Credit Crunch In Indonesia In the Aftermath of the Crisis

Facts, Causes and Policy Implications

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This study investigates whether the sharp decline in credit from banking sector in Indonesia has been a result from a 'credit crunch' or due to weak credit demand accompanying the recession. Using the macro and micro (panel data) analyses as well as surveys on banks and non-financial firms, the study confirms the existence of a credit crunch in Indonesia. Furthermore, we reveal that the banks' source of firms' funds have decreased dramatically, from around 40% to around 25%. This study provides policy implications for both monetary and financial policies of Indonesia and in general of Asian countries.

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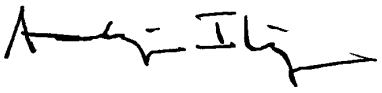
Foreword

In spite of the recent improvement in macroeconomic and monetary conditions, the recovery of the Indonesian economy proceeds in slow pace. One of the main factors behind the slow recovery is a lack of fresh funds provided by the banking sector to finance economic acitivites.

The study conjectures that the slow growth of credit can be attributed to the 'credit crunch', that is, unwillingness of banks to supply credits. Unavailability of credits to finance firms' working capitals and investments could generate a second round effect on the business failures which in turn exacerbates the quality of bank loans and triggers the reemerging of banking/ financial crises. From monetary policy perspective, the credit crunch blocks monetary transmission mechanism and reduce the effectiveness and efficiency of monetary control.

I wish to expres my greatest appreciation to the publication of the study on the credit crunch phenomenon, which has been done by the use of quantitative empirical analysis as well as direct surveys to the banking sector and firms. I would like to extend my gratitude to banks and firms for their entusiasm in providing data and views during the survey. Finally, efforts of the research staffs of Financial Markets Structure and Development Studies Division who have completed this study are highly appreciated. Hopefully the study brings benefit for all of us.

Jakarta, March 2001



Achjar Iljas
Deputy Governor

Preface

This study is a part of Strategic Research Program of Directorate of Economic Research and Monetary Policy - Bank Indonesia for the year 2001. The objective of the study is to understand the malfunctioning of the banking sector in Indonesia in intermediating the deposits into credit to the real sectors in the aftermath of the crisis. From monetary perspective, a deep understanding to this phenomenon could reveal the recent puzzle of monetary transmission process. Accordingly, it helps the monetary authority to improve the efficacy of monetary policy. From micro perspective, the results of this study could disclose the behaviour of banks and firms in the credit market in the post crisis periods.

We would like to thank to those who have helped us in realizing this study. In particular, we thank to banks and firms as the respondents of our survey on supply of and demand for credit. We also thank Dr. Hartadi A. Sarwono, Dr. Perry Warjiyo, Mr. Didy Laksmono, Mr. Wibisono and Mrs. Sri Liani Suselo for providing comments and encouragements during the study. The study has benefitted from advice of many colleagues, especially from Dr. Peter Rosner and participants of the directorate workshop and Credit Crunch Seminar. Helpful comments and suggestions from participants of Asia Pacific Finance Association (APFA) Conference in Bangkok, 22-25 July 2001 are very appreciated. Finally, we thank Mrs. Rita Morena for her extraordinary effortsand initiatives in transforming the manuscript into a nice and beautiful bi-lingual book.

We realize that there are some limitations in this study. Hence, comments and suggestions from readers to improve this study will be appreciated. We hope that the study provides benefit for policy makers, academicians and anyone who concerns about the financial crunch in the country.

Jakarta, March 2001

Research Team

Financial Market Structure and Development Studies Division

Executive Summary

1. The slow growth of bank credits after undergoing very sharp decline at the beginning of the crisis is one of the factors causing the process of Indonesia's economic recovery to proceed slower compared to other Asian countries affected by the crisis like South Korea and Thailand. Although the macroeconomic climate, particularly the monetary condition, has relatively improved as reflected from the low inflation and interest rates, the supply of credit by banks remains inadequate to lubricate the economic growth to the level prior to the crisis.

2. This study assesses the factors behind the slow growth of bank credit. In particular, this study unwillingness of banks to lend and more risk-averse behavior (credit crunch hypothesis) or from low credit demand as a result of a weak economic prospect and corporate balance sheet adjustment. From macroeconomic perspective, the credit crunch will clearly hinder the process of economic recovery since the source of corporate financing largely relies on bank credit. The continuing of the credit crunch could generate a second round effect on the business failure. This in turn will worsen the quality of bank loans and increase the possibility of reoccurrence of the financial crisis. From monetary policy side, credit crunch provides implications on the effectiveness of monetary policy and the way the monetary policy should be directed to avoid warsening of the problem.

3. Based on the above-mentioned background, this study investigates the causes of bank credit decline by conducting empirical analysis using aggregate data as well as individual banks (panel) data. In addition, this study is also strengthened with qualitative analysis based

on the survey conducted on banks to assess from the supply side and on companies to assess from the demand side.

4. In general, this study concludes that the continuing slow growth of credit is more due to supply factors as suggested by the credit crunch hypothesis. This is particularly due to the capital problem being experienced by banks after the crisis (capital crunch), increasing non-performing loans (NPLs), higher credit risk in the business sector as reflected from the continuing high leverage ratio, and the lack of information regarding potential borrowers.

5. The result of bank survey indicates that the criteria for credit approval by banks rely more on the information regarding the prospective borrowers than the type of project being proposed. Interest rate is not considered to be the main factor in loan approval. Under such condition, although a borrower is willing to pay higher interest rate and provides higher collateral, banks are not willing to approve the loan. This reflects the existence of the non-price credit rationing in the banking sector. Therefore the lack of information regarding the quality of borrowers and the feasible sectors likely serves as one of the factors explaining why bank credit supply remains relatively slow.

6. From the qualitative analysis of bank asset portfolio and confirmed by the bank survey, it was also found that there is a change in bank preference in its portfolio investment recently. Banks tend to hold liquid and less risky assets, such as Bank Indonesia Certificate (SBI), government bonds, and inter-bank money market (liquidity preference hypothesis).

7. According to banks, the business sector, which have relatively low risk are export oriented and small and medium enterprises (SMEs). Prior to the crisis, the manufacturing industry constituted as a major sector for banks to generate profit in lending activities. Since then, the export-oriented business became the main sectors to generate profit. The banks also view

that the SMEs have a better business condition compared to the large ones. However, banks are still reluctant to lend to SMEs on the ground that the lending activities is very costly and the banks lack of experiences in dealing with SMEs.

8. The results of the company survey suggest that the demand for credit has increased. This is reflected from the fact that the majority of respondents view that their production and sales have increased because of higher demand. To anticipate the increase in demand, half of the respondents will expand their business by making new investments.

9. In conducting their activities, the companies use their own fund (retained earnings) as the main source of finance (56%). The main reasons of using the own fund are the relatively high loan rate, under utilized of their own capital, tightness of credit procedures and the existence of banks credit rationing.

10. Meanwhile, 44% of the corporate financing come from external fund of which the majority still originates from the bank credit, namely around 24% comprising 14% working capital credit and 10% investment credit. The share of bank credit as the external financing has declined significantly compared to previous years (around 40%). Others source of external financing are the capital market (6%), offshore loans (5%), bonds (3%), and their own group (1%).

11. The results of company survey also confirm that the supply factors are the main causes behind the slow credit growth. Most of the respondents said that bank credit conditions had become tight as reflected from less flexibility in negotiating collateral and loan rates. In addition, the respondents experiencing difficulties in obtaining credit said that bank credit limitation, inadequate collateral and worsening cash flow of the companies served as the factor hindering the access to credit.

12. Both banks and companies view that in order to overcome the credit crunch it is necessary to prioritize the exchange rate stability, thereby making it possible to push a conducive business climate. In addition, high economic growth, borrower debt restructuring, and provision of complete information regarding potential borrowers and sectors to be financed also has to be sought by the government. Banks also stated the need for a stimulus in lending activities such as a provision of credit guarantee scheme and the project financing schemes.

13. The existence of credit crunch provides very important implications for monetary policy. First, it reduces the effectiveness of monetary policy particularly due to the weakening of the transmission channel from monetary variable to economic activities. The existence of adverse selection, high business risks, and low banks capital shift away loan rates from being used by the banks as the main factor in approving credits to a borrower. This condition weakens the monetary policy transmission through the interest rate channel, credit channel, as well as balance sheet channel.

14. Second, in the condition of weak firms' financial condition, monetary expansion in the form of lower interest rate does not necessarily increase their investment. Firms tend to use this opportunity to take various measures to restructure their financial condition such as deleveraging. However, the effects of monetary policy through the firms' balance sheet can be asymmetric, in the sense that the effects of monetary policy through the balance sheet channel will be strengthened in the case of the monetary contraction. The monetary contraction reflected from the high interest rate not only increases the cost of capital for investment but also worsens the quality of firms' assets. This in turn amplifies the impact of monetary policy on the real sector, a phenomenon the so called "financial accelerator . The implication is that in a situation where credit crunch occurs, a monetary contraction must be carried out more carefully.

15. The weakening and uncertainty of relationship between monetary policy and the real sector provide an implication that the use of various monetary indicators as intermediate targets or as information variables becomes difficult. The use of interest rate as an operational target also has to be assessed more thoroughly particularly at the time of credit crunch. The criteria of banks in providing credit rely more on the non-price factors such as collateral adequacy and long-term relationship between banks and borrowers. Therefore, the change of interest rates has a less significant impact on credit and economic activities compared with normal condition. In addition, as a result of the weakening of information content of various monetary variables, the use of the broad-based monetary indicators appears to be more suitable than merely targeting only one variable.

16. According to the survey results, the stability of exchange rate becomes the main factor in banks' credit and firms' investment decisions. This provides an important implication of the need to stabilize the volatility of exchange rate.

17. The existence of the credit crunch in the aftermath of the crisis is rooted in the problem of information regarding the quality of borrowers. The important implication is that the government needs to provide guidance as to quality of borrowers as well as prospective sectors. In addition to the borrowers information system available at BI, the Indonesian Bank Restructuring Agency (IBRA) as the institution holding important information regarding big companies can provide information on creditworthy companies. In Korea, for example, identification of the quality of firms was conducted during the credit restructuring process. A further solution regarding information problem is to provide credit voucher to prospective borrowers as a form of 'guarantee' of the borrowers' quality.

18. The possibility of implementing a regulatory forbearance has to consider its costs and benefits, particularly for relaxation of the non-performing loans (NPLs) ratio. First, in

international banking regulation practice, the NPLs ratio is not a part of the prudential regulation. Second, the implementing prudential measures of CAR and NPLs ratio at the same time when banks have just recovered is burdensome. If the relaxation on CAR is also carried out, it should be done based on a set of objective rules, such as to encourage credit to exporters and SMEs by assigning a lower risk weight for loans to these sectors. This argument is in line with the results of survey to banks indicating that the export and SMEs have relatively low risk.

19. The possibility of providing credit guarantee scheme to the SMEs and export-oriented enterprises may be taken into consideration. This scheme may be used as a stimulus for the economy. Several countries have used this type of scheme in overcoming the credit crunch. In Korea, for example, to reduce the impact of the financial crisis and at the same time to provide stimulus to the economy, in 1998 the government issued a special guarantee program for SMEs and export oriented firms. However, this guarantee scheme could create moral hazard and has the consequence on fiscal burden that naturally becomes unpopular amidst the difficulties of the government budget.

20. In the long term, development of financial markets, particularly securities, such as corporate bonds, has to be sought. These instruments may be used by firms as a source of financing and by banks as an alternative investment. The diversification of source of funds becomes an important issue as heavy reliance on bank financing creates the economy to be a more crisis-prone.

Contents

List Of Graphs

List Of Tables

Chapter 1
Introduction

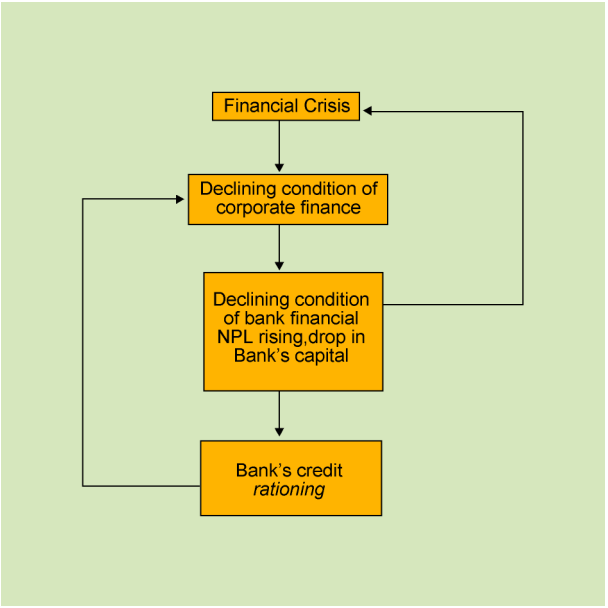
The hitherto continuing slow growth of bank credit after undergoing very sharp decline in the beginning of the crisis is one of the factors causing the process of Indonesia's economic recovery to proceed more slowly compared to other Asian countries affected by the crisis. Although the macroeconomic climate, particularly the monetary condition, has relatively improved compared with the time of the crisis, as reflected from amongst others the relatively low interest rate and inflation, the amount of credit extended by banks has not yet adequately served as lubricant in pushing the economy to recover.

The decline in bank credit in the aftermath of the crisis may result from either credit supply or demand factors, or both. From the supply side, this fact stems from bank liquidity problem that was due to amongst others the occurrence of bank run and rising foreign liabilities. At the same time when the interest rate and exchange rate jumped sharply, companies in Indonesia that before the crisis also had owned very high leverage level augmented the problem for bank in the form of increased non-performing loans (NPLs). Meanwhile, the high interest rates also caused the occurrence of negative interest margin at banks. This in turn reduced bank capital drastically. The financial distress experienced by banks and companies has caused the relationship between banks and companies to be severed, further limiting the funds needed by the corporate sectors.

Although the problem with the banks has gradually improved, such as the net interest margin and banks capital on an aggregate basis starting to be positive, bank credit supply until recently has been still proceeding slowly. The behavior of banks becoming more risk-averse and the banks perception of the high credit risk in the real sectors have created reluctance of banks in supplying the credit. In addition, efforts by banks to make balance sheet adjustment to meet

prudential provisions, such as achievement of capital adequacy ratio of 8% and NPLs of 5% by the end of 2001 and the provision on legal lending limit is believed to also be the cause of reluctance of banks to supply credit. The credit decline due to reluctance of banks to supply credit is often referred to as credit crunch.

On the other hand, in the economic recession, bank credit decline can also be originated from a weakening demand for credit due to low prospective investment opportunities and the financial condition of non-financial companies that has not yet been recovered, as reflected from amongst others the continuing high debt-equity ratio.



Graph 1.1.

Credit Crunch and Financial Crisis

From macroeconomic perspective, the credit crunch clearly hinders the process of economic recovery since the source of financing of the business world largely relied on bank credit. If this credit crunch continues, it could create a second round effect on the failure of the business sector, which in turn worsens the quality of bank loans and the risk of reoccurrence of the banking crisis (Graph 1.1).

From monetary policy side, the credit crunch has blocked the monetary policy transmission channel to the real sector, either through the interest rate channel, credit channel, and balance sheet channel. In the existence of non-price credit rationing, a fall in bank loan rates due to a monetary expansion cannot be transmitted to the real sector through the banks credit. In addition, the credit crunch imposes a constraint monetary policy, particularly because under such circumstances a tight monetary policy raising interest rate

worsens the condition of corporate financial position which in turn increasingly deteriorates the credit crunch.

Based on the above mentioned background, this study assesses the causes of bank credit decline by conducting an empirical analysis using aggregate as well as individual (panel) banking data. In addition, this study is also strengthened by the qualitative analysis obtained from the survey on a number of banks and companies. Specifically, this study attempts to answer whether the credit decline taking place is due more to the supply factors as predicted by the credit crunch hypothesis or is due to the demand factors. Understanding the causes of bank credit decline derives various implications for monetary and banking policies.

This study is divided into several chapters as follows. Chapter 2 provides a literature study reviewing theoretical framework of the credit crunch and other countries' experiences with the credit crunch. Chapter 3 explains the cause of credit crunch in Indonesia, discusses its impacts on the bank portfolio changes. Chapter 4 discusses results of empirical assessments on the credit crunch. Chapter 5 discusses the results of survey on the banking sector to see whether the credit decline has been a result of the supply factors. Chapter 6 discusses the results of survey on the corporate sector to confirm the financial constraint hypothesis being faced by companies in obtaining external funds to finance investment and work capital. Chapter 7 discusses the policy implications of the existence of credit crunch for the monetary and banking policies, and policy options to overcome the credit availability.

Chapter 2
Literature Review

DEFINITION OF CREDIT CRUNCH

The term of credit crunch appeared in 1966 as a disintermediation phenomenon taking place in the United States when the a tight monetary policy implemented by the Federal Reserve to overcome inflation. The very tight policy increased long-term interest rate far above the limit on deposit interest rate regulated by Regulation Q. As a result, depositors withdrew their fund from banks to get higher interest rates on other financial assets so that bank deposit underwent a big decline bringing about supply of credit hindrance. Since the financial sector deregulation in the 1980s abolishing deposit interest rate limit (Regulation Q), the bank disintermediation phenomenon due to such regulation has not occurred again (Kliesen and Tatom, 1992).

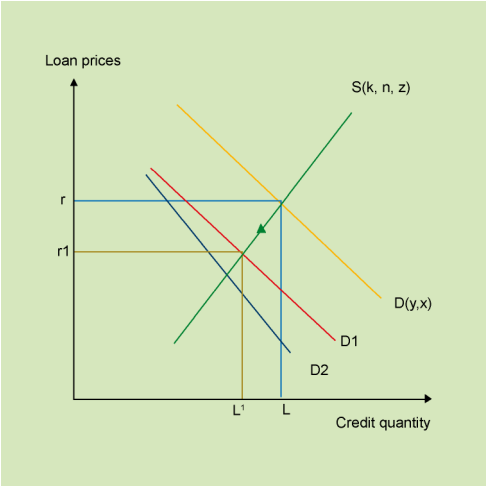
A credit crunch can also be defined as the non-price credit supply constraint as a result of binding regulation such as the capital and legal lending limit or as a result of reduced asset quality and bank profitability. In a more technical term, Bernanke and Lown (1991) defines a credit crunch as shifting of bank credit supply curve without a change in interest rate and quality of borrowers' quality. This definition is in line with what that of Pasarbasioglu (1996), defining a credit crunch as a reduced credit supply due to reduced willingness of banks to provide loans, without being followed by an increase in loan interest rates. The strongest definition was provided by Gosh and Gosh (1999) defining credit crunch as a quantity rationing, whereby loan interest rate no longer functions in clearing the credit market. This definition is linked to the credit rationing concept presented by Stiglitz and Weiss (1981) and Jafee and Stiglitz (1990) defining credit rationing as a condition whereby a certain class of borrowers does not have access to credit although they are willing to pay a higher loan rate.

Of the various definitions above, in general credit crunch can be defined as a situation where there is sharp decline in bank lending supply as a result of reduced willingness of banks credit to the real sector. The reluctance of banks in supplying credit is reflected from the increased spread, namely the difference between loan rates and deposit rates and the increasingly tight criteria to obtain credit. In an extreme condition, credit crunch occurs in the form of credit rationing, namely banks refuse to provide credit to most borrowers at any level of interest rate.

CREDIT SLOWDOWN: CREDIT DEMAND VERSUS CREDIT SUPPLY

A credit slowdown can occur due to decline in demand or supply for bank credit. To differentiate the sources of the credit slowdown resulting from demand versus supply the following sub-section explains it within the credit market framework.

From macroeconomic perspective, credit slowdown stemming from demand factors may occur during recession, particularly because of the weakening of investment activities. From microeconomic perspective, a structural problem such as adjustments by firms to reduce the rising debt-equity ratio as a result of the crisis may also be one of the factors that can explain why demand for credit also declines. Although the reduced demand for credit frequently takes place as a result of the weak demand for investment during a recession, micro-economic structural factor frequently occurs in a post-crisis economy.



Graph 2.1.
Credit Slowdown as a Result of Decline in Demand for Credit

As illustrated in Graph 2.1., shifting in the demand curve due to weakening of the economic activities, given unchanged the supply curve, tends put downward pressure on loan prices, i.e., lowering of the loan rates and the loosening of

credit conditions such as amount of collateral. If a downward credit demand is originated by microeconomic structural factors, shifting in the credit demand curve is also followed by sharpening of the demand curve, namely the credit demand becomes less sensitive to the changes in the price of credit (Graph 2.1., D2 curve).

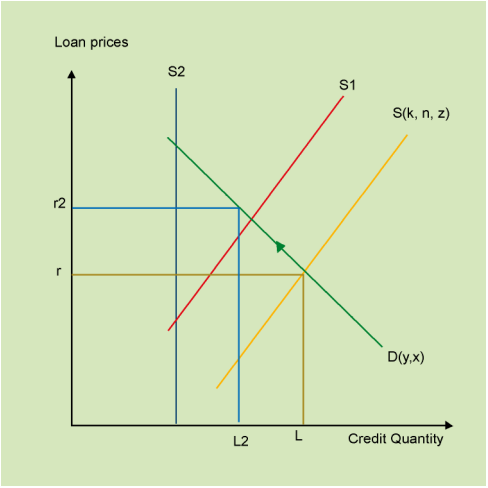
On the supply side, the credit decline is due to reduced willingness of banks to lend at the prevailing interest rates. Factors that can cause reduced willingness to lend may originate from bank internal factors as well as external factors. Internal factors such as the low bank asset quality, high non-performing loans and drop in bank capital resulting from depreciation and negative interest margin reduces the capability of banks to provide loans.

From institutional perspective, the closing of almost half of banks in Indonesia greatly affects the behavior of banks. First, the collapse of a number of banks may reduce the liquidation value of banks, thereby increasing the bankruptcy cost to be borne by bank owners if the banks are liquidated (Shleifer and Vishny, 1992). This causes banks that are surviving to be more conservative (risk-averse) in conducting their operations. Second, the closing of a number of banks by the government, that at a certain level means the government is prepared to close banks whose performance is bad, has reduced moral hazard incentive for banks by signaling that the government has changed the strategy in handling problem banks. This causes the banks to quickly restore their soundness in order to avoid liquidation. Since the soundness is measured by, amongst others, the achievement of capital adequacy ratio (CAR), the banks have started to make adjustment of their asset portfolio including reducing their credit, to maintain or increase their CAR.

From the external aspect, the deterioration in the borrowers' creditworthiness as a result of the weakening of firms' financial condition weakens their ability to repay existing debts or to borrow new loans. In certain situation, when banks find it difficult to differentiate the creditworthiness of the borrowers, they will reduce the credit supply. Such non-price credit rationing can take place in various forms: several borrowers still get loans whilst other borrowers with the same creditworthiness do not, rationing on credit for certain sectors (such as consumer credit) or certain group of borrowers (small-scale enterprises), or a number of debtors appearing

to be creditworthy are rejected because the banks do not have complete information regarding the financial position of the prospective borrowers.

Whatever the cause, credit decline as a result of the supply factors can be indicated by the shifting of the supply curve (Graph 2.2.). Credit decline as a result of reduced supply has pushed the loan interest rates hike and tightening of credit conditions. However, the reluctance of banks to lend is often not followed by interest rate increase, but in the form of quantitative credit reduction (non-price credit rationing). This is understandable as a result of worsening credit risk and the existence of information problem making banks to be unable to differentiate borrowers quality. This information problem is worsened when banks experience replacement of management. Since the relationship between banks and their borrowers is of a long-term nature[1], the replacement of bank management makes the existing relationship broken down and the new management does not inadequately understand the condition of the borrowers. As a result, banks tend to be more careful in approving loan applications. The presence of information problem is also one the main factors behind the non-price credit rationing where the loan rate is not the main consideration in loan approval.



Graph 2.2.
Credit Decline due to Reduced Supply of Credit

This non-price credit rationing shifts the supply curve to the left and becomes vertical, implying that the credit supply curve becomes completely insensitive to the interest rate change (Graph 2.2, S2 curve). In practice, the occurrence of the non-price credit rationing often takes place at the same time with price rationing. Several banks' borrowers, such as small entrepreneurs or new borrowers, are affected by quantity rationing, whilst the others are affected by price rationing or both.

[1] This long-term relationship reduces the moral hazard problem (because if the borrowers commit moral hazard behaviour, it will be difficult for them to get credit in the future). Such a long run relationship also reduces the information problem because banks learn the behavior of the clients from time to time.

Box 1
Credit Crunch and Asymmetric Information in a Credit Market

The credit crunch hypothesis basically originates from the new-Keynesian paradigm in analyzing the credit market. Unlike the neoclassic school assuming a perfect market, the new-Keynesian approach assumes that basically the financial market, like the credit market, frequently does not function perfectly (imperfect market), particularly with the existence of asymmetric information among market agents. This informational asymmetry has encouraged the parties possessing more information (such as banks' borrowers) to have the incentive to take action deviates from the other party's interest (such as bank). The borrowers, for example, often commit a moral hazard action using the loans borrowed for a high-risk project. The incentive to conduct this moral hazard emerges with a high level of debt, the firm retains most of the profits if the project is successful while banks incur most of the losses if the project ends in failure, particularly if the bankruptcy cost is relatively low.

In addition to moral hazard problems, imperfect information about quality or the riskiness of the borrowers can create an adverse selection problem. With imperfect information, low quality or risky firms are those who would be more likely to apply loans, especially when the interest rate increases. The logic is that at the time the loan rate rises, only the borrowers whose quality is low (namely the borrowers with high risk) is prepared to pay high interest, whilst the borrowers whose quality is high (namely the debtor with low risk) is reluctant to submit application for credit. Accordingly, on average the quality of the debtor will be lowered and thus the profitability of banks will decline.

The existence of informational asymmetry problem in the financial market, such as moral hazard and adverse selection, is the reason why banks charge premium on debtors above the interest rate which should have occurred in a perfect market to compensate banks for costs

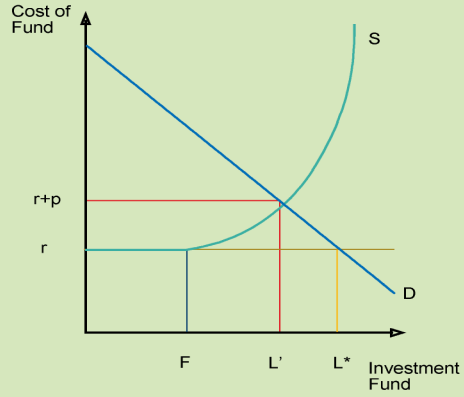
incurred in evaluating projects and monitoring the borrowers. This premium charged by banks has an inverse relationship with internal funds (net worth) owned by borrowers. The smaller the net worth, the bigger the incentive of the borrowers to commit moral hazard and adverse selection, hence the higher the premium charged by banks. As a result, in a market with asymmetric information, the credit supply of banks is smaller than what should have been the case, as illustrated in Graph 1.

Graph B.1. illustrates the relationship between demand and supply of funds for investment. Under a *perfect* capital market where a firm can raise whatever funds it needs at a prevailing rate r (the real interest rate), the supply of funds is a horizontal line at r. Credit demand curve (D) is determined by investment opportunity, namely the expectation of future profit. In this case, the equilibrium capital stock is the intersection between the supply of funds and the demand for funds at L*. A contractionary monetary policy pushes real interest rate to rise, the supply curve shifts upward, thereby lowering the capital investment level.

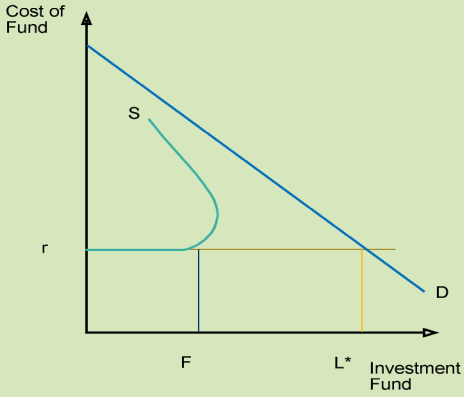
Under an *imperfect* financial market, the S curve is no longer flat. Up to a level of internal funds F, the S curve is horizontal at r. However, when the level of investment is greater than the available internal funds F and the firm raises external funds the S curve becomes upward sloping. The upward sloping S curve is derived from the prediction that the more external funds the firm raises, the higher is the probability of moral hazard that can arise and hence the higher premium the firm will have to pay. In such condition, equilibrium of investment become L' that is lower than the perfect market condition, L*. The graph also reflects that the larger the own funds, the larger the equilibrium of investment. In addition, it can also be observed that the curve S in the companies facing higher premium (small companies, companies with higher leverage) is steeper compared with companies with lower premium so that the impact of cash flow change of this company is bigger. Interest rate increase due to monetary policy not only raises the curve S but also lowers F, so that the impact on investment is larger than mere impact of capital cost increase.

If the adverse selection problem taking place is so bad, namely the bank completely no longer able to differentiate the borrowers quality, the supply curve becomes backward bending

before the supply curve intersects the demand curve, the borrowers are affected by credit rationing, whereby there is no equilibrium demand and supply at the prevailing interest rate (Graph B.2). The core of the above framework is that the borrowers' net worth does matter in accessing the external funds. Accordingly, it is easy to predict that the collapse of the borrowers' net worth could generate a financial crisis. The recent financial crisis in East Asia provides a clear example. The large scale of depreciation in domestic currency and the sharp rise in domestic interest rates lead to a sharp fall in the value of borrowers' net worth. If the borrowers' net worth becomes negative, investment is no longer feasible as shown in Figure B.2. In this case, the supply curve shifts leftward and no longer intersects the demand curve for funds in the positive value of investment. This is what we observe in the course of the crisis: the substantial collapse in borrowers' net worth has reduced banks' willingness to supply of loans whatever level of demand for loans.



Graph B.1.
Credit Market in Informational Asymmetry Condition



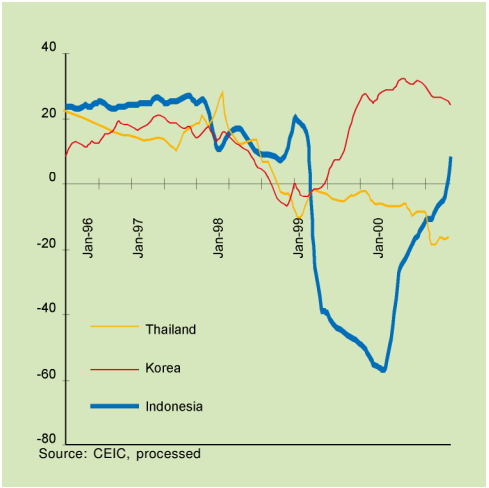
Graph B.2.
Credit Rationing

CREDIT CRUNCH: REVIEW AT SEVERAL COUNTRIES

Credit crunch is also the phenomenon experienced by developing and industrialized countries. In developing countries particularly after financial crisis and industrialized countries where the financial system is advanced such as the United States and Britain. This sub-chapter conducts literary study on several countries that have experienced credit crunch, such as post-crisis Asian countries, Latin America, and industrial countries. In general, it may be said that credit crunch is always started with rapid credit growth that creating the bubble problem in economy followed by financial and banking crises and credit crunch. Beside that, credit crunch is generally responded with government discretion.

Asian Countries

In Asian countries, the credit crunch has become an interesting topic for policy makers for the purpose of overcoming the limited credit needed in the economic recovery particularly since crisis. Although conclusively various assessments conducted have concluded, there had been slow down of credit growth in Asian countries since the occurrence of the crisis. However, the cause of the occurrence of the slow down remains a question, whether it was caused by the weakened credit demand resulting from the post-crisis recession or lowered banks credit supply.



Graph 2.3.
Credit Growth in Several
Asian Countries

The study on credit crunch in various Asian countries conducted by Domac and Ferri (1999) concluded that there was an indication of existence of credit crunch in Asian countries since

the crisis. This is marked by the existence of price and non-price credit rationing reflected from the increasing risk premium and real interest rate charged to debtors. In addition, there was indicated that the number of rejected credit application increased.

The empirical study conducted by Gosh and Gosh (1999) using the disequilibrium model also showed there was credit crunch in the two countries hit by the crisis, namely Indonesia and Korea. However, the study concluded that the credit crunch that occurred was a dynamic nature, one until two years after the crisis, it caused banks experiencing financial distress due to rising NPLs and decreasing capital. As a result of this supply side problem, credit crunch occurred. Furthermore, as soon as the companies have become bankrupt and the aggregate demand has started to weaken, the credit demand also declined. Since the first quarter of 1998, according to the study, the decreased of credit demand has exceeded the credit supply decline, it means that the credit crunch did not occur again.

The credit crunch in Asian countries created several effects, as follows:

(i) The occurrence of flight to quality of bank assets from credit to the risk-free government securities.

(ii) The credit contraction of SMEs bigger than non-SMEs (flight to quality of debtors).

To overcome the credit contraction problems to SMEs, several measures have taken by Korea to face the liquidity problem in the SME sector, such as:

(i) Relaxing prudential regulation. In October 1988 the Banking Supervisory Agency (BSA) implemented the program to support SMEs, by means of:
   - Relaxation of the SMEs' loans selection criteria (screening). SMEs do not have to pay penalty fee when they failed to fulfill their debt and they only have to pay the normal loan rate.
   - In evaluating the performance of bank management, the highest weight has been given to the SMEs' loan.

(ii) Rediscount facility penalty. In October 1998 the Bank of Korea gave incentive to banks that provide loans to SMEs and imposed rediscount facility penalty to banks which were not able to fulfill the adequacy ratio of SMEs' loan.

(iii) Providing credit guarantee scheme. The credit guaranteed was given low risk weight compared to the credit backed up with collateral in the Risk Weighted Asset (RWA) calculation.

Slightly different from the other Asian countries which experienced the crisis almost in the same time, the declining of Japan economic condition was due to structural factors, namely the financial difficulty of the banking system, particularly the capital structure problem. In his study, Woo (1999) stated that the Japan's crisis started in 1997, as an impact of the banking system problem, such as increased credit quality and loss of investment in stock. This problem subsequently affected the banks capital structure, so that the banks needed additional capital. With the tightness regulation, banks maintained their capital by decreasing their credit. This declining policy had an impact on the large number of debtors that were not able to pay their loans, like increasing NPLs and burdening the banks' capital.

However the credit crunch problem was not a new problem in Japan. In 1991, credit also significantly decrease as a result of tight monetary policy. This policy was partially the response on the increased of asset price that pushed by rapid credit growth in the preceding years, as a result of financial sector deregulation. The burst of the asset price bubble, particularly property price, caused the collateral value to drop drastically, thereby lowering the capability to access credit. The decreased credit resulting from this declining asset price was worsened by the rule on capital adequacy of BIS. In Japan, company shares constituted an important part of bank capital, so that the decrease share price made the capital adequacy ratio difficult to access.

For the purpose of facing the existing problem, the government provided fund in the amount of Y60 trillion for bank restructuring package in October 199l. In addition, the government also provided deposit guarantee for depositors up to March 2001 and there is guarantee on all aspects of debt from Bank Post having network with considerable number of depositors. Meanwhile, the Bank of Japan tries to loosen liquidity by purchasing short term commercial paper (3 months to 1 year) with the repurchase method, this policy was expected to be able to provide fund for the non-financial sector.

Latin American Countries

Some Latin American countries, particularly Mexico (1995) and Argentine (1996), the credit crunch problem resulted the Mexican crisis in 1995. The Mexican crisis causing decrease of the Gross Domestic Product (GDP) in the last three quarters of 1995 (namely 9.2%, -8%, and 7%) immediately recovered with positive growth since the second quarter of 1996 and grew at an average of above 5% until the first quarter of 1998. However, the economic recovery after the crisis in Mexico was of an asymmetrical nature: the tradable sector tending to grow and recover whilst the non-tradable sector experienced stagnation as a result of credit crunch. Whereas the tradable sector is able to get funding from the international market, the non-tradable sector that generally comprised SMEs must depend on own financing because banks were reluctant to provide credit for these sectors.

Several factors causing the existence of credit crunch in Mexico (Krueger and Tornell, 1999):

(i) Banks were burdened with evergreen credits, thereby reducing the capacity of the banks in providing fresh fund for new projects.

(ii) Low bank capital as a result of increasing non-performing loans.

The Mexican crisis also caused financial crisis in Argentine at the end of 1995. As a result of very high interest rate the private sector debt increased sharply, thereby increasing the perception of high risk in the banking sector. This caused banks to be reluctant to provide credits. This credit crunch was marked by the existence of flight to quality from the credit portfolio to government securities. In addition, the increasing need for loans of the public sector caused a rise in the return from the government securities that were risk-free, thereby further encouraging banks to make placement of their fund in this portfolio rather than lend credit. The increasing perception of credit risk has an impact on the decreased credit supply also boosted loan rate increase that worsened the adverse selection problem.

Industrial Countries in Early 1990s

At the beginning of the 1990s, a number of industrial countries like the United States, Britain, and France experienced credit contraction that was quite deep resulting in the weakening growth in these countries. The credit crunch take place in industrial countries was not separable from the rapid credit growth resulting from financial sector deregulation occurring in industrial countries during the 1980s. Financial sector deregulation ending credit control was directly followed by the increased access to bank credits by early rationed sectors. The rapid growth of credit after deregulation became the main stimulant to boost the share and property price increase in the 1980s, and these changes in turn affected credit growth. The increasing assets and capability to have loans rose in line with the asset price increase. However, when the asset price started to decline as a result of tight monetary policy to overcome overheating economic caused decreased capability of clients to take loans. Credit decrease in those industrial countries at the end of the 1980s and in the early 1990x was also affected by bank regulation requiring banks in industrial countries to follow the capital structure ratio following the BIS standard.

In the United States credit crunch occurred during the period 1989-1992. There were several items causing the occurrence of credit decline. First, the burden of large debt repayment and the increased firms and banks financial problem constituted the main factor causing the credit decline. Second, the credit supply factors such as capital limitation for the purpose of the BIS standard by many circles was believed to be the cause of occurrence of credit crunch (Bernanke and Lown, 1991). In that period banks could not sell new shares because their performance was not good enough, whilst many banks also slowed down the credit growth and improved their credit exposure to increase the capital structure ratio (Ballantine, Jr., 1999).

In Britain, like happened in Japan, credit decline was started by the tight monetary condition at the beginning of the 1990s. Britain's economy experienced recession in the summer of 1990 causing business failure and eruption of the bubble in the property sector. The property price decline augmented the burden in the household sector to repay the mortgage debts that were

indeed quite high. As a result, banks became reluctant to distribute credit to these sectors. However the property sector was not the only cause of the credit decline. The large number of mergers and acquisitions also caused the corporate sector to have high leverage. The decrease credit quality of corporate sector not only caused bank to be reluctant to lend credit but also worsened bank assets quality, thereby decreasing the capital adequacy ratio.

Czech Republic

The banking sector is not effective enough in making allocation of its fund, because the fund investment policy that was too expansive increased the inflation pressure through asset value, not price of goods. This took place because credit growth was more due to the overvalued collateral, and was more used for investment that was not productive enough such as real estate. The privatization method and process carried out on state-owned companies made a contribution in the overly over valuation of corporate assets, thereby having an impact on the high value of fixed asset and commercial paper used as collateral. Subsequently such matter becomes substantial constraint on banks when decreasing the corporate assets value served as collateral.

Government banks have quite a big role in the economy, so that reduced distribution by the banks considerably affects credit supply on a overall basis. Beside the regulation factor, the reduced capability of companies to generate profit results in reduced capability to repay loans. This is reflected from the declining trend of manufacturing company profit since the end of 1998, lowering credit supply to this sector.

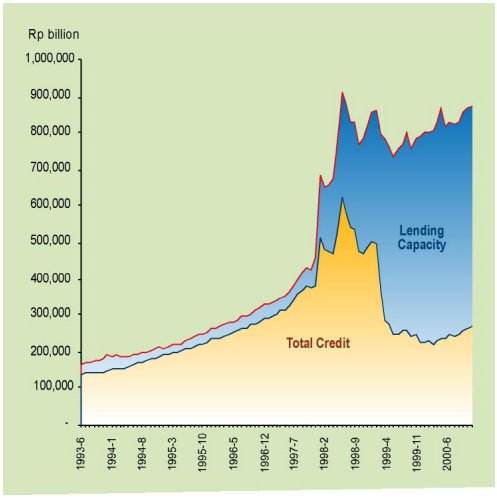
Credit decrease is also due to share price decline, because banks use corporate shares as collateral, so that share price decline will affect the amount of credit supplied that in turn will affect the economy. The situation after 1997 was a result of institutional transition (privatization or legal framework problem). In addition it was also due to macroeconomic and monetary condition changes resulting from budget and fiscal constrain.

To overcome credit contraction and bank performance, the government provides capital injection to several government banks. In addition, transfer is made on NPLs of government banks, whose performance is bad to government banks in better condition, subsequently expecting that the improvement will increase credit supply because the CAR is improving.

Chapter 3
The Credit Crunch in Indonesia : Stylized Facts

BANKS' CREDIT DEVELOPMENT

The rapid growth of banks' loan prior to the crisis is not separable from the ability of bank in providing loan (lending capacity)[2]. This is reflected from the growth of lending capacity that is relatively in line with the growth of banks' loan. During the year 1994-1996, the capacity of bank lending grew 20.6% boosting by the rapid growth of third party fund (deposits), whilst the banks' loan grew 24.9%.



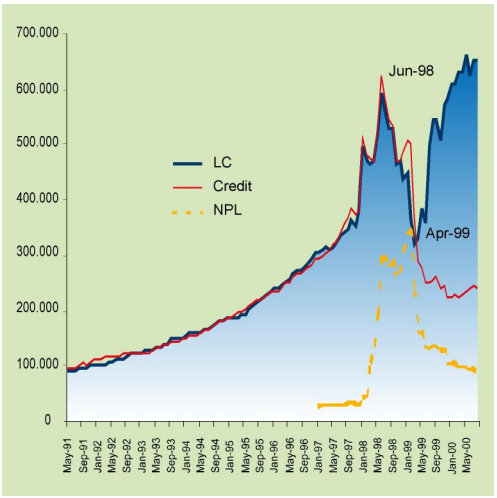
Graph 3.1.
Lending Capacity and Bank Loan

The rapid loan growth exceeded the lending capacity growth is reflected from the loan to deposit ratio (LDR) during the period, namely reaching an average of 109.4%. The crisis that occurred in mid-1997 resulted in slowing deposits' growth that in turn had an impact on the decreased bank lending capacity growth. On the other hand, the amount of loan drops faster and caused the difference between lending capacity and loan showing a widening tendency (Graph 3.1.). During the year 1997-2000, the average growth of lending capacity reached 31.2% whereas the average growth of loan was far below it, namely reaching 5.9%.

Before the crisis, banks' loan grew relatively quickly. This is reflected from the high loan growth during the year 1994-1996 that reached an average of 24.9% per year. The high loan

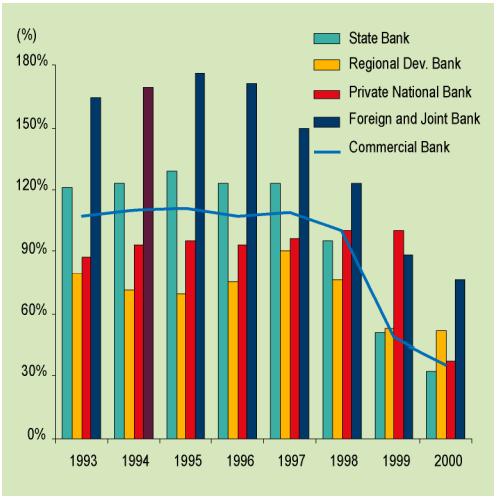
[2] Lending capacity constitutes total liabilities less RR, cash in vault, and capital.

growth still continued in 1997 although the crisis took place in the middle of the year. In 1998 the growth of banks' loan was quite high, namely reaching 28.9%, that was partially also due to the effect of weakening rupiah so that the value of credit in foreign currency in terms of rupiah leaped sharply. The effect of the crisis on credit emerged in 1999 when the credit grew negatively. The improvement of banks' loan gradually began in 2000 in which banks' credit showed a positive growth.



Graph 3.2.
The Growth of Lending Capacity, NPLs and Volume of Bank Loan

Initially, the decline of banks' loan since mid-1998 was caused by the lack of bank ability to provide loan (Graph 3.2.). Unfortunately, though the banks' lending capacity already showed some improvement in mid-1999, the amount of banks' loan was still declined. Observing the banks' loan decline, it had a pattern similar to the reduced figure of NPLs. In the other words, the decline of the banks' loan after April 1999 was more due to the obligation for banks participating in the recapitalization program to transfer bad loans (credit collectibility 5/ loss) to AMU-IBRA and then swept it with government bonds.



Graph 3.3.
The Growth of Bank LDR

The low of usage of banks' lending capacity is also seen in the low LDR figure. In fact in 2000, the bank LDR still showed a declining tendency. If the LDR at the end of 1999 was still recorded in the amount of 49.5%, by the end of 2000 the figure had dropped further, becoming 35.5% (Graph 3.3).

Observing the groups of banks, in 2000 all domestic groups of bank (state banks, private national banks, and regional development banks) had LDR figure below 59%. Even, the state banks and private national banks was recorded to have relatively small LDR, namely respectively 32.1% and 25.9%. Meanwhile, although the LDR figure continued to drop, foreign banks and joint banks are recorded to have a quite high LDR, namely reaching 77.0%. The phenomenon of the low LDR level, besides being caused by the swap of the credit with government bonds was also caused by the slow growth of banks' loan although the recapitalization program had been completed.

THE CAUSES OF SLOW GROWTH OF BANKS LOAN

The slow growth of banks' loan could happen because of weak credit demand, weak credit supply, or both. Disruption to the demand side could be in the form of declining the quality of borrower, high interest rate exceeding the ability to pay of debtors, and the high risk of business sector so that the firms did not have the courage to start business yet. Whereas disruption to the supply side could be in the form of the limitation of bank capital, availability of loanable fund, NPLs problem, and reluctance of banks to provide credit that related by the high risk of the business sector.

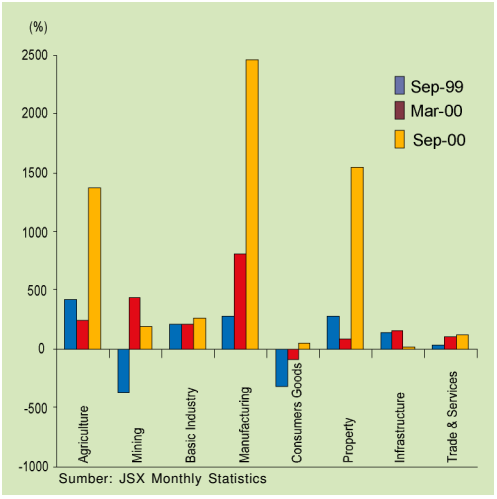
Problems on Demand Side

During the recession period, credit decline was a normal phenomenon that occurred as a reflection of the lower demand for new construction, capital goods, and consumer durables.[3] In the case of Indonesia, although credit growth already shows improvement but the pattern was rather different from the normal condition. Thus, explanation on the demand side could clarify the pattern difference.

[3] Bernanke and Lown, 1991

Declining Quality of Borrowers and High Loan Interest Rate

One of the main factors on the weak credit demand is the deterioration of firms' balance sheets. Before the crisis, many of the firms significantly increased their leverage, originating from both domestic and offshore loans. The financial crisis in 1997-1998 caused the sharp depreciation of exchange rate and risen interest rate hike. This condition increased debt service ratio of the firms and raised their leverage. The increasing leverage of firms is also reflected from the high debt-equity ratio of public companies. Even, the leverage level of companies dealing in the manufacturing industry, agriculture and property sectors was recorded very high (Graph 3.4).



Graph 3.4.
Debt to Equity Ratio of Companies Listed at JSX (Jakarta Stock Exchange)

In addition, the interest rate hike that was so high during the crisis caused a drop in the value of corporate assets and cash flow. As a result, although there was opportunity for investment, the firms with weak financial condition (companies whose leverage was higher or whose cash flow was lower) tended to carry out financial consolidation first rather than carrying out business expansion. This resulted in the low credit demand that took place.

Business Risk

In explaining the still low application for bank credit, the high business risk is one of the main factors reducing demand for credit. The uncertainty that remained high caused the entrepreneurs to be not yet daring to carry out business expansion (investment) so that the demand for credit for investment automatically also decreased. In addition, in the recession condition

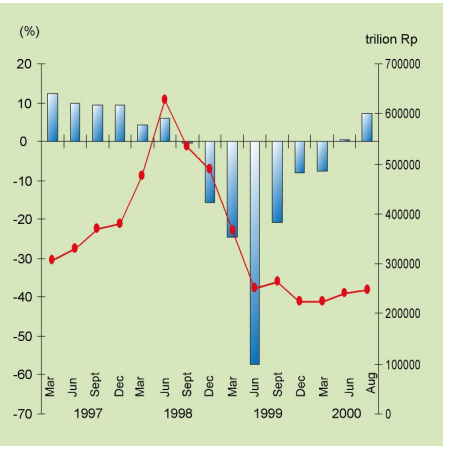
companies usually reduced their inventory. The reduced inventory amount naturally brought about less need for working capital that in turn caused lower demand for working capital credit.

Problems on Supply Side

A number of internal bank problems (such as capital adequacy, worsening asset quality, and availability of loanable fund) is believed to have caused a decline in the capability of banks to provide credit. In addition, there are several external problems creating reluctance on the part of banks to provide financing for the business sector.

Capital Adequacy

One of the impacts of the crisis is decreasing of banks' capital that is quite sharp as a result of the huge lost and lower asset quality. Consequently, the majority of banks owned negative net-worth (Graph 3.5). In such capital-constrained condition, it was very normal if banks then decided not to distribute credit, because increasing in the credit distributed will increase risky assets, thereby requiring the banks to have more capital. This condition is so called as capital crunch (Bernanke and Lown, 1991) to describe the phenomenon of decreased bank ability to distribute credit as a result of lack of capital.



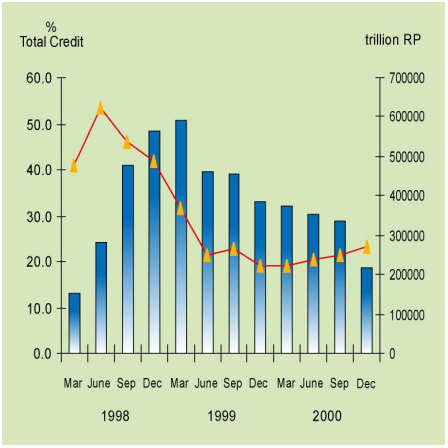
Graph 3.5.
CAR (Bar chart) and Credit Provided (Line chart)

Although the level of banks capital on an aggregate basis is positively in line with the completion of the recapitalization program, the requirement of minimum 8% CAR at the end of 2001 constituted one of the internal factors limiting the banks in providing credit. Banks felt that the 8%

CAR at the end of 2001 was difficult to reach, so that banks became more careful in distributing credit.

Non-performing Loans (NPLs)

Besides capital adequacy, the high of banks NPLs, that leaped over 50% in early 1999, constituted one of the factors causing reluctance on the part of banks to provide credit (Graph 3.6). In such high NPL condition, banks tended more to carry out internal consolidation to improve the asset quality rather than distributing credit.



Graph 3.6.
NPLs (Bar chart) and Credit Provided (Line chart)

The high of banks NPLs also affected the banks capital condition so that it worsened. This was due to the rising provision for loan losses (PPAP) that must be established and the decreasing interest revenue. Although NPLs by the end of 2000 gradually decreased, the high loss due to NPLs in the preceding periods caused banks to be risk-averse so that credit growth was not quite significant.

High Credit Risk

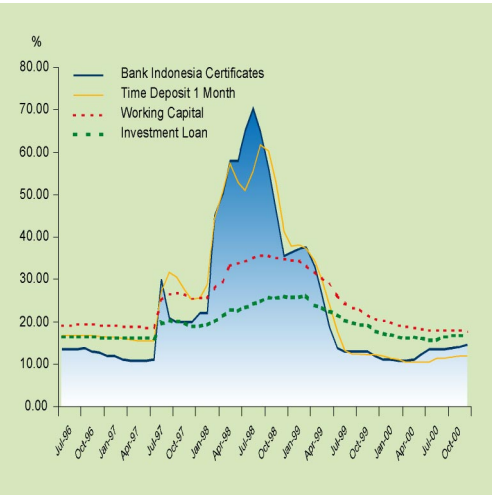
According to the banking perspective, one indicator reflecting the high risk in the business sector is by looking at the spread between the loan rate and the fund rate. A previous research found that one of the causes of the large spread of interest rate in the post-crisis is the level of risk margin applied by banks (Graph 3.7.) [4]. In addition, a number of other findings concluded that the high risk in the business sector has made banks reluctance to lend, namely: banks tend to ask liquid collateral;

[4] See "Interest Rate Formation from the Banking side in supporting the effectiveness of Monetary Policy", SPPK-DKM Part, Year 2000

to deal with the well-known borrower, and to centralized their credit approval. The high credit risk is also reflected from the leverage of companies as mentioned earlier.

THE CHANGES OF BANK PORTFOLIO

Bank Portfolio prior to Crisis

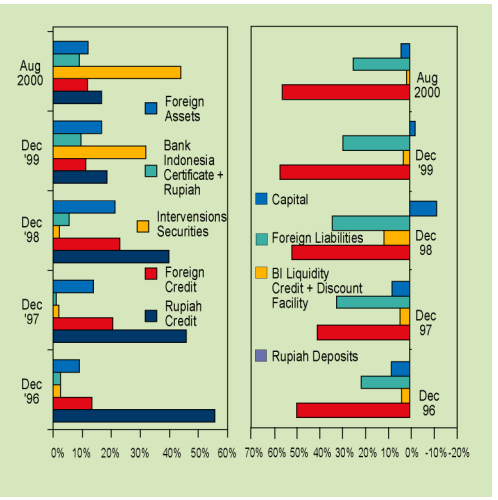


Graph 3.7.
Growth of SBI, Deposit, Working Capital Credit (KMK), and Investment Credit (KI) Rates

Prior to the crisis, the main sources of fund originated from the rupiah third party fund (rupiah DPK) and foreign currency liabilities. This is reflected from the large share of these two sources, namely reaching as high as 71% (Graph 3.8). The other source of funds originated from capital, inter-bank liabilities, loans, and Bank Indonesia Liquidity Credit (KLBI).

Prior to the crisis, banks allocated their fund mainly in the form of credit as reflected from its large share that reached 55.7% in 1996. Besides that, banks placed their fund in the form of foreign currency credit, inter-bank assets, and other foreign currency assets. The placement in SBI amounted to only 2.5% of the fund owned by banks.

There is an interesting pattern in the liquidity management among groups of banks. The pattern is not only occurred during the normal period but also in other observation periods. Foreign and joint banks were seen very efficient in



Graph 3.8.
Bank's Asset and Liability Portfolio

maintaining liquidity in the form of cash (idle fund). The cash held by these banks in each observation period as low as 0.1%-0.2%. However, in December 1999 the ratio leaped to 0.76% as an anticipation of the Y2K issue. Meanwhile, some other banks (local banks) held relatively large amount of cash, namely ranging between 0.6%-2.8% in normal period and subsequently rising in the other periods.

Other important finding was the banks' tendency to hold more foreign currency since the normal period (Rp6.9 trillion) and increasing subsequently in the crisis period (Rp85.1 trillion in December 1998). However, since the recapitalization program was being implemented, banks experienced short foreign currency in which in August 2000 reached Rp9 trillion. This was due to the transfer of foreign currency credit from the state banks to the IBRA and swept it with the hedge bond. Meanwhile, other groups continued to experience long foreign currency. Such phenomenon showed that there was a tendency that bank convert some of their rupiah fund into foreign currency investment.

Bank Portfolio during Crisis

At the beginning of the crisis, the composition of bank fund source was change significantly. Although the rupiah DPK and foreign currency liabilities continued to be the major source of fund, the composition of rupiah DPK decreased while the composition of foreign currency liabilities increased as a result of an addition of US$1.6 billion and the weakened rupiah value. In addition, the composition of fund source from BI increased which originated from the discount facility received by a number of banks due to liquidity problems.

The decrease in the composition of DPK at the beginning of the crisis was not merely due to decrease in rupiah DPK, but was due to the relatively slower growth of DPK compared to those in the foreign currency. In December 1997, almost all of groups of banks succeeded in increasing their rupiah DPK. Private National Non Forex Banks (BUSND) experience decrease in rupiah DPK as a result of the liquidation of 16 banks in November 1997.

On the asset side, the portfolio of banks at the beginning of the crisis has changed. Although the rupiah credit was still the main asset portfolio, its domination began to decline. On the other hand, the composition of foreign currency credit and other foreign currency assets began to rise. In line with the degradation of quality of the credit owned by banks, the provision for loan losses (PPAP) also increased. The SBI portfolio SBI in December 1997 also began to decline in line with the liquidity problems.

In December 1998, the composition of bank sources of fund did not experience significant change compared to those in December 1997. However, the composition of the worsened bank condition was reflected in the negative networth as a negative impact of loss. In addition, the source of fund from BI also showed significant increase due to the increased in discount facility giving to illiquid banks.

The composition of rupiah DPK in December 1998 was relatively higher compared to those in the previous period. Compared to December 1997, the rupiah DPK rose by Rp183.8 trillion. Such increase mainly occurred in time deposit in line with the high interest rate provided by banks at that time. The foreign currency liabilities owned by banks in December 1998 declined by US$6.8 billion compared to those in December 1997. Such drop was also linked to the huge capital outflow at that time.

The loss suffered by banks in 1998 amounted to Rp168.3 trillion caused the bank capital to become negative Rp98.5 trillion. The loss was particularly due to the negative spread facing by banks because of rigidity in loan rates; the disrupted in bank revenue because of non-performing loans rose since many companies collapsed in the crisis period, and the losses because of exchange rate fluctuation.

The asset portfolio in December 1998 was still dominated by rupiah credit, foreign currency credit, and foreign currency assets. However, the composition of rupiah credit declined while the composition of foreign currency credit and foreign currency asset rose. Meanwhile, the share of PPAP increased due to the continuing worsening process in the quality credit and increase in the share of SBI due to the attractiveness of the interest rate.

The amount of SBI owned by banks rose by Rp40.8 trillion during the period December 1997-December 1998. Based on the group, the biggest increase occurred in the Private National Forex Banks (BUSD) group, namely Rp18 trillion. Meanwhile the SBI owned by state banks and foreign-joint banks rose by Rp10.5 trillion and Rp10.1 trillion respectively. BUSND and Regional Development Banks (BPD) placed their fund in SBI by Rp2.1 trillion and Rp116 billion.

Bank Portfolio Post-Recapitalization Program

In December 1998, after the government has implemented the recapitalization program in several banks, bank portfolio changed quite significantly as can be seen on the liability and the asset sides. On the liability side, although the rupiah DPK and the foreign currency liabilities were still the major sources of fund, the negative capital of banks and the composition of discount facility began to undergo decline. The discount facility had already returned to the normal pattern as when the crisis had not yet occurred. Meanwhile, the negative bank capital become since the government injects fund to strengthen the capital.

On the asset side, the recapitalization program brought about the shifting in bank portfolio. The main composition of bank fund shifted from rupiah credit to government bond. Rupiah credit, foreign currency asset, foreign currency credit, and SBI constituted the second layer portfolio. The decrease of bank portfolio in rupiah credit occurred due to several things, namely: transfer of credit from recapitalization banks to Asset Management Unit Indonesian Bank Restructuring Agency (AMU-IBRA) as a condition for them to participate in the program, the write off of NPLs of several banks that conducted the recapitalizion themselves; the high business sector risk had made banks reluctant to provide new loan; and the continuing existence of CAR constraint for several banks since they should set aside fund to establish PPAP caused banks unable to provide new loan. On the other hand, in line with the constraint in loan supply, banks shifted the fund to the form of SBI and Rupiah Intervention (IRK).

Up to August 2000, the above-mentioned pattern of bank liability and asset portfolio had not changed much. The continuation of the recapitalization program on state banks and several Banks Take Over (BTO) only improve the capital to be positive. In addition, on the asset side, the recapitalization program only enlarged the share of government bond as the main portfolio of banks. Meanwhile, the portfolio of banks in SBI also has not shown significant change.

Observation of the pattern of bank portfolio behavior post the recapitalization program shows that in general the function of banks as an intermediary function has not fully recovered. Although such thing only occurred in state and BUSD banks, due to the majority of those banks with regard to assets, solution of this problem has to be sought. The pattern of state banks and BUSD (up to August 2000) shows that the recapitalization program has proved to be inadequate to overcome the complicated nature of the problem in the banking sector.

In the post-recapitalization, the capability of bank to generate credit has not yet fully recovered. A pile of problems still remained, namely the high risk of the business sector and the relatively slow progress on restructurization of companies had caused banks to lose their main function as an intermediary between creditors and debtors. Most of the bank fund is placed only in securities (government bonds and SBI) not constituting as the core business of the banks because it just resembles more the activities of a mutual fund.

Chapter 4
Empirical Investigation: Is there a Credit Crunch?

This chapter discuss empirical test to investigate whether the credit decline in the aftermath of the crisis in Indonesia is due to supply factors as suggested by the credit crunch hypothesis or due to weak demand for credit. This empirical investigation is conducted by the use of two approaches, namely macro-aggregate and micro-bank. The macro-aggregate approach is conducted using aggregate data in a disequilibrium model of the credit market as conducted by Pazarbasioglu (1997) and Gosh and Gosh (1999). The micro bank-level approach is conducted by a panel regression method using individual bank data.

MACRO-EVIDENCE

Methodology

The main problem in testing the existence of credit crunch is how to identify that the bank credit is due more to supply or demand. Basically, the identification is carried out in a switching regression framework by which the actual loans may be attributed as the loan supply or loan demand function. In the methodology, a system equations of loan supply and demand functions are estimated by maximum likelihood methods due to Madalla (1983, pp. 296-297).

The real supply of loans (L^S) is determined by the banks' lending capacity and factors influencing the willingness of banks to supply loans: lending rates, real output and capital-assets ratio. Lending capacity is defined as total liabilities minus bank's capital minus required reserve minus cash in vault. The loan rates is the interest rates on working capital loans. Current output is the real GDP obtained by interpolating the quarterly real GDP. Different from previous studies

(e.g. Gosh and Gosh) we include capital-asset ratio as a determinant of the loan supply. We conjecture that the fall in the banks' capital especially during the crisis has been responsible to the recent shrinking in the bank loans; thus 'capital crunch' (Bernanke and Lown, 1991) is probably a better explanation of the recent 'credit crunch'. The loan supply specification is given by:

$$L_t^S = \alpha_0 + \alpha_1 lcap_t + \alpha_2 r_l + \alpha_2 y_t + \alpha_4 CA_t + \alpha_5 NPL_t + \varepsilon_t \quad (1)$$

where $lcap$ is the real lending capacity (the lending capacity deflated by CPI). r_l lending rates, respectively. y denotes the real output measured by the real GDP. CA denotes banks' capital to asset ratio and NPL denotes non-performing loans.

Loan demand (L^D) is determined by real output and lending rates. Needless to say that the higher output means the higher needs for loans. The demand for loans is negatively related to the lending rates reflecting the current cost of capital given expected inflation. The formal specification of demand for loans is given by:

$$L_t^D = \beta_0 + \beta_1 y_t + \beta_2 r_{l,t} + \varepsilon_t \quad (2)$$

To capture the effect of the crisis on loan demand and supply, we also include a dummy for crisis (i.e, zero up to July 1997 and one thereafter).

Equations (1) and (2) can be simplified into the following two-simultaneous equations:

$$L_t^S = X_{1t}'\alpha + \varepsilon_{1t} \quad (3)$$

$$L_t^D = X_{2t}'\alpha + \varepsilon_{2t} \quad (4)$$

Where X_1 is the determinants of the loan supply function and X_2 is the determinants of the loan demand function. If the lending rate does not fully adjust the disequilibrium in the loan market, the actual loan (L_t) can be expressed as the minimum of loan supply or loan demand:

$$L_t = \min(L_t^D, L_t^S) \tag{5}$$

If the $L^D > L^S$, then the observed quantity L is on the supply function, and if $L^D > L^S$, then the observed quantity L_t is on the demand function. Maddala (1983) shows that, in this type of disequilibrium model, the coefficients of (1) and (2) can be estimated by maximum likelihood methods with the likelihood function (ML) as follows:

$$ML = \prod_t \{g_1(L_t)[1-G_2(L_t)] + g_2(L_t)[1-G_1(L_t)]\} \tag{6}$$

where $g1(L_t)$ and $g2(L_t)$ denotes the probability of the actual loans belong to supply and demand, respectively, which is assumed to follow normal distribution and $G_1(L_t)$ and $G_2(L_t)$ denotes their corresponding cummulative density function. We use Berndt, Hall, Hall and Hausman (BHHH) iterative procedure to estimate the equation.

Empirical Result

Equation (1) is estimated for the sample period 1993.06-1999.09 and reported in Table 4.1. In the loan supply function, all coefficients conform to what is expected. The lending capacity has the expected positive sign. This supports that the lending decisions depend on the banks' deposits and foreign borrowings, the two major components of the lending capacity. Similarly, the loan rate has a positive and significant coefficient, reflects that the higher the loan rate the more credit offered by banks. A more interesting finding is that the loan supply is positively influenced by the capital-asset ratio. This finding supports our prior conjecture that the fall in loans in the aftermath of the crisis partly attributable to the 'capital crunch'. Meanwhile, the NPL has a negative and significant coefficient implying that the higher NPLs in a bank portfolio, the less credit that can be supplied by the bank as a higher NPLs makes banks have to provide allowance for earning assets losses.

Table 4.1.
Result of Estimate of Maximum Likelihood of
Credit Supply and Demand Equation

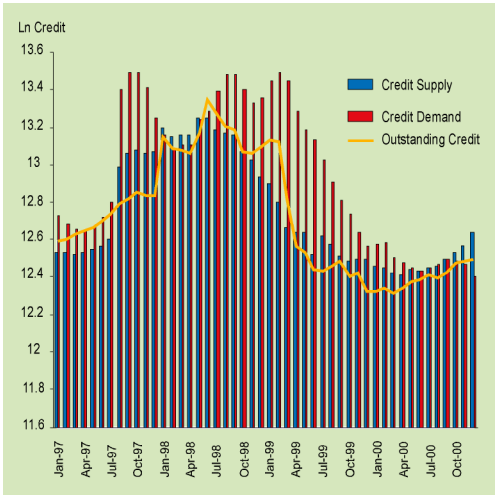
-Variable	Coefficient	t-stat
Supply		
Constants	3.720	7.80***
Credit capacity	0.451	11.21***
Credit interest rate	1.299	11.94***
Capital-asset ratio	0.002	3.09**
NPLs	-0.335	-8.98***
Demand		
Constants	-3.249	-3.21**
Output	2.871	10.41***
Credit interest rate	1.966	29.83***

* significant at 10%, ** significant at 5%, *** significant at 1%

In the loan demand equation, the output has a positive and significant coefficient reflecting the higher the output the higher demand for credit. Surprisingly, interest rates on loans have a positive effect on the loan demand. These perhaps reflect that the interest rate is not the main problem for firms to apply credit.

Furthermore, to obtain an indication as to whether the actual credit is affected by the supply or demand factor, the estimates of two functions are fitted in the same graph (Graph 4.1). The figure strikingly shows that the throughout the crisis, the bank loans are associated supply determined. The evidence of 'credit crunch', characterized by an excess demand for loans, started to emerge in August 1997, one month after the contagion effects from the exchange rate turmoil in Thailand spread to Indonesia. Indeed, prior to the crisis hit the country, non-performing loans in the banking system tended to rise. Coupled with the excessive foreign denominated liabilities, this condition is vulnerable to the currency turbulence. Against this situation and uncertainty in the exchange rate after the government adopted the free-floating regime, it is not surprising that the

banks were discouraged to extend loans. A further depreciation of exchange rate together with the high interest rates weakened the balance sheet of corporates and discouraged the future investment, which in turn reduced the demand for bank loans. This is reflected by narrowing the magnitude of excess demand.



Graph 4.1.
Result of Estimate of Credit Supply and Demand

In a more recent period when the overall macroeconomic condition is relatively stable, the credit crunch may be attributed to the new prudential regulation issued by Bank Indonesia on November 1998, including the capital adequacy ratio (CAR), quality of productive assets, provision for loan losses and legal lending limit. Re-imposing of CAR to BIS standard in 2001 reduce the willingness of banks to lend amidst the existing bad loan problems. In addition, a more stringent legal lending limit provision has forced banks to adjust their loan behaviour from the legacy of bank-business group relationship. As the bank-borrowers is a long-term relationship in nature, the adjustment needs a long period, e.g. collecting information about their new potential borrowers. In sum, the 'credit crunch' in the aftermath of the economic crisis in Indonesia was triggered by the large-scale depreciation and high interest rate at the beginning of the crisis and exacerbated by the new prudential regulation to enhance the bank resilience.

It can be noted from the graph that since the mid-2000 there has no longer been demand excess, showing that actual credit is no longer driven by the supply factor. There are several factors that may be able to explain this phenomenon: (1) credit crunch has indeed gradually recovered; (2) there are factors affecting bank loan supply but not captured in the model such as the continuing high credit risk in the business sectors. The survey conducted on banks and firms as reported in Chapter 5 and Chapter 6 will reconfirm the question.

MICRO-EVIDENCE

Panel data regression

This empirical assessment using panel data of individual banks is carried out to test the hypothesis that the decline in bank credit is due to the supply factor as indicated by the credit crunch hypothesis, particularly the weak internal financial condition of banks. The (monthly) data used in this empirical investigation are the individual banks with sample between January 1994 through December 1999. By eliminating the banks closed prior to the end of December 1999, we have 140 banks or 10,080 observations.

The panel regression model is specified to capture the supply factor, especially the capital-asset ratio as the proxy of the bank capital (CAR) ratio and the demand factor, namely the GDP growth and the monetary policy variable (SBI rate). The model specification is as follows:

$$\Delta L_{i,t} / A_{i,t} = b_0 + b_1\left(\Delta L_{i,t-1} / A_{i,t-1}\right) + b_2 CA_{i,t-1} + b_3 y_t + b_4 rSBI_{t-1} \qquad (7)$$

Where the index i is the index for individual banks and t is the index for time period. L_{it} is the credit position, A_{it} is the total asset, CA_{it} is the capital to asset ratio (hereinafter to be referred to as capital ratio), y_t is the GDP growth and $rSBI$ is the SBI interest rate.

Panel Regression Result

The panel regression of the equation (7) is conducted for the entire sample period (1994:01 - 1999:12), in addition to the regression for the sample period before the crisis (1994:01-1997:07) and the period after the crisis (1997:08-1999:12). For the whole sample period, a dummy for crisis is added to capture the structural change that may occur from the period before the crisis and thereafter. The regression result can be seen in Table 4.2.

The result of estimate for all banks show that generally the coefficients of model conform to what is expected, namely the capital-GDP growth ratio positively affects credit growth whereas the SBI interest rate as the monetary policy variable negatively affect credit growth.

Consistently, the capital ratio also has positive and significant coefficient for the whole sample period, before the crisis and after the crisis. This shows that the credit extended by banks with low capital tends to grow slower compared with the banks with higher capital ratio. This finding is in line with our conjecture that bank capital constraint in the aftermath of the crisis is one of the main factors creating the credit crunch.

Table 4.2.
Panel Regression Result of All Banks

Variable	All samples (Jan 94-Dec 99)	Pre-Crisis (Jan 94-Jul 97)	Post-Crisis (Aug 97-Dec 00)
Constants	0.011 (10.38)	0.011 (3.26)	0.006 (2.45)
$\Delta L_{i,-1t} / A_{i,t-1}$	0.028 (2.78)	-0.006 (-0.46)	0.041 (2.57)
CA_{t-1}	0.025 (5.96)	0.031 (6.69)	0.022 (3.05)
GDP growth	0.130 (3.64)	0.183 (3.99)	0.108 (1.93)
$r_{SBI\ (-1)}$	-0.038 (-7.91)	-0.041 (-1.58)	-0.037 (-5.77)
Dummy Crisis	-0.005 (-3.27)	-	-

( ) figure in parenthesis is t-ratio.

Meanwhile, as expected, GDP growth as the proxy of the credit demand shows positive and significant coefficient for the whole sample data. This reflects that the bank credit will grow in line with the increase in demand for credit. However, the magnitude of the coefficient on output decline significantly after the crisis, which implies that since the crisis, effects of demand factor on the behavior of bank credit have been declining.

Furthermore, to examine the role of bank financial position in bank credit behaviour, the sample of banks were split into two categories of banks, namely banks under recapitalization process (recap banks) and those not included in the recapitalization program comprising banks in category A and foreign banks (non-recap banks). This regression is carried out by using the equation (7) by adding the ratio of non-performing loans (NPLs)[5]. This variable is expected to influence negatively the credit supply:

$$\Delta L_{i,t} / A_{i,t} = b_0 + b_1\left(\Delta L_{i,t-1} / A_{i,t-1}\right) + b_2 CA_{i,t-1} + b_3 y_t + b_4 rSBI_{t-1} + b_5 NPL_t \qquad (8)$$

The estimation results show that the coefficient on capital ratio for recap banks has positive and significant, whilst in the case of non-recap banks the coefficient becomes insignificant. This finding is intuitively well understood since the recap banks, i.e., those experiencing the capital constraint, the credit provided by the banks is more sensitive to capital ratio than those without

Table 4.3.
Result of Panel Regression, Jan. 97 - Dec. 99, Banks in Recapitalization versus Banks in Non-Recapitalization

Variable	Banks in Recapitalization	Banks in Non-Recapitalization	All banks
Constants	0.001 (1.66)	0.024 (7.04)	0.02 (6.29)
$\Delta L_{i,-1t} / A_{i,t-1}$	-0.091 (-2.90)	0.033 (1.77)	0.02 (0.98)
CA_{t-1}	0.033 (2.98)	0.013 (1.43)	0.02 (2.55)
GDP growth	0.235 (2.31)	0.296 (4.34)	0.23 (4.06)
r SBI	-0.014 (-1.19)	-0.044 (-5.69)	-0.03 (-4.45)
NPL_{t-1}	-0.049 (-7.06)	-0.044 (-8.55)	-0.04 (-9.22)

Figure in ( ) parenthesis is t-ratio.

[5] Data on NPLs for individual banks prior to crisis not available

capital problem (non-recap banks). For the two groups of banks, the coefficients on NPLs are negative and significant. These findings suggest that the supply factors significantly play the role in behaviour of bank credit.

Another interesting finding is that the effects of monetary policy (coefficient on SBI) on the credit extended for the two groups of banks are different. The effects of SBI on the credit for non-recap banks are negative and significant. Conversely, in the case of recap banks, the effects of the monetary policy variable are not significant. This finding suggests that monetary policy becomes ineffective in affecting credit of the recap banks. Since the share of this bank group is relatively large in the economy, the blocking of this transmission channel will aggregately reduces the effectiveness of the monetary policy.

Chapter 5

Supply of Credit Behaviour: Results of Survey on Banking Sector

In the preceding discussion the existence of the credit crunch phenomenon through empirical analysis was presented. To confirm the empirical analysis, this study conducted a survey on banks to know whether the credit decline originates from the supply factors. The survey was conducted on 20 banks with characteristics as follows: (i) average assets approximately 90% of the total bank assets, (ii) the average assets close to 70% of the total outstanding bank credits, (iii) the average third-party fund respectively 80% and 70% of the total banks third-party fund.

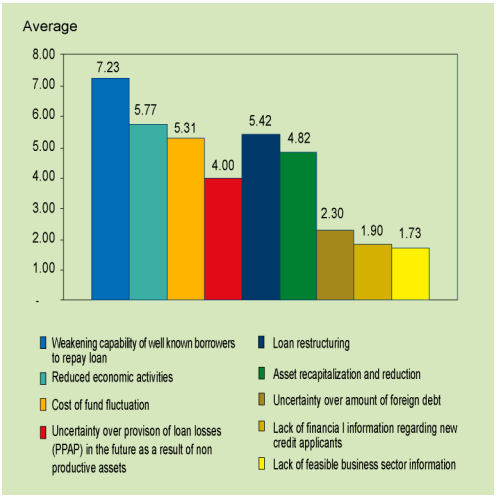
The question in the survey was prepared to provide information on various kinds of mechanism that could cause the existence of credit crunch, such as the problem being faced by banks since the crisis, the possibility of adverse selection problem, and the bank liquidity preference.

Analysis of the survey result was done by giving the highest score to answers serving as the top priority and the lowest score as the last one. The scores in turn were averaged from all of the samples coming in. The highest average reflects the priority answer, which according to the respondent is the most important. In addition, analysis was also calculated the percentage of respondents answer for each question. (Complete questionnaire of his survey is presented in Appendix 1).

From the 13 banks' answer resulting from the survey, several important things were found in line with the credit supply which supporting the occurrence of credit crunch, namely:

- Credit approval or rejection by commercial banks depends more on the borrower information than the type of project being proposed.
- In making rejection, banks do not take into consideration the interest rate as the decisive factor (non-price credit rationing). Lack of information regarding the quality of borrowers and the feasible sectors likely serves as one of the decisive factors in the lending.

- Recently, there is a change of bank preference in its portfolio investment. Banks tend to hold liquid and less risky assets, such as Bank Indonesia Certificate (SBI), government bonds, and inter-bank money market (liquidity preference hypothesis). Banks seriously observes the cost of loans and tends to reduce their lending. Banks are also concerned with the fund requirement for re-capitalization and restructurization.



Graph 5.1.
Bank Problems

BANK PROBLEMS SINCE THE CRISIS

Based on the average score processed on the question regarding the main problem being faced by banks, the weakened ability to pay of well-known borrowers has the biggest score, namely 7.23, of the maximum score of 9 (Graph 5.1).

The score could be interpreted that the weakened ability to pay of the borrowers has become the main problem for banks. The respondents place this answer as the main problem around 70% respondents. This problem being faced by banks, particularly since the crisis period bringing about the deterioration of the business sector, which in turn disrupting the corporate finance, that mostly are the bank borrowers. The uncertainty political situation has also worsened the business activities and weakened the company financial condition. The deteriorating financial condition of companies, particularly those becoming bank borrowers, in turn cause the quality of bank credit worsened.

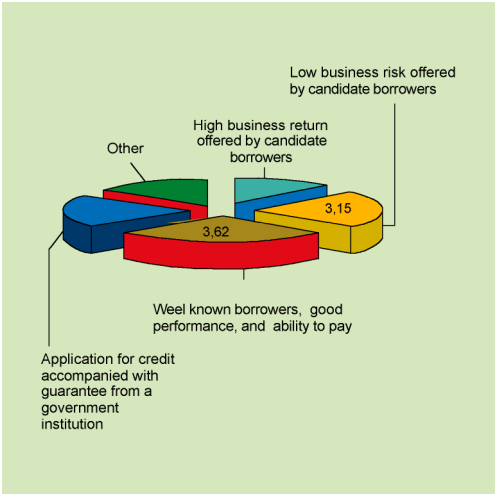
Another problem being faced by banks is the slowdown economic activities and the slow progress of the loan restructuring process. The economy that has not fully recovered causes the reduced business world activities so that the bank borrowers reduce their business activities, which in turn may decrease their application for credit to banks. Meanwhile, the slow progress on the borrower loan restructuring makes it difficult for banks to find feasible borrowers.

Besides the above problem, banks also face internal consolidation problems for the purpose of fulfilling the prudential banking regulation. The regulations considered to be constraints, particularly with regard to the bank credit supply is the Capital Adequacy Ratio (CAR), Legal Lending Limit (LLL), and also the Reserve Requirement (RR)[6].

FACTORS AFFECTING CREDIT DECISION

The worsening borrower quality causes the occurrence of change of bank lending behavior as reflected from the bank's decision to approve or reject a credit application. In the case of credit approval, the highest score of the average answer given, namely 3.62 of the maximum score of 5 (Graph 5.2.) shows that the bank's decision to provide credit depends on the length of time the company has been the borrower (the well-known borrower), corporate performance, and the ability to pay. From the sample percentage, 70% of the respondent use these reasons as the main consideration in their credit decision. Another factor that is also taken into consideration in deciding on a credit is low risk of the candidate borrower. Meanwhile, the profitability of the candidate borrower that usually as the main factor in credit approval, becomes the last factor.

From the aspect of credit rejection, 77% of the respondents answered that the main factor in the credit rejection is the weakened ability to pay of the well known borrower, which is also reflected from the highest average score, namely 3.77 of the maximum score of 5 (Graph 5.3). This is also supported from the answer of all respondents in making application rejection for credit proposal by new borrower. On

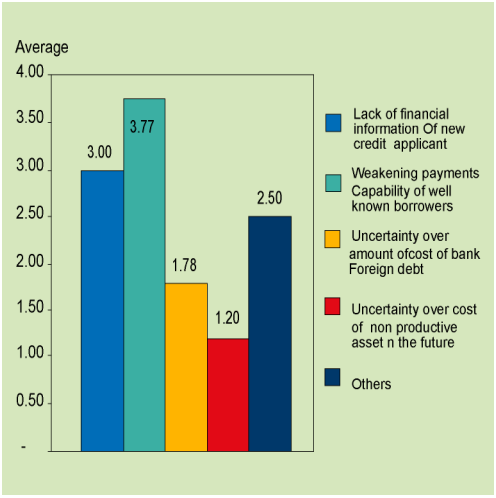


Graph 5.2.
Credit Approval Factors

[6] See Interest Rate Establishment Structure from Bank Side to Support Effectiveness of Monetary Policy. 2000 Goal Work Program, SPPK-DKM Section.

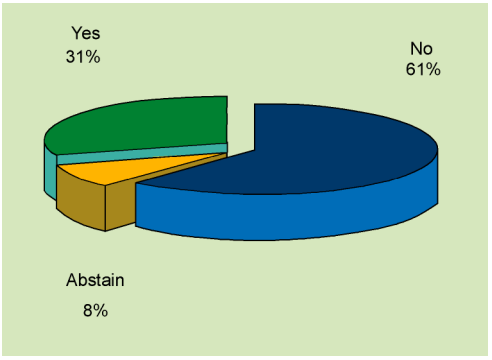
the other hand, the possibility of application credit rejection for the well–known borrower is very small. This phenomenon implies the existence of the risk-averse attitude of bank to the new credit application.

The phenomenon that credit approval or rejection by banks based on the borrower information, particularly for the well-known borrower with good relationship, views an indication that non-price factors are more important in lending decision. In addition, the bank evaluation on the candidate borrower that based on the behavior of the well-known borrowers, shows the existence of asymmetrical information problem. Banks, in this case, carry out borrower quality averaging. Providing the borrower quality information can minimize asymmetrical information problem.



Graph 5.3.
Credit Rejection Factors

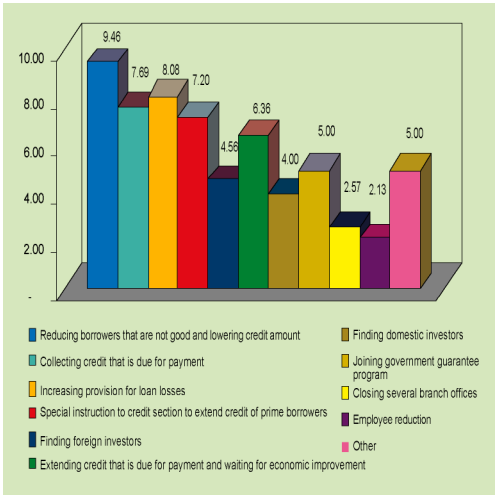
The non-price credit rationing is also reflected from the 100% respondents stating that they will not accept rejected credit application, although the borrowers agree to pay at a higher interest rate or with a shorter period. The banks are also confident that the applications of the borrower that they reject will not be accepted by other financial institutions (Graph 5.4).



Graph 5.4.
Will other banks accept the candidate borrower whose credit application is rejected by your bank?

BANK CREDIT POLICY SINCE THE CRISIS

For the purpose of overcoming the crisis that occurred, 85% of the respondent banks



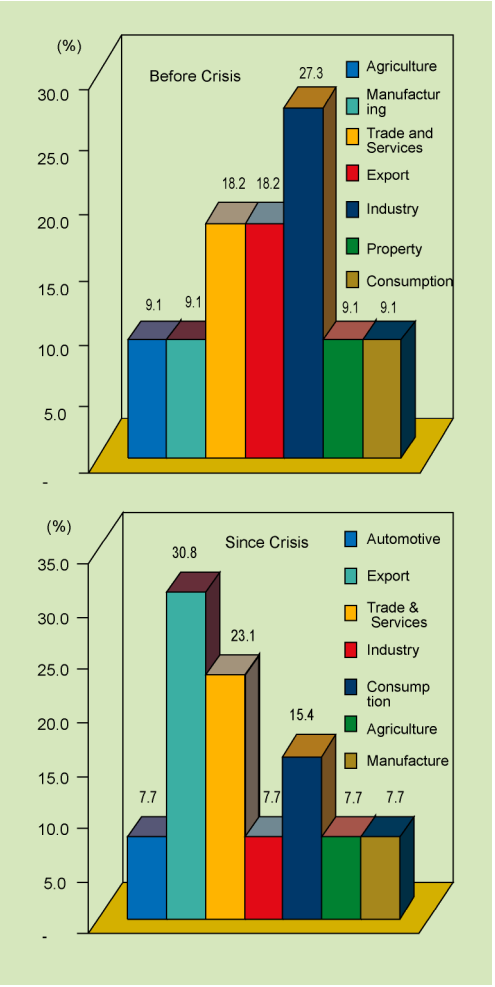
Graph 5.5.

Bank Policy during Crisis Period

minimize loss, and making credit extension only to the prime borrowers.

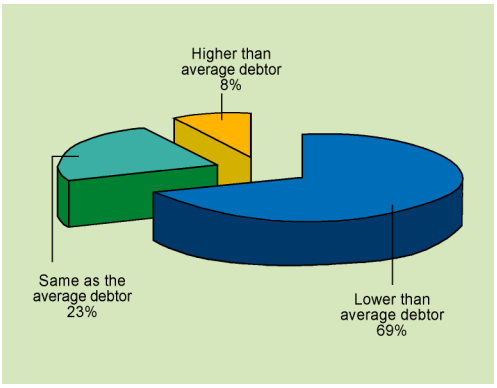
The crisis that occurred and the existence of tighter bank credit policy gives an implication of reduced outstanding credit owned by banks. 70% of the respondents stated that since July 1997 they had experienced decrease of the credit that they had by more than 20% of the average outstanding credit before the crisis. From the sample percentage, 54% of the respondents stated that the number of borrowers that they had also decreased by more than 20% of the average in the period before the crisis.

According to the banks opinion, the economic sector worst hit as a result of the lending difficulty is the property sector, importers and other carried out credit policy, namely reducing the number of bad borrower and reducing credit supply as seen in the average score of the highest answer, namely 9.46 of the maximum score of 11 (Graph 5.5). In addition, another policy is that increasing the provision for loans losses that giving a consequence of reduced bank profit, collecting credits that are due for payment to

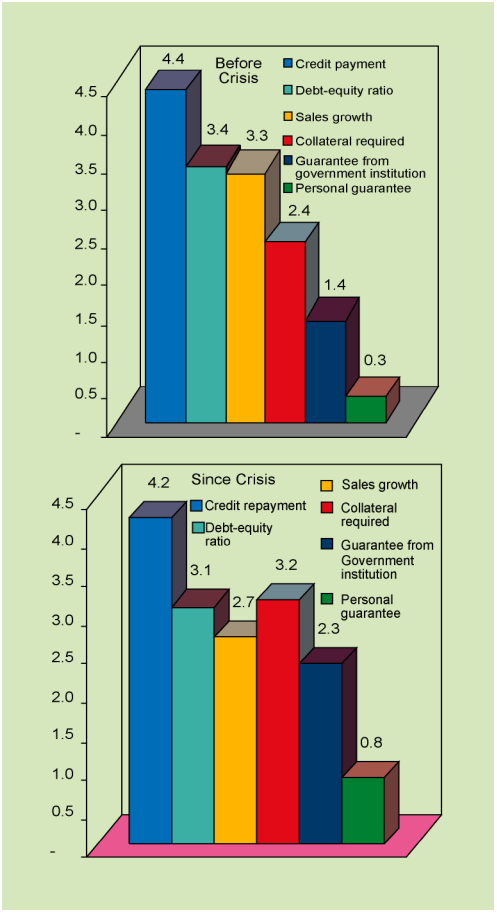


Graph 5.6.

Sectors that are Profitable to Banks



Graph 5.7.
Evaluation of Risk of Credit to Exporters



Graph 5.8.
Risk Factors

financial institutions that thus far have largely relied on bank fund. Before the crisis period, the sector which having a big opportunity for banks to generate profit in lending activities, is the industrial sector. Whereas since the crisis to date, the sector which having the opportunity of providing profit for banks, is the export sector (graph 5.6). From the risk, 69% of the respondents said that exporters have relatively lower risk compared with the other borrowers.

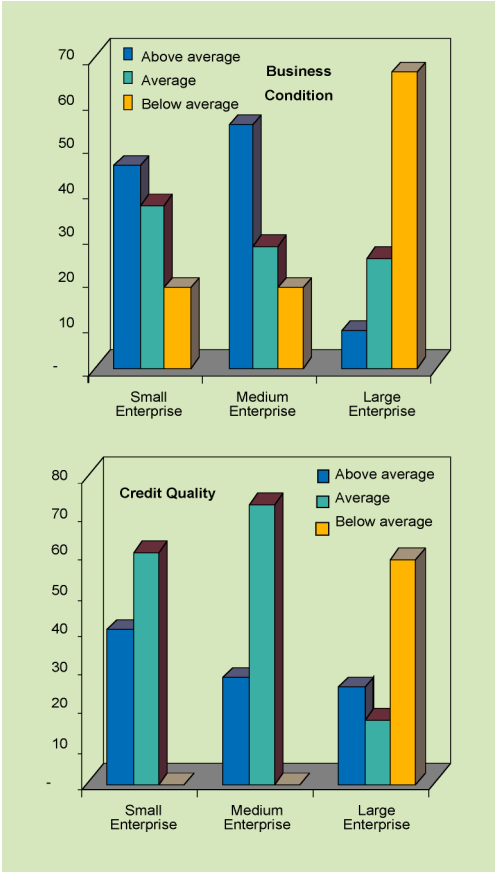
In the case of credit risk evaluation, the main factor taken into consideration by the respondent before the crisis and after the crisis is the credit repayment by borrowers. As long as the candidate borrower can guarantee credit repayment, the credit risk of the borrowers will be rated low. Another factor that is also taken into consideration is the debt-equity ratio (leverage), the collateral owned and the growth of sales of the business of the candidate borrowers.

From the evaluation conducted by respondent on the business condition and credit quality of their borrowers, small-scale enterprise credit (KUK) has better business condition compared with medium-scale enterprise (namely with an asset of Rp1-5 billion) and large-scale enterprise (with assets above Rp5 billion) (Graph 5.9). However, banks are still reluctant to lend to SMEs on the ground

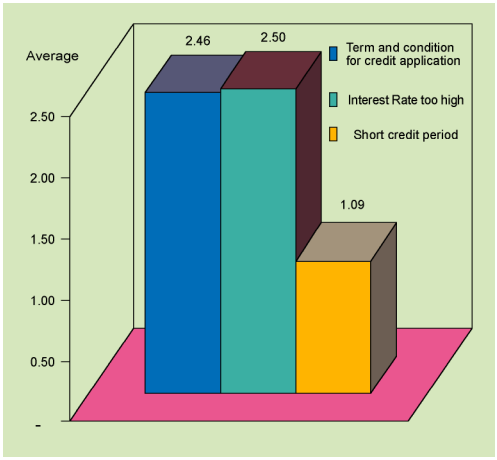
that the lending activities is very costly and lack of experiences in dealing with SMEs.

Based on the respondents opinion, for the purpose of improving the credit condition in Indonesia needs to prioritize the exchange rate stability effort, thereby being able to push a conducive business climate. In addition, high economic growth, borrower debt restructuring, and provision of complete information regarding potential borrowers and sectors to be financed also has to be sought by the government. Banks also stated the need for a stimulus in lending activities such as a provision of credit guarantee scheme and the project financing schemes.

From the aspect of borrowers, the factors considered hindering lending activities and often complained to banks are interest rate that is too high and term of conditions for credit application that is considered too tough. 60% of the respondents with average score of 2.5 stated the main factor of the borrower's complaint was high interest rate (Graph 5.10).



Graph 5.9.
Credit Condition and Quality

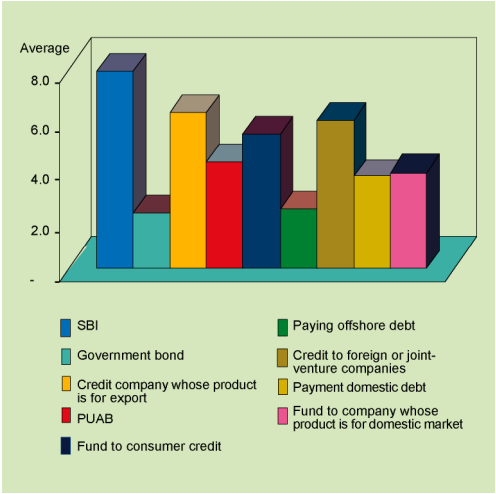


Graph 5.10.
Debtor's Complaint

LIQUIDITY PREFERENCE

The continuing high uncertainty, amidst the political situation that is not yet stable, and the

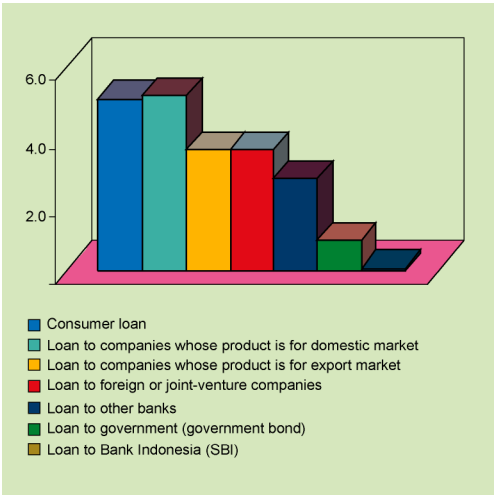
continuing process of internal bank consolidation for the purpose of fulfilling various Bank Indonesia's prudential regulation have caused lending activities to be not yet restored to the condition before the crisis. This condition in turn causes the bank preference change in the portfolio investment. 85% of the respondents have preference to invest their surplus fund in the form of government bonds and Bank Indonesia Certificate (SBI), each having an average score of 7.9 and 6.3 of the maximum score of 9 (Graph 5.11). Besides the two risk-free assets, banks tend to invest their fund in a very short period, namely inter-bank investment (PUAB). This takes place because the high business risk in the real sector has caused the banks to tend to hold liquid assets.



Graph 5.11.
Bank Preference in Fund Placement

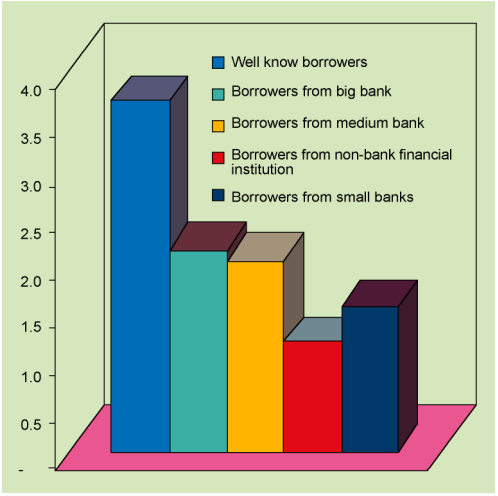
The banks evaluate credit to companies still has high risk. Credit to domestic oriented companies and consumer credit constitutes the type of investment considered having the highest risk, as reflected from the high average score of each, namely 5.2 and 5.1 (Graph 5.12).

Recently, the lending activities made by banks mostly constitute an extension of the previous credit. Most of the borrowers receiving the new credit are well-known borrowers. In addition, the banks only provide new credit to borrowers originating from large banks. The decision of the banks to provide new credit is mostly determined by the ability to pay of the prospective borrowers.



Graph 5.12.
Fund Placement Activity Risk

The lowering outstanding bank credit is mostly due to transfer of credit to AMU/IBRA for the purpose of credit restructuring. Based on the answer in the questionnaire, the problem being faced by banks in conducting credit restructuring is the problem of borrower information such as cash flow, balance sheet, etc. There is a change in bank preference on safe and liquid assets, worsened by the information imperfection, further strengthens the credit crunch phenomenon.



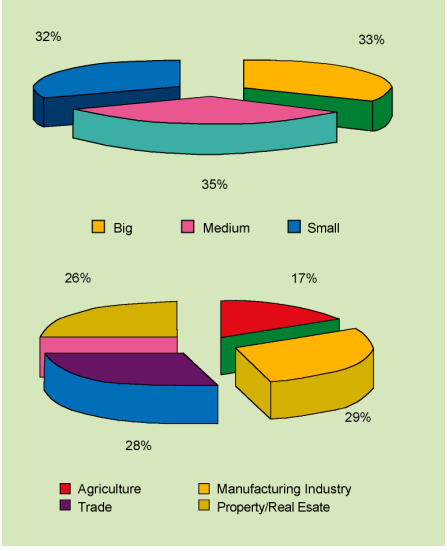
Graph 5.13.
Approved Application for Credit

Chapter 6

Firms' Demand For Credit : Results From Corporate Survey

In the previous chapter, the results of bank survey indicate that there is bank reluctance to provide credits to companies as a result of several problems being faced by banks such as the continuing high credit, debtor information problem, and fulfillment of bank prudential provision and. The findings show that the credit declines during the crisis period and the slow growth are pushed by credit supply factors, namely from the side of banks as credit supplier. To obtain objective result, this research also conducted survey from the side of credit demand by firms.

The survey conducted on firms that still having credit from banks includes several sectors, namely agriculture, manufacturing industry, trade, and property. The firms surveyed are also divided into three firms' size, namely large, medium, and small enterprises. The survey is aimed to get qualitative information from respondents regarding firm financing source, access to banks credit, alternative financing during the crisis period, and corporate preference towards banks as source of finance.

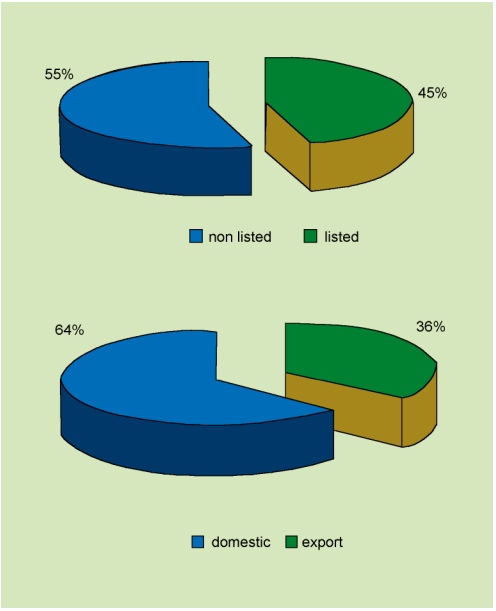


Graph 6.1.
Respondent Characteristics
by Sector and Scale

RESPONDENTS CHARACTERISTICS

The number of respondents interviewed was 120 companies with breakdown as follows: agricultural sector 17%, manufacturing industry 29%, trade 28%, and property/ real estate 26%. Categorized according to firm scale, namely large companies 33%, medium companies 35% and small companies 32%.

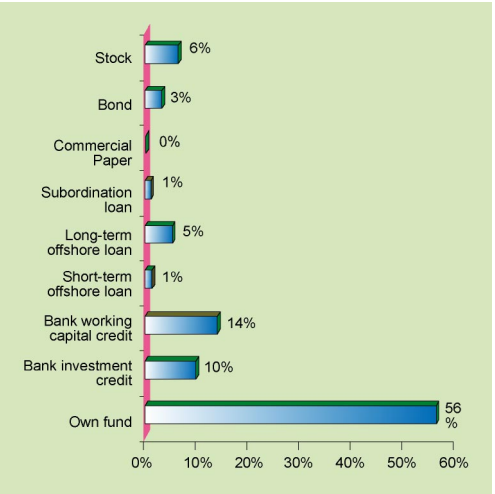
Most of the respondents have operated between 10-30 years; 21% respondents have operated for less than 10 years, and 4% have operated for more than 40 years. Almost half of the respondents are companies listed at the stock exchange. The business activities of the respondents oriented to export about 36% of the total respondents, and remaining 64% of the respondents oriented to domestic market. The raw material mostly originates from domestic sources, only 7% of the respondents totally use imported raw materials.



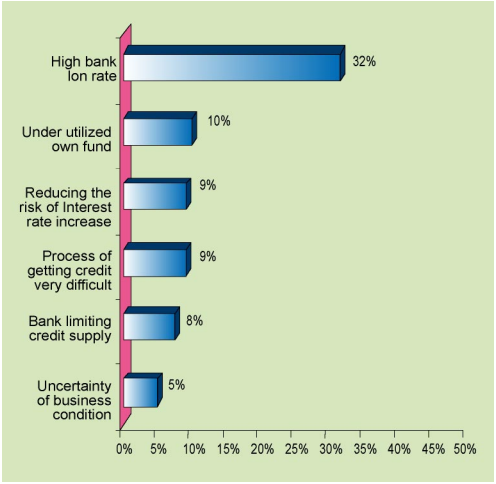
Graph 6.2.
Portion of Respondents Listed at Stock Exchange and Business Orientation

CORPORATE SOURCE OF FINANCE

In conducting their business activities, the respondents use internal fund (retained earning) as the main source of financing, about 56% from the total financing (graph 6.3.). The portion has risen quite sharply compared with the previous years. For example the survey conducted earlier by Dwor-Frecaut et al (1999) found the internal fund portion used as the source of financing amounting to around 40%. Meanwhile, as the source of external financing, bank credit still serves as the main source although the portion is reduced, namely around 24% comprising working capital credit and investment respectively in the amount of 14% and 10%. Meanwhile, the capital market is the next external source of financing, namely around 8%.



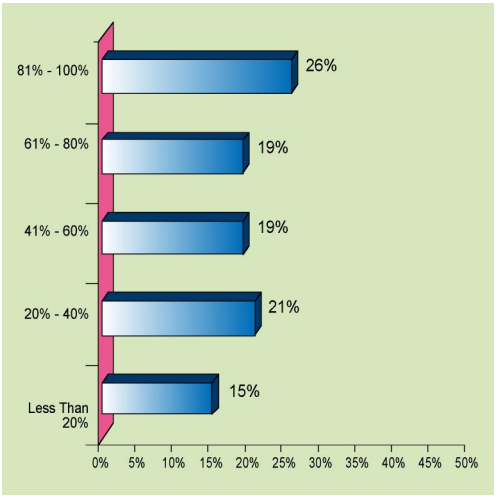
Graph 6.3.
Corporate Sources of Financing



Graph 6.4.
Reasons for Use of Own Fund

From the survey can be concluded that the main reasons of using the own fund are the relatively high loan rate, under utilized of their own capital, tightness of credit procedures and the existence of banks credit rationing. In addition, the firms perceived high interest rate reflects the expectation of the entrepreneurs for interest rate movement in the future. This phenomenon takes place throughout all firms size, export, orientation and business sectors. Under current uncertainty in interest rate, the use of own fund is considered cheaper compared with credit from banks. By using own fund, the company may avoid the risk of interest rate increase.

Classified according to the share of internal funds, 26% of the respondents use own fund with a portion ranging between 81%-100% of the total financing. Meanwhile there are only 15% of the respondents whose use own fund percentage is less than 20%. This finding is in line with the actual condition in which the economic activities on an aggregate basis are mostly financed from self-financing.



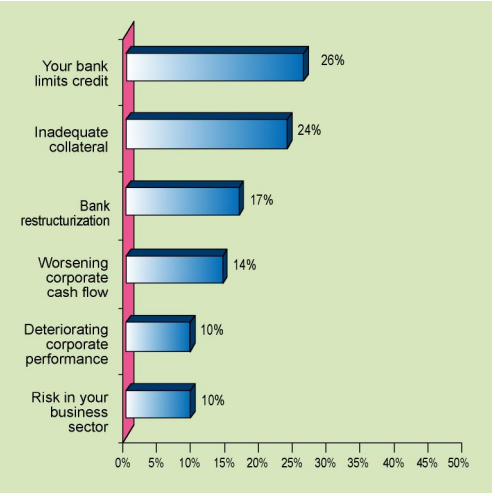
Graph 6.5.
Share of Own Fund of Total Financing

CORPORATE ACCESS TO BANK CREDIT

Accessibility

In line with the improving bank condition, the survey result shows that during the past year the respondents did not experience difficulties to

obtain credit from banks. Majority (65%) of the respondents do not have any difficulties in getting credit from banks, while 35% of the respondents had such difficulties. The respondents who have difficulties, in access to bank credit said that factors causing the difficulty, namely the existence of credit rationing, inadequate collateral, worsening corporate cash flow, deteriorating corporate performance, and the banks providing credit are still in the restructuring process (graph 6.6).



Graph 6.6.
Causes of difficulties in obtaining credit

The bigger the business scale of a company, the higher the level of difficulty to obtain credit as reflected from the share of large firms respondents of having difficulties (Table 6.1.). This is particularly, due to the fact that large-scale companies generally have high leverage level.

Table 6.1.
Access to Credit by Business Scale

Difficulty to Obtain Credit	Total	Large	Medium	Small
	120	40	42	38
Yes	35%	45%	33%	26%
No	63%	53%	64%	74%

Based on the business sector, the firms in property sector find it relatively more difficult to obtain bank credit compared with agriculture and manufacturing sectors (Table 6.2.).

Based on the cross tabulation, the factor causing the difficulties in accessing credit by property sector is due to the worsening corporate cash flow. Whereas in the case of the agriculture and manufacturing firms, experiencing difficulty to obtain credit because banks limit credit flow to the two sectors.

Table 6.2.
Access to Credit by Sector

Difficulty to Obtain Credit	Total	Agriculture	Processing (Manufacturing) Industry	Trade	Property/ Real Estate
	120	20	35	34	31
Yes	35%	45%	26%	32%	42%
No	63%	55%	71%	65%	58%

Tightening of Credit Conditions

Although 65% of the respondents said they did not experience difficulties in obtaining credit, 76% of the respondents said banks had increasingly tightened the credit conditions offered, particularly in relation to collateral. The tightening of the credit conditions is also reflected from the low degree of flexibility in collateral and interest rate negotiation within the last one year. The survey shows 65% of the respondents stating that banks are not flexible in negotiating collateral. Meanwhile, around half of the respondents said that banks were not flexible in negotiating on credit interest rate. The tightening of credit condition is not only experienced by new clients, but also by companies who have been bank debtors for a long time (Table 6.3.).

Table 6.3
Relationship between Respondents and Credit Conditions

Relationship with Banks Providing Credit	Total	Tight	Not Tight
Total	120	91	29
Less than 2 years	5%	100%	0%
2 to 5 years	14%	88%	12%
5 to 10 years	34%	73%	27%
More than 10 years	47%	71%	29%

This tightening of the collateral is largely experienced by the respondents in the agriculture sector, namely 70%, whilst the sector getting the most loosening is the property sector, namely 58%. This is due to the fact that property can serve as collateral.

From the business scale, the smaller the business scale of the respondents, the tighter the collateral fixation required by banks (Table 6.4). This conforms to the fact-taking place, because generally debtors with small enterprise scale do not have bargaining power with banks.

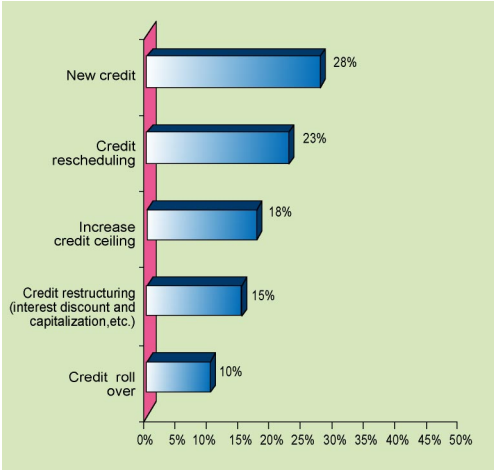
Tabel 6.4.
Bank Flexibility in Fixation of Collateral

Bank providing flexibility in collateral negotiation	Business scale			Business Sector				Total Respon-dents
	Small	Medium	Large	Agri-culture	Industry/ Manufacturing	Trade	Property/ Real Estate	
Number of Respondents	38	42	40	20	35	34	31	120
Yes	29%	38%	45%	30%	37%	38%	42%	38%
No	71%	62%	55%	70%	63%	62%	58%	62%

Meanwhile in the case of loan rate, banks provide more flexibility in loan interest rate negotiation as reflected from 56% of the respondents' answers. By business sector, it is found that the manufacturing industry sector and the property/ real estate sector constitute the sectors getting the most flexible, while the sector getting the least flexible is the agriculture sector. From the business scale, there is no significant difference between the size of firm in flexibility of loan rates (Table 6.5.).

Table 6.5.
Bank Flexibility in Fixation of Loan Interest

Bank providing flexibility in loan interest rate negotiation	Business scale			Business Sector				Total Respon-dents
	Small	Medium	Large	Agri-culture	Industry/ Manufacturing	Trade	Property/ Real Estate	
Number of Responden	38	42	40	20	35	34	31	120
Yes	57%	55%	55%	40%	63%	53%	61%	56%
No	43%	45%	45%	60%	37%	47%	39%	44%

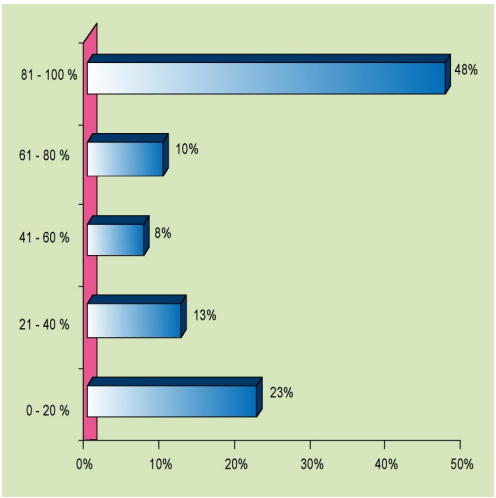


Graph 6.7.
Purpose of Submission of Application for Credit

Credit Extended After Crisis

As stated before, after the crisis, there is increase of own fund portion used as business financing. The result is only one-third of the respondents has executed credit agreement with banks. The respondents that have credit agreement, only 28% executed new credit agreement, whilst the rest is in rescheduling, capitalization loan interest, and credit restructuring. (Graph 6.7).

Part of the respondents that submitting credit application said that the amount of credit approved by banks had reached 80%-100% of the credit requested (Graph 6.8). The majority of the credits is obtained from private banks and foreign-joint banks that are not affiliates company of the respondents. Most of the respondents obtained working capital credit from the banks.

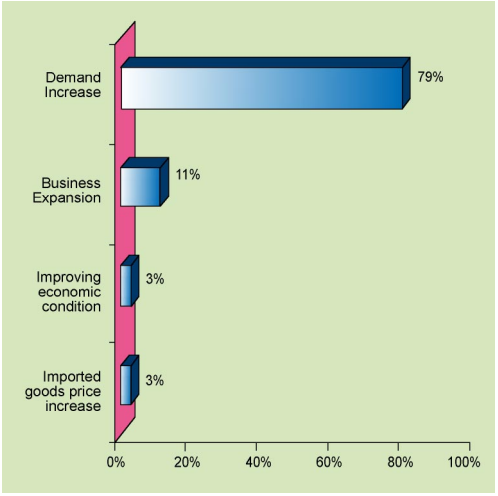


Graph 6.8.
Credit has been Approved

BUSINESS INVESTMENT AND FINANCING

In line with the economic recovery in the last two years, 60% of the respondents said their production and sales were increase. The cause of the production increase mostly originates from the rising demand and business expansion (Graph 6.9.). Furthermore, only half of the respondents is carrying out business/ investment expansion. This indicates that there is unused production capacity.

The respondents that will make new investment, use internal fund, whilst external fund originates from banks and capital market. This is in line with the statement about business financing above. Meanwhile, if the companies experiencing difficulty to obtain financing from banks, there are alternative sources of financing, such as own fund, capital market, suppliers, bonds, affiliated companies, offshore, and leasing.



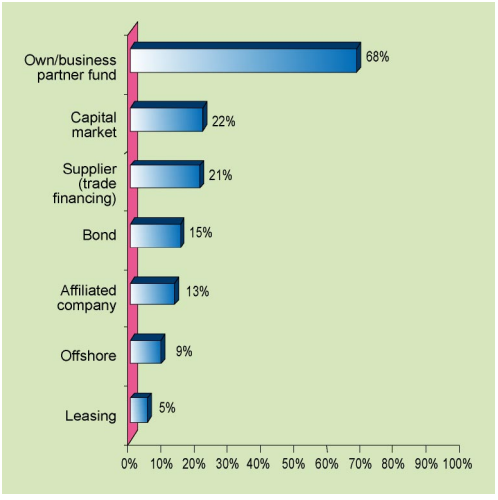
Graph 6.9.
Cause of Production and Sales Increase

From the business sector, most of the respondents in each business sector use their own fund as the main financing source alternative. The same thing also takes place in the case of respondents according to the size of the business scale.

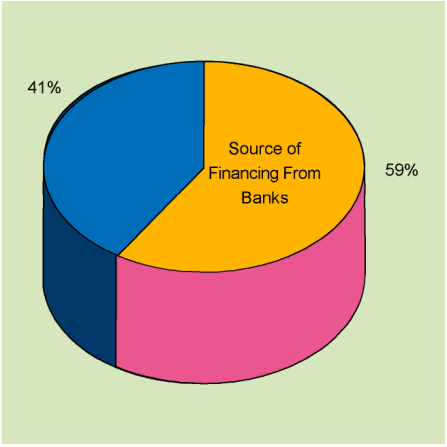
CORPORATE PREFERENCE FOR SOURCE OF FINANCING FROM BANK

From the survey result, it is found that most respondents never executed credit agreement after the crisis, the preference for banks funding has not changed. 59% of the respondents still expect the banks will be the source of fund.

From the business sector view, the agriculture sector is the sector experiencing reduced preference for bank financing. Furthermore, only the respondents with large business scale have reduced preference (Table 6.6).



Graph 6.10.
Alternative Non-Credit Source of Financing



Graph 6.11.
Respondents' Preference for Banks

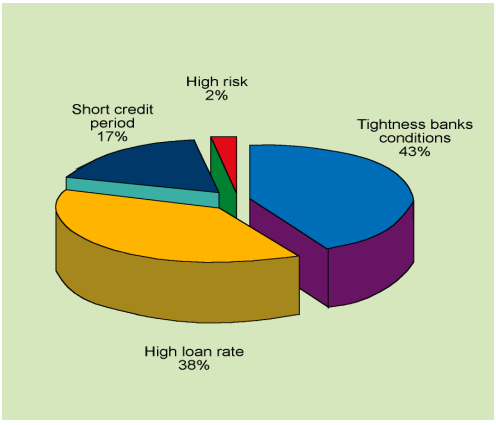
This reduced preference is due to various factors, amongst others the tightness bank conditions such as collateral and credit application procedure, the high loan interest rate, the short credit period, and high risk cause by the economy has not been recover yet.

Prospects of Credit Demand

There is difficulty in obtaining source of financing from banks, in 2 years ahead most of the respondents (53%) intend to and plan to submit credit application to banks, particularly the export-oriented respondents. The respondents that have a plan to submit credit application are medium-scale enterprises (60%), large-scale (55%) and small-scale (43%). The agriculture sector is the sector with most respondents intending to submit credit application (65%),the industry/ manufacturing sector and the trade sector respectively the same (53%), and the property sector (45%).

Table 6.6.
Preference by Sector and Business Scale

Decreasing of preference for bank financing source	Business scale			Business Sector				Total Respon-dents
	Small	Medium	Large	Agri-culture	Industry/ Manufacturing	Trade Property/	Real Estate	
Number of responden	38	42	40	20	35	34	31	120
Yes	40%	33%	50%	50%	37%	35%	45%	41%
No	60%	67%	50%	50%	63%	65%	55%	59%



Graph 6.12.
Factors Causing Decrease of Bank Preference

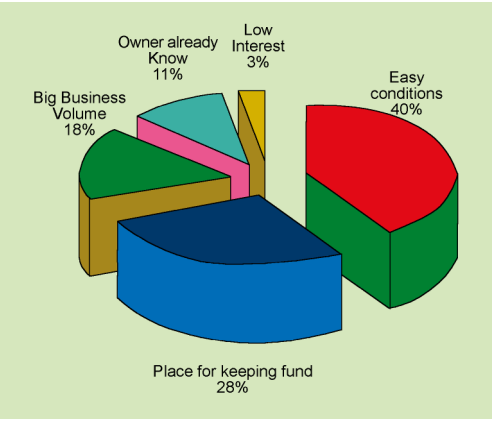
The type of credit to be proposed in 2 years ahead is mostly in working capital credit (67%), whereas investment credit 33%. This shows that there is still uncertainty of the long-term economic prospects. The respondents mostly submitting working capital credit application are the small-scale enterprises (75%). Whereas the respondents mostly submit credit investment application are the respondents with large-scale (45%). If observed by business sector, the sector most planning to submit working capital credit application is the trade sector (83%), whilst in the case of investment credit it is the property/ real estate sector (50%).

Table 6.7.
Plan for Submission of Application for Credit 2 Years Ahead

Plan for submission of application for credit in 2 years ahead	Business scale			Business Sector				Total Respon-dents
	Small	Medium	Large	Agri-culture	Industry/ Manufacturing	Trade Property/	Real Estate	
Number of Responden	38	42	40	20	35	34	31	12
Yes	75%	72%	55%	54%	72%	83%	50%	67%
No	25%	28%	45%	46%	28%	17%	50%	33%

The plan of the respondents to submit credit applications is intended for banks with the criteria of having easy conditions, banks thus far used to keep respondents' fund, banks whose business volume is big, banks whose owner is already known, and banks providing low loan rate. The bank criterion that it must be already known implies the existence of asymmetrical information in deciding to lend credit by banks.

The quite high preference for credit from banks and the existence of corporate plan for the next 2 years to submit credit application reflects the credit demand. It may be said that the phenomenon of credit decline is caused more by the supply factor compared with the demand factor.



Graph 6.13.
Criteria of Bank Selected in Submitting Credit Application

Chapter 7
Implications on Monetary and Banking Policies

IMPLICATIONS ON MONETARY POLICY

Credit crunch has important implications for the monetary policy. First, a credit crunch has disrupted the work of monetary policy by blocking the transmission channels of the monetary variables to economic activities. Second, a credit crunch provides the implication for the use of various monetary indicators in monetary policy operation. Third, it has implication on how the monetary policies should be directed so that the credit crunch is not exacerbated.

Effectiveness of Monetary Policy

The reluctance of banks to lend is mainly triggered by factors such as adverse selection, high business risks, low bank capital, which in turn making interest rate not to serve as the main factor used by banks in credit approval. This has created blockages for the operation of the monetary policy transmission channel through the interest rate channel, credit channel and balance sheet channel.

The credit channel will clearly be disrupted. The reason being that banks are reluctant to provide credit for various reasons already explained, expansionary monetary policy increasing bank reserve not used to increase loan portfolio. As discussed in the previous chapter, banks tend to put their excess liquidity in low risk assets, especially in SBIs. Since most of the financing of the real sector in Indonesia largely relies on the bank financing, the disruption of bank credit has reduced investment and consumption. In the case of countries with developed financial market, where the level of bank credit substitution with other financing alternatives is relatively more

perfect, the impact of credit crunch on the economy is not as severe as in the case of countries with less developed financial market such as Indonesia.

Credit crunch not only disrupts the credit channel particularly in the case of monetary expansion, but also hinders the operation of the interest rate/ money channel. The monetary expansion is indeed positively responded by the market with the lowering of the interbank rates and deposit rates. However the response of the deposit rate has become increasingly insensitive, particularly when the banks' credit portfolio shifts to SBIs. Under condition in which bank deposits do not have competitor, a tight monetary policy marked by an increase in SBI rate has not being followed with a proportional increase in the deposit rates.

The response of loan rate to a monetary policy is even slower than the deposit rate, particularly when the monetary policy is loosened. In addition to the adjustment made by banks after the crisis to increase interest spread, the fall in supply of credit also keeps the loan rate at a high level, thereby slower the response of the loan rate. As a result, transmission through the interest rate channel becomes hindered as reflected from the ineffective monetary policy in lowering the cost of capital.

The weakening firms' financial condition after the crisis has also weakened monetary policy transmission through the balance sheet channel, particularly in the time of easy monetary policy. In the condition of a weak firm's financial condition, monetary expansion in the form of lower interest rate does not necessarily increase their investment. Firms tend to use this opportunity to take various measures to restructure their financial condition such as deleveraging. However, the effects of monetary policy through the firms' balance sheet can be 'asymmetric', in the sense that the effects of monetary policy through the balance sheet channel will be strengthened in the case of the monetary contraction. The monetary contraction reflected from the high interest rate not only increases the cost of capital for investment but also worsens the quality of firms' assets. This in turn amplifies the impact of monetary policy on the real sector, a phenomenon the so called as "financial accelerator". The empirical study conducted by Agung (2000) shows the possibility of such phenomenon. The implication is that in a situation where

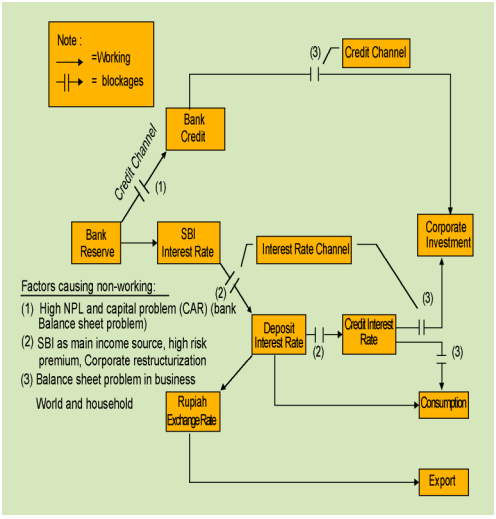


Diagram 1.
Blockages of Monetary Policy Transmission during the Credit Crunch

credit crunch occurs, a monetary contraction must be carried out more carefully.

The next question is whether or not a credit crunch also affects the effectiveness of monetary policy in the long term. If the credit crunch taking place at present affects banking permanently, for example banks become risk-averse in providing credit compared to the past, then the impact of monetary policy on bank credit will be smaller. The uncertainty of relationship between monetary policy variables and various financial variables and the real sector has an implication for the operation of monetary policy.

Box 2
Monetary Policy Transmission

Monetary policy affects the real economic activities through various channel, amongst others the interest rate/ money channel, credit channel, balance sheet channel, and exchange rate channel.

In the interest rate or money channel, banks do not explicitly play a role. The role of banks is not more than that of liquidity (money) creation through the provision of credit or purchase of commercial bonds from the market. In a monetary contraction, bank reserve is reduced so that the ability of banks to create liquidity is also reduced. If the price level does not change flexibly (sticky), monetary aggregate will really be reduced. As a result, short-term interest rates rise and through the expectation that inflation will decrease in the future, long-term real interest rates will also increase. In turn, investment activities fall as a result of the increase of the cost of capital.

In the credit channel, monetary policy affects aggregate demand directly through the availability of banks' credit. A contractionary monetary policy, for example, will lower the supply of banks credit because of reduced banks reserve. With the assumption that the major source of firms investment funds relies on bank credit (namely bank credit not being perfectly substitute with another forms of financing, such as commercial paper, corporate bonds, etc.), the monetary policy that can affect bank credit supply will influence the ability of firms to invest.

The balance sheet channel in monetary policy transmission operates through changes in corporate financial condition. For example, a tight monetary policy as reflected from the rising interest rate lowers the value of corporate assets and corporate cash flow. The reduced firms financial position reduce their access to external funds that in turn will weaken the ability of the firms to invest.

Monetary Policy Stance

The credit crunch marked by shifting of bank asset portfolio from credits to securities (especially SBI and the government bonds) has made it difficult to understand the monetary policy stance. As we could observe in 2000, the indicators of monetary policy stance as reflected from the interest rate and base money movements often gave rather contradictory signals.

The growth of base money in the amount of 23.4% during 2000 showed that monetary policy stance was relatively loose, however the the climbing of the SBI interest rate up to level of 14.53% by the end of 2000[7] from 11.48% in January 2000 showed that monetary policy stance was heading towards a tight direction. In addition, the real deposit interest rate showed the opposite direction. The movement during 2000 showed that real interest rate experienced a very sharp decline, namely from around 12% at the beginning of 2000 becoming only around 2% by the end of the year.

Indicators of Monetary Policy

The weakening and uncertainty of relationship between monetary policy and the real sector have an implication that the use of various monetary indicators as intermediate targets and as information variables becomes difficult. The non-functioning of bank financial intermediation affects the relationship between credit and aggregate economy. The use of interest rate as an operational target also has to be assessed more carefully particularly when a credit crunch in the form of non-price credit rationing interest rate does not reflect the equilibrium of credit market. As a result of the weakening information content of various monetary variables, the use of a number of monetary indicators (broad-based indicators) appears to be more correctly applied than merely targeting only one variable. The use of a number of indicators in monetary policy is also supported by the fact that the financial innovation and deregulation have created uncertainty

[7] At the end of March 2001, the SBI interest rate already reached 15.24%.

of using a single monetary variable in monetary control. Therefore, research regarding the information content of a number of monetary/ financial indicators becomes an important agenda for monetary policy in the medium term.

The use of a number of monetary indicators (not targeting a monetary policy) is furthermore in line with the framework of inflation targeting. Implicitly the inflation-targeting framework recognized the weaknesses of the framework of using intermediate target particularly due to the uncertainty of relationship between the intermediate target and the final target.

Stability of Rupiah Exchange Rate

The continuing high risk in the business sectors constitutes the underlying problem causing the supply of credit to the real sector becomes limited although banks' liquidity has been in a loose condition. The high risk has reduced the interest of banks/ companies to offer/ submit applications for credit. From the banking perspective, they consider that the high business risk will only augment the potentiality of failure in repaying the credit distributed by them. Meanwhile from the business sectors' perspective, in the high uncertainty, they consider it is better to postpone the plan to carry out business expansion.

Many factors contribute to bring about the high risk in business sector. From survey on business sectors, they consider that the risk has been created by uncertain development in the rupiah exchange rate. The rupiah exchange rate that continues to fluctuate within a very wide range has complicated the firms' business planning and their price setting. The important implication of the above information is the importance of reducing the volatility of exchange rate.

IMPLICATION FOR BANKING POLICY

Since a credit crunch constitutes a non-price credit rationing, it is difficult to overcome this problem only by the monetary policy. Rather, it requires microeconomic policy both in the

banking and corporate sectors.

Information on Creditworthy Borrowers

The existence a credit crunch in the aftermath of the crisis was rooted in the problem of information regarding the quality of borrowers. The problem stems from the corporate financial condition that is generally weakened, causing banks to be unable to differentiate the quality of borrowers. Furthermore, this problem results from the loss or at least lack of information regarding borrower following the closing and merger of a number of banks. The economic crisis, which generated the bankruptcy of a number of firms, particularly large firms that formerly connected to banks in the same business group, has forced banks to establish relationship with the new borrowers. However, getting the new borrowers with good track record and reputation is not easy in the condition where most companies are experiencing financial difficulties. Although banks tend to continue establishing relationship with their old good borrowers, since most bank management has undergone replacement, they lose confidential information regarding the old borrowers.

In addition, the closing and merger of banks has caused severance of relationship between the clients and the banks. The mergers between banks do not guarantee that the track record of the previous clients will be effectively used. Merger that also means the replacement of management needs a learning process for the new management in establishing relationship with the borrowers. Again, as the nature of borrowers-bank relationship in the credit market is of a long-term nature. The specialization of the banks in this case makes bank credit different from other instruments such as corporate bonds or shares of a market-based nature.

The important implication of this information problem is that the government should provide guidance on the quality of borrowers, besides providing a prospective sector. In addition to the information system regarding banks' borrowers available at BI, the IBRA as the institution maintaining important information on large borrowers/ firms should be able to make

identification on borrower quality. In Korea, for example, identification of bad and good risks borrowers was conducted during the restructuring process.

Domac and Ferri (1999) offer a solution by providing credit voucher to prospective clients as a form of 'guarantee' of the quality of the credit clients that could provide an indication to the banks in the decision to provide credit.

Regulatory Forbearance

One of the internal problems underlying the decline in the banks' credit supply is the capital crunch and the relatively high NPLs. Although the process of bank restructuring and recapitalization has shown significant progress as reflected from the rising CAR and decreasing NPL ratio, however in general achieving the required capital adequacy (CAR) of 8% by the end of 2001 and NPL ratio of 5% is not easy. This prudential regulation will at least encourage banks to shift their portfolio from the risky asset such as loans to the risk-free assets such as the SBI and government bonds. In addition, the bank's efforts to increase paid-in capital for the purpose of CAR fulfillment, at a certain level has caused banks to reduce their 'investment' in information capital (Hellman, Murdoch, and Stiglitz, 1999), meaning that there is incentive to reduce the costs of collecting information (screening and monitoring) on the borrowers and the prospective borrowers.

The implication of this condition is the need at a certain level to conduct regulatory forbearance but taking into account moral hazard exposed to banks as a result of this. The negative impact that can be created as a result of the regulatory forbearance is the problem of regulatory credibility as a result of time-inconsistent policy. However, in view of the reinstatement of the function of bank intermediation as the key to economic recovery and monetary policy effectiveness, the costs and benefits of the regulatory forbearance will remain valid to be taken into consideration, particularly for the relaxation of the NPL ratio provision. The case for relaxation of the latter is as follows. First, in the international banking

regulation practice, NPL ratio is not a part of prudential regulation. Second, the implementation of CAR and NPL ratio simultaneously when the financial condition or banks has just recovered is burdensome.

If the relaxation on CAR is also carried out, it should be done based on a set of objective rules, such as to encourage credit to exporters and SMEs by assigning a lower risk weight for loans to these sectors. This argument is in line with the results of survey to banks indicating that the export and SMEs have relatively low risk.

Credit Guarantee Scheme for SMEs

As a result of the high degree of uncertainty, banks tend to adopt a risk-averse attitude in supplying loans. In this condition, banks change their preference by investing their fund into risk-free assets such as the SBI and government bonds instead of placing their funds into loans. The implication is the importance of providing guarantee to the banks so that they will not reluctance in providing credit to the real sector. In this case, one of the alternatives that may be taken into consideration is assessing the establishment of a credit guarantee institute, particularly to small-scale enterprises and export-oriented enterprises. The selection of the small-scale enterprises in the guarantee program must be made with the consideration that small-scale enterprises absorb substantial employment and equalize income distribution. Whereas the export guarantee is intended to expand the international market, strengthen balance of payment, support exchange rate stability, and boost economic growth.

Several countries in overcoming the credit crunch have used this type of scheme. In Korea, for example, to reduce the impact of the financial crisis and at the same time to provide stimulus to the economy, in 1998 the government issued a special guarantee program for SMEs and export oriented firms. However, this guarantee scheme could create moral hazard and has the consequence on fiscal burden that naturally becomes unpopular amidst the difficulties of the government budget.

Development of Securities Market as Financing Alternative

In the long term, development of financial markets, particularly securities, such as corporate bonds, has to be sought. These instruments may be used by firms as a source of financing and by banks as an alternative investment. The diversification of source of funds becomes an important issue as heavy reliance on bank financing creates the economy to be a more crisis-prone.

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Appendices 1

Questionnaire for Survey on Banking Behaviour After Crises

1. Is there serious problem faced by your Bank after the crises?
   Please, fill in priority (sequence number 1 = very important)

	Weak capability of well known borrowers to pay debt
	Decrease in economic activities
	Fluctuation banks' cost of fund
	Uncertainty of provision of loan losses (PPAP) need in the future due to nonproductive assets
	Restructuring credit
	Re-capitalization and reduction of assets
	Uncertainty in cost of banks foreign debt
	Lack of financial information on new credit applicants
	Lack of information about feasible business sectors
	Others (explain)……..

2. To give approval for credit to old and new borrowers last year, what factors are taken into account by bank in giving approval for credit application? (Please filled in priority sequence, sequence number 1 = very important)

	High business profitability offered by new borrowers
	Low risk of businesses offered by new borrowers
	Well known borrowers, having good performance, and having capability to pay the loan
	Credit application with government institutions' guarantee
	Others (explain)…….

3. Factors considered in rejecting credit disbursement either to old or new borrowers last year: (fill according to priority sequence, sequence number = very important)

	Lack of information about financial condition of new borrowers
	Low capability to pay of well known borrowers
	Uncertainty of cost of bank foreign debt
	Uncertainty of nonproductive asset costs in the future
	Others (explain)……..

4. Categories of rejected borrowers are as follows:
(Choose one of them)

	New borrowers
	Well known borrowers of your bank more than 1 year
	Well known borrowers of your bank more than 2 years
	Well known borrowers of your bank more than 5 years

5. Some factors complained by customer, make sequence according to the ranking: (number 1 = most important)

	Conditions which do not support approval for credit, because tight requirements of credit application, such as collateral
	High interest rate
	Short term of credit
	Other (explain)……..

6. For credit applicant rejected, if they accept high interest rate, will other financial institutions give loan?

	Yes
	No

7. What is the reaction of your bank on the crises?
   Please fill in according to priority (number 1 = very important).

	Management wants to reduce the number of bad borrowers and decrease credit
	Collecting due loans
	Increasing provision for loan losses
	Giving special instruction to credit division to extend the loan for prime borrowers
	Looking for foreign investors
	Extending due loans and waiting for economy recovery
	Looking for domestic investors
	Participating in the program of government assurance
	Closing several branch offices
	Reducing the number of employees
	Others (explain)……

8. According to your opinion, what economy sector gets the worse impact due to the difficulty of liquidity disbursement?
   Please, fill according to severity sequence (number 1 : severest)

	Manufacturing Sector
	Agricultural sector
	Service sector
	Exporter
	Importer
	Other banks or non bank financial institution
	Others (explain) ……

9. How do you evaluate business condition and credit quality on borrowers according to the scale of business? (fill with tick mark = v)

Business Scale	Business Condition			Credit Quality		
	Above average	Aver-age	Below Average	Above average	Aver-age	Below Average
Small Scale Business (KUK)						
Medium Scale Business (asset Rp1-5 billion)						
Large Scale Business (asset > Rp5 billion)						

10. Are there the borrowers of your bank, which have financing access from branch or head office in foreign country? (Fill with tick mark = v).

	Yes
	No

If any, what are the percentage of the number of borrowers and what percentage of fund is met by branch or head office in foreign country? (Fill in percentage)

Percentage of the number of borrowers	Percentage of fund need

11. Before the crises, what sector has the best opportunity for credit disbursement in respect of its profitability? For example, property sector, export, industry, etc. (Fill in the sector)

The best sector	
The second best sector	
The third best sector	

12. Now, which sector has the best opportunity for credit disbursement in respect to its profitability? For example, property sector, export, industry, etc. (Fill in the sector).

The best sector	
The second best sector	
The third best sector	

13. In regard with its profitability, what type of credit is offered by your bank and what is the percentage of incomes from each type of credit?

Type	Sequence	Income Percentage
Working capital credit		
Investment credit		
Consumption credit		
• Credit Card		
• Housing loan		
• Car loan		
• Others ……		

14. What factors are used as consideration of your bank in assessing risk faced by new borrowers before the crises and recent time? (fill the sequence according to the importance level, number 1 = most important)

Description	Sequence	
	Before crises	Now
Credit payment		
Debt equity ratio		
Sales growth		
Collateral value		
Government institution guarantee		
Private or company guarantee		

15. How does your bank assess the risk on exporters? (fill with tick mark = v)

	Has lower risk than average of debtors
	Has the same risk as the average of debtors
	Has higher risk than average of debtors

16. If exporter has the same risk or higher than average of debtors, please fill in influential factors in sequence (number 1 = primary reason)

	Exporter has many activities unable to be detailed
	Exporter has large foreign loans
	Small scaled business volume

17. Please fill in the decreasing number of borrowers and credit volume after the crises (July 1997). (Fill tick mark = v).

Percentage	Of total number of borrowers	Credit volume
1 – 5 %		
5 – 10%		
10 – 20%		
More than 20%		

18. If your bank has lent credit, what category does the credit belong to? (fill based on the biggest sequence, number 1 = biggest)

Type	Priority
New credit	
Extended credit	
Others	

19. Where is application for new credit derived from?
Fill the sequence according to the group, number 1 = greatest)

	Well known borrowers
	Borrowers from leading banks
	Borrowers from medium banks
	Borrowers from non-bank financial institutions
	Borrowers from small banks

20. What does your bank face in credit restructuring? (Fill based on the sequence, sequence number 1 = the most important problem)

	Information about debtors (balance, cash flow, etc.)
	No sufficient financial instrument for credit restructuring
	The cost for due diligence too expensive
	No problem found in credit restructuring
	Others (explain)……

21. If your bank reduces credit amount, where does your borrowers get alternative financing? (Fill according to priority sequence, number 1 = greatest number)

	Self financing
	Participation of foreign investor
	Domestic investors
	Issuance of the company securities (Comm.Paper, bond, etc.)
	No alternative
	Others (explain)……

22. In the point of view of your bank, what is needed to improve the Indonesian credit market? (fill in according to priority, number 1 = most important)

	Exchange rate stability
	Credit restructuring of companies in Indonesia
	Higher economic growth
	Better information about debtors financial condition
	Increase credit volume by foreign banks
	Sharing business risk between private sector and government
	Other (explain)……

23. Fill in with priority sequence, number 1 = most important)

	Guarantee scheme by state banks
	Medium and long term loans
	Trade financing by domestic banks
	Trade financing by foreign banks
	Overdraft facility
	Domestic Letter of Credit
	Others ……

24. If your bank has refused credit application, will your bank approve credit application if the customer accept ….. : (Fill in tick mark = v)

Reason	Yes	No
Higher interest rate		
Shorter term		

25. Fill in sequence of the following according to risk category:
(number 1 = riskiest)

	Consumption loan
	Loan to the company making production for domestic market
	Loan to the company making production for export market
	Loans to foreign companies or joint ventures
	Loans to another bank
	Loan to government (government bond)
	Loan to Bank Indonesia (Bank Indonesia Certificate)

26. What does your bank do if experiencing excess liquidity?
(Fill in priority sequence, number 1 = most important)

	Invest to Bank Indonesia Certificate
	Paying foreign loans
	Purchasing government bonds
	Lending credits to foreign companies or joint ventures
	Lending credits to the company producing products for export market
	Paying domestic loans
	Investing fund to other banks (Inter Bank Call Money)
	Lending credits to the company producing for domestic market
	Investing fund to consumption loan
	Others (explain)……

Thank You

Appendices 2

Questionnaire for Credit Demand Survey

Name of Respondent		Name of Interviewer	
Position/ Title		Telephone	
Name of Company		Team Leader	
Address		Supervisor	
Respondent			
Date of Interview		Interview Time	

Good morning/ afternoon/ evening, my name is _____ from PT. Insight as research company. Now we are conducting a research on bank credit. Therefore, I really want to meet and talk with financial staff at this company.

CHAPTER A – FILTERING QUESTIONS

P01	Has your company ever applied credit to bank?	Code	Route
	Yes	1	P02
	No	2	STOP

P01	Does your company has loan from the bank?	Kode	Route
	Yes	1	S00A
	No	2	STOP

WARNING:
IF CODE "1" IN P01 AND P02, CONTINUE TO B. IF NOT, STOP.

SECTION B – COMPANY PROFILE

NOTE: MAKE SURE THAT COMPANY RESPONDENTS HAVE FINANCIAL REPORTS AND RESPONDENTS TO BE INTERVIEWED REALLY KNOW AND MANAGE THE FINANCE OF THE COMPANIES.
!!!!

S00A	INTERVIEWER: Write Answers, mark appropriate code. SHOW CARD What line of business does your company run?	
BUSINESS SECTOR		Code
	Agriculture	1
	Processing Industry (manufacture)	2
	Trading	3
	Property/ Real estate	4
	Others	5

S00B	DON'T ASK ANY QUESTION, fill code according to list of company scales from Bank Indonesia.	
	Large	1
	Medium	2
	Small	3

S01	In what year did your company start to operate? (Open ended)

S02	Is your company listed in the stock exchange?	Code
	Yes	1
	No	2

S03	Is your company export-oriented?	Code
	Yes	1
	No	2

S04	Where does your company get raw materials for	Code
	production?	
	Import	1
	Local	2

S05 SHOW CARD

INTERVIEWER: Mark code according to the choice of respondent, then fill in the percentage in the adjourning column. After completed, calculate the percentage of financing sources and fill the total in the bottom, far right column. Total number must be = 100%. If not = 100%, ask respondents to repeat the answer.

Where is your company's financing sources derived from and what percentage each financing source of the total financing source in the late 2000? (Multiple)

		Code	Percentage
S05A	Own fund	1	%
S05B	Bank investment credit	2	%
S05C	Bank working capital credit	3	%
S05D	Short term loans from foreign countries	4	%
S05E	Long term loans from foreign countries	5	%
S05F	Subordination loans	6	%
S05G	Commercial Papers	7	%
S05H	Bonds	8	%
S05I	Shares	9	%
	T O T A L (Must be = 100 % !!!)		%

S06	INTERVIEWER: See table above, find the answers from S05A to S051 which has the biggest percentage. Why do you choose — (the biggest percentage from the above table) as financing source with the biggest percentage? (open ended) PROBE FULLY (Multiple)

S07						
		1996	1997	1998	1999	2000
	Production					
S07A	volume					
	(Rp. Million)					
	Sales					
S07B	Turnover					
	(Rp. Million)					
	New					
S07C	investment					
	(Rp. Million)					
	Permanent					
S07D	Employees					
	(Persons)					

INTERVIEWER: Ask one by one, Write the true answer at the table.
Based on the company financial report, what are the production volume, sales turnover, new investment, and number of permanent employees of the company from 1996 to 2000 (Open Ended)

S08	INTERVIEWER: Ask one by one, Write the answer at the table. Based on the company financial report, what are the total loans, Equity, Gross Profit, Total Assets, Cost of Good Sold, Inventories, Net cash flow, and Current Liabilities of your companies from 1996 to 2000: (Open Ended)						
			1996	1997	1998	1999	2000
	S08A	Loans					
		(Rp. Million)					
	S08B	Equity					
		(Rp. Million)					
	S08C	Gross Profit					
		(Rp. Million)					
	S08D	Assets					
		(Rp. Million)					
	S08E	COGS					
		(Rp. Million)					
	S08F	Inventories					
		(Rp. Million)					
		Net Cash					
	S08G	Flow					
		(Rp. Million)					
		Current					
	S08H	Liabilities					
		(Rp. Million)					

FINANCIAL INDICATORS

INTERVIEWER: Do not ask about the table, fill in according to formula given below after the interview is completed.

Indicators	Formula	1996	1997	1998	1999	2000
DER (%)	Loan/ capital (S08A/ S08B)					
ROE (%)	Gross profit/ capital (S08C/ S08B)					
ROA (%)	Gross profit/ asset (S08C/ S08D)					
Inventory turnover	COGS/ Inventory (S08E/ S08F)					
Cash Flow from Operation Ratio (%)	Net Cash Flow/ Current Liabilities (S08G / S08H)					

Q01	How was the production or sales growth of your company within the last two years (up/ down)?	Code	Route
	Up	1	Q02
	Down	2	Q04

Q02	SHOW CARD What are the causes of production/ sales increase of your company?	Code
	Increasing demand	1
	Business expansion	2
	Getting capital increase	3
	Getting additional credit	4
	Others, explain……	5

Q03	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q02, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON CAUSES OF PRODUCTION/ SALE INCREASE FROM THE PRIMARY ONE (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q02/ IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q02, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q06 Please, put your answer in sequence based on the most primary (no 1) causes of production/ sale increase	
	Q03A Sequence 1 ..... (Code at Q02)	
	Q03B Sequence 2 ..... (Code at Q02)	
	Q03C Sequence 3 ..... (Code at Q02)	
	Q03D Sequence 4 ..... (Code at Q02)	
	Q03E Sequence 5 ..... (Code at Q02)	

Q04	SHOW CARD What are the causes of production/ sales decrease of your company?	Kode
	Decreasing demand	1
	No credit available from banks	2
	Company restructuring	3
	Price increase	4
	Others, explain.....	5

Q05	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q04, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON CAUSES OF PRODUCTION/ SALE DECREASE FROM THE PRIMARY ONE (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q04. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q04, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q06 Please, put your answer in sequence based on the most primary (no 1) causes of production/ sale decrease.	
	Q05A Sequence 1 ..... (Code at Q04)	
	Q05B Sequence 2 ..... (Code at Q04)	
	Q05C Sequence 3 ..... (Code at Q04)	
	Q05D Sequence4 ..... (Code at Q04)	
	Q05E Sequence 5 ..... (Code at Q04)	

Q06	If there is production/ sale increase, do you increase business capacity (investment)?	Code	Route
	Yes	1	Q07
	No	2	Q10

Q07	SHOW CARD Where do you get financing sources for your investment? (multiple)	Kode
	Own fund/ business partner	1
	Bank	2
	Capital market	3
	Bond	4
	Supplier (trade financing)	5
	Affiliated companies	6
	Leasing	7
	Foreign	8
	Others.....	9

Q08	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q07, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON FINANCING SOURCES OF INVESTMENT FROM THE BIGGEST NOMINAL VALUE (NUMBER 1) TO THE SMALLEST ONE AND FILL IN THE DOTTED LINES WITH CODE AT Q07. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q07, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q09. Please, put your answer in sequence based on financing source of investment with the biggest number of nominal value (sequence number 1) to the smallest one.	
	Q08A Sequence 1 ..... (Code at Q07)	
	Q08B Sequence 2 ..... (Code atQ07)	
	Q08C Sequence 3 ..... (Code at Q07)	
	Q08D Sequence 4 ..... (Code at Q07)	
	Q08E Sequence5 ..... (Code at Q07)	
	Q08F Sequence6 ..... (Code at Q07)	
	Q08G Sequence 7 ..... (Code at Q07)	
	Q08H Sequence 8 ..... (Code at Q07)	

Q09	INTERVIEWER: SEE CODE Q08A AND ASK THE FOLLOWING QUESTIONS Why do you choose —— (code Q08A) as the main financing source? (Open Ended) PROBE FULLY (Multiple)

Q10	Does your company find any difficulty obtaining credit within the last 1 year?	Code	Route
	Ya	1	Q11
	Tidak	2	Q13

Q11	SHOW CARD Why does your company find difficulty obtaining credit within the last one year? (Multiple)	Code
	Bad company cash flow	1
	Inadequate collateral	2
	Risk at your business sector	3
	Decrease your company performance	4
	Your bank limits the credit	5
	Financial information has not met bank requirements	6
	Other, explain.....	7

Q12	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q11, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON CAUSES OF DIFFICULTY IN OBTAINING CREDIT FROM THE PRIMARY ONE (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q11. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q011, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q13. Please, put your answer in sequence based on the most primary (no 1) causes of difficulty in obtaining credit.
	Q12A Sequence 1 ..... (Code at Q11)
	Q12B Sequence 2 ..... (Code at Q11)
	Q12C Sequence 3 ..... (Code at Q11)
	Q12D Sequence 4 ..... (Code at Q11)
	Q12E Sequence 5 ..... (Code at Q11)
	Q12F Sequence 6 ..... (Code at Q11)
	Q12G Sequence 7 ..... (Code at Q11)

Q13	SHOW CARD If the company faces difficulty in obtaining fund from bank, what is your alternative to meet financing need? (Multiple).	Code
	Own fund/ business partners	1
	Capital market	2
	Bond	3
	Supplier (trade financing)	4
	Perusahaan terafiliasi	5
	Leasing	6
	Foreign countries	7
	Other, explain.....	8

Q14	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q13, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON ALTERNATIVE OF FINANCING SOURCES FROM THE PRIMARY ONE (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q13. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q13, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q15. Please, put your answer in sequence based on the most primary alternative of financing source (number 1).
	Q14A Sequence 1 ..... (Code at Q13)
	Q14B Sequence 2 ..... (Code at Q13)
	Q14C Sequence 3 ..... (Code at Q13)
	Q14D Sequence 4 ..... (Code at Q13)
	Q14E Sequence 5 ..... (Code at Q13)
	Q14F Sequence 6 ..... (Code at Q13)
	Q14G Sequence 7 ..... (Code at Q13)

NOTE: IF CODE "1" AT Q14, CONTINUE TO Q14A, CONTINUE TO Q15, IF NOT, GO RIGHTLY TO Q16

Q15	JIKA KODE "1" PADA Q14A SHOW CARD What are your reasons choosing own fund as the main alternative of financing source?	Code
	Own capital is more economical than external one	1
	It is difficult to get external fund	2
	Bank/ Investor interferes the management	3
	Other, explain.....	4

Q16	Does your company find the credit requirements tighter?	Code
	Yes	1
	No	2

Q17	Does your bank give flexibility in negotiation about loan rate within the last 1 year?	Code
	Yes	1
	No	2

Q18	Does your bank give flexibility in negotiation about collateral within the last 1 year?	Code
	Yes	1
	No	2

Q19	Has your company ever apply for credit during economy crises?	Code	Route
	Yes	1	Q20
	No	2	Q22

Q20	SHOW CARD In what scheme does your company apply for the credit? (multiple)	Code
	New credit	1
	Increase/ addition credit ceiling	2
	Credit rescheduling	3
	Credit restructuring (arrears discount, loan interest capitalization, etc.)	4
	Credit roll over	5
	Other, explain……..	6

Q21	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q20, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON PURPOSES OF CREDIT APPLICATION FROM THE PRIMARY ONE (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q20. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q20, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q22. Please, put your answer in sequence based on purposes of credit application from the most primary one (sequence number 1)
	Q21A Sequence 1 ..... (Code at Q20)
	Q21B Sequence 2 ..... (Code at Q20)
	Q21C Sequence 3 ..... (Code at Q20)
	Q21D Sequence 4 ..... (Code at Q20)
	Q21E Sequence 5 ..... (Code at Q20)
	Q21F Sequence 6 ..... (Code at Q20)

Q22	What percentage is your company's credit need approved by bank from credit application for the last 2 years?	Code
	0 – 20 %	1
	21 – 40 %	2
	41 – 60 %	3
	61 – 80 %	4
	81 – 100 %	5

Q23	SHOW CARD What bank groups do lend credit to your company? (Multiple)	Code
	State banks	1
	Private national banks	2
	Foreign-joint banks	3
	Regional development banks	4
	Rural banks	5
	Other, explain……..	6

Q24	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q23, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON BANKS DISBURSING CREDITS WITH THE BIGGEST NOMINAL VALUE (SEQUENCE NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q23 IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q23, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q06 Please, put your answer in sequence based on banks lend credits with the biggest nominal value (sequence no 1) to the smallest one.	
	Q24A Sequence 1 ..... (Code at Q23)	
	Q24B Sequence 2 ..... (Code at Q23)	
	Q24C Sequence 3 ..... (Code at Q23)	
	Q24D Sequence4 ..... (Code at Q23)	
	Q24E Sequence 5 ..... (Code at Q23)	
	Q24E Sequence 6 ..... (Code at Q23)	

Q25	How many banks are there where your company becomes the customers?	Kode
	1	1
	2	2
	3	3
	4	4
	5	5
	More than 5	6

Q26	How long does your company make relationship with banks presently lending the biggest credit to your company?	Code
	Less than 2 years	1
	2 to 5 years	2
	5 to 10 years	3
	More than 10 years	4

Q27	Is the bank that lends credit, an affiliated company with your company?	Code
	Yes	1
	No	2

Q28	SHOW CARD In the event that your company obtains credit from bank, what category does the credit belong to? (Multiple)	Code
	Investment credit	1
	Working capital credit	2

NOTE: IF RESPONDENT ANSWERS BOTH QUESTIONS AT Q28, CONTINUE TO Q29. IF RESPONDENT ANSWER ONLY ONE OF THEM, RIGHTLY TO Q30.

Q29	IF CODE "1" AND "2" AT Q28 Which credit has bigger value in your company?	Code
	Investment credit	1
	Working capital credit	2

Q30	What is your preference to financing sources from bank decreasing?	Code	Route
	Yes	1	Q31
	No	2	Q33

Q31	SHOW CARD What are causes of your decreasing preference to financing sources from Bank? (Multiple)	Code
	High interest rate	1
	Tight requirements (collateral, procedure, etc.)	2
	Term of credit is too short	3
	Others, explain.....	4

Q32	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q02, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON DECREASE IN PREFERENCE TO FINANCING SOURCES FROM BANK FROM THE PRIMARY ONE (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q31. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q31, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q33. Please, put your answers in sequence based on the decreasing preference to financing sources from Bank from the most primary (no 1).	
	Q32A Sequence 1 ..... (Code at Q31)	
	Q32B Sequence 2 ..... (Code at Q31)	
	Q32C Sequence 3 ..... (Code at Q31)	
	Q32D Sequence 4 ..... (Code at Q31)	

Q33A	SHOW CARD Does your company have a plan to apply bank credit within the next 2 years?	Code	Route
	Yes	1	Q33B
	No	2	Q36

Q33B	SHOW CARD What type of credit does become preference of your company in the next 2 years?	Kode
	Investment credit	1
	Working capital credit	2

Q34	SHOW CARD If your company will apply for bank credit, then what kind of bank will you choose? (Multiple)	Code
	Banks used to keep your fund	1
	Banks offering soft requirements	2
	Banks with big business volume	3
	Banks whose owners is well known	4
	Others, explain……..	5

Q35	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q34, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON SELECTION OF RESPONDENTS FROM THE MOST PRIMARY BANK (NUMBER 1) AND FILL IN THE DOTTED LINES WITH CODE AT Q34. IF RESPONDENTS ANSWERS ONLY ONE ANSWER AT Q34, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q36. Please, put your answer in sequence based on selective bank from the most primary one (no 1).
	Q35A Sequence 1 ..... (Code at Q34)
	Q35B Sequence 2 ..... (Code at Q34)
	Q35C Sequence 3 ..... (Code at Q34)
	Q35D Sequence 4 ..... (Code at Q34)
	Q35E Sequence 5 ..... (Code at Q34)

Q36	SHOW CARD How do you apply for credit application to bank? (Multiple)	Code
	To one bank, if rejected, then to another bank	1
	Proposed simultaneously to several banks	2
	Several banks come to your company to offer credits	3
	Other, explain……..	4

Q37	SHOW CARD How does your company manage the surplus of fund within the last 2 years? (Multiple)	Code
	Used as additional working capital	1
	As additional investment for business expansion	2
	Kept in bank	3
	Used to develop another business	4
	Invested in the stock exchange or money market	5
	Other, explain……..	6

Q38	INTERVIEWER: IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q37, ASK RESPONDENT TO PUT THE ANSWERS IN SEQUENCE BASED ON USAGE OF THE BIGGEST FUND SURPLUS (SEQUENCE NUMBER 1) TO THE SMALLEST ONE AND FILL IN THE DOTTED LINES WITH CODE AT Q37. IF RESPONDENTS ANSWER ONLY ONE ANSWER AT Q02, DON'T ASK ANY QUESTION, WRITE ANSWER CODE AT SEQUENCE 1 AND CONTINUE TO Q39. Please, put your answer in sequence based on the usage of the biggest fund surplus (no 1) to the smallest one.	
	Q38A Sequence 1 ..... (Code at Q37)	
	Q38B Sequence 2 ..... (Code at Q37)	
	Q38C Sequence 3 ..... (Code at Q37)	
	Q38D Sequence 4 ..... (Code at Q37)	
	Q38E Sequence 5 ..... (Code at Q37)	
	Q38F Sequence 6 ..... (Code at Q37)	

Q39	SHOW CARD According to you, what is needed to increase credit supply to the Indonesian real sector? (Multiple)	Code
	Stabilization of exchange rate	1
	Bank restructuring	2
	Big company credit restructuring	3
	High economic growth	4
	Encouraging foreign banks to increase credit	5
	Encouraging state banks to increase credit	6
	Soft loan from central bank	7
	Business risk sharing between private and government (for example credit insurance)	8
	Other, explain……..	9

NOTES:

- IF RESPONDENTS ANSWER MORE THAN ONE ANSWER AT Q39, CONTINUE TO Q40.
- IF RESPONDENTS ANSWER ONLY ONE, WRITE ANSWER CODE AT Q39 TO SEQUENCE 1 (SEQUENCE NUMBER 1) AND STOP, INTERVIEW FINISHED, THANK YOU.

Q40	INTERVIEWER: ASK TO THE RESPONDENT TO MAKE SEQUENCE THE ANSWER AT Q 39 OF THE PRIMARY CHOICE (SEQUENCE NO. 1) AND FILL THE CODE AT Q39 IN THE FOLLOWING COLUMN Please, put your answer in sequence from the most primary choice (sequence number 1)		
	Q40A	Sequence 1	(Code at Q39)
	Q40B	Sequence 2	(Code at Q39)
	Q40C	Sequence 3	(Code at Q39)
	Q40D	Sequence 4	(Code at Q39)
	Q40E	Sequence 5	(Code at Q39)
	Q40F	Sequence 6	(Code at Q39)
	Q40G	Sequence 7	(Code at Q39)
	Q40H	Sequence 8	(Code at Q39)
	Q40I	Sequence 9	(Code at Q39)

Interview Has Finished, Thank You