## Chapter 1

# Linkages between Real and Financial Aspects of Economic Integration in Asia: Overview Report

### **Jenny Corbett**

Crawford School, Australian National University

### **Christopher Findlay**

School of Economics, University of Adelaide

March 2010

### This chapter should be cited as

Corbett, J. and C. Findlay (2010), 'Linkages between Real and Financial Aspects of Economic Integration in Asia: Overview Report', in Findlay, C., F. Parulian and J. Corbett (ed.), *Linkages between Real and Financial Aspects of Economic Integration in East Asia*. ERIA Research Project Report 2009-1, Jakarta: ERIA. pp.1-19.

### Chapter1

### **Linkages between Real and Financial Aspects of Economic Integration in Asia: Overview Report**

Jenny Corbett Australia–Japan Research Centre Crawford School Australian National University

Christopher Findlay
School of Economics
University of Adelaide

### Abstract

The objective of this paper is to present an overview of the studies under ERIA Research Project "Linkages between Real and Financial Aspects of Economic Integration in Asia" conducted in FY 2009. The objective of this research is to understand the relationship between the financial side of the economy and the real activities of firm, consumers, and workers. We would like to understand the contribution of both real and financial integration to growth and to welfare, and to enquire whether increases in either or both forms build the linkage between the real and financial economy. The first part of this study begins with chapters that address the measurement of regional integration compared with the engagement with the global economy and how this influences the aggregate behavior of the economies. The second part turns to a consideration of the financial sector and the efficiency and performance of banking in the region. This allows a discussion whether, in the current crisis, the banking sector was an important channel of financial shock into real behavior. The third part turns to the corporate sector. Using data on firms, type of finance used by firms, its impact on their performance, and ownership structure influence over the productivity growth are discussed. Based on the findings, we present several policy recommendation and future research agenda for further economic integration in East Asia.

### Introduction

A question which has engaged both policy makers and academic economists is how to understand the relationship between the financial side of the economy and the real activities of firms, consumers and workers. Is money merely a veil behind which the real economy operates in response to "real" stimuli, or does finance drive real behavior? Surprisingly there is not only no theoretical consensus on this point but there is relatively little direct empirical analysis. The purpose of this project has been to examine this question and to particularly focus on the policy-relevant questions that it raises. The extent of financial integration of the economies of the region and its relationship with the linkage of the real side of these economies has therefore been an important question.

Our motivation is to understand the contribution of both real and financial integration to growth and to welfare and to enquire whether increases in either or both forms build the linkage between the financial and the real economy. We also ask whether regional integration, rather than greater openness and integration with the global economy, contributes differently.

Out of our research emerges an interest in a "grand trade off", concern about which has been heightened since the global financial crisis. This is the balance between financial integration and the benefits it confers, on the one hand, and the transmission of shocks from the rest of the world and associated threats to financial stability on the other. There is an interest in the direct channels of transmission of such shocks but also the indirect effects, for example, the ways in which financial integration might intensify the direct effects of the transmissions of shocks on the real side of these economies.

Papers in this project explored these questions by examining both macroeconomic indicators on the behavior of the financial and real economies and also by reviewing the microeconomics of the channels of transmission of shocks and the processes of integration.

The project has been structured around the idea that between the financial and real sectors of the economy there is a "black box" through which unanticipated shocks, or longer-

term, predictable changes, in either sector may be transmitted from one side to the other. Because there is so little consensus on the elements or transmission mechanisms that may be inside that black box, we empirically examined several different important mechanisms.

The study begins with chapters that address the measurement of regional integration compared with the engagement of regional economies with the global economy and how this relates to the aggregate behavior of the economies. This gives a picture of the potential for welfare gains from risk sharing and also the scale of possible costs from financial contagion in more open economies. We then turn to a consideration of the financial sector and the efficiency and performance of banking in the region. This allows a discussion of whether, in the current crisis, the banking sector was an important conduit of financial shock into real (trade and output) behavior. The final set of studies turns to the corporate sector and, using data on firms, examines what type of finance they use, what impact that has on their performance and whether foreign direct investment or ownership structures matter for productivity growth. These studies complete the analysis of both sides of the financial market (lending and borrowing) and give insight into several routes by which finance impacts on corporate behavior. Moreover, because they also include country and policy variables in their analysis, it is possible to see where policy can be used to affect outcomes.

The research reported here identifies significant gains from further financial market integration. It shows that factors which are specific to particular economies are important to understand the process of and impacts of integration. The studies suggest that work on institutional quality alongside efforts to open the financial sector help offset the risks of the higher levels of transmission of shocks. Results of this type point to the benefits of a "bottom-up" approach to strategy on financial market integration at the economy level rather than larger scale and top-down institutional building at the regional level.

In terms of further work, the papers in this collection identify a number of empirical studies to clarify the questions that have emerged in the process of this research. This includes work on measures of integration, the indicators of business cycle movements,

further work on the sources of corporate funding, and new indicators of bank efficiency, and others. One theme, however, is the value of identifying more carefully the specific institutional features which are contributing to the observed economy-level variations in results. Such an analysis would also contribute to the design of capacity building programs across the region.

### **Macroeconomic indicators**

There is a variety of ways of measuring financial integration and a contribution of this project has been to explore some of these measures and their differences. Papers by Cavoli and Rajan and Pontines and Parulian use several different lenses to illustrate the country and time pattern of changes in real and financial integration in the region.

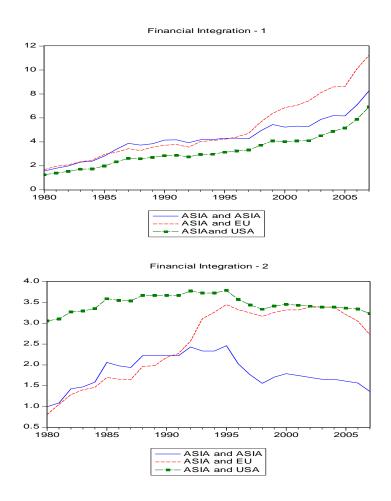
Several indicators are illustrated in Figure 1, which shows quantity-based measures of integration presented by Pontines and Parulian (who also report a price-based measure). The figure includes three graphs, one for each of their financial integration measures. The first measure is the average of the sum of stocks of total foreign assets and liabilities (derived from balance of payments data and including both (FDI) and portfolio investment) held by countries *i* and *j* scaled by their nominal GDP. The second is an average of the so-called Chinn–Ito index of financial openness and which is based on World Bank data on reported restrictions to financial transactions across pairs of countries. The third is based on the stocks of portfolio assets and liabilities between country *i* in country *j* and vice versa, scaled by each country's GDP. Each graph contains time-series plots of the cross-country pair average of the relevant financial integration measure.

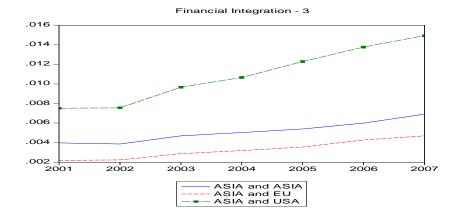
- The first figure, for the global holdings of foreign assets, clearly shows that Asia's integration with world financial markets has increased considerably over the past three decades and has moved in parallel with the globalization of finance in other regions. The main, dramatic rise occurred around the middle of the 1990s.
- This clear, persistent, upward trend in engagement with world financial markets
  occurred despite the reversal in Asia's openness to financial flows based on the
  measure of policy barriers (the Chinn-Ito measures in the second figure), that

took places sometime in the mid-1990s. From this point until the end of the period, the policy barriers measure fluctuates around an approximately constant mean, suggesting that Asia has not made much further progress in reducing formal restrictions on financial flows in recent years.

The quantity measure that indicates truly bilateral financial integration (the third figure), portrays Asia's increasing, though limited, intra-regional financial integration but also shows that the intra-regional integration falls behind that of the region's integration with the US.

Figure 1. Financial Integration over Time (Quantity-Based Measures)





*Note*: The correlation is estimated with a four-year rolling window.

Source: Pontines and Parulian.

Despite the apparent growth in levels of financial integration, the question remains about the relevant benchmark, and whether higher levels of integration or faster change might be possible. We return to this question, and the implications of the answer, below. However there is value in continuing to review and refine the portfolio measures of integration which are available.

Price indicators used by both Cavoli and Rajan and Pontines and Parulian, although different, indicate a similar story. Pontines and Parulian use a measure of the Euclidian distance from complete arbitrage between pairs of countries (revealed by the term structure of interest rates and by the gap between bank rates and money market rates) while Cavoli and Rajan use the distance from uncovered interest parity. All these indicators show an increase in the extent of arbitrage between individual regional economies and others in the region (i.e. increased "regional integration") before the Asian crisis, with a slowing in the pace of integration after it. However, the region's economies have increased their price arbitrage with financial markets *outside the region even more* than they have within the region.

The relationship between financial integration and real integration is explored by Cavoli and Rajan. They use innovative measures of both forms of integration (the distance from uncovered interest parity and purchasing power parity) which permit an easier

comparison of the extent of both forms and of the extent to which an economy is integrated with another economy or groups of economies.

Cavoli and Rajan find that the level of real integration exceeds that of financial integration (in their paper Cavoli and Rajan report on some other commonly used measures of integration which have observed the same result). As might be expected, Japan, Singapore and Hong Kong have integrated with global capital markets and Korea is increasingly so. The original ASEAN members are relatively more integrated with each other than with other economies in the region. Singapore and Malaysia are more integrated within the region than the other original members, and they are all more integrated than the later members.

There have been changes over time. A comparison of levels of integration within regional groups before and after the Asian Financial Crisis finds a higher level of real integration after the crisis but not for financial integration, although these effects are relatively small.

In further interesting work, Cavoli and Rajan examine the relationship between changes of levels of real and financial integration. They find some evidence that increments to financial integration precede that of real integration. This result challenges some of the preconceptions of the relationship between those two variables. However, as the authors explain, it may reflect the timing in the adjustment process, with financial markets reacting more quickly to a common shock than the real side of the economy. It is a topic for further work to identify the drivers of both financial integration and real integration and therefore their timing.

Pontines and Parulian examine the relationship between financial integration and the synchronicity of business cycles in economies in the region. As they explain, this relationship could work in either direction. Standard international business cycle models predict that greater financial integration should lead to lower synchronicity, while models of contagion suggest a positive relationship. There is no uniform result on this question in the current research literature (where cross-section studies find a positive relationship while panel data studies find a negative relationship) and little work has been done on this question in Asian economies.

Pontines and Parulian observe a rising (though not high) level of financial integration but generally no change in any particular direction in the degree of synchronicity in the cycles of the economies of interest. This simple comparison suggests that the mechanisms that transmit events through the financial system are not dominant but this question requires further testing, which Pontines and Parulian undertake, in order to be able to make a more powerful statement.

Pontines and Parulian find that, controlling for other influences on synchronicity, the relationship is negative; that is, a higher level of financial integration is associated with a decrease in business cycle synchronicity. This suggests that the business risk smoothing opportunities created by integrated financial markets dominate the contagion effects. Deeper financial integration, in other words, permits a decoupling of an economy from others with which it is integrated.

As Pontines and Parulian explain, this result is important in the current debate, where it has been alleged that the downside of greater financial integration is that it can pose risks to financial stability. This claim, they note, takes on ever increasing traction and prominence in discussions especially in light of the recent painful experience with the GFC which tends to demonstrate the role that financial linkages play in the transmission of shocks between economies. However, despite concerns in policy circles, it appears that the jury is still out on whether greater financial integration indeed increases the likelihood of crises. They refer to other recent work which shows that the availability of better risk sharing mechanisms tends to offset the risk of spillover or transmission of shocks, and thus financial integration leads to an improvement in welfare as specialization benefits are magnified and realized.

This result is consistent with the literature that argues that greater integration does not pose risks to financial stability on its own, but when a too-rapid liberalization of financial markets interacts, for instance, with certain distortions in the economy such as weak and lax supervisory regulations as well as problems of credibility and enforcements of contracts, these distortions are magnified and financial instability problems arise.

Pontines and Parulian measure the nature of the business cycle using GDP. As they also point out, there is a debate about the assessment of business cycles and an item for further

work is to examine alternative indicators. For this group of economies, many undergoing rapid structural change and evolution of their financial systems, the definition of the business cycle may not be straightforward, or at least the standard sets of measures may be more difficult to apply.

Another topic for further attention is the definition of the groups of economies to be considered in the analysis of synchronicity. The Pontines and Parulian methodology uses bilateral averages over a global sample of economies and further work is required on whether the relationships are different for degrees of integration within Asia compared to the rest of the world.

Corbett and Maulana examine a different aspect of the risk smoothing that the work of Pontines and Parulian suggests might occur. They explain the theoretical benefits of financial market integration in terms of the scope to smooth consumption but they note they do not formally analyze the possible trade-off with the greater transmission of shocks. Corbett and Maulana undertake an exercise in which they examine how much consumption and income risk sharing actually takes place in the East Asian region using identities relating output, income and consumption. This method has been used for other highly integrated economies (e.g. between US states and within Europe) but has only recently been applied to the Asian region. The research calculates how much of any change in a country's domestic income (an income "shock") is absorbed by offsetting movements in income from abroad (income risk sharing) and how much is offset by a change in national saving. Both of these changes can protect consumption from having to adjust to short-term changes in income.

Corbett and Maulana find that that the current level of consumption smoothing by the countries in the region is rather low. Most of the smoothing (23 percent) comes via the use of credit markets (i.e. from changes in national savings) while capital markets account for very little (2 percent). That implies that economies in the region do not use foreign investment income to shield (insure) themselves from domestic income variations. These results mean that a very large part of changes in GDP is not smoothed (75 percent). This kind of calculation can be extended directly (and rather mechanically) to provide estimates of welfare gains (or welfare improvements foregone) so, although they do not

do the calculation, it is straightforward to conclude that welfare could be improved by using these avenues more fully for income and for consumption smoothing.

This line of research raises the question of whether the benefits of financial integration are being fully utilized and the answer provided by Corbett and Maulana is "not yet". This is a significant result in itself because it suggests there is room for welfare gain from greater financial openness in the region. This conclusion is reinforced by data on the "intensity" of bilateral investments between countries in the region. Using the same data as Pontines and Parulian on bilateral portfolio holdings, Corbett and Maulana show that, relative to the size of the region's global investment markets, they do, in fact, invest quite heavily in each other. The fact that they are so small in the global markets means that none of them is using foreign investment as insurance against risk to any great extent, but the high intensity does suggest that, if they become more open to international financial markets, and if they maintain the current distribution of their portfolio holdings, they would source a considerable amount of their risk insurance from within the region.

In the context of the data reported by Pontines and Parulian concerning the lack of synchronicity in the region's business cycles, this result of Corbett and Maulana suggests that constructing new "top-down" institutions to help smooth cycles, such as systems for monetary integration, are not a priority. Those institutions are very difficult to establish efficiently in the context of the range of country differences that are identified in this research. Instead, of more value in the immediate terms is to identify the impediments to the consumption-smoothing role that integrated capital markets might play. In other words, of more value is further work on a "bottom-up" approach to integration.

Other papers in this project which focus more on the microeconomic dimensions of integration have begun to identify some priorities in that respect.

### Microeconomic transmission channels

Papers in the project reviewed the behavior of financial institutions, banks in particular, and of corporations, that is, both the lending and borrowing side, respectively. There is

also work on how the choices made by borrowers and lenders have affected their own performance.

On the lending side, Onji, Gai and Corbett are interested in the question of whether bank behavior exaggerated the shock from the rest of the world in the Global Financial Crisis. They first examine the significance of the lending channel relative to commercial paper, to see if there are signs of a credit crunch. They find some signs of such an event. They then examine balance sheets of banks in East Asia to test whether the lending fell faster for banks with (1) a high exposure to the Lehman Brothers' bankruptcy and (2) a high reliance on money market funding. In a new data set constructed for this project (an unbalanced panel of 747 banks from 10 economies around the region) they find a statistically significant correlation between loan growths in 2008 with the Lehman exposure and also with the degree of dependency to money market.

Onji, Gai and Corbett also find significant country effects; that is, the importance of the lending channel among the various transmission mechanisms appears varies economies. On the whole, most banks around the region rely on deposits as the chief source of finance so that their lending would be largely unaffected by the transmission mechanism focused on in this study. However, Korean banks in their sample rely relatively heavily on money market finance, and there is evidence consistent with the importance of the lending channel in Korea. In the analysis of the ratio of commercial papers to bank loans, they find indications of a credit crunch for Korea and Taiwan but not for Japan. Overall, the results indicate that the lending channel would have amplified the GFC shock in Asia but to a limited degree.

An important channel of finance is trade credit. This channel received a significant amount of attention in the Global Financial Crisis and there were a number of proposals for special measures related to trade finance. The role of trade finance received significant attention in the ASEAN debate on responding to the GFC. Siregar examines the role of trade finance in explaining recent slowdowns of trade activities in Indonesia, Korea and Thailand. In general, his findings confirm the vital role of trade credit in shaping export flows of these three economies during the past two decades. Nonetheless,

the impacts of trade finance on the export demand differ from one country to another. In particular, the experiences of the three countries appear to suggest that the more developed a country's financial sector then the role of trade financing is more likely to be significant. As expected, the adverse consequences of falling trade credit on export performance amplify the local impacts of a global event. This last finding highlights the importance of the crisis contagion channel from the financial sector to the real sector of an economy.

Siregar follows up his comparative work with a case study of Indonesia. The export sector of Indonesia suffered a more severe decline than during the 1997 Asian financial crisis than in the GFC. Siregar evaluates the role of export credit in explaining the performance of the export sector in Indonesia. He is particularly concerned about the role of this financing facility during the economic downturns. He finds robust evidence that the export credit contributed to the boom and bust of the export sector in Indonesia. However, the results also suggest that the size of the contribution is modest. The significance of export credit has indeed magnified the global shock, and it is short-term financing, not investment capital, which has been detrimental to the performance of the country's export sector. However, ultimately, two traditional determinants of export demand remain the most significant contributing factors – income and price factors. The slump of major trading partners' economies weakened the demand for Indonesian export goods and the country's exports were highly sensitive to the uncertainties and volatilities in the prices of major commodities in the world market.

Thangavelu and Findlay look at the determinants of bank performance. They study the determinants of efficiency of banks in the Southeast Asian countries of Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam. The study uses a new data base of nearly 600 banks from 1994 to 2008. They focus on three key areas: (1) bank-specific activities such as their off-balance sheet activities, (2) financial liberalization through foreign participation and ownership, and (3) impact of bank regulation and supervision. The results indicate that off-balance sheet activities tend to reduce bank efficiency as they measure it. Foreign participation and ownership in the financial markets tend to increase bank efficiency. Bank regulation in restricting activities on non-

interest income and authority of official supervision tend to improve the efficiency measures used in their study. Private monitoring of financial markets tends to reduce bank efficiency.

Thangavelu and Findlay use a simple quantitative measure of productive efficiency, and a topic for further work is to examine other measures. However their results stress the significance of the local policy environment for bank performance. Also significant, and highly relevant to the discussion of integration, is the contribution of foreign ownership of banks to performance as measured here.

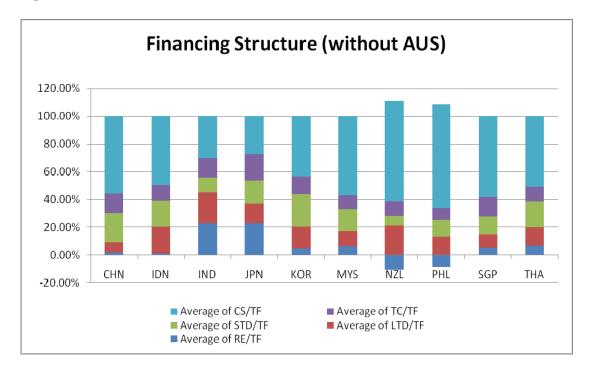
As noted earlier, a key element in explaining how financial changes affect the economy is an understanding of how they are transmitted to the corporate sector. This requires analysis of both the lending side and the borrowing side. It is not only the choices of financial institutions over the supply of credit, but also the choices of companies that determine the final outcome. Corbett provides an overview of what might be the expectations about corporate financing behavior in the light of previous work on other regions. The survey classifies existing research as being descriptive of the patterns of corporate finance or as trying to explain the drivers behind company choices of financial structure. An additional, more policy-relevant body of research, analyzes the impact of financing on real economic outcomes, such as growth or productivity. These latter studies have, in recent years, focused on whether bank-based or market-based financial systems produce better real-sector outcomes. Interestingly, the consensus is that neither system produces demonstrably better results in terms of growth or productivity. What matters is the quality of institutions and financial regulation rather than whether financing is bank or market based. This research result has yet to be fully appreciated in some policy circles, where there is still frequent discussion of one type of system over another without due attention paid to the question of quality. The paper points out the additional importance of such studies to understanding how financial shocks are transmitted to the real sector. Few empirical studies examine whether the source of finance (debt versus equity or retentions) matters for the *volatility* of outcomes, and few studies cover East Asia so there is a clear need for future research here in order to identify desirable policy improvements.

Corbett and Twite then report results of precisely the sort of analysis that Corbett's survey identifies as missing from current research. They develop a large, new database for the region based on company accounting data covering a high proportion of the listed firms in all the countries where firms regularly disclose information. Their data indicate some new and striking results. The financing patterns of Asian companies are quite different to those regularly reported for other countries.

Figure 1b from their paper (here Figure 2) illustrates two remarkable features of the financial structure of listed companies in the region. First, unlike the conventional wisdom for developed countries, retained earnings have not been the major source of finance in this region over this time period. Listed companies in East Asia rely heavily on outside sources of finance. The second feature is that, over time, the ratio of equity has risen dramatically as retained earnings have fallen. The trend is particularly noticeable after 2001. The drop in retained earnings began somewhat before the onset of the Asian financial crisis, suggesting that firms were increasingly fragile. During the crisis retained earnings dropped very steeply and, by 2001, had dropped to half their previous levels on average. For many of the countries, retentions were negative for the years immediately after the Asian crisis. Even more striking is that, from that time on, external finance came in the form of equity finance rather than debt. It appears that there was financial fragility before the crisis and that it took several years before companies were able to restructure to cover their growing losses. Once restructuring had been achieved, their access to stock market finance enabled them to use much higher proportions of equity finance than before the crisis. Whether this is a sign of financial health is a different matter: East Asian firms are now much more dependent on external (outside the company) finance than they were previously. The data cannot distinguish how much of the funding is foreign nor how much comes from other investors within the region versus elsewhere.

These are extraordinary results and are contrary to expectations based on the theories of the "pecking order of finance".

Figure 2



To some extent these data tell the story of the two financial crises. When financial markets opened up to some extent before 1998 the source of funding focused on debt. The Asian Financial Crisis brought this undone, and demonstrated that reliance on debt was not sustainable. After 1998 the sources of funding were reoriented to equity finance. The response to the GFC is not yet fully reflected in the data and is a topic for further work as the data become available. However, even in these processes, economy-level characteristics continue to be important. A topic for further work is the extent to which the burst of merger activity in reaction to the Asian crisis led to an apparent reorientation to equity rather than debt finance or retained earnings. Despite the unusual pattern in aggregate financial structure, Corbett and Twite find that choice of finance by firms is driven by broadly the same set of factors as in other countries.

The clear message from various estimations is that, in explaining the choice of financial structure, firm characteristics, industry affiliation and country characteristics all matter. This implies that it is not the behavior of Asian firms that is different but that the composition of the corporate sector, together with country characteristics that favor equity finance, must explain the pattern. A deeper understanding of this result and further

testing of the robustness of the finding is crucial for drawing policy inferences. Is it the case, for example, that policy should be focusing on strengthening the operation and supervision on stock markets to ensure that vulnerability to volatile movements in thin or illiquid markets does not unduly impact on companies. Or should policy focus on improving the quality of bank and bond markets so that a more balanced spread of financing across debt and equity could be achieved. What would be the effect of different tax regimes on the balance between debt, equity and retentions? The degree to which these policy questions matter depends to some extent on the results of the second part of Corbett and Twite's research.

Corbett and Twite turn also to the question of whether the structure of the sources of funds affects the growth of corporate investment in tangible (and in total) assets. Here, they find that country factors are much more important than financing structure in explaining performance. This finding is consistent with the emerging consensus of studies on other samples of countries. What it tells us is that measures of countries' institutional quality are more important than the sources of firms' finance or than the industrial composition of countries in determining the differences in countries' investment performance. This is a key result for policy makers since it puts the focus firmly on policy variables relating to market and regulatory quality as the source of better investment outcomes. Does this mean that financial structure does not matter for policy purposes? Not necessarily. In common with the existing literature, this study does not focus on the effect of financial structure on the volatility of real outcomes such as investment growth, nor does it exploit the possibilities in the data to examine the impact of specific episodes of financial crisis as transmitted through company financial structure. That is another area for future research and would help answer the important question of whether different financing structures provide greater robustness and reduce the vulnerability of the corporate sector even if they do not affect the longer-term, growthinducing outcomes represented by levels of investment in tangible assets.

Thangavelu, Findlay and Chongvilaivan examine firm behavior and the effects of foreign ownership, financial constraints, and various aspects of foreign affiliates. These are all variables related to the channels of influence of integration but in this study these effects

are studied at the firm level. They use yet another new data base especially created for this project. This is data for a set of firms in Vietnam from 2002 to 2008, including data for over 5000 firms. They find that foreign ownership (which they can measure in terms of percentage of ownership, not just in terms of its presence or absence) is positively correlated with productivity. Financial constraints (e.g. low liquidity and limited access to external credit) appear to be a major threat to the productive performance of firms in the manufacturing industries in Vietnam. The evidence also points to the presence of scale efficiency and the importance of high-tech and human capital accumulations to productivity enhancement.

#### **Final comments**

Overall, the papers indicate there could be substantial gains from further financial market integration. The ability to smooth consumption and income variance could only grow with greater financial openness. With greater openness is likely to come greater regional integration. While the expectation is that this may raise some risks, in terms of the transmission of shocks from the rest of the world, the work here points to significant scope for welfare gains and little evidence that financial contagion is a large risk.

The work also demonstrates that country-specific factors are generally significant in understanding the processes of integration and their consequences. These studies indicate that the country-level factors most likely to be important are those related to institutional quality. If so, work on institutional quality alongside efforts to open the financial sector might not only add to the degree of integration but also ameliorate the trade-off with the risks of transmission of significant shocks. These results point to the benefits of "bottom-up" work on integration and removing the impediments to integration.

At this stage, this bottom-up strategy appears to be even more important than top-down institution building, such as the creation of regional monetary unions or regional bond markets. The results of this research show that business cycles within the region are not highly correlated, and, indeed are more highly correlated with cycles outside the region. Since symmetric shocks, or symmetric response to shocks, are considered one prerequisite for monetary union, the region does not seem to meet this criterion. Alongside

the results showing the underdeveloped level of risk sharing and insurance against consumption volatility, there is clear evidence of benefit from developing additional mechanisms to allow private agents to access a more diversified set of income sources. Improved openness of financial markets is one mechanism to achieve this. Creating structures from the top down, such as the efforts to develop regional bond markets, may simply be solving problems that are not of the "first-order" in this region. Companies do not seem currently to demand greater access to bond finance. Their financing choices, while different from other regions, are not different in the way that was claimed as a rationale for building regional bond markets (that is, they are not overly bank financed). Nor do their choices seem to be distorted, in so far as that can be deduced from the finding that the drivers of corporate financing choices are broadly similar in this region to that in other groups of countries. Consumers are not yet even using the international capital markets that exist to smooth their consumption so there is little evidence that they need more such markets within the region. The problems that have been identified here – low levels of consumption smoothing, and business cycles that have been quite sensitive to movements outside the region (not yet decoupled, though the post-GFC data may change that view) – are better resolved at the economy level. If those problems were resolved and markets became more integrated as a result, then the transfers sought between economies and over time through structure such as regional bond markets might also be achieved. The long-run consequences of the bottom-up approach may well be to shift the parameters of the economies of the region to provide support for new top-down institutions. But while that might be the long-run sequence, the work reported here indicates that top-down institutional innovation is not the immediate priority.

Despite this skeptical finding about large-scale institution building related to financial markets at this stage of the region's development, there remains a rich agenda for regional cooperation.

Within the region, there are not only significant country differences in experiences to date, but also there is a wide range of experience of various sorts of institutional structures in financial markets and their links with local corporate structures. These institutional differences are driving the observed country differences in processes and consequences.

Our proposed future research program would exploit these differences in the region and identify more carefully the nature and contributions of country features. That analysis is a valuable input into the design of a capacity-building program for financial integration in this region and between this region and the rest of the world.