



Overview

The Feasibility of Creating Mortgage-Backed Securities Markets in Asian Countries

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INTRODUCTION

The Asian financial crisis has confirmed the need to develop further the long-term domestic bond markets in the region. Despite generally high rates of saving, long-term savings have not been efficiently mobilized. Private-sector investments in rapidly growing emerging economies have had to be financed with short-term foreign borrowing (causing worsening imbalances in the current account and eventually exchange-rate instability). Governments looking for a way out of the crisis have therefore been searching for alternative ways of mobilizing long-term savings.

The search has focused on several instruments.¹ Mortgage-backed securities (MBSs) are increasingly seen as a tool for mobilizing long-term savings, while at the same time stimulating domestic housing markets.

The present study was carried out to determine the feasibility of establishing mortgage-backed securities markets in eight Asian countries (the People's Republic of China, India, Indonesia, Republic of Korea, Malaysia, Pakistan, the Philippines, and Thailand). The domestic bond and mortgage markets are reviewed briefly in this overview chapter, which also summarizes the findings of the study and its policy recommendations at the regional level.

Mortgage-Backed Securities (MBSs)

MBSs are a specific type of asset-backed securities (ABSs), which are claims on a stream of cash flow from financial assets, usually in the form

¹Including pension-fund reform and the development of mutual funds or unit trusts.

of receivables. MBSs are backed by a stream of cash flows from mortgage credits provided by an originator (usually a bank). MBSs are an effective tool for balance-sheet management for originating institutions, which can take the securitized loans sold without recourse off their balance sheets.

By channeling funds from domestic bond markets to domestic housing markets, MBSs link the wholesale and retail credit markets. That is why reasonably efficient bond and housing markets are crucial for the efficient operation of domestic MBSs markets. And conversely, distortions and other shortcomings in domestic housing and bond markets weaken the MBS markets.

In theory, any real or financial asset that can generate a stable and predictable cash flow can be securitized. In practice, the types of assets eligible for securitization (see Table 1) depend on the preferences of the regulatory regime. More developed financial regimes take a more liberal approach, while less developed regimes, such as the Philippines', are wary of liberalizing securitization rules without first increasing the technical capacity of regulators to supervise such activities. Exotic securitization structures, such as the securitization of receivables to be realized in the future, are not yet widely accepted in developing regulatory regimes. The

Table 1 Types of Assets Securitized ■

| Country | Securitizable Assets |
|-------------------|--|
| United States | Various types of receivables, including residential and commercial mortgages, credit-card receivables, automobile loans, royalty streams, personal loans, and trade receivables |
| China | No assets currently securitized |
| India | Limited securitization of: auto loans, bills receivable, hire-purchase receivables, and other receivables |
| Indonesia | Credit-card receivables, auto-loan receivables, export receivables, future receivables, motorcycle receivables |
| Republic of Korea | No assets currently securitized |
| Malaysia | Residential mortgages and industrial property loans |
| Pakistan | No assets currently securitized |
| Philippines | Mortgage loans, consumption loans, trade and lease receivables, credit-card receivables, and other similar financial assets |
| Thailand | Loan claims or any other receivable rights that give rise to a flow of future income: mortgages, auto loans, consumer loans, vehicle and equipment leases, credit-card receivables |

securitization of nonperforming loans, a practice spawned by the crisis in countries such as Japan and Thailand, is expected to inject additional liquidity into the banking system.

Receivables and loans are the most commonly securitized assets. Of these, mortgages are the most widely eligible, because the underwriting process for housing loans is fairly easy to standardize. Countries with enough experience in mortgage securitization (e.g., Malaysia) have also begun drawing up regulations for the securitization of other types of assets, usually project- or infrastructure-related receivables. Besides residential mortgages, securitizable assets include, among others: commercial mortgages, trade and lease receivables, automobile loans, credit-card receivables, agriculture and education loans, taxicab medallions, and cash surrender values of life insurance policies.

In practice, conventional MBSs issues can be classified into three types (see Table 2):

- *Collateralized debt.* This is very similar to traditional borrowing where real assets are pledged as collateral for debt. In the case of collateralized debt, the market value of the financial asset when sold, or the market value of the future stream of cash flow generated by the asset, is pledged. This type of structure is found in the United States and other Western financial markets, but not in the countries surveyed.
- *Pass-through obligations.* These structures involve the sale of direct equity interest in the underlying asset pool. Since the claim is in the form of an equity stake, the timing and size of the amortization on the principal cannot be reconfigured. The interest payment stream, however, can be divided between the servicer and the investors. Thus, in a pass-through MBS, the underlying assets have the same payment characteristics as the security. Assets are conveyed to a special-purpose trust (SPT), which issues certificates to investors buying direct equity claims on the underlying assets. Among the countries in the survey, only the Philippines allows pass-through ABSs structures.
- *Pay-through obligations.* Unlike pass-through ABSs, these structures allow the payment stream of the underlying assets to be reconfigured to appeal to a broader range of investors. Assets are conveyed to a special-purpose corporation (SPC), which issues debt securities collateralized with the assets. An example of an SPC in

Table 2 Allowable Securitization Structures ■

| Country | Eligible Securitization Structures |
|-------------------|---|
| United States | Collateralized debt, pass-through obligations, pay-through obligations |
| China | No private debt securities issued, only private equity securities |
| India | Pay-through obligations |
| Indonesia | Pay-through obligations |
| Republic of Korea | None |
| Malaysia | Pay-through obligations |
| Pakistan | None, but there is a proposal for pass-through-type obligations |
| Philippines | Pass-through obligations |
| Thailand | Law establishing secondary mortgage institution does not define the allowable securitization structures |

the countries surveyed is Cagamas Berhad of Malaysia. Indonesia, Malaysia, and India have recently allowed pay-through securitization structures for various types of receivables.

Securitization transactions allow securities to be structured so as to achieve a credit rating that can be higher than the issuer's. This is another appeal of securitization.

Since all the countries in the sample are familiar with the concept of a mortgage generating future flows of amortization payments, mortgage-backed securitization should theoretically be possible in those countries. Differences in legal and regulatory climates, however, account for differences in the ease of implementation of MBSs transactions. Some countries have experimented with or have successfully established securitization regimes, while for other countries, the MBSs concept is still totally foreign.

There are a number of potential issuers of securitized assets. These include secondary mortgage institutions (SMIs), corporations, and banks. In the United States, the government established the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) to securitize residential mortgages. Cagamas Berhad in Malaysia was established by the government as a secondary mortgage institution (SMI) to securitize mortgages. Housing finance corporations in other countries, such as the Philippines, Korea, and India, are current or potential issuers of MBSs.

DOMESTIC BOND MARKETS

Table 3 shows the relative size of the domestic corporate bond and equity markets and domestic bank lending in the countries surveyed. Malaysia has the largest market for bank loans and equity market capitalization in relation to GDP, while Korea has the largest domestic bond market. Table 4 summarizes outstanding bonds by type of issuer. Korea has the highest ratio of government and corporate bonds to GDP.

Table 3 *Bank Loans, Corporate Bonds, and Equity Markets in Selected Asian Countries, December 1997 (US\$ billion)* ■

| Country | Outstanding Bank Loans | Outstanding Corporate Bonds | Equity Market Capitalization |
|-------------|------------------------|-----------------------------|------------------------------|
| PRC | 965.19 (105.00) | n.a. | 206.37 (22.46) |
| India | 80.40 (23.50) | 30.98 (9.10) | 128.47 (37.60) |
| Indonesia | 80.82 (60.20) | 2.01 (1.50) | 29.11 (21.68) |
| Korea | 118.17 (47.60) | 50.73 (20.40) | 41.88 (16.86) |
| Malaysia | 117.27 (165.80) | 11.96 (16.90) | 93.61 (132.30) |
| Pakistan | 15.46 (27.20) | 0.62 (1.10) | 10.97 (19.30) |
| Philippines | 43.83 (72.30) | 7.60 (12.50) | 31.36 (51.73) |
| Thailand | 128.26 (125.50) | 3.86 (3.80) | 23.54 (23.04) |

Note: Percentage of GDP in parenthesis. "n.a." stands for "not available."

Sources: Asian Development Bank, 1999; International Finance Corporation, 1998

Bond market development presupposes a wholesale credit market made more efficient and reliable as a source of funds by a host of well-functioning institutions and market players. But the bond market is also influenced by factors that affect capital markets in general. Hence, bond market development should be discussed within the broader context of capital market development.

The Asian Development Bank (1999) has proposed six capital market policy areas for consideration by policymakers and regulators in Asian developing countries. These are:

Table 4 Outstanding Bonds, Trading Volume, and Turnover Ratio, December 1997
(US\$ billion) ■

| Country | Outstanding Bonds | Government Bonds | Corporate Bonds | Trading Volume | Turnover Ratio |
|-------------|-------------------|------------------|------------------|----------------|----------------|
| PRC | 65.22 (7.10) | 65.22 (7.10) | n.a. | 185.54 | 284.80 |
| India | 93.76 (27.44) | 62.78 (18.37) | 30.98 (9.10) | 28.97 | n.a. |
| Indonesia | 4.91 (3.66) | 2.90 (2.16) | 2.01 (1.50) | 2.51 | 32.00 |
| Korea | 131.57 (52.97) | 78.41 (31.57) | 53.16 (21.40) | 169.12 | 128.50 |
| Malaysia | 30.81 (43.55) | 18.55 (26.64) | 11.96 (16.90) | 15.71 | 36.90 |
| Pakistan | 6.40 (11.26) | 5.78 (10.17) | 0.62 (1.10) | n.a. | n.a. |
| Philippines | 14.10 (23.26) | 6.50 (10.72) | 7.60 (12.50) | 42.55 | 222.50 |
| Thailand | 11.50 (11.25) | 7.57 (7.41) | 3.86 (3.80) | 3.39 | 19.50 |

Note: Outstanding bonds include both government-issued and corporate bonds with the exception of the PRC, for which only government-issued bonds are reported. Figures in parentheses represent % of GDP. "n.a." stands for "not available."
Source: Asian Development Bank, 1999

- development of long-term bond markets;
- improvement of corporate governance;
- reinforcement of regulatory and supervisory arrangements;
- expansion of the investor base;
- further improvement of market infrastructure; and
- reevaluation of controls on market volatility.

Development of Long-Term Bond Markets

Major flaws in many of the markets surveyed, if not remedied, will hamper the financing of long-term investments and, even more so, the establishment of MBSs markets in the region. Underdeveloped bond markets in the countries surveyed have narrowed those countries' choices in raising capital, leading them to rely heavily on the banking system. Banks, on the other hand, risk mismatches in their maturity structures if they continue to provide long-term capital (for infrastructure-related investments), given their short-term liabilities. For lack of alternative sources of domestic

long-term capital, firms have turned to international wholesale credit markets, and have exposed themselves to exchange-rate risks in the payment of debt. The crisis, however, has worsened those risks, and has reduced the flow of portfolio lending to Asian countries and depressed the domestic equity markets. Very little long-term capital is being mobilized in the region.

Clearly, therefore, domestic bond markets have a crucial role to play, along with domestic equity markets, in financing investments in areas critical to sustained economic growth. Reforms in these markets are thus a key part of financial market reform in Asia in general. The Asian Development Bank study identified four key institutional impediments to the development of long-term bond markets in the region.

Lack of a benchmark yield curve

The government can boost the bond market (including the market for MBSs) by developing benchmark yield curves that will allow the risk-adjusted pricing of long-term corporate bonds. Malaysia, Korea, and the Philippines, among the countries surveyed, have attempted to establish benchmark yield curves, but none that is worthy of consideration.

Most of the countries surveyed, notably Malaysia and the Philippines, have recognized that the concentration of liquidity in short-term bond markets is to the detriment of long-term bond markets and activities, such as housing and infrastructure. Both countries have programs for deepening their long-term financial markets and extracting benchmark long-term bond yields. However, the programs have been derailed by the crisis, which has increased demand for short-term rather than long-term securities. Many of the other countries in the survey have been content with their liquid short-term domestic bond markets (the short-term bond markets in Korea appear to be the deepest) and have not attempted to build liquid long-term bond markets.

Limited supply of quality bond issues

The lack of viable debt instruments is due to the following factors: (i) poor credit standing of issuing corporations; (ii) statutory restrictions and financial regulations on the issuance of bond instruments; and (iii) repressive regulatory processes.

Many of the supply-side impediments mentioned cannot be removed without some initiative on the part of government. The further deterioration

of the credit standings of issuing corporations as a result of the crisis underscores the need for macroeconomic stabilization to enhance credit conditions in general. Governments must also be aware that undue legal restrictions on the amounts of debt that corporations can raise or on the number of eligible issuers interfere with the proper operation of market forces in bond markets (and hence unduly limit supply).

Limited bond demand

Subjecting bond markets to nonmarket forces, such as the practice of forcing captive investors to purchase bonds at below-market yields, unnecessarily restricts demand.

Inadequate bond market infrastructure

The ADB study pointed out that the following were necessary for the development of bond market infrastructure: (i) competitive auctions; (ii) a secondary market trading system where real-time price and volume information is readily available; (iii) a clearing and settlement system for bonds; (iv) a stronger role for credit-rating agencies; and (v) hedging instruments for long- and short-term interest-rate risk.

Bond market development in general requires mechanisms to ensure that the market value of securities reflect correct market perceptions of relative borrower risk and other fundamentals. For this purpose the bond markets should be competitive and have information efficiency. All participants should have access to information that will help them value securities correctly. Bond markets, like all securities markets, thrive only in conditions of full transparency: information about issuers and other parties to a transaction and the basic variables driving bond prices should be well known. Without such transparency, market prices may not correspond to the fundamentals. That is, bubble paths may emerge in the prices of securities.

Since information is crucial to bond market development, an economy must have a stable, consistent, and accessible framework for the timely and accurate analysis and interpretation of information about issuers and securities. Bond markets cannot develop fully without exhaustive, objective, and independent research by credit-rating agencies, investment banks, and other financial service institutions.

To a greater or lesser extent, shallow bond markets are a constraint in all of the countries surveyed. Lack of quality information discourages

investment. Despite efforts by the countries to set up domestic credit-rating agencies and to cultivate a ratings culture in domestic bond markets, most of the agencies lack the capacity to rate structured-finance securities. Some countries, such as Malaysia, India, and Korea, have allowed the establishment of more than one credit-rating agency to foster competitive ratings. However, with low demand for ratings due to shallow bond markets, the efficacy of such a step is questionable.

Improvement of Corporate Governance

The ADB study identified three principles for improving corporate governance, which is necessary for improving the overall integrity of broad capital markets: (i) competitive capital markets; (ii) legal protection for investors; and (iii) a better defined and enhanced role for outside shareholders.

Bond market development in general also requires institutions and tools to protect creditors' claims on borrowers. Laws passed to strengthen and clarify the nature of claims of creditors on debtors likewise preserve the integrity of domestic bond markets. In most of the countries surveyed, laws governing the bond markets can barely cope with the demands of trading and regulation of sophisticated financial transactions.

Where laws do appear to be adequate, regulators are unable to enforce rules and regulations. This renders investments in the bond markets more uncertain, reduces overall demand for such investments, and makes the markets even more shallow.

Reinforcement of Regulatory and Supervisory Arrangements

The ADB identified three serious problems in the region that cause enforcement problems and increase monitoring costs: (i) fragmented regulatory structure and coverage; (ii) overemphasis on merit-based regulation; and (iii) underutilization of self-regulating organizations (SROs).

Bond markets need laws that strengthen the operation and regulation of financial markets in general. The crisis has pushed a number of governments to institute quick reforms in the structure and regulation of their financial markets. From the regulatory standpoint, perhaps the most important reforms have been those that were intended to consolidate regulatory oversight over disparate financial institutions in a single entity. The most prominent example is the Financial Supervisory Commission in Korea, which now supervises the banking, capital market, and insurance

industries. The objective is to streamline review and regulation, and to give regulators a broader perspective of the financial system, instead of the limited sectoral views of the past.

The present model of financial regulation is that of a central bank and a securities commission regulating the financial markets. Typically, central banks supervise banks, while securities commissions supervise securities market institutions. Regulatory powers are typically embodied in enabling laws which allow financial regulators to discharge their functions.

A market-based regulatory philosophy consistent with competitive capital markets also includes a gradual transition from merit-based to disclosure-based regulation, in recognition of the fact that market participants are in a better position to decide on the merits of a particular issue than the regulator itself.

Expansion of the Investor Base

The ADB study identified a number of preconditions for the expansion of the investor base, which is narrow in most, if not all, of the countries surveyed: (i) improvement of the contractual savings system and its regulations; (ii) promotion of mutual funds; (iii) deregulation of the asset management industry; and (iv) a greater role for insurance companies in capital markets.

Domestic laws in several of the countries surveyed limit the range of eligible investments by contractual savings institutions. These laws or rules, while prudential in nature, need to be evaluated for consistency with efforts to broaden investor participation in financial markets in general.

Further Improvement of the (Equity) Market Infrastructure

The ADB study also cited the following issues related to the strengthening of equity market infrastructure, which are relevant as well to the development of the bond markets: (i) better risk management in clearing and settlement; (ii) rationalization of trading costs (including brokerage fees and stamp taxes); and (iii) adoption of better trading methods to reduce volatility.

To ensure their integrity, financial markets must protect investors from a multitude of trading system and counterparty risks. Transaction risk can be minimized through such means as clearing and settlement systems based on scripless trading and real-time gross settlement (RTGS). In recent years, Thailand, Malaysia, and Korea have invested significantly in

the necessary financial market infrastructure to support more sophisticated securities market activities.

High transaction costs resulting from such factors as stamp taxes, which curtail liquidity in both primary and secondary bond markets, may also hold back the development of the bond markets. Reasonably low transaction costs promote operational efficiency. Most of the countries studied levy transaction taxes, such as stamp taxes and capital gains taxes, on the trading of bonds and other securities in the financial markets. High transaction costs in the Philippines, India, and Pakistan have led investors to hold on to their investments in bonds and other securities until maturity. In an effort to stimulate liquidity in their domestic bond markets, Malaysia and Thailand have eliminated stamp taxes to lower transaction costs and encourage trading of securities.

Transaction costs are influenced as well by the competitive structure of bond markets. Where securities trading or market support activities are confined to only one or a few institutions, such as when there are few brokers, investment banks, and underwriting institutions, transaction costs will be relatively high.

Regulations that require institutional investors (especially banks or insurance companies) to set aside a proportion of their investments in bonds as regulatory capital or reserves also increase bond market transaction costs. Such requirements, though essentially prudential in nature, impose an opportunity cost on investors which reduces the demand for bonds and other securities.

Reevaluation of Controls on Market Volatility

Finally, the ADB study recommended the introduction of (i) margin regulation, (ii) circuit breakers, (iii) a price stabilization fund, and (iv) securities transaction taxes to contain volatility in the region's financial markets.

However, the study report also expressed reservations about the efficacy of such controls on market volatility, which could encumber price discovery. Careful evaluation of these mechanisms before their adoption was recommended.

DOMESTIC MORTGAGE LOAN MARKETS IN ASIA

The domestic market for mortgages in the countries surveyed in this study shows the tremendous potential of mortgage finance in Asia. This potential,

though, will remain untapped if weaknesses common to mortgage markets in the region are not solved.

First, like bond markets, the viability of mortgage markets in the region may be compromised by high transaction costs, especially unreasonably high stamp taxes. High transfer and registration fees and property taxes add to transaction costs. Malaysia has dealt with the problem by granting exemptions for the sale or transfer of mortgages arising from securitization.

Second, the difficulty of enforcing property rights also constrains mortgage finance in the region. The absence of a clear legal framework for protecting property rights is a major obstacle to the operation of housing markets in Pakistan and Indonesia.

Third, banking and financial systems in several countries still have inadequate mortgage underwriting systems. If poor credit risks cannot be distinguished from good credit risks through borrower screening, then credit rationing will be a problem on the supply side of mortgage markets. Mortgage quality is a potential area of concern in the Philippines, Pakistan, and Thailand.

Table 5 summarizes the key characteristics of mortgage markets in the countries studied. The table contains important information and observations about the types of financing patterns and mortgage lenders in those countries.

In most markets, mortgage credit as a proportion of GDP is still small and shows much potential for future growth. Many of the countries surveyed display tremendous potential for growth in mortgage markets. In particular, China, Indonesia, Pakistan, and India, all very populous countries, each have mortgage-to-GDP ratios of less than 5 percent, implying room for growth. However, traditional aversion to mortgage borrowing in India and Pakistan may limit the potential for mortgage credit growth.

Recognizing the importance of sustainable and competitive housing markets, many of the countries surveyed are deregulating their housing finance markets. The move from nonmarket to market-based lending includes a gradual shift away from providing budgeted and off-budget subsidies for housing and interest-rate ceilings toward more market-determined pricing and supply of mortgage financing. This regulatory shift is already evident in the availability of both fixed- and floating-rate mortgages in most countries. But despite the general trend toward market-based lending, most housing finance markets are still marred by major distortions. These include: (i) interest-rate ceilings and/or subsidies in all

of the countries surveyed except Thailand;² (ii) limits on mortgage lending in China; and (iii) mandatory bank credit allocations for housing in India.

State-owned and state-run firms still dominate primary mortgage lending in many of the countries surveyed, underscoring the importance attached by governments to housing as a central human and economic need. This is true of all the countries surveyed except Malaysia, in which commercial banks are the dominant primary mortgage lenders.

Deregulation of housing finance markets has also enlarged the group of primary mortgage lenders. Except in China and the Philippines, mortgage lending began with the establishment of a state-owned mortgage finance institution with broad market powers and financial support from the state. Although state-owned mortgage lenders are still dominant in several countries, the transition toward deregulated housing finance markets has made it profitable for other types of lending institutions—including commercial banks, provident funds, and insurance companies—to participate as well. The entry of provident funds and insurance companies has led to a more proper matching of assets and liabilities for housing finance institutions.

Dominant primary mortgage lenders in the countries surveyed differ markedly in the way they operate. While all of them offer the best credit terms, for instance, not all of the dominant public-sector mortgage lenders lend at subsidized interest rates. In countries like China, Indonesia, the Philippines, and Malaysia, where some mortgages from primary lenders are available at subsidized rates, governments have initiated low-cost housing loan programs with fixed or below-market mortgage rates. Other countries, such as Korea, Thailand, and India, price mortgage loans at market rates. The dominant primary mortgage lenders in the countries surveyed include contractual savings institutions (the Philippines and China), housing banks (Thailand, Indonesia, India, and Korea), and housing finance companies (Pakistan). India uses an apex-structured banking system to ensure liquidity in the housing finance industry.

Only two of the countries surveyed—Pakistan and the Philippines—have had considerable amounts of nonperforming mortgage loans.

²Such ceilings and subsidies are usually intended for low-cost housing initiatives of the government.

Table 5 Characteristics of Mortgage Markets in Selected Countries ■

| Size of Mortgage Credit Market | Types of Lenders | General Financing Patterns |
|--|--|---|
| <p>As of 1996: 0.5% of GDP (estimate)</p> | <p>Primary lenders include state-owned housing funds and banks. Housing Funds originate about 38% of mortgage lending. Other major primary lenders: Bank of Construction, Bank of Industry and Commerce, Bank of China. Bank of Construction has largest market share among primary bank lenders</p> | <p style="text-align: center;">China</p> <p>Mortgage lending as proportion of GDP has risen steadily since 1993. Housing Funds for employees of state-owned enterprises established at city government level in 1992 to provide housing financed by employer and member contributions (thus, Housing Funds are essentially provident funds for housing). These funds augment mortgages originated by banks, which are constrained in their loan exposures outside of state-owned enterprises. Mortgage lending from Housing Funds is typically at subsidized rates. Local governments may set limits on amount borrowed, thus, market-based bank lending can augment housing finance</p> |
| <p>As of 1996: 0.05% of GDP (estimate)</p> | <p>Major sources of primary mortgage finance: state-owned and private companies, notably central and state governments, Housing Development Finance Corporation (HDFC), housing finance institutions (HFIs), state pension and provident fund, and India's two insurance companies. HDFC, largest mortgage lender, pioneered mortgage finance based on market principles. National Housing Bank (NHB) operates as an apex bank to promote and support housing finance institutions. NHB refinances housing loans originated by commercial banks and HFIs. HFIs may be established by: (i) industrial groups or individual promoters; (ii) subsidiaries of commercial banks; or (iii) insurance companies</p> | <p style="text-align: center;">India</p> <p>Mortgage interest rates have been deregulated since 1994. However, HFIs generally charge higher rates on larger loans. Maximum tenure is about 15 years. Mortgage financing has been growing rapidly, driven by increase in population and urbanization, and fall in property prices. But home-buyers tend to be debt averse, and to borrow only when absolutely necessary. Thus, there is low dependence on housing loans. Commercial banks required by State Bank of India to allocate 1.5% of incremental deposits for direct or indirect housing finance. Indirect financing includes refinancing by banks to housing finance institutions (HFIs) at lower than prime rates. HFIs may also finance themselves by issuing public deposits, with return capped at 15% per annum. Government also provides fiscal incentives for home ownership, as well as fiscal concessions to HFIs and for financing HFIs</p> |

| | Indonesia | | Korea |
|---|---|---|---|
| <p>In 1996: Outstanding mortgage loans about 3.10% of GDP</p> | <p>Primary lenders: state-owned mortgage bank BTN for low-cost housing, private mortgage bank Bank Papan Sejahtera, and commercial banks for other mortgages. BTN is the dominant mortgage lender, although share of residential mortgage financing has declined from 46.7% in 1993 to 31.4% in 1996. Statistics on 11 major primary mortgage lenders indicate weak capitalization ratios, and severe maturity mismatches on balance sheets</p> | <p>Mortgage financing has grown rapidly since 1993. But bad debts have risen since start of economic crisis. Government always active in lending for low-cost housing. But private sector has assumed larger role in mortgage origination in last 10 years. Standard lending packages available. Interest spreads about 3–4%. Most banks use specialized credit scoring to rate borrower creditworthiness. Low-cost housing about 90% of housing units sold in the market, but only about 50% of value of mortgages. Default ratios for housing typically low. But some banks require some recourse to developer in the form of a guarantee</p> | <p>National Housing Fund is a provident fund for housing. NHF offers several housing finance schemes to match preferences of subscribers wishing to build houses. Government has made HCB responsible for managing NHF, which has no staff or branch network. Statistics indicate that Koreans are increasingly able to afford houses. Value of mortgages as proportion of GDP increased steadily in 1985–1997. But Housing Credit Bank nearly doubled new mortgages originated in 1997. Public sector originates about one-third of mortgages originated. Government regulates interest rates, but is gradually deregulating industry and removing constraints on supply of housing loans. New players such as mortgage credit companies and installment credit companies, which provide quicker access to credit than traditional sources, have rapidly gained in market share despite lending at market rates. Sources of informal housing finance: lease-purchase-type <i>chonseon</i> deposits</p> |
| <p>In 1997: 3.2% of GDP; 13.8% of total loans</p> | <p>Primary lenders include commercial banks, life insurance companies, Housing and Commercial Bank (HCB) and National Housing Fund (NHF). Last two are largest primary lenders to housing sector. Recent deregulation of housing finance industry has allowed entry of new players, such as mortgage companies and installment credit companies, into mortgage lending market. Largest public lenders: NHF and Agricultural Cooperatives Federation (ACF). Largest private lenders: HCB, Kookmin Bank, and life insurance companies</p> | | |

Table 5 Characteristics of Mortgage Markets in Selected Countries (Cont'd) ■

| Size of Mortgage Credit Market | Types of Lenders | General Financing Patterns |
|---|--|---|
| <p>In 1996: 15% of GDP (total mortgage lending by government, banks, and other nonbank financial institutions); 8% of total bank assets (lending by commercial banks only); 12.07% of commercial bank loans</p> | <p>Financing sources: several state-owned corporations, and commercial banks. Malaysia Building Society Berhad (MBSB) is a housing credit institution which grants term loans for housing, mostly at market rates of interest. Most of its funding is in the form of loans from major shareholder, Employees Provident Fund (EPF) and Bank Negara Malaysia, as well as other shareholders' funds and fixed deposits placed with it by private institutions. Borneo Housing Mortgage Finance Berhad (BHMF) extends mortgage finance only for purchase of houses in Sabah and Sarawak. MBSB and BHMF market share in mortgage lending has declined dramatically because of competition from commercial banks. Supplementary housing finance through Employees Provident Fund (EPF)</p> | <p style="text-align: center;">Malaysia</p> <p>Most mortgages lent at market rates. Loan interest rates either fixed or floating. No mortgage insurance company, so guarantors required at times. Cagamas Berhad securitizes mortgages, providing mortgage lenders with additional liquidity. MBSB not subject to BNM lending restrictions. Has advantage of not being subject to statutory reserve and liquid asset requirements. Also gets appropriations from government and BNM for financing at concessionary rates (for government low-cost housing program)</p> |
| <p>In 1997: 1.07% of GDP; 1.26% of bank assets; 4.58% of bank loans</p> | <p>Lenders include several state-owned and private-sector finance corporations. Commercial banks reluctant to lend for housing. House Building Finance Corporation (HBFC) is the major primary lender in the formal (regulated) housing market. Three private housing finance companies were established between 1988 and 1993. However, only one of them has survived. At present, the formal sector accounts for only 20% of all housing credit. Informal sector responsible for financing 80% of credit for housing. This comprises personal</p> | <p style="text-align: center;">Pakistan</p> <p>Mortgage credit as percentage of GDP, bank assets, and bank loans declining since 1994, partly because of reduced subsidies to House Building Finance Corporation, largest mortgage lender, with 95% of total mortgage credit originated by formal sector. Financing sources for housing include mostly debt to be raised from housing finance institutions HBFC lends on more lenient terms than IHFC, the sole private-sector provider. Average mark-up for HBFC loans is about 3.55% lower than for IHFC. Average tenor of HBFC loans is 20-21 years; for IHFC, 9 years. HBFC also offers variable mark-up, while IHFC mark-up is fixed. HBFC default ratio 25-30%. For IHFC, 1%</p> |

| | |
|---|---|
| <p>savings and remittances from abroad, and borrowing from relatives. HBFC funding from revolving fund replenished by loan repayments from borrowers. Funding for IHFC, sole private-sector primary lender, in the form of debt and equity capital</p> | |
| <p>Financing sources: private banks, in-house financing from developers, mortgage loans from member contributions to state-run provident fund for housing, Home Development Mutual Fund (HDMF), and from members of state-run pension systems: Social Security System (SSS) and Government Service Insurance System (GSIS)</p> | <p>Philippines</p> <p>Low-cost housing loans available at below-market rates from HDMF and in the form of in-house package from SSS and GSIS. Terms for public mortgage lending are generally easy, with fixed interest rates, longer maturity periods and higher loan-to-value ratios (sometimes up to 90%). Loan packages not for low-cost housing are charged market rates and are domain of private banks. They have variable interest rates and lower loan-to-value ratios (typically 60%). Default ratio for state-originated mortgages much higher than for privately originated mortgages, primarily because of poor borrower screening, leading to moral hazard. Mortgage insurance provided by state-run company, Home Insurance Guarantee Corporation (HIGC)</p> |
| <p>Primary mortgage lenders: private commercial banks, the state-run Government Housing Bank (GHB), as well as finance companies, credit foncier companies, life insurance companies, and the Government Savings Bank. GHB has largest share of mortgage loans (38.5% of total mortgages as of 1997). Finance, operates on commercial basis without government subsidies, and thus lends at market rates</p> | <p>Thailand</p> <p>Despite crisis, growth of residential mortgage lending has dropped only marginally. This was preceded by rapid growth in last two decades. GHB share of total home mortgage lending has been increasing since 1995. GHB, which has had largest share of mortgage credit market, lends at easiest terms, with lowest interest rates and highest loan-to-value ratios. Most institutions offer both fixed- and floating-rate mortgage loans, but most prefer to lend at variable rates. Traditionally low default ratios for mortgages. But slight rise in ratio due to financial crisis</p> |
| <p>As of 1997: Around 6.5% of GDP; 11.23% of total loans</p> | |
| <p>In 1997: 16.5% of GDP; 9.5% of total outstanding loans</p> | |

Sources: Country studies and author's calculations

Default ratios in the other countries are reasonably manageable. The vast majority of the problem loans in the two countries were originated by public institutions with inadequate borrower screening mechanisms. These shortcomings may be corrected through prudential regulation and better underwriting and servicing. The largest originator of public mortgages in the Philippines, the Home Development Mutual Fund (HDMF), has recently tried to forge partnerships with the private sector, to strengthen underwriting and servicing procedures.

Informal sources, where these are customary, also play a considerable role in housing finance. This is the case in Korea, where *chonsei* deposits finance a large portion of housing, and in Pakistan and India, where the informal sector and personal savings still provide much of the resources for housing finance.

Feasibility of Creating MBSs Markets

To determine the feasibility of establishing MBSs markets and secondary mortgage institutions (SMIs) in the countries surveyed, key variables, such as market demand and supply in the mortgage and mortgage-backed securities markets, were analyzed. In the housing and mortgage market, the assets or mortgages originated by banks and other financial institutions must be of good quality. On the other hand, in the market for mortgage-backed securities, the quality of the securities themselves must be ensured. Thus, the quality of both the underlying asset and its derivative instrument must be strong for the establishment of MBSs markets to be feasible. Table 6 summarizes the important factors to be considered when evaluating the feasibility of establishing MBSs markets.

Most of the countries surveyed agreed that mortgage demand in primary markets, temporarily slowed by the crisis, would eventually pick up because of the continuing need for viable and affordable housing. Impediments to the viability of establishing MBSs markets in these countries are therefore likely to come from the following sources: the secondary mortgage market, and the primary and secondary market for MBSs and bonds in general. For MBSs markets and secondary mortgage institutions (SMIs) to be viable, reforms and improvements should start with the primary and secondary mortgage markets, and later involve the primary and secondary bond markets.

Different countries have different financial regimes yet share similarities which inhibit the development of MBSs. Among these inhibiting

Table 6 Factors Conducive to the Development of Secondary Mortgage Markets ■

| Factor | Prerequisites | Effect on SMI Viability |
|---|--|---|
| Adequate demand for mortgages | Macroeconomic stability; robust economy | Sustains demand for mortgages and long-term securities, such as MBSs |
| Legal and regulatory framework conducive to liquidity in primary and secondary mortgage markets | Foreclosure laws that facilitate recovery of foreclosed properties. Ability to convey mortgages without need for consent of all mortgagors. Clear rules on conveyance or assignment and definition of true sale of mortgages. Low transaction taxes (low stamp taxes) on creation of mortgages. Adequate regulatory and supervisory capacity | Reduces SPV's credit risk. Facilitates securitization. Reduces uncertainty in legal and accounting treatment of conveyance of mortgages. Improves liquidity in primary and secondary markets for MBSs. Reduces systemic risks in MBSs market; increases certainty of MBSs investments |
| Adequate underwriting and servicing capacity of mortgage lenders | Prudent lending guidelines and supervision by financial authorities and regulators. Standard underwriting procedures. Automated servicing | Reduces SPV's credit risks. Facilitates securitization; takes advantage of scale economies in securitization |
| Adequate capacity to assess mortgage lending risks | Low NPL rate for mortgages | Reduces SPV's credit risk; improves overall quality of MBSs |
| Ability to standardize mortgage underwriting | Use of credit scoring | Facilitates securitization |
| Availability of support institutions and timely information about mortgage markets | Credit bureaus. Mortgage insurers | Facilitates risk assessment of potential borrowers. Enhances quality of MBSs |
| Clear accounting rules for MBSs | Well-defined accounting treatment of true sale and modes of conveyance | Reduces uncertainty in treatment of MBSs transactions and conveyance of mortgages |
| Adequate demand for MBSs | Lower tax burden on potential buyers of MBSs. Less institutional restrictions on MBSs investments | Enhances liquidity in primary and secondary markets for MBSs |
| Legal, regulatory, and tax framework conducive to bond market liquidity | Special MBSs/SMI laws. Low transaction costs for primary and secondary trades (low stamp taxes). Flexibility in allowable MBSs structures and eligible issuers. Adequate regulatory and supervisory capacity | Simplifies process of drafting rules and guidelines. Enhances liquidity in primary and secondary markets for MBSs. Widens variety of instruments available to issuers and investors. Reduces systemic risk in MBSs market |
| Yield curve for pricing MBSs | Longer yield curve, with liquid market for standard maturities | Improves accuracy in benchmark pricing of MBSs |
| Adequate credit-rating capacity | MBS ratings (may be mandatory) | Encourages prudent and independent assessment of MBSs risks |
| Bankruptcy-remote SMI | Clear laws on bankruptcy-remoteness | Ensures MBSs quality and integrity |
| Adequate financial market infrastructure | Adequate clearing and settlement facilities | Ensures MBSs quality and integrity; facilitates securitization |

factors in the secondary mortgage market is the inadequacy of laws and accounting guidelines for protecting and carrying out the transfer of ownership under conditions of true sale. Inadequate laws and accounting guidelines cast doubt on the bankruptcy-remoteness of SPVs, and increase transaction costs in the conveyance of mortgages to them. Countries such as China, Korea, Indonesia, Pakistan, and India must deal with these deficiencies. Only the Philippines, Thailand, and Malaysia have clearly defined rules on what constitutes a true sale. Moreover, the requirement in some countries, notably China, India, Indonesia, and Korea, to obtain the consent of the mortgagor before the mortgages can be conveyed to the SPV delays securitization.

Another factor that affects the viability of a secondary mortgage market is the quality of mortgages originated in primary mortgage markets. In Pakistan and the Philippines, low mortgage collection efficiency makes a compelling case for improving the underwriting, information gathering, appraisal, and servicing capacity of originators, and for reducing moral hazard in lending through better screening and monitoring.

Improvements in the primary and secondary bond markets as a whole would also strengthen the primary and secondary markets for MBSs. The bond markets in the countries surveyed have similar shortcomings: the lack of long-term benchmark yield curves, low demand for long-term financial instruments, the lack of long-term investments by the contractual savings sector, and high transaction costs.

The key findings of the regional survey are summarized in the following sections.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN CHINA

The potential market for MBSs in China is plagued by demand and supply uncertainties. There are indications that housing demand has shifted from institutions to individuals and that individual demand is strong in certain cities such as Shanghai (despite the regional slowdown in economic activity). But demand still depends on a state housing subsidy for mortgages originated by the Housing Fund. Such subsidies may adversely affect the demand for mortgage-backed securities since low rates of return on the underlying mortgages will limit the return on MBSs. Besides, competition from government securities and lack of reliable information on the state of domestic housing markets may also affect MBSs demand. Furthermore, sophisticated borrower evaluation and credit

analysis techniques have not yet been developed, given the novelty of individual mortgage lending. SMI feasibility hinges on the existence of such techniques.

The distortions are even greater on the supply side, where state planning prevails. Supply and demand are also undermined by weak laws and regulations for MBSs development. There are no rules for trading in private fixed-income securities, and no basic accounting framework for MBSs, making their purchase much more risky. The need to obtain borrower consent before selling mortgages and the absence of foreclosure laws likewise increase transaction costs and credit risk.

A secondary mortgage institution will thrive better in a more competitive and complete market. It has therefore been suggested that MBSs be issued offshore to mobilize savings from more established channels, such as foreign equity markets. Ensuring the integrity of MBSs backed by assets in China would nonetheless require a stronger domestic financial sector.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN INDIA

The prospects for establishing a secondary mortgage institution appear favorable in India. It has a large and growing population and has recently mandated risk assessment through credit ratings to assess risks. Moreover, relatively good-quality mortgages are held by potential MBSs market participants, such as the State Bank of India (SBI) Group, nationalized banks, and private domestic and foreign banks.

However, as in most of the other countries surveyed, factors that affect *both* the mortgage and bond markets also affect the feasibility of establishing an MBSs market in India. The lack of domestic securitization experience indicates the need to build the capacity for mortgage securitization from scratch. The legal and regulatory framework, on which securitization is based, was not designed with securitization in mind. The law seems to imply that banks conveying mortgages should first seek the consent of mortgagors. The government has also not ruled clearly on the definition of a true sale, nor issued clear accounting guidelines for MBSs transactions. The development of the MBSs market is hampered as well by lengthy foreclosure, high stamp duties on the conveyance of property, and the generally unclear tax treatment of conveyed property.

Table 7 Summary of Survey Findings, China ■

| Criteria | Status |
|--|---|
| Securitized assets | No assets currently securitized |
| Eligible securitization structures | No private debt securities issued, only private equity securities |
| Eligible ABSs/MBSS issuers | None currently, but potential issuers include Bank of Construction, Bank of Industry and Commerce, Bank of Agriculture, Bank of China, and City Housing Fund |
| ABSs/MBSS regulators | None; potentially Ministry of Finance, Securities and Exchange Commission (SEC) and/or People's Bank of China (PBC) |
| Roles of ABSs/MBSS regulators | Securities and Exchange Commission regulates equities and related securities; People's Bank of China regulates bonds and other fixed-income securities. PBC likely to regulate MBSSs. But new securities law being drafted by SEC may cover MBSSs |
| Laws, rules, and guidelines for bonds, including ABSs/MBSS | Securities Law being drafted by legislature. But while law may cover the bond market, it may not address issues specific to ABSs/MBSSs |
| Duties of originators and SPVs | Not applicable; no laws govern MBSSs |
| Borrowers' consent required for mortgage conveyance? | Yes |
| Credit analysis of loan applicants | Credit approval process and documents not yet standardized. Mortgage loans typically originated by Housing Fund (subsidized) or unsubsidized banks. Housing Fund is provident fund for housing, so qualified contributors may apply for housing loans |
| Definition of true sale | Unclear |
| Asset conveyance methods | Not applicable |

| | |
|--|--|
| SPV/SMI bankruptcy-remoteness | Not yet established; proposed SMI may be located in Hong Kong to boost demand |
| Credit enhancements, credit ratings, and common modes of issue | Not applicable. Credit enhancements not available in China. But there is a credit-rating agency and state-owned enterprises (SOEs) have issued bonds |
| Servicer | Information not given in report |
| Issues affecting MBSs demand and supply | Potentially large and growing demand for primary mortgages due to robust growth despite crisis. Thus, potential demand for MBSs also large. But Chinese banks often used for policy-directed lending, and inexperienced in mortgage origination. Secondary market for fixed-income securities also limited. More serious concerns: lack of reliable information on housing market, complicated tax system, and high transaction costs |
| Obstacles to bond market and MBSs development | Government issues bonds, but private sector is discouraged from doing the same so as not to crowd out public bonds |
| ABSs/MBSs primary and secondary market infrastructure | Shanghai Stock Exchange or possibly Hong Kong Stock Exchange |
| Foreclosure issues | Not applicable. No foreclosure laws |
| Stamp duties on property transfer | 0.03% for sales value of property; based on sales contract value. 0.05% for sale or transfer of residence right; based on transfer contract value |
| Stamp duties on securities | None mentioned in report |
| Other tax issues | None mentioned in report |
| Accounting issues | No GAAP for treatment of securitization |
| Other major legal and regulatory issues | No legal framework for MBSs |

Table 8 Summary of Survey Findings, India ■

| Criteria | Status |
|--|--|
| Securitized assets | Limited securitization of: auto loans, bills receivable, hire-purchase receivables, and other receivables |
| Eligible securitization structures | Pay-through obligations |
| Eligible ABSs/MBSs issuers | None allowed, but potential issuers include the State Bank of India (SBI) Group, nationalized banks, private domestic and foreign banks |
| ABSs/MBSs regulators | No ABSs/MBSs regulator yet, but potentially the Securities and Exchange Board of India (SEBI) |
| Roles of ABSs/MBSs regulators | Securities and Exchange Board of India (SEBI) regulates capital markets, including ABSs market |
| Laws, rules, and guidelines for bonds, including ABSs/MBSs | No codified asset securitization law. However, some securitization transactions have been approved on case-by-case basis |
| Duties of originators and SPVs | Not applicable; no laws govern MBSs |
| Borrowers' consent required for mortgage conveyance? | Consent generally not required but recommended |
| Credit analysis of loan applicants | Most mortgage loans have low loan-to-value ratios; most borrowers prefer proportionally more equity than debt. Credit approval not yet standardized; appraisal may not be very accurate |
| Definition of true sale | Unclear |
| Asset conveyance methods | Assignment of mortgages |
| SPV/SMI bankruptcy-remoteness | SPV not yet established |

| | |
|--|--|
| Credit enhancements, credit ratings, and common modes of issue | <p>Mortgage insurance nonexistent, but credit enhancements may come in the form of overcollateralization and standby letters of credit, as well as financial guarantees.</p> <p>Although three domestic credit rating agencies exist, no ratings were required for initial ABSs issues. However, SEBI now requires rating of new debt issues. SEBI has also mandated dual ratings.</p> <p>Private placement the most common mode of issue of corporate debt, and possibly also for future MBSs issues</p> |
| Servicer | Most likely the originator |
| Issues affecting MBSs demand and supply | <p>Potential demand for MBSs from traditional capital market investors, such as commercial banks, insurance companies, provident funds, housing finance institutions, and some large companies.</p> <p>Housing demand expected to be robust, but MBSs demand likely to be stifled most by high stamp duties on primary and secondary trading, and lengthy foreclosure.</p> <p>Potential MBS supply primarily from Housing Development Finance Corporation (HDFC), LIC, an insurance company, smaller housing finance institutions, and banks. MBSs supply likely to be constrained by underdeveloped or absent legal framework</p> |
| Obstacles to bond market and MBSs development | <p>Obstacles to bond market development: few large investors; limits on investments by insurance companies and provident funds; shallow secondary bond markets; lack of automated clearing and settlement system; low investment in infrastructure; illiquid primary markets; thin investor base. In addition, there are very few retail investors, contributing to thinness of investor base</p> |
| ABSs/MBSs primary and secondary market infrastructure | Over-the-counter market and National Stock Exchange (NSE) |
| Foreclosure issues | <p>Foreclosure under old law took 8–10 years and was very costly. This deterred development of MBSs markets. Under new Recovery Act, foreclosure may be expedited through Special Tribunals established for the purpose. Adjudication through these tribunals is expected to take about a year</p> |

Table 8 Summary of Survey Findings, India (Cont'd) ■

| Criteria | Status |
|---|--|
| | Foreclosure can also be expedited by granting foreclosure power to housing finance institutions under National Housing Bank Act of 1987 |
| Stamp duties on property transfer | State Stamp Act empowers state governments to reduce, remit, or compound stamp duties on any instrument. Thus, depending on state concerned, value of stamp duties on transfer of securities or assignment of debt can range from 0.1% to 15% |
| Stamp duties on securities | See above |
| Other tax issues | <p>High stamp duties; certain aspects of tax system may impede securitization</p> <p>Borrowers may obtain a tax rebate only on repayment of loans from state-approved institutions (housing finance institutions, National Housing Bank, employers, etc.). In securitization, care must therefore be taken to ensure that final lender is not the investor but the approved financial institution.</p> <p>Mere transfer of interest in assets generating income does not imply transfer of tax burden for the assets.</p> <p>As representative assessee on behalf of MBSs investors, SMI receiving stream of mortgage payments would be taxed.</p> <p>Borrowers do not pay withholding taxes on interest payments to housing finance institutions. Thus, SPV also must not withhold taxes from MBSs investors.</p> <p>Clarifications sought on taxation of sale of loans</p> |
| Accounting issues | No GAAP for treatment of securitization |
| Other major legal and regulatory issues | <p>Urban Land Ceiling Act limits amount of land that can be held in urban areas.</p> <p>Rent Control Act has made it impossible for landlords to evict tenants, and reduced incentive to build and maintain rental properties</p> |

The factors that hinder bond market development also hinder MBSs development. These factors include: limits on investments by insurance companies and provident funds; shallow secondary bond markets; unautomated clearing and settlement systems; low investment in infrastructure; illiquid primary markets; a thin investor base; and high stamp duties on primary and secondary trades. The small number of retail investors contributes to the thinness of the investor base.

But despite these market constraints, the country report suggests that a secondary mortgage institution in India could be backed by some of the larger players in the housing and financial sectors such as NHB, HDFC, HUDCO, and UTI (an active player in the secondary market). Meanwhile, the NHB should act as SPV, as proposed, in a pilot securitization program where housing finance institutions would sell their loans to NHB without recourse.

The proposal is for MBSs to be issued at the start by NHB, and for these MBSs to be rated. The credit-rating agencies must specify the extent of credit enhancement needed for a triple-A rating. The credit enhancement could take the form of cash collateral from the housing finance institution (HFI) that sold the loans. Later, a specialized institution could be set up to guarantee various types of financial instruments such as MBSs. The HFI that originated the loan should continue servicing the loan and be compensated for doing so.

MBSs should first be sold mainly to large institutional investors such as banks, UTI, and other mutual funds. The government should be prodded into allowing long-term investors such as LIC, GIC, and provident funds to participate. Eventually, MBSs should be sold to individual investors. Fiscal incentives from the government particularly at launch would help push MBSs among individual investors and create a level playing field.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN INDONESIA

The Capital Market Law of 1995 does not cover MBSs. However, recent BAPEPAM rules for onshore ABSs/MBSs stipulate the use of a collective investment contract (CIC) arrangement (as against ABSs arrangements), wherein an investment manager manages a portfolio of mortgages and ABSs, while a custodian bank becomes a depository of mortgage securities.

Table 9 Summary of Survey Findings, Indonesia ■

| Criteria | Status |
|--|---|
| Securitizable assets | Credit-card receivables, auto-loan receivables, export receivables; future receivables; motorcycle receivables |
| Eligible securitization structures | Pay-through obligations |
| Eligible ABSs/MBSS issuers | Commercial banks |
| ABSs/MBSS regulators | Bank Indonesia, Ministry of Finance (through Capital Market Supervisory Agency, BAPEPAM), and State Land Registry Agency (BPN) |
| Roles of ABSs/MBSS regulators | <p>Capital Market Law of 1995 mandates BAPEPAM to provide policy guidelines and to regulate and supervise the capital market. Thus, BAPEPAM is empowered to interpret laws on matters within its purview, and to establish rules and issue decrees.</p> <p>Capital Market Law also mandates BAPEPAM to regulate debt securities with a maturity of more than one year. On the other hand, Bank Indonesia regulates money market debt and the banking sector.</p> <p>If MBSSs are introduced in Indonesia, BAPEPAM would have to draft rules and implementing guidelines. ABSs guidelines exist but are untested</p> |
| Laws, rules, and guidelines for bonds, including ABSs/MBSS | <p>Capital Market Law of 1995 does not provide for MBSSs. But new BAPEPAM rules for onshore ABSs/MBSS stipulate use of collective investment contract (CIC) arrangement (as against ABSs arrangements), whereby an investment manager manages the mortgage and ABSs portfolio, while a custodian bank becomes a depository of the mortgage securities.</p> <p>New law on use of land and building as collateral (Hak Tanggungan Law) covers assignments of mortgages and provides for defaults, and hence provides basis for future laws on MBSSs and primary and secondary mortgage markets</p> |

| | |
|--|--|
| Duties of originators and SPVs | Originators evaluate, appraise, and service loans. CIC manages and monitors asset portfolio |
| Borrowers' consent required for mortgage conveyance? | Yes |
| Credit analysis of loan applicants | Credit scoring potentially facilitates MBSs transactions. Appraisal may not be very accurate |
| Definition of true sale | May be based on Hak Tanggungan Law: (i) Seller holds mortgage agreement and credit agreement, and is registered. Letters of consent from mortgagors allowing sale/transfer/assignment are required. (ii) Sale is notarized. (iii) All sale documents are transferred to buyer. (iv) Transaction is registered at the National Land Registry Agency (BPN) |
| Asset conveyance methods | Assignment, sale, or transfer |
| SPV/SMI bankruptcy-remoteness | SMI/SPV not yet established, but Indonesian authorities are working with Fannie Mae to establish one. Levels of recourse are undefined. Thus, it is unclear if SPV is bankruptcy-remote |
| Credit enhancements, credit ratings, and common modes of issue | Types of credit enhancements available: bond insurance, overcollateralization, swaps, imposition of minimum credit quality for originators. Domestic credit rating agency: Pefindo. Rating of MBSs required. Mode of ABSs/MBSs issuance not yet decided by government |
| Servicer | Originator will most likely also service mortgage loans |
| Issues affecting MBSs demand and supply | On demand side, weak legal protection for debt-holders. Also, small investor base. On supply side, difficulty in assigning, transferring, and protecting property rights; also, lack of clear precedence of commercial dispute resolution and legal enforcement of contracts |

Table 9 Summary of Survey Findings, Indonesia (Cont'd) ■

| Criteria | Status |
|---|--|
| Obstacles to bond market and MBSs development | <p>Large corporate bond market relative to other Asian countries, but very small compared with private banking sector. Domestic bond market grew very rapidly up to 1997.</p> <p>Obstacles to domestic bond market development: small investor base with attendant moral hazard in a buyer's market; lack of high-quality issuers in the market.</p> <p>Domestic bond market suffers from high transaction costs and inadequate disclosure and accounting standards. Also, general lack of reliable benchmarks</p> |
| ABSs/MBSs primary and secondary market infrastructure | Over-the-counter market and Jakarta and Surabaya Stock Exchanges |
| Foreclosure issues | <p>Time-consuming (more than one year) and costly (Rp 50–90 million). Covered by Law No. 4/1996, which mandates foreclosure in following steps: (i) foreclosure request; (ii) warning letters; (iii) court injunction; (iv) foreclosure; (v) determination of tax liability status by tax office; (vi) auction announcement; (vii) public auction; and (viii) property clearance.</p> <p>Foreclosure inefficiency makes banks prefer extrajudicial methods</p> |
| Stamp duties on property transfer | 5% of land value levied on transferor of title |
| Stamp duties on securities | None mentioned in report |
| Other tax issues | None mentioned in report |
| Accounting issues | Accounting standards generally perceived as most in need of reform in the region |
| Other major legal and regulatory issues | None mentioned in report |

In addition, the new law on the use of land and building as collateral (Hak Tanggungan Law) covers mortgage assignment and defaults, and therefore sets the tone for future laws on MBSs and on the primary and secondary mortgage markets. Unfortunately, this law requires banks to seek the consent of mortgagors before conveying mortgages, hampering securitization. Unless this condition is relaxed, securitization will not be viable. The viability of an MBSs market is also constrained by difficulties in assigning, transferring, and protecting property rights, and the lack of clear precedence of commercial dispute resolution and legal enforcement of contracts.

Other aspects of the mortgage process affect the viability of an SMI in Indonesia. These include inefficient foreclosure proceedings and inaccurate appraisal. Accounting standards create uncertainty in the treatment of mortgage assignments and transfers, and are generally perceived to be the most in need of reform in the region. However, the evolution of credit scoring, which facilitates mortgage underwriting, should make an MBSs market more viable.

Perhaps the biggest obstacles to the viability of an MBSs market in Indonesia can be found in the domestic bond market. Although the market is large relative to other bond markets in Asia, inadequate disclosure and high transaction costs affect the quality of private bond issues. Other obstacles to the development of the domestic bond market are the small investor base and the lack of high-quality issuers in the market. All of these shortcomings detract from the advantages of a wide variety of credit enhancements and MBSs trading infrastructure.

The country study on Indonesia suggests that the viability of an MBSs market rests on improvements in the market for fixed-income instruments, in market infrastructure and institutions, and in the legal and regulatory framework for securitization. The study concludes that other vehicles (besides a secondary mortgage institution) be explored to stimulate liquidity in the housing sector. In particular, the study argues for the establishment of a secondary mortgage lender (SML) which could: (i) buy mortgage loans from primary lenders and issue bonds in capital markets to raise long-term capital; or (ii) lend money to primary mortgage lenders (PMLs) against their mortgage receivables. According to the study report, the first option is most appropriate for Indonesia given its legal framework and current market conditions.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN KOREA

Structural impediments in the past, such as the policy of directed credit to industry, have contributed to the current shortage of mortgage finance. However, Korean authorities have begun to review the need for increased credit to the housing sector to augment funding from the Housing and Commercial Bank (H&CB), private mortgage firms and commercial banks, and the publicly run National Housing Fund (NHF), another state-run provident fund for housing.

There is renewed interest in stimulating the housing finance market, yet Korea still lacks major preconditions for a viable MBSs market. These include a market-oriented interest rate, a more developed domestic bond market, and an adequate legal and regulatory framework for MBSs.

Despite the shortage of mortgage financing in Korea, mortgages are originated at below-market rates. The excess demand for mortgage loans is probably due to the pricing distortion. This distortion should be corrected if a secondary mortgage institution is to be viable in Korea.

The supply side of the private bond market in Korea is relatively better developed than in other countries in this study. There are many private-sector bond issuers, and there is an established credit-rating culture. In addition, there is an active over-the-counter market for fixed-income securities. However, the demand side of the domestic bond market is beset by the same weaknesses as the bond markets in the other countries in this study: the proliferation of short-term investors, the absence of a well-defined benchmark yield curve for pricing securities, and onerous stamp taxes on trading. These weaknesses should also be addressed for an MBSs market to be viable.

Among the barriers to the viability of an MBSs market, legal and regulatory barriers are the most pernicious. The law that requires banks to seek the consent of mortgagors before conveying mortgages is the single biggest obstacle to securitization, which is also hampered by the absence of standard accounting practices for MBSs. There are no other laws for mortgage transfer and/or conveyance. However, foreclosure in Korea is relatively less time-consuming and costly compared with other countries in the study.

Despite the underdeveloped legal framework for securitization in Korea, the presence of an established financial market infrastructure for the issuance and trading of fixed-income securities should facilitate the establishment of an MBSs market in the future. At present, though, the

country should deal with the pressing legal constraints, and do away with distortions in credit and mortgage pricing and in credit allocation. The new regulatory structure for financial markets should rationalize the supervision of the financial markets.

The country study on Korea also argues for the introduction of simple MBSs structures to attract investors. The use of pay-through-type, rather than pass-through, instruments seems to be indicated, at least initially.

FEASIBILITY OF STRENGTHENING CAGAMAS AND THE MBSs MARKET IN MALAYSIA

Since Cagamas already exists, the question is how to strengthen further its capacity for securitization. Among the promising developments are a plan to broaden securitization activities to include industrial mortgages, and a commitment to pursue “true securitization,” without recourse to mortgage originators.

At present, the fiscal privileges granted to Cagamas make it a viable conduit for securitization. Cagamas is exempt from state taxes, and mortgages conveyed to it are exempt from stamp taxes, as are Cagamas securities, when traded in the primary and secondary bond markets. The agency status of Cagamas securities makes them comparable to government securities. Demand is therefore healthy despite the crisis. In addition, Bank Negara Malaysia has declared these securities eligible for use by banks in meeting their reserve and liquidity requirements.

The establishment of Cagamas has strengthened the domestic bond market, but its agency nature has tended to divert demand away from private bond issues. The advantage Cagamas now enjoys over other bond issuers will persist unless it is privatized. The government’s efforts to preserve and encourage securitization in Cagamas nonetheless indicate its continuing commitment to the housing sector in the interest of national welfare and development. Housing demand (and supply) in Malaysia should therefore not be a cause of too much concern to the government.

The stimulus provided by Cagamas has spurred further modernization in the Malaysian bond market, with recent improvements in clearing and settlement technology, as well as the introduction of scripless trading. Accounting methods have likewise been developed for dealing with securitization.

The existence of Cagamas notwithstanding, some aspects of the securitization market still need attention. These include the costly and

Table 10 Summary of Survey Findings, Korea ■

| Criteria | Status |
|--|--|
| Securitizable assets | No assets currently securitized |
| Eligible securitization structures | None |
| Eligible ABSs/MBSs issuers | None currently, but potential issuers include privately run Housing and Commercial Bank (H&CB), private mortgage firms and commercial banks, and publicly run National Housing Fund (NHF), another state-run provident fund for housing |
| ABSs/MBSs regulators | None at present, but potential regulators would include new Financial Supervisory Commission (FSC), Financial Supervisory Board (FSB, to be established in 1999), Ministry of Finance and Economy (MOFE), and Bank of Korea (BOK) |
| Roles of ABSs/MBSs regulators | FSC makes and enforces major decisions related to operations of securities market, and exercises surveillance. If MBSs are introduced in Korea, they will be regulated by FSC |
| Laws, rules, and guidelines for bonds, including ABSs/MBSs | ABSs/MBSs laws being considered; but major barriers exist. These include laws governing transfer and conveyance of mortgages |
| Duties of originators and SPVs | Not applicable; no laws govern MBSs |
| Borrowers' consent required for mortgage conveyance? | Yes |
| Credit analysis of loan applicants | Credit approval process and documentation not yet standardized; appraisal may not be very accurate as property prices are not based on market but on government-appraised price of land and standard cost of construction for residential units set by Ministry of Construction and Transportation |
| Definition of true sale | Unclear |
| Asset conveyance methods | Not applicable |
| SPV/SMI bankruptcy-remoteness | SMI/SPV not yet established |
| Credit enhancements, credit ratings, and common modes of issue | Private debt securities were issued with bank guarantees before the financial crisis. Three domestic credit-rating agencies: Korea Management Consulting and Credit Rating Corporation (KMCR), Korea Investors Service, and National Information and |

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| | | Credit Evaluation Corporation. Law requires bond issuers to obtain dual ratings. Mode of ABSs/MBSs issuance not yet decided by government. But bonds can be issued through Korea Stock Exchange or over-the-counter market |
| Servicer | | Not specified in report |
| Issues affecting MBSs demand and supply | | Potentially large and growing demand for primary mortgages despite crisis. But no MBSs transactions yet, perhaps because of traditional investor preference for short-term securities. Below-market mortgage rates also potential hindrance to MBSs demand. Supply-side hindrances: cumbersome transfer and conveyance of mortgages (permission of all debtors in pool required). More importantly, state subsidy for primary housing market through below-market interest rates obviates need to look for cheaper sources of funds |
| Obstacles to bond market and MBSs development | | Corporate bonds hold larger share of market than government bonds. Until recently, however, government was wary of further expanding domestic bond market for fear of increased financial market volatility. But government thoroughly liberalized domestic bond market as part of reforms to address the financial crisis. Hindrances to development of domestic bond markets: lack of liquidity; market manipulation by a few institutional investors; underdeveloped long-term government bond market; and use of inappropriate bonds as benchmarks. Reason: unstandardized issuers and interest structures of government bonds |
| ABSs/MBSs primary and secondary market infrastructure | | Over-the-counter market and Korea Stock Exchange. Most bond trading takes place in OTC market |
| Foreclosure issues | | Foreclosure takes around 2 months. Preliminary measures: written notices of demand, and notice of start of legal proceedings. Mortgage holder may then apply for auction of property. Successful bidder pays mortgagor after the bidding |
| Stamp duties on property transfer | | None mentioned in report |
| Stamp duties on securities | | Securities transaction tax: 0.3% of the sales value; levied on seller |
| Other tax issues | | None mentioned in report |
| Accounting issues | | No GAAP for treatment of securitization |
| Other major legal and regulatory issues | | Mass conveyance of property is cumbersome; signatures of debtors required |

Table 11 Summary of Survey Findings, Malaysia ■

| Criteria | Status |
|--|---|
| Securitizable assets | Residential mortgages and industrial property loans |
| Eligible securitization structures | Pay-through obligations |
| Eligible ABSs/MBSs issuers | MBSs activities restricted to Cagamas Berhad, an SMI established by the government |
| ABSs/MBSs regulators | Bank Negara Malaysia, Securities Commission (SC), Registry of Companies, and Kuala Lumpur Stock Exchange |
| Roles of ABSs/MBSs regulators | No specific regulator of MBSs in Malaysia, but in December 1988 Bank Negara Malaysia (BNM) introduced guidelines to streamline approval and issuance of MBSs. The objective was to clarify the basic legal and administrative framework for bond financing and to encourage corporate bond market development. Sale of housing loans by BNM-regulated financial institutions to Cagamas is subject to terms and conditions approved by BNM. Basically, BNM has permitted only housing loans for houses costing up to RM150,000 to be sold to Cagamas. All proceeds are free from liquidity and statutory reserve requirements, thus effectively reducing cost of funds obtained from Cagamas. But after the sale, housing loans still subject to 50% risk weight for computation of capital adequacy ratio since the loans are sold with recourse to originators, which continue to bear credit risk after sale of loans. BNM also permits Cagamas bonds and notes issued to finance purchase of housing loans to qualify as liquid assets for maintenance of minimum liquidity ratio by financial institutions. BNM regulatory power is therefore very important for viability of housing loan securitization in Malaysia |
| Laws, rules, and guidelines for bonds, including ABSs/MBSs | Cagamas, the national mortgage corporation, was incorporated under Companies Act of 1965, Cagamas Berhad, along with Bank Negara Malaysia and Securities Commission, establishes all rules for MBSs transactions in Malaysia |
| Duties of originators and SPVs | Originators underwrite, appraise, and service the loan, and convey the assets to Cagamas, the SPV. Cagamas manages the portfolio under a trust agreement, and markets the securities to investors |
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| Borrowers' consent required for mortgage conveyance? | No |
| Credit analysis of loan applicants | <p>Credit approval documents and process being standardized.</p> <p>Credit analysis of borrowers based on assessment of ability to repay mortgage.</p> <p>Borrowers generally grouped into: salaried and self-employed borrowers. Borrower age is also considered.</p> <p>In general, maximum loan amount is based on: (i) monthly amortization of interest and principal not to exceed 1/3 of gross monthly borrower income; (ii) loan-to-value ratio 90–100% (low cost), 80–90% (medium cost), 70–80% (high cost); (iii) financial guarantee required if some requirements (e.g., documentation, proof of income) are not met</p> |
| Definition of true sale | Cagamas-issued MBSs are not backed by assets conveyed via true sale |
| Asset conveyance methods | By assignment (not by true sale, but with recourse to primary lender since primary lender is responsible for losses arising from borrower default) |
| SPV/SMI bankruptcy-remoteness | Cagamas Berhad in operation since 1987, has issued various medium-term pay-through-type securities, and plans true sale-type transactions in the future. Cagamas purchases loans from originators with recourse to them if borrower defaults. Since sale is not true sale, Cagamas may not be bankruptcy-remote |
| Credit enhancements, credit ratings, and common modes of issue | <p>Overcollateralization most common mode of credit enhancement. Also, Cagamas bonds are treated as sovereign issues because of explicit guarantee from Bank Negara Malaysia.</p> <p>Domestic credit rating agencies: RAM and MARC.</p> <p>Rating required for Cagamas bonds.</p> <p>MBSs issued through tender/auction panel of 15 principal dealers appointed by Bank Negara Malaysia</p> |
| Servicer | Originator |
| Issues affecting MBSs demand and supply | Obstacles to further development of domestic bond market: need for longer-term bonds; lack of market-based benchmark; insufficient information on bond trading; inadequate supply of bonds; absence of bond futures market; narrow investor base; high liquidity and reserve costs; absence of borrowing and short selling; and other regulatory constraints |

Table 11 Summary of Survey Findings, Malaysia (Cont'd) ■

| Criteria | Status |
|---|---|
| Obstacles to bond market and MBSs development | <p>Malaysian government is pursuing efforts to facilitate the creation of a financial center in Kuala Lumpur; in this regard, there has been strong support for development of bond market infrastructure (scripless clearing and settlement system, rating agencies, etc.).</p> <p>Obstacles to further development of domestic bond market: need for longer-term bonds; lack of reliable market-based benchmark; insufficient information on bond trading; inadequate supply of bonds; absence of bond futures market; narrow investor base; high liquidity and reserve costs; absence of borrowing and short selling; and other regulatory constraints</p> |
| ABSs/MBSs primary and secondary market infrastructure | Over-the-counter market and Kuala Lumpur Stock Exchange |
| Foreclosure issues | <p>Time-consuming and costly.</p> <p>Covered by National Code of 1965; default triggers judicial mechanism that empowers aggrieved chargee to apply for order for sale/auction, which may be held thrice.</p> <p>Extrajudicial sales or foreclosure by private treaty also allowed</p> |
| Stamp duties on property transfer | Cagamas Berhad has been granted special exemption from stamp duty on mortgage and bond-related transactions |
| Stamp duties on securities | See above |
| Other tax issues | None mentioned in report |
| Accounting issues | Follows US GAAP |
| Other major legal and regulatory issues | Legal and regulatory framework evolving to widen range of eligible assets and create securities more in line with international ABSs/MBSs standards |

time-consuming foreclosure process, the narrow investor base in the bond market, the inadequacy of hedging mechanisms, and the lack of a longer-term benchmark yield curve. There are also various laws that restrict the transfer of mortgages.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN PAKISTAN

The viability of an MBSs market in Pakistan may be hampered by the absence of a legal and regulatory framework for securitization. Without such laws, securitization would initially be subject to the discretion of regulators and policymakers. The absence of laws relating to conveyance and the true sale of assets creates uncertainties in securitization.

The greatest barriers to the viability of securitization in Pakistan appear to be in the primary and secondary mortgage markets. Aside from the absence of laws for mortgage conveyance, stamp duties for mortgage transfer appear relatively high, foreclosure is costly and time-consuming, credit approval is not standardized, and credit appraisal may not be accurate. These problems have caused a deterioration in the quality of the mortgage portfolios of the largest housing finance corporations. In addition, a recent Supreme Court ruling that secured creditors may realize their securities in any manner desired makes it possible for originators to have a claim on assets even after they have sold them. This will have an adverse effect on the bankruptcy-remoteness of any SPV that is established. Moreover, the current accounting framework must be enhanced to make it responsive to securitization needs.

While the primary and secondary market infrastructure for fixed-income securities trading appears adequate, the market lacks liquidity and depth because of several factors including: (i) crowding out of private bonds by government bonds due to persistent deficits; (ii) investor wariness of sophisticated savings schemes; (iii) lack of investor awareness; (iv) lack of a ratings culture; (v) undercapitalization of market-makers and discount houses; and (vi) lack of a separate trading floor for bonds.

The country study suggests that the initial market demand for MBSs in Pakistan is likely to be low. Large housing finance corporations feel no need for additional liquidity. What is more, sources of liquidity other than MBSs already exist. Other potential problems noted by the report include the highly leveraged nature of the SPV (a deterrent to many investors), the long tenor of MBSs, the lack of standardization of mortgage loans, and the high default ratio of originators, such as HBFC. Another major

Table 12 Summary of Survey Findings, Pakistan ■

| Criteria | Status |
|--|---|
| Securitizable assets | No assets currently securitized |
| Eligible securitization structures | None, but pass-through-type obligations are being proposed |
| Eligible ABSs/MBSs issuers | None allowed, but potential issuers include commercial banks, housing finance companies, leasing companies, cellular phone companies, utility companies, manufacturing companies |
| ABSs/MBSs regulators | No ABSs/MBSs regulator yet, but potentially State Bank of Pakistan and Corporate Law Authority (CLA) |
| Roles of ABSs/MBSs regulators | State Bank of Pakistan regulates banking sector, and Corporate Law Authority (CLA) regulates capital markets |
| Laws, rules, and guidelines for bonds, including ABSs/MBSs | No asset securitization law yet. But rules on various securitization aspects (assignment, structuring of SPVs, recourse provisions, etc.) exist |
| Duties of originators and SPVs | Not applicable; no laws govern MBSs |
| Borrowers' consent required for mortgage conveyance? | No |
| Credit analysis of loan applicants | Credit approval not yet standardized; appraisal may not be very accurate |
| Definition of true sale | Unclear |
| Asset conveyance methods | Various options, including novation, assignment, subparticipation, or true sale, are possible |
| SPV/SMI bankruptcy-remoteness | SPV not yet established; current laws allow potential firm to be bankruptcy-remote; there is a proposal for a thinly capitalized SPV. But a possible issue is recent Supreme Court ruling that secured creditors may realize their securities in any manner desired, making it possible for originators to have a claim on assets even after sale |
| Credit enhancements, credit ratings, and common modes of issue | Credit enhancements may take the form of overcollateralization, bank-issued first-loss cover, and bank guarantees |

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| | Two domestic credit rating agencies: Pakistan Credit Rating Agency (PACRA) and DCR-VIS. Private placement most common mode of issue of corporate debt, and possibly also for future MBSs issues |
| Servicer | Not specified in report |
| Issues affecting MBSs demand and supply | Potential demand from commercial banks, insurance companies, mutual funds, etc.; can be stifled by competition from government bonds, low investor awareness |
| Obstacles to bond market and MBSs development | Inconsistent government policies on bond market; crowding out of private bonds by government bonds due to persistent deficits; investor wariness of sophisticated savings schemes; thin investor base and low investor awareness; poor appreciation of ratings; shallow and illiquid bond market; undercapitalized market-makers and discount houses; lack of separate trading floor for bonds |
| ABSS/MBSs primary and secondary market infrastructure | Over-the-counter market, Karachi Stock Exchange (KSE), Lahore and Islamabad Stock Exchanges |
| Foreclosure issues | Time-consuming and costly; potential problems in enforcing foreclosure due to corruption. House Building Finance Corporation (HBFC) foreclosure procedures: (i) personal contact with defaulter; (ii) direct sale or forcible occupation of property (under Section 28 of HBFC Act of 1952); (iii) recourse to civil or high courts; (iv) recourse to Banking Tribunal Courts. New Banking Companies Act seeks to address issue of lengthy foreclosure, cutting time to 3–6 months |
| Stamp duties on property transfer | 7–9% on assignment of loans |
| Stamp duties on securities | None mentioned in report |
| Other tax issues | High stamp duties; certain aspects of tax system may also impede securitization |
| Accounting issues | No GAAP for treatment of securitization |
| Other major legal and regulatory issues | None mentioned in report |

impediment would be the nontransparent operations of housing finance companies.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN THE PHILIPPINES

Despite the relatively advanced state of development of the legal and regulatory framework for securitization in the Philippines, the viability of establishing a secondary mortgage institution is constrained by a number of factors that affect the broader market for financial securities. On the demand side, these factors include the tax burden on insurance companies and restrictions on MBSs investments by the contractual savings sector in general. The preference for short-term financial investments also hinders the viability of an MBSs market. On the supply side, the impediments include the absence of credit-rating capacity and inadequate regulatory capacity. The latter has been partly addressed by the introduction of new rules on asset securitization by the central bank.

A major impediment has been the quality of the underlying mortgages. Mortgages originated by state-run institutions carry a much higher credit risk than mortgages originated by private institutions, as reflected in the low collection rate of state-run mortgage originators. The low rate of return on state mortgages is aggravated by the interest rate ceilings on low-cost socialized housing mortgages. Confidence in public-sector mortgages in general is further undermined by the inability of originators to distinguish poor from bad credit risks. But for private originators, securitization remains a viable tool, and a state-run mortgage insurer provides assurance that private mortgages are of reasonable quality.

To be viable, an MBSs market in the Philippines must exercise effective control over the integrity of its security issues. Therefore, MBSs must be adequately rated before they are issued. In addition, while underwriting procedures appear to ensure the soundness of the mortgage portfolios of private banks, the MBSs market must be able to regulate the underwriting practices of public originators. Adequate screening and monitoring mechanisms must be in place to make the securitization of publicly originated mortgages viable.

The moral hazard associated with the low-cost housing market has led to a recent tightening of mortgage credit to this sector. This, along with the crisis and the subsequent contraction in mortgage lending limits set by

the central bank, has put a credit squeeze on the entire housing market. As a result, real estate lending has fallen sharply across the board, reducing the supply of securitizable mortgages.

Other legal and regulatory issues also need to be addressed. These include the low level of activity in the private bond market; the need to resolve the dichotomy in mode of clearing and settlement between private and public securities; costly stamp duties for mortgage conveyance and securities trading; the lengthy process of foreclosure; and the possibility of redemption. Accounting rules must conform to existing best practices, and tax issues regarding MBSs must be resolved.

Whether a privately run SMI will be viable in the Philippines depends, too, on the extent of regulatory restrictions on its operations. The central bank, after insisting on classifying the SMI as a quasi-banking institution under its supervision, recently softened its stance. It also ruled that MBSs would not be classed as deposit substitutes, for which adequate reserves would have to be set aside.

FEASIBILITY OF ESTABLISHING AN MBSs MARKET IN THAILAND

The regional economic crisis has given Thailand an opportunity to overhaul the institutional mechanisms for regulating its financial markets. A secondary mortgage institution has been established with the help of Fannie Mae and Merrill Lynch. The move has boosted the viability of securitization in Thailand, because the law provides precise definitions for true-sale transactions and methods of conveyance.

Despite the increased awareness of securitization due to the Special-Purpose Vehicle Decree and the securitization of bad loans, several factors still impede the viability of establishing an MBSs market in Thailand. The foreclosure process is time consuming and costly, and the transfer of real property is subject to stamp duties. The viability of an MBSs market is also limited by weaknesses in the domestic bond market: lack of liquidity in the primary and secondary markets; high stamp and transaction taxes; lack of government bonds to serve as benchmarks (and thus lack of a benchmark yield curve); low demand among potential investors; high intermediation costs relative to bank deposits and equities; and economic instability due to the crisis. On the mortgage market side, potential obstacles include the underdevelopment of mortgage underwriting and the unclear accounting treatment of mortgage conveyance.

Table 13 Summary of Survey Findings, Philippines ■

| Criteria | Status |
|---|--|
| Securitized assets | Mortgage loans, consumption loans, trade and lease receivables, credit-card receivables, and other similar financial assets |
| Eligible securitization structures | Pass-through obligations |
| Eligible ABSs/MBSS issuers | SEC-supervised corporations. Major MBSS issuer: Home Development Mutual Fund (HDMF), state-run provident fund for housing |
| ABSs/MBSS regulators | Securities and Exchange Commission (SEC) and Bangko Sentral ng Pilipinas (BSP) |
| Roles of ABSs/MBSS regulators | SEC regulates securities issued by private corporations. BSP regulates securities issued by commercial banks. Insurance Commission (IC) regulates and monitors securities transactions of insurance companies. SEC disclosure requirements are typical documentary requirements for debt securities. Home Insurance Guarantee Corporation (HIGC)—guaranteed MBSS issuers are exempt from BSP and SEC registration and monitoring |
| Laws, rules, and guidelines for bonds, including ABSs/MBSSs | Interim rules for asset-backed securities drafted by SEC in 1994 are being used to regulate ABSs/MBSS transactions. Central Bank board recently approved ABSs/MBSS rules for banks. SEC considering modifying rules for nonbank institutions. Other laws that may affect ABSs/MBSS market being considered by Congress. Approval of Securities Regulations and Enforcement Act (SREA) on domestic private securities pending in Congress. Corporation Code governs public corporations; some portions being revised in Congress to strengthen corporate governance |
| Duties of originators and SPVs | Originator underwrites, appraises, and services loan, and conveys assets to SPV. Latter manages portfolio under trust agreement, and markets securities to investors |
| Borrowers' consent required for mortgage conveyance? | No |

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| Credit analysis of loan applicants | <p>Credit approval process and documentation not yet standardized; appraisal may not be very accurate.</p> <p>Banks share information on credit histories of potential corporate and individual borrowers.</p> <p>Most banks offering mortgage loans follow these credit standards: (i) loan-to-value ratio: ceiling of 60% recently mandated by BSP; (ii) monthly amortization generally not more than 1/3 of gross personal income</p> |
| Definition of true sale | Unclear under current SEC rules. But new BSP rules clearly spell out conditions of true sale |
| Asset conveyance methods | Mainly through assignment of mortgages. Current rules stipulate a true sale, which is not clearly defined |
| SPV/SMI bankruptcy-remoteness | <p>Government-owned and -operated National Home Mortgage Finance Corporation (NHMFC) was to have undergone transition in mode of financing from obtaining credit to finance the purchase of mortgages to issuing MBSSs, thereby becoming a genuine secondary mortgage institution. But has become saddled with nonperforming assets, and claims from creditors, compromising its bankruptcy remoteness.</p> <p>Government is to decide manner of asset disposal and future of SPV. SEC securitization law unclear if other SPVs, such as special-purpose trusts required under Philippine law, are bankruptcy remote.</p> |
| Credit enhancements, credit ratings, and common modes of issue | <p>Most common mode of credit enhancement is overcollateralization. Also, mortgage insurance and/or MBSSs guarantee available from HIGC, a state-owned company.</p> <p>Domestic credit-rating agency: Credit Information Bureau Inc. (CIBI). MBSSs issue does not have to be rated if guaranteed by Home Insurance Guarantee Corporation (HIGC). HIGC undertakes due diligence in providing guarantee cover on MBSSs.</p> <p>Most common mode of issue is through private placement. But there are plans to establish a bond trading board at the Philippine Stock Exchange (PSE). This will allow primary offerings at PSE</p> |

Table 13 Summary of Survey Findings, Philippines (Cont'd) ■

| Criteria | Status |
|---|---|
| Servicer | Originator |
| Issues affecting MBSs demand and supply | <p>Demand constraints: asset problems affecting low-cost and high-end property markets; high transaction costs and taxes; limits on investments by insurance companies and pension funds; and absence of reliable and timely housing-sector indicators. Below-market rates on mortgages originated by state-run institutions also hinder securitization.</p> <p>Supply constrained by wide variety of problems, including inadequate legal and regulatory framework, lack of primary market liquidity, lack of bond market infrastructure, and thin investor base</p> |
| Obstacles to bond market and MBSs development | <p>Historically strong demand for short-term government, instead of private, securities; private bond market very small compared with private banking sector.</p> <p>Hindrances to domestic bond market: high stamp duties; macroeconomic instability; inadequate clearing and settlement systems; unreliable credit ratings; lack of reliable benchmarks; lack of facilities for financing inventories of securities; buy-and-hold investors.</p> <p>More serious impediments: bad underlying asset quality; inadequate tax framework for MBSs; foreclosure laws that discourage securitization; and inadequate information in retail mortgage markets</p> |
| ABSs/MBSs primary and secondary market infrastructure | Over-the-counter market and Philippine Stock Exchange (PSE). Establishment of separate PSE trading board for bond issues delayed |

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| Foreclosure issues | <p>Time consuming and costly; in addition, very low collection efficiency on mortgages originated by public institutions.</p> <p>Extrajudicial foreclosure: (i) notice of sale not less than 20 days in at least three public places; publication once a week for at least 3 consecutive weeks in a generally circulated newspaper; (ii) sale by public auction.</p> <p>Debtor may redeem property within one year of sale, and may petition that sale be set aside and writ of possession canceled if court later determines that mortgage was not violated.</p> <p>Party that bought the foreclosed property must furnish a bond equivalent to use of property for 12 months, to indemnify debtor if it is shown that sale violated mortgage or Foreclosure Law.</p> <p>Judicial Foreclosure Law: (i) complaint; and (ii) sale of property</p> |
| Stamp duties on property transfer | Stamp duties on transfer of real property range from 0.2% to 0.4% |
| Stamp duties on securities | 0.15% based on the value of securities for transfers of securities in primary and secondary markets |
| Other tax issues | Unclear application of tax laws to MBSs. Heavy tax on insurance sector constrains MBSs demand; no private mortgage insurance |
| Accounting issues | ABSS/MBSs accounting procedures not yet in line with US GAAP |
| Other major legal and regulatory issues | Rent Control Act and Maceda Law discourage securitization since they lengthen foreclosure proceedings and introduce nonmarket distortions into housing market |

Table 14 Summary of Survey Findings, Thailand ■

| Criteria | Status |
|--|---|
| Securitizable assets | Loan claims or any other receivable rights that give rise to a flow of future income: mortgages, auto loans, consumer loans, vehicle and equipment leases, credit-card receivables |
| Eligible securitization structures | Law establishing secondary mortgage institution has not yet defined the allowable securitization structures |
| Eligible ABSs/MBSs issuers | Commercial banks, finance companies, credit foncier companies, securities companies, other entities approved by SEC |
| ABSs/MBSs regulators | Securities and Exchange Commission (SEC), Ministry of Finance, Bank of Thailand, and Thai Bond Dealing Center (TBDC). Ministry of Finance responsible for overall development policy and supervision of securities market. SEC obtains mandate from MOF and supervises primary and secondary markets. Bank of Thailand supervises banking and finance businesses. TBDC is a self-regulating secondary market for bonds in Thailand |
| Roles of ABSs/MBSs regulators | Ministry of Finance enforces the Special-Purpose Vehicle Decree. SEC powers and duties: (i) determine securitization policies; (ii) supervise SPV compliance with decree; (iii) determine types of securitizable assets; (iv) issue notifications implementing the decree; (v) determine fees for undertakings pursuant to the decree; (vi) appoint a subcommittee or adviser for any matters; (vii) establish regulations for subcommittee meetings and performance; (viii) perform other activities to achieve objectives of the decree. Office of Securities and Exchange Commission powers and duties: (i) consider and approve securitization scheme proposed by eligible persons; (ii) register the SPV; (iii) withdraw registration of SPV and appoint a liquidator; (iv) appoint an interim representative of the SPV to manage its business as it deems appropriate |
| Laws, rules, and guidelines for bonds, including ABSs/MBSs | Securities and Exchange Act of 1992 empowers SEC to regulate and monitor corporate debentures and security instruments. Instruments may be issued through private placement or public offering. Privately offered issues must be registered with SEC and comply with rules regarding sale and transfer of issue. To obtain SEC clearance, issuers of publicly offered issues must show financial capability, obtain a credit rating prior to issuance, and be assisted by a financial adviser in preparing documents |

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| | <p>SEC Notification of 10 August 1994 requires debentures to be rated by TRIS, except those with MOF guarantee.</p> <p>SEC Notification on Criteria, Condition and Method of Securitization for the Offer for Sale of Securities to Limited Persons within the Country or to the Overseas Investors provides securitization guidelines.</p> <p>Emergency Decree on Special-Purpose Vehicles for Asset Securitization (B.E. 2540) only for secondary mortgage institutions</p> |
| <p>Duties of originators and SPVs</p> | <p>Decree on Special-Purpose Vehicles empowers Ministry of Finance and SEC to regulate securitization. But they have not yet ruled on duties of originators and SPVs</p> |
| <p>Borrowers' consent required for mortgage conveyance?</p> | <p>No</p> |
| <p>Credit analysis of loan applicants</p> | <p>Credit approval process not yet standardized; appraisal may not be very accurate. Sound underwriting criteria not yet developed; no credit bureau or credit reporting agency.</p> <p>Mortgage lending operations vary according to mortgage lender. But these operations are typical: (i) Commercial banks and finance companies lend mostly to medium- and high-income borrowers, while Government Housing Bank lends to all income groups and particularly to lower-income groups. (ii) Typical loan-to-value ratios: for land and house, 80% of appraised value, or selling price, whichever is lower; for condominium unit, 75% of appraised value, or selling price, whichever is lower. In some residential plot, 70% of appraised value, or selling price, whichever is lower. In some cases (as is true of the Government Housing Bank), the bank lends up to 90% of appraised value of land and house if employer and employee agree to monthly salary deductions to pay the loan. (iii) Maximum loan relative to income normally limited by value of collateral property and income of borrower. Government Housing Bank does not grant loans in excess of 30 times monthly income of borrower with regular employment, or 15–20 times monthly income of self-employed borrower. Some banks use scoring system to analyze borrower creditworthiness for different types of employment. Other criteria of creditworthiness, such as savings, property holdings, are also taken into account. (iv) Maximum payment-to-income ratio normally cannot exceed 30%. But this ratio can be higher for higher-income borrowers if justified by credit analyses. (v) Most financial institutions in Thailand offer only floating-rate mortgage loans. A few banks, including Government Housing Bank, lend at both fixed and floating rates (reviewable/variable rates). But most Thai borrowers still prefer variable rates which move with the money market</p> |

Table 14 Summary of Survey Findings, Thailand (Cont'd) ■

| Criteria | Status |
|--|---|
| Definition of true sale | Priced at fair market value; SPV assumes risks and benefits from assets; SPV entitled to claim benefits from transferred assets |
| Asset conveyance methods | True sale; exemption of assets transferred from certain fees; SPV's rights over assets are protected in case of true sale |
| SPV/SMI bankruptcy-remoteness | Just established, capital fully paid by Bank of Thailand; operations being established with help of Fannie Mae and Merrill Lynch; bankruptcy-remote provided assets are purchased by SPV under conditions of true sale |
| Credit enhancements, credit ratings, and common modes of issue | Most common mode of credit enhancement is overcollateralization. Domestic credit rating agency, TRIS, rates unsecured bonds and commercial paper for companies and financial institutions. SEC requires ratings for unsecured bonds without MOF guarantee, including MBSs. Mode of ABSs/MBSs issuance not yet decided by government |
| Servicer | Originator |
| Issues affecting MBSs demand and supply | Demand for MBSs likely to come from commercial banks and financial institutions, but may also come from mutual funds, contractual savings institutions, and insurance companies. Demand likely to keep pace with improvement in economy; but more support institutions (e.g., mortgage insurance, ratings) are needed to ensure integrity of MBSs transactions. Housing loans also rising as percentage of total loans in economy. Potential hindrances: unclear accounting treatment of MBSs; low awareness of securitization and prudent risk management techniques for ABSs/MBSs transactions |
| Obstacles to bond market and MBSs development | Bond market dominated since 1990 by private debt issues. Although still small in total value compared with equities market, bond market has grown rapidly in 1990s. Obstacles to development: lack of primary and secondary market liquidity; high stamp and transaction taxes; lack of government bonds to serve as benchmarks |

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| | (and thus lack of a benchmark yield curve); low demand among potential investors; inadequate secondary market infrastructure; high intermediation costs relative to bank deposits and equities; and economic instability due to economic crisis |
| ABSs/MBSs primary and secondary market infrastructure | Scriptless, over-the-counter trading through Thai Bond Dealing Center. Clearing and settlement through Stock Exchange of Thailand (SET) |
| Foreclosure issues | <p>Time-consuming and costly; foreclosure takes 2–3 years.</p> <p>According to Section 728 of Thai Civil and Commercial Code:</p> <p>When loan is in default for about 3–4 months and workout fails over reasonable period of time, lenders normally activate acceleration clause in loan contract and declare full amount of debt immediately due and payable. If borrower cannot pay, lender may take court action to enforce mortgage or pursue foreclosure to take possession of collateral securing defaulted loan and sell it to satisfy the debt.</p> <p>In enforcing the mortgage the mortgagee must notify the debtor in writing to perform his obligation within a reasonable time to be fixed in a notice. If debtor fails to comply, mortgagee may take court action for a judgment ordering mortgaged property to be seized and sold by public auction.</p> <p>Section 729 also entitles mortgagee to claim foreclosure of mortgage if (i) debtor has not paid interest for five years; (ii) mortgagor has not satisfied the court that the value of the property is greater than the amount due; and (iii) there are no other registered mortgages or preferential rights on the property</p> |
| Stamp duties on property transfer | 0.5% of official sale value of land or sale price, whichever is greater |
| Stamp duties on securities | 15% stamp tax only on primary issuance of ABSs/MBSs. Secondary trades exempt from stamp taxes |
| Other tax issues | None mentioned in report |
| Accounting issues | No GAAP for treatment of securitization |
| Other major legal and regulatory issues | Unclear laws regarding seniority of claims for various structured securities; restrictions on investments by provident funds |

The Thai bond market shares many of the limitations of its counterparts elsewhere in Asia, yet is in a sense relatively better poised to ensure the viability of the recently established SMI. The Thai Bond Dealing Center, with modern clearing and settlement facilities, serves as a platform for potential primary and secondary market trades in MBSs. In addition, there is a viable credit-rating agency, which enhances risk assessment for MBSs.

The country study on Thailand identifies other factors that affect the viability of an MBSs market, including the possibility that originators will have to pay a 10 percent value-added tax when selling or conveying assets to the SMI. The study, however, concludes that with strong government support, a robust market can develop in the future.

POLICY RECOMMENDATIONS FOR THE REGION

In general, the countries surveyed in this study have the following characteristics: (i) shallow domestic bond markets with the greatest liquidity concentrated in short-term securities; (ii) weak legal frameworks in support of securitization; and (iii) large and growing primary mortgage markets despite the Asian financial crisis. Hence, despite these weaknesses, there is definitely room for developing robust MBSs markets provided certain conditions are met.

Given the current state of MBSs markets in the region, the following policies at the regional level are recommended for the development of MBSs markets:

1. Macroeconomic stability encourages long-term investment and thus provides the basis for building long-term capital markets, including MBSs markets. Therefore, economies should make every effort to stabilize their macroeconomies in the light of the Asian financial crisis.

Mortgage-backed securities markets rely on the synergy of four interdependent markets: the primary and secondary markets for mortgages, and the primary and secondary markets for mortgage-backed securities. Thus, for MBSs markets to function well, a delicate balance among the four must be struck, and this entails strengthening real assets in the mortgage market and financial assets in financial markets. This is because real assets back financial assets in an MBSs transaction. The basis for strengthening all such assets begins with a robust macroeconomy. The paradigm for well-functioning markets includes a stable macroeconomic framework with reasonably low inflation, low but positive real interest

rates, a reasonable fiscal and external position, and the absence of speculative asset bubbles (in both real and financial asset markets). Such a framework ensures a reasonable demand for and supply of both real and financial assets, and strengthens the bond between wholesale and retail credit markets in an MBSs transaction. A stable macroeconomy ensures that the real values of both real and financial assets are not subject to rapid erosion, and that the prices of such assets are not subject to unreasonable and speculative volatility. In addition, a stable macroeconomy plays a part in ensuring the *quality* of such assets, because the quality of MBSs as investment instruments is heavily dependent on the quality of the underlying mortgages. If the quality of mortgage portfolios declines as a result of macroeconomic shocks, so will the quality of MBSs as investment instruments.

The economic shock dealt by the Asian financial crisis has caused severe swings in asset prices, rising interest rates due to higher risk premiums for borrowers all over the region (including mortgage borrowers), deterioration in the quality of loan portfolios, and moderately higher inflation in the affected countries. The resulting mood of macroeconomic frailty has led to a decline in both fixed and portfolio investment. And because MBSs markets are a composite of fixed (housing) and portfolio (MBSs) investments, MBSs markets throughout the region have also weakened as a result.

For the potential of MBSs markets in the region to be fully exploited, economies must therefore strive to stabilize their macroeconomies and to reestablish conditions favorable for investment.

2. With respect to the domestic mortgage markets, economies must have a legal and regulatory framework conducive to building liquidity in the primary and secondary markets for mortgages and for MBSs. Foreclosure laws must be restructured to facilitate the recovery of properties, clear tax and accounting rules must govern the conveyance/assignment and true sale of mortgages, and transaction costs must be minimized.

In stable financial markets, investors rely on a comprehensive, stable, fair, and reasonable legal and regulatory system for investment decisions. The lack of such a system discourages the operations of MBSs and other markets. Many of the countries surveyed have laws and regulations governing important aspects of securitization (such as foreclosure and conveyance of assets). But many of these laws were not made specifically

with the development of securitization in mind. Existing securitization-related laws do not support current securitization initiatives. Therefore, the legal framework in many countries must be modified to facilitate the development of MBSs.

In the primary mortgage markets, care must be taken to ensure that foreclosure laws are not unreasonably structured so as to make the recovery of foreclosed assets difficult or cumbersome. This tends to lower the supply of housing investments, and also the demand for MBSs instruments.

In the secondary mortgage markets, there must be clear laws for the sale/assignment/conveyance of mortgages to special-purpose vehicles. Such laws must clearly specify whether mortgages are sold on a recourse or nonrecourse basis, as this distinction allows market participants and regulators alike to evaluate how risks are structured in transactions (and better supervise those risks). Laws should also distinguish the type of securitization structure allowable (pass-through or pay-through). The distinction is important because laws usually differ in the treatment of pay-through instruments, which are usually associated with debt claims and special-purpose corporations, and pass-through instruments, which are associated with equity claims and special-purpose trusts.

3. Experience indicates that a secondary mortgage corporation (SMC), though not a necessary condition for the introduction of MBSs, facilitates its development if there are many competitors in the primary mortgage markets. Therefore, while current MBSs markets may not justify the development of an SMC, the future growth of MBSs markets may entail the establishment of one.

One reason for the growth and success of Fannie Mae and Freddie Mac in the United States is that they exploit scale economies in standardizing securitization processes for a large and disparate group of primary mortgage lenders. Experience has shown that establishing an SMC helps cultivate deep and liquid MBSs markets. This is because an SMC can exploit economies of scale in securitizing large volumes of mortgages, and can facilitate the standardization of mortgage underwriting. If this is the case, then centralizing securitization activities in one or two firms generates efficiency gains which drive down the costs of securitization.

However, the development of an SMC may generally be feasible only if the legal and regulatory framework, the general macroeconomy, financial sector support institutions and infrastructure, and the present stock

and future growth of mortgage demand support its establishment. Therefore, countries where these conditions exist may consider encouraging the establishment of an SMC as a first step toward developing their own domestic bond markets.

Experience has also shown that the establishment of SMCs requires some form of government equity participation at the start. This will initially confer agency status on MBSs, as they have the same risk profile as sovereign securities. Over time, government participation should decline in order to subject the firm to market discipline.

4. In economies where the dominant primary mortgage lender is (still) expected to be a single institution, securitization should (in theory) be easier to develop. This is because a single institution will have all of the relevant information for securitization (loans, borrower histories, portfolio quality, etc.). In this case, it may be advisable to explore securitization through a special-purpose trust (SPT) arrangement with a bank rather than through SMCs.

This might apply to China, India, and Pakistan, where there is still considerable concentration in the mortgage lending industry. If there are not too many participants in the primary mortgage market an SMC might be too costly to establish.

5. Economies should also strive to improve overall mortgage underwriting procedures, including the quality of borrower and credit history information, to improve borrower screening and ultimately the overall quality of mortgages. Then, they should introduce practices such as credit scoring to help standardize the underwriting process and facilitate the development of the MBSs market.

The quality of MBSs ultimately depends on the quality of the underlying mortgages. Hence, all aspects of borrower screening must be improved as a prerequisite for developing MBSs markets. Due attention should be paid to creating a framework that reduces moral hazard and encourages transparency among prospective borrowers. The underwriting process should be equipped with enough procedures, controls, safeguards, and accurate sources of information to allow originators to prequalify only reasonable borrower risks and build standard profiles of safe borrowers, making them better able to assess risks of potential borrowers.

Building better sources of borrower information may include establishing a database with credit histories of retail borrowers, which originators

can access to cross-check potential borrowers.³ Meanwhile, building better internal controls could include adopting internationally accepted accounting standards for the recognition of arrears or past-due accounts.⁴

Eventually, as experience is gained in following borrower screening standards and procedures that work, all or parts of the underwriting process can be standardized, and this may include the introduction of credit scoring methods. This greatly facilitates MBSs development.

6. With respect to domestic bond markets, economies must ensure that transaction costs and taxes do not constrain liquidity in the primary and secondary financial markets. Regulators must also ensure that domestic bond markets are competitive, to minimize spreads and distribute market power among participants.

Experience has shown that stamp taxes are the primary component of transaction costs in bond markets and nascent MBSs markets in the countries surveyed. The structure of stamp taxation is usually some form or combination of fixed and variable costs based on the face value of the security. If stamp duties are repressively high, they may hinder primary and secondary market trading of MBSs altogether.

Stamp duties may also hinder the development of the primary and secondary mortgage market if they make mortgage debt too expensive for borrowers, and the sale, conveyance, or assignment of mortgages to an SPT or SPC too expensive for originating institutions.

Some countries, such as Malaysia and Thailand, have exempted some or all MBS transactions from stamp duties. Whether such exemptions are good policy or not depends on initial conditions. Countries that are not fiscally constrained with a large deficit at the outset will be in a better position to grant such fiscal incentives. For countries running budget deficits, a more reasonable stamp duty policy would be to simplify the tax system by levying standardized duties across instruments and then gradually lowering them as the fiscal position improves.

7. Because they allow longer-term debt to be priced, the establishment of long-term benchmark yield curves also encourages bond/MBSs market development.

The risk-adjusted real rate of return on long-term instruments such as MBSs will not be compatible with the corresponding risk-adjusted real

³This is a credit information bureau.

⁴Adoption of internationally accepted accounting principles for the recognition of past-due accounts could have averted the deterioration of the public mortgage portfolio in the Philippines.

rate of return for short-term instruments. Therefore, using short-term rates to approximate long-term interest rates in pricing long-term securities will not generate the proper valuation for long-term instruments.

For this reason, all of the countries surveyed should strive harder to establish a proper long-term benchmark yield curve using yields of short- and long-term government securities. However, to ensure that short- and long-term yields reflect current perceptions of risk, those government securities should be standardized, issued regularly, and traded in liquid and deep primary and secondary markets. Thus, governments must reduce impediments to the depth and liquidity of markets for benchmark government securities.

8. Constraints on eligible investments by potential investors, such as contractual savings institutions, inhibit the development of domestic bond markets.

Among the most likely investors in MBSs are institutions with long-term liabilities on their balance sheets (which will naturally require long-term investment assets such as MBSs to avoid maturity mismatches). These institutions include provident funds, pension funds, insurance companies, and pre-need firms, which, however, are normally subject to prudential regulations on their eligible investments. Overly strict regulations may unnecessarily restrict investment decisions by contractual savings institutions. MBSs markets will not be liquid and deep without adequate investment support from such institutions.

Provided there are adequate safeguards on the quality and structure of MBSs transactions, and there is sufficient regulatory capacity to monitor and supervise such transactions, then regulatory authorities may consider easing MBSs into the list of eligible investments by contractual savings institutions.

9. To reduce transaction risk in MBSs the private sector and the government may consider investing in technology to improve overall clearing and settlement. Establishing formal and organized over-the-counter markets for bonds and MBSs, or allowing MBSs to be issued and traded in the local stock exchange, will encourage the adoption of modern technology in MBSs markets, and will also improve market liquidity.

As is true of any other market for traded securities, the use of technology enhances liquidity in MBSs markets and ensures secure transactions. Therefore, as the MBSs market grows, both the government and the

private sector should consider investing in technology to speed up transactions, such as technology that will allow real-time gross settlement. This will shorten the time between trades and settlement, reduce the risk of fraud, and increase demand for MBSs.

As a step toward consolidating MBSs transactions and enhancing the liquidity of MBSs markets, governments may consider establishing organized bond exchanges where bonds and MBSs may be issued and traded in standard volumes, using standard criteria and rules for listing and trading, and undergo standard clearing and settlement. Such a venue, where the prices of securities can also be determined efficiently, induces liquidity in MBSs markets, and can form the basis for establishing futures and derivatives markets.

10. Improved access to information about bond market participants fosters competition and efficiency in financial markets, including MBSs markets. The cultivation of a ratings culture may therefore stimulate bond/MBSs market growth.

Mortgage-backed securitization is direct financial intermediation. That is, it mobilizes savings in such a manner that the saver-investor decides which type of debtor will be granted credit.⁵ Unlike traditional banking where information about creditors is privately produced, MBSs investors, like typical bond investors, rely on publicly produced information from many types of institutions, including investment banks, schools, and investment advisers. An independent and objective assessment by a credible credit rating firm may well be the most important source of information for investors about the creditworthiness of a potential issuer of MBSs.

Issuers may also use credit ratings in structuring securities to meet a wider variety of investor risk preferences. For example, an asset generating a steady stream of fixed amortization payments may have this cash flow structured in such a way as to provide only interest payments to some investors and only principal payments to others.

Credit-rating institutions are also important because they are able to utilize their institutional capacity and memory to construct profiles of good-quality MBSs issuers, just as credit bureaus may be able to construct profiles of good-quality retail borrowers. Credit-rating agencies will be able to evaluate and adequately track overall macro conditions in all of the

⁵This differs from traditional commercial banking, a form of indirect financial intermediation, where depositor-savers cannot choose the debtors.

four markets composing the MBSs composite market, and spot important trends affecting MBSs and mortgage markets.

With the broadening of information and analysis from credit-rating agencies, the cultivation of a financial culture that relies on independent and objective credit ratings may induce liquidity in MBSs markets.

11. Aside from providing improved legal protection for creditors, countries may also consider building a sufficient framework for the provision of external credit enhancements for MBSs, such as facilitating the development of competitive private mortgage guarantee markets.

Among the countries surveyed, the Philippines and Korea have mortgage guarantee firms, which help insure creditors against loss in case of borrower default. The existence of such firms may also encourage the growth of MBSs markets by encouraging greater mortgage lending. However, these firms should operate in a framework that promotes actuarially sound risk-adjusted pricing of guarantees.

12. Price distortions in mortgage and bond markets, such as interest-rate controls and subsidies, inhibit bond/MBSs market development. They should be used only minimally or, better yet, eliminated.

Since the MBSs market comprises four interdependent markets, distortions in any one of those markets inhibit the operation of market forces on the other three. For example, subsidized mortgage rates constrain MBSs backed by subsidized mortgages from yielding market rates of return, instantly reducing demand or eliminating it altogether. Also, mandatory credit allocations for housing distort the allocative efficiency of housing and credit markets. Reducing distortions in MBSs markets ensures greater competition and incentives for market entry by a wider variety of primary mortgage lenders, insurers, underwriters, appraisers, etc.

As stated earlier, the agency status of MBSs issued by an SMC with some form of explicit or implicit government guarantee or support confers on it the status of a sovereign risk. Therefore, it is expected that these MBSs will be sold with lower rates of return (and priced at a premium) compared with other privately issued securities. The implicit subsidy that comes with government equity participation in the issuing SMC creates a distortion by giving the mortgage and property sector access to cheaper sources of funding (at both the wholesale and retail lending level) compared with other industries. This advantage may induce greater demand for housing.

13. Regulators must strengthen their technical capacity to supervise and regulate MBSs transactions.

Boosting domestic demand for housing by developing MBSs markets requires capacity building by government in the regulation of such markets.

If the government intently pursues efforts to expand and develop MBSs markets, it must see to it that regulators are adequately trained to supervise the MBSs process, to assess and minimize systemic risk in MBSs markets, and to identify the necessary reforms and their proper sequencing. Given the complexity of MBSs markets, this is not an easy task, but it is manageable provided governments proceed with prudence, and have enough will to take the necessary steps.

Selected References

- All-Asia Capital and Trust Corporation. "The Emerging Asian Bond Market." World Bank, 1995.
- Fox, Nancy. "Credit Enhancements and the Role of Monoline Insurance." Paper presented at the APEC Workshop on Asset-Backed Securitization, Kuala Lumpur, Malaysia, 1998.
- Gutierrez, Julian. "Structuring and Pricing MBS in the US Market." Federal National Mortgage Association, 1997.
- Huang Sin Cheng. "Securitisation of Mortgages in Malaysia." Paper presented at the APEC Workshop on Asset-Backed Securitization, Kuala Lumpur, Malaysia, 1998.
- Jordan, Pat. "Ratings—The Role of the Rating Agency: Standard & Poor's." Paper presented at the APEC Workshop on Asset-Backed Securitization, Kuala Lumpur, Malaysia, 1998.
- Lamoreaux, Pamela. "Overview of Mortgage-Backed Securities and Operational Aspects." Federal National Mortgage Association, 1997.
- Lea, Michael. "Models of Secondary Mortgage Market Development." International Finance Corporation, 1998.
- Llanto, Gilbert, Aniceto Orbeta, Ma. Teresa Sanchez, and Christine Tang. "A Study of Housing Subsidies in the Philippines." Philippine Institute of Development Studies, 1997.
- Rhee, S. Ghon. "Results of the Survey on Asset Securitization in APEC Economies." Asian Development Bank, 1998.
- _____. "Rising to Asia's Challenge: Enhanced Role of Capital Markets." Asian Development Bank, 1999.
- Singh, Veerinderjeet. "Securitization: An Overview of Accounting and Tax Issues." Paper presented at the International Conference on Asset Securitization, sponsored by Arthur Andersen Malaysia, 1997.