other root causes of the eurozone crisis were the flaws in the design of the economic and monetary union (Kirkegaard 2011, Bergsten 2012). The EMU launched in 1999 comprised the euro (the single currency) and the European Central Bank (ECB) for a common monetary policy. It did not contain a fiscal union, a banking union, and other institutional mechanisms for coordinating structural policies. Both the Werner Report of the 1970s (European Commission 1970) and the Delors' Report of the 1980s (European Council 1989), which served as the blueprint, had developed a three-stage roadmap comprising closer economic coordination among members, binding constraints on member states' national budget, and a single currency. But in their haste and eagerness to accomplish a full and irrevocable European unity, the "founding members" had felt that the two convergence criteria enshrined in the Maastricht Treaty – a 3 per cent limit on annual fiscal deficit and 60 per cent limit on gross public debt to GDP ratio - would be adequate for the purpose. In practice, these thresholds were neither binding nor fixed. The EMU was, therefore, launched as an experiment between a set of countries that were quite diverse and far less integrated than required by the optimum currency theory of Professor Robert Mundell (1961). It was hoped that a monetary union would lead to an economic union. But this did not happen.

The institutional flaws have now been identified and actions are being taken to fix them. A key design flaw in the EMU was the absence of the lender of last resort in government bond markets (De Grauwe 2011, Wyplosz 2011). When a country issues sovereign bonds in its own currency, there is an implicit guarantee from the central bank that cash will always be available to pay out the bondholders. The absence of such a guarantee in a monetary union – where bonds are issued in a currency over which individual countries have little control – makes the sovereign bond markets prone to liquidity crisis and contagion, very much like banking systems in the absence of lender of last resorts.

Initially, given the no-bailout clause in the EU treaty, the ECB was reluctant to pursue the role of lender of last resort. Instead, eurozone members set up the European Financial Stability Facility (EFSF) for the purpose. A permanent 700 billion euro European Stability Mechanism (ESM), designed to replace the EFSF, has been ratified by all participating states as of September 2012. The establishment of the ESM is critical as the EFSF is running out of money (having bailed out Greece, Ireland, and Portugal) and is due to expire around the

middle of next year. In July, there was a dramatic turnaround when ECB chief Mario Draghi, promised to "do whatever it takes" to protect the euro. He delivered on early September when he announced plans to make the ECB the lender of last resort in government bond markets. Under the new program dubbed the Outright Monetary Transactions (OMT)<sup>5</sup>, the ECB will buy existing government bonds in the secondary market without announcing any limits in advance. The OMT will primarily benefit fiscally troubled countries like Spain and Italy which are facing difficulties financing their debt. To prevent moral hazard and ensure that countries continue their adjustment policies, the ECB will require that a country seeking to benefit from the OMT to first apply to eurozone's bailout funds, the EFSF and the ESM, where tough conditions are imposed. The ECB also announced that it would sterilize its purchases so that there will be little impact on money supply.

In June 2012, the President of the European Council announced a vision for a stable and prosperous EMU based on four essential building blocks comprising (i) an integrated budgetary framework (ii) an integrated financial framework (iii) an integrated economic framework and (iv) a set of measures to promote democratic legitimacy and accountability of decision-making within the EMU (European Council 2012a). Subsequently an interim report was published in October (European Council 2012b) followed by another report in December (European Council 2012c) which includes a proposed time-frame for realizing the four building blocks of a 'genuine' EMU.

On the first building block, actions are being taken to establish a banking union. The objective is as stated in the June Summit statement is to "break the vicious circle between banks and sovereigns". This requires establishing a Europe-wide financial supervisor referred to as the Single Supervisory Mechanism. Brussels had proposed the ECB for the task and recently the European Finance Ministers approved this proposal. This was a landmark decision which transferred authority from national regulators to a supranational one. Sometime in 2014, the ECB will start supervising 200 largest banks in the Eurozone. The banking union also requires setting up a common resolution mechanism to oversee the orderly winding down of troubled banks and a common deposit guarantee scheme. These will be difficult as they imply that taxpayers may have to pay for the mistakes of a bank in another

<sup>&</sup>lt;sup>5</sup> The old program was the longer-term refinancing operation (LTRO) to provide short-term liquidity for up to three months. LTRO has calmed markets but the widening differences in the borrowing costs of the crisis-affected countries and the rest remained.

country. In fact, European leaders doused hopes of a radical overhaul and said that the EU President is to brief them on further actions only in June 2013.

On the second building block, EU members (except the Czech Republic and the United Kingdom) had agreed to set up a new Fiscal Compact to the strengthen the economic governance framework of the EMU in March 2012. Once This Compact came into force on 1 January 2013 and it requires all ratifying members to enact laws on national budgets to meet the two Maastricht convergence criteria (notably the Stability and Growth Pact and the Treaty on Stability, Coordination, and Governance), except this time it will be enforced by the European Court of Justice (ECJ) which means that any member may bring enforcement proceedings against another member in the ECJ if they fail to meet their obligation. The target is to make the Compact effective on 1 January 2013 if it is ratified by at least 12 members. 'Six-pack' measures to enforce the Stability and Growth Pact were adopted in December 2011. The 'two-pack' reform, as part of which the European Commission would be able to review drafts of national budgets, is currently being debated in the EU legislative. The December report noted that in the medium-term the issuance of common debt (Eurobonds) could also be explored. In the longer term, a full-fledged fiscal union with taxes and expenditure handled by a common authority is also envisaged.

On the third building block, the existing framework for economic coordination is to be made more enforceable to ensure that unsustainable policies do not put the stability of the EMU at risk. Such a framework is to also focus on policies in relation to labor mobility and tax coordination. Implementations of policies are to be monitored at the supranational level.

Finally, in moving towards a more sustainable fiscal and economic union, a stronger mechanism for legitimate and accountable joint-decision-making is to be established. Greater public support for Europe-wide decisions is to be sought. Proposals have been made to enhance parliamentary oversight of various institutional and structural reforms.

With the view of refocusing the experiment that the "founding fathers" of the EMU began in 1999, a number of bold actions have been announced. A lot more are under discussion. Specific and time-bound roadmaps have yet to be prepared and agreements reached. New supranational institutions are to be established to complement the many that Europe already has. This task will be a real challenge as it requires politicians to give up powers which many

of them regard as sacrosanct. In the early post-World War II period, there was unanimity on the need to promote peace and the will to cooperate was strong. This may be less true now, especially since imminent panics in financial markets and the possibility of a Greek exit from the EMU have receded somewhat. Whether the reformed EMU, or EMU II, in Europe will be enough to save the single currency system remains to be seen.

## **IV. Impact on Asia**

The Eurozone crisis impacts Asia through three major channels: the trade, financial, and remittances channels.

#### **Trade Channel**

Both regions are important trading partners of each other. According to data by the European statistical agency, in 2011, goods originating in Asia comprised 31.5% of the euro area's total imports, while 23.5 per cent of the euro area's total exports were destined to Asia (Eurostat, 2012). Asia's exports would therefore be adversely affected by falling demand for foreign goods and services in Europe, resulting from an uncertain business environment and the implementation of austerity measures. But according to IMF data, developing Asia's trade has diversified quite significantly in recent years: while the share of intra-regional trade has increased significantly, the share of the US has fallen sharply to about 13 per cent while that of the eurozone has remained more or less unchanged at around 10 per cent (Figure 1). The increasing level of intra-regional trade would have provided additional resilience to Asia from external shocks emanating from both the eurozone and the US.

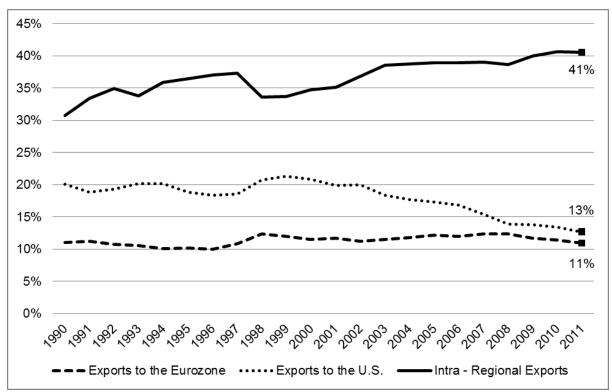


Figure 1: Developing Asia: Exports by Region (Percentage of Total Exports)

Source: IMF Direction of Trade Statistics (Edition: Nov. 2012)

Data in Figure 2 lends some support to above expectation. According to *Eurostat* data, the eurozone's imports from Asia fell quite sharply in late 2008 and throughout 2009 reflecting the adverse impact of the global economic crisis. Since then it has recovered and even exceeded the pre-crisis level. After April 2012, however, some softening of the eurozone's imports from Asia can be witnessed.

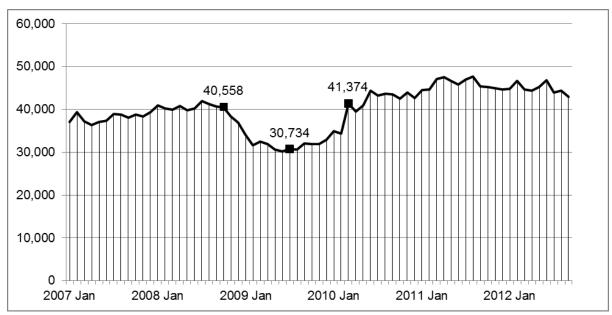


Figure 2: Eurozone - Monthly Imports from Asia (in € Million)

#### Source: Eurostat.

A prolonged recession in the eurozone will pose a serious threat to the export-oriented countries in Asia such as China, Korea, Malaysia, Philippines, Singapore, Sri Lanka, and Thailand. Massa et al (2009) indicate that countries pegging to the US dollar such as Vietnam, Bangladesh, and Sri Lanka could experience an appreciation of their currencies and thereby lose export competitiveness as the euro weakens. Countries with stronger domestic demand (such as Indonesia) will obviously be less affected.

#### **Financial Channel**

The second channel through which the eurozone crisis could be transmitted to Asia is the financial channel that is, through the impact on FDI inflows, bank lending, and remittance flows from Europe to Asia.

Data on FDI outflows from the EU to the world are available from the Eurostat until 2010 (Table 1). These data show that FDI outflows from the EU fell sharply by over 60 per cent during the period 2008 to 2010, from euro 383.5 billion to 145.6 billion. FDI inflows to Asia also fell during this period. Among the Asian countries, Singapore, China, Hong Kong, India, and Japan are the largest recipients of FDI from the EU. Only preliminary data is available for 2011, these suggest that EU FDI in Asia was rebounding quite strongly.

		Outward FDI flows		
	2008	2009	2010	2011(P)
Total Outflows	383.5	316.5	145.6	369.9
China (excl. Hong Kong)	6.5	6.5	7.1	17.5
Hong Kong	4.9	4.1	6.1	8.0
Japan	2.9	1.0	-2.2	3.6
India	3.4	3.3	4.7	12.0
Singapore	25.9	4.7	10.6	:
Total Asia	58.8	34.9	25.1	:
Source: Eurostat				
(P) Preliminary figures for 2011 are based on annualised quarterly data.				

## Table 1: Outward FDI Flows from EU (€ bn)

Using data from the Bank for International Settlements and CEIC, the ADB has estimated the exposure of Asian countries to banks in the US and Europe in 2011 (Table 2). These estimates suggest that Asian countries are more exposed to banks in Europe than banks in the US. Asian countries could therefore be seriously affected through this channel.

Borrower	Len	der
	U.S. Banks	European Banks
Indonesia	5.0	12.1
Malaysia	5.6	14.9
Philippines	6.8	15.1
Thailand	2.2	4.5
Vietnam	1.2	6.4
Hong Kong, China	10.4	69.6
<b>Republic of Korea</b>	7.5	13.9
Singapore	26.2	71.4
Taiwan	6.4	12.1
China	0.8	2.6
India	8.0	17.3
Kazakhstan	4.2	17.0
Source: ADB (2012)		

 Table 2: Asia's Exposure to U.S. and European Banks (as percentage of borrower country's domestic credit in Sep. 2011)

In terms of exposure to European banks, Singapore tops the list with consolidated European bank claims amounting to 71.4 per cent of total domestic credit, followed by Hong Kong (69.6 per cent), India (17.3 per cent), Kazakhstan (17.0 per cent), the Philippines (15.1 per cent), Malaysia (14.9 per cent), and Indonesia (12.1 per cent). Towards the bottom of the list are Japan (2.3 per cent) and the China (2.6 per cent).

The impact of the eurozone crisis on lending activities of European financial institutions is visible, but the effects have not yet been very pronounced. Mathur (2012) has estimated that in the final quarter of 2011, European banks cut back on their lending to Asia by US \$40 billion, but this is relatively small compared to the US\$ 220 billion that was pulled out of the region during the period of June-September 2008 at the time of the global economic crisis.

Deleveraging by European banks could accelerate if the eurozone crisis deepens. The *Economist* magazine (2012) has commented that the decrease in European bank lending to Asia has been partially offset by increased activity of Japanese banks in the region, but the services provided by European banks cannot easily be replaced. European banks provide close to a third of the region's trade and project finance and have an edge in sophisticated finance methods that Japanese banks lack. Asia's regional financial hubs are likely to be most vulnerable to reduced European bank activity.

#### Remittances

With global remittances flows to developing countries having reached a record level of US\$ 300 billion, the potential impact of this channel cannot be underestimated (Lacalle, 2012). Figure 3 shows that after registering a very sharp increase (of 29 per cent) in 2007, the growth of outward remittances from the eurozone has softened considerably with absolute declines in 2009 and 2010. Data on remittance flows from the eurozone to Asia are not available, but it is reasonable to expect a similar trend. Countries such as Bangladesh, Cambodia, Kyrgyz Republic, Nepal, Philippines, and Tajikistan could therefore have been adversely affected. However, since remittances are relatively inelastic to short-term shocks, it is possible that the adverse impact could be realized only in the longer term.

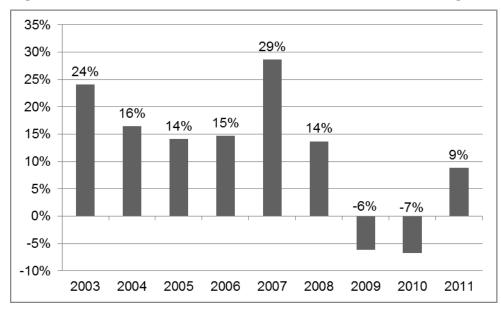


Figure 3: Eurozone Outward Remittances (Annual Percent Change)

Source: UNDP.

## **Overall Impact on Economic Growth in Asia**

In order to estimate the overall impact of the eurozone crisis on developing Asia, it is necessary to integrate the impacts of the various channels discussed above. This requires developing and simulating an econometric model, which is beyond the scope of the present paper. A recent model-based study by the OECD (2012) finds that the eurozone crisis has had an adverse impact on Asia, but so far they account for less than half of the recent slowdown in economic growth being experienced by Asian countries. On an individual country level, the report estimates that export declines stemming from the eurozone crisis have over the year to the first half of 2012 dragged down GDP growth in India, Indonesia, and China by roughly a quarter percentage points.

The overall impact of the eurozone crisis on Asia appears thus to be manageable so far. The rest of the slowdown is accounted for by the slow recovery in the US, regional factors such as the slowing growth in China and India, and various domestic factors. The OECD, however, expects the eurozone crisis to be the single most important factor dragging down Asian growth next year.

Figure 4 shows the trend in Asian economic growth together with the ADB's 2012 and 2013 growth projections. The data show that the ADB has downgraded growth forecasts for Asia during the period from April to October 2012. In April 2012, it had forecast that Asia as a whole could grow by 6.9 per cent in 2012 and by 7.3 per cent in 2013. In October, it lowered

these forecasts to 6.1 per cent and 6.7 per cent representing a downgrading by 0.8 percentage points in 2012 growth estimate and 0.6 percentage points in the 2013 forecast. If the OECD is correct, roughly half of these downgrades are due to the eurozone crisis and the rest have been caused by other factors.

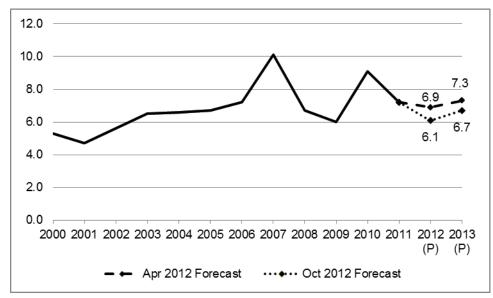


Figure 4: Average Growth Rate of Asia (% per year)

Figure 4 Source: IMF; ADB (Apr 2012, Oct 2012)

Table 3 shows that the ADB has downgraded the growth forecasts for the South Asia region the most - 1.1 percentage points for the 2012 forecast and 0.7 percentage points for the 2013 forecast. Within South Asia, the forecasts for India were downgraded the most because of both external and domestic factors. The second most significant downgrading by the ADB was for the East Asian region (0.9 percentage point and 0.6 percentage points respectively). Growth forecasts for export-dependent economies such as Hong Kong and Taiwan have been downgraded the most. Singapore's growth forecasts have also been downgraded by 0.6 percentage points and 0.5 percentage point for the two years.

Going forward, the impact of the eurozone crisis on Asia will depend on how the crisis evolves and how it will affect the slow recovery in the US both of which are major trading partners and markets for Asia. A recent study by the ADB outlines three possible scenarios. If the eurozone were to experience a recession and the recovery in the US were weak, then output growth in Asia in 2012 would fall by 0.4 to 2.0 percentage points (ADB 2012 p. 15). If both the eurozone and the US were to experience a recession, then Asia's output would

contract by 0.5 to 2.5 percentage points. Finally, if the crises in the eurozone and the US were to drag output in these countries to the 2009 level, Asia's output in 2012 would fall by 0.6 to 3.7 percentage points in this worst case scenario. It looks like we are still in the low to medium case scenario outlined by the ADB, but the future is uncertain.

			ADO 2012			Apr 2012	Oct 2012	Apr 2012	Oct 2012
Year/Country	2007	2008	2009	2010	2011	2012 Fo	orecast	2013 Fo	orecast
East Asia	11.3	7.3	6.7	9.8	8.0	7.4	6.5	7.7	7.1
China, P.R.	14.2	9.6	9.2	10.4	9.2	8.5	7.7	8.7	8.1
China, Hong Kong	6.4	2.3	-2.6	7.0	5.0	3.0	1.6	4.5	3.9
Korea	5.1	2.3	0.3	6.2	3.6	3.4	2.7	4.0	3.4
Mongolia	10.2	8.9	-1.3	6.4	17.3	15.0	11.0	17.5	12.0
Taiwan	6.0	0.7	-1.8	10.7	4.0	3.4	1.7	4.6	3.8
South Asia	8.8	6.4	7.5	7.8	6.4	6.6	5.5	7.1	6.4
Afghanistan	13.7	3.6	21.0	8.4	5.7	7.1	6.9	5.8	6.5
Bangladesh	6.4	6.2	5.7	6.1	6.7	6.2	6.3	6.0	6.0
Bhutan	12.6	10.8	5.7	9.3	8.3	8.0	7.9	8.5	8.4
India	9.3	6.7	8.4	8.4	6.9	7.0	5.6	7.5	6.7
Maldives	10.6	12.2	-4.7	5.7	7.5	3.5	3.0	4.5	4.0
Nepal	2.8	5.8	3.8	4.0	3.5	4.5	4.6	4.0	3.8
Pakistan	6.8	3.7	1.7	3.8	2.4	3.6	3.7	4.0	3.7
Sri Lanka	6.8	6.0	3.5	8.0	8.3	7.0	6.5	8.0	7.0
Southeast Asia	6.6	4.4	1.4	7.9	4.6	5.2	5.2	5.7	5.5
Brunei Darussalam	0.2	-1.9	-1.8	2.6	2.9	2.6	1.5	3.2	2.1
Cambodia	10.2	6.7	0.1	6.0	6.8	6.5	6.4	7.0	6.8
Indonesia	6.3	6.0	4.6	6.2	6.5	6.4	6.3	6.7	6.6
Lao P.D.R.	7.9	7.2	7.3	7.5	7.8	7.9	7.9	7.7	7.7
Malaysia	6.5	4.8	-1.6	7.2	5.1	4.0	4.6	5.0	4.8
Myanmar	5.5	3.6	5.1	5.3	5.5	6.0	6.3	6.3	6.5
Philippines	6.6	4.2	1.1	7.6	3.7	4.8	5.5	5.0	5.0
Singapore	8.9	1.7	-1.0	14.8	4.9	2.8	2.2	4.5	3.8
Thailand	5.0	2.5	-2.3	7.8	0.1	5.5	5.2	5.5	5.0
Vietnam	8.5	6.3	5.3	6.8	5.9	5.7	5.1	6.2	5.7

 Table 3: Growth Rates in Asia (%)

Source: ADB (2012a; 2012b)

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