The usage of surveys to overrun data gaps: Bank Indonesia's experience

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I. Introduction

The global economic recession that triggered in late 2007 in the United States seriously affected the global economy in 2008. The catastrophe has spread worldwide, and to both advanced and emerging countries. Various stock markets around the world have fallen sharply, thus causing a massive impact on large financial institutions. Turbulence in the US financial market has created a vicious circle between financial markets worldwide and the real sector. In response to the situation, several aggressive policies have been adopted at the global level to promote economic recovery. Governments around the world have also launched fiscal stimulus plans with strong efforts to alleviate their economic condition.

The global crisis has caused atrophy of world economic growth. Data from the World Economic Outlook (WEO) showed that in 2007 the world economy still grew 5.2%. However in 2008 growth in the world economy decelerated to 3.0% and contracted to –0.6% in 2009. The contraction has been experienced in many countries especially in advanced economies due to the increasing integration of the global economy and the deepening of the crisis effect. In 2009, only a few countries showed positive growth although it was lower than previous years, such as India, China, and some ASEAN countries including Indonesia. It seems that although central banks and governments have used wide-ranging policy tools to support the economy, no rigorous improvement of sentiment signal has yet been given. However, it is also realized that the restoration will need go through a difficult transition period.

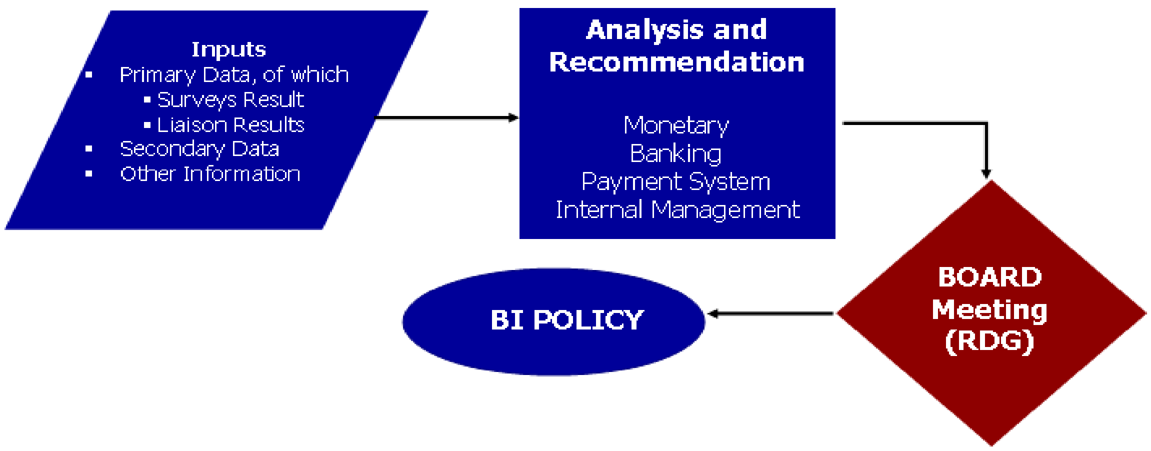
The effect of the global crisis in Indonesia started in the last quarter of 2008. The rupiah exchange rates weakened and touched the lowest level at Rp12.151/USD in November 2008 or depreciated by 31% compared to January 2008. The pressures on the rupiah exchange rate came from the mounted balance of payments deficit, fueled by unfavorable development in the current account and capital financial account. This condition also led to slower economic growth in Indonesia. In the third quarter of 2008, the economy was still amounting to 6.2% growth (yoy). However, in the fourth quarter of 2008, the global financial turmoil began to bear down on Indonesia's economy, followed by slowing of economic growth to 5.3% (yoy) in the fourth quarter of 2008. Indonesia's economy in 2008 was still able to record 6.0% growth, but the crisis itself has generated a 4.5% deceleration in Indonesia's economic growth.

With regard to the central bank perspective, Bank Indonesia (BI) has one main objective i.e. to establish and maintain rupiah stability. Concerning the global downturn, BI has been keeping a close watch on the financial market turbulence and the impact on Indonesia's economy. Given the high level of uncertainty that persists in the economic environment, it is indispensable for monetary policy formulation to be supported by a number of economic indicators and information. Therefore, BI requires more progressive statistics data and information than that issued by official institutions. Since the official economics data are not available to be used as supporting data immediately, BI conducts some surveys on a regular or ad hoc basis as a source of supplementary information on macro or micro economic conditions to obtain early indicators respecting national economic movements earlier than official data.

II. Bank Indonesia surveys

As monetary authority, Bank Indonesia sets up the framework and implements prerequisite monetary policy to achieve and maintain the stability of rupiah value. In order to support the Board of Governors in formulating the monetary policy, BI needs additional information which was obtained from the surveys. Under the provisions of Bank Indonesia Act No. 23/1999 as amended by Act No. 3/2004, BI conducts surveys to assess information concerning the current economic situation as well as its projection.

The Mechanism of Monetary Policy Formulation



The outcome of the surveys is periodically reported to the Board of Governors and several departments in Bank Indonesia. It is also published on Bank Indonesia's website, therefore respondents and external stakeholders are able to utilize the survey's results. Some surveys are conducted regularly by Bank Indonesia such as the Business Survey, Consumer Survey, Banking Survey, Retail Survey, etc. However, BI can also conduct some ad hoc surveys to assess particular issues related to financial market conditions and economic activities. During the global financial crisis, BI conducted Banking Surveys and some ad hoc surveys to collect information concerning the impact of the crisis on the financial sector and the real sector.

II.1 Banking survey

During the global financial crisis, the Banking Survey became more important as a tool to obtain early information for monetary and credit development analysis. It is a quarterly survey which covers 48 banks in Jakarta that provide 80% of national total credit. The respondents are selected by a stratified purposive sampling method and classified based on their total assets into: (i) Large Bank with total assets of more than Rp25 trillion; (ii) Middle Bank with total assets between Rp4 trillion and Rp25 trillion; and (iii) Small Bank with total assets of less than Rp4 trillion. The main purposes of this survey are predominantly to obtain information about the current quarter conditions and the expectation for the next quarter as well as the whole year conditions.

The Banking Survey provides Bank Indonesia with the latest development regarding: (i) the banking policy in funding and deposit lending; (ii) the effectiveness of BI's monetary policy transmission mechanism; and (iii) some additional information related to the banking sector's condition which is already reported in Banking Monthly Reports. Some indicators generated by this survey which are important for analyzing financial system conditions are: (i) sectoral loans development; (ii) sources and disbursement of funds; (iii) deposit and lending rates; and (iv) projection of outstanding credit growth. In addition, this survey also accommodates a certain number of ad hoc questions dealing specifically with financial market issues. Questionnaire forms are sent by mail, facsimile and email. Since 2008, the questionnaires have been distributed to the banks through an online system. The questionnaire is distributed to respondents in the first week at the end of the quarter and returned back to BI a week before the end of the quarter. The response rate of this survey is considerably high, on average above 90%. In the meantime, the report on the Banking Survey is published in the first week after the reporting quarter.

Data are classified into quantitative and qualitative types. Qualitative data are processed by the weighted net balance method and pooling method. The weighted net balance method is calculated by multiplying the respondent's answer with each segment of loan (totally 100%), then calculating the difference between the percentage of respondents claiming "increase" and the percentage of respondents answering "decrease" (used to be known as net balance). Pooling method means that the percentage of the majority answers compare to total respondents. Meanwhile, quantitative data is processed by using the simple average method.

For Bank Indonesia, the key important sources of early data which are necessary to assess the impact of the global financial crisis are provided by the Banking Survey. Therefore, during the crisis, Bank Indonesia required banks to provide some additional information through three periods of the Banking Survey which were conducted in Quarter IV-2008, Quarter I-2009 and Quarter II-2009. Some additional questions related to the global financial crisis include: (i) the impact of the global crisis on the banks' business activities; (ii) which indicators are most affected by the crisis; (iii) the impact of the crisis on the banks' Non Performing Loans (NPL); (iv) the types of credits that suffered the most from the increase of NPL; and (v) the projection of growth in lending.

II.2 Ad hoc surveys

Aside from regular surveys, BI also conducts some ad hoc surveys. The topics of these ad hoc surveys depend on the current economic conditions or some important issues that could generate a negative impact on Indonesia's economy. Every year we conduct four to five ad hoc surveys by using the phone survey method. Respondents of the surveys are wide-ranging, from individuals to companies/institutions. During the period of crisis in 2008 to 2009 we conducted three ad hoc surveys to capture early information regarding the impact of the crisis on the real sector.

The first survey was conducted in November 2008; the topic was "The Impact of Global Economy Crisis to the Real Sectors." The respondents were selected by using purposive sampling which covered 80 companies in several economic sectors i.e. agriculture, mining, manufacturing, construction, trade, and transportation sectors. The survey asked about companies' business situation, capacity utilization, the usage of labor, financial condition, and the impact of exchange rate depreciation on external as well as domestic demand. Data collected were processed by the net balance method, simple average, and pooling system.

The second survey was "Exports and Imports of Non Oil and Gas Performance in Quarter I-2009 and 2009." This survey was carried out from February to March 2009 and involved 317 export companies (covering 29% of non oil and gas export values). They were selected by the purposive sampling method. The data collected were processed by using the net balance, weighted average, and pooling method.

The third survey was conducted from May to June 2009 mainly to obtain information concerning how the financial crisis was affecting companies' employment conditions. Respondents of this survey embraced 256 companies in several sectors (agriculture, mining, manufacturing, construction, and trade). Respondents were selected by purposive sampling from middle to large companies. The data were processed by the simple average and pooling method.

III. The survey results

As explained in the previous section, to analyze monetary and credit development as well as the real economic activities, Bank Indonesia requires some data and information. Data from official institutions typically come with a time lag, as a result data and information obtained from surveys become more important to fill data gaps and preserve prompt information to policy makers. In this section, we will discuss the information obtained through the surveys during the crisis and the conditions of the financial sector and the real sector based on data.

III.1 The financial sector

In general, the impact of the global crisis on commercial banks could be minimized due to conservative characteristics of Indonesia's banking. The sources of funds mainly came from deposits, which were placed mainly in the form of credit or securities such as government bonds. However, the integration of the domestic financial sector into the global financial market may be problematic. Pressure from the global financial crisis that emerged in the fourth quarter of 2008 until the first quarter of 2009 destabilized the domestic financial sector. Based on the Banking Survey in the fourth quarter of 2008, the majority of respondents (96.7%) claimed that the global financial crisis was having an impact on banking activities. This indication was confirmed by some data such as tight liquidity in the interbank money market as a result of banks' preference to hold liquidity and limit their interbank transactions. Moreover, weak external demand had caused banks' asset quality to deteriorate as reflected in increasing Non Performing Loans (NPL).

III.1.1 Credit growth

In 2009 the annual growth rate of credit to the private sector declined substantially. The dramatic drop in credit growth was indicated by the Banking Survey in the fourth quarter of 2008. Respondents stated that the banking activity most affected by the crisis was lending activity, followed by money markets and lending rates, and tightening liquidity. The main factor behind the deceleration of loan expansion was less production and trade activities due to a substantial decline in domestic demand and weakening household purchasing power. Tightening liquidity which created pressure on the money market rate and banking lending rates also took a significant role in the deceleration in loan growth.

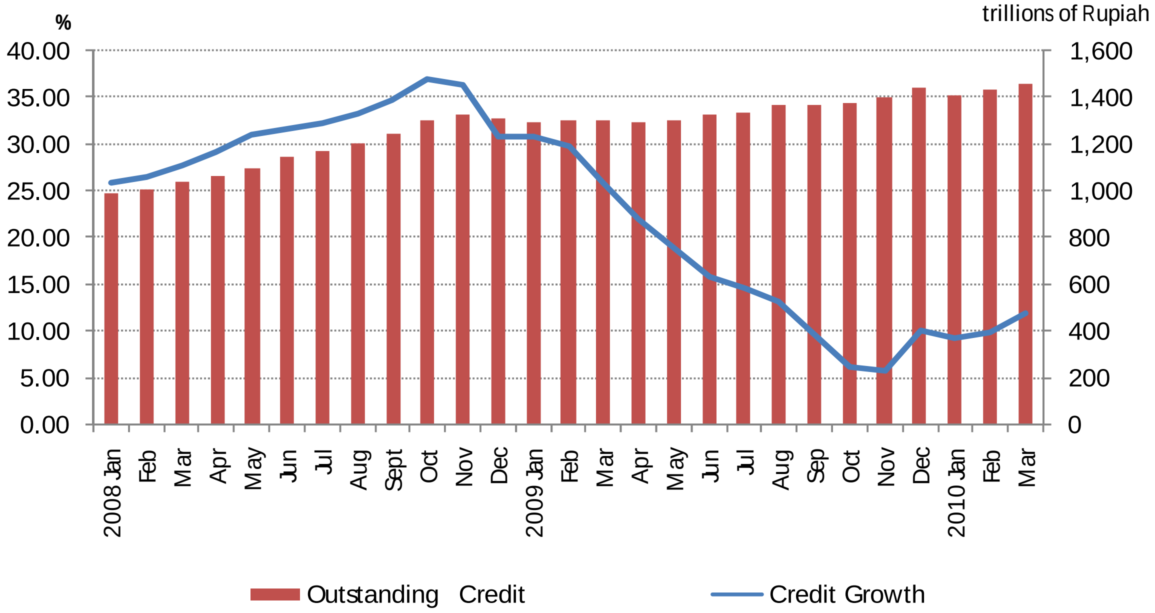
The Banking Survey conducted in the first quarter of 2009 also indicated that there are no signs that banks are starting to ease their credit conditions. The low capacity utilization, weak demand from both domestic and external markets that led to a delayed plan of business expansion and eventually to financial needs from banks which remain weak are among the reasons behind the deterioration of credit growth. On the other side, banks turned more cautious in their lending activities and even refrained from extending credit to particular sectors.

The deterioration of business conditions in 2009 was also denoted by the ad hoc survey in November 2008. Respondents were pessimistic about the prospects of the real economy and predicted that business conditions in 2009 would be getting worse. They predicted that business activities in 2009 would decline 7.51% compared to the previous year. In the second quarter of 2009 Banking Survey, the majority of the respondents in large bank groups expected that the recovery in both loan demand and credit supply would not happen in 2009.

Therefore, they predicted that credit growth in 2009 would be around 10% to 15%, which was lower than 2008.

Data from Banking Statistics confirmed those survey results. In 2008 banking credit grew reasonably high and by the end of 2008 credit growth was recorded at 31%. However, in 2009 credit growth was down significantly to 10%, which had been predicted in the second quarter of 2009 Banking Survey. The deceleration of credit growth was mainly because banks became more prudent in their lending. In addition, the subdued level of economic activity and trade, and the uncertainty surrounding the business outlook dampened firms' demand for financing. As a result, banks tended to place their funds in more secure and liquid instruments, mainly in the form of central bank certificates and government bonds.

Graph 1. Outstanding Commercial Bank Credit



Source: Bank Indonesia.

III.1.2 Non Performing Loans (NPL)

Pressure in the economic conditions has indirectly caused a broad unfavorable impact on the banking performance, through the downturn in the real sector performance, particularly in exports and imports activity. This condition undermined the ability of banks to provide credit to the business sector and eventually will increase their credit risk and Non Performing Loans (NPL)[1].

The increment in the NPL ratio was predicted by respondents when they were surveyed in the Banking Survey in the fourth quarter of 2008, the first quarter of 2009, and the second quarter of 2009. The majority of respondents predicted that the NPL ratio in 2009 would potentially increase, and would reach a high NPL ratio in the second quarter of 2009 and the third quarter of 2009. Respondents predicted that the NPL ratio in 2009 would be higher than that in 2008. Based on economic sectors, respondents claimed that the highest potential for NPL would occur in the manufacturing sector and trade sector.

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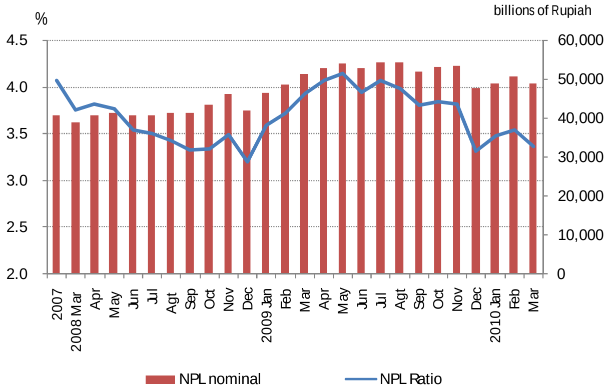
[1] The NPL ratio is credits that are sub-standard, doubtful and loss divided by total credits.

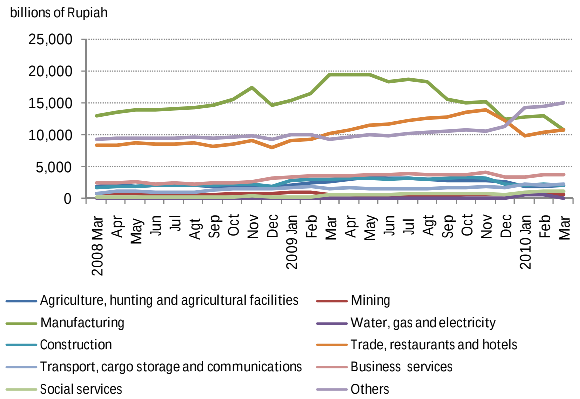
Data from Banking Statistics proved that since the fourth quarter of 2008, the NPL figure has increased monthly and hit the highest point in August 2009 with Rp54.3 trillion (Graph 2). The increasing of nominal NPL in the midst of sluggish credit growth exposed the economy to a rise in bank NPL in 2009. Following high nominal NPL, greater nominal credit risk by economic sector was focused on the trade, hotel and restaurant sector and the manufacturing sector, which contributed to 34% of NPL (Graph 3). The increasing of nominal NPL caused the ratio of NPL to tend to increase, starting at the end of 2008.

Graph 2. Non Performing Loans



Source: Bank Indonesia.

Graph 3. Non Performing Loans by Economic Sector



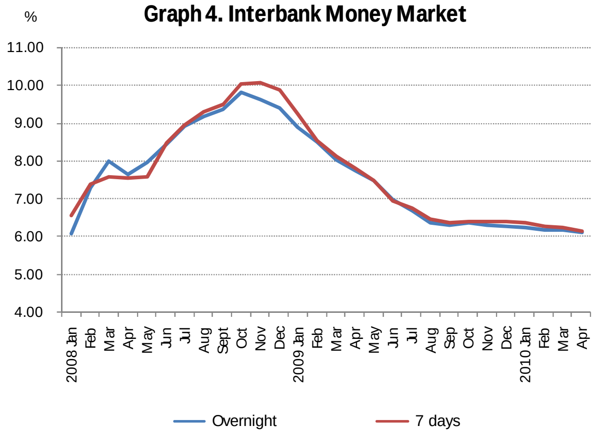
Source: Bank Indonesia.

III.1.3 Interest rates

Tight liquidity on the global financial market caused investors to adjust their investment portfolio in emerging countries, including Indonesia, which hastened a foreign capital flow reversal and intensified pressures on the domestic financial market. In the banking sector, tight liquidity was found in the interbank money market as a result of the banks' preference to keep the liquidity and limit interbank transactions. This condition was revealed in the Banking Survey in the fourth quarter of 2008. Most of the respondents (89.7%) argued that one of the impacts of the crisis on the banking sector was a high interest rate due to tightening liquidity. However, respondents to the Banking Survey in the first quarter of 2009 predicted that, for Quarter II-2009 and the whole year 2009, the interest rate would be lower than 2008.

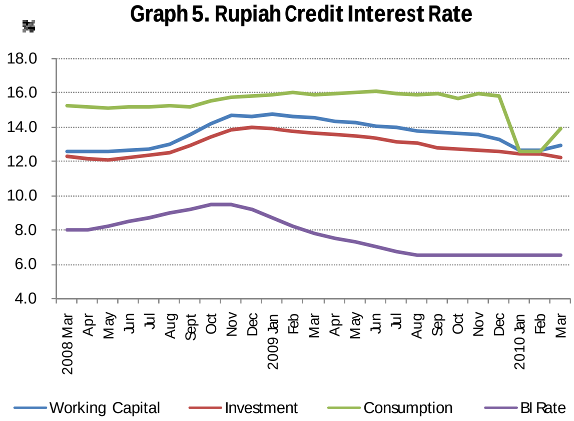
Banking Statistics data show that in 2008 the average rupiah credit interest rates start to mount especially in the second semester of 2008. However, entering the year of 2009, we found that pressures on liquidity due to the global crisis had eased slightly. This condition was parallel with the decline in the policy rate (BI rate).

Graph 4. Interbank Money Market



Source: Bank Indonesia.

Graph 5. Rupiah Credit Interest Rate



Source: Bank Indonesia.

III.2 The real sector

The impact of the global crisis in Indonesia was not only felt by the financial sector, but also spread to the real sector. The contraction of economic growth in several major countries caused a decline in world trade volume of –10.7% in 2009. This deterioration in the world economy led to sluggish business conditions in Indonesia, particularly in the export oriented businesses, and increased the risk of unemployment.

III.2.1 Performance of exports and imports

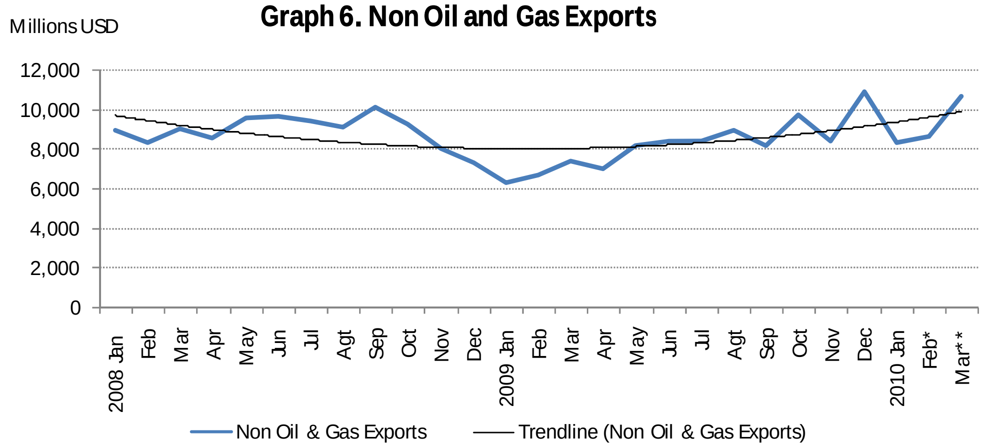
Export performance

Among the main primary external transactions, Indonesia's exports and imports have been affected by the global crisis. This was indicated by respondents when BI conducted its Exports and Imports of Non Oil and Gas Performance Survey in the first quarter of 2009.

The survey revealed that non oil and gas exports volume in the first quarter of 2009 was predicted to decline. On average, export volume was expected to decrease 18.0% compared to the same period in the previous year. Respondents believed that weak external demand and delayed export contracts were the main reasons behind such a depressing condition. The same conditions were also predicted for the whole year 2009, being projected to decrease 16.8%. To solve the problem of the weakness in export performance, respondents have some strategies such as cost efficiency, export destinations diversification, products diversification, product quality improvement, and the amount of labor reduction.

The weakening in export performance indicated by the survey was confirmed with export and import data. Contractions in economic growth in some of Indonesia's major trading partners such as the USA, Japan, and Singapore, in parallel with the decline of international commodity prices, triggered the weakening of export performance. Compared to the same quarter in the previous year, non oil and gas export growth in the first to third quarter 2009 experienced negative growth, thus export growth contracted to –8% during 2009.

Graph 6. Non Oil and Gas Exports



* preliminary figure
** very preliminary figure

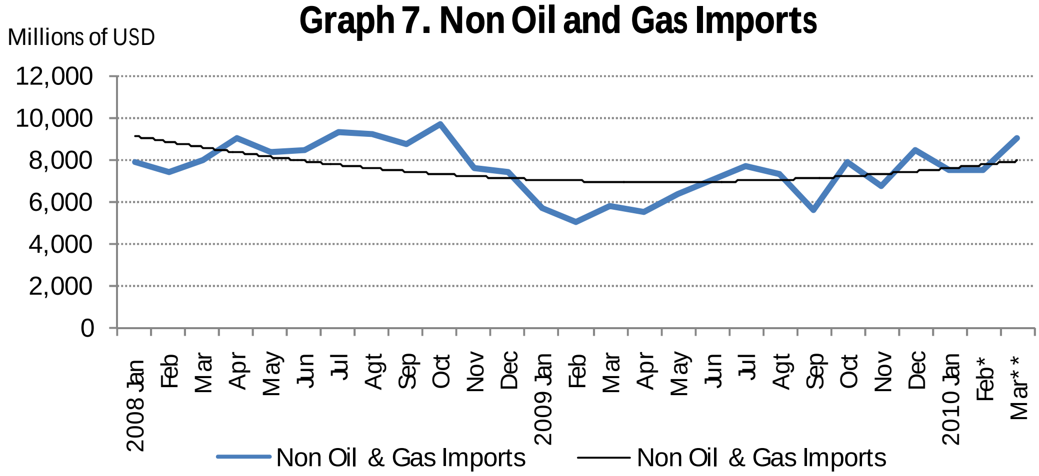
Source: Bank Indonesia.

Import performance

Indonesia's imports have been dominated by non oil and gas commodities, which average over 70% of Indonesia's total imports. Although international turmoil affects the trade through exports, it may also affect trading activity. Moreover, a higher level of import substitution, especially for Indonesia's manufacturing products, may lead to import growth deceleration in line with export conditions. The contraction in non oil and gas imports has been indicated by respondents in the Exports and Imports of Non Oil and Gas Performance Survey (first quarter of 2009). The survey revealed that non oil and gas imports were expected to decrease in the first quarter of 2009 at an average of –19.9%, in line with weak export performance. In 2009, respondents predicted that imports would decline by –15.7% on average.

Those predictions have been confirmed with import data. During 2009, imports of non oil and gas dropped in each quarter and touched –22% in 2009 compared to the previous year. The performance of imports can be seen in Graph 7.

Graph 7. Non Oil and Gas Imports



* preliminary figure
** very preliminary figure

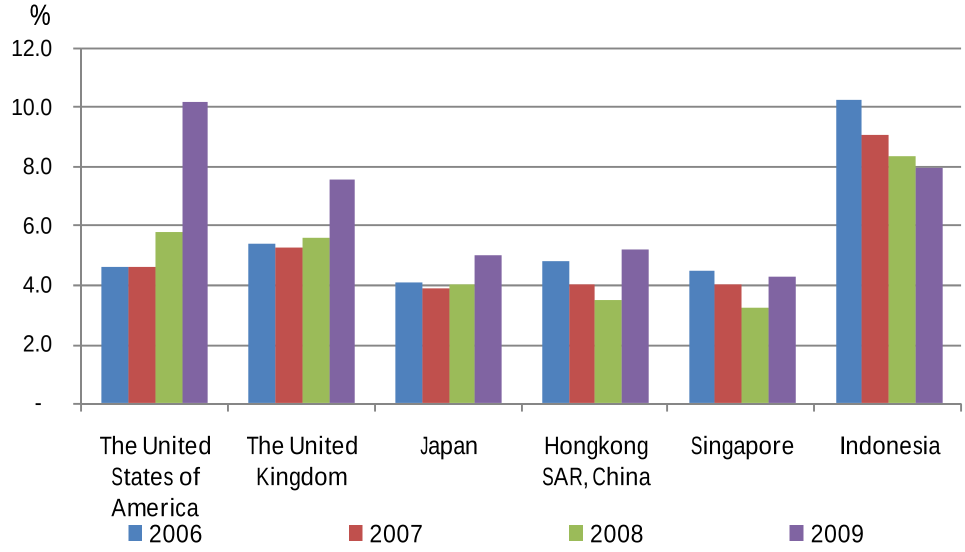
Source: Bank Indonesia.

III.2.2 Labor conditions

The pressure from the global crisis had a major effect on several companies to make changes to their operations and upgrade their business efficiency, with the result that some factories closed. These changes led to a rise in planned worker layoffs at some companies. The above condition was indicated in BI's ad hoc survey in May to June 2009 related to the impact of the crisis on companies' usage of labor. However, respondents predicted that the impact of the crisis on the decline in the use of labor would be insignificant. Respondents who reduced working hours or laid off their workers were relatively smaller compared to the total respondents. The survey conceded that the number of companies who reduced the working hours was only 10% in the fourth quarter of 2008 and 8% in the first quarter of 2009. The companies who laid off their workers, as much as 16% in Quarter IV-2008 and 21% in Quarter I-2009, were mostly from export oriented companies. The majority of layoffs were of non permanent workers. Generally, the reasons behind the layoffs were related to cost efficiency and weak demand both from abroad and from the domestic market. Furthermore, in 2009 only 11% of respondents believed that they had a plan to reduce labor. The rest of the respondents said that they would not reduce labor since their businesses went normally during the crisis.

The conditions of labor during the crisis can be seen from the unemployment rate. As shown in Graph 8, some countries experienced an increase in the unemployment rate. In the United States, when the crisis began, the unemployment rate in 2009 increased to 7.6% from 5.6% in 2008. However, the unemployment rate in Indonesia during the crisis tended to decline. It means that the global crisis had no such big impact on the Indonesian labor market as previously indicated in the survey.

Graph 8. Unemployment Rate



Source: Global Finance.

IV. Conclusion

Indonesia, as one of the countries that maintain an open economy, also suffered the adverse effect of the global crisis which was started in the United States in 2007. The crisis has been transmitted to fragility of world economic growth in 2008 and 2009. Indonesia itself also experienced a deceleration in economic growth, even though still charting positive growth. The impact of the crisis on the Indonesian economy was not only felt by the financial sector but also spread out to the real sector. This global recession presents a signal that there will be more challenges beyond the economic crisis itself.

As a central bank, Bank Indonesia (BI) presides over the global crisis and the impact on Indonesia's economy. To alleviate the impact of the crisis, BI carried out a series of monetary policies to reinforce earlier measurement. In order to formulate better monetary policies, BI requires data and information issued by official institutions. However, since the data are not available immediately to be used as supporting data, BI conducted some surveys on either a regular or ad hoc basis.

During the period of crisis (2008–2009), BI took a certain number of surveys to get early information from the banks and companies regarding the impact of the crisis on their businesses. The information was gathered from the Banking Survey and some ad hoc surveys. The surveys indicated that the financial sector and the real sector were affected by the crisis. Low credit growth and increasing Non Performing Loans (NPL) were several problems which arose in the financial sector although not yet indicated as a systemic banking crisis. In the real sector, exports and imports of non oil and gas dropped in 2009 and several companies cut their labor, particularly export oriented companies.

We found that indicators and information obtained from the surveys were essentially very important in giving early information concerning the impact of the global financial crisis on the domestic economy, and hence supported BI in taking prudent monetary policy measures to recover from the crisis.

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