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Cross-Border Bank Lending to Selected SEACEN Economies: An Integrative Report

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Abstract:

This study seeks to address a number of rising policy concerns from the aftermath of the recent subprime crisis. Did foreign bank lending decline sharply and transmit the financial shocks from the advanced economies to the SEACEN emerging markets? Was the decline driven by the drying-up in supply of cross-border loans or more by the sharp decline in the demand for this funding? Does greater exposure of foreign banks to a host country lowered the sensitivity of its claims to shocks originating from their own economies? Do bank claims to a country affected by the aggregate changes in claims to another country? How about the stability of these flows? In short, this study aims to ascertain the various multi-faceted aspects of this international bank lending.

JEL Classification: C23, F34, F36, G15, N25

Key Words: International Bank Claims; Cross-border Lending; Bank Exposure; Subprime crisis; East and Southeast Economies.

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1. Introduction

The role of international bank and its lending to the emerging markets has been long debated. To date, the balance of evidence supports the view that foreign bank entry into domestic banking system has been largely a positive one. The liberalization of local banking systems and the presence of foreign banks have indeed been argued to promote institutional and regulatory/supervisory improvements (Mishkin (2009)), and have also resulted in more efficient allocation of productive resources in globalized economies (Goldberg (2009)). Likewise, foreign banks have been seen as a stabilizing force for host markets. Yet, this proclaimed stabilizing role may seem at odds with the view that activities of the global banks have spread profound difficulties in international financial markets, including the SEACEN economies, during the recent subprime financial crisis period.

This integrative report is part of a research project conducted at the SEACEN Center to evaluate further a number of perspectives on the presence and bearing of the global banks in SEACEN economies. In particular, it seeks to address a number of rising policy concerns from the aftermath of the recent subprime crisis. Did foreign bank lending decline sharply and transmit the financial shocks from the advanced economies to the SEACEN emerging markets? Was the decline driven by the drying-up in supply of cross-border loans or more by the sharp decline in the demand for this funding? Does greater exposure of foreign banks to a host country lowered the sensitivity of its claims to shocks originating from their own economies? Do bank claims to a country affected by the aggregate changes in claims to another country? How about the stability of these flows? In short, this study aims to ascertain the various aspects of international bank lending.

To address the above set of topical and policy relevant questions, we offer next a more in-depth review of the rising role of international bank lending activities in SEACEN economies. The discussion unveils some of the domestic factors that have been catalytic in attracting these international banks. In this section, we will also compare and contrast lending activities of banks from major developed economies, such as Japan, the UK and the US during different periods since the early 1990s. More importantly, the recent subprime crisis period will be the focal point of the discussion to instill preliminary stylized facts on basic features and trends of these international bank lending. A more discerning observation underscores the role of cross-border lending vis-à-vis local lending of these international banks. In particular, in some of the SEACEN economies, cross-border lending has indeed been the source of volatilities in these flows whereas local lending by these international banks remains robust.

To further substantiate our analyses, Section 3 of the paper first introduces the empirical model and panel testing that we will undertake as far as the determinants of international bank claims, and elaborates in detail the key findings. To demonstrate the key features of international bank lending in our region, we will focus on the lending activities of banks from Japan, UK and US to five SEACEN economies, namely Indonesia, Korea, Malaysia, Philippines and Thailand. These five SEACEN economies have arguably been subjected to both massive inflows and sudden outflows of international bank lending since the mid-1990s. The Japanese, UK and US banks,

on the other hand, have been the major lenders to these economies during the past two decades.

The section of the paper that integrates the findings of the individual research papers coming from the research project is presented in Section 4. Essentially, this section summarizes and brings to light a number of common and contrasting findings from the experiences of economies included in the research project. The diversity of the experiences and stages of financial market developments in these economies does not only strengthen the previous discussion as far as the findings of the empirical panel testing undertaken in this paper, but, more importantly, it enriches the analyses on the set of policy questions posted earlier. Given what we have learned from the experiences of the SEACEN economies in particular, a number of policy recommendations to better manage the activities and presence of the global banking system will be put forward in Section 5 of the paper. A brief concluding section ends this integrative report.

2. Stylized Facts and Motivation

Foreign banks' operations in emerging markets across the global banking system, including those of the Asian economies, increased dramatically starting the second half of the 1990s. The emerging markets, in general, do not rely on foreign deposits for funding, but they usually turn to international banks for credit lines for exports (Mihaljek (2010)). Across eight SEACEN economies, the rise of the international banks' presence started with the first phase of reform and deregulation of the banking sector in most of these economies in the late 1980s and early 1990s. For instance, as reported in Table 1, the total foreign bank claims of four of the eighth SEACEN economies, namely Indonesia, Malaysia, Korea and Thailand in that respective order, grew at an annual average of between 16 to 30 percent for the period of 1989-1996. This is not to mention that prior to this period, total foreign bank claims to Chinese Taipei grew at an annual average of around 19 percent between 1983 and 1988, and slightly tapering off at around 10 percent by the same period of 1989-1996. It is ironic, however, that with the exception of Malaysia which continued to experience strong inflows of international bank flows, Thailand, Korea, Indonesia and to some extent Chinese Taipei, experienced the most severe declines in foreign bank claims across these eight SEACEN economies around the time of the peak of the 1997 East Asian financial crisis.

During the time of the reversal of the IT bubble in the US in 2001-2002, the likely retreat of foreign banks' claims to these same eight SEACEN economies were also observed, however, this presumed impact is quite uneven. For example, Indonesia and Thailand continued to experience a substantial negative contraction in international bank lending during this period. Meanwhile, Malaysia, the Philippines and Sri Lanka experienced a slowdown in international bank lending after coming-off from around the time of the East Asian financial crisis virtually unscathed (Table 1). On the other hand, however, international bank flows to the economies of Korea and Chinese Taipei were virtually resilient from the adverse economic episode in the US and have also since the East Asian financial crisis experienced a recovery by posting positive annual average growth rates in these flows for this same period.

The loosening of ownership regulation in most SEACEN economies post Asian financial crisis had also significantly facilitated the rise in the activities of international banks in Asia. Indonesia, South Korea and Thailand, for instance, have raised the allowance for foreign equity participation in local banks of up to 100 percent. Meanwhile, the Philippines permitted 60 percent foreign ownership. As a consequence, the significantly more liberal ownership policy which facilitated an aura of stability and confidence in the respective economies' banking system has frequently been recognized as an important contributing factor to the return of sustained surges of foreign bank inflows not only to these four above-mentioned SEACEN economies from 2003 to 2007 but also across the board for the wider spectrum of SEACEN economies, just before the outbreak of the recent sub-prime crisis in the US (Table 1).

The total foreign claims of international banks, in general, continued to sustain strong momentum into some of the emerging markets of the Asian region even until the first half of 2008. However, only during the immediate weeks and months following the Lehman Brothers debacle, six of the eight SEACEN economies were engulfed in a sharp and sudden reversal of international bank claims. The unforeseen and sheer size of these reversals in international bank flows out of these six SEACEN economies saw the annual growth rate of these flows hitting negative territory by end-of 2008, only with the exceptions of Thailand and Sri Lanka.¹ More recent data reveals that for almost all of the eight SEACEN economies, inflows of international bank lending had again returned to these economies (Table 1).²

As far as the nationality of the sources of these international bank flows, it is interesting that during the pre-Asian financial crisis, Japanese banks were the largest sources of funding for the banks and corporations in the eight SEACEN economies.³ For example, at its peak for the period of 1989 to 1996, Japanese lending amounted to 56 percent and 54 percent of total foreign lending to Thailand and Indonesia, respectively (Table 2).⁴ Not far from these two economies are Korea and Malaysia which recorded lending by Japanese banks of 28 and 40 percent of total foreign lending during the same years, respectively. As presented in Table 2, in the aftermath of the Asian financial crisis, a consistent waning in the share of lending by Japanese banks were experienced by all of these eight SEACEN economies, and this diminishing dominance in lending by Japanese banks have been taken on recently to some extent by UK banks and ever consistently by US banks.⁵ As a result, such is the critical influence of Japanese, UK and US owned-banks that the combined lending of these three big economies account at least to around half of the combined lending by developed countries into each of these eight SEACEN economies (Table 2).

¹ Though Thailand only experienced a very marginal increase in international bank inflows.

² The only exception is Sri Lanka, which presumably suggest that the adverse effects of the Global Financial Crisis came to this economy with a lag.

³ Exceptions are the Philippines and to some extent, Chinese Taipei, which are both dominated by lending from US-owned banks.

⁴ See, for instance, Siregar and Choy (2010) which examines the driving factors behind the total claims of seven OECD countries' banks to nine East and Southeast Asian economies.

⁵ An interesting observation is the heavy dominance in lending by UK-owned international banks to Sri Lanka beginning in the mid-1990s and onwards.

As discussed above, while international bank lending retreated substantially in almost all of the eight SEACEN economies in the immediate aftermath of the bankruptcy of Lehman Brothers, it can be that a key component of these international bank lending in the form of the local claims of these foreign banks operating within the domain of these SEACEN economies remained strong and were less adversely affected by the external shock that originated from the US. As depicted in Figure 1, while these local claims booked by offices of foreign banks in these economies also retreated in Indonesia, Korea, Philippines and Thailand such was not the case for Malaysia and Chinese Taipei in 2008.⁶

In retrospect when we look back at previous crises such as the Asian financial crisis and the 2001-2002 collapse of the IT bubble in the US, almost all of the eight SEACEN economies experienced sharp reversals in total international bank flows during these two separate crisis periods similar to the one that recently occurred at end-2008. However, remarkably, the local claims continue to register positive average annual growth rates during the past crisis episodes, namely the 1997 East Asian crisis and the 2001-2002 IT bubble.⁷ In addition, more recent data in the post-GFC period indicate that the local claims of the foreign banks immediately recovered and grew positively in six of the eight economies, the lone exceptions being the Philippines and Chinese Taipei (Figure 1).

In summary, the cross-country experiences of our six economies highlight the seeming indisputable evidence that global banks act as a channel of financial shock transmission from the global financial markets to the local economy. Formally testing this hypothesis as well as significantly identifying the possible driving factors behind this international bank lending are therefore imperative and will be the primary objective of the empirical works of this study.

3. Measurement and Empirical Results

Our baseline general econometric model lays out the possible determinants of international bank claims represented by the following dynamic panel equation:

$$\Delta \log Claims_{ij,t} = \alpha_0 + \alpha_1 \Delta \log Claims_{ij,t-1} + \beta_1 VIX_t + \beta_2 Clender_{ij,t} + \beta_3 growthrate_{j,t} + \beta_4 growthrate_{i,t} + \beta_5 [growthrate_{i,t} \times exposure_{ij,t}] + v_{ij,t} \quad (1)$$

where i,j represents economy pairs i and j , and $i = 1$ to 3 denotes the major BIS-reporting home country banks of Japan, UK and the US, while, $j = 1$ to 5 denotes the SEACEN host economies of Indonesia, Korea, Malaysia, Philippines, and Thailand. The dependent variable, $\Delta \log Claims_{ij,t}$,

⁶ In the case of Sri Lanka, while local claims booked by offices of foreign banks decreased more on average than total international bank claims in 2008, the reverse was true in the following period.

⁷ The only lone exception is the case of the Philippines which during the 2001-2002 period also saw the local claims by international banks to contract along with total foreign bank claims.

is the logarithmic differences of total foreign bank claims⁸ from banks in home country i to host economies j ; $\Delta \log Claims_{ij,t-1}$ is the lagged of the dependent variable. In Equation 1 we assume that $v_{ij,t}$ contains the following two effects: (i) the unobserved time-invariant country-pair specific effect, η_{ij} , and (ii) a stochastic error term $\varepsilon_{ij,t}$, varying across time and cross-section.⁹

We follow the voluminous literature on the fundamental determinants of capital flows by accounting for in our empirical model the home or push and host or pull factors that figure prominently in this extensive literature. On this basis the respective real GDP growth of host economy j ($growthrate_{j,t}$) and home country i ($growthrate_{i,t}$).¹⁰ We expect a positive coefficient on the real GDP growth of host economies as higher returns in these economies should then lead to a rise in international bank flows in these economies. Whereas, there is ambiguity as to the expected sign of the real GDP growth in home countries as, on one hand, recessionary economic conditions in home countries entail lower profit opportunities at home, which should then encourage foreign banks to seek better or higher returns abroad in which case we expect a negative coefficient on the $growthrate_{i,t}$ variable. On the other hand, weak economic conditions in the home countries may signal a worsening of the capital position of foreign banks which should then discourage, or worse, retrench their lending overseas.

Apart from considering the impact of traditional push and pull factors on international bank claims, we also take into account a measure of the state of the global financial market, the S&P 100 Volatility Index (VIX_t) of the Chicago Board Options Exchange which is widely used as an indicator of expected short-term volatility of the global financial market. A high value of the VIX indicates more volatile market expectations and as such we expect a negative coefficient on the VIX variable as greater global volatility should lead to a reduction in international bank flows to host economies (Hermann and Mihaljek, 2010).¹¹ In line with the well-cited study of van Rijckeghem and Weder (2003), we also include in our empirical model a measure of the potential contagion or spillover of changes in international bank flows from one economy to another, and is denoted by the $Clender_{ij,t}$ variable. More popularly known as the common lender effect, this argues that movements in international banks' claims on one economy may be transmitted to other economies that owe claims from the same international banks (Peria, et al, 2005). We follow Peria, et al (2005) in accounting for this effect and thus operationalise $Clender_{ij,t}$ as the changes in claims from home country i banks to all the five SEACEN host economies other than that of the individual SEACEN host country j .^{12,13} We should then expect

⁸ Total foreign bank claims is the sum of international claims and local claims in local currency; while, international claims is comprise of cross-border claims in all currencies and local claims in foreign currencies.

⁹ In a separate Appendix to this chapter, the technical details of the dynamic panel estimation undertaken in this integrative chapter are presented.

¹⁰ We also include in the estimation the nominal interest differential between host economy j and home country i , however, this variable surprisingly came out with the opposite expected sign as it was highly correlated with one of the factors and so was entirely omitted from the estimations.

¹¹ It is also based on this expected relation that the VIX is also construed as a factor that measures the global supply of international bank lending. Higher volatility corresponding to a high value of the VIX makes it more difficult for banks to raise additional capital (Takats, 2010).

¹² As pointed out by Peria, et al (2005), in an ideal sense, the common lender effect can be equated to a portfolio allocation choice wherein changes in values of claims trigger an adjustment in other assets or

that if the common lender effect works, the coefficient on $Clender_{j,t}$ would be positive and significant.

Turning finally into our main variable of interest, that is, in order to test the impact of the financial crisis on the stability of international bank lending to our respective SEACEN host economies, we interact our home economies' real GDP growth rate variable, $growthrate_{i,t}$, with a measure of foreign banks' exposure to our individual host economies, noting that we measure foreign bank exposure as the ratio of home country i 's international bank claims on host economy j to the total worldwide claims of home country i 's banks.¹⁴ Since crisis coincide with deterioration in macroeconomic fundamentals such as in real GDP growth rates as what happened in developed markets during the recent global financial crisis, this interaction variable recognizes the idea that crisis are basically indistinguishable from downturns in GDP. In this view, this allow us to test, depending on the sign and significance of the interaction term, the impact of foreign bank exposure on how they react from a shock originating from their own economy. A priori, if higher exposure translates into stable international bank lending, we should expect the interaction between home country foreign banks' real GDP growth rate and its exposure to be positive.

The estimation results of three alternative specifications of the dynamic panel model for the whole sample period of 2000Q1 to 2010Q3 are summarized in Table 3. Altogether, with the exception of the growth rate in home country variable i , which came out only significant in specification (3), all of the estimated coefficients are significant and came out with their expected signs. Several key findings are worth to be highlighted. To start, we find evidence that international bank flows increase (decrease) their claims on host markets once these same economies experience stronger (adverse) macroeconomic growth performance. This result confirms the presence of 'demand factor' influencing the flows of these claims. All of these five SEACEN economies experienced slower growth, particularly during the peak of the recent global financial crisis, translating into weaker demand for funding from the international banks.

Similarly, we find a number of 'supply side factors' have also come to play here. First, the negative coefficient (as mentioned only though insignificant in specifications (1) and (2)) on the home countries' real GDP growth rate indicates that foreign banks' behaviour is veered towards seeking better or higher returns abroad when domestic economic conditions are weak and fragile. The results confirm that weaker economic outlook in home country translates into a rise in the foreign bank claims' on host economy.

Second, we also find evidence in support of the common lender effect in view of the positive and significant coefficient on changes in international bank claims in other economies. This

claims. The limitation of working then with aggregated country level data on international bank claims is that it obscures this portfolio allocation decisions at the individual bank level.

¹³ These major East Asian host countries are: China, Indonesia, Korea, Malaysia, Philippines, Singapore and Thailand.

¹⁴ This measure of foreign bank exposure is similar to that of Peria, et al (2005), however, based on some unique reason pertaining to the Latin American context, they measure the numerator as home country i 's international bank claims on the *private sector* of host economy j . In this paper, we do not make that distinction between private and non-private sectors.

seems to support the argument for the presence of contagion effect in international banking. In particular it demonstrates that changes in foreign bank claims on one economy might spill over to other economies that hold claims from the same banks (van Rijckeghem and Weder (2003)). Third, consistent with theoretical expectation, a rise in the expected short-term volatility of the global financial market, as proxied by the widely used S&P 100 Volatility Index (VIX_t) of the Chicago Board Options Exchange, has indeed adversely contributed to the overall sharp decline in the total claims of the foreign banks. The overall robustness of the supply side factors substantiates the role of the international bank claims as a key transmission channel of the impacts of a distress banking sector in the advanced economies into the emerging markets of SEACEN.

Finally, the positive and significant coefficient on the main variable of interest, the interaction between home country foreign banks' real GDP growth rate and its exposure suggests that controlling for macroeconomic conditions in developed economies, crisis episodes or shocks that originate from developed economies do not necessarily translate into less stable financing in international bank claims to host economies in SEACEN. This is in contrast, however, with the earlier preliminary examination of the flows in international bank claims wherein we observed a sharp and sudden reversal during the global financial crisis. Perhaps one reason for this seemingly conflicting result is that the foreign bank claims data used in this section is not a 'pure' cross-border claim data. This is in view of the fact that the foreign bank claims data as consolidated by the BIS is not just comprised of the cross-border claims but also of the local claims of the foreign banks' offices on residents of the country in which the foreign bank is located. Thus, it is highly likely that the local claims component in the data maybe mitigating this effect since this particular component of the foreign bank claims hold-up well during the global financial crisis.

4. Lessons from the Research Papers

The research papers summarized in this section is a study in contrast in terms of their economies' approach or stance to relaxation of capital flows. The SEACEN economies examined here range from the relatively 'stricter' approach to capital flows, e.g., Myanmar, Sri Lanka to relatively more open and liberal stance to capital flows, e.g., Chinese Taipei and Korea. As summarized in Table 4, while the research papers employ a variety of data structure from macro-panel (Chinese-Taipei¹⁵, Indonesia, Korea, Sri Lanka) to time-series (Philippines and Myanmar) as well as in the period of observations that either includes both the Asian and global financial crisis (Indonesia, Korea, Philippines) or to one that examine beginning the early part of 2000s until the recent global financial crisis (Chinese Taipei, Sri Lanka and Myanmar), the research papers were almost unanimous in using the growth rate of foreign claims as the dependent variable in their various econometric regressions.¹⁶ In addition, with the exception of

¹⁵ The Chinese Taipei paper also employs a micro-panel data structure.

¹⁶ The only exception being the Philippines paper which uses the gross international claims data. In addition, as presented in Table 4, the Indonesia paper estimates separate regressions for the growth in

the Philippines and Myanmar, most papers have employed bilateral claims that comprise the top-four sources of international bank lending in the respective economies, and as we gathered from the above discussions, bilateral claims of US, Japanese and UK banks are always included.

In consistency with our own empirics undertaken in the previous section, the research papers account in their respective empirical model the home (push) and host (pull) factors of international bank flows by including for the most part explanatory variables such as the GDP growth rates of the home and host economies as well as the interest rates of the home and host economies. Out of the seven regressions reported in total, the home country real GDP growth rate came out statistically significant four times. Whereas, the home country interest rate came out to be weakly significant, on average, as it only came out to be significant in one of the four regressions that this variable was included. Likewise, the host country real GDP growth rate came out to be significant in four of the seven regressions undertaken that included this same variable, however, the host country interest rate came out to be insignificant in all four regressions that included this variable as one of the explanatory variables in the model. These results are suggestive of the distinguishing characteristic of the international bank flows into some of these SEACEN economies. In particular, the procyclicality of these flows, i.e., better (worse) economic conditions in the host (home) economies leads to greater bank flows into some of these SEACEN economies, whereas, the role of 'liquidity' conditions both in the home and host economies does not matter much as a fundamental driver of these flows.¹⁷

In contrast to the strong and robust results obtained with the variable on the expected short-term volatility of the global financial market in section three of this chapter, only one of the research papers (Philippines) actually included this important variable in their estimations, and this came out to be highly and negatively significant as expected for this lone paper, which again strongly suggest that global supply factors have a role to play in determining bank flows from developed to emerging economies.

Turning now to the impact of crisis episodes on the direction of these bank flows, a dummy variable was created for this purpose in all the research papers. Those papers that include the period that encompass the Asian financial crisis of 1997-98 have unanimously found that this crisis episode had a negative effect on this type of flows. Whereas, those papers that tested the impact of the recent global financial crisis on these flows have come out with conflicting results. While this global financial crisis dummy came out to be significantly negative in the cases of Indonesia and Korea, this same crisis dummy variable was insignificant in the regressions undertaken in the cases of Chinese Taipei and Myanmar. The more interesting question, nonetheless, is whether greater exposure on the part of major foreign banks, as measured in this chapter as well as in the other research papers, has a crisis-mitigating impact or, in other words, has a stabilizing effect on these bank flows in times of financial turmoil. To answer this question, an interaction variable, i.e., product between the appropriate crisis dummy and

foreign claims and growth of local claims. Similarly, the Philippines paper estimates separate regressions for gross international claims and cross-border lending.

¹⁷ This then corroborates the results of our own set of empirics in section three wherein a measure of interest rate differential came out to have weak explanatory power in almost all of the regressions.

exposure was created. The balance of the evidence appear to suggest that greater exposure on the part of major foreign banks into these selected SEACEN economies fulfill a stabilizing or crisis-mitigating role during periods of financial distress. In particular, the interaction term between the Asian financial crisis dummy and exposure while insignificant in the case of Indonesia, came out to be significant in the regression for the Philippines. More tellingly, the interaction term this time between the global financial crisis dummy and exposure came out only insignificant in two of the seven regressions undertaken. This latter result, more importantly, again corroborates the earlier empirical results undertaken in the previous section.

Three of these papers have also further considered interesting and related aspects of the research issues at hand. For instance, the Chinese Taipei paper also undertook separate micro-panel regressions on a very large number of observations and found evidence which support the above stabilizing argument.¹⁸ The Indonesia paper also estimates a separate regression using the same set of explanatory variables but using this time the growth of local claims as the dependent variable and should be viewed as an alternative angle to robustly ascertain the stabilizing-role of international foreign bank lending. It obtained results wherein the interaction term between the crisis dummies and exposure came out to be insignificant in both fixed and random-effect regressions, which is then interpreted as confirming the result obtained for the stabilizing role of international bank flows when total international bank claims was instead used.

The Philippines paper also considered this alternative angle of robustly ascertaining the stabilizing-role of international foreign bank lending by estimating separate regressions using confidential cross-border lending data from the Bangko Sentral ng Pilipinas (BSP) as the dependent variable. This time however, though, while it obtained an intriguing result wherein the interaction term between the Asian financial crisis dummy and a measure of exposure came out to be positive and significant (again, confirming the stabilizing-role argument), the interaction term between the recent global financial crisis and exposure came out to be negative and significant, which is, in direct contrast to the above results. Finally, the Philippines paper also interestingly examines the question on whether greater trade openness does have a crisis-mitigating impact on international bank flows. However, the interaction variable between the crisis dummies and a suitably measured variable for trade openness came out to be insignificant in the regressions.

5. Policy Challenges Going Forward

The era of great moderation (low inflation) across the globe has been found to be gravely inadequate to safeguard much-needed stability in the financial sector. Even during the period of sound macroeconomic conditions, the financial system was subject to various self-amplifying

¹⁸ Specifically, interaction variables between the GFC dummy and country dummies were included in the regression along with a number of balance sheet indicators of domestic and foreign banks in the sample. It obtained results wherein these interaction variables came out positive and significant with the exception of the UK dummy. This is interpreted as greater exposure of these major foreign banks have a stabilizing role on domestic loans as a ratio of deposits (dependent variable) during crisis times.

mechanisms in upward trends (bubbles), downward trends (busts) and phases of the credit cycle. There has been growing awareness and acceptance of the central bank role as a financial stability authority, in addition to monetary authority.

New responsibility will come with new challenges. In this study, we highlight the role of lending activities of international banks, particularly cross-border lending, as a potential source of financial instability. Going forward, a number of policy responses to manage potential risks associated with international bank lending have actually been tabled and debated. The following sub-sections will elaborate some of them.

5.1 Cross-border Supervision

Cross border banking with the presence of multinational banks (includes the newly emerging regional multinational banks) enhances the ‘interconnectedness’ factor. It is now a well known fact that globalised banks play a crucial role in the international transmission of monetary policies and economic shocks globally. At the first instance, the lack of cross border supervisory cooperation has resulted in asymmetric information on cross-border risk exposures leading to an under-appreciation by supervisors and regulators of underlying systemic risks and connections (Kodres & Narain (2009)). In addition, it is rather obvious that the existence of asymmetric information among supervisors in different jurisdictions, leads to untimely and uncoordinated responses (Nijathaworn (2010)). Furthermore, adequate cross-country supervisory cooperation and coordination are necessary to overcome loopholes such as currency substitution, or switching from domestic lending in foreign currency to direct foreign credit.

One potentially effective method to facilitate cross-border policy cooperation and coordination is through the college of supervisors.¹⁹ The college of supervisors is defined as a “permanent, although flexible, structure for cooperation and coordination among the authorities of different jurisdictions responsible for and involved in the supervision of the different components of cross-border banking groups, specifically large group” (The Committee of European Banking Supervisors (CEBS (2009)). As a general rule, the establishment of a supervisory college should be considered for significant financial institutions in terms of size, interconnectedness with other components of the financial system and/or the roles they play in the market which may cause systemic impact on the country’s financial system, hence affecting the region’s financial stability.

A recent survey has identified a number of regional and global banks that have strong presence in major Asian economies (Siregar & Lim (2010)). The Hong Kong Shanghai Banking Corporation (HSBC), Citibank and the Standard Chartered Bank are among the three major

¹⁹ As of September 2009, there are more than 30 colleges to supervise complex institutions.

international banks that have wide and extensive branch networks in the Asian region (Table 5). In addition to these three international powerhouses, the South East Asian region has also witnessed the emergence of its own multinational banks. In Malaysia, banks such as the Malayan Banking Berhad (Maybank), Commerce International Merchant Bankers Berhad (CIMB) and Rashid Hussain Berhad (RHB) have expanded their networks beyond Southeast Asian countries. A number of Singaporean banks, namely the Development Bank of Singapore (DBS), the United Overseas Bank (UOB), and the Overseas Chinese Bank Corporation (OCBC) have achieved similar success in their efforts to become regional banks.

As of May 2010, a number of major central banks in Asia have been invited to participate in colleges of supervisors. Bank Negara Malaysia, for instance, is involved in the colleges of supervisors organized by the Financial Stability Agency of United Kingdom for the Standard Chartered Group, the BaFIN for the Deutsche Bank Group and the OFSI for the Bank of Nova Scotia Group. Similarly, the Monetary Authority of Singapore (MAS) and Bangko Sentral ng Pilipinas have also participated in a number of colleges of supervisors set up for major European and the US banks. In addition, under the foreign banking law of a number of Southeast and East Asian economies, one of the conditions for the foreign bank to establish its subsidiary domestically is that the home-supervisor of that particular foreign bank must sign a MOU with the host central banks. This MOU facilitates bilateral exchanges of data and information between the two bank supervisors. However, as of late 2010, there has not been any arrangement for supervisory colleges for Asian regional multinational banks such as Malaysian and Singaporean banks discussed earlier.

5.2 Reducing the complexity of large cross-border banks through ‘subsidiarization’.

An important cross-border banking issue is the relationship between the home- and host supervisory agencies and central banks. In the event that a foreign bank that is systemically important in a host country finds itself in a crisis could lead to potential conflicts between the home- and host country authorities. These conflicts could be particularly significant if the relative size of the parent bank and its overseas affiliate is substantially different, or if the economic importance of the overseas affiliate to the parent bank is mainly marginal, e.g., funding of the overseas affiliate is mainly sourced from local deposits. For instance, home-country authorities will not be keen on supporting a small overseas affiliate, or the overseas affiliate will receive less attention from the parent bank or home supervisor as the impact of such failure of the overseas affiliate is relatively low or immaterial on the financial group’s overall position, even if the troubled overseas affiliate is relatively systemically important for the host country. On the other hand, host-country authorities could find it politically difficult to use public or taxpayer resources to support a foreign-owned bank when it gets into trouble.

One of the answers to such challenge of a systemically-important foreign bank failing in a host country is to ensure local incorporation as a subsidiary rather than as a branch. All else being equal, local incorporation gives host authorities greater supervisory control over local operations such as by making it more difficult for assets to be removed from local operation to the parent bank, i.e., ring-fenced. Furthermore, it enables the possible imposition of specific capital-related

prudential requirements which can provide some separation between the subsidiary and the parent bank, and thus reducing intra-group contagion risk (Mihaljek, 2008).

5.3 Other Policy Considerations

5.3.1 Increasing capital levels and buffers.

Introduced as part of the new capital standard under Basel III, 'ample' or conservation buffers reflect the large perceived negative externality associated with a failure of a large cross-border bank and as such should be available to enable banks to maintain large enough capital levels to offset losses in times of adverse financial shocks. Countercyclical capital buffers, on the other hand, rests on the concept that banks should build-up extra capital in times of excessive credit growth and as such banks can tap the buffer during periods of financial distress without having to raise new capital immediately. Implementing such types of capital buffers can improve the banking sector's resilience to financial crises as well as mitigate its impact on the entire economy.

5.3.2 Deposit Insurance Scheme

Deposit insurance coverage could be lowered for large cross-border banks. There is a perception that large cross-border banks pursue scale, e.g., mergers and acquisitions, in order to become 'too big to fail'. In order to mitigate such incentive a spreading or sharing of the risk in the official financial safety-net (a form of co-insurance) can be introduced by reducing the deposit insurance coverage for large cross-border banks. This will also reduce the scope for free-riding on the part of large cross-border banks as far as the financial safety net mechanism of the banking sector.

5.3.3 Establishment of cross-border collateral arrangements

This involves the central bank in one jurisdiction providing domestic currency liquidity to eligible financial institutions against collateral placed by their offices in another jurisdiction into the liquidity-providing central bank's account at the local central bank. In essence, this is another way for central banks to provide a cross-border bridge to support funding requirements in another jurisdiction should interbank cross-border intermediation become impaired (CGFS-2010).

5.3.4 A systemic risk charge or a systemic risk levy on 'too-big to fail' or 'systemically important' cross-border institutions.

The bigger the financial institution, the higher is the likelihood that it will be rescued in times of financial distress. In other words, the cost of the financial rescue is directly related to the systemic relevance or size of the financial institution. One solution is a systemic risk charge that mainly depends on the size of the cross-border bank. This follows on from the basic principle of the theory of externalities, which suggests that a polluter should be charged with a tax that is equivalent to the social costs of the pollution. We can then regard the systemic instability

created by the cross-border bank's activities as an externality and a systemic risk charge could be regarded as a way to 'internalize' this problem of too-big to fail.

One such suggested approach is for regulators to assign systemic risk ratings to a financial institution and then assess a capital or systemic risk surcharge based on this rating. Banks with higher systemic risk rating would receive higher capital or risk surcharges. In short, the surcharge is based on the financial institution's corresponding contribution to systemic risk. In principle, under certain assumptions, a surcharge on capital is equivalent to a levy on capital in terms of stifling the incentive for large cross-border banks to engage in systemic risk activities. However, an important difference between the two is that a levy removes the funds from the financial institutions balance sheet, whereas a capital surcharge leaves the funds under the control of the financial institutions (Doluca et al, 2010).

In view of this difference, the advantage of the levy is that it can be used to fund a 'Systemic Stability Fund' that would act as a private safety net in the event of a financial crisis. The idea is that the accumulated levies can then be re-invested into 'convertible' or liquid instruments by the Systemic Stability Fund into the same financial institutions that had paid these levies. These liquid instruments serve to fulfill the financial rescue role that in the event a large cross-border banks gets into trouble, these same instruments can be used by the supervisory authorities to 'bail-in' the weakened cross-border bank without resorting to the use of public or taxpayer resources.

6. Concluding Remarks

The recent sub-prime crisis forced a rethink of the mandate of central banks in the area of financial stability. Prior to the latest financial crisis, the primary mandate in most central banks in Asia was on monetary policy stability, in particular price stability. Recent crisis demonstrates that years of monetary stability during the period of great moderation did not safeguard the economy from looming financial instabilities. It clearly illustrated as well that the globalized banking system played a crucial role in transmitting the crisis from the advanced economies to the various corners of the world, including the emerging markets of East and Southeast Asia.

As policy makers, it is no longer adequate to view domestic banking system in particular and financial system in general as being separate from the domestic economy. The increasing interconnectedness of domestic banking liquidity to the global funding environment enhances the links between domestic financial stability and adverse developments emanating outside of the domestic economy. Our study examines the role of international bank claims, in particular the cross-border lending, as a critical channel of transmission of worldwide financial shock to the local economy. We focus on the recent crisis period to gather greater appreciation of the exposure of the local financial system to these external shocks. In addition, we look into a number of home-country indicators of economic fundamentals. The exposure and home country fundamental variables have been found to be significant factors and confirmed the role of international bank lending as a channel of shock transmission from the home countries to host economies. Furthermore, the common lender effect -- whereby movements in international

banks' claims on one country may be transmitted to other countries that owe claims from the same international banks—underscores the spillover effect that was evident as well during the 1997-98 Asian financial crisis.

Going forward, more in-depth researches on the roles, activities and impacts of these global banks on the local economy, including local policies, should be carried out. As regional banks, such as CIMB, MayBank, OCBC and UOB (as shown in Table 5) continue to expand their activities in the region, it will be interesting to ascertain how they perform relative to the traditional global banks, such as Citibank, Standard Chartered Bank or HSBC. Are these regional banks proven to afford more stability in the region? At the end of the day, the influence of the globalized banking system will likely continue to spread and deepen in SEACEN economies. Understanding their networks of dealings and anticipating their bearings in these economies will undoubtedly improve our capacity to manage them and mitigate, if not, eliminate potential shocks coming from the financial sector in the near future.

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**Table 1:
Annual Average Growth of International Bank Claims in Selected
SEACEN Economies**

Countries	1983- 1988	1989- 1996	1997- 2000	2001- 2002	2003- 2007	2008	2009
Indonesia	8.59	16.11	-6.27	-13.33	15.16	-0.85	14.01
Korea	-0.97	20.09	-7.49	6.85	34.50	-19.98	16.76
Malaysia	0.84	16.12	15.88	1.39	16.69	-5.91	2.75
Philippines	-2.98	6.08	10.30	-2.0	8.44	-20.35	10.89
Sri Lanka	7.09	3.62	21.87	2.34	22.93	14.24	-4.82
Chinese Taipei	18.94	10.13	1.43	11.05	23.33	-15.60	21.09
Thailand	8.45	30.65	-13.35	-9.19	9.32	1.61	19.38

Source: BIS Consolidated Banking Statistics for the basic data and authors' calculations.

Table 2
Average Share of Japanese, UK and US banks in Total Foreign Bank Lending to Selected SEACEN Economies

Country	Nationality of Foreign Banks	1983-1988	1989-1996	1997-2000	2001-2002	2003-2007	2008	2009
<u>Indonesia</u>								
	Japanese	40.48	54.22	30.82	22.57	15.37	14.09	14.66
	UK	8.40	4.85	8.48	10.08	12.30	13.31	13.20
	US	19.06	8.96	10.56	9.08	9.32	12.75	13.27
<u>Korea</u>								
	Japanese	31.30	28.48	18.72	13.48	8.86	8.94	9.52
	UK	7.78	4.80	7.72	10.45	19.44	25.02	24.37
	US	29.88	18.12	18.93	22.27	23.88	18.91	25.46
<u>Malaysia</u>								
	Japanese	43.57	40.91	22.48	11.98	7.73	8.16	8.71
	UK	8.65	6.40	20.09	26.51	28.12	26.73	27.67
	US	19.88	24.04	19.19	15.15	14.52	11.51	13.15
<u>Phils.</u>								
	Japanese	21.46	19.00	13.45	13.47	10.39	12.97	13.67
	UK	10.69	8.46	9.78	11.75	12.98	14.60	16.92
	US	41.13	42.74	27.52	21.99	17.55	17.46	19.58
<u>Sri Lanka</u>								
	Japanese	25.79	10.32	4.95	2.37	1.12	0.80	0.63
	UK	8.13	14.55	22.78	34.60	40.96	41.83	46.33
	US	18.33	9.45	6.74	8.33	8.67	8.06	7.37
<u>Chinese Taipei</u>								
	Japanese	19.24	20.72	10.61	8.79	7.58	8.72	8.07
	UK	4.85	7.30	12.08	15.88	19.45	25.89	27.63
	US	52.24	27.89	31.16	36.52	23.87	21.52	26.38
<u>Thailand</u>								
	Japanese	47.33	56.39	38.70	26.62	27.17	31.15	32.39
	UK	3.18	2.79	6.58	10.95	15.26	16.38	16.50
	US	23.94	11.44	9.87	10.68	12.70	10.33	12.00

Source: BIS Consolidated Banking Statistics for the basic data and authors' calculations.

Table 3
Dynamic Panel Estimation Results of Determinants of Changes
in International Total Bank Claims, 2000Q1 – 2010Q3

Variables	(1)	(2)	(3)
logdiffclaims _{t-1}	-0.045 (0.033)	-0.050 (0.033)	-0.059 (0.033)*
growthrate _j	0.245 (0.099)***	0.383 (0.128)***	0.303 (0.129)***
growthrate _i	-0.169 (0.192)	-0.327 (0.214)	-0.405 (0.213)**
vix		-0.42 (0.025)*	-0.041 (0.025)*
Clender			0.176 (0.034)***
growthrate _i * exposure	0.441 (0.173)***	0.429 (0.172)***	0.504 (0.172)***
Sargan test (p-value)	0.07	0.07	0.15
AB test for AR(2) (p-value)	0.36	0.36	0.61

Notes: standard errors in parentheses. *** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level . Numbers in the last two rows of the table are p -values.

Table 4
Integrative Summary of Research Papers

	Chinese Taipei	Indonesia	Korea	Myanmar	Philippines	Sri Lanka
Data	Macro and Micro Panel	Macro Panel	Macro Panel	Time series	Time series	Macro Panel
Period	2000 Q1 – 2010 Q2	1994 – 2009	1995 – 2010 Q2	1999 – 2010	1995 Q1 – 2009 Q4	2000 – 2010 Q1
Data on International Bank Claims Used	Logarithmic-first difference of Foreign Claims	Distinguish between growth of foreign claims and growth of local claims	Logarithmic-first difference of Foreign Claims	Logarithmic-first difference of Foreign Claims	Distinguish between Gross international Claims and cross-border lending	Logarithmic-first difference of Foreign Claims
Were Bilateral Claims Used	Claims from the US, UK, Japan and Switzerland banks	Claims from Japan, US, Germany and UK	Claims from Japan, US, UK and European banks	aggregated	aggregated	Claims from Netherlands, Japan, US, UK banks
Sign and Statistical Significance of Global Supply factor, if included	—	—	—	—	negative, significant	—
Sign and Statistical Significance of Push Factors:						
Home country real GDP growth	negative (significant) – US positive (significant) – Japan insignificant – UK insignificant - Switzerland	insignificant in fixed-effect regression; significant in random-effect regression ^a	negative, significant	insignificant	—	significant

Home country interest rate	significant only for the UK	insignificant ^a	negative, significant	—	—	insignificant
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Sign and Statistical Significance of Pull Factors:

Host country real GDP growth	positive (significant)	negative (significant) in fixed effect regression; insignificant in random effect regression ^a	positive, significant	negative, significant	positive, significant	insignificant
Host country interest rate	insignificant	Insignificant ^a	insignificant	—	—	insignificant

Sign and Statistical Significance of crisis variables:

Asian financial crisis dummy	—	significant ^a	negative, significant	—	—	—
Global financial crisis dummy	insignificant	significant ^a	negative, significant	insignificant	—	—
Interaction term between Asian financial crisis dummy and exposure	—	insignificant ^a	—	—	positive and significant	—
Interaction term between Global financial crisis dummy and exposure	positive (significant)	positive, (significant) in both fixed and random effect regressions ^a	positive, significant	insignificant	positive and significant	insignificant

Other Important Details

<p>Results from Micro-panel: Dependent variable - (Loans to deposit)</p> <p>Interaction between GFC dummy and country dummies -</p> <p>significant and positive for France, HK, Japan, Switzerland and US But not for the UK</p>	<p>interaction terms between crisis dummies and exposure all insignificant in fixed and random effect regressions using the growth of local claims</p>	<p>Interaction between trade openness and crisis dummies included in regressions using international claims – all insignificant</p> <p>interaction term between asian crisis dummy and exposure – positive and significant using cross- border lending;</p> <p>interaction term between GFC crisis dummy and exposure – negative and significant using cross- border lending</p>
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^a Based on results using the growth of foreign claims.

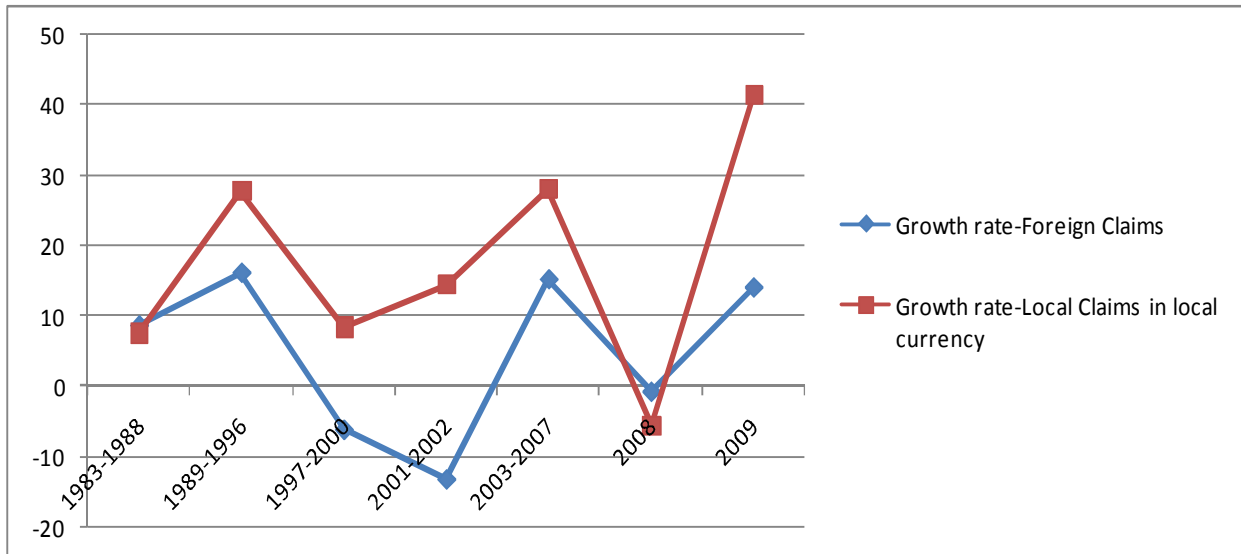
**Table 5:
Cross Border Banks in Selected SEACEN Economies**

Countries	Top 3 domestic FIs in your jurisdiction that have significant presence in the region	Top 3 foreign FIs in your jurisdiction that are originated from SEACEN member economies	Top 3 other foreign FIs (apart from originating from SEACEN member economies) that have significant presence in your country
Indonesia	<ul style="list-style-type: none"> - Bank Mandiri - Bank BRI - BCA 	<ul style="list-style-type: none"> - CIMB Niaga (Malaysia) - Bank International Indonesia (MayBank Malaysia controls around 43%) 	<ul style="list-style-type: none"> - Citibank - HSBC - Standard Chartered Bank
Korea	<ul style="list-style-type: none"> - None 	<ul style="list-style-type: none"> - DBS (Singapore) - UOB (Singapore) - OCBC (Singapore) 	<ul style="list-style-type: none"> - Citibank - HSBC - Standard Chartered Bank
Malaysia	<ul style="list-style-type: none"> - Maybank - CIMB Group - Public Bank 	<ul style="list-style-type: none"> - OCBC (Singapore) - UOB (Singapore) - Bangkok Bank (Thailand) 	<ul style="list-style-type: none"> - Citibank - HSBC - Standard Chartered Bank
The Philippines	<ul style="list-style-type: none"> - Metropolitan Bank Corporation (Metrobank) - Philippine National Bank (PNB) 	<ul style="list-style-type: none"> - Chinatrust (Taiwan) - Maybank (Malaysia) - Korea Exchange Bank (Korea) 	<ul style="list-style-type: none"> - Citibank - HSBC - Standard Chartered Bank
Singapore	<ul style="list-style-type: none"> - DBS Bank Limited - OCBC - UOB 	<ul style="list-style-type: none"> - Maybank (Malaysia) - Bangkok Bank (Thailand) - RHB Bank (Malaysia) 	<ul style="list-style-type: none"> - Citibank - HSBC - Standard Chartered Bank
Chinese Taipei	<ul style="list-style-type: none"> - Bank of Taiwan - Taiwan Cooperative Bank - Mega International Commercial Bank 	<ul style="list-style-type: none"> - DBS (Singapore) - OCBC (Singapore) - Bangkok Bank (Thailand) 	<ul style="list-style-type: none"> - Citibank - HSBC - Standard and Chartered Bank
Thailand	<ul style="list-style-type: none"> - Bangkok Bank - Kasikorn Bank - Siam Commercial Bank 	<ul style="list-style-type: none"> - UOB (Singapore) - CIMB Thai (Malaysia) - OCBC (Singapore) 	<ul style="list-style-type: none"> - GE Capital - ING - Standard Chartered

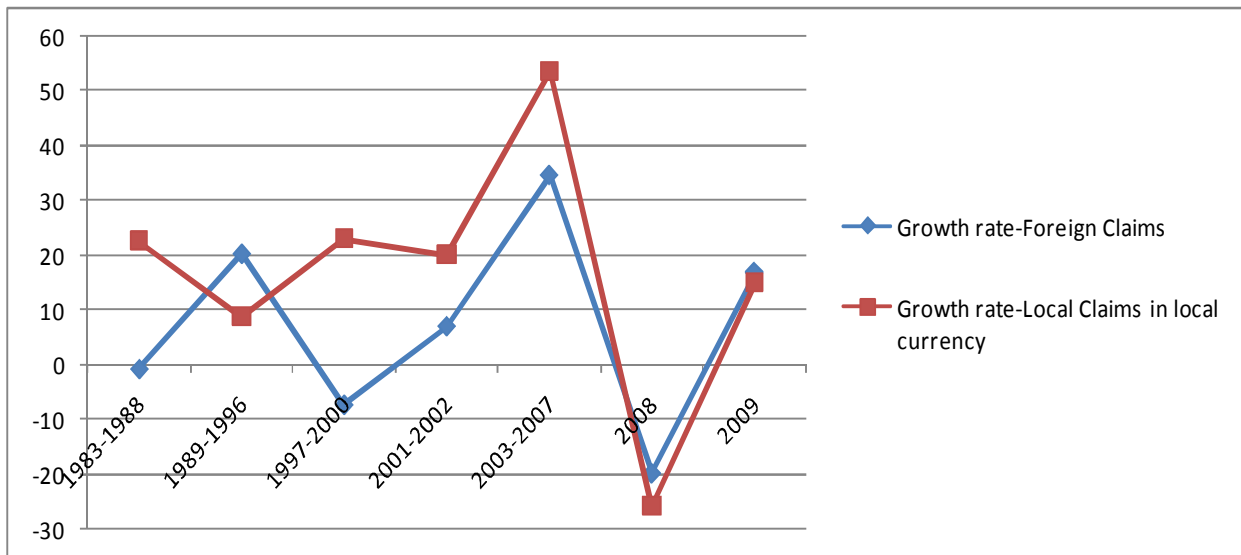
Source: Siregar and Lim (2010)

Figure 1
Average Annual Growth Rate of Foreign and Local Bank Claims in Selected SEACEN Economies

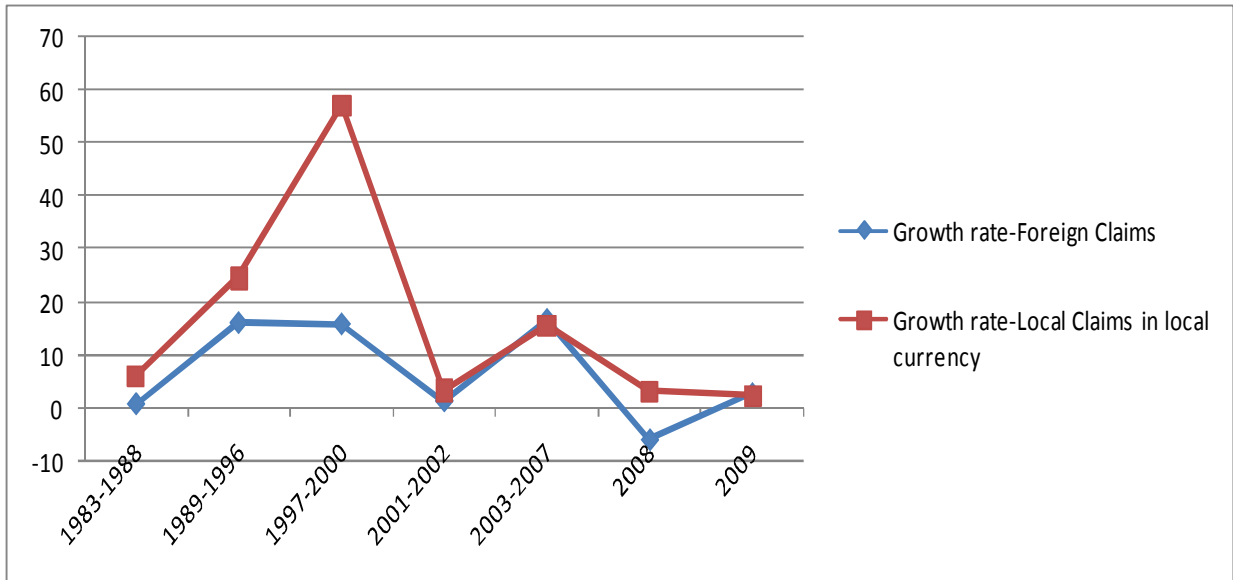
Indonesia



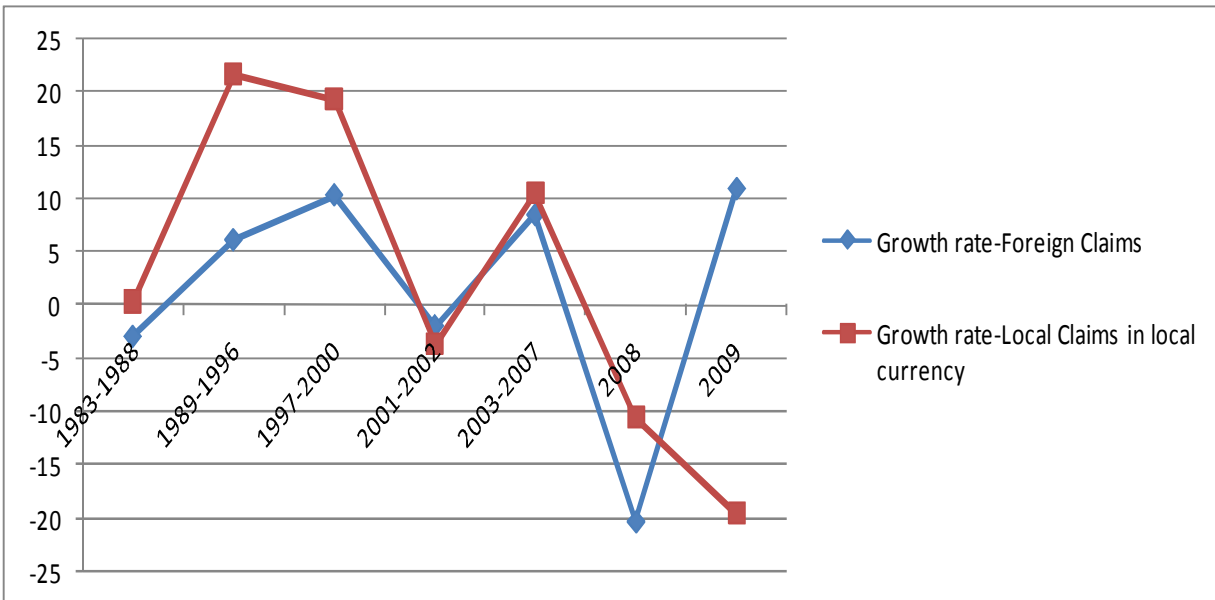
Korea



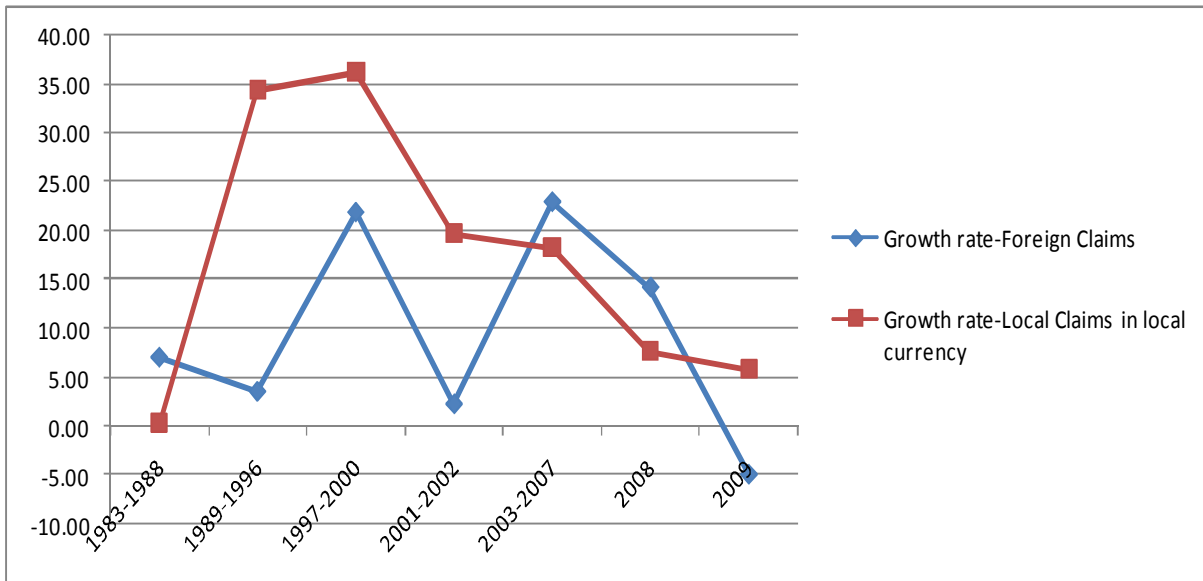
Malaysia



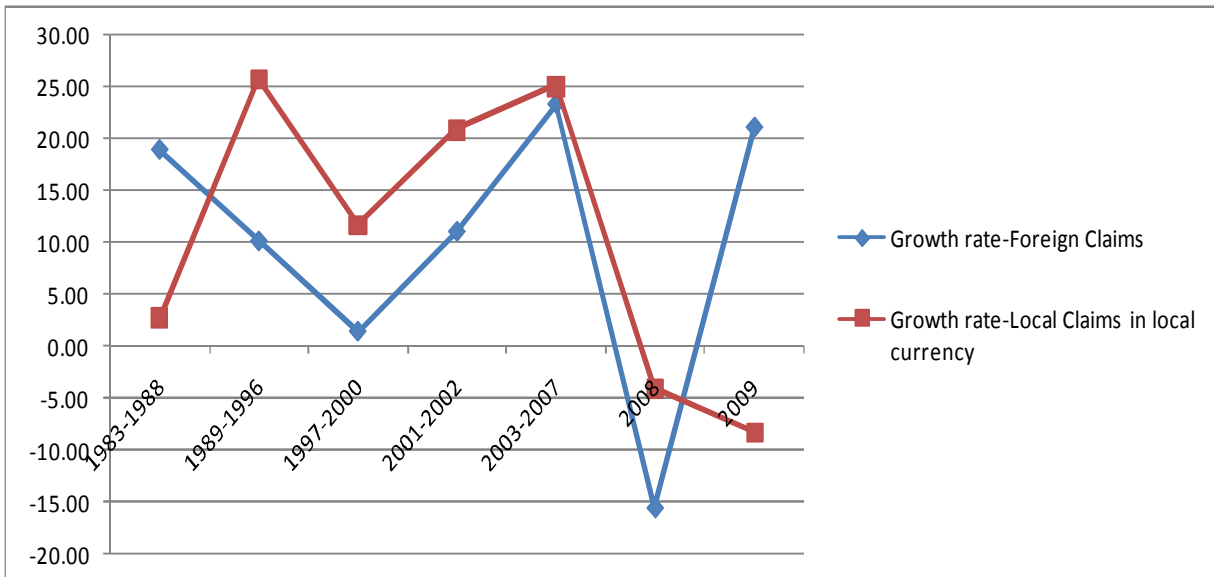
Philippines



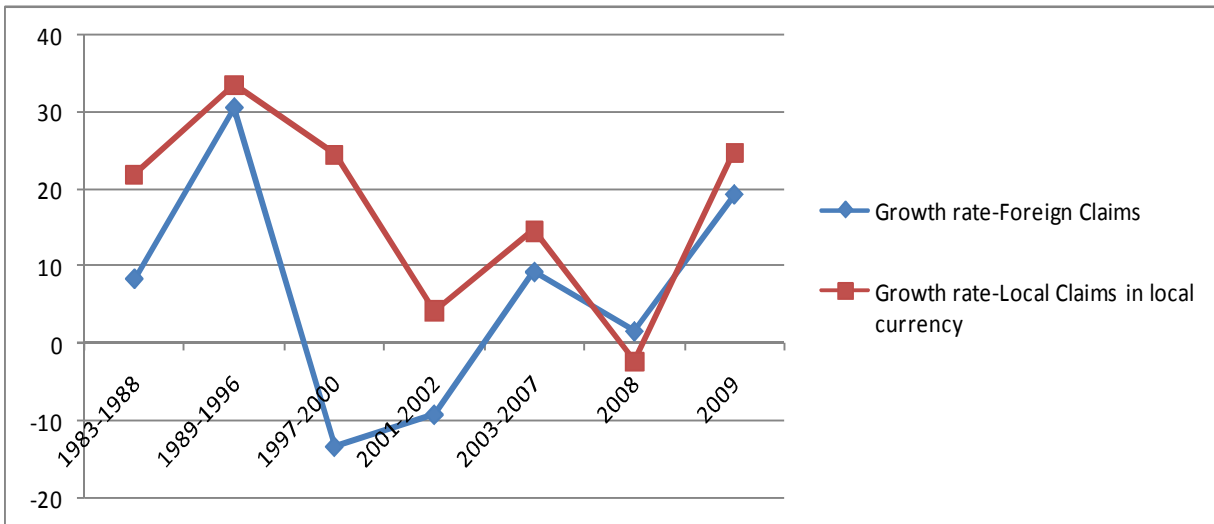
Sri Lanka



Chinese Taipei



Thailand



Source: BIS Consolidated Banking Statistics and authors' calculations.