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Explaining the Twin Crises in Indonesia

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May 2011

Abstract

The co-existence of the 'twin' banking and currency crises in emerging market economies has raised concerns regarding the underlying causes and potential remedies. Literatures suggest that there are at least three major approaches that could be used to explain the phenomenon: the microeconomic perspective which emphasizes the role of asymmetric information problems in the banking sector, the macroeconomics perspectives that link the financial liberalization with the banking sector risky behaviors, and the new institutional perspectives incorporating political and financial institutions into the analysis of crisis. Using these frameworks to analyze the twin crises in Indonesia during the 1997-2000 periods, it is suggested that the crises are rooted in and could be well-explained by the asymmetric information model. Although the other models also influence the co-existence of banking and currency crises, it was the asymmetric information problems before and during the crises combined with political turmoil which magnified the contagion effect of the currency crisis in the neighboring countries to the Indonesian economy. Prior to the crises, moral hazard and adverse selection problems both in economic and political fields have significantly contributed to weak micro banking fundamental in the Indonesian banking system. High non-performing loans and weaknesses in the prudential regulation were also evident. Similarly, the post crises experiences demonstrated that uncertainty regarding the economic reform programs and political stability had undermined market confidence, triggered bank panics and worsened currency crisis. Findings of this study are expected to increase understanding on the determinants of twin crises as well as to provide valuable lessons in managing and maintaining robust financial sector in Indonesia.
Keywords: Twin crises, financial crisis, banking crisis, Indonesian economic, institutional economics.
JEL: E44, G01, N25, O11, O53.

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1 Introduction

Financial crisis in South East Asian economies from 1997 to mid-2000s was surprising to many. Not only because of the remarkable economic performance of the emerging economies - also known as “the Newly Industrialized Economics” (NIEs)”consisting of Indonesia, Malaysia and Thailand - since the 1960s, but also because of their strong economic fundamentals. This is supported by their high economic growth and robust macroeconomic indicators, as suggested by many scholars especially from those of international institutions such as the World Bank, International Monetary Fund (IMF) and Asia Development Bank (ADB) (Page, 1994[26]). Many believe that accumulation of physical and human capital (Young, 1994[33]) and supportive role of government and market institutions (Stiglitz, 1996[29]) were behind these success stories.

Only a few scholars suspect that the indicators did not fully reflect the economic fundamentals and, as such, there are other dynamics which might trigger financial crisis (Cole & Slade, 1996[5]). It is also believed that signs of weaknesses were quite clear prior to the crises. In Thailand, for example, economic growth slowed down rapidly from about 8-14 per cent in the 1988-1995 periods to only 6 per cent in 1996. In Indonesia, although economic growth was close to 6 per cent in 1995, signs of recession were also clear from rising inflation, widening current account deficit and increasing non-performing loans in the banking sector. Meanwhile in Malaysia, real effective exchange rate appreciation contributed to the countries widening current account deficit (Radelet, Sachs, Cooper, & Bosworth, 1998[28]).

Regardless the above debate on the ‘successfulness’ of the NIEs economies, the countries experienced severe financial crises since 1997. Many believe that the crisis is started from the collapse of the Thai Baht in mid 1997. Since the South East Asian economies are highly integrated, the events triggered the collapse of surrounding economies’ currencies. Subsequently, inflation and interest rates soared, reaching double digits in some countries. The banking sector, which is at the centre of the financial system, also collapsed following by a large economic contraction. The co-existence of currency and banking crises in the economies is known as the “twin crises” (Gupta, 1996[14]; G. L. Kaminsky & Reinhart, 1999[18]).

Why did the crises happen? Various literatures suggest that at least three linked approaches can be used to explain the recent twin crises in emerging market economies. First, from microeconomics perspective, it is believed that asymmetric information problems particularly in the banking sectors have triggered and magnified the effect of twin crises (Hahm & Mishkin, 2000[15]; Mankiw, 1986[22]; Mishkin, 1996[24]). Second, using macroeconomic perspective, it is suggested that the balance of payments and financial liberalization problems are the roots of the crises (Calvo & Mendoza, 1996[3]; Corsetti, Pesenti, & Roubini, 1998[7]; Demirgüç-Kunt & Detragiache, 1998[8]; G. L. Kaminsky & Reinhart, 1999[18]). Finally, current literature also suggests that institutions are considerably important in influencing the severity and recovery from the crises (Brown & Dinc, 2005[2]; Demirgüç-Kunt

& Detragiache, 2002[9]; Kane & Klingebiel, 2004[19]; Kroszner, 1997[20]).

This paper uses the three approaches to explain the twin crises in Indonesia, an emerging economy in South East Asia which experienced the worst crises in the region during 1997-2000 periods. While in 2000 the badly hit economies such as Korea, Malaysia, and Thailand were clearly in recovery (Wilson & Drysdale, 2000[31]), more than one decade after the collapse of the Thai's Baht the Indonesian economy still experienced lower growth compared to the pre-crisis period. It is argued that uncertainty, especially in parts of domestic political economy, has made the crises prolonged in the economy. Therefore, interest rates and inflation rates in late 2000s were still higher than the pre-crisis period, although the rates declined gradually following the economic reform. The exchange rates never returned to their initial condition and they are approximately four times higher than pre-crisis period in 2005.

The rest of the paper is organized as follows. In the next section, some stylized facts and literature review regarding typical financial crises in emerging economies are discussed. In section three, the initial conditions and economic structure of Indonesia prior to the crises are explained based on the three approaches described earlier. Section four explains the twin crises experienced by the country, from the impacts of the crises to the authorities' policy responses, and analyze which of the approach(s) is more sensible in explaining the circumstances. The final section concludes the analysis and suggests some relevant lessons learnt from the experiences.

2 Understanding the Twin Crises

Banking and currency crises are typical financial crises which occur in many emerging economies nowadays. Since they tend to cluster, they are also known as the "twin crises". Due to their complexity, others also call them the "high-tech" crises (G. Kaminsky, 1999[17]). A study conducted by Kaminsky and Reinhart (1999[18]) with sample consists of 20 countries during 1970-1995 period observe that during the 1970s there were 26 cases of currency crisis with only three cases of banking crisis. In contrast, while the number of currency crises did not increase much during the 1980s and 1990s, the number of banking crises per year has more than quadrupled in the post-liberalization period. Similarly, another study featured a larger sample countries of 90 industrial and developing countries in the period 1975 to 1997 concludes that the twin crises frequency increased overtime and they were concentrated in financially liberalized emerging market economies (Glick, Moreno, & Spiegel, 2001[12]).

Literature also suggests that twin crises in emerging market economies are closely related to the dynamics between microeconomic fundamentals, macroeconomic linkages and institutions in the economies. In the micro context, a model proposed by Mishkin (1996[24]) stresses the role of asymmetric information problems in the banking sector as the trigger for the financial crisis. Defining financial crisis as a non-linear disruption to financial markets, it is suggested that adverse selection and moral hazard problems are worsen during crisis so that financial markets are unable to channel funds to economic agents efficiently. In this model, moral hazard and adverse selection problems are reflected in the fluctuation of interest rates and increase in uncertainty. If interest rates and uncertainty increase - perhaps due to recession, stock market crash, or political turmoil - the bad risk borrower will be more likely to appear. In contrast, lenders will be more aware of this possibility and cut their lending. These situations lead to adverse selection problem, currency crash and trigger a bigger financial crisis. Alternatively, assets market effects can deteriorate banking system balance sheet if external shocks, such as unanticipated deflation, occur. Finally, bank panics might occur due to asymmetric information between the public and the banks.

The basic model has been extended to the literature that use bank balance sheet and market information to explain and predict the failure of individual banking institutions. Gonzales-Hermosillo (1999[13]) finds that non-performing loans (NPL) and capital adequacy ratio (CAR) often deteriorated rapidly before bank failure. While Bongini, Claessens, and Ferri (2001[1]) find that bank measures (CAMEL) could predict crises reasonably well and that connected institutions to the banking system were more likely to experience trouble. Furthermore, research also links the nature of both economic and non-economic institutions of the banking sector and the nature of bank ownership with various aspects of bank performances[1]. In general, these approaches see strong relationships between microeconomic fundamental problems in the banking sector with the occurrence of the banking and currency crises.

Another approach tries to link macroeconomic measures with the twin crises. Stoker (1994[30]) relates balance of payment problems to banking crisis and points out that an initial external shock, such as increase in foreign interest rate, coupled with a commitment to a fixed exchange rate will result in the loss of reserves. If the international reserves were not sterilized, this will lead to a credit crunch, increase in bankruptcy and financial crises. In addition, capital inflow and financial liberalization may also lead to greater financial fragility since they encourage banks to involve in risky transactions. In this respect, Demirguc-Kunt and Detragiache (1998[8]) note that banking crises are more likely to occur in countries that have liberalized their financial system. McKinnon and Pill (1997[23]) suggest that financial liberalization can make the economic cycle be more pronounced by fuelling the lending boom that

[1] La Porta, Lopez-de-Silanes and Shleifer (2002), and Barth, Caprio and Levine (2001) find that greater state ownership in banking sector is associated with reduced competition, poorer productivity and lower growth. Similarly, Beck, Demirguc-kunt and Levine (2004) argue that banking crises are less likely in economies with more concentrated banking system, fewer regulatory restrictions on bank competition and activities, and national institutions that encourage competition. This view supported by Velasco (1987) which shows that when central banks finance the bailout of troubled banks by printing money, banking crisis will give rise to the currency collapse. For more discussion and detail results of the papers, see Demirguc-Kunt, A. and Levine, R. (2004), Financial Structure and Economic Growth: A Cross Country Comparison of Banks, Markets and Development, Massachusetts: MIT Press.

leads to the eventual failure of the banking system. Whereas Eichengreen and Rose (1998[10]) conclude that there is a strong effect of interest rates and GDP growth in advanced economies on bank fragility in developing countries, although the impact may vary under different exchange rate regimes. These models together emphasize the importance of macro financial linkage with the twin crises.

Finally, current literature starts to notice the relationship between financial and non-financial institutions in affecting severity of financial crises. An important financial institution that has been investigated extensively is the presence of an explicit deposit insurance scheme. While such explicit insurance should be able to reduce banking system fragility by eliminating the possibility of self-fulfilling panics, in addition to the 'common' blanket guarantee policy, it is also realized that it may create incentives for excessive risk-taking (Kane & Klingebiel, 2004[19]). Moreover, it is found that explicit deposit insurance was associated with a higher probability of banking crisis; the more so if bank interest rates are deregulated and if the institutional environment is weak (Demirgüç-Kunt & Detragiache, 2002[9]).

In addition to the financial institutions, Brown and Dinc (2005[2]) argue that political concerns play a significant role in delaying government intervention in the recovery of failing banks. For instance, failing banks are less likely to be taken over by the government or lose their licenses before elections than after elections. This effect becomes even stronger when the ruling party is politically weak. Another study by Kroszner (1997[20]) emphasizes the importance of symmetric information and the existence of competitive elections in reducing the probability of crises in the case of the US Savings and Loans crisis[2].

To summarize, there are at least three approaches useful for explaining the coexistence of the banking and currency crises. The models include the microeconomics perspective particularly with regard to the banking sector, the macro financial linkages and the role of financial and political institutions in the crises. These will be used to examine the twin crises in Indonesia. Before proceeds to the analysis, however, it is worth to understand the economic situation in Indonesia before the crises so as to get insights into what is going on in the economy. This is discussed in the next section.

3 Indonesian Economic Prior to the Twin Crises

This section describes initial conditions of Indonesian economic prior to the coexistence of banking and currency crises using the three approaches illustrated in the previous section. First, from a micro banking perspective, it is argued that signs of

[2]Indeed, based on the US Saving and Loans examination he argues that disseminating information about the costs of inefficient government policy, ensuring competition among interest groups, increasing the transparency of government decisions, improving the structure of legislative oversight of the regulatory process, and allowing entry of foreign banks are all measures that can potentially improve government financial sector policy and reduce the cost of crises.

weaknesses prior to the crises are evident from the increase of non-performing loans in property sector, prolonged problems in state-owned banks as well as weaknesses in legal and regulatory frameworks. Second, from macro financial linkages, it is suggested that financial liberalization has increased risk-taking appetite of banks, as reflected in the form of increased short term un-hedged liabilities. Lastly, political instability has increased uncertainty and magnified the severity of the crises.

3.1 Micro Banking Perspective

Following the declining oil price in the early 1980s, the Indonesian government reformed its financial sector. The authority enacted the 1983 Banking Reform Package, which removed most of bank credit ceiling and controls over state bank deposits/lending. In 1988, it further moved most of the entry barriers and various restrictions that favored certain types of bank by passing the 1988 Banking Reform Package (Hill, 2000[16]).

There are several main reforms in the 1988 package. First, open entry is allowed for joint ventures, foreign banks and domestic banks. Sound domestic banks are even permitted to trade in foreign exchange. However, no proper exit mechanism set up for failed banks. Second, new credit control is imposed. With this new regulation, foreign and joint ventures banks should allocate 50 per cent of their loans to export-oriented business while domestic banks should allocate 20 per cent of their lending to domestic small and medium sized business. The state-owned enterprises are no longer obliged to deposit all their funds in state banks and could place up to 50 per cent of their funds in private banks. Third, reserve requirement was reduced from 15 per cent of demand deposit to 2 per cent of all deposit liabilities. Lastly, ceilings on foreign borrowing are abolished and legal lending limits are established particularly for loans to a single borrower or to groups of borrowers. In addition, banks are allowed to issue shares (Cole & Slade, 1996[5]).

As a result, between 1988 and 1991 the number of banks increased dramatically from 101 to 182. Private bank branches also quadrupled from 559 to 2,639 within this period. However, in late 1988 several smaller banks started to experience liquidity problems. In the early 1990s Bank Summa, one of the biggest domestic private banks owned by a major domestic business group, began to face serious financial problems due to the deteriorating quality of its loans portfolio and the practice of exceeding the legal lending limit. Another similar case is experienced by Bank Duta, a private bank that held funds of the State Logistic Agency (Bulog) and the foundations affiliated with the former President Soeharto. It seems that the existing prudential regulations were not enough to maintain the rapid expansion of the banking system as well as (the related) political intervention (Enoch, Baldwin, Frécaut, & Kovanen, 2001[11]).

Furthermore, in February 1991, the central bank announced a new comprehensive capital, asset, management, equity, and liquidity (CAMEL) quantitative-rating

Table 1: **Non-performing Property Loans as a percentage of Property Loans (1992-April 1997)**

	1993	1994	1995	1996	Apr-97
Construction	13.49	13.25	11.62	9.58	9.62
Real Estate	8.05	5.77	4.48	3.71	4.37
Mortgage	3.2	2.67	2.72	2.99	3.67
Total Property	9.24	7.86	6.53	5.69	6.04
Total Credit	n.a	11.63	n.a	8.79	9.23

Source: Bank Indonesia and Infobank (in Pangestu and Habir, 2002)

system. The system specifies the qualifications of bank owners and managers, new Capital Adequacy Ratio (CAR) regulations, stricter information and reporting requirements, and tougher limits on lending within a corporate group or to one individual group (Pangestu & Habir, 2002[27]). Following this, the New Banking Law 1992 was endorsed.

Despite these "stricter" regulations, the number of new banks continued to increase after the year 1992. Their products and services were also improved. Banks, especially domestic commercial banks, rapidly extended their long-term credit particularly to risky sectors such as property and infrastructure projects. Consequently, property sector lending increased rapidly. However, as shown in Table 1, non-performing property loans were also increased following the poor assets quality. In addition, competition with foreign banks forced the domestic banks to focus more on the retail market and consumer lending which mostly went into consumption and speculation in property and stocks. Thus, financial credit to these sectors entailed high default risks and maturity mismatch risks as well as reflecting the lacked of information and transparency.

The new regulations were also insufficient to manage soundness of the state-owned bank. Some studies had demonstrated that prolonged financial weaknesses within the banks were derived in particular from the poor track record of loan repayment, especially amongst those extended to the largest and most influential Indonesian conglomerates closely linked to the centre of power. In many cases, the central bank provided (implicit) guarantees and helped the troubled banks to recover without proper evaluation (Cole & Slade, 1998[6]; Enoch, et al., 2001[11]).

The estimated aggregate solvency position of all banks and corporate groups as of June 1997 is summarized in Table 2. It is evident from the data that the real financial conditions of the banks were fragile with a surplus of assets over liabilities too thin to deal with any significant macroeconomic shock. The banks' equity position was also very low compared with that of the corporate sector. Since the banking and corporate sectors were intertwined, the magnitude of the imbalance in leverage at the beginning of the crises indicates that many banks were being used to serve the needs of their affiliated corporate borrowers and were not being resourced sufficiently to carry out their task on a sustainable basis (Enoch et al. 2001[11]).

Table 2: **Estimated Aggregate Solvency Position of Banks and Corporate Groups (billion US$, as of June 1997)**

	Bank	Corporations	Banks and Corporations
Assets	226	310	536
Liabilities	209	210	419
Equity	17	100	117
Assets/Liabilities	108 per cent	148%	128 per cent

Source: Source: Bank Indonesia/IMF Staff estimates (In Enoch et al., 2001)

To summarize, it appears that prior to the financial crises microeconomic fundamentals particularly in the Indonesian banking sector has shown signs of weaknesses. These are reflected in the increase of non-performing loans in the risky sectors, prolonged problems in state-owned banks related to loans of influential Indonesian conglomerates closely linked to the centre of power, existed weaknesses in the legal and regulatory framework and the central bank's lack of ability to enforce prudential regulation.

3.2 Macro Financial Linkages

As suggested in the literature, the main source of financial vulnerability in many emerging economies is financial liberalization which encourages policies aimed at increasing capital inflows. This is also the case in Indonesia. High domestic interest rates and limits on offshore borrowing, for example, have led to an increase in deposits by non-residents. However, as private domestic corporations were not restricted from borrowing abroad, many of them borrowed abroad without proper hedging and deposited the funds in the domestic banking system for activities that are predominantly based in rupiah (domestic currency). As discussed earlier, given the asymmetric information problems the Indonesian banking sector extended its credit rapidly to risky sectors such as property sectors and infrastructure projects and hence ended up with huge non-performing loans problems (Pangestu & Habir, 2002[27]). These lead to a high exchange rate risk and credit risk (Enoch, et al., 2001[11]).

In addition, the private borrowing was largely in the form of short term unhedged external liabilities (Table 3). Short term debts of corporations, most notably bank loans, were issued to companies oriented to domestic market rather than to export markets that would have provided the natural hedge of dollar earnings. Meanwhile, the proportions of medium and long-term assets held by all financial institutions were insignificant as of 1998. Therefore, the debts were risky and sensitive to external shocks.

Table 3: **Indonesia's Total Foreign Debts as of February (million USD, 1998)**

Sectors	Bank Loans	Securities (CP/MTN/FRN)	Total
Banks			
State-owned	5,910	1,370	7,280
Private-domestics	4,124	955	5,079
Foreign/Joint Venture	4,330	-	4,330
Total	14,364	2,325	16,689
Corporations			
State-owned	3,995	2,388	6,383
Foreign Investment	23,473	-	23,473
Domestic Investment	30,120	5,313	35,433
Total	57,588	7,701	65,289
Bank+Corporate	71,952	10,026	81,978
Indonesian Government	-	-	54,110
Total Debt	-	-	136,088

Note : CP=commercial paper, MTN=Medium term notes, FRN=Fixed rate notes
Source: Pangestu and Habir (2002)

3.3 Institutional Linkages

While many believe that Indonesia had strong economic fundamentals prior to the crises (Enoch, et al., 2001[11]; G. Kaminsky, 1999[17])[3] , some scholars expressed concern over the mounting evidence of corruption and cronyism as well as its potential effects on the future health of the financial system. Cole and Slade (1996[5]), for example, notice that it is difficult to predict whether corporate governance and established financial system foundations will be strong enough to continue working well given all the uncertainties surrounding the political leadership and the influence of different power groups in Indonesia. They further argue that increasing politicization of major investment and financial decisions raises the level of risk.

The weak (corporate) governance can also be seen from some institutional aspects. First, high concentration of and connection to the centre of power in the banking sector ownerships have created many asymmetric information problems. After the 1988 reforms, the number of private banks doubled to reach 164 in 1996 but 75 per cent of total bank assets were owned by the top ten private banks connected to the former president Soeharto[4] and six state banks. Since majority of the private

[3]Signaling approach (Kaminsky 1999[17]) concludes that there were less signs for the Indonesian crises prior to 1997 as Indonesian current account deficit was not deteriorating rapidly and real exchange rate was not appreciate as much as in the other country. Further, Furman and Stiglitz (in Enoch, C et al., 2001[11]) find that Indonesia crisis was the least predictable one of a sample of 34 troubled economies.

[4]Some examples include Bank Central Asia (BCA), the largest private bank and the largest bank in Indonesia prior to the crises owned by Salim Group (president's relative) and Bank Duta which was controlled by Soeharto's foundation.

banks shares were in the hands of the Soeharto's cronies, asymmetric information problems occurred especially between the banks' original owners and the minority shareholders. The connection has also made some banks remained untouched by the authority despite of their violation to the existing prudential regulations as is evident from the gross violation of the legal lending limit by the affiliated firms within the same group.

Second, the government often gave implicit deposit guarantees to state banks and certain private banks. The banks were also under political pressures to direct lending to particular sectors or groups without proper evaluation of the loans. Some examples are the cases of Bapindo[5], Bank Duta[6] and the Indonesian National Car Project[7]. These guarantees have significantly contributed to excessive moral hazard problem in the economy.

Therefore, it is suggested that political connections as well as implicit and explicit guarantees given by the authorities have created asymmetric information problems. The problems led to risky behavior of banks and excess capacity in some sectors, such as property sector (implies moral hazard problems) and lending without proper evaluation of the loans (implies adverse selection problems), which in turn were central to the structural vulnerability of the Indonesia banking sector before the twin crises.

4 The Banking and Currency Crises in Indonesia 1997-2000

Following the collapse of Thai's Baht in July 1997, rupiah depreciated dramatically. Subsequently, balance sheets of the banking sector and highly leveraged companies deteriorated. Amidst the international supports and the IMF banking restructuring programs, confidence crisis related to the banking restructuring policies escalated. At the same time, political uncertainty and asymmetric information problems were also escalated. Consequently, the exchange rate collapsed, interest rates hiked, hyperinflation occurred and the real economy contracted by more than 14 per cent in 1998. The facts demonstrated that the banking sector problems in Indonesia are intertwined with currency crisis, so as proofed the existence of the twin crises.[8]

[5]The state owned development bank Bappindo had been involved seriously in corruption and huge NPL problem. Instead of closing down or restructuring the bank the government allowed it to continue operates.

[6]Bank Duta, a private domestic bank held the deposit of Bulog and the Soeharto Foundation was bailed out by the government and Indonesian conglomerates despite its massive losses due to currency speculation.

[7]The Indonesian National Car "Timor" owned by Tommy Soeharto (President's son) was given duty free status for its import as well as captive market for its product (i.e. police department and civil servant), whereas the funding was being asked from state banks and some private banks.

[8]Facts described in this section are mainly drawn from Cole and Slade (1998[6]), Radelet and Sachs (1998[28]), Enoch et al (2001[11]) and Bank Indonesia Annual Report (1999-2005)[25].

4.1 The Conventional Wisdom of Bank Restructuring

Options for undertaking bank restructuring vary given trade-offs between the speed of restructuring, fiscal costs, incentives for bank performance and confidence in the banking system. A bail out might be the fastest option, but produces expensive costs. In contrast, the closing down of non-viable banks and paying off creditors/depositors money through (explicit) blanket guarantee could involve lower fiscal costs. However, at the same time it could send a wrong signal about fiscal discipline to the market (Claessens, 1998[4]).

Policy sequences are also believed to play an important part in the restructuring programs. Lindgren et al (1999[21]) recommend three phases in managing and resolving a systemic banking crisis. First, in the acute phase of the crisis it is necessary to introduce measures such as liquidity support, blanket guarantee and sterilization efforts to stop bank panic and stabilize the financial system. Second, as the banking system becomes more stable, restructuring 'tools' such as legal, financial and institutions framework; solvency support; and banking recapitalization can be implemented. Finally, measures to normalize the banking system including banking privatization and blanket guarantee removal could be employed in the recovery phase.

4.2 First IMF Package

Initial response of the Indonesian monetary authority to the currency crisis was widening the exchange rate band from 8 per cent to 12 per cent. However, as rupiah remained depreciated and capital flowed outside the country, the exchange rate regime was floated on August 1997 and subsequently monetary policy was being contracted considerably. Moreover, in September 1997 the government tightened fiscal policy by postponing large projects planned by the former President's family. It also released a plan to restructure the banking sector. However, the plan essentially lacked of credibility[9] and hence rupiah continued to weaken.

The government then asked for supports of IMF. Following this, the first Letter of Intent (1st LOI) package was announced on November 1997. It was agreed to immediately close sixteen small and deeply insolvent banks, while guaranteed small depositors funds. However, as the plan lacked clarity due to information asymmetry problem – as reflected in the facts that the details of the plan were never made public, the choice of banks being closed was unclear, etc - bank panic occurred. Furthermore, as the deposit guarantee was seen insufficient, domestic investors moved their funds from private banks to state or foreign banks, or even abroad, in 'flight for quality'.

The government commitment to the reform itself was also proven to be doubtful. The 'resurrection' of one of the closed banks with the 'help' of the President's son

[9]Radelet and Sachs (1998)[28] noted that on November 1997 the Indonesian government had withdrawn the cancellation of 15 mega projects as they proposed in the fiscal policy reform.

is one example believed as an early sign that the President was not going to be committed to the reform. By mid-December 1997, 154 banks (approximately 50 per cent of the banks in the system) had experienced a run on their deposits. At the same time, the central bank's liquidity support had reached 31 trillion rupiah or 5 per cent of GDP.

4.3 Second IMF Package

As the confidence crisis deteriorated in January 1998, rupiah dropped to its lowest level of 15,000/USD. Costs of the liquidity support also increased to 60 million dollars during the period. In response to these situations, the government announced the Second IMF Letter of Intent (2nd IMF LOI). The package had three components. First, a temporary blanket guarantee was given to all liabilities of depositors and creditors of domestic banks, except for derivative transactions. Second, the Indonesian Bank Restructuring Agency (IBRA/BPPN) was established to supervise and restructure the banking sector. Third, corporate restructuring plan (later known as the "Jakarta Initiative") was carried out along with the other reforms.

While the package contents were consistent with the conventional wisdom of banking sector restructuring policy, the potential moral hazard problems were obvious. First, a temporary blanket guarantee was subject to moral hazard and adverse selection problems. Given the guarantee, it is possible that depositors were less likely to assess the bank's soundness. Knowing this, the bank management might have also adopted riskier strategies. To mitigate the problem, the central bank introduced a cap on deposit rates. However, in practice, commercial banks often offered flexible interest rates to attract depositors. Consequently, the adverse selection problems were inevitable. Second, the establishment of a single centralized public agency to restructure the banking system, viz. IBRA, was highly vulnerable to political interventions due to a large vested interest and notable government record of corruption and cronyism. Although difficult to be proven, the fast "turnover" of IBRA chiefs and low recovery rates of banking sector restructuring under IBRA - less than 30 per cent – might indicated these tendencies. The same problems were also faced by the corporate restructuring program.

The immediate effect on market confidence was relatively positive. By February 1998, rupiah strengthened to reach approximately 10,000/USD. IBRA successfully took over and closed down 14 out of 54 troubled banks. However, continuing uncertainties on the implementation of IMF reforms packages, 'new' plans of the President's (such as introducing a currency board system, after hearing a 'promising' lecture from the prominent US economist Steve Hanke), and political confusion leading up to the presidential election in March 1998 further undermined the confidence. Deposit runs continued and economic conditions worsened.

At the same time, riots have developed in several big cities as people were unsatisfied with the continuing crises. Students across the country were also conducted massive demonstrations against the re-election of President Soeharto for the fifth period (the 32-37 consecutive years) which might made him the longest President in the world at that time. These circumstances led to the President's resignation in May 1998. He was replaced by the vice president BJ Habibie.

From (institutional) economic perspective, these political events implied that the president's connection which had became the "guarantee" for many years have broke down. The undermining of this connection caused massive uncertainty for both domestic and foreign investors. They lost their confidence significantly, which led to massive deposit runs on Indonesian banks. Subsequently interest rates climbed to 70 per cent, inflation rose to 50 per cent, GDP contracted by nearly 14 per cent and the banking sector further collapsed.

4.4 Further Banking Restructuring Efforts

The new President B.J. Habibie continued the banking restructuring effort by focusing on rehabilitation and recapitalization programs. The rehabilitation programs concentrated on auditing processes. In the beginning, the audits undertaken on six private banks taken over by IBRA revealed that on average the non-performing loans were 55 per cent of total loans (90 per cent in the case of one large bank) and most of the loans went to their affiliates. Assets of three of the banks were frozen and their deposits were transferred to the appointed state banks. The other banks prepared for mergers with the state-owned Bank Danamon. Using the audit results, IBRA later enforced ten former owners of the taken-over banks to pay back the liquidity support they obtained from the central bank. Yet, this action was far from successful and caused much political controversy.[10]

In September 1998, IBRA introduced its recapitalization programs. The programs were designed for private banks and state banks which were the weakest banks in the Indonesian banking system. As for the private banks, the program objectives were to recapitalize the viable banks and share the restructuring burden between the government and the private sector. Their contribution would be in the form of bonds and cash respectively. Under this program, the viable bank owners would also be able to buy back the government's contribution after three years.

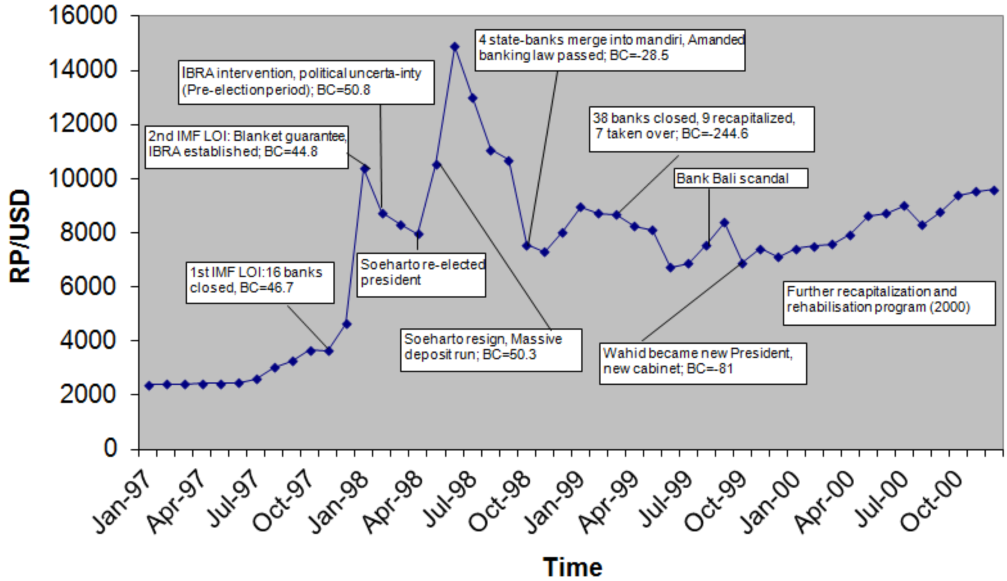
The banks categorization itself was completed in March 1999 with 67 banks falling under category A (high CAR, no government support) and 9 banks falling under category B (medium level of CAR, eligible for government support). In addition, 38 and 7 banks were closed and taken over by IBRA respectively. Two out of 9 banks under category B, including big banks such as Bank Bali and Bank Niaga, continued to experience 'additional' problems. Among others, the Bank Bali scandal was believed to be connected with the government official corruption scandal.

[10]Later, (former) officers of the central bank were also investigated in relation to their involvement with the issues. Some of them, including the in-law of the current Indonesia's president Susilo Bambang Yudhoyono, were brought to court and jailed in 2009.

On the other hand, the restructuring of the state banks has been slower than the plan although most of the banks had negative CAR. All of them were recapitalized after private banks restructuring or banks mergers had taken place and the new (official) general election had been held. Under the new President Abdurrahman Wahid, the merger of four weakest state banks into Bank Mandiri (the largest state-owned bank in the country) was finally conducted. Whereas, its further recapitalization program took place after the new cabinet was appointed. The remaining three state banks (BRI, BNI and BTN) were recapitalized after submitting the restructuring plans and management changes.

The government ended the banking recapitalization program in October 2000. The cost of banking recapitalization in terms of government bonds issued reached 439 trillion rupiah, whereas the total cost of the restructuring program itself is estimated to be around 659.5 trillion. Nowadays the banking sector reform focuses on a financial stability program by designing deposit guarantee institutions and the Indonesian Banking System Blue Print (API or Arsitektur Perbankan Indonesia).

Figure 1: **Indonesian Exchange Rate Movements (Rp/USD, 1997-2000)**



Source: Author's summary and analysis

Figure 1 summarizes the Indonesian experience of the 'twin' banking and currency crises during 1997-2000 periods. It is clear from the figure that the movements of exchange rate and bank capital have been largely driven by changes in political and economic policy perceptions, even in terms of the announcement of new economic policies or new agreements with the IMF. Furthermore, the figure also point out that in the earlier phase of the crises intentions to reform the banking system by closing down the most troubled banks had a positive impact on the exchange rate.

However, as the plan lacked of credibility and colored by many political interventions during the political turmoil period, the exchange rate further collapsed and bank's capital weakened. Even policies such as blanket guarantee that was intended to restore confidence in the banking system and demonstrated that the government had serious intentions to enforce prudential regulations produced exactly the opposite effects. Later, when the political situation became more stable, such as when Abdurrahman Wahid won the presidential election in 2000, exchange rate fluctuations became relatively small and stability of macroeconomic conditions increased significantly.

5 Conclusion

The co-existence of the 'twin' banking and currency crises in emerging market economies has raised concerns regarding their underlying causes and potential remedies. Literature suggests that there are at least three approaches to explain the phenomenon. It could be explained, first, from the microeconomic perspective which emphasizes the role of asymmetric information problems particularly in the banking sector as trigger of the crises. Second, it could also be evaluated from the macroeconomics perspectives that link the stage of financial liberalization with the banking sector risky behaviors leading to the banking and currency crises. Finally, the institutional perspective incorporating the political and financial institutions framework into the analysis has also being increasingly used to explain the occurrence of twin crisis.

The Indonesian experience during 1997-2000 periods suggests that the twin crises are rooted in and could be well-explained by the asymmetric information model. Although the macroeconomic model also influences the co-existence of banking and currency crises through the influence of financial liberalization and capital movement, it was the asymmetric information problems combined with political turmoil that magnified the contagion effect of the currency crisis in the neighboring countries to the Indonesian economy. Prior to the crises, moral hazard and adverse selection problems both in economic and political fields have significantly contributed to weak micro banking fundamental in the banking system. High non-performing loans and weaknesses in the prudential regulation were also evident. Similarly, the post crises experiences demonstrated that uncertainty regarding the economic reform programs and political stability had undermined economic agents' confidence, triggered bank panics and worsened currency crisis.

Following the twin crises, it is contended that the reform process should be comprehensive. While financial system fundamentals and institutions must be strengthened, political stability must also be maintained. To strengthen the financial system, the banking sector should include efforts to complete the restructuring programs and develop the core banks, strengthen prudential regulations and supervision, create incentive-based safety nets and reduce political intervention from either government or vested interest to affect the robustness of Indonesian financial system. Finally, political stability is a necessary condition if the country wants to recover from the crises in the near future.

As final remarks, it should be noted that currently the Indonesian banking system has far improving from the immediate impact of the twin crises. Rupiah has appreciated from more than 15,000/USD at the peak of the crises to around 9,000 by the end of 2010. Inflation has also dropped to approximately 7% nowadays. Annual economic growth has been persistent between 5-6 per cent in the last few years. The 2010 global financial crisis triggered by the sub-prime crisis in the USA in 2008 did not even significantly influenced Indonesian financial system. Furthermore, key global drivers of Indonesia's external balance, namely capital inflows and commodity prices, have strengthened. The challenge for Indonesia is to maximize the opportunities that this brings, in terms of enhancing future growth and making investments that can improve the welfare of the entire population, while managing the associated risks and learnt from its past twin crises experiences (World Bank, 2010[32]).

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