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## A Second Look at Credit Crunch: The Philippine Case

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Philippine Institute for Development Studies

## A Second Look at Credit Crunch: The Philippine Case

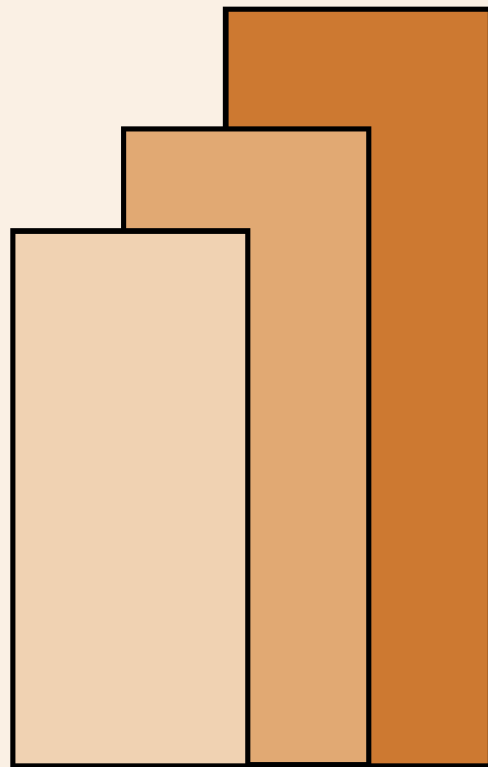
*Mario B. Lamberte*

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## **A SECOND LOOK AT CREDIT CRUNCH: THE PHILIPPINE CASE<sup>1</sup>**

*Mario B. Lamberte<sup>2</sup>*

*“Things are seldom what they seem,  
Skim milk masquerades as cream.”  
Gilbert  
H.M.S. Pinafore*

### **ABSTRACT**

*This paper tries to verify empirically the claim that there has been a credit crunch in the Philippines since the onset of the Asian financial crisis in July 1997. The results of the analysis using both macro and micro level data do not support such claim. Instead, the results tend to show that the current slowdown in bank loans is merely a reflection of the economic downturn. The paper recommends that policy makers focus their attention on raising aggregate demand using both monetary and fiscal policies.*

### **I. INTRODUCTION**

Two years after the Asian financial crisis struck, the Philippines is finally seeing some lights at the end of the tunnel. GDP grew by 1.2 percent in the first quarter of 1999 and by 3.6 percent in the second quarter. Inflation rate fell to a 23-month low of 5.7 percent in July 1999. Meanwhile, the bellwether 91-day Tbill rate dropped to 8.5 percent on 6 July 1999, the lowest in the last 12 years. In June, the gross international reserves reached a record high of US\$14 billion, which can cover more than four months of imports.

A dark cloud, however, seems to be lurking at the end of the tunnel. Despite improving outlook of the Philippine economy in the past few months, recent statistics still show that bank loans have continued to shrink. The seeming reluctance of banks to lend has worried policy makers and

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<sup>1</sup> This is part of the larger research project of the Institute on the Economic Impacts of the Asian Financial Crisis.

<sup>2</sup> Acting President, PIDS. The author wishes to acknowledge the research assistance provided by Ms. Chelo Manlagnit and Ms. Hope Gerochi and secretarial assistance by Ms. Juanita Tolentino. Thanks are due to the participants of the seminar held on 25 August 1999 in which the preliminary draft of this paper was discussed.

some analysts because it could undermine the strength of the economic recovery. In fact, a lot of people are now ganging up on the banks for not expanding their loans fast enough to support the expected economic turnaround, screaming “*credit crunch*”!

Is there really a credit crunch? If so, what factors have caused it? These were the questions that the Economic Monitoring Group (EMG) attempted to answer when it called representatives from the business sector, bankers associations and academe to a meeting at the Bangko Sentral ng Pilipinas last June 25, 1999. Although there was a lack of consensus on the issue about the existence and causes of a credit crunch since the onset of the Asian financial crisis, the participants of said EMG-led meeting still proceeded to put forward some recommendations to encourage financial institutions to increase the flow of credit to the private sector.

This paper attempts to revisit those questions and amplifies some of the points made in an earlier paper on the credit crunch issue in the Philippines during the Asian financial crisis.<sup>3</sup> To put the issue at hand in a proper perspective, the next section briefly discusses the literature on the credit view and credit crunch. The third section presents a conceptual definition of credit crunch and a simple theoretical framework for detecting the existence of a credit crunch. The fourth section discusses the necessary and sufficient conditions for the existence of a credit crunch. The fifth section provides an empirical analysis of the existence of credit crunch in the Philippines using macro and firm-level data. The sixth section gives a brief discussion of what can be expected in the near future. The last section concludes the paper and makes some policy recommendations.

## II. CREDIT VIEW AND CREDIT CRUNCH

At first blush, the credit crunch problem looks like a simple operational problem. However, it actually forms part of the literature on monetary transmission mechanisms and business cycle.<sup>4</sup>

The traditional Keynesian view, which is also referred as the *money view* or the textbook *IS-LM model*, considers only two financial assets, namely, money and bonds. All non-money assets, such as bonds, commercial papers, stocks, bank loans, etc., are assumed to be perfect substitutes.

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<sup>3</sup> See Lamberte *et al.* (1999).

<sup>4</sup> Neumann (1995) and Mishkin (1996) provide an excellent review.

Thus, monetary policy is transmitted to aggregate demand through a single interest rate, the bond rate. It can be summarized as follows:

$$M \uparrow \Rightarrow i_r \downarrow \Rightarrow I \uparrow \Rightarrow Y \uparrow \quad (1)$$

where M is money supply;  $i_r$ , real interest rate; I, investment; and Y output. That is, an expansionary monetary policy reduces the real interest rate, which leads to an increase investment, which is a component of aggregate demand, and to a rise in output. Variants of this model include exchange rate and equity prices as channels. The effectiveness of monetary policy depends on the elasticity of the demand for money. It is to be noted that the *money view* does not have a banking sector, and therefore, credit movements do not exert an independent influence on economic activity.

The *money view* has been challenged by the so-called *credit view*.<sup>5</sup> This new view assumes that there is imperfect substitution among non-money assets. For example, bonds and bank loans are not perfect substitutes. Another example is that credit instruments available to large corporations are different from those available to small corporations. Likewise, savings instruments available to large savers are different from those available to small savers. The *credit view*, therefore, emphasizes the interplay between credit and economic activity. The implication of this view is that disruptions to the credit markets can have significant effects on output and employment. Therefore, monetary authorities must use other tools to influence the credit supply.

The *credit view* suggests two new channels of influence for monetary policy, which arise as a result of information problems in credit markets. One is referred to as the “balance sheet channel”, which emphasizes the effects of changes of monetary policy through balance sheets of consumers and firms. More specifically, an increase in money supply leads to a rise in equity prices; hence, the net worth of firms improves. This reduces adverse selection and moral hazard problems, which encourages banks to lend to firms. The whole process can be summarized as follows:

$$M \uparrow \Rightarrow P_e \uparrow \Rightarrow \text{adverse selection} \downarrow \text{moral hazard} \downarrow \Rightarrow \text{lending} \uparrow \Rightarrow I \uparrow \Rightarrow Y \quad (2)$$

<sup>5</sup> See Brunner and Meltzer (1988); Bernanke and Blinder (1988); Bernanke (1993), among others.

$P_e$  refers to equity prices. Adverse selection refers to the problem of distinguishing good-risk borrowers from bad-risk borrowers before making a loan, while moral hazard reflects the lenders' difficulty in monitoring borrowers after making a loan. The other variables are defined as above.

The other is referred to as the "bank lending channel", which states that changes in monetary policy affect bank deposits and, hence, banks' loanable funds. The increased supply of bank loans encourages investment, which, in turn, affects output. That is,

$$M \uparrow \Rightarrow \text{bank deposits} \uparrow \Rightarrow \text{bank loans} \uparrow \Rightarrow I \uparrow \Rightarrow Y \uparrow \quad (3)$$

Accordingly, monetary policy will have different impacts on different types of firms. More specifically, loan-dependent firms, such as small firms, will be affected more by changes in monetary policy than large firms, which have access to alternative sources of funds, such as the securities market.

### III. WHAT IS A CREDIT CRUNCH?

The rapidly growing literature on the "credit crunch" has emerged with the debate between the *money view* and the *credit view* providing as a backdrop.<sup>6</sup> According to Kliesen and Tatom (1992), the phrase "credit crunch" first appeared in mid-1966 when the US Federal Reserve Board instituted a restrictive monetary policy to "slow the growth of demand for goods and services in order to fight inflation" (p. 19). Since then, credit crunch had been used to describe credit contraction associated with high interest rates.<sup>7</sup> However, the character of credit crunch in the US seems to have changed in the early 1990s when credit contraction occurred at a time when interest rates were falling. This has prompted some economists to look for other reasons for the credit crunch.

A credit crunch is always associated with a decline in the quantity of credit, but not every decline in the quantity of credit is a credit crunch. Thus, it is necessary to differentiate the term *credit crunch* from the term *credit slowdown*. A decline in the quantity of bank loans, which has been

<sup>6</sup> For example, see Blinder and Stiglitz (1983).

<sup>7</sup> In its August 7, 1999 issue, *The Economist* warns of an impending credit crunch in the US as demonstrated by the widening in the spreads on corporate-bond issues and mortgage-backed securities.

observed, for instance, to have dropped from Php 1.4 trillion in June 1998 to Php 1.3 trillion in June 1999, might have been induced either by a decline in the supply or demand for credit or both. The term *credit slowdown* is used to refer to the combined effects of both supply factors and demand considerations on the quantity of credit. On the other hand, the term *credit crunch* refers only to a reduction in the available supply of credit.<sup>8</sup> The US Council of Economic Advisers (1992) defines credit crunch in the following manner:

*“A credit crunch occurs when the supply of credit is restricted below the range usually identified with prevailing market interest rates and the profitability of investment projects.”*  
(p. 46)

An alternative, but straightforward definition of a credit crunch is provided by Hadjimichalakis and Hadjimichalakis (1995) as follows:

*“Credit crunch occurs when banks are less willing and able to lend to creditworthy customers.”* (p. 113)

Clearly, a credit crunch is a supply-side phenomenon. A drop in the quantity of bank loans caused by a decrease in demand for credit by firms and households due to depressed economic activity is a demand-side phenomenon, which must not be confused with the term *credit crunch*. The figures below showing the familiar supply and demand curves for credit will help to clarify these points.<sup>9</sup>

**Figure 1** illustrates the case of a supply-induced decline in credit. Equilibrium in the credit market is established at interest rate,  $i_0$ , and the quantity of credit,  $C_0$ . A tight monetary policy could shift the supply curve from  $S_0$ , to  $S_1$ , causing the equilibrium interest rate to rise to  $i_1$  and the flow of credit to decline to  $C_1$ . A change in other factors can likewise cause the supply of credit to shift upward. For instance, regulators might impose tighter prudential standards, such as stricter definition of past due loans and increase provisions for non-performing loans, which raises the banks' marginal

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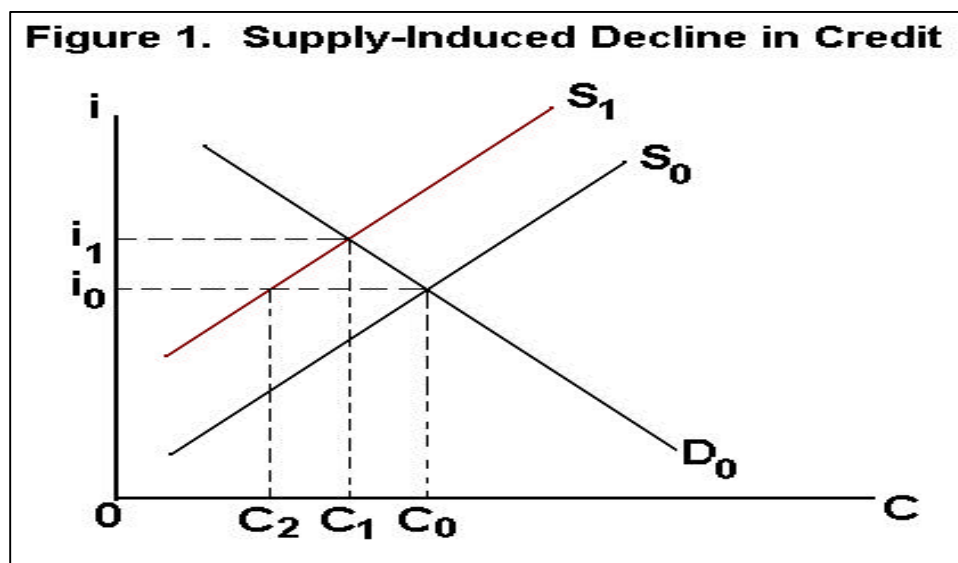
<sup>8</sup> These terms are drawn from Cantor and Wenninger (1993).

<sup>9</sup> The figures are adopted from Kliesen and Tatom (1992) and Ito and Pereira da Silva (1999).

cost and consequently dampens the banks' willingness to lend more and issue more deposit liabilities.<sup>10</sup> This will result in the widening in the spread between lending and deposit rates. Thus, a tight monetary policy combined with much stricter regulatory standards can result in much more severe credit crunch. Other unexpected shocks to the banking sector that lead to a disruption in the credit market will have similar effects.

The unwillingness of banks to lend can be a function of default risk. A change in the perception about credit risk could compel banks to raise lending rate to compensate for the additional risk in lending. This will similarly shift the supply curve upward as shown in **Figure 1**. Since the alternative for banks is to place their funds on risk-free assets, this situation will result in a widening in the spread between lending rate and return on risk-free assets.

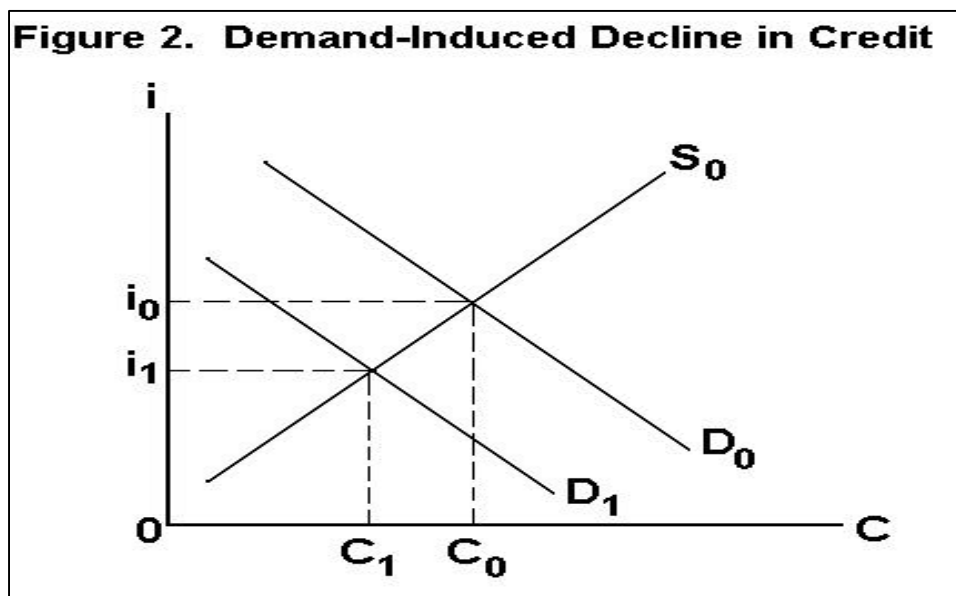
The credit crunch may result from the aggravation of asymmetric information problem, which is endemic in credit markets (Cantor and Wenninger 1993). Whenever banks perceive an increase in credit risk, they may not raise the interest rate to say,  $i_1$ , because of the presence of adverse selection problem, which makes raising the lending rate to clear the market unprofitable. Rather, banks prefer to continue charging at the same rate,  $i_0$ , and ration credit, resulting in a much lower quantity of credit, say  $C_2$ , than if there were no credit rationing, i.e.,  $C_1$ .



<sup>10</sup> One of the participants during the seminar pointed out that the Central Bank Governor's recent announcement that he wants to have fewer, but bigger banks in the next few years may have fueled banks' unwillingness to expand lending.



In contrast to **Figure 1**, **Figure 2** presents the case of a demand-induced decline in credit. The downward shift in the demand for credit could be due to a slowdown in production in response to a sluggish demand for goods or to increased access to alternative sources of funding, such



as the securities market. In any case, the result is that both the equilibrium interest rate and the quantity of credit to the business sector decline. This situation should not be considered a credit crunch.

There may be periods when the shift in the supply of credit upward occurs simultaneously with the downward shift in the demand curve. In such situations, credit crunch is said to occur only when the former has a dominant effect over the latter, resulting in much higher equilibrium interest rate and lower quantity of credit.

Indeed, the real challenge lies in distinguishing a credit slowdown originating from the supply side (credit crunch) from that coming from the demand side of the credit market since each type requires a different set of policy prescriptions. Admittedly, making such distinction is not easy to do because credit slowdown occurring in many countries, including the Philippines, has been associated with economic downturn. In fact, there is still an on-going debate about the occurrence of a credit crunch in those periods marked by credit slowdown in the US economy. The debate has recently

spread to Asia when a financial crisis hit the region beginning in July 1997.<sup>11</sup> Understandably, the competing views have led to different policy prescriptions. For example, those who believe that Asian economies are currently experiencing a credit crunch argue that traditional monetary tools cannot reliably address cyclical problems when there are severe disruptions in the credit market that adversely affect economic activity. Therefore, monetary authorities must abandon the traditional IMF prescriptions and instead use other tools to influence the credit supply. These may include: temporary suspension of capital adequacy standards, provision of credit through non-market channels, and unlimited and unconditional provision of domestic liquidity, among others.<sup>12</sup>

#### **IV. NECESSARY AND SUFFICIENT CONDITIONS FOR A CREDIT CRUNCH**

According to Cantor and Wenninger (1993), a credit crunch implies changes in the relationship between credit availability and interest rates:

- (a) less credit may be available over a wide range of interest rates, a condition consistent with a shift in a credit supply schedule while the credit demand schedule remains unchanged, or
- (b) the reduction in credit availability may bear little relation to the level of interest rates, a condition that occurs when banks allocate credit not by the price (i.e., interest rate) but through non-price mechanisms to overcome the problem of imperfect information and asymmetric information, wherein borrowers possess information about their opportunities/activities or creditworthiness that they do not disclose to lenders or creditors.

The task, therefore, is to find indicators that can describe both conditions (a) and (b).

It can be gathered from the discussions above that a necessary condition for the existence of a credit crunch during a certain period is that the quantity of credit is contracting. When examining

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<sup>11</sup> See Lamberte *et al.* (1999), Ito and Pereira da Silva (1999), Ding *et al.* (1998), and Waiquamdee *et al.* (1999).

<sup>12</sup> Yoshitomi and Ohno (1999).

credit crunches, the behavior of bank loans over time should be related to the size of the economy, which is proxied by GDP. Quarterly data are available for both GDP and loans of commercial banks.<sup>13</sup> Since the growth rate in the ratio of bank loans to GDP, or credit ratio for short, could fluctuate from quarter to quarter, a credit crunch episode should be associated only with that period when such growth becomes negative for at least two consecutive quarters.<sup>14</sup>

The credit contraction is a necessary but not sufficient condition for the existence of a credit crunch. A corroborating evidence or sufficient condition must be satisfied before accepting any credit contraction as a credit crunch episode. Five possible corroborating pieces of evidence have been examined.

### *Indicators for the Shift in the Credit Supply Schedule*

The following are possible indicators for the shift in the credit supply schedule, with credit demand schedule remaining unchanged, or credit supply declining more than demand for loans:

1. Real lending rate must be rising during a credit crunch episode. This is because a drying up in the supply of bank loans, with demand for bank credit remaining unchanged, can lead to a rise in interest rate.
2. The spread between loans and risk-free assets must be widening during a credit crunch episode. This is because banks may be reluctant to lend during periods when risks are perceived to be rising. Such behavior can be reflected in the spread between the lending rate and the rate of return on less risky investment instruments, such as the Treasury bills.
3. Bank intermediation spread must be widening during a credit crunch episode. A tightening in regulatory standards can reduce banks' willingness to lend, even to some of their creditworthy customers. the BSP redefined the criteria for determining past due loans and required a general loan-loss provision loans in October 1997.<sup>15</sup> This is in addition to the 20 percent cap on real estate loan. When banks are less willing to

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<sup>13</sup> Commercial bank loans comprise about 90 percent of the total outstanding loans of the banking system.

<sup>14</sup> In the Philippines, the official definition of a recession is that real GNP declines by at least two consecutive quarters.

<sup>15</sup> Before the Asian crisis, loans were treated as past due if the number of installments in arrears reached six in the case of loans payable on a monthly basis and two in the case of loans payable on a quarterly basis. Starting October 1997, the number of installment in arrears was reduced to three and one, respectively. Meanwhile, the schedule for the compliance

lend, even to their creditworthy customers, they will likely bid less aggressively for deposits, and perhaps maintain or raise their lending rate, which will result in the widening of the bank intermediation spread.

### ***Indicators for Tighter Credit Rationing***

A widely held view is that banks and other lenders ration credit; that is, they allocate credit not by the price of credit, i.e., interest rate, but through non-price mechanisms. Credit rationing is a response by lenders to asymmetric information problem in credit markets wherein borrowers have private information that banks do not have. A sudden change in economic conditions could lead to a change in the lenders' and borrowers' perception to the terms in which credit is made available. Thus, economic uncertainty could aggravate the information asymmetry problem in credit markets, which would prompt lenders to cut back on loans, thereby leading to a credit crunch.

The following types of credit rationing will be examined here:<sup>16</sup>

1. ***Pure credit rationing*** occurs when some borrowers are denied credit while otherwise identical borrowers receive credit. In this case, lenders may not raise interest rate to the point where demand is equal to the supply of credit to avoid the adverse selection problem; that is, attract only riskier borrowers.
2. ***Sectoral credit rationing*** refers to the application of credit standards that effectively shut off the flow of credit to entire sectors, such as certain classes of borrowers or types of borrowing. During times of economic uncertainty, banks may have difficulty sorting out bad from good credits within a sector, say non-exporters or small firms, and therefore choose not to lend at all.

The existence of any of these five corroborating pieces of evidence is a sufficient condition for the occurrence of a credit crunch.

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of the general loan-loss provision was set as follows: 1% - 1 October 1998; 1.5% - 1 April 1999; and 2% - 1 October 1999.

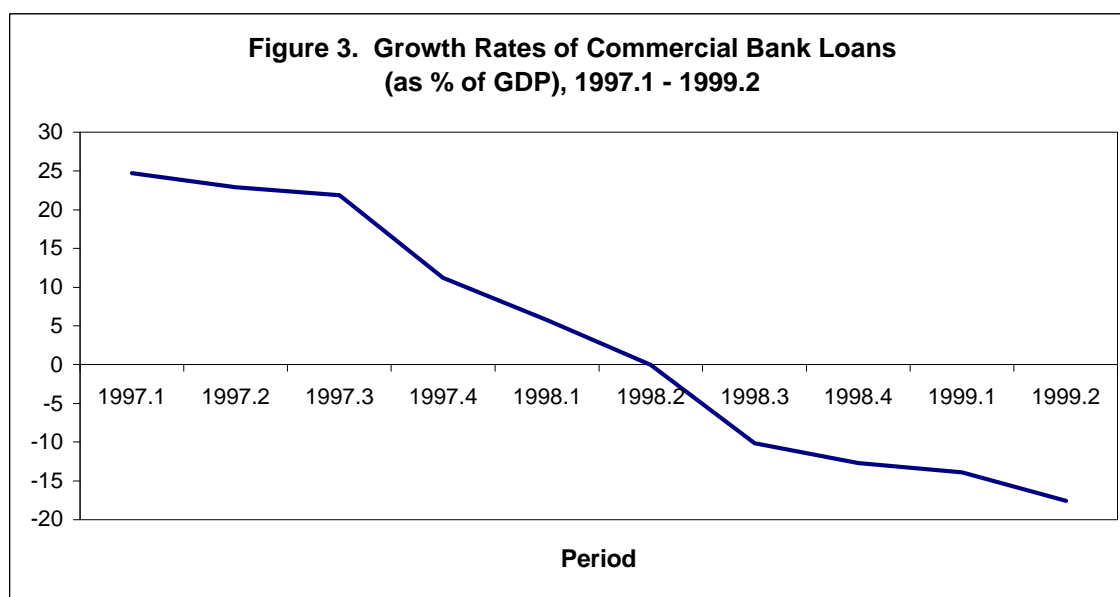
<sup>16</sup> This is taken from Cantor and Wenninger (1993).

## V. EMPIRICAL RESULTS

The discussions below will focus first on the issue whether the necessary condition for the existence of the credit crunch has been satisfied and later, on the issue whether any of the above-mentioned sufficient conditions have been satisfied. Macro level data will be used to see if any of the first three possible sufficient conditions for the existence of a credit crunch has been satisfied, while firm-level data will be utilized to verify if the fourth and fifth sufficient conditions have been satisfied.

### A. Necessary Condition

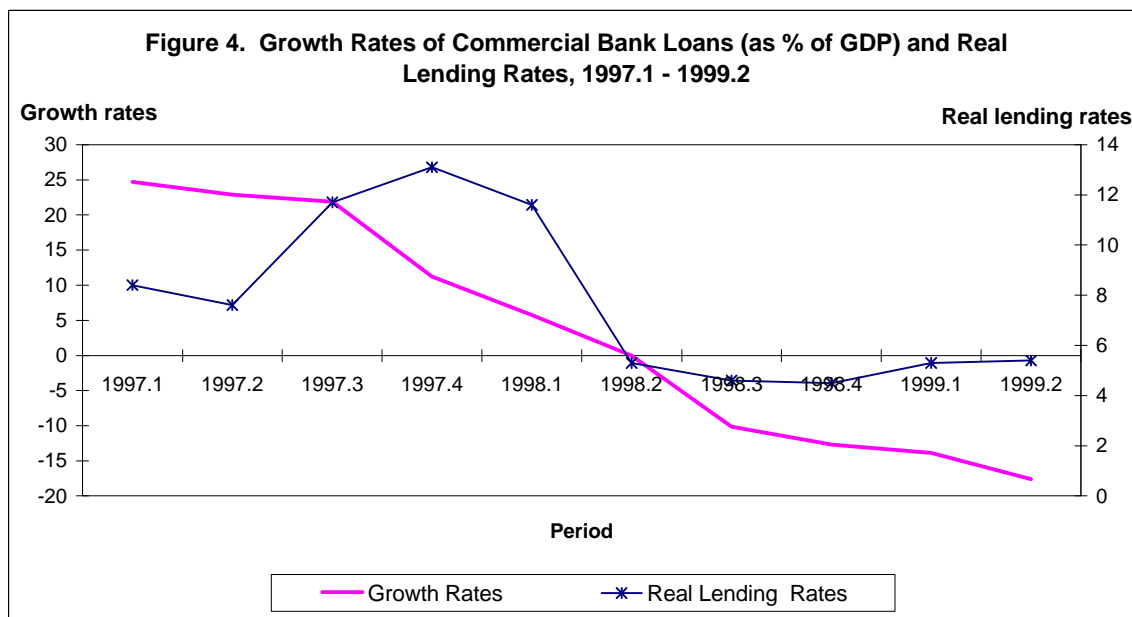
**Figure 3** shows that the growth in the credit ratio had been declining since the onset of the Asian financial crisis and had entered the negative territory since the second quarter of 1998. For the second quarter of 1999, the credit ratio contracted by 17.6 percent on an annual basis. Thus, the empirical evidence satisfies the necessary condition for the existence of a credit crunch beginning in the second quarter of 1998.



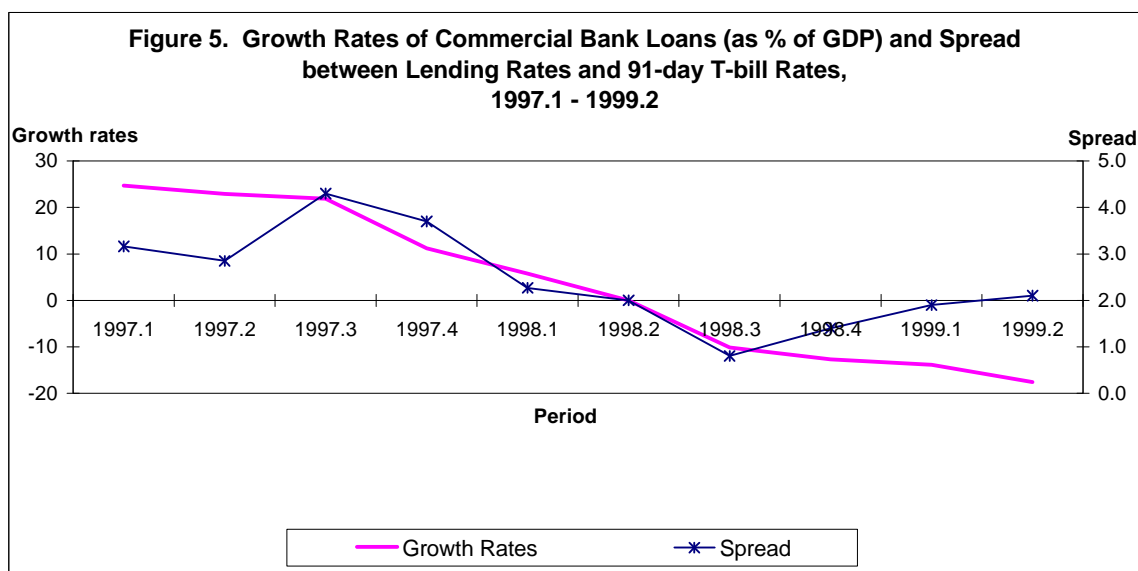
**B. Sufficient Conditions**

*1. Evidence from Macro Level Data*

A rise in the interest rate during the period when bank loans are declining is a sufficient condition for the existence of a credit crunch. **Figure 4** depicts the behavior of the real lending rate together with that of the credit ratio from the first quarter of 1997 to the second quarter of 1999. As a result of the tightening of monetary policy, real lending rate rose up until the fourth quarter of 1997. Thereafter, it declined as monetary policy was eased up. On the other hand, the growth rate of bank loans continued to decline even during the period when the real lending rate declined. It, therefore, appears from the results that this sufficient condition for the existence of a credit crunch is not being satisfied.



A possible widening in the spread between loans and risk-free assets during the period when bank credit is declining is another sufficient condition for the existence of a credit crunch that was examined. **Figure 5** shows the movements of the spread between bank lending rate and the 91-day Tbill rate together with that of the credit ratio since the first quarter of 1997. After rising in the third quarter of 1997, the spread tended to



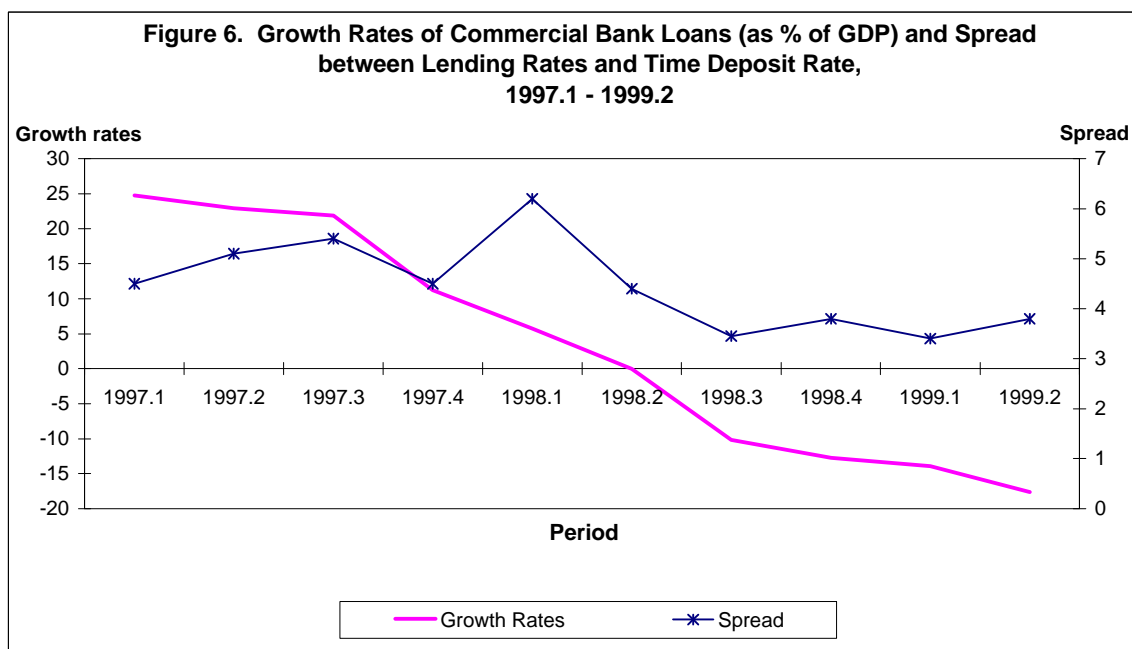
narrow in the subsequent quarters. In fact, the spread became much thinner in 1998 when the growth in bank loans became severely negative compared with the previous year. The results, therefore, do not satisfy this particular sufficient condition for the existence of a credit crunch.

The third sufficient condition that was examined was the unwillingness of banks to lend caused by the tightening of regulatory standards, which could result in the widening in the intermediation spread. It appears, however, from **Figure 6** that bank intermediation spread has not widened since the onset of the Asian financial crisis, except during the first quarter of 1998. Thus, this sufficient condition for the existence of a credit crunch has not been satisfied.

## 2. Evidence from Firm Level Data

A survey of 541 firms was recently conducted by the National Statistics (NSO) with financial support from the World Bank to determine the impacts of the Asian financial crisis on the manufacturing sector.<sup>17</sup> Of the total number of firms surveyed, 69 percent claimed to have experienced a decline in output since July 1997. Some of the data can be used to answer the

<sup>17</sup> See Lamberte *et al.* (1999).



question of whether there has been an aggravation of information asymmetry problem in the Philippines during the crisis period from the point of view of firms.

Concerning *pure credit rationing*, the results of the above-mentioned survey show that the proportion of firms denied of bank credit rose from 6.4 percent before the onset of the Asian financial crisis, i.e., January to June 1997, to 13 percent during the crisis period (see **Table 1**). Although the percentage of those who admitted having been denied of a loan by a bank or finance company had doubled during the crisis period, it is still much smaller than what is generally expected considering the economic uncertainty brought about by the Asian currency meltdown. In other words, a great majority of the sample firms still have continued access to credit from a bank or finance company during the crisis period.

Before admitting that an intensification of pure credit rationing has occurred during the crisis period, it is important to find out if banks have a good basis for denying the loan applications of some firms during the crisis period. Heavy debt exposure of firms could be one of the reasons. The survey



<b>Table 1. Enterprises Denied of Bank Loans</b>			
<b>In percent</b>			
	<b>January 1 - June 30, 1997</b>	<b>July 1 - December 31, 1997</b>	<b>so far in 1998</b>
<b>A. Export Orientation</b>			
1. Exporters	6.61	11.98	14.34
2. Non-Exporters	6.28	12.56	11.61
<b>B. By Size of Firms</b>			
1. Small	5.24	8.66	11.16
2. Large	7.56	15.68	14.77
<b>C. Total</b>	<b>6.42</b>	<b>12.21</b>	<b>12.98</b>

Source: Survey of Philippine Industry and the Financial Crisis, 1998

results show that the average debt-equity ratio of those firms being denied of bank loans increased from 3 in 1996 to 5.1 during the first half of 1998, whereas the debt-equity ratio of firms that were able to access bank credit declined from 3.5 to 2.7 in the same period (see **Table 2**). This means that banks were able to sort out risky from less risky borrowers on the basis of their customers' debt exposure. These results do not lend support to the view that there has been an intensification of pure credit rationing in the recent past.

As regards *sectoral credit rationing*, it is generally expected that during periods of economic uncertainty accompanied by sharp currency depreciation, banks will discriminate against small firms and non-exporters and favor large firms and exporters. However, the survey data presented in **Table 1** do not support this view. As shown, the proportion of exporters denied of bank loans during the crisis period had increased more than that of non-exporters (beginning vs. end period).<sup>18</sup> In terms of size, both small and large firms saw a doubling in the proportion of firms denied of bank loans during the indicated period.<sup>19</sup>

<sup>18</sup> There is anecdotal evidence that some exporters ran into financial trouble right after the sharp depreciation in the peso in July 1997 because they contracted dollar-denominated loans to finance their non-exporting businesses.

<sup>19</sup> Small firms are those with employment in 1996 of less than 150.

Period	Denied of bank loans		Not denied of bank loans	
	Median	Mean	Median	Mean
1. 1996	2.06	3.00	2.32	3.51
2. 1997	3.18	4.43	2.36	3.52
3. 1998:First half	4.03	5.10	1.96	2.68

*Computation of means excludes outliers.*

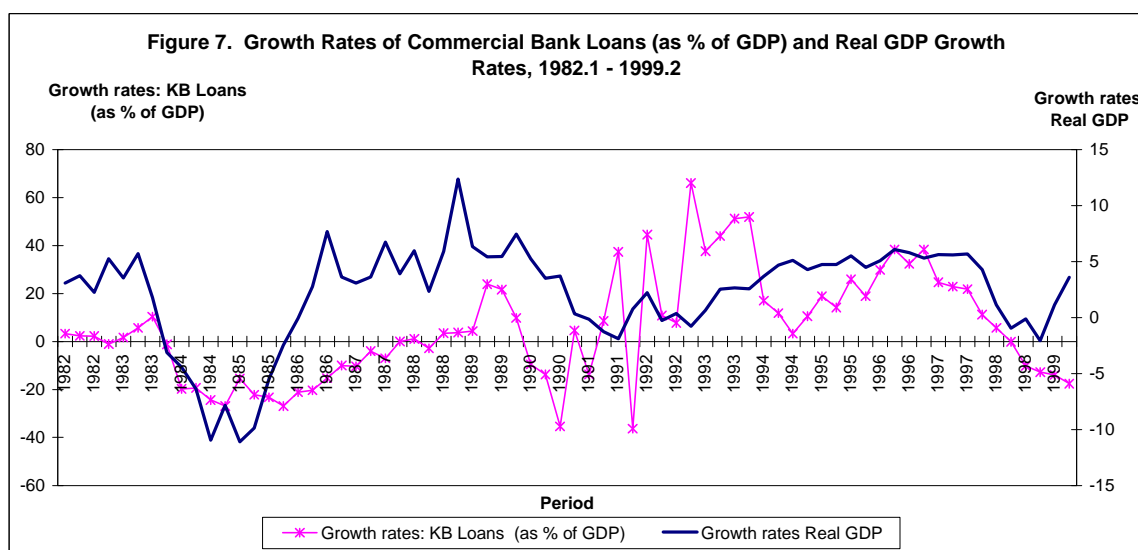
*Source: Survey of Philippine Industry and the Financial Crisis, 1998*

Indeed, the results discussed above do not confirm the existence of a credit crunch during the crisis period. Rather, it is argued here that the decline in the quantity of bank loans in the most recent past merely reflects normal cyclical phenomenon; that is, it can be mainly attributed to the decrease in the demand for credit due to the economic downturn. First, economic growth rate already slowed down even before the Asian financial crisis hit the Philippines. More specifically, after peaking at 6.1 percent in the second quarter of 1996, GDP growth rate declined in the subsequent quarters. Second, the average capacity utilization of the 541 firms surveyed declined from 78 percent in 1996 to 69 percent during the first half of 1998 (see **Table 3**). As expected, non-exporters and small firms experienced larger decline in capacity utilization

Period	All Sectors	Export Orientation		Size of Firms	
		Exporters	Non-exporters	Large	Small
1996	78	78	77	79	76
1997 1st half	75	76	74	79	72
1997 2nd half	73	76	71	77	70
1998 1st half	69	72	65	73	65

*Source: Survey of Philippine Industry and the Financial Crisis, 1998*

than exporters and large firms during the crisis period. However, it is worthy to note that the average capacity utilization rate of the sample firms already started to decline to 75 percent during the first half of 1997. All these could have affected the firms' demand for credit in the most recent period.



As mentioned above, credit slowdown has been associated with recession. The results of the analysis above suggest that the recent credit slowdown episode is due to the economic downturn. To further boost the results, we examine the behavior of the credit ratio and real GDP from a longer period, say from the first quarter of 1982, when quarterly data on GDP started to become available, to the second quarter of 1999 (see **Figure 7**). During this period, there were three episodes when the growth in the credit ratio became negative for at least two successive quarters. The shortest occurred in the early 1990s (3 successive quarters) and the longest in the mid-1980s (17 successive quarters). The first and third episodes were associated with a recession; that is, GDP shrank for at least two successive quarters.<sup>20</sup>

The two variables, i.e., GDP growth rate and growth in the credit ratio, depicted in **Figure 7** seem to move together during the indicated period. Which one precedes or causes the other? In other words, did weaknesses in bank loans lead to a recession or vice-versa? To answer this question,

<sup>20</sup> In this case, the GDP is used instead of the GNP.

Granger-causality tests were performed.<sup>21</sup> The results of the causality tests shown in **Table 4** suggest that declines or increases in GDP growth rate preceded the declines or increases in bank loans, not the other way around as many have expected.

Table 4. Results of Causality Tests (1 Lag)	
Direction of Causality	Results
A. GDP growth rate does not cause loan growth rate (F=4.20) Loan growth rate does not cause GDP growth rate (F=0.03)	Reject * Accept
B. GDP growth rate does not cause manufacturing loan growth rate (F=8.69) Manufacturing loan growth rate does not cause GDP growth rate (F=0.10)	Reject ** Accept
C. GDP growth rate does not cause retail loan growth rate (F=8.69) Retail loan growth rate does not cause GDP growth rate (F=0.80)	Reject** Accept
D. GDP growth rate does not cause real estate loan growth rate (F=0.13) Real estate loan growth rate does not cause GDP growth rate (F=1.12)	Accept Accept

Notes:

\* - 5% level of significance.

\*\* - 1% level of significance.

Figures in parenthesis are F-statistics.

Bank loans were further categorized according to economic sectors receiving the loans. For brevity, only three large borrowing sectors, namely, manufacturing, retail and real estate sectors, were considered in this paper. The ratio of the commercial bank loans to the sectoral value-added was used as the credit ratio for each of the three sectors. The results, which are also shown in **Table 4**, indicate that GDP growth rate Granger-causes or precedes manufacturing and retail loan growth rates. However, such pattern cannot be observed in the case of real estate loans.

Additional results from the same survey mentioned above also confirm the observation that the recent credit slowdown originates from the demand side as a result of depressed economic activity. **Table 5** ranks the various reasons for the decline in output. The effects of the *peso depreciation on the cost of raw materials* and *interest rate* were the top two reasons for the decline in the firms' output. Interestingly, firms, regardless of export-orientation and size, consistently ranked

<sup>21</sup> Note that the Granger causality test used in this study measures precedence and information content but does not by itself indicate causality in the more common use of the term (E-Views, Version 3).

decline in demand higher than insufficient credit available from banks, either for working capital or for expansion, at the prevailing rates of interest as a reason for the reduction in output.

Reasons	All Respondents		Export Orientation				Size of Firms			
	Score	Rank	Exporters		Non-Exporters		Small		Large	
			Score	Rank	Score	Rank	Score	Rank	Score	Rank
a. Decline in domestic demand	3.14	3	2.49	6	3.72	2	3.38	2	2.85	4
b. Decline in foreign demand	2.28	8	3.21	3	1.45	10	1.96	10	2.69	5
c. Insufficient credit being extended by suppliers	2.17	10	1.98	10	2.33	7	2.34	9	1.96	9
d. At current interest rates, insufficient credit is available from banks for working capital	2.60	5	2.68	5	2.53	5	2.68	5	2.50	6
e. At current interest rates, insufficient credit is available from banks for expansion	2.34	7	2.40	7	2.29	9	2.50	7	2.14	8
f. High level of interest rates	3.24	2	3.26	2	3.23	3	3.19	4	3.31	2
g. Higher cost of raw materials due to depreciation of the peso	3.78	1	3.66	1	3.88	1	3.94	1	3.57	1
h. Increases in the labor cost	3.10	4	3.08	4	3.11	4	3.21	3	2.96	3
i. Shortages of raw materials	2.45	6	2.38	8	2.50	6	2.66	6	2.19	7
j. Suppliers hurt by the crisis are not delivering goods	2.23	9	2.15	9	2.30	8	2.48	8	1.92	10

Score ranges from 1 to 5, 1 being the highest and 5 the lowest.

Source: Survey of Philippine Industry and the Financial Crisis, 1998

## VI. WHAT CAN BE EXPECTED IN THE NEAR TERM

Given such results, what then can be expected in the next few quarters? The data series in **Figure 7** are quite instructive. It is interesting to note that in the 1980s, bank loans continued to decline, albeit at a decreasing rate, long after the GDP growth rate entered the positive territory. If past experience can be used as a guide to the future, then there is a possibility that the pattern just described above can be repeated in the next few quarters; that is, growth in bank loans will lag behind GDP growth or GDP growth will enter the positive territory before growth in bank loans does. In fact, this already happened in the first two quarters of 1999.

Are the firms hard pressed for funds? The survey results show that about three-fourths of the total sample firms claimed to have adequate liquidity to finance production (**Table 6**). The

proportion claiming the same is higher among firms that do not have loans than among those that have existing loans. In both cases, a smaller proportion of exporters and large firms are facing liquidity constraint than non-exporters and small firms. Liquidity constraint should ease up as demand for goods picks up because the survey results show that income from sales covers 36 percent of the short-term financing requirement and 38 percent of the long-term financing requirement of firms.

	<b>All Firms</b>	<b>Firms that have loans</b>	<b>Firms that do not have loans</b>
<b>A. Export Orientation</b>			
1. Exporters	79.8	73.5	90.4
2. Non-Exporters	72.2	62.9	84.6
<b>B. By Size of Firms</b>			
1. Small	74.4	67.1	82.3
2. Large	78.2	70.1	96.0
<b>C. Total</b>	<b>76.2</b>	<b>68.7</b>	<b>87.5</b>

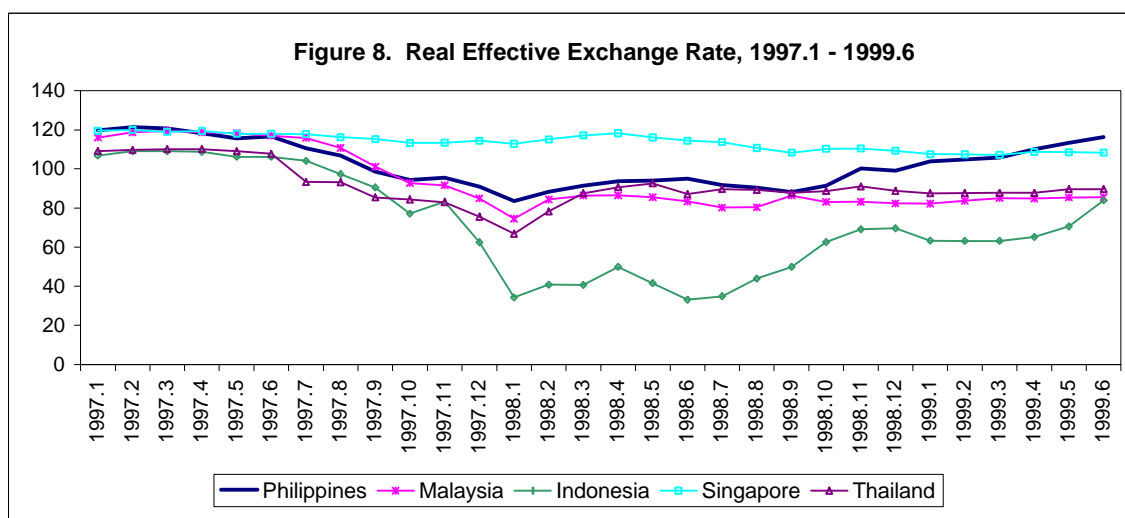
Source: Survey of Philippine Industry and the Financial Crisis, 1998

## VII. CONCLUSIONS AND POLICY IMPLICATIONS

The results of this study generally do not support the claim that the country has been facing a credit crunch in the sense defined above since the onset of the Asian financial crisis. On the contrary, they tend to show that the current slow down in bank loans is merely a reflection of the depressed economic activity. Therefore, bank loans are expected to rebound once economic activity picks up. This should serve as a warning to those who want to push banks to loosen up a notch in their lending policy, which may endanger the sustainability of the economic recovery.<sup>22</sup> After all, it was not very long ago when almost every one was blaming the aggressive lending stance of banks for the present economic crisis. At the very least, prudential measures that were recently put in place by the Bangko Sentral must be maintained.

<sup>22</sup> The problem of SMEs' lack of access to bank credit, which is a structural one, should not be confused with the issues discussed in this paper.

In terms of macroeconomic policy, policy makers should concentrate on raising aggregate demand. Both monetary and fiscal policies should support this stance. However, there is a limit as to how much monetary policy can push aggregate demand. Since monetary policy has already been substantially relaxed in recent months, it must now take a neutral stance. Raising interest rate to defend the exchange rate must be avoided, especially since there is a reason for allowing the nominal exchange rate to depreciate. **Figure 8** shows that the Philippines' real effective exchange rate has recently returned to its pre-crisis level, suggesting that the peso has been appreciating in real terms in recent months.<sup>23</sup> It likewise shows that the Philippines has been losing its international competitiveness to its neighbors in recent months – a bad news to both the country's domestic- and export-oriented industries. Exports, which are a major component of aggregate demand, need to be sustained during the recovery period. The other reason for maintaining a low interest rate is to allow loan work-outs done by some firms and banks to proceed in a less costly and orderly manner.



Source: JP Morgan

On the other hand, fiscal policy must remain expansionary for the rest of the year. Indeed, the government announced last year a set of pump-priming measures for this year. There are, however, some doubts as to whether real pump-priming measures have been effectively activated this year. The budget figures net of accounts payables seem to suggest that fiscal policy has not taken a strong

<sup>23</sup> The data here were provided by Dr. Josef T. Yap, a Senior Research Fellow of the Institute.

expansionary stance after all. Whether the recent bulge in accounts payables is purely technical in nature (i.e., due to accounting and auditing procedures) or is a result of an attempt by the past administration to use it as a fiscal instrument needs to be seriously examined. Next year, however, it may not be prudent on the part of the government to implement pump-priming measures.

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