SESSION 2

BANK CREDIT DEVELOPMENTS IN SEACEN AND OTHER ASIAN ECONOMIES

By
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The main purpose of this paper is to examine the issues surrounding the impact on credit flows in Asia from the 2008-09 global financial crisis (GFS). In particular, the focus will be on how Asian Central Banks and other authorities may benefit from considering the strategies used by developed country authorities to understand, address and then mitigate the impact of the disruptions on credit flows in banking and financial markets of their economies. An important question to clarify in this respect is to better determine if credit disruptions stemmed from supply-side or from demand-side impulses. It is clear that the policy responses the authorities deploy would largely differ depending upon which supply or demand factors are prevalent and responsible for the problems caused. In this manner, there will be an additional dimension to consider in addressing the role for a central bank in efforts to nurture new sustainable growth areas.

Section 1 provides the background within which the context of credit developments in SEACEN and Asia following the GFC may be viewed. Section 2 that follows discusses the broad policy responses of developed countries and the emerging economies to the GFC disruptions. Some issues (Section 3) concerning the policy responses are then discussed. Section 4 then presents several lessons to draw from analysis of credit markets undertaken in disparate developed countries, which should be emulated by SEACEN economies.

1. Background

The US subprime loans disruption has been blamed for triggering the global financial crisis which followed. The effects of the GFC can be depicted by sharp fall in bank credits, which were felt worldwide. Like in other regions, the dislocation in Asian credit markets was considerable but fortunately not as severe

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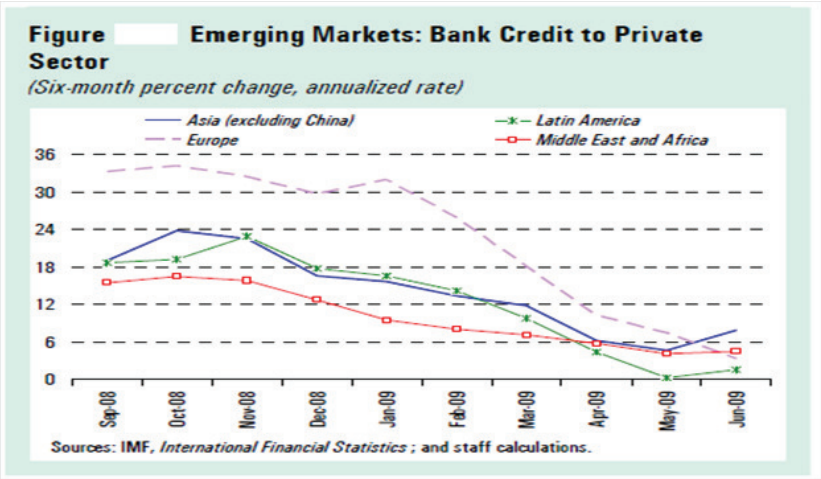
as those suffered by others. As can be seen in Figure 1, the negative effects beginning around mid-2008 had already begun to taper off for Asia by the first quarter of 2009. Financial conditions then began to turn around for Asia by mid-2009, reflecting for the most part the strong and active countervailing policies implemented by Asian authorities.

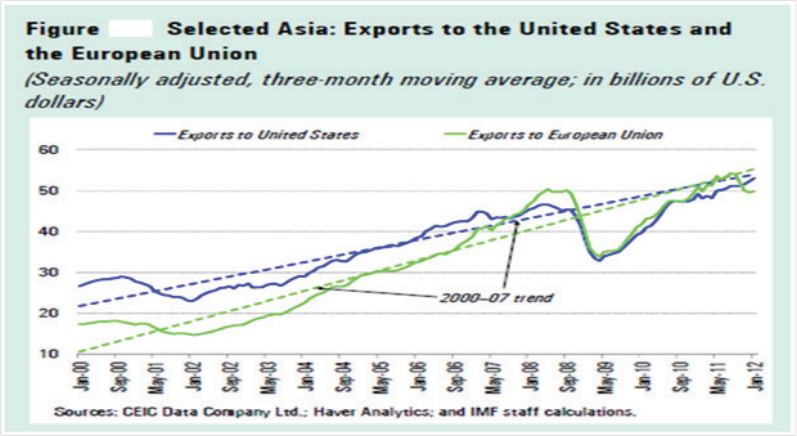
However, the impact of the GFC as reflected in a sharp decline in Asian economic performance was most acutely felt and transmitted through the trade channel, compounded by the drop in credit flows discussed above. Figure 2 shows the precipitous plunge in Asian exports to both European and US markets in 2008. Asian exports to these two major markets did not recover to their long term trends until 2011-2012. Exports to Europe approached the long-term trend mark by early 2011, but the turmoil from debt and fiscal sustainability problems surrounding Greece and other southern EU member countries, caused the trajectory of exports to Europe to turn downwards again in 2012. On the other hand, exports to the US have seen steady revival and returned to its long-term trend by the beginning of 2012.

Figure 1
Emerging Markets: Bank Credit to Private Sector



Note: Extracted from "Regional Economic Outlook, Asia and Pacific, Oct. 2009, IMF," Page 20.

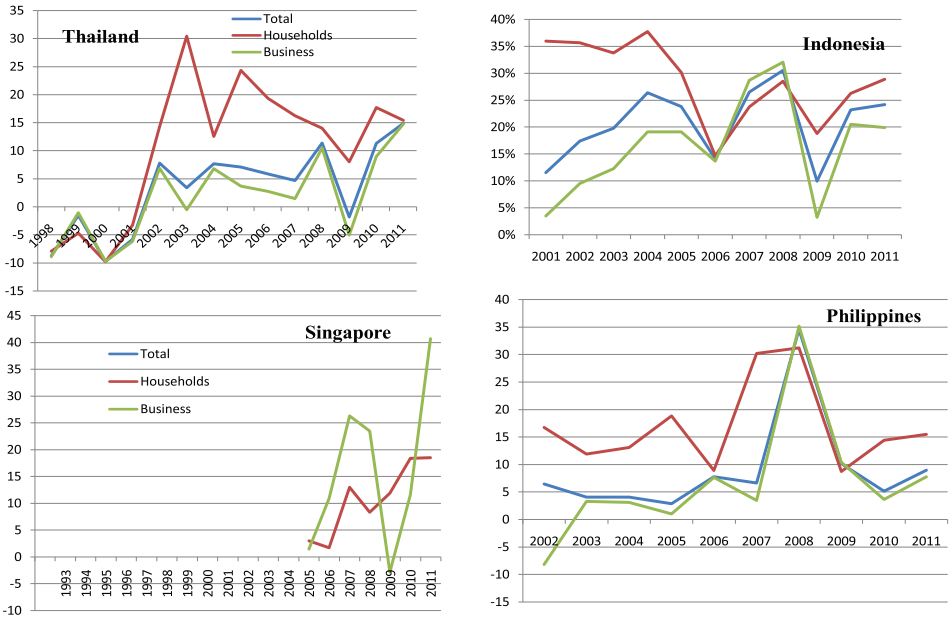
Figure 2
Selected Asia: Exports to the United States and the European Union



Note: Extracted from "Regional Economic Outlook, Asia and Pacific, April 2012, IMF," Page 1.

This trajectory of Asian exports over the period 2008 to 2012 appears to be similar to that for bank credit in most SEACEN economies. In tandem with the fall in growth rates, exports and external credit flows in SEACEN member economies, domestic bank credit also fell sharply beginning in mid-2008 as depicted in Figures 3 and 4 for selected SEACEN economies. In many of the SEACEN economies, the fall in bank credit was felt most by the business sectors, as the growth outlook weakened considerably. It was reported that bank loans to SMEs suffered the brunt of the cutbacks, which is not surprising considering that SMEs account for a large part of economic activity in many of the SEACEN economies.

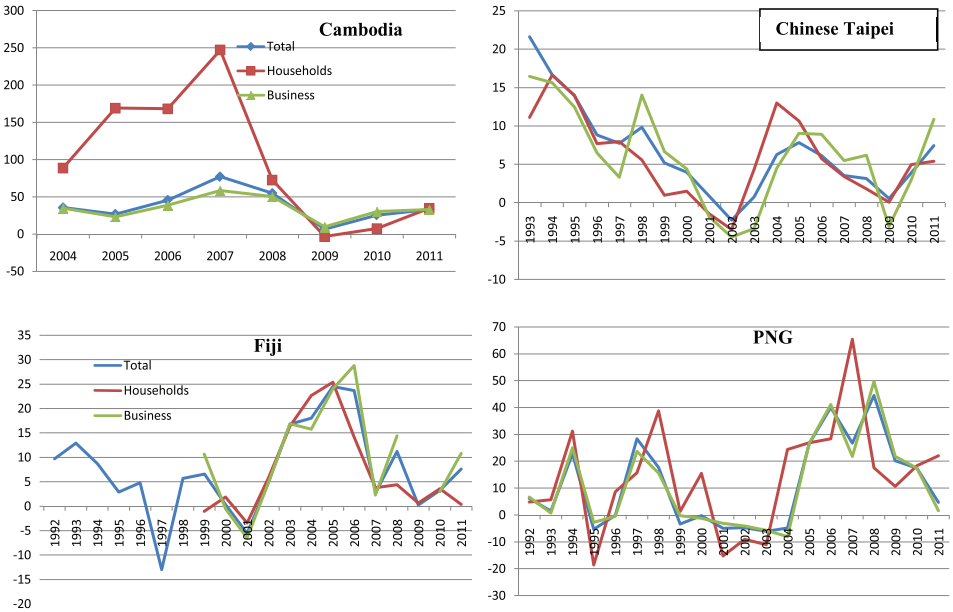
Figure 3
Credit Growth in Selected SEACEN Economies (%)



Source: Monetary Authorities of the respective economies.

Unlike in other regions of the world, the negative economic impact from the GFC in Asia proved to be rather short lived. This turnaround was clearly reflected both in the recovery of Asian export performance (Figure 2) and more forcefully in a sharp resumption in bank credit growth. Once again bank credit to the business sector which had previously plunged precipitously, showed a strong recovery. In considering the new growth areas post GFC it will be useful to understand the impact of bank credit volatility on the performance of SMEs, which will be the principal drivers of growth in the future.

Figure 4
Credit Growth in Selected SEACEN Economies (%)



Source: Monetary Authorities of the respective economies.

2. Policy Responses of the Monetary Authorities

The strong policy actions taken by country authorities in the face of the GFC restored some semblance of external stability. This recovery was bolstered by close international cooperation and coordination in policy implementation, led by the G-20 and multi-lateral institutions like the IMF. In Asia, the efforts at fiscal and monetary stimulus to restore macroeconomic vitality were no less relentless. Some analysts believe that the response of Asian countries this time around is in sharp contrast to previous behaviour, which tended in the past to be more cautious. Many Asian economies had previously feared that countercyclical policies may exacerbate capital outflows and may compound further losses in confidence about economic management. But unlike in the past, the GFC has been felt worldwide and Asia is now in better shape economically to forcefully adopt credible countercyclical policies.

Moreover, many Asian countries had the benefits of ample fiscal space to afford the expansionary policies. The fiscal buffers had been accumulated from lessons drawn from the Asian crisis experienced in the previous decade. On the monetary front, Asian countries actively provided liquidity to the banking system

in tandem with the central banks of the developed countries, but not quite in the similar league in terms of the scale and ground breaking depth of the supporting measures of these deeply troubled industrialised economies. The interventions of Asian central banks were more measured unlike the several packages of "Quantitative Easing" of the US Federal Reserve and the large and sustained asset purchases of the Bank of England and the European Central Bank.

An array of tools was successfully brought into play by Asian central banks to support the banking sector which contributed to reversing the downward trend in economic growth. In addition to liquidity support, key policy interest rates were lowered considerably together with reductions in bank reserve requirements. Special measures were also adopted to support the banking and financial markets. Some Asian countries expanded the coverage of deposit guarantee schemes and provided special credit lines to SMEs and widened the scope of guarantees of bank and trade credits. Reflecting the broadening of international cooperation and policy coordination, several Asian countries were able to establish foreign currency swap facilities with the US Federal Reserve as well as between each other's central banks. The ASEAN+3 reserve pooling mechanism was expanded and funding available to participating members was further augmented.[2]

The revival in bank credit flows and economic growth has also been attributed to two important factors; the health of the corporate sector and the stronger capital position of Asian banks. Relative to the Asian Crisis in the 1990s and the position of firms in Europe and the US, the corporate sector this time in Asia was in much better financial shape. Drawing in part from lessons from the severe disruptions experienced during the Asian Crisis the corporate sector has mostly successfully weaned itself from excessive leverage and reliance on bank debt financing. This has allowed it to secure better cash flow from reduced debt servicing outlays and thereby boosting profitability and investment returns. With better economic and business fundamentals, enterprises in Asia were able to secure the resumption of bank credit stemming from their lower default risks when external economic conditions stabilised. While large firms benefited from this undercurrent, the same cannot be said about the SME fortunes. But as indicated above, the authorities recognised this and thereby acted by placing special emphasis to supporting SME revival and development, in line with the belief that SMEs would be the new area for growth impulses in Asia.

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2. The details of the specific monetary measures are not discussed here as they have been provided in the other papers of this Seminar.

At the same time, banks in Asia were also in a better position to quickly return lending operations to normalcy after the financial disruptions from the GFC eased and stability returned. Banks in Asia for the most part did not rely excessively on cross-border interbank lending or on wholesale funding in their operations, unlike in the build-up to the Asian Crisis or the situation experienced by banks in Europe and the US. Moreover, Asian banks had better capital positions and low NPLs, which is a positive legacy from the dislocations suffered from the previous crisis. Asian banks exercised restraint in the acquisition of the toxic assets that precipitated the GFC, not only because of prudence but also because supervisory authorities and the banks did not as yet fully understand the newly engineered financial products, which with hindsight probably worked to everyone's advantage. Asian banks did not encounter many problems in raising capital in response to the GFC and were thus able to further augment buffers to support renewed lending capabilities.

3. Issues Associated with the Policy Responses to the GFC

While the strong policy responses in Asia have led to a revival in economic growth and resumption in bank credit to the economy, the ensuing side-effects from these policies would also now need to be addressed. The downside risks to sustaining the recovery will not only be subject to the strength and sustainability of the economic turnaround in the export markets of Asia and world financial conditions, but also the effects from the success of the countercyclical policies adopted. In effect, the full story behind the efforts to overcome the negative impact of the GFC on Asian economies has not been completed.

In the near future, Asian countries are likely to face further rounds of financial disturbances when the stimulus policies are withdrawn and a return to normal conditions is achieved. But there is still uncertainty as to what this "new normal" will be. Asian countries will need to exercise prudence in exiting and withdrawing from the monetary and fiscal stimulus gradually over time that they themselves have adopted. However, more importantly in the current environment, they also have the challenge of managing the fallout from the policy stimulus of developed countries in support of restoring economic growth. This challenge will be further compounded when developed countries begin to unwind from these stimulus policies. If the exit from these policies is not well coordinated or if market actors react unfavourably to the end of such policies, it may cause unforeseen stability problems for emerging market authorities. There is a high risk that the market may not act predictably, largely because of the novelty of the exceptional and unconventional measures adopted, and thus the market has no precedence with which to fall back on.

In the current environment, expansionary policies in developed countries are putting pressure on several fronts for emerging economies, especially those in Asia. Financial markets are flush with liquidity from the expansionary monetary stimulus, deleveraging by developed country banks and the continued reluctance to extend sufficient bank credit to business. This liquidity is flowing largely to emerging Asian economies in search of better yields and borrowers with stronger economic prospects and lower default risks. Large capital flows are posing serious challenges for Asian central banks. While greater flexibility in managing the exchange rate has helped in mitigating large capital flows, sustained appreciation in the exchange rate is starting to affect the competitiveness of key growth sectors in Asia's economies.

There are limits to the capability of central banks in intervening in the foreign exchange markets to smooth exchange rate volatility and influence the pace of appreciation of the currency. Furthermore, many Asian central banks have already previously accumulated a substantial hoard of foreign currency reserves as insurance against reversal in capital flows and investor sentiments. This again is the legacy of drawing lessons from the Asian Crisis of the 1990s. As a consequence, Asian central banks are also facing problems from the accelerated build-up of assets on their balance sheet. Unlike the developed country central bank's build up in balance sheet assets from liquidity support operations, many Asian central banks face problems from the build-up in foreign exchange assets on their balance sheets. This development generates a multitude of issues for central bank policy in maintaining macroeconomic growth and sustaining financial stability.

Large holdings of foreign exchange reserve assets give rise to substantial risks in future losses from valuation changes, including from exchange rate fluctuations. There are limitations to which a central can engage in hedging operations to mitigate potential risks from capital and operational losses. Moreover, the need to continuously accumulate foreign exchange reserves requires the conduct of off-setting policies, like sterilisation operations, to sustain the chosen monetary stance of the central banks. This is a well-known dilemma that central banks face when managing monetary policy and external sector stability.

Another issue related to the management of large capital inflows and complications for the conduct of monetary policy relates to the implication for the efficacy of policy measures in influencing the attainment of inflation objectives and achieving financial stability. There is ample empirical evidence that links

large capital inflows to surges in bank credit and to asset price bubbles. These developments reflect a misallocation of resources which central banks would have to manage through the use of macro-prudential policy measures.

4. Lessons to Draw for Bank Credit Development during the GFC

Similar to developments in the developed countries, Asian countries suffered the same initial disruptions to economic growth and bank credit in the aftermath of the GFC. However, unlike the developed countries, Asian economies experienced a quick recovery in economic growth and bank credit, even if this turnaround is still surrounded by downside risks from the continued poor performance of Asia's major trading partners. In early 2012, economic growth in Europe continued to be tepid, with some European countries in danger of experiencing a double dip in economic growth prospects. Economic growth recovery in the US was more sustained but still continued to be below potential amid the uncertainty brought about by disagreements in policy priorities and implementation of sustained measures. More importantly, bank credit and financial sector resources available for funding economic growth continued to underperform from prolonged market reluctance to support activities as risk appetite persisted in its hibernation.

In these circumstances developed country authorities and financial market researchers have undertaken substantial studies on the reasons behind the slow recovery in bank credits. So while Asian countries have not experienced this episode of prolonged low growth in bank credit, it is argued that they should draw lessons from the work undertaken by authorities of developed countries and authorities' explanation of the malaise in bank credit development to help in the design of polices to overcome this phenomenon. There is room for Asian central banks to institute similar studies or information collection, to better understand and thereby strengthen credit and funding markets to face future disruptions expeditiously.

The GFC has been characterised by deleveraging by banks and other financial entities, especially in Europe and the US. The presence of a credit crunch was clearly signaled initially by both rapidly falling bank credit flows and a sharp tightening by prudential authorities of credit standards applied to borrowers. This credit crunch has contributed to two main negative impacts. First, it has deepened and prolonged the economic recession in the affected economies in Europe and the US. Secondly, it is hampering as well as posing a threat for sustained economic recovery. These negative impacts have continued through early 2012, and have

been compounded by the sovereign debt problems of a few European countries and the more intractable medium- to long-term fiscal sustainability issue of many European countries and the US.

It is difficult to clearly disentangle the factors affecting the supply and demand for bank credit. It has been suggested that a credit crunch cannot be identified easily on the basis of observable data such as credit volumes and assessments of credit availability because developments can be demand driven rather than supply driven in a situation where the economic environment is not stable.[3] Constraints on the supply of credit may often be just a reflection of the sharp deterioration in the credit worthiness of borrowers, which may also be compounded by the strongly negative economic prospects for recovery in cash flows to cover repayment obligations. Furthermore, constraints on credit may have also stemmed from inappropriately tight prudential measures to recapitalised banks or increase their capital buffers. At the same time, banks which have inadequate capital or insufficient buffers may also face severe limitations in their ability to grow bank credit to support economic recovery.

The policy responses a central bank would deploy would largely differ depending upon which credit supply or demand factors are prevalent and responsible for the problems caused. For example, an increase in interest rates may be the result of an increase in demand for credit, which in a situation requiring monetary tightening would call for further increases in the rate. On the other hand, if the higher interest rate reflects a low supply in loanable funds, the policy response might be an expansion of liquidity requiring the lowering of interest rates. Another possible scenario could be that a fall in credit growth may be a combined result of both falling demand and supply for credit, in which case a more accommodative monetary policy may be appropriate.

In these circumstances, a variety of recent studies have sought to segregate the supply and demand factors affecting credit growth. The studies on bank credit development may be clustered into those that rely on survey-based data for analysis and those that rely on time series data.

4.1 Survey-Based Studies

This paper highlights several approaches in the use of survey-based data to analyse bank credit developments.

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3. See Gern, Klaus-Jürgen and Gern, Nils Jannsen, (2009), "Do We Face a Credit Crunch?" in The Crisis and Beyond. Henning Klodt and Harmen Lehment (Eds.), November , Kiel Institute for the World Economy.

A study in Australia estimated that "…. a one standard deviation shock to the balance of firms reporting difficulty obtaining finance (a 'credit supply shock') reduces Australian GDP by almost 1/3 percent after one year and gross national expenditure by nearly ½ percent." [4] They also found that the negative impact on business credit seems to be larger and lasted longer, persisting even after two and a half years. They were able to state that for Australia, the GFC impact on reducing credit supply contributed to a 1% reduction in GDP for 2009, but the effect was shorter in duration compared to the previous crisis in the 1990s.

The Australian researchers went about identifying credit frictions as manifested in the shift in credit supply stemming from financial stress separately from those factors that affected shifts in credit demand. They turned to a survey-based measure of the difficulty in obtaining business finance as a gauge for credit supply and used a structural VAR approach to validate their findings. The survey essentially asked the simple question – "Do you find it is now harder, easier, or the same as it was three months ago to get finance?" They sourced the data from the ACCI-Westpac Survey of Industrial Trends, which has a long history (since 1960) as a continuous running quarterly private-sector survey in Australia. The question posed in the survey has remained largely unchanged since mid-1966 and in recent years have covered 300 firms. The limitations recognised are that the survey covers only manufacturing firms, even though the influences from household and other non-manufacturing firms may be of importance. As shown in Figure 5, firms clearly reported difficulties in obtaining bank credit during the period of the GFC, which the study has attributed to supply of credit constraints.

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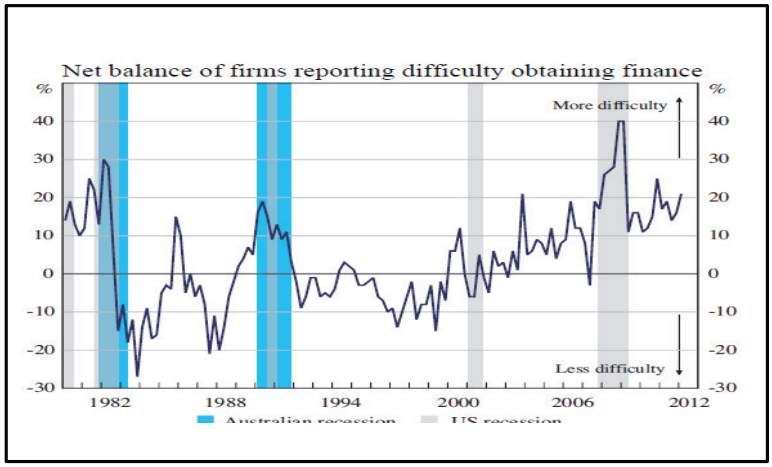
4. See Jacobs, D. and V. Rayner , (2012), "The Role of Credit Supply in the Australian Economy," *Research Discussion Paper*, May, Reserve Bank of Australia.

Figure 5
Difficulty Obtaining Finance

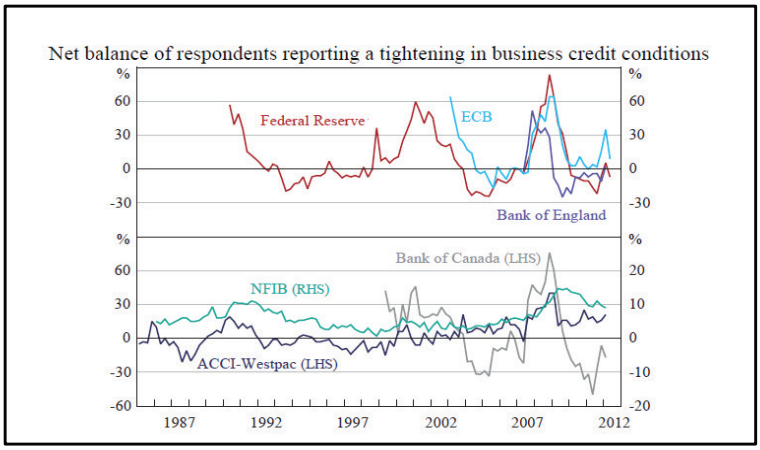


Sources: ACCI-Westpac; Melbourne Institute; National Bureau of Economic Research.

Note: Extracted from "The Role of Credit Supply in the Australian Economy" by D. Jacobs and V. Rayner, Page 11.

It is notable that similar surveys carried out in Europe, US, England and Canada seems to capture the same observation made by the Australian researchers. This is clearly depicted in Figure 6 drawn from this study. Similar surveys are conducted for Europe by the European Central Bank, for UK by the Bank of England, for Canada by the Bank of Canada and the US by the National Federation of Independent Business (NFIB).

Figure 6
International Credit Conditions Survey



Sources: ACCI-Westpac; Bank of England; Thomson Reuters.

Note: Extracted from "The Role of Credit Supply in the Australian Economy" by D. Jacobs and V. Rayner, Page 14.

Using survey data, research in the **Federal Reserve Bank of San Francisco** examined the supply side effects of loan pricing in the aftermath of GFC.[5] The paper used the Federal Reserve's Survey of Terms of Business Lending (STBL), which collects data on all Commercial and Industrial loans given out by 350 US banks. The survey is conducted every February, May, August, and November of each year, and first started in 1977. The panel of banks has stayed largely the same, changing only due to exit and merger of banks while the information asked have increased over time. Bank credit data include risk ratings, the loan rate and type (e.g. prime), the loan size, commitment status, and if loan is secured by collateral. The survey data is then merged with the financial data of the reporting banks collected from the quarterly Report of Conditions and Income, by the FED.

The findings from this study indicated that: 1) large and medium-sized banks tightened loan rates more than small banks. It is also true of course that small bank rates are more often higher even if they tended to tighten less; 2) while small loans tend to have a higher spread than large loans, small loans actually

5. See Kwan. S.H., (2010), "Financial Crisis and Bank Lending," *Working Paper Series*, May, Federal Reserve Bank of San Francisco.

tightened less than larger loans. This shows that bank-dependent small borrowers did not suffer more from bank tightening relative to larger borrowers.

The channels for loan tightening usually took the form of reducing discounts on large loans, increasing risk premiums, and complying with more restrictive prudential ratios placed on banks.

In contrast, **survey data from Italy** that contain information on loan applications and bank decisions were used to understand the effects of the GFC on SMEs credit trends. The paper draws on a monthly survey of about 3,800 Italian manufacturing firms, interviewed from March 2008 to February 2010 by the ISAE (Institute of Studies and Economic Analysis).[6] The survey provided information on the loan applications and their outcome for these manufacturing firms. Analysis of the data permitted the separation of demand and supply effects, and this helped to identify the existence and severity of credit crunch across firms and markets. The firm level survey data was then merged with information on the spatial distribution of bank branches in order to assess the effect of the organisational structure of the local banking systems on access to credit by local firms.

The findings threw light on the importance of the hierarchical structure of banks in the local market in determining decisions on giving bank credit. It reinforces the belief that relationship-based lending is relevant. The impact on SMEs from credit supply factors were largely neutral but larger firms suffer most if they are customers of distant banks as opposed to local banks. Thus this study seems to establish that there is a home bias when credit markets are disrupted. It would appear that when banks react by pursuing a flight-to-quality, a more distant customer would be placed at a disadvantage.

4.2 Studies Using Time Series Data

Several researchers have also relied on the more traditional time series data sets to look at credit market developments. This section identifies several interesting studies.

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6. See Presbitero, A.F.; G.F. Udell and A. Zazzaro, (2012), "The Home Bias and the Credit Crunch: A Regional Perspective," *Journal of Money, Credit and Banking* (forthcoming).

Researchers in Germany from the Bundesbank analysed time series data using a Bayesian VAR model to evaluate the development of loan volume against the past and current macroeconomic conditions to understand the economic causes affecting the supply and demand of credit trends.[7] In the aftermath of the GFC, businesses in Germany were very vocal and placed the blame on banks for their reluctance in extending credit to support economic recovery. The banks countered by asserting that tighter bank capital requirements were not to be blamed for banks holding back on lending because of increased credit risks posed by businesses due to the negative economic outlook.

The findings indicate that as the GFC intensified there were substantial decline in bank credit from loan supply shocks. However, the historical evidence from the time series data seems to suggest that the cumulative effects of monetary and credit supply shocks are more than off-set by other factors, which subsequently leads to higher volume of credit. They cautioned that these findings are very tentative and the robustness of the results remains to be tested.

Another study by the **Federal Reserve of San Francisco** evaluated bank credit developments in nearly 200 recession episodes in 14 countries over the past 140 years.[8] The paper mostly focuses on leverage over the business cycle. The findings support the notion that financial factors exert an important role in influencing the variations in the business cycle. The study validates conventional wisdom that more credit-intensive booms tend to be followed by deeper recessions and slower recoveries. It also provides evidence that the effects of leverage are particularly pronounced in recessions that coincide with financial crises.

It is not surprising that financial crisis is closely associated with a sharp slowdown in credit growth and investment. Crisis is further amplified where a prior large build-up in leverage is present during the expansion stage. This explains why banks are reluctant to lend even when there are promising business opportunities because they are busy deleveraging. But at the same time, there are also the effects from the fall in demand for credit as businesses and households may also be deleveraging by undergoing balance sheet repairs. The historical evidence suggest that policy-makers need not worry too much about unleashing inflationary pressures if they decide to pursue a policy which aims at keeping interest rates low for a prolonged period.

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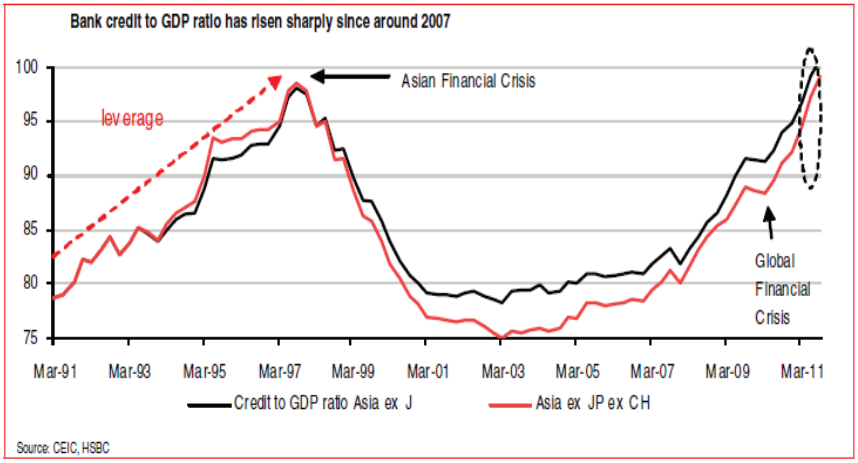
7. See Busch, U.: M. Scharnagl and J. Scheithauer, (2010), "Loan Supply in Germany during the Financial Crisis," *Deutsche Bundesbank Discussion Paper Series*, 1, Economic Studies No. 05/2010.

8. See Jorda, O.; M. Schularick and A.M. Taylor, (2011), "When Credit Bites Back: Leverage, Business Cycles and Crises," *Working Paper Series,* November, Federal Reserve Bank of San Francisco.

A more recent study from **HSBC** finds evidence that GDP growth itself has become more credit intensive.[9] The study first asserts that credit has fueled the impressive recovery in growth following the GFC. Credit has also actually grown faster than growth rates and this trend is clearly not sustainable, as reflected in Figure 7 and 8.

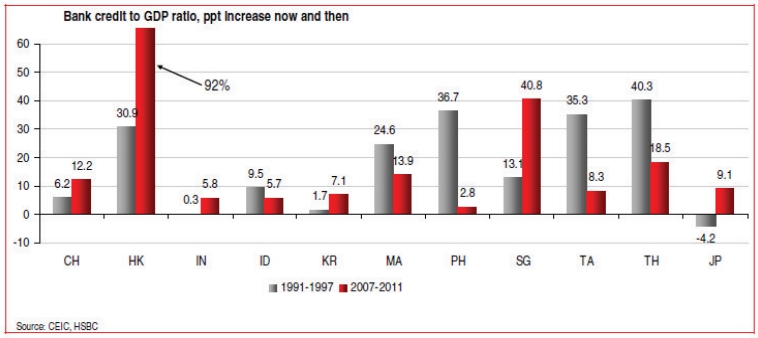
Figure 7
Bank Credit to GDP Ratio



Note: Extracted from "How Credit Intensive is Asia's Growth?" by F. Neumann and S. Mukherjee, Flashnote, HSBC Global Research, January 2012, Page 2.

9. See Neumann, F. and S. Mukherjee, (2012), "How Credit Intensive is Asia's Growth?" Flashnote, HSBC Global Research, January.

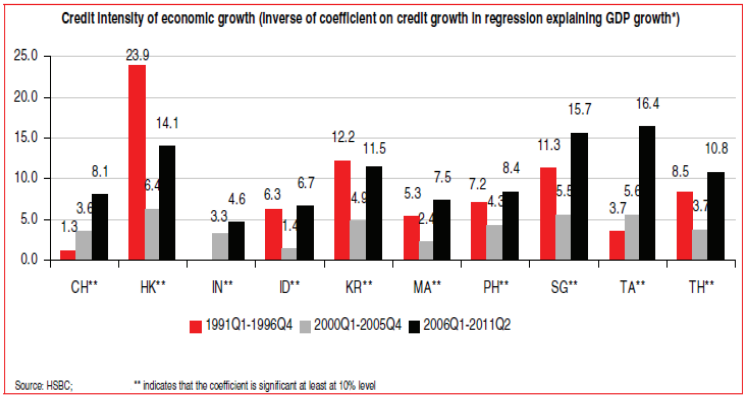
Figure 8
Bank Credit to GDP ratio



Note: Extracted from "How Credit Intensive is Asia's Growth?" by F. Neumann and S. Mukherjee, Flashnote, HSBC Global Research, January 2012, Page 2.

They presented evidence (see Figure 9) that for a given increase in bank lending the resulting economic growth achieved has fallen in recent years. They qualified that there is as yet no evidence which implies this deteriorating matrix is a result of falling returns on investments or a decline in productivity. It was found that rising credit intensity over the past ten years were more prominent in China, Chinese Taipei, Singapore and Thailand.

Figure 9
Credit Intensity of Economic Growth



Note: Extracted from "How Credit Intensive is Asia's Growth?" by F. Neumann and S. Mukherjee, Flashnote, HSBC Global Research, January 2012, Page 3.

These HSBC researchers stated that the findings perhaps suggested that the quality of growth in Asian economies has deteriorated. This would need to be closely monitored as they may have negative implications on financial developments in the future.

In summary, the paper highlights the foregoing studies, which analyses several issues related to credit developments connected with the GFC or other crisis, from which SEACEN economies could draw lessons from. Many central banks in Asia should, working with other stakeholders, consider commissioning surveys like those undertaken by the countries described above. SEACEN economies could also usefully replicate the studies utilising time series data as set forth in this paper. This will help in securing a deeper understanding in the workings of credit markets in normal times and at times when markets are disrupted or when they exhibit exuberance.

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