Indonesia
A Tale of Three Crises

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Introduction

Frequent currency crises occurred since the early 1980s, peaking in 1981 with 45 episodes. Sovereign debt crises were also common during that decade, peaking in 1983 with 10 debt crises. The so-called savings and loans crisis in the United States (US) also took place throughout the 1980s into the early 1990s, then the stock market crash (the "Black Monday") erupted in 1987, followed by the 1989 junk bond collapse, which resulted in a significant recession in the US. But a high frequency of financial crises with greater regional and global impact occurred during the decade of 1990s, starting with the European Monetary System (EMS) crisis in Europe where the national central banks could no longer control their domestic (short-term) interest rates, then the 1994 Tequila crisis in Mexico, followed by the 1997-98 Asian financial crisis (AFC).

For Indonesia, the AFC was a major critical event from the economic, political, and social perspectives. As the crisis erupted, the deteriorating economic conditions were exacerbated by the continuing sluggish growth in Japan, the most important trading partner and source of foreign assistance at the time. Instead, the support came from the International Monetary Fund (IMF) with strict conditionalities. The severity of the AFC went beyond trade and financial terms. Declining real wages, massive unemployment, rising poverty, and a sharp decline in the quality of life, not to mention the deterioration in social capital, all contributed to the real hardship of millions of Indonesians who had nothing to do with the creation of vulnerabilities that caused the crisis, let alone the propagation of the crisis.

What and who created the vulnerabilities and how they eventually brought about the crisis are the topics discussed in the next two sections. The bulk of the narratives in the subsequent section is devoted to the

chronological events and the unfolding of the crisis, followed by the discussions on the post-AFC development in the section that follows. The latter sets the stage for the subsequent 2008-09 global financial crisis (GFC). After discussing the policies and the effects of the GFC, the role of the ultra-easy money and quantitative easing (QE) policy taken by the advanced economies (AE) as a response to the GFC is highlighted. The repercussion of those unconventional and unprecedented measures on capital flows and global liquidity was significant, and it had played a central role in the ensuing 2013 crisis known as the "taper tantrum" (TT). The unfolding event following the speech by Ben Bernanke, former Chair of the Federal Reserve, about the Federal Reserve's (Fed's) plan to taper its asset purchases rattled the Indonesian financial market. The TT crisis was a vivid reminder of the importance of securing the country's financial stability in a world financial system with free flows of capital, and the analysis shows that an external shock could clearly generate contagion and financial spillovers. The last section compares the scale and nature of the financial spillovers during the three crisis episodes, using the case of the exchange rate and the shock and volatility in the equity market.

Early Liberalization

Early on, Indonesia had an open capital account, aimed primarily at attracting foreign direct investment (FDI) to boost the economy from a sharp downturn in the 1960s. The Investment Law was promulgated in 1967 to attract FDI in mining (mostly in oil) and in selected manufacturing sectors. The government realized that to stimulate the economy, the country needed a strong industrial base supported by some heavy industries, the operations of which required foreign capital and technology. As soon as the establishment of an industrial base began, growth was reversed from negative to positive.

The upward trend continued toward the 1970s and received a further boost in 1974 when the world's oil price quadrupled following the war in the Middle East. The oil crisis (which was an oil boom for Indonesia) boosted government revenues to finance basic infrastructure — hard and soft. Problems emerged during the second half of the 1980s when the price of crude oil fell back to its 1974 level in 1986. This led to a major change in the country's development strategy.

On the financial side, the strategy began in June 1983 with domestic financial liberalization (DFL). The central bank, Bank Indonesia (BI), allowed deposit and lending rates to gradually move freely, and direct credit controls were removed, so were controls on credit allocation and rules for opening new banks. However, the state-owned banks continued to dominate. The move was soon followed by the introduction of new instruments in the money market such as daily auctions through more market-based interest rates and exchange rates, and the installment of relevant institutions for capital market operation. By the mid-1980s, only few selective controls applied to capital inflows, for example, imposing domestic ownership requirements, limiting foreign borrowings, and prohibiting the purchase of equity by foreign investors in the local stock market. But overall, the capital flow regime was fairly liberal during the period.

A major shift also took place in trade policy. After devaluing the currency in 1983 (by 28%) out of the fear of a balance of payment (BOP) crisis, a series of current account and trade liberalization (CTL) measures were taken. The resulting increase of exports, however, was short-lived. As the world oil price plunged from USD 30 to USD 10 per barrel in 1986, the government devalued the currency again, this time by 31%, and took a series of measures to reduce the economy's heavy reliance on the oil sector. The diversification measures were intended to stimulate labor-intensive exports and enhance the role of the private sector.

Realizing the large import content of most industries, firms exporting more than 85% of their products were exempt from import duties and could import inputs free of licensing restrictions. The share of foreign ownership in exporting enterprises was raised to 95%, and permits for FDI operations were extended to 30 years.[1] In addition to lowering import duties and simplifying export-licensing procedures, the government allowed companies established with foreign investments to export products manufactured by other companies and to establish joint-venture companies to export those manufactured products. Many nontariff barriers were replaced by tariffs, which would also gradually be reduced.

Both DFL and CTL entailed the pursuit of coordinated financial and exchange rate policies to provide a stable macroeconomic environment

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[1] In addition, FDI firms exporting more than 65% of their products were allowed to hire foreign workers/experts.

necessary to sustain growth and to diversify the economy. The exchange rate was allowed to move more flexibly, and the swap premium was shifted to a market-based system with an extended maximum maturity. The encouraging results of the export strategy through greater reliance on market forces and openness to foreign investors raised government confidence to proceed with further liberalization.

A sweeping measure in the financial sector was subsequently taken in October 1988. The policy package, known as PAKTO (or *Paket Oktober*), was intended to improve the functioning and supervision of the banking system and money market, and to allow greater foreign participation through the licensing of new banks and their branches, all of which were meant to create a level playing field for all banks. For state banks, this would pose a challenging task as they could no longer maintain wide margins through thin competition as before.[2] The impact of PAKTO on private banks was significant. The number of bank branches sprouted, forcing them to compete for customers by offering a host of new services. Foreign participation was also encouraged, allowing foreign banks to have rupiah savings schemes, which was previously prohibited, and to participate in other nonbank financial institutions (NBFIs). To diversify the economy, the government required new branch offices of foreign banks to extend at least 50% of their loans to finance nonoil exports. At the same time, FDI companies were allowed to sell their foreign exchange directly to foreign exchange banks without having to sell it to the central bank (BI).

The government also broadened the range of market makers in the capital market and lengthened the maturity of money market instruments. One of such measures was to extend the maximum maturity of money market securities to 6 months. In order to supplement daily auctions, the government introduced weekly auctions of money market instruments, and the NBFIs were authorized to issue rupiah certificates of deposits (CDs). The allowance for foreign banks to receive rupiah savings had a major impact on the country's savings rate as it was accompanied by a drastic reduction in reserve requirements from 15% to 2% on foreign currency deposits and current liabilities (time and saving deposits) of all banks.

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[2] For example, public enterprises were allowed to hold up to 50% of deposits at nonstate financial institutions.

Although liberalizing trade and liberalizing the financial sector are fundamentally different, the results of both were encouraging. Supported by an improved macroeconomic condition (low inflation and small current account deficits (CADs)), the growth impact was undisputable particularly during the first 2 years after PAKTO. The removal of credit controls resulted in an outpouring of bank lending that led to a surge in consumption and investment, while tariff cuts and reductions in nontariffs barriers helped spur exports (Figure 2.1).

Figure 2.1: Growth of Real Credit, Investment, Consumption, and Exports, Pre-Asian Financial Crisis (Percent)
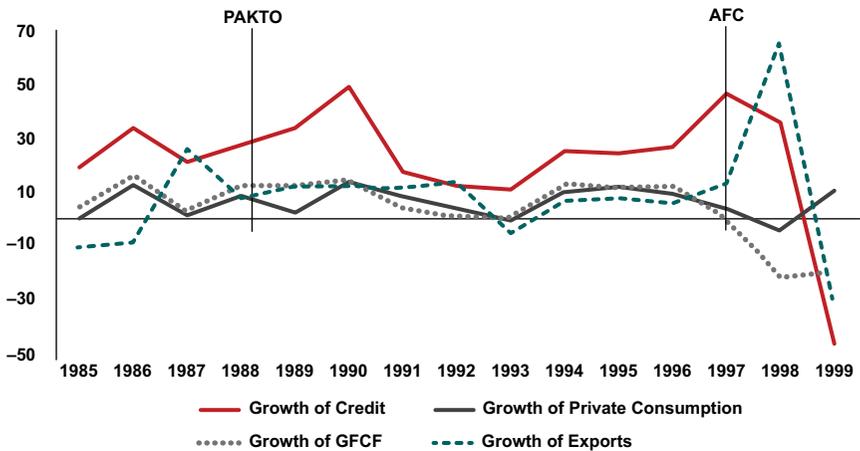
AFC = Asian financial crisis, GFCF = gross fixed capital formation, PAKTO = *Paket Oktober.*
Source: Processed from Statistics Indonesia, various publications.

However, imports also surged (Table 2.1) as a considerable portion of inputs had to be imported due to the low elasticity of substitution in most exporting sectors. It was during this period that many well-managed and competitive manufacturing firms producing a wide range of labor-intensive goods for world markets flourished. FDI increased, money market improved, and the stock market surged, although with some volatility. Higher growth and investment expanded employment opportunities for a huge number of the labor force, raising real wages and lifting millions of people out of poverty.[3]

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[3] It should be noted, however, although employment in manufacturing increased, the opposite occurred in the agricultural sector. Combined with a rapid growth of services, the employment ratio of tradable to nontradable sectors declined, while the wage ratio showed the opposite trend (Azis 2006).

Table 2.1: Selected Economic and Social Indicators, 1985–1999

Item	1985	1986	1987	1988	1989	1990	
Growth of Real GDP (Percent)	2.50	5.88	4.93	5.78	7.46	7.24	
Growth of Real Private Consumption (Percent)	0.00	12.15	1.68	7.74	2.04	13.57	
Growth of Credit to Private Sector (Percent)	19.71	33.82	20.96	28.57	34.14	49.08	
Growth of Real Government Consumption (Percent)	17.69	−1.10	−12.04	0.75	12.40	8.90	
Growth of Real Gross Fixed Capital Formation (Percent)	4.60	16.26	3.37	13.43	13.60	14.82	
Growth of Real Exports (Percent)	−10.81	−8.74	25.82	7.78	11.94	12.25	
Growth of Real Imports	−5.88	3.72	14.56	4.91	11.24	19.33	
Inflation, Consumer Prices (Annual percentage)	4.72	5.82	9.28	8.05	6.42	7.82	
Total Deficit (Percent of GDP)	1.28	3.27	0.52	2.34	0.71	−1.25	
Primary Deficit (Percent of GDP)	−0.52	0.36	−2.23	−0.79	−2.12	−3.78	
Broad Money Growth (Annual percentage)	29.06	19.48	22.79	24.32	38.17	44.56	
Current Account/GDP (Percent)	−2.25	−4.89	−2.76	−1.66	−1.17	−2.82	
Real Effective Exchange Rate (2015 = 100)	231.90	178.80	130.70	126.00	126.90	123.60	
Stock Index	66.53	69.69	82.58	305.12	399.69	417.00	
School Enrollment, Primary (Percent net)	97.83	97.22	98.05	97.77	97.88	96.23	
School Enrollment, Lower Secondary (SMP) (Percent net)	…	…	…	…	…	…	
School Enrollment, Upper Secondary (SMA) (Percent net)	…	…	…	…	…	…	
Pupil-Teacher Ratio, Preprimary (Percent)	21.84	21.57	18.56	18.89	19.26	16.84	
Prevalence of Underweight (Percent of children under 5)	…	…	35.90	…	31.00	…	
Prevalence of Underweight (Percent of adults)	23.10	22.80	22.50	22.20	21.90	21.60	
Mortality Rate, Under 5, Female (Per 1,000 live births)	94.70	91.30	87.90	84.50	80.90	77.40	
Mortality rate, Infant, Male (Per 1,000 live births)	80.90	78.40	75.80	73.20	70.70	68.00	
Life Expectancy at Birth, Total (Years)	60.29	60.70	61.11	61.51	61.92	62.32	
Poverty Gap at USD 3.20 a Day (2011 PPP) (Percent)	…	…	47.70	…	…	39.40	
Gini Index (World Bank estimate)	…	…	30.60	…	…	31.20	

... = not available, GDP = gross domestic product, PPP = purchasing power parity, SMA = *Sekolah Menengah Atas*, SMP = *Sekolah Menengah Pertama*.
Source: Author's compilation from various sources.

	1991	1992	1993	1994	1995	1996	1997	1998	1999
	6.91	6.50	6.50	7.54	8.22	7.82	4.70	−13.13	0.79
	8.14	4.21	−0.84	9.69	11.65	9.18	3.56	−4.54	9.95
	17.47	12.20	10.33	24.97	24.21	26.58	46.73	35.99	−46.72
	2.47	10.90	0.98	−3.30	4.42	4.21	−5.32	−27.72	16.92
	3.83	0.51	−0.05	12.82	11.59	12.27	0.12	−21.96	−20.18
	11.01	13.85	−5.99	6.56	7.41	5.82	12.95	65.17	−32.42
	10.68	9.04	−6.66	14.77	17.95	3.11	11.41	33.45	−36.03
	9.42	7.52	9.67	8.53	9.42	7.97	6.23	58.45	20.48
	0.88	1.23	0.52	−1.00	−1.32	−0.76	−0.58	1.38	2.84
	−1.34	−1.00	−1.35	−2.60	−2.78	−2.00	−2.30	−2.06	−1.05
	17.53	19.62	20.06	20.20	27.52	27.08	25.25	62.76	12.23
	−3.65	−2.17	−1.33	−1.58	−3.18	−3.37	−2.27	4.29	4.13
	121.10	117.40	121.80	121.10	117.20	126.00	119.50	57.50	84.50
	247.00	274.00	588.00	469.00	513.00	637.00	401.00	398.04	676.92
	95.32	94.46	93.25	93.79	93.61	92.52	92.46	…	…
	…	…	…	50.03	50.96	54.53	57.84	56.96	59.23
	…	…	…	33.22	32.60	34.80	36.61	37.23	38.49
	17.37	17.28	17.58	16.70	16.96	16.81	17.29	17.74	…
	…	29.80	…	…	…	30.30	…	25.80	22.80
	21.30	21.00	20.70	20.40	20.00	19.70	19.30	19.00	18.60
	73.80	70.30	67.00	63.70	60.70	57.80	55.00	52.40	50.10
	65.40	62.80	60.30	57.90	55.50	53.20	51.00	48.90	46.90
	62.73	63.13	63.53	63.92	64.29	64.64	64.95	65.24	65.51
	…	…	39.20	…	…	32.60	…	44.20	29.80
	…	…	32.00	…	…	34.50	…	31.10	31.10

Indeed, an encouraging trend also occurred in the nonmacroeconomic front. Prior to the AFC, Indonesia achieved substantial progress in poverty reduction and improved income distribution and other social conditions especially in health and education (Table 2.1). The combined sustained growth, stable macroeconomic conditions, and improved income inequality led the World Bank to include Indonesia in the list of "Miracle" countries in their well-known publication *The East Asian Miracle: Economic Growth and Public Policy* (World Bank 1993).

To discern the true and precise forces behind this impressive performance, however, is more complex than it seems. Some argued that it was driven by fundamental factors such as the stable macroeconomic environment, the legal framework for competition, and increased investments in people (education and health). These factors, as the argument goes, helped improve the country's productivity and resource allocation. Others, however, associated the performance with the expected dynamic gains of activist government policies through, among others, industrial policies that altered the industrial structure, even at the expense of static allocative efficiency.

While both views carry some elements of credibility, it is a gross exaggeration to claim that Indonesia's achievements were entirely caused by market-based competition and orthodoxy. The government had in fact continued to intervene extensively in both product markets and factor markets. A business network of personal and political favoritism was widespread, and state-owned enterprises continued to hold monopoly power in some sectors. In the financial sector, despite PAKTO, only a few commercial banks continued to control a large share of an oligopolistic market structure, and their shareholders were large industrial groups (conglomerates). Indeed, the structure of banking and nonbanking financial institutions corresponded very closely to the pattern of distribution of economic power.[4] Either in a quasi or direct way, these conglomerates were the largest borrowers. In general, Indonesia's industrial organization structure — marked by a high industrial concentration — shaped the nature of the country's financial structure, not vice versa.

The fact that bank loans constitute almost two-thirds of total corporate finance tells a lot about the nature of Indonesia's corporate finance during

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[4] There was no anti-monopoly law until after the AFC (Law Number 5/1999 Concerning the Prohibition of Monopolistic Practices and Unfair Business Competition).

the time. Moreover, while the official prudential requirements for domestic banks were basically in line the Basel Committee recommendations, weak enforcement simply added to the problem. Data show that prior to the AFC, 15 out of 240 banks failed to meet the minimum CAR, and 41 did not comply with the legal lending limit.

Equally inaccurate is to assert that the selectivity in industrial policy to promote "winners" by providing incentives across and among sectors (similar to what Japan, Korea, and Singapore did) was behind the success. The government did not really possess the knowledge about what would be the winning sectors, what specific interventions were needed (in addition to the existing ones), let alone how the positive spillover effects of those sectors would compensate for any inefficiencies generated by the interventions.

The country's industrial policies at the time were actually not that different from those adopted in other developing countries: not properly integrated with trade policy, rampant with poor governance, and inefficient competitors continued to be among the most active and effective players to gain the government's special treatments. As discussed in the next section, some of them, especially the big "conglomerates," had actually played an important role in setting the stage for the 1997 crisis. At any rate, evidence that industrial policy had systematically promoted sectors with high productivity was either very weak or nonexistent.

A more accurate assertion would be a mixture of some elements of both. Improvements in macro fundamentals clearly provided the necessary environment to mobilize resources to boost spending for the country's social overhead capital (e.g., health and education), and high concentration of few players controlling corporate empires allowed the economy to grow fairly strongly. These conglomerates often owned a family bank that received state revenues, foreign aid and foreign direct, and portfolio investments, and had a better access to offshore banks and diverse sources of finance such as derivatives. Absent proper regulations, most of these family-run banks allocated a large portion of loans to either single individuals, select groups, or closely related firms of their own. By 1995, it was reported that almost half of all private bank's assets had been in-house lending, consumed by loans to related firms.

It is also important to note that steady growth achievements did not happen smoothly. The process following liberalization exposed some policy

trade-offs. To support higher growth of credit, consumption, and investment, which allowed gross domestic product (GDP) growth to hover above 7% per annum, money supply (M2) had to increase. The early 1990s case was a notable example where inflation surged, the real exchange rate (RER) appreciated, and the CAD increased as a result.

When the economy overheated, the authority had to implement a tight monetary policy (TMP). As it turned out, making the policy effective was more difficult than originally thought.

Because of the export-bias trade policy, some sort of trade-off emerged. The early attempt to raise the interest rates failed to sustain inflation reduction, even though active open market operations (OMO) were supported by nonconventional policy (e.g., redeeming central bank promissory notes purchased from state-owned enterprises). The inflation rate jumped to reach close to 10% in 1990 and 1991. A persistent increase in subsidized export credit to support exports was among the reasons behind the failure to lower inflation, and the authority finally decided to eliminate the currency swap mechanism.

In the meantime, a sharp increase in nonbudgetary spending exposed an inconsistency between monetary and fiscal policy. Technocrats in charge of macroeconomic policy tried to resist nonbudgetary spending and succeeded in terminating export credit. The move, however, was not without costs: some important positions in the post-election cabinet were lost. As downward pressures on the exchange rate mounted, the authority widened the band repeatedly, the last one before the AFC occurred in 1996, in which the rupiah was allowed to fluctuate within a 5% range.

But overall credit, consumption, and investment failed to revive GDP growth, forcing the authority to lower the interest rates in 1993. As expected, some macroeconomic indicators began to deteriorate: inflation surged to reach a double-digit figure in the following year before it gradually declined to less than 7% in 1996.

The CAD persistently widened to reach USD 7.6 billion in the same year. Hence, the Indonesian experience with policy trade-off at the time — between controlling inflation and boosting nonoil exports — reflects a typical small open economy case.

Building Up Vulnerability

The mixture of increased reliance on market forces — albeit with interventions — and the dominance of few players in some sectors worked fairly effectively to produce growth. But the system gradually divulged weaknesses that soon became the ingredients of vulnerability.

First of all, pressures to maintain high growth led to explicit and implicit public guarantees to many private projects. In some cases, the projects also received subsidies. Credits were directed to favored firms with little consideration over costs, risks, and externalities. The close links between public and private institutions gave a strong impression that associated projects were somewhat "insured" against adverse shocks. To sustain such a system, capital accumulation continued even when the profitability of new investment projects was low. In an undercapitalized economy with investment opportunities, financing capital accumulation with borrowing was considered an optimal course of action. In the end, the combination of excess investment and increased debt inflows resulted in a wider CAD.

Much of the debt inflows were facilitated by financial intermediation. It was during that period that many Indonesian conglomerates established finance houses, insurance and leasing-factoring subsidiaries, and other forms of securities firms. They managed to arrange large syndicated loans as international banks were more than willing to lend large amounts of funds and paid little attention to sound risk assessment. It was a moral hazard at play, where the key influential factors were the implicit guarantee or potential bail-out (either by the government or by external parties such as the IMF).

As shown in Table 2.2, Indonesia's private external debt increased dramatically and more than tripled during the period of 1990–1997. At the time, falling interest rates in AE (especially Japan) lowered the cost of capital and prompted large inflows into Asian countries including Indonesia. A considerable portion of the flows was in the form of debt, channeled through either the banking sector or the direct transfers to corporate borrowers. Most were short term and used to finance projects with questionable social benefits but were profitable from the private point of view. The largest lenders to Indonesia were Japanese banks, followed by the European and the US banks. For borrowers, the relatively stable exchange rate lowered the risk premium on dollar-denominated debt and eliminated the need to hedge. The

intriguing question is, given the risks of such a large increase of short-term debt, why did the authority allow that to happen?

On this issue, some argued that the only information about corporate debt that the authority (in this case BI) had at the time was only the debt made with loan contracts, and the published data on other corporate debt were also incomplete. It was reported that the authority had requested large debtors (mostly conglomerates) to report the details of their external borrowing. Indeed, data on private debt were actually available from as far back as 1970, as shown in the World Bank's debt data. But the accepted concept about the key indicators of vulnerability did not include private debt at that time. It was not about data being unavailable but about misconceiving the risks of crisis.

In the end, the debt figures were released and appeared in the first letter of intent (LOI) between the government and the IMF (discussed in the next section): USD 140 billion, about 60% of GDP, of which USD 33 billion was short term (defined as having less-than 1-year maturity). The estimated private portion of the total debt was roughly USD 80 billion. Based on the yearly data from the World Bank shown in Table 2.2, Indonesia's total external debt for the entire year of 1997 was recorded at USD 136.3 billion, of which the public share of long-term debt was around USD 56 billion, and the private share was USD 44.5 billion. The bulk of the remaining short-term external debt, almost USD 33 billion out of USD 36 billion, was private debt.

Another intriguing question is: Were Indonesia's macroeconomic "fundamentals" strong at that time, and if so, why did the country fall into crisis? Most analysts are of the view that macroeconomic data on Indonesia during the years before the AFC did not show signs of vulnerability. In addition to data on the growth of consumption, investment, and GDP, the traditional measures of macroeconomic "fundamentals" should include the current account, fiscal balance, and inflation; these were considered the "usual suspects." Based on such indicators (Table 2.1), one could not classify Indonesia as fundamentally vulnerable prior to the AFC. Up to 1996, the country's inflation rate was fairly low, consistently at a single-digit level, mainly because of the government's prudent management of the budget. In some years, the fiscal balance was even in surplus. Trade diversification also worked well: exports grew steadily until 1995, before slowing down in 1996. As a result, the CAD was kept low although it slightly increased in 1996 to 4.3%. Reasons behind the export slowdown in 1996 were detected: more than 40% devaluation of Chinese yuan in 1994, stronger US dollar,

capital inflows that put upward pressure on exchange rate, and increased competition from other emerging markets (EMs). Also important to note is that the slight widening of CAD occurred because of increased imports, particularly those of the capital and intermediate goods category, reflecting strong investment and import-dependent exports.

Historical experience suggests, however, that to evaluate a country's "fundamentals" one should go beyond simply looking at the "usual suspects." A high economic growth could still weaken the "fundamentals" as the episode of Indonesia's overheating economy during the 1990s have shown. Also, the traditional view that strong economic growth makes the CAD sustainable deserves clarifications.
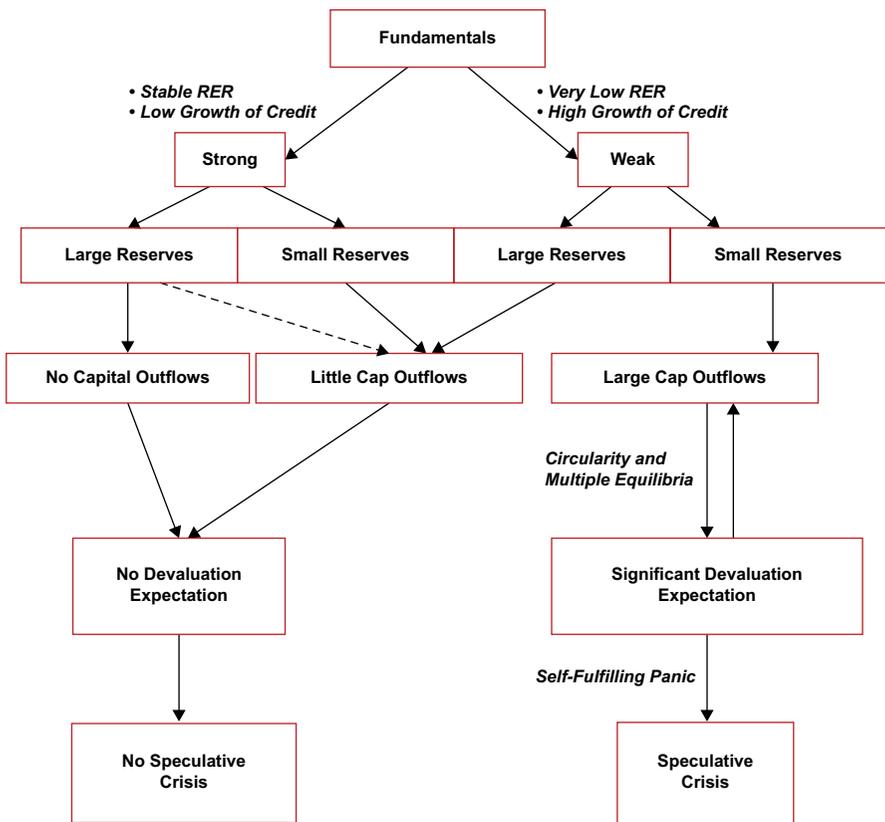
The question of sustainability should be approached by looking at the intertemporal decisions underlying the CAD. Since the current account balance is equal to the difference between savings and investment, any fall in savings or increase in investment could affect the current account balance. Sustainability is less problematic if external borrowing is used to finance productive capacity that increases exports. On the other hand, if the increased CAD is driven by falling savings, the country's "fundamentals" tend to weaken. A slightly trickier way to look at sustainability associated with the CAD is by linking the deficit with the size of debt and real interest rates. If the debt-to-GDP ratio is high, the gap of the real interest rates and the GDP growth is wide, and the current account surplus that is required to stabilize the debt-to-GDP ratio in the long run would tend to get larger. The difference between the real interest rate and output growth for Indonesia, which was 3.3% before the AFC, is relatively high but not too high by a normal standard.

Another view is that a better and more appropriate approach to evaluate a country's "fundamentals" should include information beyond traditional indicators. One such approach is to focus on selected key variables that reflect a stricter interpretation of "fundamentals": the RER, the strength of the banking system, and the size of foreign reserves. An appreciation of the first, combined with weakness of the second, would quality for weak "fundamentals."

Figure 2.2 helps put these indicators in perspective. If there was no real appreciation and/or the banking system was not weak, Indonesia's "fundamentals" would be classified as strong. Whether capital outflows have significant negative impact on the economy or not depends on the country's size of foreign reserves. A possible scenario would be having capital

outflows but only of limited amount, such that no devaluation expectation or speculative crisis would occur. On the other hand, if Indonesia suffers from an excessive and sustained real exchange rate appreciation and/or having a weak banking system, the country's "fundamentals" would be considered weak. If, however, foreign reserves were ample, the best it could expect was to have a limited amount of capital outflows. Otherwise, a large outflow would occur when the size of foreign reserves is small, in which case a multiple equilibria scenario driven by a circularity mechanism is likely to happen: that is, devaluation depends on capital outflow, but outflow itself depends on the expectation of devaluation. As soon as a self-fulfilling panic took place,

Figure 2.2: Causes of Vulnerability to Speculative Crisis and Self-Fulfilling Panic

Fundamentals

- *Stable RER*
- *Low Growth of Credit*

- *Very Low RER*
- *High Growth of Credit*

Strong

Weak

Large Reserves   Small Reserves   Large Reserves   Small Reserves

No Capital Outflows   Little Cap Outflows   Large Cap Outflows

Circularity and Multiple Equilibria

No Devaluation Expectation

Significant Devaluation Expectation

Self-Fulfilling Panic

No Speculative Crisis

Speculative Crisis

RER = real exchange rate.
Note: dotted line indicates a small possibility.
Source: Author's construction.

a speculative crisis would occur. The rationale of the above framework is similar to Sachs, Tornell, and Velasco (1996).

Based on such a framework, Indonesia's annual growth of credits since the early 1990s was roughly 18%, before it accelerated to 26.6% in 1996. No RER appreciation was detected before the AFC.[5] Hence, using a stricter interpretation, one cannot conclude that Indonesia had weak "fundamentals" before the AFC.

What about the size of foreign reserves? This can be evaluated in different ways. In addition to using a traditional measure (the size of reserves converted into the number of months of imports), foreign reserves should also be compared to the domestic currency deposit. Given the quasi-fixed exchange rate system and full convertibility of Indonesia's capital account, a depositor could withdraw rupiah from banks and convert it into dollars at the announced parity (currency substitution). Unless there were sufficient foreign reserves to honor such a demand, a financial system could suffer from illiquidity if it held excessive domestic liabilities. Hence, the ratio of M2 over foreign reserves matters (Azis 2006). Looking at the Indonesian data, the ratio before the onset of the AFC was around 6.3. While it was high compared to those in other Asian crisis countries (except Korea), it was clearly below the ratio in Mexico before the country suffered from the 1994 crisis. Hence, even when considering the possibility of currency substitution, Indonesia's "fundamentals" were not the raison d'être for its vulnerability.

Yet another approach is to consider the size of foreign reserves as a measure of the country's capacity to repay external debt. As discussed earlier, the size of short-term external private debt had increased, mostly incurred by the large corporate sector (conglomerates). Following financial liberalization, the ratio between the short-term external debt and foreign reserves had been persistently higher than unity, implying that the short-term debt was greater than readily available foreign reserves. By 1996, the ratio had reached 166% before peaking at 188% in 1997, which easily put Indonesia into a vulnerable category. Note that the ratio of total private debt-to-foreign reserves in those 2 years reached 189% and 254%, respectively (bottom rows of Table 2.2).

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[5] Using the consumer price index (CPI), J.P. Morgan found that Indonesia's real effective exchange rate (REER) had depreciated by 5.4% (Azis 2002a). By applying a monetary model and using data on a purchasing power parity (PPP) basis, Chinn (1998) showed that even if the rupiah were overvalued, the size of the overvaluation was smaller than in crisis-free countries. In particular, the overvaluation was less than 5%, way below what happened in the country during the AFC.

Table 2.2: Debt and Foreign Reserves, 1990–1999

Item	1990	1991	1992	1993	
External Debt (ED) (USD million)	69,848.51	79,528.20	87,987.35	89,157.13	
1. Short Term (ST)	11,135.30	14,314.80	18,057.10	17,987.00	
2. Long Term (LT)	58,219.29	65,047.86	69,930.25	71,170.13	
3. LT – Public (PB)	47,958.79	51,871.86	53,649.25	57,141.13	
4. LT – Private (PR)	10,260.50	13,176.00	16,281.00	14,029.00	
5. Others (OTH)	493.91	165.54	0.00	0.00	
6. Lending Banks					
a. Japan	15,124.00	16,730.00	16,767.00	16,401.00	
b. United States	1,228.00	1,552.00	1,961.00	2,414.00	
c. Europe	3,861.00	4,276.00	4,540.00	5,521.00	
d. Others	1,955.00	2,172.00	2,594.00	3,349.00	
Foreign Reserves (FR) (USD million)	8,656.79	10,357.99	11,482.02	12,474.06	
ST/FR	1.29	1.38	1.57	1.44	
PR/FR	1.19	1.27	1.42	1.12	

USD = United States dollar.
Source: World Bank and author's compilation from various sources.

Then there is a question about measuring the health of the banking system. Although the growth of the bank's credit was relatively low, the allocation of it — by extension also the size of nonperforming loans (NPLs) — matters, so does the bank's capital ratio. Using such measures, data show that Indonesia's banking system was indeed far from healthy. Note, however, that data on NPLs were problematic; the difference between official data and alternate estimates from other institutions was fairly large. For example, according to the official data, the NPLs in 1996 and 1997 were 9.5% and 8.1%, respectively, while according to the IMF and the BIS, they were 12.9% and 14.0%.[6] Meanwhile, data of the bank's capital ratio CAR show that it fell from 11.8% to 9.2% during the same period. In terms of allocation, the proportion of credit going to the property sector increased, reaching between 25% and 30%. Even these statistics did not do justice in describing the overall banking

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[6] Another problem with NPLs is that poor loan portfolios can be disguised until they are recognized when the crisis arrives. Hence, it does not really measure the health of the banking system at the time the data show.

1994	1995	1996	1997	1998	1999
107,819.78	124,399.50	129,003.51	136,339.70	151,484.84	151,806.50
19,457.00	25,966.30	32,230.44	32,865.00	20,112.70	20,029.08
88,362.78	98,433.20	96,773.07	100,504.37	122,282.15	121,201.17
63,921.83	65,310.01	60,078.73	56,035.60	67,553.85	73,936.30
24,440.95	33,123.19	36,694.34	44,468.77	54,728.30	47,264.87
0.00	0.00	0.00	2,970.34	9,089.99	10,576.25
18,351.00	20,974.00	22,035.00	22,018.00	16,403.00	12,494.00
2,454.00	2,778.00	5,279.00	4,893.00	3,537.00	3,454.00
6,201.00	8,841.00	13,106.00	13,003.00	10,586.00	9,280.00
5,059.00	7,721.00	10,296.00	12,509.00	11,164.00	13,459.00
13,321.14	14,907.56	19,396.15	17,486.80	23,605.84	27,345.10
1.46	1.74	1.66	1.88	0.85	0.73
1.83	2.22	1.89	2.54	2.32	1.73

system as it overlooked the quality and enforcement of bank regulation. As argued earlier, most conglomerates set up their own banks to finance their excessive spending and accumulate the external debt. Financing own affiliated companies was a common practice at the time, especially among big companies belonging to the same people or group who also own the banks. The fact that it was allowed to occur suggests that the country had a questionable regulatory and supervisory framework, making the banking system and corporate governance weak.

In sum, Indonesia's vulnerability prior to the AFC was associated with increased private external debt as a result of poor governance (implicit guarantees, which downplayed the price signals) and a weak banking system following DFL and CTL (intermediating funds with lax regulation), both of which were enabled by the external conditions at the time (low interest rates abroad). All these occurred in an environment where Asia was generally seen as a region with stellar records, as elucidated in the "East Asian Miracle," hence Indonesia continued to be a favorite destination to invest.

Chronicle of Events: Contagion and Unfolding the Asian Financial Crisis

Some analysts argue that reversed expectations of market players over future investment profitability played a key role in triggering the AFC (Corden 1999; Krugman 1999; McKibbin and Stoeckel 1999; Woo, Sachs, and Schwab 2000). While that may be true, the question remains: what caused the changes in expectations? For Indonesia, the contagion from Thailand that began in July 1997 is often quoted as the trigger. The floating of the Thai baht on July 2 (first time in 14 years) intensified the pressure on the rupiah. How big was the scale of the spillover?

By applying the variance decomposition based on vector autoregression (VAR) for the period of July 1997–June 1998, and focusing on the shock volatility (Azis et al. 2013; Azis, Virananda, and Estiko 2021), Table 2.3 displays the results that can help answer the question. Looking at Thailand as the transmitter (the column) and other countries as receivers (the row), the effect of exchange rate spillover from the baht on the Indonesian rupiah did not actually occur directly but indirectly through the baht's effect on the Singapore dollar and the Philippines peso. As shown in Table 2.3, the percentage shares of forecast error variance of the spillover from the Thai baht to those two currencies were 0.140% and 0.070%, and the percentage shares of the spillover effects of the two on the rupiah were 0.080% and 0.040%, respectively, higher than the direct spillover from the Thai baht on the rupiah (0.016%).

Table 2.3: Exchange Rate Spillover Index, July 1997–June 1998

Item	FX_JP	FX_CN	FX_IN	FX_KR	FX_ID	FX_TH	FX_MY	FX_PH	FX_SG
FX_JP	0.8492	0.0041	0.0126	0.0201	0.0335	0.0002	0.0712	0.0001	0.0089
FX_CN	0.0137	0.8969	0.0245	0.0306	0.0007	0.0276	0.0019	0.0003	0.0038
FX_IN	0.0035	0.0109	0.7431	0.1096	0.0491	0.0008	0.0560	0.0012	0.0258
FX_KR	0.0220	0.0717	0.0422	0.7924	0.0134	0.0068	0.0112	0.0122	0.0282
FX_ID	0.0711	0.0024	0.0268	0.1459	0.6294	0.0016	0.0034	0.0403	0.0791
FX_TH	0.0430	0.0079	0.0060	0.1926	0.0409	0.6696	0.0072	0.0172	0.0157
FX_MY	0.0559	0.0006	0.0285	0.1256	0.2418	0.1200	0.4054	0.0208	0.0014
FX_PH	0.0892	0.0062	0.0503	0.1819	0.1160	0.0718	0.0610	0.3933	0.0303
FX_SG	0.1820	0.0129	0.0002	0.0672	0.1030	0.1375	0.1656	0.0211	0.3105

FX = exchange rate, CN = China, ID = Indonesia, IN = India, JP = Japan, KR = Korea, MY = Malaysia, PH = the Philippines, SG = Singapore, TH = Thailand.
Note: Each cell denotes the percentage share of forecast error variance from spillover.
Source: Author's calculations.

The spillover effect, however, went beyond the exchange rate. To evaluate the effects on variables such as GDP growth rate and the inflation rate, the impulse response function (IRF) was calculated by using the Cholesky decomposition in the following order: exchange rate ➔ GDP growth ➔ inflation rate. To the extent a contagion process always occurred during a crisis, it is also of interest to compare the spillovers among Asian countries under different crisis episodes.[7] Using the period that covers the AFC (1991–2000), one covering the GFC (2001–2010), and 2011–2020 to cover the TT and the ongoing coronavirus disease (COVID-19) crisis, the scale of macro spillover during the period covering the AFC appears to be quite considerable. The scale is bigger than during the GFC and is, for now, only slightly smaller than the spillover during the period covering the TT and the ongoing COVID-19 crisis (Figure 2.3).[8] Hence, while the Thai baht devaluation in early July indeed sparked a contagion in Indonesia, albeit indirectly, the spillover effect went beyond just the exchange rate to include other macroeconomic variables, the detailed events of which are described in Figure 2.3.

Fearful that the currency would continue to lose value against the US dollar, many Indonesian companies with external debt began to sell the local currency in increasing quantities. In response, the monetary authority took a standard tightening policy, that is, raising the interest (*Sertifikat Bank Indonesia* (SBI)) rates from 6% to 15% for a 6-day period, and from 7% to 10% for a period of more than a week, intervening in the foreign exchange market (with some USD 500 million sold), and widening the exchange rate band (to 12%). In addition, BI also froze commercial papers (*Surat Berharga Pasar Uang* (SBPU)) and called on domestic banks to support the rupiah. Ironically, more intervention caused more intensified speculative attacks. As the repeated attempts to defend the rupiah failed, and as foreign reserves continued to deplete, on August 14, the government finally gave in and let the rupiah float.

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[7] The Spillover Index is calculated from the variance decomposition based on VAR estimation of quarterly data of inflation, GDP growth, and foreign exchange (USD:IDR). The variance decomposition allows us to split the forecast error variances of each variable into parts attributable to the various system shocks (i.e., fraction of error variance x_1 that is contributed from x_1, x_2, and so on). The i,j-th value within the spillover matrix is then constructed from the error variance of the 10-period-ahead returns. The Spillover Index is subsequently calculated by dividing the off-diagonal sum with the total sum of this matrix. The off-diagonal column sums denote the contribution *to* others and the off-diagonal row sums denote the contribution *from* others. Given the directional spillover from the columns and rows, the net spillover for a given variable can be calculated as the difference between its contribution *to* others and its contribution *from* others.

[8] Due to differences in the nature and the coverage of each crisis episode, however, the US was included in the calculation as another potential transmitter of spillovers. Note also that two crisis episodes were covered in the 2011–2020 period; the 2013 "TT" and COVID-19.

Figure 2.3: Macro Spillover Index — Exchange Rate, Gross Domestic Product, Inflation (Index)
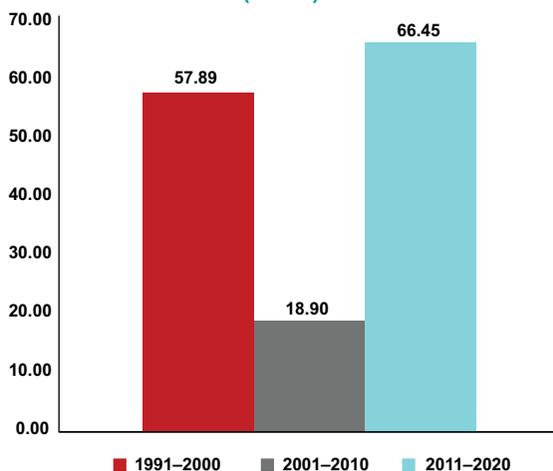
Notes: The index indicates the extent to which the variance or fluctuation of each variable is caused by the spillover of volatility in the other variables. Hence, an index of 57.89 during 1991–2000 means that 57.89% of the exchange rate variance is due to the spillovers from gross domestic product and inflation volatility, not from the exchange rate volatility itself.

Source: Author's calculations.

The praise from IMF strengthened BI confidence that it was doing the right thing, despite the fact that it actually made things worse as the rupiah depreciated further and interest-sensitive businesses started to feel the pinch of higher rates.[9] Alas, with confidence, BI raised the interest rates again, from 10.5% to 20% for 1 week, and from 22% to 30% for 2 weeks. It also restricted the forward selling transactions of foreign currency from local banks to foreigners by putting a cap at USD 5 million per customer and per position per bank (swap transactions for foreign trade and investment were exempted). The rupiah, however, continued to slide.[10]

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[9] In the IMF News Brief No. 97/18, August 14, 1997, Stanley Fischer, the IMF's acting Managing Director, remarked, "The management of the IMF welcomes the timely decisions of the Indonesian authorities. The floating of the rupiah, in combination with Indonesia's strong fundamentals, supported by prudent fiscal and monetary policies, will allow its economy to continue its impressive economic performance of the last several years."

[10] At that point, some people began to question the conventional wisdom of an open economy often cited in macroeconomic textbooks that raising interest rates would reduce, if not reverse, capital outflows and thence strengthen the country's currency. Argued by Kindleberger (1996), this conventional wisdom holds only during normal times, and the relationship is actually reversed during a financial panic. A similar argument was made by Sachs (1999). Referring to the AFC episode, Furman and Stiglitz (1998) found that in 13 crisis episodes in 9 emerging markets, the temporarily high interest rates were associated with exchange rate depreciation, not appreciation. Gould and Kamin (1999) showed that the exchange rates in the region were not affected by changes in the interest rate but were influenced by credit spreads and stock prices.

Facing a severe liquidity problem, many state-owned companies withdrew IDR 12 trillion deposits from BI, almost half of their total deposits. To alleviate the liquidity crunch, BI began to lower the SBI rate from 39% to 27% for 1 month, and from 28% to 25% for 3 months (a rollback of monetary tightening).

But few banks were actually lending, because market confidence had already been shattered. Even with ministers' repeated announcements that the government would postpone several infrastructure projects to restore confidence, market reacted skeptically, and speculative attacks continued. This led President Suharto to announce on September 22 that some 81 infrastructure projects worth more than USD 17 billion would be postponed as part of a reform package. That did not stop the rupiah from sliding.

Apparently the market was more concerned with something else. In several interviews, many brokers clearly expressed their concern toward the mounting short-term external debt. They believed that the amount was much larger than reported. Indeed, the power of information (or lack thereof) was on full display. As the BI Governor conceded, he simply had no idea about it, and there was nothing the government could do to make the debt disappear; investors rushed for the exits, and Indonesia saw its first defaults. While market intervention continued, the authority also tried to attract foreign currencies from exporters to boost foreign reserves by introducing swap facilities awarding exporters and forward buying facilities for imports if the imported goods were used to produce export products. But the repeated failure to restore confidence made the government no longer able to stomach the market reaction. On October 8, the government officially asked the IMF for assistance. Indonesia was entering the new saga.

After a technical mission was sent to Jakarta, Michel Camdessus (the then IMF Managing Director) continued to declare that Indonesia's fundamentals were sound, despite the rupiah's new low of IDR 3,845 against the dollar (a more than 30% depreciation). As many had predicted, the government and the IMF had to go through difficult negotiations on the conditions for aid. In late October, Japan and Singapore pledged USD 5 billion each, and Malaysia and Australia USD 1 billion each, probably in the hope that President Suharto would declare that he needed only expertise and not money from the IMF (Vatikiotis 1997). But by the end of the month, a LOI had been submitted along with a Memorandum on Economic and Financial Policies (MEFP), which contained conditionalities as prerequisites

for receiving IMF financial support. By that time, the cumulative depreciation of the rupiah since the crisis began in July had already exceeded 30%, and the stock market had fallen by 35%, both indicating the largest declines in the region.

In addition to a standard macroeconomic policy of tightening, the LOI essentially comprised of two components: dealing with the financial sector (insolvent banks and bank supervision) and dealing with the real sector of the economy (overcoming structural rigidities, including governance issues). On the policy of tightening, it appears that the experience of handling the Latin American crisis just 3 years before the AFC had convinced the IMF that a traditional policy mix of monetary tightening and fiscal restraints was appropriate for Indonesia and other crisis countries in Asia.[11] On removing structural rigidities, the experience with policy reform in Eastern Europe and the former Soviet Union (to shift from a socialist to a market economy) during the 1990s could have inspired the IMF to do the same with Indonesia.

One of the sticking points in the negotiation was about the IMF's demand to close insolvent banks. While the proposal made sense, the counterarguments pointed to the risk of bank run due to the fact that at the time, Indonesia did not have a formal deposit insurance scheme in place. After long and difficult negotiations, on November 5, the authorities agreed to enter into a 3-year Stand-By Arrangement with the IMF for USD 10 billion, which was augmented by USD 1.4 billion in July 1998. In addition, multilateral institutions pledged USD 8 billion and bilateral donors USD 18 billion as the second line of defense."[12] The government finally agreed to close 16 banks as demanded by the IMF.

What was feared about bank runs quickly came into reality: bank closures prompted a panic. Savings of thousands of people had to be frozen, and it cost 6,000 bank employees their livelihoods. In a matter of days, panic shifted to the government. While originally it was announced that no guarantee would be given to deposits, the government changed its position

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[11] Nobel laureate James Tobin believed that the IMF's Asian packages were based on its experiences with Mexico in 1994 (Tobin and Ranis 1998).

[12] The total dollar amount of the rescue package was unclear. The popularly known amount was USD 43 billion, consisting of SDR 7.3 billion for a 3-year stand-by loan from the IMF (through an emergency procedure) which amounted to USD 18 billion when combined with support from the World Bank and the Asian Development Bank (ADB), Indonesia's own reserves for BOP support amounting to USD 5 billion, and the remaining amount from bilateral supporters in a second line of defense, which in the end was never been used.

by guaranteeing deposits up to IDR 20 million per depositor account at 16 closed banks. However, a panic bank run deepened. As the public realized that larger deposits would not be guaranteed, a rush of withdrawals from many banks occurred. Even at the country's largest private institution, Bank Central Asia, account holders pulled out and headed for the safety of state banks. Prompted by such development and the fear of possible systemic impact of it, in January 1998, the government changed its position again by declaring that it would provide a blanket coverage of all deposits in all domestic banks (a so-called blanket guarantee). Ironically, on the same day of the announcement the government also declared that some 15 infrastructure projects that were originally postponed would now be given the go-ahead.

Entering 1998, the deteriorating market began to hit many firms and companies. According to one estimate, three out of four companies were deemed unhealthy. The crisis also spilled over across countries and assets (regional prices of commodities fell). As depicted in Figure 2.4A and 2.4B, the accelerated drop in investment began during the first quarter of the year and the largest fall occurred in the third quarter. In the last quarter, the fall continued, and the decline of GDP was made more severe by the steepest drop in consumption (the largest GDP component). As a result, for the entire year, the overall GDP fell by more than 13%, largest among the Asian crisis countries.

Poverty increased dramatically as indicated by a jump in the poverty gap. By sector, the utilities sector of electricity, gas, and water supply was the only one that avoided a negative growth for the year.

The three sectors suffering from the largest fall were trade-hotel-restaurant, construction, and manufacturing. In all three, the fall occurred persistently in every quarter of the year. Notable in Figure 2.4B is the growth pattern of the agricultural sector. In the second and fourth quarters, the sector managed to register an increase despite the severe prolonged effect of the El Niño drought in that year.[13] Part of the reason was most of the adverse impacts of the crisis hit the main island of Jawa, not the agriculture-dominated non-Jawa region where the majority of plantations were located.

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[13] Together with the economic crisis, the El Niño phenomenon contributed to the deterioration of food supply situation and a major forest fire. The World Bank estimated that up to 50 million Indonesians faced problems in maintaining an acceptable caloric intake, while the haze layer caused by the forest fire expanded over an area of more than 3,000,000 km^2 (1,200,000 sq mi), covering large parts of Sumatra and Kalimantan, and reached Malaysia, Singapore, Brunei, Thailand, and the Philippines, as well as Sri Lanka. The cause of the fire, however, was not only caused by El Niño but also man-made sources.

Together with some mining products, plantation and other agricultural exports enjoyed greater competitiveness due to the weakening rupiah. This partly explains why income inequality slightly improved as indicated by a fall of the Gini index from 34.5 in 1996 to 31.1 in 1998.

As shown in Figure 2.4A, in every quarter during 1998, exports were the only component experiencing a positive growth. On the other hand, the fall of investment led to a sharp drop in imports during the fourth quarter. As a result, for the first time in more than a decade, the current account balance turned positive (surplus), which lasted for more-than a decade before returning to deficit in 2012.

Figure 2.4A: Absolute Changes of Gross Domestic Product Components During the Asian Financial Crisis
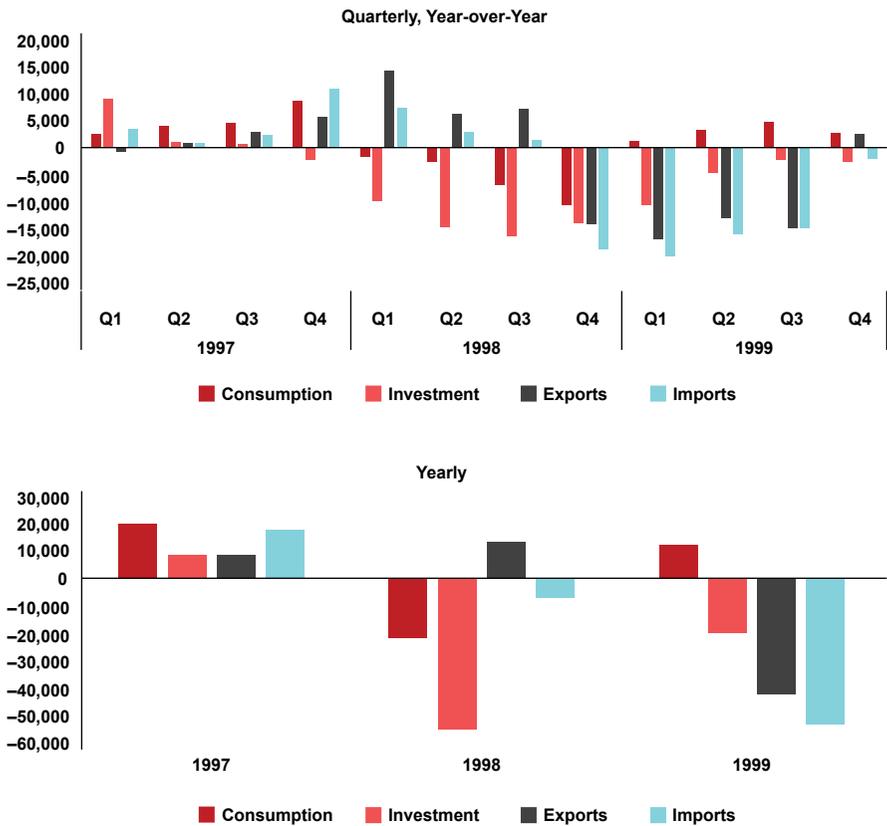
Source: Author's calculations based on Statistics Indonesia data.

Figure 2.4B: Absolute Changes of Sectoral Gross Domestic Product During the Asian Financial Crisis

Source: Author's calculations based on Statistics Indonesia data.

Over a 5-day period, the rupiah plunged to IDR 10,000 to the dollar, down more than 70% since the crisis began in July 1997. This prompted a talk among market players that Indonesia might declare a debt moratorium. The effects of the IMF program on the socio-economic and political environment began to bite. In particular, the IMF austerity program heightened the likelihood of social unrest prior to the March presidential poll. It caused panic buying of food as people feared that prices would spiral. The perception was strong that the Indonesian government was not tough enough to negotiate with the IMF over the demanded austerity program.

In the midst of widespread doubt that the government would implement the agreed IMF program, a glimmer of hope appeared when it was reported that US President Bill Clinton called the Asian leaders, and President Suharto later pledged his commitment to implement the economic reforms. But the hope was short-lived, as Stanley Fischer arrived in Jakarta on January 11 with additional reform measures. Among others, the new proposal called for significant new structural reforms, including lifting subsidies for energy, dismantling domestic trade restrictions in several industries, establishing greater independence for BI, reducing selected foreign investment barriers, and ending support for Indonesia's national automobile program and national aircraft program. Most of these proposed reforms had very little to do with recovering the tattered economy, especially those areas that were outside IMF expertise and mandate. If anything, they created confusion and consequently worsened the already gloomy public mood.[14]

Pressures for Indonesia to quickly implement the reform intensified, including from US Defense Secretary William Cohen, and Deputy Treasury Secretary Lawrence Summers, who met with Suharto. The whole saga culminated on January 14, when Michel Camdessus met with Suharto. The event was later captured in a photo laden with heavy symbolism of Western "imperialism" in which Indonesia surrendered to the IMF's austerity measures.[15] Most analysts viewed that the photo heightened — or even triggered — the

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[14]The extent of this proposed reform was characterized by the World Bank's James Wolfensohn as broad-based. A Fund staffer confessed that the structural reforms did not address the real problems: banking system weaknesses and the corporate debt burden (Blustein 2001 reviewed in Azis 2002b).

[15]In the photo, Camdessus, with his arms crossed, peered over the shoulder of a visibly cowed Suharto. He said of the meeting that "the immediate priority of my visit is to arrest and turn around the tremendous loss of confidence, and stabilize the market through monetary discipline and a dramatic acceleration of long overdue structural reforms."

reason for the anti-IMF stigma, especially in Asia, that has lasted until today.

The market, however, was not amused. The Jakarta stock exchange slumped and the rupiah slid further to IDR 8,650 to the US dollar. The main reason it failed to impress was because it did not address the key issue, which was Indonesia's USD 133 billion debt, especially the private short-term share of it. Since USD 9.6 billion of such debt would mature in 2 months' time, the amount of rupiah needed to change into dollars to pay the principal, not including interest payment, increased significantly because the debt was made when the rupiah was still IDR 2,400 per US dollar. This raised the possibility of debt moratorium or mass bankruptcies. Some analysts estimated that 228 companies faced problems servicing debt, and out of them only 22 did not have liabilities exceeding assets.

As Suharto announced that he would run for a seventh 5-year term in office, and rumors spread that Minister Habibie would be his vice president, the rupiah tumbled to a record low of IDR 11,800 to the dollar. Even with the renewed government commitment to implement the new IMF package, no signs indicated that such a package would alleviate market confidence since the resolution of the private debt was nowhere mentioned. The only news that the market received was that the government would soon announce guidelines to resolve liquidity and solvency problems in the private banking sector. The combination of the above events brought the rupiah to another record low of IDR 17,000 to the US dollar, dragging down other Asian currencies as well.

The effect of the worsening financial condition on the real sector soon became deeper. Because the country's exports were highly import-dependent, many exporters were unable to conduct their business as foreign lenders ceased accepting letters of credit (LC) from Indonesian banks. Upon the initiative of then Singapore Prime Minister Goh Chok Tong, a multilateral committee of eight countries was established to guarantee LCs issued by Indonesian banks.

A meeting between Indonesian officials led by Radius Prawiro (Suharto's debt adviser) with representatives from 20 big banks took place on January 27 in Singapore.

Indonesia announced a temporary freeze on debt servicing until a new framework was worked out between lenders and Indonesian borrowers, and the government would guarantee the security of both depositors and creditors. Borrowers would be able to roll debt forward and postpone

payments. This was a significant move as it was the first time the key issue contributing to the deepening of the crisis was finally addressed. But there was another significant announcement made: the government committed to allow more foreign ownership in Indonesian banks. Not long after that, the government declared that it would establish the Indonesian Banking Restructuring Agency (IBRA), which would be responsible for restructuring banks unable to restore themselves before bringing (selling) them back in the market (to the private sector). Intended to avoid massive bank liquidation, the practical meaning and implications of the two announcements were soon proven by the evidence: many banks in Indonesia would be owned, either majority or partly, by foreigners.[16]

It was also announced that the International Finance Corporation (IFC) and other banks would provide USD 42 billion in credit for 42 domestic companies, and the government would set up a bankruptcy law. A series of banking rules and regulations followed, for example, higher minimum paid up capital for banks (to enhance bank's capital structure to anticipate mergers) and 12% capital adequacy ratio (CAR), both of which had to be met in 1 to 3 years. The market reacted positively. The rupiah strengthened by 28% to reach IDR 7,450 to the US dollar.

The growing rumors that the country might adopt the currency board system (CBS) created mix reactions: positive because it was seen as a possibility that the rupiah would stabilize but also negative because to ensure every unit of local currency issued backed by the equivalent in foreign reserves — which was the premise of CBS — would require a huge amount of foreign reserves which BI did not have. There was a risk that the government would not be able to keep the rupiah at the rate they wanted. Also, to prevent outflows under the CBS, the interbank rates would have to go up to a very high level and that would exacerbate the already serious NPL problem in many banks.

When the ruling Golkar party named Research and Technology Minister, Habibie, as vice presidential candidate, the stock market fell. As the CBS rumors got stronger, the IMF sent a strong signal that it disagreed with the idea and threatened to pull the plug on its rescue effort. Disagreement was also expressed by Lawrence Summers, Robert Rubin, and Federal Reserve Chairman Alan Greenspan (the last two made their remarks during their

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[16]Some 54 banks (39 private, 4 state-owned, and 11 provincial-run) were placed under IBRA, and more followed before some of them were merged.

testimony to the Congress). Acting defiantly, the government announced that it would quickly establish a currency board. Even when President Clinton phoned Suharto urging him not to establish the CBS, Suharto's position was to drop the plan only if the US and other developed countries helped and came up with an alternative that would work. A similar response was delivered to the IMF.

On February 17, a new Governor of BI, Syahril Sabirin, was appointed. Following the commitment of Japan, the US, and Australia to grant export credits (in addition, Japan also pledged new loans totaling USD 2.36 billion), on February 21, the government suspended its plan to implement the CBS. It also guaranteed a payout on all legal deposits in the 16 liquidated banks (a major change from the previously announced coverage which was only up to IDR 20 million in each account). The government also requested the G-7 nations to help. A few days later, another meeting took place between the representatives of foreign bankers and Indonesian corporate borrowers, from which both sides expressed optimism about resolving the USD 73 billion private borrowing. On debt data, efforts would be made to compile a complete inventory of Indonesia's debt data.

While financial and economic uncertainty lingered, social unrest erupted in various places throughout the country, driven mostly by soaring prices of basic commodities and deeper economic hardship. Demonstrators burned cars, shops (especially those owned by ethnic Chinese), and attacked churches. Although official data showed that the year-to-year inflation reached slightly above 30%, the actual prices in many places had actually increased much higher. Interestingly, in his speech to the People's Consultative Assembly (MPR) on March 2, President Suharto raised again the possibility of using the CBS in combination with the IMF reform; he called it the "IMF-Plus."[17] The rupiah fell again to IDR 10,000 per US dollar as uncertainty grew about whether the IMF would go on with the second USD 3 billion assistance. In the meantime, riots and demonstrations continued to erupt almost everywhere, including in university campuses where students began to demand for political reform.[18] As socio-economic

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[17] Once again, Washington tried to persuade Suharto to abandon the CBS idea by sending Walter Mondale as an envoy to Indonesia. About the meeting, Mondale later said, "I was able to make our case. But what their decision will be I do not know."

[18] Frustrated, Suharto was quoted as saying that the IMF's economic reform was not in agreement with the constitution because it supported a "liberal" economic system that was in contrast with the constitution-mandated "family-oriented" system.

conditions worsened, the IMF began to show its flexibility and promised to pay more attention to the humanitarian aspects of the crisis. This was apparent during the discussions about the scheduled release of another installment of its loan.

At the end, however, the IMF suspended the USD 3 billion disbursement because of its disappointment with the pace of reform. This time, however, Indonesia's response was stronger than ever: the country was ready to suffer the consequences of the IMF pull out rather than accede to the IMF's economic-liberalization agenda! The newly appointed Cabinet, including Habibie as the Vice President, was seen as another signal of Indonesia's disappointment with the IMF program and pressure. Fearing region-wide consequences, former Japanese Prime Minister Ryutaro Hashimoto and former senior financial ministry official Eisuke Sakakibara visited Jakarta to persuade President Suharto to stand by his agreements with the IMF. By this time, the second USD 3 billion installment had not been decided yet. One of the sticking points was the IMF 's insistence not to relax the limits of fiscal expenditures that included an increase of subsidy for food and medicine.

By mid-March, former Coordinating Minister for Economy, Finance, and Industry Ginandjar Kartasasmita tried to convince the IMF team that the CBS would not be implemented due to the country's limited foreign reserves. At the same time, the IMF conceded that it would have to relax certain fiscal and other requirements in light of Indonesia's social needs. The country's deteriorating socio-economic conditions must have been behind the IMF's change of stand. The IMF finally agreed that the government could maintain state subsidies for nine essential food categories and basic medicines. At the same time, the World Bank pledged to coordinate humanitarian relief to supply imports of food and other essentials worth USD 1.5 billion.

As the second USD 3.0 billion tranche was finally agreed upon, including USD 2.5 billion from the World Bank and the Asian Development Bank, Indonesia seemed to be back to the orthodox IMF policy. BI's subsequent decision to raise interest rate (again) was quickly praised by the IMF. As to the issue of external private debt, the then new minister for state-owned enterprises, Tanri Abeng, announced that the government would make it compulsory for corporations to report their debts and would not conduct any bailout or take any credit risk.

Post-Asian Financial Crisis

As the economy slowly recovered, there remained much unfinished work, one of which was to complete the design and execute the plan of bank recapitalization based on the CAR (after existing shareholder equity has been written down commensurately with adequate provisioning for NPL and other assets). According to the plan, the government's contribution to the recapitalization program — up to 80% — would be in the form of long-term bonds including both market-linked and indexed bonds. There were three types of bonds: floating rate bonds up to IDR 95 trillion (using 3-month SBI rate for 3–10 years), fixed rate bonds up to IDR 9 trillion (12% for 5 years and 14% for 10 years), and index-linked bonds amounting to IDR 54 trillion (3% above inflation for 20 years). The first group of eligible banks was recapitalized to at least 4% CAR. Confusion abound about when those bonds could be sold in the market. Decades after the AFC, few large banks, especially the state-owned ones, continue to hold some of these bonds. Indeed, this is one of the problems from the AFC that continues to burden the government coffers even until today.

There was a serious governance issue arising from the whole restructuring policy as it failed to transform the institutional structure of the corporate economy. Even with the 1998 bankruptcy law, the 1999 anti-monopoly and law, and the rule that the NPL should be transferred before banks and corporates were restructured, the protracted negotiations over the restructuring allowed the heavily indebted conglomerates and family firms to move capital out, contributing to capital outflows. After refusing to meet payments, they reassembled and raised loans abroad. At the same time, the government had to decide how to dispose of the non-performing assets but also wanted to avoid insolvency of the fear of workers bearing the brunt of liquidation. All these problems resulted in a business environment where the high-leverage conglomerates continued to be dominant and have monopolistic market power with high asset concentration. On the other hand, many smaller and weaker firms had either collapsed or faced insurmountable difficulties to get credit. The subsequent 2003 law on corporate restructuring did not change the setting as it primarily dealt only with the state-owned enterprises.

On debt management, a Debt Management Office (DMO) was established within the Ministry of Finance in July 2006. It was tasked to manage the central government debt to ensure the achievement of fiscal sustainability. But it was the private external debt that caused great concern due to its role in

the AFC. On this front, improvements had been made with the introduction of the External Debt Information System (EDIS) in 2002 and the initiative to publish monthly indicators.[19] Yet, the breakdown of debt components remains sketchy (e.g., distinguishing between scheduled and actual debt service, estimating the accumulation/reduction of private sector payments arrears, and estimating rescheduling and debt reductions from external creditors). More importantly, given the continuing dominance and influence of large businesses cited above, which typically have numerous subsidiaries and complex financial transactions, the accuracy of information is subject to question.

On the macroeconomic front, even with the low base level due to the crisis, the GDP growth rate in the early years of post-AFC never reached the pre-AFC level, far lower than the needed rate to absorb the growing labor force (Azis 2008). Figure 2.5 shows that until the onset of the GFC, Indonesia's GDP growth in PPP terms lagged behind that of other Asian-crisis countries.

Figure 2.5: Trend of Gross Domestic Product Index Based on Purchasing Power Parity (Index, 1996 = 1.0)
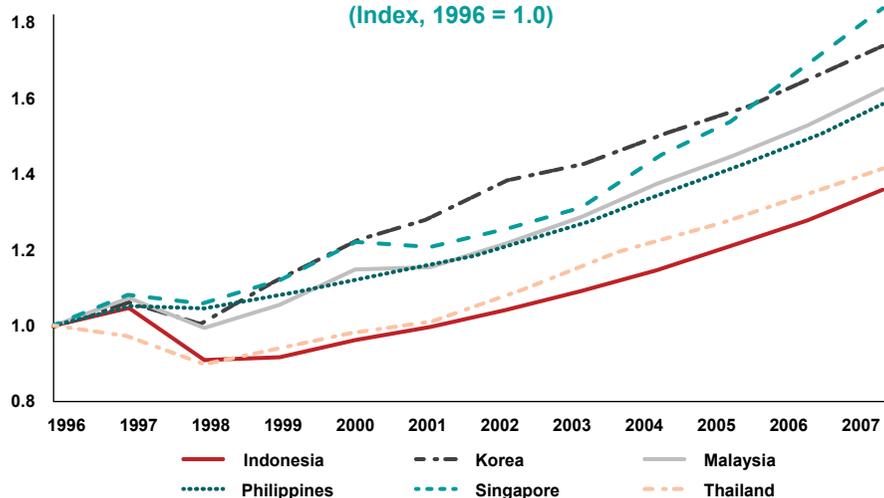
Source: Author's calculations.

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[19] Through Bank Indonesia Regulation No. 14/21/PBI/2012 (later replaced by Bank Indonesia Regulation No. 21/2/PBI/2019), any banks, NBFIs, and nonfinancial institution companies conducting activities in foreign exchange activities are required to deliver complete, accurate, and timely reports, information, and data on such activities to BI. Also, through BI Regulation No. 1/4/PBI/1999, Article 10, paragraph 1, BI has the right to request information and data object from the respondent through a survey. The final data on external debt are then compiled in accordance with the guidelines published by the IMF.

By components, the accelerated growth since early 2000s occurred only in exports due to the favorable commodity prices and weak rupiah (Table 2.4). If we compare the periods of 2002–2004 and 2004–2006, government consumption had increased, but the surge was not for countercyclical purposes, but rather for the 2004 tsunami disaster-related spending, financing of the newly implemented decentralization policy, and debt payment. On the other hand, the growth of investment and private consumption (largest component of GDP) tumbled due to the restrictive macroeconomic policy, a disconnect between monetary policy and real sector, and the lure of higher returns from investing in financial assets, each of which is discussed in Table 2.4.

A tight fiscal policy was evident since 2001. An expanded aggregate demand through fiscal policy was virtually nonexistent as the deficit never exceeded 2% of GDP despite the 3% limit stipulated in the State Finance Law and Government Regulation 23/2003. On the monetary side, following Act 23/1999 concerning the central bank (BI)'s legal independence, a single objective of price stability, and the prohibition for BI to extend credit to the government and the private sector (Alamsyah et al. 2001), the policy leaned toward tightness. Although Act 23 also mentioned inflation targeting (IT), the implementation of the policy did not occur until 2005. Insofar accountability, transparency, and managing expectation are key for an independent central bank, the authority felt that a number of necessary steps had to be taken to improve the BI communication policy first before implementing the IT. Indeed, the country's transparency of monetary policy had improved over time, and the gap between market expectations and the actual policy had narrowed down, making the monetary policy more predictable.[20]

On the exchange rate, although the floating system had formally replaced the crawling peg regime, attempts to defy "the impossible trinity" dictum continued; when signs of weakening rupiah emerged, the authority did not refrain from intervening the market. A case in point was in December 2001, when BI raised the policy rate (SBI rate) to over 17% despite no serious sign of inflation.[21] At the time, the pressure on the rupiah to depreciate escalated

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[20] Despite these improvements, the BI's press releases on the monetary policy still contained long sentences and complex wording structures. More importantly, monetary policy surprises had a significant impact only on the short-term money market rates, not on the bonds market and the exchange rates, which indicates that the country's yield curve remained incomplete (Ahokpossi et al. 2020).

[21] The inflation began to rise only when the government removed the domestic fuel subsidy in October 2005 that caused a 120% jump in the domestic fuel price.

Table 2.4: Selected Macroeconomic Indicators, 2002–2017

	2002	2003	2004	2005	2006	2007	2008	
Real GDP (Percentage change)	4.50	4.80	5.00	5.70	5.50	6.30	6.10	
Domestic Demand (Percentage change)	2.40	6.00	5.40	5.30	3.30	4.10	7.60	
Of Which:								
Private Consumption (Percentage change)	3.80	3.90	5.00	4.00	3.20	5.00	5.30	
Gross Fixed Investment (Percentage change)	4.70	0.60	14.70	10.80	2.90	9.40	11.90	
Net Exports (Percentage change)	0.80	1.80	–2.10	1.10	1.40	0.60	0.70	
Consumer Prices (12-month average)	11.80	6.80	6.10	10.50	13.10	6.20	9.80	
Central Government Balance (Percentage of GDP)	–1.60	–2.00	–1.40	–0.30	–1.00	–1.20	–0.10	
Primary Balance (Percentage of GDP)	3.40	1.60	1.30	2.10	1.40	0.80	1.70	
Base Money (12-month percentage change end period)	8.30	19.80	20.40	21.90	22.20	26.50	–2.90	
Private Sector Credit (12-month percentage change end period)	25.10	22.10	30.40	19.70	14.40	27.50	30.50	
Current Account (Percentage of GDP)	0.40	3.40	0.60	0.10	2.70	2.40	0.00	
Rupiah/USD	9,314.00	8,575.00	8,933.00	9,705.00	9,165.00	9,141.00	9,439.00	

GDP = gross domestic product, USD = United States dollar.
Source: Author's compilation from various sources.

because of the rising demand of imported oil by the state oil company Pertamina, which led to a surge in dollar requirements. The trauma of currency depreciation, weak balance sheet of banks and firms, and large size of external debt had made the authority edgy. Evidence also showed that the crawling peg rate headed toward a soft US dollar peg, casting doubt about the official claims that the rupiah was managed under a floating regime. Obviously, such a system required a substantial size of international reserves. As countries having big reserves often did better to withstand the contagion during a crisis, reserves accumulation became the preferred policy.
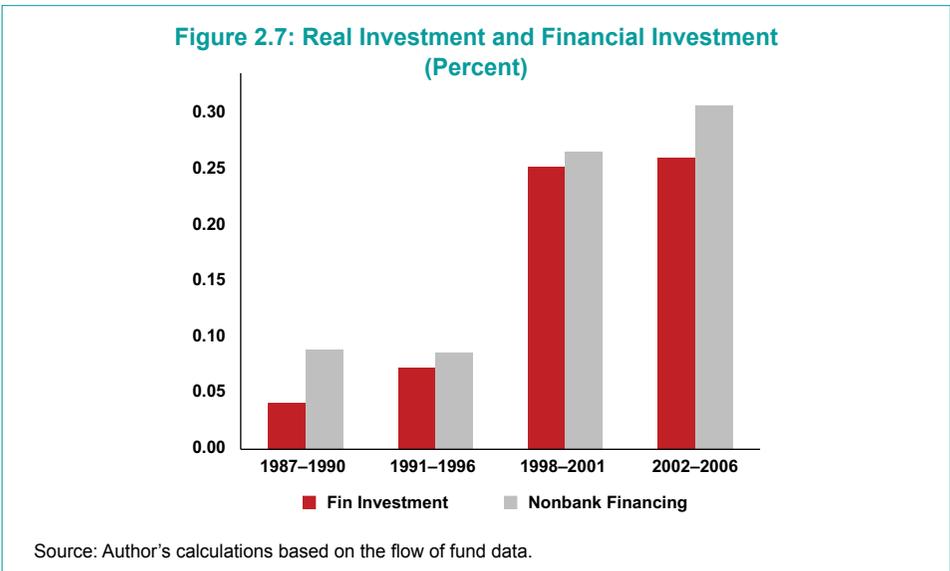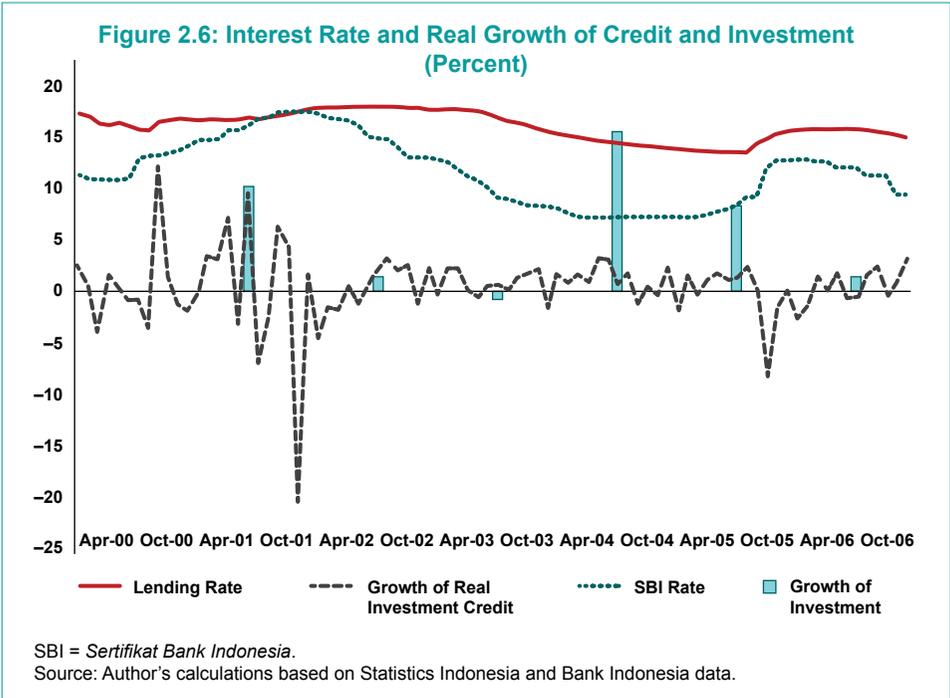
Despite the SBI rate increase, however, the lending rates did not change much and credit and investment continued growing until the early 2002. Since then, an anomaly occurred: the interest rates fell (causing the gap between

2009	2010	2011	2012	2013	2014	2015	2016	2017
4.50	6.20	6.50	6.30	5.60	5.00	4.90	5.00	5.10
5.30	5.40	6.10	7.90	4.70	5.00	4.20	4.60	5.00
4.90	4.70	4.70	5.30	5.50	5.30	4.80	5.00	5.00
3.30	8.50	8.80	9.70	5.00	4.40	5.00	4.50	6.20
1.20	0.90	1.50	−1.40	0.60	−0.20	1.00	0.10	0.30
4.80	5.10	5.40	4.00	6.40	6.40	6.40	3.50	3.80
−1.60	−0.60	−1.10	−1.90	−2.20	−2.10	−2.60	−2.50	−2.50
0.10	0.80	0.10	−0.60	−1.00	−0.90	−1.20	−1.00	−0.90
17.20	28.90	18.30	14.90	16.70	11.60	3.00	4.60	9.70
7.20	19.60	25.40	22.30	20.00	11.80	10.30	7.70	8.70
2.00	0.70	0.20	−2.80	−3.20	−3.10	−2.00	−1.80	−1.60
10,354.00	9,086.00	8,774.00	9,375.00	10,414.00	11,862.00	13,391.00	13,306.00	13,383.00

the lending rates and the SBI rate to widen) while the growth of credit and investment fluctuated and fell (Figure 2.6). The real investment recovered only briefly in the third quarter of 2004 before it fell again for the next three quarters.

That episode of disconnect between interest rates and investment provides an important lesson, that is, due to high agency costs, macroeco-nomic shocks tend to curtail the ability of banks to supply loans even years after the crisis is over. High leverage and weak balance sheet of firms and banks, asset prices that have not fully recovered, and the disappearance of large borrowers have all raised the agency costs imposed by the asymmetric information between borrowers and lenders. Combined with the bank's large holding of recap bonds and SBI, this significantly reduced the effectiveness of monetary policy (Azis 2008). The lure of returns on financial assets also

diverted liquidity away from real investment. Based on the flow of fund data, Figure 2.7 shows that among business and household sectors, the share of financial investment (as opposed to real investment) in total investment has increased dramatically since the AFC.

Figure 2.6: Interest Rate and Real Growth of Credit and Investment (Percent)

| Lending Rate | Growth of Real Investment Credit | SBI Rate | Growth of Investment |

SBI = *Sertifikat Bank Indonesia*.
Source: Author's calculations based on Statistics Indonesia and Bank Indonesia data.

Figure 2.7: Real Investment and Financial Investment (Percent)

| Fin Investment | Nonbank Financing |

Source: Author's calculations based on the flow of fund data.

There was a major and dramatic policy change that altered the country's institutional arrangement after the AFC. Given the highly centralized system in the past, many had expected that a shift toward a decentralized system in Indonesia would have to be made. To minimize the risks of a sudden change, however, such a shift would need to be gradual. But to the dismay of many observers, the new government under Habibie made a drastic decision to flip the system upside down immediately. Through Law No. 22/1999 and Law No. 25/1999, the central government quickly devolved some of its major functions and a large share of national revenues to subnational governments. On the political front, local leaders would be elected directly (no longer appointed by the central government), where the local elections would be done in stages, starting in few districts and municipalities before reaching a full swing in all regions in 2005. No doubt, the change was dramatic. Some international organizations and observers coined it a "big bang" decentralization.

Interestingly, such a drastic decision was not driven by pressures from governors, regents, mayors, and local elites; rather it was motivated by the ambition of President Habibie's supporters to win voters by making his administration appear reformist. While in a large and diverse country like Indonesia there are clearly potential governance benefits from decentralizing, the resulting welfare performance has not been encouraging. Most of the elected leaders were unable to play a robust role in promoting local development and improving the general welfare of their constituents. "Local capture" and money politics were widespread, the number of conflicts increased, and the progress in improving the various aspects of the human development index (HDI) and economic growth in many regions had been dismal (Azis and Pratama 2020). Poor preparation, low quality of human capital, a lack of transparency and accountability, and higher dependency of some districts on intergovernmental grants also led to a growing number of corruption cases.[22]

Overall, the post-AFC period saw some changes in policies and institutional arrangements, but many also remained unchanged. The macroeconomic environment was relatively fine, with 6% average growth during the last 2 years before the GFC. The inflation rate continued to decline, although

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[22]Some outside observers argued that Indonesia's decentralization was successful based on their conclusion on the fact that the early prediction of a collapse in local service functions did not materialize. They undermine the spread of weakening institutions that have undercut the effectiveness of many economic policies since then.

it temporarily spiked in 2005 (17.1%) due to a drastic cut in domestic fuel subsidy. The latter did not only cause domestic fuel prices to surge, but also interrupted the upward trend of economic growth (which fell from 5.7% in 2005 to 5.5% in 2006). The current account was persistently in surplus due to favorable commodity prices, and the fiscal deficit was kept below 2% of GDP along with the persistent surplus in the primary balance. More importantly, especially from the perspective of the AFC experience, the external debt was under control. Having the reserve accumulation be the preferred policy, the ratio of short-term external debt to foreign reserves was on a declining trend, with the exception in 2005 when the ratio spike to 97%. By the time the GFC was about to happen, the ratio was down to 63%.

From Global Financial Crisis to Taper Tantrum

With the above post-AFC backdrop, Indonesia was in a better initial position to confront the shock during the GFC. The overall impact of the shock was mild, although the effect in the financial sector was quite significant. During July 2007–December 2008, the interest rate spread rose significantly, where the J.P. Morgan Emerging Markets Bond Spread jumped from 168 basis points to more than 920 basis points, recorded as the largest in emerging Asia. Other financial indicators also showed the extent of the impact: the stock market was down by 50.0%, bank CAR fell from 21.6% in January to 16.8% in November 2008, and the bank's return on assets (ROA) dropped from 3.2% to 2.6% during the same period. As the scandal of Bank Century emerged, confidence fell.[23] The interbank transactions dropped by almost 60%, causing the deposit rate to spike, and the growth of credit declined from above 30% to only 10%.

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[23] The scandal involving Indonesia's 13th largest bank, Bank Century, was the poster child of the impact of the GFC on the banking sector. When the bank reported a negative CAR one month after the Lehman collapse, at first the government seized and placed the bank under the care of Indonesia's deposit insurance company (Federal Deposit Insurance Corporation (FDIC) equivalent). As foreign investment started to pull out, and terrified of a repeat of the AFC, the government decided to bail out the bank. But the bailout quickly turned rotten as one of the bank's cofounders was found guilty of issuing fake LC, and the bailout cost (IDR 6.76 trillion or USD 737 million) turned out to be almost 10 times more than the original estimates. A subsequent parliament vote on whether the bailout was warranted resulted in a resounding vote of no confidence, implying that the decision created some political costs. Perhaps because of that unpleasant experience, when another bank (Bank IFI) failed to increase its capital following the GFC, BI decided to close it down.

Although the overall banking system has been resilient, with less than 4% NPL, 77% loan-to-deposit ratio, and 17% CAR, the highly segmented banking system left the smaller banks to remain vulnerable to liquidity risk due to their narrow funding options and difficulties to get market access during distress. It was at that point that the Indonesia Deposit Insurance Corporation (IDIC) raised the maximum amount of deposit insured to IDR 2 billion per depositor per bank.

Although the impact of the GFC on the financial sector was greater than the impact through the trade channel (explained in the following paragraph), there was no panic in Indonesia's financial market and no widespread insolvencies. The growth of the economy remained positive, only slowing from 6.3% in 2007 to 6.1% and 4.5% in 2008 and 2009, respectively (Table 2.4). The positive growth was supported primarily by a steady growth of private consumption. The latter received a boost in the first quarter from the election-related spending and lower taxes as part of the government's fiscal stimulus. Despite the loosening of monetary policy (the interest rate was reduced from 9.5% to 6.5%) and a sharp increase in private credit, the growth of investment dropped rather sharply. But the country's capacity to withstand the external shock from the GFC was enhanced by the fact that the share of exports in GDP was less than 30% during 2008–2009, far lower than in most countries throughout Emerging Asia (EA). The share fell further since then to reach below 20%, until now.

Insofar the GFC hit industrial countries whom EMs relied on for their exports, the contagion through trade channel had significantly affected the export-oriented countries in EA but not Indonesia. In fact, Indonesia's nonoil exports increased due to the more open trade policy, greater flexibility of the exchange rate, greater global supply chain networks, and, most importantly, a strong economic recovery in China that led to increased demand for Indonesian products. At any rate, these factors and the dependence on domestic consumption had helped Indonesia withstand the effect of the GFC.

With moderate fiscal stimulus, loose monetary policy, and increased flexibility of the exchange rate combined with judicious use of reserves, the economy should have been reverting back to its medium growth path. Under normal circumstances, that should have also boosted the country's financial stability. Yet, the circumstances were far from normal. Although economic growth was relatively stable, averaging around 6%, the financial risk structure

had changed as the global liquidity surged following the ultra-easy money policy adopted by the AE.

It all began with the aggressive move by the US Federal Reserve to push down the already low interest rates to 0.25% following the Lehman collapse in the fall of 2008. A similar move was made by the Eurozone by lowering the rates to 1%. Realizing the scale of the crisis and the risk of entering a depression, the Fed kept those low rates for several years, while in the Eurozone the rate was further lowered to 0.25% in 2013 and 0.15% in 2014. To deal with the financial institutions' deteriorating balance sheets caused by the subprime crisis, in November 2008 the Fed implemented a quantitative easing-1 (QE-1) policy, in which it would purchase the long-term Treasury securities, agency securities, and mortgage-backed securities (MBS). QE-1 was subsequently proceeded by QE-2 that lasted from June 2009 until March 2010, followed by a reinvestment program in August 2010.[24]

The market response to the low interest rates and the QE policy was expected: a massive amount of capital left AE to EM including EA and Indonesia. Unlike the case before the GFC, where most inflows to EM were intermediated through banks, this time the flows were predominantly entering through the capital market including the local currency bond market. The consequence of surging inflows was a large expansion of liquidity and a lower cost of borrowing which, in turn, spurred credit creation and economic growth. The growth of private credit surged from a single-digit rate to 20.0% and 25.4% in 2010 and 2011, respectively, and the growth of investment jumped from 3.3% in 2009 to 8.5% and 8.8% during the same period. As a result, GDP growth increased from 4.6% to 6.2% and 6.5% in 2010 and 2011 respectively (Table 2.4). At the same time, the pressure on the exchange rates to appreciate also increased: the rupiah strengthened by 14.5% in 2010, and it further strengthened by 3.6% in 2011. The surge of net foreign assets (NFA) almost doubled the growth of base money, causing the inflation rate to jump.

But the implied risks went beyond the standard macroeconomic hazards of an overheating economy. With plenty of liquidity and low costs of borrowing, the overall risks to financial stability increased. The flow of funds data showed that banks, nonfinancial companies, and households shifted their preference toward financial and risky investments. The low cost

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[24]Since any increase in the Fed's balance sheet through asset purchases would ultimately be removed when the purchased assets mature, the reinvestment policy will act to keep the QE policy from undoing itself naturally.

of borrowing also led the government to accelerate the issuance of sovereign bonds and to undertake "maturity adjustment." While all were enjoying the "party" of ample liquidity, however, the risks of the winding down of AE's easy money policy did not seem to be in the radar screen.

Such risks turned into a crisis during the summer of 2013 when the former Fed Chair, Ben Bernanke, announced the Fed's intention to reduce its asset purchases. As soon as the news was out, the capital market was rattled and the exchange rate tumbled. The stock market became volatile as capital outflows surged. The shock, known as taper tantrum (TT), was felt particularly hard in the local currency bond market because the market was shallow and the foreign ownership was around 40%. Any amounts of outflows could easily rattle the market. The resulting slower growth of GDP persisted until several years later. Indeed, while the impact of the TT on the financial market was relatively brief, if we compare with the period before TT, during TT the Indonesian economy was marked by slower average economic growth (5.0% versus 6.0%) and lower credit growth (9.6% versus 18.6%). Moreover, the surplus in current account and primary balance was turned into a deficit since 2013.

In retrospect, comparing the three crisis episodes, the effect of the shocks on economic growth was most severe during the AFC and least severe during the TT (Figures 2.8A and 2.8B). So was the effect on the overall macroeconomic indicators such as the exchange rate (Figures 2.9A and 2.9B) and the inflation rate (Figures 2.10A and 2.10B). Much of the contagion effects had been transmitted through the financial channel than the trade channel. Consequently, as the financial market post-AFC grew bigger, the effects of the shocks in the financial market became more apparent.

Interestingly, the resulting spillovers on the exchange rate during the GFC were different from those during the TT in that in the latter, the size and the volatility exceeded those during the GFC (Figure 2.11A). The shock and the volatility in the rupiah during the TT also affected the currencies in other Asian countries. Similarly, the received shock and volatility in Indonesia's equity market during the TT generated spillovers to other countries' equity market. In terms of the shock magnitude, during the TT the transmitted spillover from Indonesia was greater than what the country received, but during the GFC the opposite was the case. In terms of volatility, in both the GFC and the TT the transmitted volatility was greater than the received one.

Figure 2.8A: Real Gross Domestic Product Growth Trend, Quaterly 1995–2017 (Percent year-over-year)
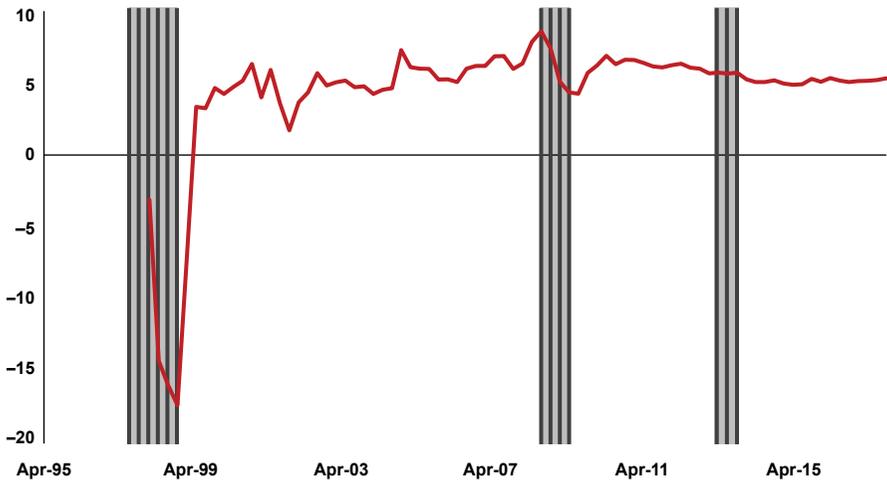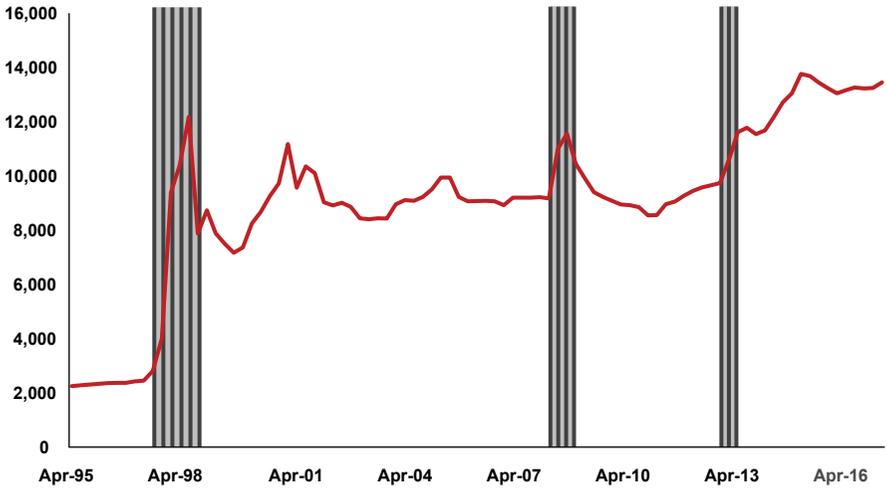

Source: Author's calculations.

Figure 2.8B: Real Gross Domestic Product Trend for 10 Quarters Since the Respective Crisis (Index, First period = 100)
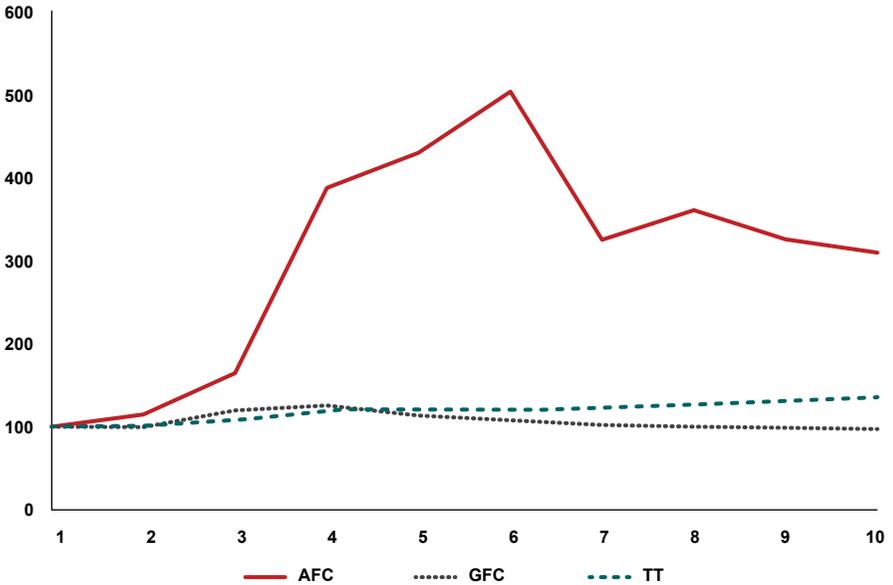

AFC = Asian financial crisis, GFC = global financial crisis, TT = taper tantrum.
Source: Author's calculations.

**Figure 2.9A: Exchange Rate, Quarterly 1995–2017 (Rupiah/USD)**

USD = United States dollar.
Source: Author's calculations.

Figure 2.9B: Exchange Rate Since the Respective Crisis (Rupiah/USD) (Index, first period = 100)
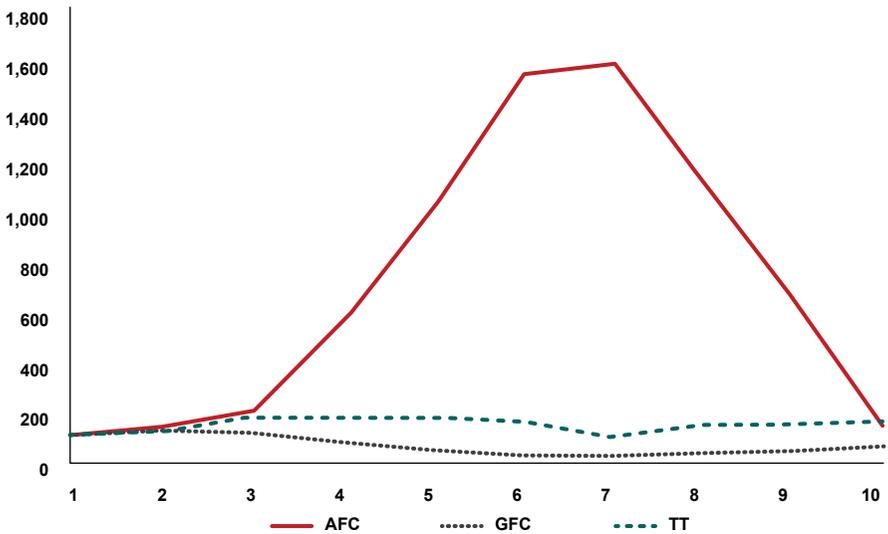
AFC = Asian financial crisis, GFC = global financial crisis, TT = taper tantrum, USD = United States dollar.
Source: Author's calculations.

**Figure 2.10A: Inflation Rate, Quarterly 1995–2017
(Percent year-over-year)**
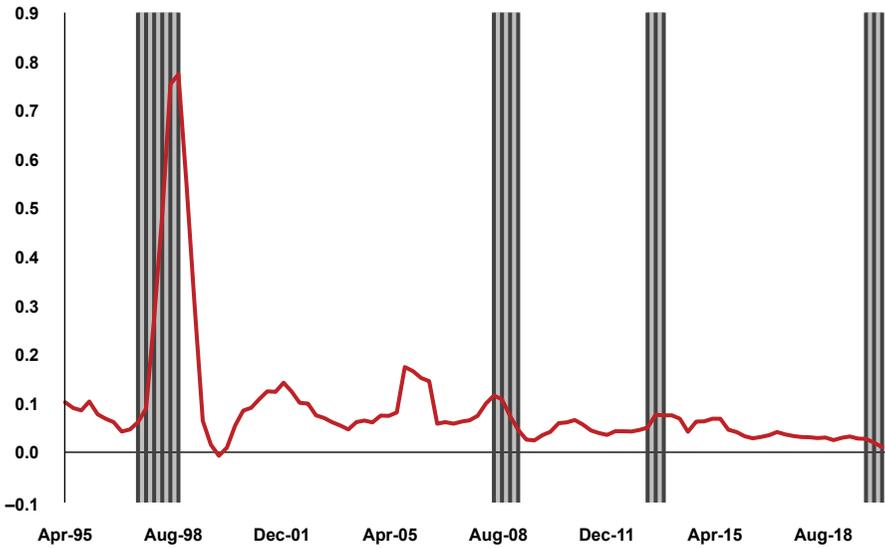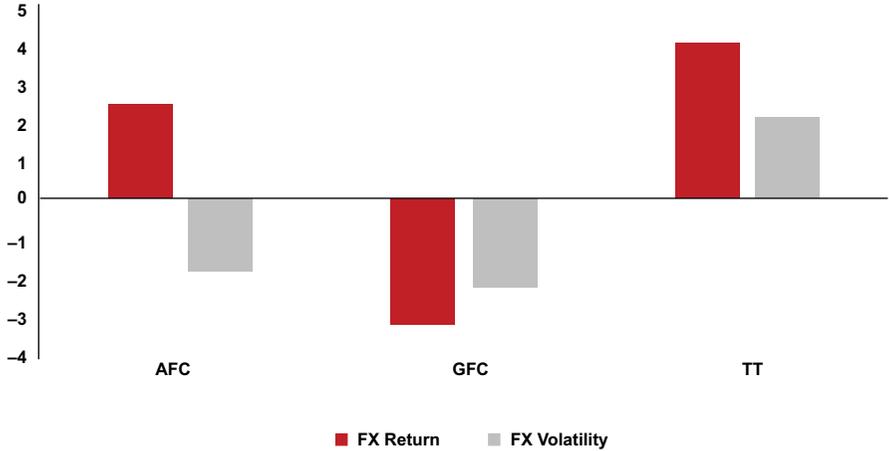

Source: Author's calculations.

**Figure 2.10B: Inflation Rate Since the Respective Crisis
(Index, First period = 100)**

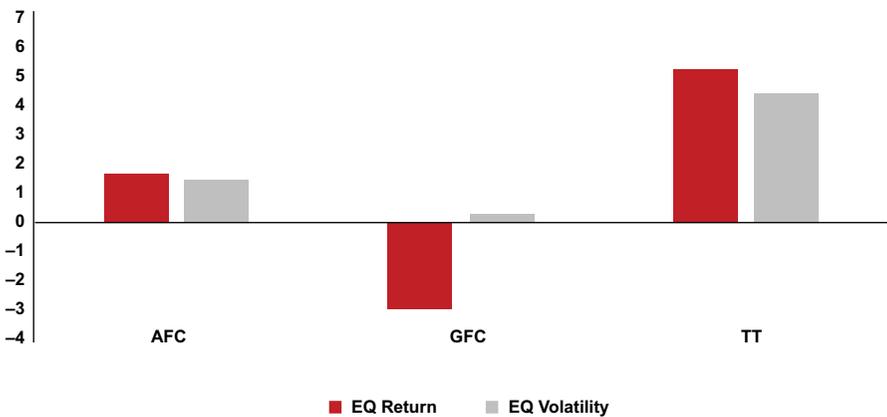AFC = Asian financial crisis, GFC = global financial crisis, TT = taper tantrum.
Source: Author's calculations.

Figure 2.11A: Net Spillover in Foreign Exchange Return and Volatility — Indonesia (Positive means net transmitter, negative means net receiver)

AFC = Asian financial crisis, FX = exchange rate, GFC = global financial crisis, TT = taper tantrum.
Source: Author's calculations.

Figure 2.11B: Net Spillover in Equity Return and Volatility — Indonesia (Positive means net transmitter, negative means net receiver)

AFC = Asian financial crisis, FX = exchange rate, GFC = global financial crisis, TT = taper tantrum.
Source: Author's calculations.

Concluding Remarks

Before summer 1997, praises toward Asian economies including Indonesia appeared in many articles, books, and reports, including those published by international financial institutions (IFIs). Policymakers overlooked the weaknesses in the country's economic and governance affairs, and failed to address them. So did the IFIs. They could not correctly predict where the economy was heading, let alone how it could fall into a crisis. It was only after the crisis broke out that they began to propagate a sharply different analysis (Azis 2018). The previously praised policies and performances were swiftly turned into something featuring the country's structural weaknesses, based upon which a sweeping institutional reform was demanded as a condition to receive IMF financial support. As the policy packages failed to restore confidence, the overall economic conditions worsened. As the ensuing socio-political conditions deteriorated, what started as a financial crisis turned into a multi-dimensional disaster. Aside from the misguided policies, the bickering between the IMF and the Indonesian officials over what to do in dealing with the precipitous fall of the economy had contributed to the depth and length of the crisis.

After the shock receded, and the economy gradually recovered, albeit slower than in other Asian crisis countries, the government made some changes in macroeconomic and institutional policies. Some of those changes produced better results; others did not. The improvements in the economic front placed Indonesia in a better position to deal with the subsequent shocks during the GFC and the TT, but the persistent weaknesses that plagued the institutional setting, and had clearly played an important role during the AFC, remained intact. The effect of, and the response to, the AFC failed to make a significant improvement in the country's governance affairs. Big companies with high leverage continued to dominate, and rampant money politics and the practice of "capture" during local elections post-decentralization posed a serious obstacle for improving the constituents' welfare in many regions throughout the country.

To the extent the nature and intensity of the shocks during the three crisis episodes were not the same, the policy response was also different. The misguided policy during the AFC brought about the most significant impact on the country's economy and socio-political conditions. The policy direction was toward monetary and fiscal tightening, combined with structural changes

unrelated to the crisis. The effect of the GFC shock was milder because of the better initial macroeconomic conditions before the crisis, as well as the boost from greater demand from other Asian countries, particularly China. As a result, the general direction of the policy was the opposite toward loosening monetary and fiscal policy while maintaining the exchange rate flexibility and securing financial stability. The overall impact of the TT shock was also generally mild. But due to the nature of the shock, the country's financial sector felt a more significant jolt than during the GFC, and the significant spillovers received were also transmitted to other countries. Accordingly, the policy direction was toward monetary tightening, keeping the fiscal balance in check, and minimizing the exchange fluctuations through encouraging the use of hedging, among others.

An important lesson from the three crises was that monitoring standard indicators ("measured risks") may not be sufficient. "Hidden risks" emerge and are exposed in a crisis. Another lesson, a country's domestic financial safety net could be far from sufficient to deal with the contagion and spillovers from external shocks. As shown in this chapter, financial spillovers, including the indirect ones, were large and significant during a crisis. It is in this respect a regional financial arrangement can and should play a complementary role in securing financial stability in the individual countries throughout the region. An effective regional cooperation is one that plays an assisting role in overcoming its members' challenges during a crisis.

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