

*Indonesia*

## Chapter 3

# The Mortgage-Backed Securities Market in Indonesia

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### The Fixed-Income Securities Market

Despite the rapid growth of the equity and fixed-income markets, the financial markets of Indonesia are still dominated by the banking sector. In 1996, net new bank lending amounted to Rp 58.3 trillion compared with Rp 14.6 trillion in new IPOs and rights issues and Rp 8.6 trillion in new bond issuance. In terms of market capitalization, however, the stock market has caught up very rapidly and in 1997 it stood at Rp 301.6 trillion compared with total bank lending of Rp 375.8 trillion. But the figures do not reflect the actual capital mobilization by Indonesian corporations since only about 20 percent to 30 percent of the total equity capitalization is listed and traded on stock exchanges while the rest is still held by the original founders. Also, the increase in bank lending by the end of 1997 resulted more from the sharp appreciation of US dollar-denominated lending rather than from new loan disbursements.

Table 1 shows the growth of the Indonesian debt markets vis-à-vis bank loans and the equity market in 1992–1997.

**Table 1** Growth of the Indonesian Financial Markets, 1992–1997 (Rp trillion) ■

	1992	1993	1994	1995	1996	1997
Bank loans	122.9	150.3	188.9	234.6	292.9	375.8
Equity (capitalization)	24.8	69.3	103.8	152.2	215.0	301.6
SBI	20.6	23.4	15.1	11.9	18.6	7.0
Bonds (capitalization)	2.0	3.9	4.9	7.4	9.7	15.8
Rupiah commercial paper	1.0	2.5	5.0–7.0	8.0–10.0	5.9	0.8
US-dollar MTNs, FRNs (US\$ billion)			—	—	6.0	16.4

Source: Pefindo

## PRIMARY MARKET ACTIVITIES

In the early stage of its development, the Indonesian fixed-income market underwent periods of very low activity and even complete suspension of trading. Between 1977 and 1982, the fixed-income market was dominated by SBI (Sertifikat Bank Indonesia, short-term notes issued by the central bank) and there was practically no organized bond trading. Following the banking liberalization in 1983, a few bonds were issued, mostly by state-owned enterprises.

The 1988 financial reform, which, among other things, privatized stock exchanges and allowed private companies to issue bonds, led to growing recognition of the fixed-income market as an alternative source of corporate debt financing. Table 2 shows that between 1992 and 1996, 10 to 18 new bonds were issued in the market each year and the number almost doubled in 1997, involving a wide range of issuers. The enactment of the new Capital Market Law in 1995, the establishment of a rating agency in 1994, and the birth of the open-end mutual fund industry in 1996 boosted the bond market before the monetary crisis in the second half of 1997.

**Table 2** Bond Issuance, 1993–1997 ■

	1993	1994	1995	1996	1997
Number of new issues	15	6	10	18	34
Number of outstanding issues	54	46	54	69	80
Capitalization (Rp trillion)	3.9	4.9	7.4	9.7	15.8
Amount of issue (Rp billion)	135.7	111.7	172.3	160.3	220.2

Source: Surabaya Stock Exchange

By June 1997, there were 80 new bond issues amounting to Rp 12 trillion compared with 69 issues for Rp 8.6 trillion for the whole of 1996. In addition, another 19 bond issues amounting to Rp 6.5 trillion were planned for the rest of 1997. Such rapid growth was driven particularly by the emergence of the mutual fund industry in mid-1996. New bond issuance, however, has been put on hold since the third quarter of 1997 because of the widespread monetary crisis.

## Types of Bonds and Issuers

Rupiah bonds issued before 1992 usually had a fixed coupon and a maturity of five years. Under the Sumarlin tight money policy of 1991, bondholders suffered losses from high interest rates while they earned much

lower, predetermined interest rates. Since then, most bonds have carried floating rates or a combined structure to protect investors from interest-rate risk.

The following types of bonds are now offered in the market: fixed-rate bonds, combination fixed-rate and floating-rate bonds, revenue index bonds, and convertible bonds, straight as well as with warrants. Most bonds are issued at par in bearer form and are denominated in Indonesian rupiah.

The first combined fixed- and floating-rate bond was issued by PT Panca Wiratama Sakti I in 1989. Such bonds typically offer a fixed interest rate for the first six to 24 months and then a floating rate based on the average time deposit rates of state-owned and other major private banks, plus a premium of 100–400 basis points (bps). Interest is usually paid quarterly and calculated on a 30/360-day basis. The bonds are priced at par in bearer form. In the absence of a market-based benchmark, the bonds are usually priced jointly by the underwriter and the issuer on the basis of a market sounding with major investors before the bond offering. In practice, market players use SBI rates and fixed rupiah swap rates as common references for short- and long-term yields. The combined fixed-/floating-rate bonds now represent a very high proportion of bond issuance in Indonesia.

Convertible bonds were first introduced in 1990 and the number of issues since then has been relatively modest. A 1992 BAPEPAM (Capital Market Supervisory Agency) regulation stipulating shareholders' approval of the terms of convertible bond issues has effectively discouraged such issues since underwriters would have had to commit to a specific conversion price three to five months before the issue date. Convertible bonds now represent less than 3 percent of all bonds issued.

The first revenue-sharing bond was issued in 1993, with a minimum rate of return of 16 percent, by PT Citra Marga Nusaphala Persada (CMNP), a private toll-road operator. Bondholders received interest payments supplemented periodically by a certain minimum portion of the company's revenue. This revenue-sharing incentive was very effective in creating demand when the market was almost paralyzed in 1993. But when CMNP grew very rapidly and the market also became very active, the revenue-sharing feature became prohibitively expensive, and the company started its buy-back program in 1996.

Rupiah bonds have become more structurally diverse in the 1990s. Two property companies, Mulialand and Modernland Realty, broke new

ground in 1995 with a step-up structure which included put and call options. The put/call option in the Mulialand bonds allowed investors to shorten the maturity, but offered an additional 50 bps sweetener for the exercise of the put option waiver after the third year. The Modernland Realty convertible bond (CB) was sold to existing shareholders, according to the number of purchase rights they held, and they could exchange the bonds for shares at a prescribed price in the future.

In another development, several companies have issued asset-backed securities (ABSs) since 1996, following the successful launching of Citibank's securitization of its credit-card receivables in 1994. Six other companies have issued onshore rupiah ABSs.

Bond issuers represent many sectors of the Indonesian economy. State-owned companies, with about 50 percent of total bonds outstanding, still play a significant role in the domestic rupiah bond market. Between 1993 and 1997, however, there was a significant shift in the sectoral composition of bond issuers. In 1993, infrastructure (46.7 percent) and financial services (43.5 percent) dominated new bond issuance, while industrial companies accounted for only 9.8 percent (see Table 3). By 1997, the industrial corporations dominated new bond issuance with a 52.3 percent share, followed by financial services (35.9 percent) and infrastructure (11.8 percent). But with the growing demand for long-term infrastructure financing, plus the chronic problem of asset-liability maturity mismatch in the banking sector, future bond issuance is expected to be more evenly distributed among infrastructure, financial services, and industrial corporations. The largest bond issuer today is PLN, the state electricity company, which has issued six bonds totaling Rp 3.5 trillion in the past five years.

Another interesting trend in the Indonesian primary bond market is the increasing average size of new bond issues, from only about Rp 76 billion in 1990 to Rp 110–120 billion in 1994 and to about Rp 220 billion in 1997. Despite the efforts of the government to encourage small- and medium-sized companies to raise capital in the bond market, large firms are still expected to dominate and the average size of new bonds will remain at about Rp 200 billion per issue.

### **Cross-Border Debt: Commercial Paper and Other Notes**

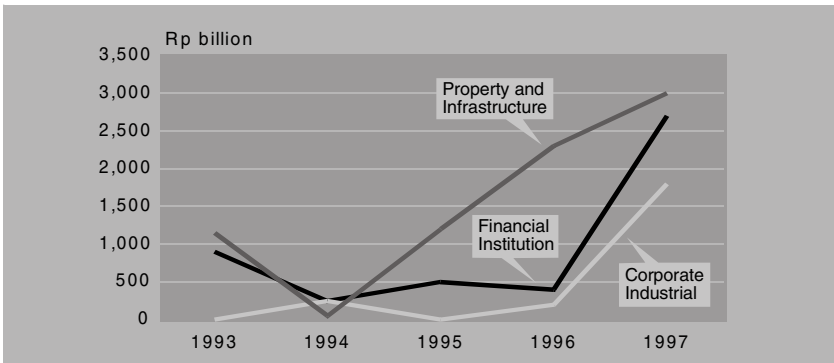
Pioneered by Citibank in 1989, the Indonesian commercial paper (CP) market grew rapidly before the central bank regulated it at the end of

**Table 3** Types of Long-Term Fixed-Income Securities and Issuers, 1993–1997  
(amounts in Rp billion) ■

Industry Sector	1993		1994		1995		1996		1997		Total	
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
Automotive and related industries	0	0	1	250	0	0	0	0	1	400	2	650
Banking	7	760	2	270	5	525	2	200	8	1,636	24	3,391
Consumer goods	0	0	0	0	0	0	0	0	1	300	1	300
Financial companies	3	125	1	25	0	0	2	200	4	1,050	10	1,400
Industrial products	0	0	0	0	0	0	0	0	4	480	4	480
Infrastructure	3	950	1	100	3	998	6	1,133	4	875	17	4,056
Property	2	200	1	25	2	200	7	1,152	10	2,147	22	3,725
Wood-based and agro industries	0	0	0	0	0	0	1	200	2	600	3	800
<b>Total</b>	<b>15</b>	<b>2,035</b>	<b>6</b>	<b>670</b>	<b>10</b>	<b>1,723</b>	<b>18</b>	<b>2,886</b>	<b>34</b>	<b>7,488</b>	<b>83</b>	<b>14,802</b>

Source: Pefindo

**Figure 1** Issuers of Long-Term Fixed-Income Securities ■



1995 (see Table 1). Several factors contributed to the growth of the CP market. CP was simpler and cheaper to issue than bonds. In the past, issuers could roll over their maturing CP, making CP de facto medium-term notes (MTNs). Overall, CP had very competitive and low transaction costs: the issuing cost for CP was estimated at about 8 bps compared with 259 bps for bonds and 200 bps for bank loans. In addition, before the central bank regulation at the end of 1995, banks could use their CP investment to circumvent the legal lending limit. Table 4 compares the structure of CP and bonds.

**Table 4** Structure of Indonesian Bonds and CP ■

	<b>Bonds</b>	<b>Commercial Paper</b>
Tenor	Mostly 5 years	Less than 270 days
Form of notes	Bearer notes	Bearer notes
Currency	Rupiah	Rupiah and US dollar
Denomination	Rp 0.5 billion and over	Rp 0.5 billion and over
Structure	Fixed and floating rates; mostly guaranteed	Zero coupon with bullet payment on maturity; clean if guaranteed
Rating requirement	Yes, as of Sept. 1994	Yes, as of Feb. 1996
Method of calculation	Yield-to-maturity	True discount
Others	Pari passu with other unsecured indebtedness	Pari passu with other unsecured indebtedness

A central bank regulation in 1996 put a stop to the growth of the CP market. According to the regulation, Indonesian banks could arrange, invest in, or act as paying agent only for CP issues that were rated investment grade. Outstanding CP shrank from a peak of about Rp 10 trillion in 1995 to Rp 5.9 trillion in 1996 and Rp 0.8 trillion in 1997. The most affected CP issuers were finance and property companies which, in 1995, were the two major issuers of CP representing about 32 percent of the total market (Table 5). As a result, many companies switched their funding sources to other instruments, particularly offshore MTNs and FRNs. Table 6 shows

**Table 5** Sectoral Distribution of CP Issuers, 1995 ■

<b>Sector</b>	<b>Amount (US\$ million)</b>	<b>%</b>
Finance	510.3	17.63
Property	417.5	14.43
Automotive and related businesses	261.7	9.04
Pulp and paper	210.0	7.26
Trading and retail	198.8	6.87
Food and beverage	165.0	5.70
Holding	115.6	3.99
Investment	115.0	3.97
Poultry	114.0	3.94
Engineering contractor	100.6	3.48
Others	685.2	23.69
Total	2,893.6	100.00

Note: Partial statistics  
Source: Pefindo

the growth of cross-border debt issuance by about 400 Indonesian corporations from 1994 to July 1997, before the monetary crisis.

**Table 6** Private Foreign Debt, 1995 to March 1997 (amounts in US\$ million) ■

Type of Industry	1995		1996		1997 <sup>a</sup>	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
Multifinance	22	818.5	86	5,144.2	9	1,044.3
Infrastructure			13	2,782.6	3	979.0
Miscellaneous	30	2,074.0	52	2,014.7	7	116.0
Banking	33	1,734.0	49	1,839.0	10	1,535.0
Property	7	185.0	34	1,696.6	8	375.2
Pulp and paper	13	1,515.9	9	1,299.0	1	400.0
Chemical	6	225.0	13	897.5	3	283.0
Telecommunications			4	741.6	2	285.0
Agro industries	8	611.0	16	625.5	6	342.7
Tobacco	1	75.0	4	475.0	0	0.0
Holding	3	155.0	5	456.0	0	0.0
Cement	2	385.0	6	379.0	2	250.0
Textile	4	149.5	8	289.0	3	200.0
Transportation	3	710.0	4	275.0	0	0.0
Trading	1	55.0	5	222.0	1	150.0
Food and beverage	1	10.0	7	217.5	1	10.0
Electronics			5	185.0	1	28.0
Glass and ceramics	4	160.0	4	158.0	2	25.0
Machinery and heavy equipment	4	265.0	3	130.0	1	9.0
Automotive and parts	4	110.0	5	120.0	1	160.0
Others	3	165.0	10	140.0	9	209.5
Mining	2	1,433.0				
Cable	2	90.3				
Tourism	2	350.0				
Total	155	11,275.9	345	20,087.2	70	6,401.7

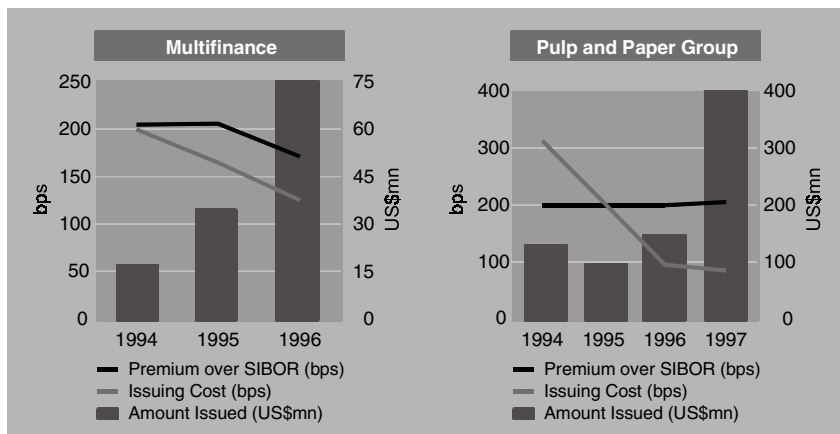
<sup>a</sup>As of March  
Source: Pefindo

High interest rates and operating inefficiencies in the domestic financial market pushed Indonesian blue-chip companies to take advantage of cheaper interest rates and issuing costs offshore. Before the monetary

crisis, such practices were also stimulated further by two particular government policies: the gradual and predictable depreciation of the rupiah against the US dollar—4–5 percent yearly in the past ten years—and the issuance of the central bank’s yankee bonds in 1996 and 1997 to provide benchmarks for Indonesian entities. As a result, cross-border debt issuance jumped from 155 issues amounting to US\$11.3 billion in 1995 to 345 issues worth US\$20.1 billion in 1996 and 60 issues worth US\$6.4 billion in the first quarter of 1997, before the crisis hit. As expected, banks, finance companies, and property and infrastructure companies were the most active issuers of cross-border debt securities in 1995–1997, followed by manufacturing companies.

The rapid issuance of offshore borrowing also brought with it learning economies: the more Indonesian entities issued offshore debt, the better they were at dealing with foreign investors and intermediaries and, hence, the lower their transaction costs. To illustrate, Figure 2 provides the offshore borrowing activities of two typical companies—a finance company and a pulp and paper company—and their attendant borrowing costs.

**Figure 2** Learning Effect of Cross-Border Borrowing ■



Interestingly, while both companies were able to reduce the issuing costs of cross-border borrowing drastically in the period 1994–1997, they differed in their ability to lower their interest rates. Apparently, global investors had known the risk associated with the pulp and paper business, which was global, and hence had already factored it into their pricing. The coupon rate for the pulp and paper company therefore remained

almost constant with a premium of about 200 bps. The finance company, on the other hand, was basically domestic, and investors, intermediaries, and the company were learning more about each other through ongoing interactions. The ongoing market scrutiny and learning curve were reflected in the pricing of the debt security, which declined slightly from a premium of 205 bps in 1994 to a premium of about 171 bps in 1996. Obviously, the better companies had better access to less costly debt in the global financial markets and benefited most from the experience of dealing with global players in the marketplace.

### **SECONDARY MARKET ACTIVITIES**

The 1995 World Bank Report pointed out the notoriously illiquid state of the Southeast Asian domestic bond markets. In the case of Indonesia, trading volume in the secondary market was estimated at well below 10 percent of total bond volume outstanding. This figure did not reflect the unorganized private transactions in the banking sector, which were known to be quite active, but no statistics on such transactions were available.

Since 1997, the Surabaya Stock Exchange has introduced a series of measures to develop the Indonesian fixed-income market. An interdealer market (similar to the Bond Dealers' Club in Bangkok) was formed to organize wholesale trades among market-makers. There were nine market-makers in early 1997, and this number was expected to increase to 15 by the end of 1997. At the retail level, individual investors should deal with market-makers through their brokers. This interdealer market will be supported by a real-time information system to enable market players to monitor market transactions and pricing continuously. In addition, the Surabaya Stock Exchange is preparing bond indices and price references for individual bonds, to help bondholders and sellers make investment decisions.

From statistics provided by the Surabaya Stock Exchange (Table 7), it is clear that the secondary market is still illiquid, with a monthly turnover of about 5 percent before the monetary crisis. During the crisis, trading activity has dropped further, reaching a monthly turnover of less than 1 percent in December 1997. Looking forward, in view of the tight liquidity in the market during the crisis and worries over the credit quality of many bond issuers, a further squeeze on secondary market activity is expected before the crisis ends.

**Table 7** Secondary Bond Market, 1997 ■

	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec <sup>a</sup>
No. of bonds	32	37	30	30	28	31	29	26	20	7
Outstanding volume (Rp million)	9,958	10,708	10,858	12,058	13,938	15,696	15,621	15,271	15,271	15,197
Market value (Rp million)	10,398	11,059	11,258	12,316	11,251	13,353	12,610	11,153	10,878	10,472
Monthly frequency	249	201	163	140	196	122	162	152	103	21
Monthly volume (Rp million)	839.2	665.0	585.6	512.8	666.1	546.0	857.7	843.8	292.0	58.0
Turnover (%)	8.43	6.21	5.39	4.25	4.78	3.48	5.49	5.53	1.91	0.38

<sup>a</sup>As of 10 December 1997

Source: Surabaya Stock Exchange

## REGULATORY STRUCTURE

The financial and securities industries are regulated by the Ministry of Finance (MOF) through BAPEPAM and the central bank (Bank Indonesia, or BI). Under the Capital Market Law of 1995, BAPEPAM sets policy guidelines and regulations and is responsible for the day-to-day supervision of the capital market. In essence, it has the power to interpret laws and legislation on matters within its jurisdiction, and to establish rules and issue independent decrees to that effect. BAPEPAM grants licenses to stock exchanges, clearing guaranty institutions, the central securities depository, investment funds, securities companies, and individual market professionals. It is also endowed with investigative powers to enforce compliance by market players.

Since the passage of the Capital Market Law of 1995, BAPEPAM has issued hundreds of implementing regulations and a set of policy guidelines called the Indonesian Capital Market Blueprint. The blueprint is meant to ensure an orderly, fair, and efficient capital market by promoting transparency and full disclosure; minimized transaction costs; stringent standards for investor protection, services, and professionalism; and the economic well-being of the securities industry.

Among the regulatory initiatives in support of the development of the capital market are the establishment of a rating agency, the removal of the 49 percent limit on equity ownership by foreign investors in most public companies (except banks), the growth of open-end mutual funds, and interdealer bond market trading in the secondary market. A BAPEPAM regulation issued in 1994 required all bonds listed on the stock

exchanges to be rated by a domestic rating agency, without specifying a minimum rating requirement for bonds to be listed. In contrast, a regulation issued by Bank Indonesia in 1995 limited the involvement of Indonesian commercial banks in the commercial-paper market to investment-grade paper. More concerned with protecting the banks, the central bank was not regulating the commercial-paper market itself.

The central bank also determines the minimum quality of bonds that banks may buy and guarantee (investment-grade bonds). Although this rule only binds banks, in practice it has been strictly followed by almost all institutional investors such as pension funds, insurance companies, and mutual funds, such that only investment-grade bonds have been acceptable and traded in the market.

Central bank rules regarding the legal lending limit and the capital adequacy requirement for banks have affected the development of the bond market as well. Companies, unable to rely solely on bank loans, have to resort to other sources of funding including the equity and bond markets.

Besides BAPEPAM and Bank Indonesia, there are two stock exchanges, the Jakarta Stock Exchange (JSX) and the Surabaya Stock Exchange (SSX), which operate as self-regulating institutions and have a broad range of regulatory powers. These include regulation of securities trading, the required disclosure of financial and other information by listed companies, and transaction settlement, as well as the power to supervise, discipline, and dismiss members of the exchange. In addition, the exchanges regulate the listing and delisting of securities on the exchange, reinforce sound business practices (including back-office and accounting practices) among members, and set standard membership requirements.

Several regulatory issues may affect the development of the debt market in Indonesia. These include: incomplete disclosure requirements; ambiguous regulatory jurisdiction over debt instruments or issuers; inability to respond to the proliferation of new financial products; lack of bankruptcy laws to protect investors' interests; and poor enforcement and compliance. Moreover, the financial system has been weakened by widespread moral hazard resulting from the dominance of the banking sector and the traditional reliance on the government as lender of last resort. In essence, the problems are caused by regulatory gaps and institutional weaknesses.

The increasing integration of the Indonesian financial market into the global market has magnified the weaknesses, particularly in the current monetary crisis. The fact that six months into the crisis the government

still had no clear picture of the extent of private-sector debt shows the severe inadequacy of the disclosure requirements. The information gap in the capital market becomes even clearer when it is considered that about two-thirds of Indonesian private cross-border borrowings, by one estimate, were issued by public companies listed on the JSX. Another regulatory weakness that is now widely acknowledged during the crisis but was generally ignored in the past by market players is the absence of a bankruptcy law and proceedings to safeguard investors' interests against the moral hazard of borrowers. The government of Indonesia has assured the IMF that it will deal with this weakness and adopt an internationally accepted bankruptcy law by mid-1998.

While the central bank takes charge of the money market and banking supervision, BAPEPAM regulates long-term debt securities, under the Capital Market Law of 1995. Rupiah bonds, which are covered by BAPEPAM, have a maturity of at least three years, but most domestic issues have a five-year tenor. Medium-term notes, with a maturity of one to three years, are therefore unregulated. Moreover, the regulatory and disclosure requirements for privately placed debt instruments, if any, are unclear. As mentioned in the foregoing discussion on corporate debt (see page 184), many Indonesian corporations have issued cross-border MTNs to take advantage of this regulatory gap, worsening the problem of inadequate disclosure. By issuing onshore MTNs, some of them dollar denominated, many companies sidestepped the rating requirement for commercial paper. MTNs that carried a put and call option after, say, three months effectively became de facto CP minus the disclosure and rating scrutiny.

The increasing openness of the Indonesian financial markets also led to the proliferation of new financial products. Asset-backed securitization, for one, gained increasing popularity among financial institutions wishing to clean up their balance sheets and to surmount their capital adequacy and lending restrictions. All of those transactions, however, were done offshore to avoid the regulatory, legal, and tax problems in Indonesia. Many infrastructure project financing deals were also worked out offshore to avoid similar problems, including the practice of requiring financial audits for the past three years, which is appropriate for corporate bonds but not for project financing.

To its credit, BAPEPAM is now working closely with the security exchanges and the central bank to address the above regulatory gaps.

New regulations, still untested, have been put in place to facilitate domestic issuance of asset-backed securities. New disclosure requirements have been issued by security exchanges under the guidance of BAPEPAM, and joint working sessions between BAPEPAM and BI have been held to deal with the gray area of MTNs and private placements.

### **PRIMARY AND SECONDARY MARKET INFRASTRUCTURE**

The infrastructure for the primary and secondary bond markets in Indonesia comprises the trading system, the clearing and settlement system, the credit-rating agency, and market-based benchmarks.

#### **Trading System**

Bond offerings in the primary market were mostly oversubscribed in recent years before the monetary crisis, reflecting the demand-supply imbalance. The demand for rupiah bonds increased mainly because of growing interest among foreign investors to arbitrage interest differentials under a relatively stable exchange regime, the growth of domestic mutual funds since 1996, and the further liberalization of the investment environment in the capital market. At the same time, the rating requirement for bond listings, among other factors, constrained the supply of bonds. According to the Pefindo Credit Rating Agency, only about half of the 180 or so companies that have been rated since 1995 earned investment-grade ratings; the rest wanted to keep their ratings confidential and therefore effectively excluded themselves from the market.

In contrast to the active bond trading in the primary market, bond trading in the secondary market is sluggish. Before the crisis, about 90 percent of Indonesian bondholders, particularly pension funds and other institutional investors, tended to hold their bonds until maturity and to enjoy interest income. Only 10 percent, particularly banks, regularly sold their bonds before maturity to restructure their portfolio according to their needs.

The SSX has become the de facto primary bourse for debt instruments. About 95 percent of bonds issued in Indonesia by the end of 1997 were listed on the SSX. The SSX has the following requirements for issuers:

- Audited financial statements for the last three years, with an unqualified auditor's opinion for the last financial year;
- Registration statement in effect;
- Legal identity with the capacity to employ market-makers; and
- Rating from a rating agency licensed by BAPEPAM.

Most transactions in the secondary market are done over the counter between bond dealers. These OTC transactions, many of them between financial institutions, are not officially recorded and, for lack of standard rules, have been largely unorganized. With the Over-the-Counter Fixed Income Service (OTC-FIS) system, implemented by the SSX since June 1997, the exchange hopes to promote organized over-the-counter trading in bonds. The OTC-FIS has not been functioning fully, yet it has helped create transparency in the secondary market since participants are required to report bond quotations and transactions.

Participation in the OTC-FIS is open to dealers and market-makers of fixed-income securities who actively trade in the secondary market, employ experts in the fixed-income market, and are known to be strongly committed to the development of the secondary fixed-income market.

### **Clearing and Settlement Systems**

Clearing and settlement of bond transactions in the OTC market tend to vary depending on the circumstances and the parties involved. In the primary market, payment is normally due before the securities are issued. In the secondary market, payment is made by bank transfer or check, and the settlement date can be negotiated between the transacting parties. Cash settlement against delivery can be arranged, but both parties must meet at a specified safe place. Orders placed on several dates can cause administrative difficulties since payment includes accrued interest. In practice, settlement is normally T+4, that is, within four business days after the transaction date. Investors generally maintain custodian accounts to avoid having to receive physical delivery of the bulky bearer bonds. If sellers and buyers use the same custodian bank, the process becomes simpler and faster.

A joint clearing and custodial service, the Indonesian Depository and Clearing Agency, or KDEI, was set up in 1993 under the auspices of seven state banks and the two stock exchanges. KDEI started its netted settlement services for shares in 1994 and planned to offer clearing and netted settlement for bonds a year or two later. The agency also looked forward to launching scripless trading, initially for shares but eventually also for bonds, in 1997. But the enactment of the Capital Market Law of 1995 led to the dismantling of the agency in 1997. Two new agencies, a central securities depository and a clearing guarantee agency, each with a different ownership and infrastructure, were set up to replace it.

The central securities depository agency, PT KSEI (Kustodian Sentral Efek Indonesia), is a nonprofit self-regulating organization (SRO) owned jointly by the stock exchanges and custodian banks, both domestic and foreign. Its launch was planned for 1998. The use of a central depository is aimed at minimizing the risk of theft or loss, forgery, and other human errors. In book-entry settlement of securities transactions (as opposed to physical delivery) custodians record the transfer of ownership of securities by debiting and crediting the respective securities accounts with the number of securities transferred. Individual investors must hold accounts with a brokerage house which, in turn, holds an account with the central depository agency. Securities in central custody may be loaned or pledged, with the written instruction of account holders; the central depository is therefore also expected to support margin trading.

The clearing guarantee agency, PT KPEI (Kliring Penjaminan Efek Indonesia), was established in 1997 and was expected to take over KDEI's clearing operation by 1998. PT KPEI is also a nonprofit SRO, whose majority shares are owned by the securities exchanges. Its establishment is intended to ensure the fair, orderly, and efficient settlement of securities transactions. The agency guarantees settlement by acting as counterparty to exchange members in their securities transactions. As such, the agency is expected to continuously monitor open orders and transactions, the rights and liabilities of each exchange member associated with a transaction, and the collateral kept in central custody. For this monitoring activity, the agency's computer systems must be linked directly to the systems at the exchanges and the central custody. The planned introduction of scripless trading, to cut the settlement time from T+4 to T+0 (same-day settlement of securities transactions), has been moved back to 1998. But the start-up of PT KPEI might be delayed because its computer acquisition costs have dramatically increased as a result of the sharp devaluation of the rupiah against the US dollar.

Apart from the central custody of securities, about a dozen large banks, including foreign banks such as Citibank, Standard Chartered, and HSBC, now offer custody services. Almost all large institutional investors have their own custodian banks; foreign investors use the custody services of foreign banks. Smaller banks and brokerage houses also offer ad hoc custody services for individual clients. According to the 1995 World Bank Report, custodian banks in Indonesia derive about 90 percent of their business from shares and only 10 percent from bonds.

## Benchmark Rates

A major hindrance to the development of the Indonesian bond market has been the absence of market-based interest-rate benchmarks for bond pricing. A market for short-term central bank certificates has existed since 1983, when interest rates were deregulated, but this does not provide a useful benchmark beyond one year.

To make up for this deficiency, market players in 1989 began using as reference the average of the three- to six-month time deposit rates (ATD) of state-owned banks and other major private banks. A premium of 100–400 bps was added to this base rate. Bondholders were effectively protected against interest-rate exposure as the ATD fluctuated in response to macroeconomic conditions in the country. Although ATD rates were only an indirect proxy for short-term money-market equilibrium and did not provide a reference beyond six months, the practice was widely accepted in the local bond market.

In 1995, the state-owned security company Danareksa Securities devised another approach to providing the much-needed benchmarks. To overcome weaknesses inherent in the ATD system, Danareksa derived a yield curve with maturities of up to 30 years from swap rates quoted by triple-A investment banks on the rupiah versus the US dollar (Indonesian swap offer rate, or IRSOR). Danareksa underwrote the fifth bond issue of Perusahaan Listrik Negara in 1995 using this approach and received a positive response from foreign investors for both the fixed and floating tranches of the issue.

Despite the market acceptance of such efforts to create a reference for bond pricing, however, they cannot substitute for the use of government bonds as benchmarks. The possibility of issuing government rupiah bonds to boost demand and liquidity in the secondary market, as was done in Hong Kong and is being planned in Malaysia, has been discussed within the MOF and the central bank. But the MOF is apparently lukewarm to the idea not because it is concerned with balancing the budget but because of the political costs of fiscal deficits. Issuing the rupiah bonds, so the argument goes, would put the MOF under constant pressure to issue more bonds to finance sectoral pet projects. The central bank, on the other hand, is more receptive to the idea. As Table 1 shows, despite a daily turnover of 0.3–0.8 trillion, outstanding SBI at any given time amount to Rp 12–23 trillion. Converting some of the outstanding SBI into long-term bonds, ideally with a maturity of one, two, three, five, seven, and ten

to twenty years, would provide the much-needed market benchmarks. Another possibility is the planned issuance of rupiah bonds with multiple maturities by multilateral agencies such as the Asian Development Bank or the International Finance Corporation. Such plans, however, still have to be carried out.

### **CREDIT-RATING AGENCY**

The first credit-rating agency, PT Pefindo, was established at the initiative of the MOF in 1994. Another credit-rating agency, Kasnik Duff and Phelps, was licensed by the government in late 1997 but is not yet in operation.

Pefindo recorded impressive growth in its first three years of operation (Table 8). By the end of 1997, Pefindo had rated about 180 companies and 249 debt securities amounting to Rp 28.2 trillion, up significantly from the previous year's cumulative total of 132 debt securities with a value of Rp 11.1 trillion. Bonds (70 issues worth Rp 19.1 trillion) and commercial-paper programs (91 issues worth Rp 9.1 trillion) made up most of the ratings. The mandatory rating regulations issued by BAPEPAM in 1994 for bonds and by Bank Indonesia in 1995 for commercial-paper programs accounted for much of this growth in rating activity. The sharp increase in bond ratings in 1997, mostly before the crisis, was due to the boom in the mutual fund industry in 1996 and 1997. Interestingly, 56 general obligation or company ratings (22.5 percent of the number of rated entities) were voluntarily sought and preliminary, in anticipation of the actual issuance of securities by the rated company. Such voluntary ratings showed that Indonesian corporations have increasingly come to accept the usefulness of ratings.

The sectoral distribution of Pefindo's ratings completed in 1997 (Table 9) indicates that the property, financial institution, wood-based and agro industry, and infrastructure sectors were the most active in requesting ratings.

To strengthen its role in the Indonesian financial market, Pefindo refined its national rating scale in June 1997 in collaboration with its international partner, Standard and Poor's (S&P). It thus hoped to provide a more meaningful way of distinguishing between high- and medium- grade Indonesian issuers in terms of credit risk while, at the same time, maintaining rank order consistency of ratings with S&P, using a clearly defined national rating scale. Table 10 shows Pefindo's rating distribution before and after the rescaling, and compares it with the rating distributions of other ASEAN rating agencies. It is significant to observe that

**Table 8** Pefindo Rating Statistics, 1994–1997 (amounts in Rp billion) ■

Rating Type	1994–1995		1996		1997		Total	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Rating Requested	49	4,916.2	110	8,513.8	98	15,660.0	257	29,090.0
Bond	13	2,384.7	19	4,775.0	40	12,225.0	72	19,384.0
Commercial paper	22	2,531.5	50	4,180.8	23	3,435.0	95	10,147.3
General obligation (GO)	13	0.0	31	0.0	15	0.0	59	0.0
Review (bond and GO)	1	0.0	10	0.0	20	0.0	31	0.0
Withdrawn	2	150.0	3	550.0	21	5,775.0	26	6,475.0
Rating Completed	17	2,237.5	115	8,861.0	117	17,135.0	249	28,233.5
Bond	11	2,084.7	16	3,800.0	43	13,200.0	70	19,084.7
Commercial paper	1	152.8	57	5,061.5	33	3,935.0	91	9,149.3
General obligation (GO)	5	0.0	33	0.0	18	0.0	56	0.0
Review (bond and GO)	0	0.0	9	0.0	23	0.0	32	0.0

Source: Pefindo

**Table 9** Sectoral Distribution of Pefindo's Rating Results, as of December 1997 (amounts in Rp billion) ■

Industry Sector	Issues		
	No.	Amount	% of Total
Property	62	8,642.5	28.4
Wood-based and agro industries	41	5,979.0	19.6
Financial companies	27	3,340.0	11.0
Banking	37	2,919.7	9.6
Infrastructure	14	2,830.0	9.3
Industrial products	17	2,265.0	7.4
Textile and related industries	18	1,820.0	6.0
Consumer goods	9	1,140.0	3.7
Automotive and related industries	10	902.5	3.0
Transportation services	5	500.0	1.6
Retail and services	5	130.0	0.4
Pharmaceutical	1	0.0	0.0
Securities and insurance	3	0.0	0.0
Total	249	30,468.7	100.0

Source: Pefindo

while each national rating scale helped classify debt securities into a wide spectrum of credit risk levels, Pefindo was still more conservative than its ASEAN peers in assigning AAA, AA, and minimum investment-grade ratings.

**Table 10** Rating Distribution of ASEAN Rating Agencies (%) ■

Rating Category	PEFINDO (Indonesia)		CIBI <sup>a</sup> (Philippines)	TRIS <sup>a</sup> (Thailand)	RAM <sup>a</sup> (Malaysia)
	Original Scale	New Scale, Pre-Crisis			
AAA	0	1	13	4	9
AA	0	7	29	21	19
A	15	25	52	47	23
BBB	75	48	3	27	40
BB	10	20	3	1	9
B	0	0	0	0	0
Total	100	100	100	100	100

<sup>a</sup>Source: *Financial Times*, May 1997

Since the start of the financial crisis, Pefindo has reviewed its entire rating portfolio twice, in October 1997 and again in February 1998. In the mid-February review, it downgraded about 85 percent of its outstanding credit ratings. The extent and severity of the downgrading varied significantly between sectors and were dependent on the initial credit standing of the issuer. Table 11 provides a comparison of the distribution of Pefindo's ratings before and during the crisis.

**Table 11** Distribution of Pefindo's Public Ratings, 1997–1998 (%) ■

Rating Category	Before Crisis (June 1997)	During Crisis	
		October 1997	March 1998
AAA	1	0	0
AA	7	7	1
A	25	25	19
BBB	48	59	32
BB	20	9	26
B	0	0	10
CCC	0	0	6
D	0	0	6
Total	100	100	100

Source: Pefindo

The industry sectors in which ratings have been most affected by the crisis are the property and financial sectors. The pronounced impact on the property sector reflects the vulnerability of property demand to the current high-interest-rate environment, as well as the propensity of many property companies to rely on unhedged foreign-currency borrowing to finance their aggressive development projects. The widespread and significant rating changes in the financial sector, on the other hand, reflect the progressively deteriorating asset quality, resulting in particular from clients' high foreign exposure due to economic pressures which strained profitability and capitalization levels. Market confidence in the system is expected to be boosted by the central bank's policy announcement in January 1997 that it would guarantee all depositors and creditors of locally incorporated banks. But the recently publicized plan to create a currency board system may require a reassessment of the government's ability to support banks.

The crisis, so Pefindo noted in its reviews, will continue to subject all rated banks and property and industrial entities to extreme operating difficulties. Conditions in the economic and financial system are expected to remain highly uncertain for some time, particularly the ability of the banking system to meet the normal working capital requirements of the corporate sector.

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## **Major Obstacles to the Development of the Indonesian Bond Market**

As discussed in the previous section, the development of the Indonesian fixed-income markets is constrained by several major factors. These factors can be grouped into three main types: the demand for corporate debt, the supply factor, and market institutions and their efficiency.

### **THE DEMAND FACTOR: SMALL INVESTOR BASE AND THE MORAL HAZARD OF A BUYER MARKET**

In the early stages of development of the bond market, state-owned enterprises issued bonds at below-market interest rates which were unattractive to most investors. Understandably, the major investors in the bonds were also government-related entities such as Taspen (pension and insurance provider for civil servants), Astek (provider of mandatory social

insurance for private-sector employees), and Danareksa (the sole state-owned investment bank at the time). The volume of bond issues was small and most buyers held the bonds to maturity.

At present, the aggregate demand for domestic debt instruments is limited to institutional investors (pension funds, insurance companies), the banking sector, and the newly emerging mutual funds. Before the crisis, the rupiah bondholdings of foreign investors made up 10–20 percent of new bond issues. But these investors, drawn to Indonesia by its macroeconomic and political stability, high interest-rate differentials, and predictable exchange rates at the time, confined their participation to the most liquid bonds with good credit standing such as bonds issued by PLN (the state-owned electricity company), CMNP, and BTN (a state bank).

Pension funds at the end of 1996 had a total capitalization of about Rp 12.1 trillion, about 54 percent of which was invested in time deposits, 10.2 percent in stocks, 10.9 percent in bonds and promissory notes, another 10.9 percent in direct investment, and about 13.2 percent in land and buildings (Table 12). Insurance companies, with a total capitalization of Rp 20 trillion at the end of 1996, still invested heavily in time deposits (about 49.2 percent of their total investment) and in private placements (8.9 percent) and stocks (5.5 percent). About 20.8 percent of their total investment was in fixed-income securities—13.8 percent in SBI and the rest in bonds and promissory notes (Table 13).

**Table 12** *Investment Portfolio of Pension Funds, 1995–1996 (amounts in Rp billion)* ■

	1995		1996	
	Amount	%	Amount	%
Time deposits and CDs	5,323.1	50.4	6,587.1	54.2
Land and buildings	1,721.8	16.3	1,605.7	13.2
Direct investment	1,160.8	11.0	1,331.6	10.9
Stocks (listed)	1,005.8	9.5	1,244.5	10.2
Bonds	970.5	9.2	1,229.7	10.1
Promissory notes	39.2	0.4	91.6	0.8
Mutual funds	75.0	0.7	60.0	0.5
Others	269.1	2.5	11.2	0.1
Total	10,565.2	100.0	12,161.5	100.0

Source: Direktorat Dana Pensiun

**Table 13** *Investment Portfolio of Insurance Companies, 1993–1996 (amounts in Rp billion)* ■

	1993		1995		1996	
	Amount	%	Amount	%	Amount	%
Time deposits and CDs	4,465.8	41.31	7,140.7	39.81	9,864.4	49.24
SBI	2,168.6	20.06	2,701.3	15.06	2,761.1	13.78
Private placement	696.4	6.44	815.6	4.55	1,792.5	8.95
Stocks	457.6	4.23	773.9	4.31	1,092.7	5.45
Bonds	531.6	4.92	776.1	4.33	976.1	4.87
Promissory notes	15.4	0.14	202.6	1.13	425.9	2.13
Policy loans	183.2	1.69	259.9	1.45	312.5	1.56
Land and buildings	149.4	1.38	2,786.7	15.54	286.6	1.43
Mortgage loans	51.6	0.48	199.7	1.11	266.3	1.33
Others	97.2	0.90	284.8	1.59	260.6	1.30
Total	10,809.8	100.00	17,936.3	100.00	20,034.7	100.00

Source: Ditjen Lembaga Keuangan

The mutual fund industry emerged in the second half of 1996, partly in response to the introduction of open-end mutual funds under the new capital market law. The industry grew very rapidly, from 25 funds with a capitalization of about Rp 2.8 trillion at the end of 1996 to 60 funds with a capitalization of Rp 7.2 trillion in June 1997, before shrinking to Rp 4.9 trillion at the end of 1997. Table 14 shows the investment portfolio of mutual funds in Indonesia. In 1997, about 15 percent of their investments were in stocks, 25 percent in money-market instruments (notably CDs and SBI), 60 percent in bonds and promissory notes, and the rest in cash.

**Table 14** *Investment Portfolio of Mutual Funds, 1997 (amounts in Rp billion)* ■

	Amount	% of Total
Money market	1,108.9	25.03
Equity	668.8	15.10
Other debt instruments	2,652.7	59.87
Total	4,916.6	100.00

Source: BAPEPAM

The full tax-exempt status of mutual fund investments has attracted even financial institutions such as banks, which have been allowed to invest in the funds. Banks, in fact, accounted for about 63.09 percent of the total capitalization of the mutual fund industry in 1997 (Table 15). As a result, there was concern that the banks might use their investments in mutual funds to circumvent their legal lending limit, if the mutual funds were to invest in turn in debt securities issued by the banks' affiliates. A similar concern had been expressed in relation to banks' investments in commercial paper before the central bank regulated CP in 1995.

**Table 15** Sponsors of Mutual Funds, as of January 1998 (amounts in Rp billion) ■

	Banks		Insurance Companies		Securities Houses		Pension Funds		Others	
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%
Money-market funds	35.0	0.88	2.3	0.06	11.0	0.28	0.0	0.00	3.3	0.08
Fixed-income funds	2,178.6	54.7	121.7	3.06	48.0	1.21	47.4	1.19	351.2	8.82
Equity funds	275.0	6.9	124.4	3.12	56.6	1.42	88.4	2.22	144.5	3.63
Mixed funds	307.9	7.7	13.4	0.34	15.8	0.40	40.4	1.01	116.7	2.93
Total	2,796.5	70.2	261.8	6.58	131.4	3.30	176.1	4.42	615.7	15.46
As percentage of total capitalization		63.09		5.91		2.96		3.97		13.89

Source: BAPEPAM

Overall, the total capitalization of pension funds, mutual funds, and insurance companies, at about Rp 68.6 trillion by March 1997, was relatively small compared with the Rp 399.6 trillion worth of assets held by banks, still the dominant sector of the Indonesian financial market. There were few individual investors in mutual funds, and efforts to promote the industry were focused on building a strong retail investor base to avoid the moral hazard associated with a buyer market: buyers dictating their terms and causing market distortions. The buyer market and the absence of a market benchmark had, in the past, led issuers, market-makers, and key investment managers to negotiate coupon rates before a bond offering; a 100–200 bps sweetener for investment managers and issuers was common practice. Increasingly stiff competition from offshore borrowings, starting in 1995, had reduced the moral hazard in the domestic bond market. But that was before the crisis hit in the second half of 1997.

### **THE SUPPLY FACTOR: FEW HIGH-QUALITY ISSUERS**

There are few good-quality debt securities in the domestic bond market. Data from Pefindo Rating Agency indicate that, before the crisis, the agency had assigned above-average ratings (idA or higher) to less than one-third (33 percent) of its rated entities, and had not granted its highest rating of idAAA to any of them. At the same time, Pefindo was known to have assigned more than 40 non-investment-grade ratings of idBB+ or lower which were not accepted or kept confidential by the companies.

Moreover, Indonesian blue-chip companies, driven in growing numbers into the international markets in 1995–1997 by the high interest rates and relatively stable exchange rates in the country (Table 6), were issuing fewer domestic bonds. Other factors were also responsible for the rise in foreign private borrowing. These included the lower transaction costs offshore; the switch by finance and property and other companies away from commercial paper toward other debt instruments following BI's 1995 restrictions on CP; and the government's yankee bond issue in 1996/1997, with which it hoped to provide benchmarks for private borrowers.

But before the crisis, things were starting to look up for the supply of quality debt in the domestic market. Infrastructure development, coupled with privatization, required massive doses of private project financing. On the other hand, fast-growing banking and finance companies wanting to clean up their balance sheet, improve their capitalization, and reduce their funding cost were increasingly looking to asset-backed securitization for the answer. Project financing and asset-backed securitization, if provided with satisfactory credit enhancements and adequate regulatory and legal support, would generate high-quality debt instruments in the local market. The issuance of rupiah bonds in the domestic market, a possibility that has been discussed by multilateral agencies such as IFC and ADB, would also add to the supply of high-quality debt, complementing the SBI of the central bank.

### **MARKET INSTITUTIONS AND EFFICIENCY**

As mentioned earlier, issuing costs in the domestic bond market were much higher than the costs of offshore borrowing or other domestic financing alternatives. The high cost of issuing rupiah bonds, as reported in the 1995 World Bank Report, was largely due to market inefficiency associated with the moral hazard of a buyer market. Indonesian blue-chip companies, meanwhile, had been able to take advantage of learning

economies to minimize their cross-border borrowing costs. Bowing to intermarket competition, domestic bond intermediaries had reduced their costs, but other financing alternatives were still cheaper.

The domestic debt market was also hampered by the quality of disclosure and market information. Low-quality information about Indonesian entities created uncertainty that could not be fully hedged by investors, and they accordingly demanded compensation upfront, in the form of higher coupon rates. In the yankee market in 1996, for example, an Indonesian entity with a double-B rating from Standard & Poor's or Moody's was charged a 200–400 bps premium over T-bill rates, compared with about 130–200 bps premium for US entities with a similar credit rating. The quality of disclosure has nonetheless improved. In 1994, Indonesia's accounting standards were ranked the lowest among eight Asian countries. In 1996, Indonesia had a higher percentage of listed companies audited by the Big Six<sup>1</sup> accounting firms and affiliates (89 percent) than South Korea or Malaysia (70 percent) or even Japan (71 percent). The financial crisis has prompted the government of Indonesia to tighten disclosure requirements. Privately held, unlisted companies with assets of at least Rp 50 billion are now required to submit and publish their audited financial reports. BAPEPAM and the security exchanges issue disclosure guidelines, particularly for cross-border borrowing and off-balance-sheet and intragroup transactions. Statistics on cross-border borrowings are now compiled and monitored regularly.

The increasing proliferation of new and sophisticated financial instruments such as project financing and asset-backed securitization calls for regulatory, tax, and legal structures that Indonesia, for the most part, does not have. Structured finance involves credit enhancements, which are contractual agreements with known third parties to address and minimize currency, interest-rate, political, market, or other risk. The effectiveness of such credit enhancements therefore hinges on clear and enforceable legal codes, supported by a good record of legal proceedings and resolution of disputes. Generally speaking, Indonesia lacks the legal framework for complex financial innovation. The development of the Indonesian fixed-income market, in particular, is hampered by various shortcomings in the legal system. These include:

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<sup>1</sup>Now known as the Big Five, following the merger of Price Waterhouse & Co. and Coopers & Lybrand in the second quarter of 1998 to form PricewaterhouseCoopers.

- The difficulty of assigning, transferring, and protecting property rights. The administrative and legal procedures can be very tedious, time-consuming, and costly.
- The lack of legal protection for debt holders. Internationally accepted bankruptcy codes are just being prepared and will remain untested in the courts in the near future. In addition, given the *pari passu* principle of financial obligations, Indonesian legal codes do not recognize any hierarchy of claims over the assets of a business entity if it defaults or goes bankrupt. The only exception is the pledge of an asset under a Hak Tanggungan agreement such as the use of land and houses as collateral for housing finance.
- The lack of clear precedence in commercial dispute resolution and legal enforcement of contracts.

An important impediment to the development of the market has been the absence of a market benchmark against which fixed-income securities can be priced properly. Attempts by the central bank to convert some of its short-term SBI into longer-term instruments with multiple maturity, if implemented, would provide the much-needed market benchmark. In the meantime, the urgent need to surmount the financial crisis has apparently come to outweigh the aversion to fiscal deficits, and has led the government to consider issuing rupiah government bonds instead of borrowing abroad.

The clearing guarantee agency, PT KPEI, and the central custody of securities, KSEI, must operate effectively to eliminate the risk of theft, loss, forgery, and human error as well as to minimize settlement disputes in physical transactions. Electronic book-entry settlement through the planned scripless trading system presents a faster and more efficient, fair, and orderly way of settling securities transactions. Delayed implementation of the system will only unnecessarily increase transaction costs in the secondary market and thus lessen investor returns.

Another weak link in the market has been the inability of underwriters and securities dealers to act as market-makers or intermediaries between issuers and investors. Without ample access to funding and market information, bond dealers cannot make a market and facilitate trading, or hold an inventory of debt securities. Current attempts by the SSX to create an interdealer market supported by a real-time trading information system are partly intended to address this issue.

Finally, the major obstacle to the development of the fixed-income market has been the widespread financial crisis. Virtually no new bonds have been issued since August 1997, and trading in the secondary market has dropped sharply. The paralysis of the traditionally dominant banking sector has effectively eliminated liquidity in both primary and secondary markets. In the current high and volatile interest-rate environment, debt securities are simply impossible to price. On the other hand, the crisis has also provided ample opportunity to address many of the above weaknesses. The agreement with the IMF provides for the establishment by mid-1998 of a legal framework for bankruptcy proceedings that meets international standards. Regulatory requirements for more adequate disclosure are also being prepared, in tandem with the restructuring of the banking and financial services industry at large. In the meantime, the stock exchanges working with the clearing guarantee and central depository agencies are expected finally to operate the much-awaited scripless trading system.

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## **Current State of Residential Mortgage Financing**

Indonesia, with a total population of about 200 million and an annual growth rate of 1.5–1.8 percent, will need hundreds of thousands of new dwelling units every year. Increasing urbanization (the percentage of the population living in urban areas is about 35–40 percent, and growing) is exerting strong pressure on the government to provide better-quality and more accessible housing in major urban centers. As low-income earners with a monthly expenditure of less than Rp 300,000 compose about 80 percent of the population, the growth of property sales in Indonesia has been dominated by low-cost housing (Table 16). In terms of value, however, Table 16 indicates that medium and large houses dominate the market, reflecting the potential for mortgage financing.

### **HOUSING DEVELOPMENT POLICY OF THE GOVERNMENT**

The government, since the 1970s, has focused on providing low-cost housing for low-income earners; revitalized slum areas by developing high-rise, low-cost dwelling units with adequate water utility, drainage, and waste treatment facilities; promoted private-sector participation; and optimized the limited land and financing resources. In its sixth five-year plan (1994–1999), the government intends to build 500,000 low-cost houses at an estimated cost of

**Table 16** *Housing Sales, 1993–1996 (units in thousands; estimated value in Rp million)* ■

	1993		1994		1995		1996	
	Units	Est'd Value	Units	Est'd Value	Units	Est'd Value	Units	Est'd Value
Low-end (small-size)	96	960	127	1,270	174	1,740	189.6	1,896
Medium-end	8.6	860	13	1,300	15	1,500	7.1	710
High-end (large-size)	1.5	1,500	2.5	2,500	3	3,000	1.8	1,800
Total	106.1	3,320	142.5	5,070	192	6,240	198.5	4,406

Sources: PSPI; Pefindo

Rp 5 trillion, a 47 percent increase over the 340,000 units built in the 1989–1994 period. Of the 500,000 target units, about 60 percent are to be developed by the private sector. In addition, slum revitalization programs will cover 21,250 ha of land in 125 large cities, and housing improvement programs will be carried out in 20,000 less-developed villages in rural areas.

To administer its housing policy, the government, in 1974, set up a national agency for housing development policy (Badan Kebijaksanaan Perumahan Nasional, or BKPN) and a low-cost housing development company (Perumnas), and made the state-owned bank BTN a mortgage bank for low-cost housing. A state ministry was established in 1985 to supervise BKPN, whose membership was enlarged in 1993 to include the central bank and other relevant government agencies. In 1980, various entities including the central bank and the IFC established another housing finance company, PT Papan Sejahtera, to provide housing finance for middle- and upper-income borrowers. Under the Banking Law of 1995, BTN and PT Papan Sejahtera could also provide nonhousing finance only if they became universal commercial banks. PT Papan Sejahtera, now known as Bank Papan Sejahtera, went public in 1994 and majority ownership has passed to the private sector.

A major policy instrument in housing development is low-cost financing for low-cost housing through BTN. Table 17 shows that the low-cost funds made available to BTN at an interest rate of 8.5–11.0 percent, increased only marginally from Rp 1.4 trillion in 1995 to Rp 1.8 trillion in 1996. At the end of 1997, shortly after the outbreak of the financial crisis, the government injected Rp 1.3 trillion from Jamsostek (the state-run social security agency for employees) with a possible extension of another Rp 1.0 trillion. The emergency funding showed the government's continued support for low-cost housing despite the crisis; the funds were also intended to keep em-

ployment at a certain level to blunt the impact of the crisis. Bond issues and deposit taking tripled BTN's assets from Rp 3.8 trillion in 1992 to Rp 11.4 trillion in 1996. In 1990–1994 BTN financed 368,708 housing units amounting to Rp 2.8 trillion; in 1995–1997 it financed 445,132 housing units worth Rp 4.3 trillion (Table 18). But, as shown in Table 16, BTN provided only about 31.5 percent of total housing loans in 1996, down from about 46.7 percent in 1993, pointing to the increasing role of the private sector in housing finance. Once the crisis is resolved, however, and at least for the near future, the government is expected to resume its dominant role in housing finance.

**Table 17** *BTN's Financial Highlights, 1992–1996 (Rp billion)* ■

	1992	1993	1994	1995	1996
Total assets	3,818.5	5,807.1	6,851.1	9,522.6	11,361.0
Total loans	2,593.8	3,536.6	4,797.8	6,165.3	8,988.4
Low-cost funding	1,439.7	1,453.7	1,166.9	1,427.1	1,764.5
From Bank Indonesia	1,052.8	1,086.1	820.7	1,113.8	1,402.0
From the government	88.9	89.9	90.0	78.4	148.9
From the World Bank	298.0	277.7	256.2	234.9	213.6
Bonds	150	350	341	647	797
Other third-party funding	1,280.4	2,914.0	3,864.7	5,756.1	6,530.6
Total equity	614.2	659.9	1,085.4	1,133.6	1,223.1
Low-cost funding as % of total lending	55.51	41.10	24.32	43.20	19.63

Source: BTN Annual Report

The increasingly larger role of the private sector in housing finance, particularly for medium- and high-cost houses, has been mentioned. The government, concerned about the volatility of the medium- and high-cost property market, has limited the growth of property sector credit, which is believed to have caused the high rate of bad loans in the banking sector.

Another policy in support of the emphasis on low-cost housing is the so-called “1:3:6 policy” for developers: a developer wishing to go into luxury housing must build three middle-class houses and six low-cost houses for every luxury house developed. Failure to comply means stiff penalties or revocation of license. Despite the valid basis for this policy, however, its implementation is perceived to be rather weak. The cost of clearing land and developing infrastructure for luxury housing is too high to be recovered from low-cost housing. Many developers, as a result, would rather pay the penalty than comply with this regulatory requirement.

**Table 18** *Housing Loans Realization, 1974–1999* ■

Plan Period	Low-Cost Housing			
	Perumnas		Non-Perumnas	
	Units (000)	Amount (Rp bn)	Units (000)	Amount (Rp bn)
Pelita II (1974–1979)	0.3	0.5	2.7	5.7
Pelita III (1979–1984)	88.2	130.7	104.6	483.4
Pelita IV (1984–1989)	88.6	270.6	255.1	1,424.4
Pelita V (1989–1994)	59.5	282.0	256.0	1,408.5
Pelita VI (1994–1999)	50.9	327.4	324.4	2,476.7
Total	287.5	1,011.2	942.8	5,798.7

Source: Bank Tabungan Negara

To maximize the use of the limited land resources in large cities and to improve the quality of life, the governments of many major cities have attempted to revitalize slum areas through high-rise, low-cost building developments. The governor of Jakarta, in late 1997, announced that slum renewal would be a top priority of his government. But while several pilot projects have been successfully developed in Jakarta, the program, especially the required land clearing, has been far from easy to implement.

The absence of a national or government-sponsored land bank in Indonesia complicates land clearing and has made it time consuming and very costly. Land ownership is difficult to establish and property rights take too much time to transfer. One consequence has been the problem of land brokerage and speculation. The National Land Registry Agency (Badan Pertanahan Nasional, or BPN) has reported very rapid growth in land acquisition despite the crisis. Of the 121,629 ha licensed for residential estate projects in the greater Jakarta area as of August 1997, 57,629 ha had been acquired and cleared; however, only 11,572 ha had actually been developed (Table 19). There were concerns that the 46,000 or so hectares of land that had been acquired but not yet developed would be left undeveloped because of the crisis, and that the huge financing involved in the land acquisition, estimated at Rp 4–8 trillion, would only worsen the problems of the banking sector.

To inject new dynamism into the property industry, the government has relaxed some restrictions on property ownership by foreigners. Government Regulation No. 41/1996 allows resident foreigners to purchase rights

Medium to Upper-End Housing					
Perumnas		Non-Perumnas		Total	
Units (000)	Amount (Rp bn)	Units (000)	Amount (Rp bn)	Units (000)	Amount (Rp bn)
0	0	0	0	3.0	6.2
0	0	0	0	192.8	614.1
0	0	0	0	343.7	1,695.0
2.2	48.6	27.2	639.4	344.9	2,378.5
1.2	31.7	33.4	883.6	409.9	3,719.4
3.4	80.3	60.6	1,523.0	1,294.3	8,413.2

to use land and apartments for up to 25 years with the possibility of a 25-year extension. But foreigners may not own land for investment purposes and, if they leave the country, must sell the land within five years of their departure. The absence of implementation guidelines has, however, kept the policy from being workable.

**Table 19** Property Development Licenses Issued in Greater Jakarta Area, 1997 ■

	February	May	August
Number of licenses issued	1,592	1,592	1,649
Land area licensed (ha)	121,629	121,629	121,629
Land area acquired (ha)	40,629	50,333	57,864
Land area developed (ha)	10,908	11,274	11,572

Source: National Land Registry Agency

## HOUSE OWNERSHIP AND LAND TENURE

The latest (1992) housing survey conducted by the Central Bureau of Statistics (BPS) among 66,500 Indonesian households indicated that, on the average, 84.3 percent of households owned their houses while the rest occupied houses under rental, leasing, or other arrangements (Table 20). House ownership in rural areas, at 91.7 percent, was higher than in urban areas, at 67.8 percent. Interestingly, house ownership was higher among lower-income than among higher-income households: house ownership decreased with increasing income. On the other hand, the propensity to lease or rent houses was more prevalent in the middle-income bracket, particularly in urban areas (Table 21).

**Table 20** *Distribution of Urban and Rural Households by Housing Tenure, 1992 (%)* ■

Tenure	Urban	Rural	Average
Own	67.81	91.73	84.38
Lease	10.38	0.60	3.61
Rent	8.47	1.01	3.31
Installment	1.08	0.20	0.47
Provided by company	3.76	1.45	2.16
Rent-free	5.16	2.66	3.43
Others	3.34	2.35	2.65
Total	100.00	100.00	100.00

Source: Central Bureau of Statistics

**Table 21** *Distribution of Households by Monthly Expenditure and Housing Tenure, 1992 (%)* ■

Monthly Expenditure Class (Rp)	Own	Lease	Installment Plan	Official	Rent-Free	Others	Total
Less than 30,000	90.23	0.25	1.05	0.16	3.89	4.36	100.00
30,000–39,999	90.92	0.62	1.49	—	4.01	2.79	100.00
40,000–49,999	91.03	0.58	1.91	0.27	3.02	2.96	100.00
50,000–74,999	89.41	1.29	2.09	0.65	3.29	3.15	100.00
75,000–99,999	87.39	2.27	2.66	1.09	3.68	2.72	100.00
100,000–149,999	84.22	3.42	3.59	1.98	3.66	2.84	100.00
150,000–199,999	80.91	5.16	4.71	2.66	3.80	2.32	100.00
200,000–299,999	77.47	7.26	4.99	4.36	2.88	2.12	100.00
300,000–399,999	74.88	8.19	4.30	6.30	2.51	1.68	100.00
400,000–499,999	78.50	7.78	2.43	6.46	1.89	1.49	100.00
500,000 and over	77.75	6.33	1.40	7.83	2.07	1.27	100.00
Total	84.38	3.61	3.31	2.16	3.43	2.65	100.00

Source: Central Bureau of Statistics

Indonesia classifies land ownership and tenure into: ownership rights (Hak Milik), the right to build (Hak Guna Bangunan, or HGB), the right to exploit (Hak Guna Usaha, or HGU), and the right to use (Hak Pakai), among others. Ownership rights (Hak Milik) refer to unlimited and transferable legal property rights over a piece of land and the houses on it. The right to build (HGB) and the right to exploit (HGU) usually imply a 30-year term of ownership, renewable at maturity. HGU involves large land areas, in thousands of hectares, for plantation and forestry, while HGB refers to much smaller land areas, for housing and commercial use. Like

Hak Milik, HGB is transferable and can be used for mortgage financing. The right to use (Hak Pakai) has a much shorter tenure, between five and ten years, and is renewable and transferable, but cannot be used for mortgage financing. Hak Pakai nonetheless can, in a limited sense, be used as collateral for commercial transactions and bank borrowing.

Land ownership in Indonesia is dominated by Hak Milik at 78.2 percent on the average; in rural areas Hak Milik makes up 85 percent of land ownership. Hak Milik is understandably more difficult to obtain in urban areas, where it represents only 62.8 percent of land ownership (Table 22). Indeed, since the 1980s, the government has limited new house ownership in urban residential areas to Hak Guna Bangunan (HGB).

**Table 22** *Distribution of Urban and Rural Households by Land Rights Status, 1992 (%)* ■

	Urban	Rural	Average
Property ownership rights	62.76	85.01	78.17
Right to build	7.34	1.24	3.12
Right to use	7.17	6.20	6.50
Others	8.81	5.59	6.58
Unknown	13.92	1.96	5.64
Total	100.00	100.00	100.00

Source: Central Bureau of Statistics

Hak Milik and Hak Guna Bangunan are used as collateral for mortgage financing through a Hak Tanggungan agreement, which has to be registered at the BPN. A debtor who obtains mortgage financing from a lender bank must sign a Hak Tanggungan agreement along with a consent form releasing to the lender bank the right to resell his obligation to a third party. In this case, the ownership of the land is still in the hands of the mortgagor and is not automatically transferred to the lender bank, but the Hak Tanggungan agreement protects the bank's rights to claim the property if the mortgagor defaults.

Most Indonesian houses (86.3 percent) have a floor area of less than 100 sq m, and only 13.7 percent have a floor area of 100 sq m or more (Table 23). Houses with a floor area of at least 100 sq m make up a higher proportion of urban houses (17.3 percent) than of rural houses (13.7 percent). On the other hand, rural houses tend to have a larger land area than urban houses: 25 percent of rural houses have a land area of at least 300 sq m compared with only 12.4 percent of urban houses (Table 24).

**Table 23** *Distribution of Urban and Rural Households by House Floor Area, 1992 (%)* ■

Floor Area	Urban	Rural	Average
Up to 19 sq m	9.47	3.45	5.30
20–49 sq m	33.63	42.83	40.00
50–99 sq m	39.56	41.60	40.97
100–149 sq m	10.62	7.90	8.74
150 sq m and over	6.71	4.22	4.99
Total	100.00	100.00	100.00

Source: Central Bureau of Statistics

**Table 24** *Distribution of Households by Land Area, 1992 (%)* ■

Land Plot Area	Urban	Rural	Average
Up to 24 sq m	10.23	2.08	4.59
25–49 sq m	15.45	9.45	11.32
50–74 sq m	16.50	14.90	15.40
75–99 sq m	12.05	11.55	11.70
100–149 sq m	16.06	15.81	15.89
150–199 sq m	8.14	9.36	8.98
200–299 sq m	10.22	11.75	10.97
300 sq m and over	12.35	25.05	21.15
Total	100.00	100.00	100.00

Source: Central Bureau of Statistics

Assuming an average household size of five family members and an average floor space requirement of 10 sq m per person, then a house, to be sufficiently livable, should have at least 50 sq m of floor space. Almost one-half of Indonesian households live in houses with less than 50 sq m of floor space, and there is no marked difference in this respect between urban and rural houses.

Most Indonesian houses, especially in the rural areas (95.7 percent), are single-story, single-dwelling units. In the urban areas, 78.6 percent of the houses are single-story, single dwelling units, 9.2 percent are single-story multiplexes, and 6.2 percent are single-story duplexes (Table 25). The proportion of multistory duplexes and multiplexes could be even higher than indicated in Table 25, considering that the drive to optimize scarce land resources had created a boom in condominiums and apartments in Jakarta and other large cities in the years before the crisis.

**Table 25** *Distribution of Urban and Rural Households by Type of Dwelling, 1992 (%)* ■

	Urban	Rural	Average
Single-dwelling units			
Single-story	78.64	95.67	90.44
Multistory	4.36	1.10	2.10
Duplex			
Single-story	6.22	2.15	3.40
Multistory	0.47	0.07	0.19
Multiplex			
Single-story	9.15	0.92	3.45
Multistory	1.17	0.08	0.42
Total	100.00	100.00	100.00

Source: Central Bureau of Statistics

In terms of building use, 94 percent of Indonesian households live in residential housing and only 6 percent in mixed-use (residential and business) housing such as shop houses<sup>2</sup> or office houses (Table 26). The proportion of mixed-use housing in urban areas (9.3 percent) is twice that in rural areas (4.5 percent). The increasing popularity of shop houses in Jakarta and other large commercial cities would indicate that mixed-use housing will take up a larger share of urban housing in the future.

**Table 26** *Distribution of Households by Building Use, 1992 (%)* ■

Usage	Urban	Rural	Average
Residential	90.67	95.47	94.00
Mixed-use (residential and business)	9.33	4.53	6.00
Total	100.00	100.00	100.00

Source: Central Bureau of Statistics

## Tax and Levy

A property development project entails several taxes and levies from land clearing to the delivery of the completed houses to buyers. A typical tax structure for a property development project is shown in Table 27.

At the developer level, the taxes start when the land is acquired. Sellers are supposed to pay a final income tax or capital gains tax (Pajak Penghasilan,

<sup>2</sup>The concept of shop houses was successfully introduced by PT Duta Pertiwi in the old city of North Jakarta, and was replicated in other parts of Jakarta and other major cities in Indonesia.

**Table 27** Typical Property Development Tax Structure ■

	Tax Rate	Tax Rate as % of Property Value
<b>Developer</b>		
Capital gains tax (PPH) for land acquisition	5% of land value	1.25%
Stamp duties (BPHT) for land plot	5% of land value	1.25%
Registration fee (BPN)	0.5–1.0%	0.5%
Notary fee	1.0%	1.0%
Capital gains tax (PPH) for developed property		5.0%
Various permits		10.0%
<b>Final buyer</b>		
VAT (PPN)		8–10%
Property tax (PBB)		0.5% per year
Registration fee (BPN)		0.5%
Notary fee		1.0%
<b>Total</b>		<b>37.0%</b>

Source: Central Bureau of Statistics

or PPh) of 5 percent of the land value, but they generally ask for a “clean price,” that is, the buyers/developers absorb the PPh. Developers also pay stamp duties (Bea Perolehan Hak atas Tanah dan Bangunan, or BPHT) of 5 percent of the land value for the transfer of land title; an administration fee of 0.5–1.0 percent when registering the transaction at the BPN; and a notary fee of 1 percent. The taxes associated with land acquisition make up about 12 percent of the land acquisition value, or about 3 percent of the selling price of the house being developed, if land acquisition cost is assumed to compose about 25 percent of the price of the house. (In other words, these taxes and levies associated with land acquisition become costs for developers which are eventually passed on to end-buyers.) When selling the developed property to end-buyers, the developer also has to shoulder a capital gains tax of 5 percent of the property value.

Besides these taxes, there are other costs associated with various property development permits. These permits include: a land use permit from BPN, zoning and master plan permits from BPN and the local governments, and permits to build (Ijin Mendirikan Bangunan, or IMB) the individual houses. The total cost of obtaining these permits is quite high, about 10 percent of sales value. Therefore, about 8 percent of every rupiah of revenue that a developer earns goes to property-related tax and another 10 percent goes to permit costs.

Before selling the property to the final buyers, developers have to pay an annual property or land tax (Pajak Bumi dan Bangunan, or PBB) of about 0.5 percent of the land value. The PBB is paid annually and administered by local governments, but 40 percent of it is transferred to the central government. The estimated land value is based on what the local governments consider to be the fair market value based on the location of the property; it is usually much lower, by about 40–60 percent, than the market value. Developers who have acquired land but have not yet developed nor sold the land to end-buyers may therefore have to carry a huge amount of property tax liability (PBB).

The final buyers of the developed property are also assessed value-added tax (Pajak Pertambahan Nilai, or PPN), stamp duties for title transfer (BPHT), and land and building tax (PBB). The VAT rate is 8 percent for the purchase of land from a developer and 10 percent for the purchase of a house. Like the taxes levied on developers, the stamp duties (BPHT) for the transfer of property title amount to 5 percent of the sale price, while the property tax (PBB) is paid annually at about 0.5 percent of the estimated fair market value of the property.

In addition, the final buyers must also pay an administration fee of 0.5–1.0 percent when they have the transaction registered at the BPN and a notary fee of about 1 percent of the sale price. If buyers finance their home buying with credit from banks, they incur borrowing costs as well. These include notary fee, BPN registration fee, insurance premium, and interest, among others.

The government, in recent years, has introduced new tax regulations and intensified tax collection to boost its tax revenue. Two particular tax changes affect the property industry. In 1995, the 5 percent final capital gains tax (PPh) replaced the corporate income tax for property companies. Since the PPh is collected monthly from all sales made by property companies, the government collects corporate income tax whether or not property developers show a profit at the end of the year. Property companies pass on this tax burden to their customers in the form of higher prices.

The second development pertains to stamp duties for the title transfer (BPHT). On 1 January 1998, these were increased from 0.25 percent to 5 percent of the property sales value. Following strong protest from the industry, particularly in view of the financial crisis, the effectivity of this new regulation was postponed until 1 July 1998.

Clearly, the tax and permit structure in the property sector, representing about 37 percent of property sales, has been burdensome and will certainly hinder the development of an efficient property market. More worrisome with respect to mortgage-backed securitization is the complicated and very costly process of title transfer. The ability of BPN to administer efficiently the registration of hundreds (if not thousands) of mortgages is particularly suspect; unless something is done, transaction costs will only increase in the end.

### MAGNITUDE OF RESIDENTIAL MORTGAGE FINANCING

Bank lending to the property industry has been significant and increasing, from about 6.6 percent of GDP in 1993 to about 13 percent of GDP in 1997. By April 1997, about 20.9 percent of total bank loans were going to the property sector, compared with only 14.4 percent in 1993 (Table 28). Property lending has grown at an average annual rate of 39.8 percent, while bank loans in general have grown by an average rate of only 25 percent yearly. Concerned about the increasing exposure of the Indonesian commercial banks to the property sector, the central bank, in late 1996, issued a decree setting a 20 percent limit on the growth of lending to the property sector, slightly lower than the average growth of total bank lending at the time.

**Table 28** Magnitude of Residential Mortgage Financing, 1993–1996 (amounts in Rp trillion) ■

	1993	1994	1995	1996
GDP	329.8	379.2	452.4	529.0
Total outstanding bank loans	150.3	188.9	234.6	292.9
Total outstanding property loans	21.7	33.2	42.8	58.9
Total mortgage loans	6.2	10.1	13.7	16.4
Outstanding bank loans as % of GDP	45.57%	49.81%	51.86%	55.38%
Outstanding property loans as % of GDP	6.58%	8.75%	9.47%	11.13%
Outstanding mortgage loans as % of GDP	1.88%	2.66%	3.03%	3.10%
Outstanding property loans as % of bank loans	14.45%	17.57%	18.26%	20.10%

Sources: Bank Indonesia; Infobank

The breakdown of property lending (Table 29) shows that residential mortgage financing was only about 29 percent of total property lending in 1996, a share that has been relatively stable since 1993. The bigger share of the property lending went to developers and contractors to finance

land acquisition, clearing, and development. Residential mortgage lending has nevertheless grown very rapidly, from about 1.9 percent of GDP in 1993 to 3.1 percent of GDP in 1996.

**Table 29** Growth of Property Loans, 1993–1996 (amounts in Rp trillion) ■

	1993		1994		1995		1996	
	Amt.	%	Amt.	%	Amt.	%	Amt.	%
Real estate	5.5	25.35	9.7	29.22	13.5	31.54	18.7	33.27
Construction	10.0	46.08	13.4	40.36	15.6	36.45	21.1	37.55
Mortgage financing	6.2	28.57	10.1	30.42	13.7	32.01	16.4	29.18
Total	21.7	100.00	33.2	100.00	42.8	100.00	56.2	100.00

Source: Infobank

Besides the two mortgage banks, Bank Tabungan Negara (BTN) and Bank Papan Sejahtera, nine other Indonesian banks as well as Citibank have been very active in the primary residential mortgage financing market. The nine Indonesian banks are: Bank International Indonesia, Jayabank, Bank Bali, Bank Niaga, Bank Umum Nasional, Bank Danamon, Bank Duta, Bank Lippo, and Bank Dagang Negara Indonesia (BDNI). The data in Table 30 show that these 11 national banks are the key players with an aggregate market share in 1996 of 68 percent of total residential mortgage lending. The state-owned bank BTN has remained the dominant player, although its share of the residential mortgage lending market has been decreasing, from about 46.7 percent in 1993 to 31.4 percent in 1996.

Compared with either total bank lending or GDP, the magnitude of residential mortgage financing has been very modest, in the face of unmet demand for such financing, particularly for low-cost housing under Rp 30 million. To shore up bank liquidity during the crisis, the government provided Rp 1.3 trillion in emergency funds, but the temporary relief was expected to cover the demand for low-cost financing only until mid-1998.

Key statistics for the 11 major players in the primary residential mortgage market (Table 31) indicate a weak capitalization ratio of 6.9–12.3 percent. More worrying is the maturity mismatch between assets and liabilities. The ratio of long-term lending to long-term funding varies between 138 percent and 440 percent, mostly 280 percent and above; it would appear, therefore, that only about one-third of long-term lending is financed with long-term funding. Such statistics are nonetheless characteristic of the

**Table 30** Residential Mortgage Financing, 1993–1996 (Rp billion) ■

Bank	1993	1994	1995	1996
Bank Tabungan Negara	2,880.0	3,421.3	4,178.8	5,224.4
Bank Papan Sejahtera	259.3	406.8	575.5	633.4
Bank Niaga	451.1	759.2	926.1	894.3
Bank Umum Nasional	296.3	584.7	726.3	809.8
Bank International Indonesia	147.4	439.3	463.7	663.4
Bank Bali	113.9	304.6	485.7	549.6
Bank Jaya International	95.7	313.1	419	507.0
Bank Danamon <sup>a</sup>	144.9	443.4	766.3	1003.9
Bank Duta <sup>a</sup>	66.3	67	101.6	154.9
Bank Lippo <sup>a</sup>	580.6	1,073.9	1,082.5	683.4
Bank Dagang Negara Indonesia	32.3	190.7	221.8	186.1
Subtotal	5,068.2	8,003.9	9,947.3	11,310.3
Other banks	1,088.8	2,106.1	3,746.7	5,074.7
Total	6,157	10,110	13,694	16,385

<sup>a</sup>Values given for these banks are only approximations  
Source: Infobank Annual Report

**Table 31** Financial Profile of Key Players in Mortgage Finance, June 1997 ■

Bank	Assets (Rp trillion)	Capitalization Ratio (%)	LT Lending/ LT Funding (%)	Interest Spread (%)
Bank Tabungan Negara	13.7	9.48	200.40	2.57
Bank Papan Sejahtera <sup>a</sup>	1.4	10.45	212.40	3.28
Bank Niaga	8.6	8.16	158.58	3.47
Bank Umum Nasional	7.7	6.93	140.25	1.92
Bank International Indonesia	19.7	12.29	129.65	2.39
Bank Bali	9.0	8.01	176.92	3.12
Bank Jaya International <sup>a</sup>	1.2	11.27	407.48	3.89
Bank Danamon	24.1	7.84	193.86	2.61
Bank Duta	6.3	7.01	112.45	1.25
Bank Lippo	11.9	8.07	69.52	4.32
Bank Dagang Negara Indonesia	20.3	10.49	85.80	2.92

<sup>a</sup>Data for these banks are as of 31 December 1996  
Source: Financial Report

banking industry in general and not merely the 11 banks. They also point to the chronic need to improve the liquidity of the banking sector and, hence, the merits of a secondary mortgage facility.

Interest-rate spreads in the Indonesian banking industry had increased in 1992–1994, during the last property boom, before declining again in the years before the crisis (Table 32). Among the 11 major players in mortgage financing, interest-rate spreads had generally followed the industry trend, although certain banks like Bank Lippo and Bank Niaga tended to have interest-rate spreads that were better than the industry's. These statistics may show that banks have become more efficient as a result of increasing competition within the industry as well as from other financial markets. The crisis has, however, magnified the problems of the banking sector, and made the above statistics rather meaningless.

**Table 32** Bank Spread Between Lending and Deposit Rates, 1992–1996 (%) ■

	1992	1993	1994	1995	1996
Lending rates	21.93	19.70	17.45	18.11	18.26
Deposit rates	19.20	14.92	12.41	15.02	15.88
Gross spread	2.73	4.78	5.04	3.09	2.37

Source: Bank Indonesia

## TERM STRUCTURE OF RESIDENTIAL MORTGAGE LOANS

Table 33 summarizes the typical term structure of residential mortgage financing, based on an S&P survey and the Pefindo database on major primary mortgage lenders. Generally speaking, most banks, except for BTN, cater to the middle-income and upscale market.

**Table 33** Typical Term Structure of Mortgage Loans ■

Loan size	Rp 2.5 million to Rp 1.0 billion
Tenor	Average maturity: 15 years Maximum maturity: 20 years
Collateral	More than 100 percent of loan value Registered Hak Tanggungan
Loan type	Variable interest rate Monthly payment Fully amortizing
Loan-to-value (LTV) ratio	New house: 70–80 percent Used house: 70–90 percent of appraised value Land/Apartment: 60–70 percent
Installment limit	Monthly installment up to 30–35 percent of income
Insurance	Life and fire insurance
Prepayment provision	1–2.5 percent fee

Sources: Standard & Poor's unpublished survey, 1997; Pefindo database

In summary, a typical term structure of residential mortgage financing is as follows:

- The average maturity of housing loans is 15 years, although certain banks, notably BTN, can lend for up to 20 years.
- Most banks, including BTN, demand a fixed monthly installment with floating interest rates. BTN, before the crisis, agreed not to raise its interest rates and to lower its rates if there would be a drop in market rates.
- Most banks set a Rp 300 million limit for mortgage financing, but certain upscale banks are willing to lend up to Rp 1 billion. Generally, the monthly installment payment should not exceed 30–35 percent of the borrower's monthly income.
- Five of the six banks surveyed allow prepayment before maturity, normally with a penalty of 1–2.5 percent of the balance of the loans. BTN allows prepayment without penalty.
- All banks require at least 100 percent collateral. The average collateral value is 125–150 percent of the total amount of the loan.
- Some banks also require recourse to developers in the form of a second-tier guarantee from developers, and most banks require property casualty insurance, particularly against fire.

### **MORTGAGE LOAN UNDERWRITING**

Most banks have similar loan underwriting procedures for checking and evaluating the creditworthiness of potential housing loan borrowers. In the increasingly competitive consumer credit market, there is strong pressure to speed up this process, to achieve efficiency through standard operating procedures, and to maintain high accuracy and an acceptable level of security.

#### **Credit Checking**

Potential borrowers who are employed normally have to submit their pay slips for the last three months and their bank account records. Their employers and the banks where they hold an account are then asked to verify the information on these documents. Mortgage lenders may also ask large borrowers and the self-employed to submit copies of their tax returns. In addition, self-employed borrowers are expected to have maintained an account with a bank for at least six months to two years.

Credit checking by banks also involves in-depth interviews with potential borrowers, to ascertain their monthly cash flow, as well as informal procedures such as visits to the house site and the borrower's neighbor-

hood. If deemed necessary, particularly for very large loans, banks may also check the central bank's blacklist.

### Collateral Valuation

Most of the six banks surveyed use the services of internal valuation specialists to assess the value of the property offered as collateral. The valuation normally involves checking the legal title and the various required permits. Banks base their assessment of property values on transactions in neighboring locations.

### Computerized Scoring

Most banks select potential clients through computerized scoring, based on data made available to them. The system speeds up and minimizes personal bias in credit decisions. One bank even provides an online facility in its ATM network for potential customers to do a credit assessment on their own before applying for housing finance.

### Defaults and Foreclosures

Bad loans in property lending occur mostly in the construction sector, and are less pronounced in mortgage financing. But the Banking Secrecy Act precludes the availability of data on loan defaults in the banking sector. Table 34, which gives the percentages of bad loans in the various credit sectors, is therefore based instead on information contained in a popular magazine, *Infobank*, whose accuracy is hard to verify.

**Table 34** Percentage of Bad Loans, by Credit Sector, 1992 to April 1997 ■

	1992	1993	1994	1995	1996	1997 <sup>a</sup>
Construction loans	12.03	13.49	13.25	11.62	9.58	9.62
Real estate loans	6.98	8.05	5.77	4.48	3.71	4.37
Mortgage finance	6.32	3.20	2.67	2.72	2.99	3.67
Total property loans	9.82	9.24	7.86	6.53	5.69	6.04
Total credit	n.a.	n.a.	11.63	n.a.	8.79	9.23

<sup>a</sup>As of April

Source: *Infobank*, no. 213, August 1997 (compiled)

Understandably, mortgage financing has a lower ratio of bad loans to total loans compared with the property sector and even the banking industry in general. Like other consumer credits, mortgage financing is widely

distributed across a large number of customers such that the risk is widely dispersed. First-time home-buyers, as statistics indicate, are very disciplined in paying their mortgage because they do not want to forfeit their lifetime savings. For the same reason, defaults are less likely on partially paid, longer-term mortgages than on short-term mortgages. Also, the experience of the Indonesian consumer finance industry, and mortgage financing in particular, seems to indicate a seasonal pattern in credit delinquencies. In periods of religious and other holidays such as Lebaran, Christmas, and Chinese New Year, many people may delay paying their mortgage to have extra cash.

Default or delinquency can lead to foreclosure and auction of collateral, but there are several intervening steps. Most banks have standard procedures, including legal action, for dealing with delinquencies. Usually they send out warning letters and make visits before taking legal action. This warning period can be as short as three months or as long as 12 months.

Law No. 4/1996 prescribes the following procedure for banks that decide to seek relief through court proceedings: (i) file a request for foreclosure; (ii) send the defaulting borrower up to three warning letters (*aanmaning*); (iii) seek a court injunction to foreclose the collateral (*penetapan sita eksekusi*); (iv) carry out the foreclosure (*sita eksekusi*); (v) obtain a tax liability statement from the Tax Office (*pengurusan SKPT*); (vi) issue newspaper advertisements announcing the auction (*pengumuman lelang*); and (vii) hold the public auction. If the bank itself wishes to buy the auctioned collateral, then it must obtain property clearance (*pengosongan*) before holding the auction. The bank first issues warning letters (*aanmaning*), seeks a court order for property clearance, and finally holds the auction.

The whole foreclosure process is time consuming and costly. On the average, it takes about two months to obtain a court order to foreclose collateral, and up to 12 months until the auction takes place. In Jakarta, a foreclosure case can cost up to Rp 50–90 million, including the lawyer's fee. Therefore, instead of going through this legal proceeding, many banks would rather use the services of law firms or debt collectors, which can normally provide a simpler way out in a relatively shorter time. These agencies approach debtors with a proposal for the joint sale of the collateral, with the proceeds to be divided between the bank and the debtor according to a predetermined ratio. However, as the ser-

vices of such agencies are not cheap (the cost is normally based on the sharing of proceeds), banks would be well advised to consider the costs and benefits first.

## SUMMARY

The discussion thus far can be summarized as follows:

- There is very strong demand for housing in Indonesia, reflecting the growing population, demographic changes, and rising standards of living. While the government has focused on low-cost housing, the middle- and high-cost segments of the market have been largely left to the private sector.
- Low-cost housing represents about 90 percent of housing units sold in the market, but less than 50 percent of sales value. The demand for low-cost housing is relatively more stable and more recession resistant than the demand for high-end housing.
- Credit lending to the property sector has grown at a faster pace than total bank loans. The majority of the loans, however, go to construction and property developers, and only about 27 percent go to mortgage financing. A significant portion of the loans to property developers for use in land acquisition and development can be nonperforming, particularly in the current crisis.
- Mortgage financing currently depends to a large extent on lending by banks, which have used the bond market only very sparingly. Indonesian commercial banks have had a chronic problem of maturity mismatch between their lending and their funding. Only about one-third of their long-term lending is financed with long-term funds; the rest comes from short-term funding. There is, therefore, strong demand for liquidity in the banking sector in general, and for mortgage financing in particular.
- As mortgage financing is widely distributed among individual consumers and across geographical areas, the risk associated with mortgage financing is generally lower than for other types of bank loans. A sound loan underwriting procedure, particularly for first-time homebuyers would lower the risk further.
- Ownership rights and title transfers to execute mortgages present major problems for mortgage financing in Indonesia. It takes an inordinate amount of time to obtain land titles for a property development project. For individual buyers of the developed property, the process

is even more complicated and time-consuming, as all land titles originally obtained by the developer must be consolidated and disaggregated. To worsen matters, there are serious doubts about the ability of the BPN to administer efficiently the registration of hundreds or thousands of mortgages at the same time.

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## **Legal and Institutional Framework for Asset Securitization**

### **OVERVIEW**

Indonesia has not passed any comprehensive law for asset securitization. But some laws, regulations, and practices in Indonesia govern the elements of a typical asset securitization. As this study is concerned with the securitization of a special type of asset, housing loans, the discussion will be limited to issues related to property ownership, title transfers, the use of land and building as collateral, and sales of financial assets. The types of property ownership and title transfers were discussed in the previous section; the following discussion will therefore deal with other relevant issues.

To infuse fresh liquidity into the primary mortgage market, secondary mortgage activity can be established following any one of at least three models. In the first model, primary mortgage lenders (PMLs) borrow money from a secondary mortgage lender (SML) against their housing loan receivables. The SML, a wholesale financial institution, finances its lending activity by issuing bonds. In this model, there is no “true sale” transaction, receivables are not removed from the PMLs’ balance sheet, and no significant tax issue is involved. This transaction makes sense economically only if the SML’s cost of funding is cheaper than that of the PMLs.

The second model is similar to the first except that now the PMLs sell their receivables to the SML instead of borrowing money from it. As a “true sale” transaction is involved, many legal and tax issues must be clarified. If the “true sale” transaction is not covered by existing legislation and if the rights of the SML to the mortgaged property cannot be protected, then the model does not hold and the transaction simply becomes similar to the first model. However, the practice of factoring financial assets can be adapted to answer some of these concerns.

In the third model, PMLs package their receivables with credit enhancements, both internal and external, and sell them to a bankruptcy-

remote special-purpose vehicle (SPV)<sup>3</sup> which, in turn, sells the securities directly to bond investors. Unlike the second model, this model allows PMLs to initiate the mortgage-backed securitization all by themselves without the help of an SML. But because mortgage-backed securitization always involves credit enhancements and can be very costly, it is economically justifiable only if the marginal benefit of lower coupon rates and a better-quality balance sheet exceeds the marginal cost of structuring the deal.

All three models require the resolution of legal, institutional, and tax issues. The following discussion will focus in particular on these issues:

- Does Indonesian law allow the sale or assignment of mortgages and loans? What constitutes a “true sale” of financial assets?
- Do mortgage purchasers (the SML, the SPV) have the same legal rights as mortgage originators (PMLs) with respect to foreclosure?
- What kind of corporate and ownership structures are appropriate for the SML? For the SPV? Which regulatory bodies should govern these entities?
- Are the SML and the SPV subject to income tax? Should withholding tax be imposed on payments made by the SML and the SPV to their bondholders? What taxes are involved in a “true sale” of financial assets?

## **Mortgage Laws**

The new law on the use of land and building as collateral (the Hak Tanggungan law), passed in 1996, consolidates the various Indonesian laws that pertain to mortgage financing. Hak Tanggungan is a security right to land and is very similar to mortgage, except that it covers only fixed assets such as land, while mortgages can cover both fixed and movable assets. The following are the key features of the law:

- Generally speaking, the use and disposition of collateral in a credit agreement is stipulated in a separate Hak Tanggungan agreement which is attached to, and inseparable from, the credit agreement
- Hak Tanggungan is indivisible and can be applied directly to only three types of property ownership (defined in the previous section), namely: Hak Milik, Hak Guna Bangunan, and Hak Guna Usaha.

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<sup>3</sup>The SPV, created specifically for the transaction, should be legally proven to be bankruptcy remote from the PMLs.

Hak Tanggungan agreements are issued by notaries or appointed officials (PPAT) and must be registered at the BPN.

- More than one Hak Tanggungan agreement can pertain to the same underlying property; in this case, claims over the asset are ranked in the order of their BPN registration, with the earliest registered claim having highest priority. This arrangement paves the way for the issuance of a second mortgage by mortgagors whose collateral exceeds the value of their first mortgage.
- A property development may originally have several ownership titles which are then consolidated and disaggregated into individual ownership titles. The new Hak Tanggungan law recognizes this common practice and provides specifically for the mortgage of such complicated ownership titles.
- A Hak Tanggungan agreement specifies the names and addresses of the transferor(s) (the first transferor should be the mortgagor) and the recipient(s), and the nature and amount of the credit(s) to which the mortgage is attached. The agreement also contains a consent clause wherein the mortgagor agrees to the sale of the underlying asset by the first-priority holder of Hak Tanggungan if the mortgagor defaults.
- If the credit to which Hak Tanggungan is attached is sold, assigned, or transferred to another creditor, the Hak Tanggungan is similarly sold, assigned, or transferred to the new creditor, who now has the same legal rights of foreclosure as the original mortgage originator (the PML).
- Hak Tanggungan can be sold, assigned, or transferred to another creditor in or outside Indonesia. Such sale, assignment, or transfer should be registered at the BPN.
- If mortgagors default, the first-priority Hak Tanggungan holder can institute foreclosure proceedings through public auction or private sale. Private sale is possible only with the consent of the mortgagor, the transferor(s), and the holder(s) of the Hak Tanggungan if the sale is expected to generate maximum sale value. The public auction is carried out no earlier than one month after written notice is issued to all parties involved in the Hak Tanggungan. Such an auction is announced in at least two newspapers and can proceed only if there is no objection from any party.

In essence, the new Hak Tanggungan law provides a good legal basis for mortgage financing, both at the primary (PMLs) and the secondary

level (the SML, the SPV), and for the protection of the rights of Hak Tanggungan holders (PMLs, the SML, or the SPV) to foreclose the underlying asset of the Hak Tanggungan if the mortgagors default. The law can also be used to define what constitutes a “true sale” of mortgages for securitization.

### **“True Sale” Transactions**

On the basis of the preceding discussions, the following are the conditions for a “true sale” mortgage transaction, as implied by the Hak Tanggungan law:

- The seller of the mortgage holds a Hak Tanggungan. This fact is evidenced by a BPN-registered Hak Tanggungan agreement attached to the credit agreement. Consent letters from mortgagors allowing the sale, transfer, or assignment of their mortgages are also required.
- There is a notarized agreement by the seller to sell the credit to the buyer, stipulating, among other things, that the seller consents to transfer or assign the Hak Tanggungan to the buyer.
- All documents pertaining to the sale—land or house title, original credit agreement, Hak Tanggungan agreement, and others—are then transferred to the buyer.
- The transaction is registered at the BPN office: the name of the new holder of Hak Tanggungan is registered in the Hak Tanggungan records, and the name of the seller is crossed out or deleted.

### **SML Incorporation and Ownership Structure**

The government of Indonesia has long explored the idea of creating an SML to provide liquidity for expanded mortgage financing at terms that are more affordable to borrowers. This concept has been carried out with the help of USAID and multilateral agencies such as ADB. The SML is expected to function as lender to banks or primary mortgage lenders (PMLs). It will buy mortgage loans from banks or lend money to PMLs against the latter’s mortgage loans, and then issue bonds in the capital market to raise the needed long-term funds. Until now, the legal identity of the SML (whether it will be a bank or a finance company) has not yet been decided. But as the SML will engage in wholesale banking and not be a retail deposit-taker or retail lender, a finance-company charter may be more appropriate.

Prevailing views about the proposed SML seem to agree on several broad principles. First, it should have a single-purpose, limited-liability charter to provide liquidity to PMLs by lending to them against their mortgages, acquiring mortgages from PMLs, and issuing bonds and mortgage-backed securities. Secondly, the SML should be a joint undertaking of the government and the private sector, with support from a multilateral agency, while being run as an independent private enterprise. Its majority ownership should be in private-sector hands, distributed among various PMLs. Finally, government support for the SML should be strong at least initially but may decline over time. Government support could take the form of an unconditional and irrevocable guarantee for the first few bonds issued by the SML, to start its lending operation.

As the very idea of an SML is to help banks and PMLs escape from their chronic asset-liability maturity mismatch and to provide new liquidity, its bond issues should be targeted to nonbank investors and not to banks, for which no specific incentive is contemplated. Otherwise, the scheme would only recycle the banks' liquidity problem and not raise sustainable longer-term funding as originally intended.

### **Collective Investment Contract as SPV for Domestic Asset-Backed Securitization**

New regulations issued by the Capital Market Supervisory Agency, BAPEPAM, in December 1997 stipulate the use of a collective investment contract (CIC) arrangement for onshore mortgage- and other asset-backed securitization. The arrangement will take the place of a trust, which is indispensable for establishing a bankruptcy-remote special-purpose vehicle (SPV). In the CIC arrangement, there is division of labor among the contracting parties, in which the task of managing the portfolio of CIC-asset-backed securities is given to an investment manager while a custodian bank becomes a collective depository of mortgage securities.

Originators or banks with mortgage loans could sell their receivables to the CIC investment manager, which then transfers the underlying mortgage securities (land titles, the Hak Tanggungan agreement) to the custodian bank for safekeeping and collective deposit. The CIC investment manager responsible for the portfolio, in turn, issues asset-backed securities particularly for institutional investors. The funds raised are transferred to the originators as contracted, again through the CIC custodian bank. The servicing of the receivables or the mortgage loans is a function

that is normally contracted back to the originators or PMLs. A second, back-up servicer is made available whenever deemed necessary.

The effectiveness of the proposed CIC model for asset-backed securities (ABSs) remains to be tested in the marketplace. In the meantime, some major issues regarding the use of the CIC scheme as an SPV still need to be resolved. One question is whether the CIC, a legal contract but not a legal entity, can legally write contracts with other parties, such as investors and servicers, in the same way that an investment manager can. A second issue pertains to the division of labor between the investment manager and the custodian bank. In the BAPEPAM scheme, the investment manager is allowed to replace the custodian bank, which practically functions as a trustee to protect the interests of investors. Finally, the bankruptcy remoteness of the CIC scheme is still untested.

In asset-backed securitization the SPV insulates the securitized assets from the insolvency of the seller (PMLs). The SPV exists solely to sell and hold the securitized assets and may not have obligations other than those to be paid with the securitized assets. It must remain independent to protect investors' interests, and maintain separate assets, bookkeeping, and audit. In this respect, the new Hak Tanggungan law, if properly implemented, has greatly facilitated the bankruptcy remoteness of the SML/SPV from the mortgage originators/PMLs. For other asset types, however, the bankruptcy remoteness will hinge on the CIC legal structure which remains uncharted, as no specific law protects the rights of those who have claims to the assets.

## **REGULATORY AGENCIES**

The development of secondary mortgage markets in Indonesia involves several regulatory agencies including the central bank, the MOF/BAPEPAM, the Tax Bureau, the Ministry of Housing, and BPN. The Ministry of Housing develops public policy and housing development programs, as discussed in the previous section.

The central bank, Bank Indonesia, sets macroeconomic policies and supervises commercial banks. Since 1996, it has also supervised finance companies to improve coordination. The government's precautionary action against property speculators of limiting the growth of property sector credits even before the crisis, has been mentioned. It is nonetheless acknowledged that mortgage financing carries an inherently lower credit risk compared with other bank loans. In the past, such a view

was reflected in the treatment of mortgages as credits to small enterprises (KUK) which PMLs could pass on to other banks in exchange for fresh loans from those banks.

Secondary mortgage financing with a “true sale” of PML receivables offers strong potential to help banks and PMLs clean up their balance sheets, get new liquidity, and reduce their funding cost (at least in the long run) without jeopardizing their capitalization. Such asset transactions, however, will also entail moral hazard associated with credit expansion and asset transactions. Generally speaking, asset securitization dictates that the assets sold should be of superior quality and should meet the predetermined quality for the benchmark asset pool. This raises a policy question about the quality of the assets that the bank will have left after the transaction. The central bank should issue guidelines to clarify the matter. Moral hazard may also arise when banks/PMLs sell their mortgage loans to the SML or the SPV while still servicing the mortgage debts sold, and apply different service treatments to the sold and the unsold assets. To avert such a problem, the central bank may have to rule against discriminatory treatment of sold and unsold assets. In addition, mortgage-backed securitization always involves a transfer of detailed information about consumers to different parties, contrary to the provisions of the Banking Secrecy Act. A special provision to accommodate such a transfer of consumer information is therefore required to make securitization workable.

The need to develop uniform contracts and legal documents for mortgage financing, as well as uniform servicing standards, has been discussed. Standardization would reduce the time and effort required for due-diligence review and ultimately facilitate the development of the secondary mortgage market. Standards for collateral valuation, loan-to-value ratio, and maximum loan size, for example, would help speed up the securitization process.

If the government does decide to establish a secondary mortgage facility (SML), there are other requirements that need central bank support. For one, the central bank is most likely to contribute equity to the SML and to guarantee its first few bond issues. However, in the current banking crisis, it is perfectly reasonable for the central bank to keep out of new initiatives while it is trying to disengage itself from involvement in various joint-venture banks. A resolution is called for, of course, if the government wants to go ahead and establish the SML.

If the central bank is willing to guarantee the first few bonds issued by the SML, it will effectively create benchmarks, the most critical missing ingredient in the development of the debt market. As stated earlier, since the SML is supposed to help banks escape the liquidity trap, the central bank is not expected to grant specific incentives for banks to invest in SML bonds.

BAPEPAM, which sets policy guidelines and regulations and supervises the day-to-day activities of the capital market, is another regulatory agency with an important role in the development of the secondary mortgage market. It has an interest in providing the regulatory framework that will facilitate the introduction of new financial products. Among the regulations it has issued in this regard are those governing the CIC scheme for asset-backed securitization, which were released by BAPEPAM in December 1997. The regulations allow a new entity to issue debt securities. If the securities are privately placed and not listed, the report to BAPEPAM may be made after the fact. In addition, the SML may also have to be exempted from the required three-year record of bond issuance.

To develop the secondary market and to build the credibility of the whole system, BAPEPAM is expected to push further the much-awaited scripless trading, with the backing of the clearing guaranty agency (KPEI) and the central custody of securities (KSEI). This scripless trading system, if extended to include bond trading, will greatly improve trading efficiency and reduce risk associated with theft, forgery, and settlement disputes. Current initiatives by the Surabaya Stock Exchange to establish a “bond dealer club” as market-makers for bonds also need to be supported.

BPN plays a crucial role in establishing the rights of Hak Tanggungan holders to execute the underlying mortgages. The BPN registration process is also critical in determining priority of claims when the underlying asset has more than one Hak Tanggungan or when the Hak Tanggungan was transferred or assigned to other parties following the sale, transfer, or assignment of the credit to which it is attached. An efficient registration and administrative process must therefore provide legal certainty for the transactions and for the parties involved. As secondary mortgage activity involves thousands of individual mortgage loans and their attendant Hak Tanggungan, and the number is expected to increase rapidly over time, BPN should consider using appropriate information technology to speed up the registration of Hak Tanggungan.

## TAX ISSUES

When a PML borrows money from the SML against its mortgage loans, no VAT (PPN) or income tax (PPH) has to be paid on the transaction. Similarly, when PMLs sell their mortgage receivables to the SML (a “true sale” transaction), the discount is booked as funding cost to the seller for whom it is tax deductible and no VAT is involved. Payments by mortgagors to the SML (the buyer) are also exempt from withholding tax. However, the SML, as a limited-liability company, is subject to corporate income tax (PPH).

For mortgage-backed securitization using the CIC scheme, the tax implications of the transaction are not yet clear. Tax codes and guidelines regarding the status of the CIC must specify whether the scheme is subject to income tax and whether mortgagor payments are subject to withholding tax.

Under the present tax regime, payments made by the SML or SPV to its bond investors are subject to withholding tax. For resident taxpayers, the withholding tax rate is 15 percent, the same rate applied to bank certificates of deposit. For nonresident taxpayers, the withholding tax rate is 20 percent or the applicable tax treaty rates. Banks and pension funds licensed by the MOF are exempt from withholding tax when investing in securities issued by the SML or SPV.

## SECURITIZATION MARKET PLAYERS

Foreign banks like Citibank have played an important role in introducing new products and financial innovation into the Indonesian financial markets. After starting commercial-paper programs in 1989, Citibank was back in 1994 to introduce its first asset-backed securitization in Indonesia. Since then, there have been at least nine securitization deals, four of which were done by Citibank.

Those deals involved different asset types, notably credit-card receivables (Citibank, Bank International Indonesia) and auto loan receivables (Astra International, Bunas Finance, Putra Surya Multidana, and Bank Bira). There is as yet no mortgage-backed securitization deal, onshore or offshore, involving Indonesian entities (see Table 35). At least six securitization deals are deemed to be in the pipeline but have not yet been completed because of the financial crisis. These upcoming deals involve auto loan receivables (Astra International), export receivables (a wood-based industrial company), and mortgage loan receivables (four deals). Two of the four mortgage-backed deals are believed to involve Bank Niaga and Bank Papan Sejahtera.

**Table 35** Completed Asset Securitization Transactions ■

Originator	Asset Type	Completion Date
PT Putra Surya Multidana TBK <sup>b,d</sup>	Auto loan and motorcycle receivables	October 1997
PT Bank International Indonesia <sup>b,d</sup>	Future credit-card receivables	July 1997
PT Bank Bira TBK <sup>b</sup>	Auto loan receivables	March 1997
PT Bunas Finance Indonesia <sup>a,d</sup>	Auto loan receivables	February 1997
Citibank NA, Jakarta Branch <sup>a,d</sup>	Credit-card receivables	August 1997
PT Astra International TBK <sup>b,d</sup>	Auto loan receivables	June 1996
Citibank NA, Jakarta Branch <sup>a,d</sup>	Credit-card receivables	January 1996
Citibank NA, Jakarta Branch <sup>a,d</sup>	Credit-card receivables	December 1995
Citibank NA, Jakarta Branch <sup>a,c</sup>	Credit-card receivables	September 1994

<sup>a</sup>Onshore transaction<sup>b</sup>Offshore transaction<sup>c</sup>Not rated<sup>d</sup>Rated by international rating agencies

Source: ABS Finance, November 1997

## Investment Banks and Credit Enhancement Providers

All the foregoing completed securitization deals, even the onshore transactions, used offshore SPVs to avoid the regulatory, legal, and tax hurdles in Indonesia. Understandably, these completed asset-backed securitization transactions also used international investment houses (such as Salomon Brothers for the Putra Surya Multidana deal, Chase/Chemical Bank, Barclays de Zoete Wedd, and Morgan-Grenfell) and global trust banks (such as Bankers Trustee Company Ltd. and Chase Manhattan Trustees Ltd., London). The only domestic investment bank that is active in asset securitization deals is ABS Finance Indonesia, a specialized structured finance institution. ABS Finance, established in 1994, counts the IFC, CapMac Asia Ltd., Citi Growth Fund of Citicorp, two Singaporean companies, and local firms among its shareholders.

Asset securitization is primarily a credit enhancement. Apart from the SPV structure, securitization employs various forms of credit enhancements (Table 36). Credit enhancements can be internal (such as through overcollateralization) or external. For deals where the securitized assets are in rupiah (such as mortgage loans and auto loans) and the securities are issued in dollars (as in the case of most of the above completed deals), currency and interest-rate swaps are becoming part of the structure. Securitization may also involve insurance against specific risk (such as political insurance) or overall credit insurance for the

deal. Generally speaking, no Indonesian credit enhancement provider has a strong enough rating to service an asset securitization. Most of the foregoing deals used international credit enhancers. For the PT Putra Surya Multidana deal, the swap provider was Chase Manhattan and the overall credit insurer was Financial Security Assurance Inc. (FSA, with AAA claims-paying ability) of the US.

**Table 36** Investment Banks and Credit Enhancement Providers ■

Deal	Investment Bank (Arranger)	Credit Enhancement Provider
PT Putra Surya Multidana TBK	Salomon Brothers	Financial Security Assurance Chase Manhattan Bank, London Branch
PT Bank Internasional Indonesia	Citicorp International	n.a. <sup>a</sup>
PT Bank Bira TBK	ING Barings	Chase Manhattan Bank
PT Bunas Finance Indonesia	Bank of Boston Bear Stearns Asia	Chase Manhattan Bank, London Branch
Citibank NA, Jakarta Branch	ABS Finance	Citibank CMCI
PT Astra International TBK	BZW	Financial Security Assurance Chase Manhattan Bank

<sup>a</sup>n.a. = not available

Before the crisis, the market for currency and interest-rate swaps was quite competitive and had many players. Among these swaps providers were global names such as Citibank, Chase/Chemical Bank, Deutsche Bank, and Bankers Trust. Apart from FSA of the US, two other comprehensive credit insurance providers are entering the market. They are Capital Market Assurance Corporation (AAA claims-paying ability), through its affiliate CapMac Financial Services Inc., and Asian Securitization & Infrastructure Assurance (Pte.) Ltd. (ASIA Ltd., with A claims-paying ability). ASIA Ltd. is a financial guarantee company domiciled in Singapore. Its owners include the Singapore government, AIA Co. Ltd., Asian Development Bank, CapMac Asia, EPF of Malaysia, and Korea Long-Term Credit Bank. The objective of ASIA Ltd. is to promote the development of structured finance in the region.

Credit enhancement providers that wish to take part in a structured deal generally impose a minimum credit quality (rating) on the originators (PMLs) as well as the country. However, as the credit ratings of Indonesian entities have deteriorated in the current crisis, and even the sovereign rating is now only single-B, with a possible further downgrading in

the near future, the market for swaps and for credit insurance has been altogether eliminated.

In addition to the investment houses and credit enhancement providers, the services of rating agencies will be required for asset securitization. The two most active rating agencies in Indonesia and in the region have been Standard & Poor's (S&P) and Duff and Phelps (DCR); Moody's has been less active. Domestic rating agencies, such as Pefindo, were not involved in completed offshore deals, but their services are very likely to be called upon in any onshore rupiah asset-backed securitization deals in the future.

### **INVESTORS AND ISSUERS**

Almost all of the completed securitization deals in Indonesia were concluded by international institutional investors, through the international distribution arm of the lead manager. Investment in ABSs requires a good understanding of the risk-return trade-offs and various aspects of the structured deal. Most international investors have developed this required expertise internally; some, like PUMA Asset Management of Australia and Société Générale, have hired specialists and analysts to help them make investment decisions. Domestic investors generally lack the expertise to participate in complex structured deals, and are not expected to participate in the first few onshore securitization deals in the near future.

On the supply side, there are quite a number of potential originators for asset securitization, from mortgage banks (see Table 30) to credit-card companies (such as Citibank and almost all major domestic banks) and car finance companies (Astra Sedaya Finance, Putra Surya Multidana, Swadharma Finance). Until the crisis hit, asset securitization was a very attractive option for Indonesian commercial banks, burdened by a liquidity mismatch and struggling to clean up their balance sheets.

The current crisis effectively killed new asset-backed securitization deals in Indonesia. Currency and interest-rate uncertainties have made it difficult for swaps and insurance providers to price their premiums and made these providers unwilling to render service. Similarly, international investors are loath to put in fresh money as the risk is considered too high to justify the expected returns. There is nevertheless a small window of opportunity for securitizing the export receivables of agro-industrial firms. If structured properly, export receivables securitization can be isolated from currency risk as well as from the bankruptcy or default risk of the Indonesian issuer.

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## Feasibility of Launching a Secondary Mortgage Lender: A Preliminary Appraisal

The legal and regulatory framework and the extent to which it facilitates or hinders mortgage-backed securitization have already been discussed in detail. The most important law with respect to mortgage securitization is the Hak Tanggungan law passed in 1996, which consolidates and strengthens the legal basis for the rights of the Hak Tanggungan holder. As mentioned earlier, the use of the CIC scheme as SPV for asset-backed securitization in Indonesia still faces many legal and tax hurdles, aside from its doubtful acceptability among domestic institutional investors. A secondary mortgage lender (SML) is therefore believed to be more feasible in the near term than onshore mortgage- or asset-backed securitization through the CIC scheme.

The following sections deal with a model for estimating market demand for housing and for residential mortgage loans, basic assumptions for the estimates particularly during the crisis, and preliminary discussions about the structure and required paid-up capital of the SML.

### **BASIC ASSUMPTIONS**

The demand for new houses is expected to drop significantly in 1998–2000 and start to recover in 2001. The demand for new low-cost houses will be only 50 percent of the 1997 level in 1998, 75 percent in 1999, and back to the 1997 level in 2000. For medium- and high-cost houses, the demand is expected to reach 25 percent of the 1997 level in 1998, 50 percent in 1999, and back to the 1997 level in 2000. As the economy starts to recover, the demand for new houses will also normalize, with a growth rate of about 20 percent per annum from 2001 before entering into the next industry cycle. Housing demand is expected to follow a four-year cycle of ups and downs.

The average price of low-cost houses, now Rp 10 million, will go up to Rp 12 million in 2001 and will increase by 20 percent every three years. The average prices of medium- and high-cost houses will remain at Rp 100 million and Rp 1,000 million, respectively, until 2001 and will then increase by 20 percent every two years thereafter.

All new purchases of low-cost houses are financed with low-interest, government-subsidized bank loans, with a loan-to-value ratio of 80 percent. About 80 percent of purchases of medium- and high-cost houses

are financed with bank loans mostly from private banks, with a loan-to-value ratio of 75 percent.

The target market of the secondary mortgage lender will be:

- The middle and high-end markets (60–70 percent of total market value);
- First-time home-owners (75 percent of buyers); and
- Single dwelling units (83 percent of new houses sold).

To minimize credit risk, the mortgages sold or assigned to the SML will strictly follow the proposed criteria for the mortgage benchmark pool.

Given the above target market and mortgage pool criteria, the mortgage pools available for the targeted secondary mortgage activity will effectively represent about 25 percent of the mortgage financing market, or about 50 percent of mortgage financing for medium- and high-cost housing.

Outstanding housing loans as of the end of 1997 stood at about Rp 18.0 trillion and had an average maturity of ten years. It is assumed that, of this total amount, Rp 4.0 trillion (about 20–25 percent) will be sold to the SML in the first four years of its operation, at Rp 1.0 trillion per year.

### **SML OPERATING CHARACTERISTICS**

The SML is chartered as a finance company with the sole purpose of providing liquidity for mortgage financing by buying mortgage loans from PMLs and issuing bonds in the capital market to raise long-term capital.

The SML should be run efficiently and professionally. As a wholesale lender, the SML will employ only a few highly skilled staff and analysts. Its staff of not more than 30 is expected to handle up to 60 transactions a year until 2007.

To be able to provide liquidity for house financing at more affordable terms for borrowers, the SML will need very competitive funding. Such low-cost funding will be achieved through a combination of government support, probably with a full government guarantee for its first few bonds, and outstanding credit quality in its asset portfolio.

If PMLs borrow money from the SML against their mortgage receivables, the interest margin passed on to them will be about 150 bps, or about one-half of the interest margin of Indonesian banks before the crisis. This lower spread, together with the expected low funding cost of the

SML, will mean a significant cost saving for PMLs. Sales of PML mortgages to the SML, on the other hand, will be priced in such a way that the SML effectively earns a gross return of 150 bps, net of funding, intermediation, and servicing costs.<sup>4</sup>

PMLs selling their mortgages to the SML are contracted back to service the mortgage payments. If necessary, another experienced consumer bank may also be contracted as back-up servicer by the SML. The cost of servicing is estimated at 50 bps, which becomes fee-based income for the PMLs.

If the SML is implemented during the current economic crisis, its transactions with the PMLs should be “true sales” of PML mortgages to the SML. Such “true sale” transactions will effectively eliminate the SML’s exposure to the credit risk of the PMLs and, at the same time, avoid the problems associated with the restructuring of the banking sector.

The operating costs of the SML will largely consist of personnel, servicing cost, office rent, and back-up office technology. Once the SML is operating normally, its total operating cost is estimated to be about 80 bps of its total assets, leaving a net profit margin after tax on assets (ROA) of about 50 bps (assuming a corporate income tax rate of 30 percent).

As a single-purpose entity with a strong public policy role, the SML can have an equity-to-asset ratio of 5 percent. This capitalization ratio is lower than that of commercial banks because the SML must maintain a very high asset quality, as indicated by the benchmark asset-pool criteria. All profit after tax will be retained as part of the SML’s capital adequacy requirement.

The SML will issue bonds yearly in the amount needed to cover the targeted demand for secondary mortgages. Exactly the same amount will be disbursed to buy mortgages from PMLs. On the liability side, therefore, the SML will carry only bonds, equity, and retained earnings. On the asset side, it will have receivables from mortgages at their purchase book value. Only a very small fraction of the assets will be in the form of fixed assets such as office furniture, equipment, and cars.

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<sup>4</sup>This assumption is highly simplistic. For PMLs, the price of the “true sale” of their mortgages should reflect the present value of their future cash flow, which would normally be higher than the book value. The SML, on the other hand, will be required to maintain its asset quality to meet its benchmark pool criteria. This may also require overcollateralization, which, in turn, will reduce the value of the mortgages being sold. This problem demands closer analysis and is outside the scope of this report. It suffices to assume here that whatever the price, the SML would, at the end of the day, earn a 150 bps spread.

## PRELIMINARY RESULTS

Some observations from the simulation using the model are as follows:

- The SML must maintain assets of a very high quality, with a targeted rating of AAA (the maximum possible rating); must operate efficiently, with a high-caliber professional staff and a very clean balance sheet with minimum investment in fixed assets; and must therefore be allowed to have a 5 percent straight equity-to asset ratio.
- During its first ten years of operations (1998–2007), the SML will buy mortgage loans worth Rp 1–2 trillion, or an average of about Rp 1.3 trillion, from PMLs each year. By the end of the tenth year (2007), the SML will be carrying Rp 10.3 trillion in mortgage loans purchased from PMLs on its balance sheet.
- To finance the acquisition, the SML must issue between Rp 150 billion and Rp 3.0 trillion worth of bonds, or an average of Rp 1.4 trillion, in the capital market each year for the period 1998–2007.
- The SML needs to have a starting paid-up capital of Rp 300 billion to support its operation and to maintain a 5 percent straight equity-to-asset ratio. All profit after tax during the period 1998–2007 will be retained, resulting in a total shareholder equity of about Rp 615 billion by 2007.
- Despite an effective interest margin of 150 bps and an after-tax profit-to-asset ratio (ROA) of only about 0.5 percent, the SML is expected to yield a return on equity (ROE) of about 7 percent on the average. Again, this superior return on equity reflects the high asset quality, clean balance sheet, and efficient operation of the SML.

## DISCUSSION AND CONCLUSIONS

Several observations emerge from the preceding discussion on the development of the Indonesian fixed-income market, the current state of residential mortgage financing, and the prospect of promoting secondary mortgage lending activity.

The development of the Indonesian fixed-income market is hindered by the small domestic investor base, the inefficient market intermediary and trading system, the absence of benchmark rates, and a host of problems related to legal, regulatory, and disclosure requirements. In the order of importance, the strengthening of the domestic investor base should rank the highest. It thus becomes imperative to mobilize domestic savings by reforming the pension fund and insurance industries. This would include, among others, the reform of the Jamsostek, the establishment of

mandatory saving modeled after the Central Provident Fund of Singapore, and the strengthening of the much-battered mutual fund industry.

The second priority should go to improving market institutions and their infrastructure. Indeed, several initiatives have already been put in place to plug the loopholes in the legal and regulatory system, particularly with regard to bankruptcy laws, disclosure requirements, and accounting standards. The current financial crisis has led the government and the IMF to push for the introduction of such laws and prudential measures in mid-1998. In addition, it is believed that the introduction of long SBI or long government rupiah bonds will become an attractive option in view of the current economic and financial reforms. In the capital market, there have been discussions to further consolidate the two securities exchanges and to expedite the implementation of scripless trading in conjunction with the full operation of the clearing guarantee agency (PT KPEI) and the central custody of securities (PT KSEI). In the meantime, there is also a strong need to strengthen the capitalization, human resources, and back-office support of securities companies.

During the financial crisis, the fixed-income market has also been practically moribund. No new debt has been issued and trading in the secondary market has almost dried up. With banking at a standstill, liquidity is almost nil. The only possibility of new debt in the market will be the debt issues of government-related entities and exporting companies. New government bond issues are expected to come from entities like PLN, Telkom, BTN, and Perum Pegadaian, and it is believed that such issues will be absorbed by government-related institutional investors. The other opportunity in the current crisis is securitization of export receivables, particularly those of forestry and plantation companies. If the securitization is structured properly, the structured entity can avoid currency and country risk, and be bankruptcy remote from the exporting companies.

The demand for housing and housing loans in Indonesia was very strong in the past, as statistics show. At the end of 1997, outstanding housing loans totaled Rp 18 trillion, of which Rp 11.3 trillion came from 11 major primary mortgage lenders. These outstanding housing loans are a solid supply base for secondary mortgage activity, even during the current crisis.

The passage of the Hak Tanggungan law in 1996 placed mortgage loan securitization in Indonesia on a strong legal footing. The law makes it easy to identify and verify the holders of Hak Tanggungan and protects their claim to the underlying collateral. In essence, the sale or assignment

of Hak Tanggungan from one party to another, if done properly, gives the final Hak Tanggungan holder full claim over the collateral and protection from the risk of bankruptcy by the transferor. The bankruptcy remoteness of the secondary mortgage entity derives its legal basis from this feature of the Hak Tanggungan.

To surmount the financial crisis, the government is giving top priority to the reform of the banking sector, with the help of the IMF and other multilateral agencies. This reform will include restructuring the industry, cleaning up the banks' nonperforming loans, and recapitalizing the whole industry. At the same time, the restructuring will isolate banks' good assets from further deterioration and from the moral hazard of the controlling shareholders. In this regard, asset securitization, and particularly mortgage securitization, will be an attractive option for cleaning up the balance sheet of banks, safeguarding their good assets, and adding liquidity to the system. The creation of a secondary mortgage lending institution can therefore be viewed as an integral part of the banking reform. In addition, bond issuance by the SML, if guaranteed by the government and structured properly, will provide the much-needed benchmark in the market.

It remains to be seen whether the CIC scheme as a special-purpose vehicle for onshore securitization will be implemented in Indonesia. Besides the unresolved legal and tax obstacles, the bankruptcy remoteness of the scheme is also still untested. Domestic investors, meanwhile, have not yet developed in-house expertise to digest the risk-return trade-off of the scheme and will therefore not be able to participate in the first few asset-backed securitization transactions.

On the other hand, the establishment of a secondary mortgage lending bank is more straightforward in Indonesia and the legal and tax implications are also clearer. Domestic investors are expected to be more receptive to investing in straight bonds issued by the SML, probably with a guarantee from the government, as no expertise is needed to handle them, unlike CIC asset-backed securitization with its more complicated structure.

The current financial crisis poses major challenges to the feasibility of secondary mortgage activity in Indonesia. The high and uncertain interest-rate environment, in tandem with the contraction of households' disposable income, has resulted in a sharp drop of demand for new housing. The Indonesian banking sector has been virtually paralyzed, with corporate borrowers in a demand and liquidity squeeze and consumers under pressure to cope with sharp price increases. To revitalize the

banking sector, the government has embarked on reform initiatives to restructure the industry, and has pledged to tackle the problem of nonperforming loans and the required recapitalization of banks.

If the SML is to be implemented soon while the current crisis is still in progress, the transactions between PMLs and the SML should be “true sales” where PMLs sell their mortgages to the SML. Such “true sale” transactions will effectively insulate the SML from the credit risk of the PMLs and avoid the problems associated with the restructuring of the banking sector.

It is essential for the SML to have superior credit and asset quality with a target rating of AAA (the highest possible rating), operate efficiently, maintain a lean staff of high-caliber professionals, and keep a clean balance sheet. The SML will not compete with the government’s low-cost housing loan program. Instead, its mortgage activity will be directed to the middle and high-end markets, particularly to first-time buyers of single dwelling units.

To ensure superior asset quality and minimize credit risk, the SML should strictly follow these criteria for the mortgage benchmark pool in its secondary mortgage activity:

- The mortgages were originated by experienced primary mortgage banks (probably with an investment-grade rating).
- The mortgages have been fully disbursed, and have a maximum original term of 15 years.
- The mortgages are secured by a first registered charge or an assignment of rights over the mortgaged property.
- The property is less than five years old at the time of mortgage origination and is covered by a property and casualty insurer with good credit standing.
- The maximum loan size is Rp 750 million, with a maximum loan-to-value ratio of 75 percent. The property valuation should be made by a registered and experienced surveyor.
- The monthly mortgage payments do not exceed 35 percent of the borrower’s monthly income.
- The mortgage loans are at least two years old, and are not more than three months in arrears at the time of sale.
- The mortgage pool securitized from a PML contains at least 100 loans, and should be geographically diversified. No single property development project may represent more than 20 percent of the mortgage pool.

Incorporating the SML as a single-purpose finance company could well be Indonesia's best option given its legal and regulatory framework. The SML should concern itself solely with providing liquidity for mortgage financing that is affordable to borrowers by buying mortgage loans from PMLs and issuing bonds in the capital market to raise the needed long-term capital.

Within the first ten years of its operation, the SML may be expected to need a minimum paid-up capital of Rp 300 billion and employ about 30 professionals.

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