

## FOREIGN BANKS AND CREDIT STABILITY: EVIDENCE FROM MALAYSIA

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### Abstract

This paper aims to examine whether foreign banks lending behavior affects Malaysian credit stability. Thus far, the concern is foreign banks could potentially withdraw from host-country economy or shrink their lending base during economic downturns, leading to an unstable credit environment. Another argument claims that foreign banks lending preferences could also lead to credit segregation between them and their domestic counterparts, especially in developing economies. The adoption of superior technology in screening loan applications enables them to have the best borrowers among potential lenders in the sense of lower probability of default as opposed to the domestic banks. Consequently, domestic banks are left with higher risk lending portfolio. Employing traditional financial ratio analysis and standard panel data lending estimation, the findings expose that in the case of Malaysia, foreign banks are credit stabilizer in the sense that their lending cyclical nature moderated bank lending sensitivity to economic cycles and there is no evidence to claim they contracted their lending during the recent financial crisis. The case for concern, however, lies within the fact that the evidence suggests the credit segregation hypothesis holds true. Foreign banks "cherry pick" loans in the commercial and industrial sector, while their domestic counterparts lending is highly concentrated in the risky real estate loans.

**Keywords:** foreign banks, bank lending, credit stability

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## 1. Introduction

In the light of banking sector liberalization, the issue of how foreign banks would affect domestic bank lending has become a matter of concern, especially in the developing economies. The major issues centre around lending preferences and lending cyclicalities. Some analysts argue that foreign banks “cherry pick” the best lenders, leaving the higher risk to their domestic counterparts. Some others advance a more pertinent macro issue, which is foreign banks’ tendency to have a procyclical lending behavior due to their profit oriented nature. These foreign banks will only extend loans during economic expansion and would contract their credit during economic downturns, leading to an unstable credit market.

The concern is of equal importance in the case of Malaysia. Although foreign banks currently made up of less than 30% of the whole banking sector, nonetheless in accordance with Malaysia’s commitment to World Trade Organization, the Central Bank of Malaysia has made a provision to fully liberalize the banking sector by 2007. Thus, it is important to know these foreign banks’ lending attitude and its consequences on credit market stability in the Malaysian economy.

Prompted by this concern, we undertake this research to offer some insights on whether foreign banks’ operations in Malaysia provide any destabilizing effects on the availability of bank lending in the economy. Aside from that, this research aims to examine bank lending patterns, in terms of cyclicalities, commitment to the Malaysian economy and sectoral preferences for both groups of bank ownership. The interest is on whether foreign banks portray a significantly different lending attitude as opposed to their domestic counterparts.

The main thrust of the judgment is based solidly on current state of interactions between foreign and domestic banks’ statistical details as well as the association of the existing foreign banks’ behavior with the Malaysian economic trend. A descriptive analysis of several financial ratios that could reflect bank lending behavior precedes the empirical analysis. This ratio analysis is employed to measure any differences between foreign and domestic banks in terms of lending behavior, using commercial



banks data spanning from 1994-2005. A standard panel data analysis then follows to capture bank lending cyclical and stability, between the two ownership groups.

Empirical findings suggest foreign banks are more of a credit supply stabilizer denying the pessimistic assertion that foreign banks lending attitude could possibly destabilize the domestic credit market. This holds true at least judging from the cyclical nature of their lending pattern and taking into account the fact that there is no evidence that they contracted their lending base during the recent financial crisis. However, their commitment to the economy in terms of lending relative to their assets is inferior to their domestic counterparts, particularly after the crisis. Another cause of concern is the fact that there is some indication of credit portfolio segregation, where foreign banks lending portfolio are concentrated on the less risky loans, leaving the riskier ones to the domestic banks. Hence, the domestic banks are left with a worst quality loan portfolio, as depicted by the higher non-performing loans.

The remainder of this paper is organized as follows. Section 2 focuses on the competing theories regarding the consequences of foreign banks lending behavior on the stability of credit in the economy as well as existing documented evidences. Section 3 deals with research designs and empirical findings are documented in Section 4. Section 5 concludes.

### **Theoretical Construct and Evidences**

The macro concern of foreign banks operations in any particular economy is their lending attitude and its consequences on the stability of domestic credit supply especially in the event of economic crisis. Given that the role of banks as credit provider in the economy, nothing less is expected from foreign owned banks. However, whether their lending policy would ultimately contribute to the domestic credit market stability remains an empirical issue, following the numerous contrasting arguments surrounding the debate of foreign banks lending decision and host country credit supply stability.

The arguments that foreign bank lending is relatively unstable centre around the issue of the possibility of foreign banks serving as an avenue for capital flight or by



withdrawing more rapidly from local markets in the face of a crisis either in the host or home country. Jeon et al (2006) empirically demonstrated that this is the case during financial crisis in Korea. In addition, any foreign bank is an affiliate of a bank holding company in their home country. Far from being an independent nucleus, they are subject to their parent bank policy in their decision making. Hence, any unfavorable economic conditions in the home country of foreign banks could change foreign banks lending decision in the host country. Peek and Rosengren (2000) find that Japanese bank lending to the U.S. was strongly affected by economic events in Japan. Goldberg (2001) finds that U.S. economic conditions impacted U.S. bank foreign lending. However, the mechanism by which home country economy could affect lending allocation in host country is equally ambiguous. A strand of literature claims that unfavorable conditions in home country economy, would encourage foreign banks to increase the funds channeled for investment, to the host country, in order to capture the greater economic rent. Another contrasting explanation claims that, unfavorable condition in the home country economy might force the parent bank to scale down their foreign subsidiaries' activity. This being the case, foreign banks' credit supply in the host country might be affected.

Moreover, argument based on basic portfolio allocation principle suggests that foreign banks lending could be procyclical with the host country economic cycle, hence leading to relatively unstable credit supply as opposed to their domestic counterparts. Foreign banks are associated with more diversified investment opportunities, geographically. Given an unfavourable condition in host country, be it lower economy growth or lower interest margins, these foreign banks could choose to reallocate their investment to other locations, thus reducing credit supply to the host country. This behavior would lead to an unstable aggregate domestic supply.

On the other hand, advocates of banking sector liberalization advance the argument that foreign banks could stabilize the domestic credit supply since they have wider sources of funds, other than domestic deposits. Hence, they should be able to be lender of the last resort to the domestic economy, even when domestic banks are facing funding problems to extend credit. Dages et al (2000) conclude that foreign bank penetration did not increase financial sector instability by showing that foreign



banks in Argentina and Mexico exhibited stronger and less volatile loan growth than domestic banks between 1994 and 1999, which is during and after the Tequila crisis.

However, a large number of existing empirical findings are consistent with the fact that foreign banks provide stabilizing role in the domestic credit market. Peria et al. (2005) claim foreign lending has become less indiscriminate and more responsive to host country conditions. The responsiveness even becomes less “pro-cyclical” as exposure increases. Foreign banks lending also reacts more to positive shocks rather than negative shocks and do not curtail credit during crisis. De Haas and Lelyveld (2005) find domestic banks contract their credit base during crisis period, hence, foreign banks play a stabilizing role by keeping their credit base stable. In contrast, Jeon et al (2006) find that Korean foreign banks reduced total lending during financial crisis. Also, their lending proved to be procyclical (decreasing lending when growth decreased and interest rates fell), while domestic banks lending are more counter-cyclical.

A more micro concern on foreign banks operation in any domestic economy, particularly the developing economies is related to the “cherry-picking” hypothesis. Foreign banks are superior when it comes to technology and expertise to evaluate and hence selecting the most promising and low default risk projects. They also have an advantage in terms of ability to offer better rates and lending terms. Accordingly, this could lead to credit segregation in the domestic credit market, where the high quality loans would be concentrated within foreign banks while the domestic ones are left with more risky loans.

A study on foreign banks behavior in Malaysia thus far claim that ownership structure (domestic or foreign), matters where directions and movements of bank lending are concerned, (Tuck, 2004). This conclusion emerge from his study using error correction mechanism and annual data spanning from 1964-1996, which suggests there is no long run equilibrium relationship among the output (loans and deposit) of foreign and domestic banks in Malaysia. On the issue of the stability of domestic credit supply and foreign banks operations in Malaysia, two studies thus far share a similar conclusion. Both suggest that foreign banks provide a stabilizing effect



on the Malaysian economy, inferring from their response during the recent financial crisis.

Firstly, Matthews and Ismail (2006), reveal that foreign banks operations are relatively unattached to the Malaysian macroeconomic environment, since they are less exposed to the East Asian financial crisis compared to domestic banks. However, their conclusion is based only on comparison study between foreign and domestic banks efficiency through Data Envelopment Analysis. There is no specific study on bank lending cyclicalities between the two ownership groups. Moreover, their dataset, dated only from 1994-2000. Secondly, Detragiache and Gupta (2004), employing the method advanced by Clarissens et al (2001) conclude that foreign banks provide stabilizing effect on the economy since they do not abandon the economy during crisis. The authors focus specifically on foreign banks behavior during the recent financial crises. To cater for that, they segregate Asian oriented foreign banks from non-Asian oriented foreign banks, to see the difference between foreign banks whose home country, thus the parent banks too, are exposed to the similar crisis; and those who are not.

This research would update existing empirical evidences by employing a more recent available dataset, given that prior studies focus only on foreign banks behavior during the East Asian financial crisis. Although the crisis is indeed an important event to gauge foreign banks commitment to the host country economy, yet other dimensions of lending attitude deserve to be examined such as response to investment opportunity and overall lending cyclicalities and stability.

## **Data Description and Research Design**

### **Data Sources and Description**

This research utilizes data from the financial statements of domestic and foreign banks operating in Malaysia. Banks' financial statements are obtained from the library of Institute of Bankers' Malaysia, the Central Bank Information Centre as well as respective banks' websites. The data set comprises of 24 banks, (12 foreign banks including 2 full fledged Islamic banks and 12 foreign banks) classified as commercial



banks according to the Malaysian Central Bank, from 1994-2005. We include only commercial banks in this study to minimize the problem of heterogeneity. In addition, it should also be noted that some banks enter the industry during the studied period; hence we have an unbalanced panel data. Apart from that, we utilize annual data since it represents the highest periodicity for which data is systematically available.

### **Financial Ratio Analysis**

Given that this study intends to examine foreign banks lending behavior with reference to their domestic counterparts, a comparison study will be adopted in both ratio and empirical analysis. Although ratio analysis is a relatively conventional approach, we believe that it is still relevant, and is equally capable of giving reliable insights in comparing banks behavior, and this is reflected by the adoption of this method in recent researches on comparative banking such as Jeon et al. (2006), K.Kosmidou et al (2004), and S. Canbas et al (2005).

To meet our research objectives, we carefully select the ratios that could reflect lending behavior of both groups of banks. Ratios such as average loan growth rate and average loan to total assets serve to demonstrate the commitment of foreign banks to the domestic economy, following Sabi (1996), who claim that ratio of total loans to total assets is a measure of commitment to the domestic economy. The ratios of average loan extended to commercial and industrial loan to total loan, average loan to real estate sector to total loan and average loan allocated to consumer loan to total loan are employed to examine bank lending preferences. Besides, ratios that reflect quality of bank lending portfolio such as average of non-performing loans to total assets and average of loan loss provisions are also being taken into consideration.

### **Empirical Model**

Ratio analysis allows us to differentiate both foreign and domestic banks willingness to extend loans to the economy, as reflected by their percentage of total loans to total assets. However, it does not bear any indication on the cyclicity of bank lending and whether the nature is symmetry across both groups of banks. Hence, we proceed by



developing econometric model to establish the association between bank credit supply and macroeconomic conditions, and to determine whether foreign and domestic banks display similar lending behavior.

We extend the model advanced by Jeon et al (2005) that investigate bank lending in Korea. The uniqueness of this model lies within the fact that it employs the basic portfolio theory as the basis to account for the difference between the two groups of banks' willingness to lend. Given that foreign banks have alternatives to invest, apparently they would be motivated to invest where the expected return is higher. Expected return is measured by real gross domestic product (GDP) growth as well as real interest rate. A higher real interest rate increases the expected return, holding risk constant and higher GDP growth decreases the risk of default, therefore increases expected return.

The model for foreign bank lending is as follow:

$$LOAN_t^i = \alpha_{0i} + \alpha_2 r_t^M + \alpha_3 r_t^H + \alpha_4 d \ln y_t^M + \alpha_5 d \ln y_t^H + \alpha_6 A_t^i + \varepsilon_t \quad (1)$$

where  $LOAN_t^i$  is bank  $i$  loan growth rate (measured in difference log) in period  $t$ ,  $r_t^M$  and  $r_t^H$  equal Malaysian and home-country interest rate spread (average bank lending rate-average bank deposit rate),  $d \ln y_t^M$  and  $d \ln y_t^H$  represent the Malaysian and home country bank  $i$  GDP growth rates, (measured in difference log) and  $A_t^i$  equals bank  $i$  total assets in period  $t$ .

For domestic banks without investment alternatives, the model takes the form of:

$$LOAN_t^i = \beta_{0i} + \beta_1 r_t^M + \beta_2 d \ln y_t^M + \beta_3 A_t^i + \varepsilon_t \quad (2)$$

Based on theoretical considerations, we hypothesize that an increase in expected return would increase bank lending. Thus, we expect bank lending to be positively associated with both Malaysia GDP growth rate as well as home country GDP growth



rate. Similarly, we expect a direct relationship between real interest rate and bank lending.

Where cyclicalities is concerned, we expect that foreign bank lending is relatively insensitive to Malaysian GDP growth as they could rely on parental support, (de Haas and Lelyveld, 2005). On the contrary, we expect the domestic banks to be more sensitive to the Malaysian GDP growth.

Apart from that, we include a dummy to capture East Asian financial crisis and its effect on bank lending. The dummy takes the value of 1 from 1997-2002. This follows the date of banking crisis from Caprio and Klingebiel (2002), who claim that the dates they attached to each banking crisis are those generally accepted by finance experts familiar with the countries.

We further extended Jeon et al (2006)'s model by including bank specific characteristics as possible explanatory variables. Bank health, for instance has been shown to be critical in determining banks' willingness to lend, and not ownership per se, Dages et al (2001). Thus, following de Haas and Lelyveld (2005), apart from regressing based on the aforementioned model, we proceed by including banks' specific characteristic, ratio of non-performing loans to total assets (-) and ratio of tier-1 capital to total assets ratio (+) to control for the effect of bank specific characteristics on lending, (in parentheses the expected signs). Hence, the model for foreign banks becomes:

$$LOAN_t^i = \alpha_{0i} + \alpha_2 r_t^M + \alpha_3 r_t^H + \alpha_3 d \ln y_t^M + \alpha_4 d \ln y_t^H + \alpha_5 BSPEC_t^i + \alpha_6 CRISIS_{it} + \varepsilon_t \quad (3)$$

while the domestic bank lending take the form of:

$$LOAN_t^i = \beta_{0i} + \beta_2 r_t^M + \beta_3 d \ln y_t^M + \beta_4 BSPEC_t^i + \beta_5 CRISIS_{it} + \varepsilon_t \quad (4)$$

We estimate the regression using the standard panel data analysis. We employ both fixed and random effects models with bank panel data in estimation and perform a



Hausman test to select the most appropriate specification. We assign cross-section weight to take into account the presence of cross-section heteroskedasticity in estimation. In addition, we employ White’s method of estimation to take care of the heteroskedasticity problem, therefore the estimators reported (in Table 2) are heteroskedasticity covariance consistent estimates.

**Empirical Results**

**Descriptive Analysis**

The analysis employs industry average ratio as the benchmark in comparing the two groups of bank ownership’s lending behavior. The findings reveal two important facts concerning foreign banks lending behavior with respect to their domestic counterparts.

Firstly, their willingness to finance domestic economic growth, as measured by annual credit growth as well as ratio of total loans to total assets, is less impressive as compared to the domestic banks. From Table 1, foreign banks’ ratio of loans to total assets is always above average prior to the recent financial crisis but this pattern has reversed after 1999. Apparently, the financial crisis has registered some adverse impact in foreign banks portfolio allocation behavior. The trend of ratio of loan to total assets suggests that foreign banks are diversifying their activities away from lending. They have altered their portfolio in such a way that domestic banks, which are increasingly devoting their portfolio towards lending, have undertaken them in terms of portion of total loans to total assets. However, loan growth rate depicts that foreign banks keep their annual lending growth consistent, around 6-9 percent. It is the domestic banks lending that experience significant growth since 2004. Prior to that, foreign banks lending growth exceed that of the domestic banks.



**Table 1: Financial Ratios by Bank Type and Industry Average**

	Domestic	Foreign	Industry Average	Domestic	Foreign	Industry Average	Domestic	Foreign	Industry Average
	LTA			LG					
1995	0.445	0.563**	0.500						
1996	0.461	0.626**	0.547						
1997	0.510	0.991**	0.772	27.75**	23.68	25.71			
1998	0.507	0.587**	0.550	1.96	8.36**	5.16			
1999	0.585	0.622**	0.604	-0.77	0.92**	0.08			
2000	0.520	0.570**	0.545	6.75**	6.06	6.40			
2001	0.562**	0.453	0.508	5.66	11.75**	8.70			
2002	0.595**	0.452	0.521	3.25	6.36**	4.81			
2003	0.575**	0.493	0.532	4.13	8.38**	6.26			
2004	0.554**	0.439	0.494	31.71**	9.21	20.46			
2005	0.582**	0.425	0.504	20.29**	6.97	13.63			
2006	0.595**	0.470	0.530	11.07**	8.80	9.94			
	NPLL			NPLA					
1996	0.139**	0.005	0.065	0.018**	0.003	0.009			
1997	0.158**	0.032	0.089	0.032**	0.020	0.026			
1998	0.177**	0.120	0.147	0.080**	0.073	0.076			
1999	0.184**	0.078	0.129	0.080**	0.036	0.058			
2000	0.061**	0.039	0.050	0.036**	0.018	0.027			
2001	0.109**	0.099	0.106	0.072**	0.025	0.075			
2002	0.195**	0.047	0.118	0.078**	0.027	0.051			
2003	0.165**	0.043	0.101	0.068**	0.023	0.044			
2004	0.069**	0.029	0.049	0.039**	0.014	0.026			
2005	0.066**	0.014	0.039	0.039**	0.008	0.022			
	CML			REL			CONL		
1996	0.302	0.377**	0.343	0.628**	0.102	0.341	0.065**	0.015	0.038
1997	0.409	0.793**	0.618	0.284**	0.213	0.243	0.051	0.066**	0.059
1998	0.696**	0.663	0.679	0.759**	0.248	0.493	0.086**	0.054	0.069
1999	0.562	0.577**	0.569	0.498**	0.209	0.347	0.072**	0.058	0.064
2000	0.366	0.651**	0.502	0.355**	0.317	0.337	0.050	0.057**	0.054
2001	0.397	0.659**	0.556	0.410**	0.342	0.390	0.067**	0.049	0.060
2002	0.449	0.631**	0.544	0.478**	0.320	0.396	0.066**	0.050	0.058
2003	0.404	0.649**	0.531	0.483**	0.329	0.403	0.070**	0.049	0.058
2004	0.365	0.613**	0.489	0.477**	0.339	0.408	0.125**	0.053	0.089
2005	0.292	0.565**	0.436	0.430**	0.372	0.399	0.238**	0.074	0.151

Note: The numbers are averages for the various financial ratios in each year or for the whole sample. \*\* denotes ratios that are above industry average.

Secondly, the findings also reveal evidences that there exist a stark difference in terms of foreign and domestic banks lending portfolio. Of particular concern is the evidence of credit segregation between these two groups of banks. Foreign banks' more advanced technology could give them an added advantage in terms of screening and hence selecting credible creditors or lending sectors, (cherry-picking). Consequently, domestic banks are forced to focus on lending to riskier borrowers or sectors. In the case of Malaysia, foreign banks prefer commercial and industrial lending while the



domestic ones concentrate on real estate loan. As stressed by many, among others Detragiache and Gupta (2004) and Jomo (2005), lending to property sector (real estate) is the high return yet high risk lending activity. Moreover, the former claim that real estate is the sector where most of the loan quality problems were concentrated. This might explain why domestic banks face greater risk exposure and worst asset quality as dictated by the consistently higher ratio of non-performing loans. However, though the results suggest that domestic banks are suffering from credit segregation where their lending is heavily concentrated in the relatively riskier sector, yet whether this is an outcome of foreign banks presence or their portfolio choice per se remains a question.

### **Empirical Analysis**

The estimations involved three separate equations, one for the overall banks behavior in the economy irrespective of ownership group, another one for the domestic banks only and lastly foreign banks only to understand their lending attitude. Comparing the first set of regression on overall lending cyclicality with the second regression, on domestic banks lending alone shows how bank lending cyclicality would be, should foreign banks are totally absent from the economy. Table 2 below summarized estimations for both foreign and domestic bank lending.

Overall, bank lending in Malaysia is countercyclical. This dictates lending in Malaysia is one of the mechanism used to smooth out cyclical fluctuations. In Dages et al (2000) words, bank lending pattern in Malaysia is more of a “relationship lending” as opposed to “transactions lending”. With relationship lending, banks would expand loans under adverse economic conditions to offset some of the shortfall in customers’ funds while during good economic times, banks cut down lending as borrowers payback outstanding loans.

Banks respond to interest rate spread, however do not correspond to the standard investment theory. Banks react to an increase in interest rate spread by reducing lending. This is similar to the behavior of Korean banks during financial crisis, Jeon et al (2006). According to Jeon et al (2006), this could possibly be explained by



information problems in loan markets. The increase in interest rates is associated with the possibility of adverse selection problems among their loan applicants. Those who are willing to borrow even at a relatively high interest rate are those who are more likely to be involved in riskier projects, hence are more likely to default. Hence, banks reduced lending as interest rate increases.

**Table 2: Models of Credit Growth**

	Overall	Domestic Banks	Foreign Banks
Constant	0.322056 (0.148478)***	2.229940 (0.827563)***	0.097778 (0.119015)
GDP			-0.029138 (0.014379)**
GDPMAL	-0.010511 (0.004835)**	-0.0266337 (0.010610)**	0.012719 (0.012985)
CRISIS	0.000646 (0.048035)	-0.084243 (0.042683)**	0.053779 (0.035341)
SPREAD			0.064282 (0.020283)**
SPREADMAL	-0.101540 (0.047826)**	-0.095985 (0.053004)**	-0.112140 (0.022089)***
SIZE	0.370844 (0.169271)***	-0.110322 (0.049978)**	0.619035 (0.134231)***
TAR	0.848948 (0.499073)**	2.231111 (1.129841)**	-0.208414 (0.120089)**
NPLA	-0.335981 (0.371220)	-0.266644 (0.338992)	-0.255109 (0.551930)
R-Squared	0.40	0.34	0.48
F-Statistics	3.26 (0.00002)	5.39 (0.00015)	6.86 (0.00002)
Durbin-Watson	1.9985	1.9434	1.9807
Hausman Test	16.5646 (0.0110)	8.8388 (0.1828)	9.452503 (0.3056)
Statistics	Fixed Effects Model	Random Effects Model	Random Effects Model

Notes:

1. Credit growth is measured by change in log loan.
2. GDP, GDPMAL, SIZE are also in change in log. SIZE is measured by total assets of each banks, TAR is ratio of equity to total assets while NPLA is non-performing loans to total asset ratio. SPREAD refers to the difference between lending rate and credit rate.
3. Figures in parantheses are standard errors.
4. \*\* and \*\*\* denotes significant at 95% and 99% confidence level.



The results however dictate both groups of bank ownerships display a contradictory nature of lending attitude where cyclical nature is concerned. The domestic banks lending policy remains countercyclical but there is no evidence that foreign banks lending is tied to the Malaysian economic growth. This is in line with the findings from Matthews and Ismail (2006) which claim that foreign banks lending is unattached to the Malaysian macroeconomic variables. Jeon et al (2006) also find that Korea's economic growth did not influence foreign banks lending activity, while the domestic ones demonstrate a counter-cyclical lending behavior.

The estimation also establishes evidences that there is a significant reduction in domestic bank lending during the recent financial crises, yet the crisis did not significantly affect foreign banks lending. This is in line with descriptive study done by Detragiache and Gupta (2004) that reveals foreign banks contracted lending during crisis, but less than their domestic counterparts. The lending pattern of both foreign and domestic banks in the case of Malaysia is also similar to those exhibited by the CEE banks, where de Haas and Lelyveld (2005) find in CEE, during the period of crisis, the domestic banks contracted credit while foreign bank lending is not affected. On the contrary, Jeon et al (2006) expose that domestic banks in Korea, increases their lending during crisis but their foreign counterpart displayed a reduction in lending activity.

Results also show that domestic banks lending are more sensitive to macroeconomic shocks as opposed to foreign banks. This boils down to in terms of stability, with respect to the Malaysian economic fluctuations; foreign banks do not present a threat to lending stability. Although their lending is neither significantly countercyclical nor procyclical, the fact that it is less sensitive to economic growth and there is no evidence that they contracted their lending base during the recent crisis as opposed to their domestic counterparts, renders foreign banks lending as more stable across economic fluctuations.

Another insight related to foreign banks' role in domestic credit market stability could be elicited by comparing the three regressions. Without foreign banks in the economy, evidence points that domestic banks on their own curtailed lending during



the recent crisis. Inclusion of foreign banks (from regression 1) however demonstrates there is no evidence to claim total bank lending contracted during the crisis. This implies foreign banks help stabilize the domestic credit market. The volatility of bank lending cyclicality also further reinforces the role of foreign banks as domestic credit stabilizer. While any changes in economic growth would lead to a 2.6% countercyclical change in growth of domestic bank lending activity, together with foreign banks, changes in economic growth would lead to only a 1% negative response in bank lending. Thus, foreign banks stabilize domestic credit market in the sense that bank sensitivity to economic cycles is reduced by more than half of that should the economy comprises only the domestic banks.

However, the evidence dictates foreign banks are susceptible to their home-country economic growth. Their willingness to extend loan as portrayed by their amount of lending would be reduced by economic expansion in their own country. This suggests some kind of substitution across markets. Their behavior follows the argument that foreign banks would seize the opportunity by investing more in their branches overseas when investment opportunity in their own country is limited by unfavorable economic consequences. This scenario provides an insight that foreign banks do not pose any threat on the stability of domestic credit supply with a caveat, which is only if home country economy and host country economy is either positively correlated or uncorrelated. This is since a better economic condition in their respective home country could register an adverse shock to their lending base to the domestic (host country) economy. Our findings are consistent with what is reported by Goldberg (2001), that total lending by US banks in Asia responded negatively to home country economic growth. This particular relationship, holds specifically in the case of US banks operating in Asia while in the case of Latin America, US banks expand lending in the domestic economy as US economic experiences greater economic growth.

Interest rate spread is also an important determinant of foreign banks lending activity. Foreign banks would reduce lending when domestic interest rate increases, most probably to minimize adverse selection problems and its consequences on their loan default rates. However, evidences claim that an increase in home country spread would encourage foreign banks to extend more loans to the Malaysian economy. This



findings correspond to the argument that the mechanism on how home country macro conditions affected foreign banks lending is an empirical issues. Though the standard portfolio theory suggest foreign banks would respond by contracting lending to the host country in light of an increase in interest spread at home, it seems that the argument did not hold in Malaysia. A more favorable investment climate at home strengthen parent banks, made available more fund to be invested in the form of lending to the host country. The domestic credit market seems to experience some positive spill over from the well being of the parent company.

Bank size or total assets is another factor that influences foreign banks and local banks lending behavior differently. While size negatively influences domestic lending, foreign banks do increase their total lending when their total assets increase. This could be attributed to the choice of domestic banks to diversify their activities, from focusing squarely on their traditional lending and deposit-taking, as their size grows. On the other hand, foreign banks usually start off with relatively mixed and diversified activities, enabling them to increase their lending base further with any increment in asset size.

Apart from that, bank level of capitalization affected their lending attitude asymmetrically. The domestic banks follow the conventional banks behavior where their lending would increase with any expansion in their capital base. However, foreign banks lending decision following an increase in capital, is consistent with Shimizu and Horuichi (1998) theoretical model, where any expansion in capital base would lead to a contraction in lending. Capital expansion in terms of equity makes banks more risk-averse in nature as the increase in equity capital requires a higher level of protection against the value of their shares.

Collectively, our findings suggest that ownership structure matters in terms of the nature of cyclicity. Their responses differ during crises and the cyclical nature of each ownership groups of banks is different. However, the interactions of the patterns suggest both domestically owned and foreign owned banks complement each other. The former countercyclical lending behavior serves as a buffer during economic downturn and smooth out economic expansion. As for the latter, although there is no



indication of any attachment of their lending and domestic economic growth, the fact that there is no evidence they contracted their lending base during financial crisis, while their domestic counterparts did and their lending moderated bank lending sensitivity to economic growth, dictate that to a certain extent, their lending behavior do stabilize the Malaysian loan supply during certain macroeconomic shocks.

## Conclusion

This research is conducted to shed lights on whether foreign banks lending behavior destabilizes bank lending activity in Malaysia, in terms of lending cyclicalities and sectoral preferences. The findings suggest that banking sector liberalization is justified on the macro frontier. Though the growth of their credit base is weaker than the domestic banks, their lending activity is less sensitive to economic shocks. Apart from the findings that claim their lending is unattached to domestic macroeconomic conditions, the evidence also indicates that their credit contraction during the recent crisis is insignificant as opposed to the domestic banks and their lending moderated the sensitivity of bank lending to economic cycles. This leads to the conclusion that they offer a more stable aggregate credit supply.

However, the existence of credit segregation among different ownership groups warrants some attention. The descriptive analysis shows foreign banks tend to cherry pick the lower risk, high quality loans which are concentrated in the commercial and industrial lending while domestic banks have a propensity to channel their lending mostly to the relatively higher risk sector which is real estate lending. This might explain the reason why domestic banks are having relatively worst quality of lending portfolio, depicted by the higher non-performing loans to assets ratio. Looking from another angle, this might due to either foreign banks possess superior technology in selecting those high quality borrowers from the pool of potential borrowers, or they are better able to attract lower risk loan applicants.

In conclusion, where Malaysia is concerned, the claim that foreign banks lending attitude distort domestic credit supply stability is baseless. In fact, empirical evidence



suggests foreign banks stabilize domestic credit market by providing a buffer during crisis and moderating lending volatility across economic cycles. The only matter of concern is the evidences empirically suggest credit market segregation hypothesis holds true. Assuming existing lending portfolio patterns of the domestic banks is a consequence of the foreign banks behavior and not a matter of choice, a way out would be to encourage domestic banks to increase their efficiency in selecting their potential borrowers by adopting the kind of technology employed by foreign banks.

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