

# **HOUSING FINANCE ASSESSMENT FOR THAILAND**

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By

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#### **Summary**

This report is based on personal interviews conducted in Bangkok during the period October 17-25, 2005, and additional desk study of secondary data and information sources. A list of persons contacted during the course of this study is provided at the end of the report.

Thailand's housing finance system succeeds generally in delivering funding to individuals homebuyers and property developers at a reasonable cost. This reflects the benefits of historically low interest rates and the belief in real estate as a superior long-term investment relative to the alternatives. The recent lending boom underway since 2003 has benefited from both improved macroeconomic stability and affordable credit conditions. Conversely, the low interest rate environment has also contributed directly to the improved macroeconomic situation and the affordability of mortgage credit.

The current growth in lending and property development must also be viewed in the context of recovery from the 1997 crisis – that is, recovery from a previous low point – and in response to government promotions to stimulate the market.<sup>1</sup> A new Financial Sector Master Plan introduced in 2003 has accelerated consolidation in the banking industry in an effort to increase efficiency and improve the delivery of financial services to lower-income households and the provinces. Population dynamics and changes in the living patterns of extended families have also increased the demand for housing and mortgage loans.

Primary residential mortgage markets in Thailand are relatively complete and highly competitive, at least at the middle-to-higher income levels. Although the commercial banks undertake the majority of mortgage lending in Thailand, the landscape tends to be dominated by the activities of GHB, which continues to act as a market leader in product development, real estate information, and potential secondary mortgage market development. The government actively employs GHB as an instrument of national policy development in housing and housing finance. GHB has been slated to undertake a major securitization effort in the near future.

The commercial banks compete aggressively for the business of higher-income borrowers while GHB and GSB serve the low- and moderate-income segments of the market. Consumers are offered an array of floating-rate and fixed-rate mortgage products, although the available fixed-rate programs generally do not fix coupon rates for more than 5 years. Some new products offered by GHB will fix rates for 10 years, but no

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<sup>1</sup> These programs included changes in rules on leases, changes in laws on foreign investment, and temporary reductions in business taxes and registration and transfer fees. See Don Makornthab, Suchot Piamcho, and Chatsurang Kanchanasai, "Bank Lending, The Housing Market and Risks: A Test for Financial Fragility," BOT Discussion Paper DP/05/2004, November 2004.

lender offers loans with rates fixed as long as 15 or 30 years similar to the dominant mortgage products in the United States. However, regulatory requirements and contractual terms on floating rate loans assure a high level of stability in mortgage coupon rates, thus diminishing consumer interest in alternative fixed-rate products.

The relatively large combined market share of GHB and GSB implies considerable concentration of risk in these two institutions. Whether this concentration is excessive, or actually provides a stabilizing influence, is unresolved. Unlike publicly-held GSEs in the United States, GHB and GSB are state-owned enterprises under direct government supervision, which should improve transparency and reduce the potential for unforeseen developments such as have occurred recently with Fannie Mae and Freddie Mac. Reducing GHB and GSB market shares would not improve the overall diversification of risk, since the Thai government is encouraging greater consolidation of the banking industry in Thailand under the Financial Sector Master Plan, and about half of the mortgage market is already concentrated among the four largest commercial banks.

The spread between deposit and loan rates and the net interest income margins reported by commercial banks indicates that the lending strategies of Thai banks are sustainable in the current environment despite aggressive pricing in competition for customers. To assess the longer term risks, BOT has established new guidelines effective January 2006 pertaining to IRR in the banking books of financial institutions.<sup>2</sup> Starting in June 2006 financial institutions will be required to report the duration of all interest sensitive assets and liabilities. The commercial banks are already including information on their repricing gaps in their financial reports in the format required for reporting to BOT.

BOT researchers have undertaken stress test analysis of banking portfolios under adverse scenarios for interest rates and housing values and have concluded that no banking institutions would fail.<sup>3</sup> However, this may reflect the current situation of excess capital, rather than the fundamental long-run safety of banking portfolios. The housing loan component is a relatively small share of total commercial bank assets, typically around 8 to 10 percent, and there is not a one-to-one matching of assets and liabilities, so it is not possible to draw any general conclusions about IRR attributable directly to mortgages. Such comparisons make more sense in the case of GHB, since the majority of their assets are mortgage loans. GHB's latest financial statements for 2004 show that a significant percentage of its loans – 38 percent – are not scheduled to reprice for at least 5 years, whereas almost none of its liabilities have durations longer than 5 years, and more than 70 percent reprice in less than 1 year, indicating a potentially significant IRR exposure. GHB reports that it engages in derivative transactions – primarily interest rate swaps – to hedge IRR on its mortgage portfolio.

Although competition among commercial and state-owned banks for customers has kept average mortgage pricing very attractive for borrowers, the commercial banks do report

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<sup>2</sup> "Supervision Policy on Interest Rate Risk in Banking Book of Financial Institutions and Related Reports," BOT Circular BOT.FPG.(21)C.2141/2547, 27 December 2004.

<sup>3</sup> Don Makornthab, Suchot Piamcho, and Chatsurang Kanchanasai, "Bank Lending, The Housing Market and Risks: A Test for Financial Fragility," BOT Discussion Paper DP/05/2004, November 2004.

that they undertake credit scoring and risk-based pricing of mortgages. Commercial banks also engage in retail cross-selling of insurance products and other banking services to mortgage borrowers which also contributes to more competitive pricing of mortgage products. A significant overhang of NPLs from the 1997 crisis implies lower rates of return on assets, but given the situation of excess liquidity banks do not appear constrained by the requirement to provision for losses against these loans. Whether mortgages are being correctly priced for future risks depends on what standard is applied and the risk preferences of the stakeholders. Recent credit bureau development should improve consumer understanding and discipline with respect to mortgage lending and other credit issues. It is expected that this development will support improved credit scoring of mortgage applications by lenders.

Although progress has been made in developing the legal framework for mortgage securitization, there appears to be no great appetite to undertake securitization on a significant scale. Excess liquidity in the banking system, a general lack of understanding by investors, the lack of suitable models and data for projecting mortgage loan performance, and recent increases in interest rates, are factors most often mentioned to explain the inertia in secondary mortgage market development. SMC is the one specialized institution that has been established to promote secondary mortgage market development. The SMC business plan entails operating in manner similar to Fannie Mae or Freddie Mac in the United State, combining portfolio investments and mortgage securitization, but SMC has undertaken an insignificant number of actual transactions and the commercial bank view securitization of loans with SMC as too costly and burdensome.

In contrast to the commercial banks, liquidity is an issue for GHB, which will need to raise additional capital to support both its ongoing business and lending for large scale NHA housing projects. GHB is in the process of hiring an advisor on securitization to assist with the selection of data, a servicing system, and dealing with international cross-border issues, and they envision being in a position to undertake securitization next year. One goal of the MOF is to pull together GHB and SMC to undertake a 20 billion baht securitization for sale to GSB, both to support the NHA projects and to synergize the GHB-GSB relationship.

Large-scale government infrastructure projects are targeted to deliver housing, housing finance, and local infrastructure development to low-income households (Baan Eua-Arthorn Project) and slum dwellers (Baan Mankong Project). While these programs may provide a stimulus to private property development, there is effectively no involvement by the commercial banking sector during the initial five years of the programs, during which time homes will purchased entirely through individual hire-purchase arrangements through GHB, GSB, and NHA.

Although the Thai housing finance system includes many of the components and products offered in more developed markets, these often lack full development and implementation. These shortcomings contribute to economic inefficiency and a reduced capacity for credit and IRR management. Both the mortgage market and real property

sectors would benefit from improvements in real estate information and appraisal standards, and borrower education regarding the potential benefits and costs of adjustable- versus fixed-rate mortgages. Development of mortgage default insurance or other forms of credit enhancement would expand access to mortgage credit by allowing lenders to issue loans at higher LTVs without increasing their exposure to credit losses. Further advances in mortgage securitization will improve the ability of banking institutions to manage interest rate risk, increase overall long-run liquidity in the market, and support development of alternative mortgage products.

The findings of the study are summarized in the following topical sections:

*Mortgage Lending Activity*

*Mortgage Products*

*Interest Rates*

*Collateral Efficiency*

*Escrow*

*Property Valuation Standards*

*Property and House Price Indexes*

*Credit Environment*

*Mortgage Insurance*

*NPLs and Mortgage Foreclosure*

*Credit Scoring and Risk Management*

*Mortgage Securitization*

*Credit Bureau Development*

*Real Estate Information Center*

*Rating Agencies*

*Financial Sector Master Plan*

*Single-Family Property Development*

*Baan Eua-Arthorn Project*

*Baan Mankon Project*

*Treasury Houses Project*

*Housing Market Data*

*Population, Income, and Price Levels*

*Persons Contacted*

*List of Acronyms and Abbreviations*

### *Mortgage Lending Activity*

Table 1 summarizes the issuance and outstanding volume of home loans for each year since 1994. Readily apparent is the sharp decline in mortgage lending activity following the 1997 crisis, and an equally dramatic recovering in lending volume since 1999. Table 1 also reports the overall size of the mortgage market as a percentage of GDP.

Table 2 reports the distribution of home loans outstanding by residential purpose, including: land, land and houses, shophouses, and condominiums. Loans from GHB are not included in these totals, but they give a general impression of the purposes to which home lending has been applied over the past two years.

Mortgage lending institutions in Thailand, in rough order of significance, include the commercial banks, Government Housing Bank (GHB), insurance companies, Government Savings Bank (GSB), National Housing Authority (NHA), finance companies, and credit fonciers. Table 3 reports the market shares of the major sources of housing finance for each year since 1998.

Commercial banks are the primary source of mortgage lending, holding about 53 percent of a total market of 1.04 trillion baht (USD 25.9 billion) at the end of 2004. Of this share, more than 78 percent (416 billion baht) is held by four banks: Siam Commercial Bank, Krung Thai Bank, Bangkok Bank, and Kasikornbank. No other commercial bank holds more than 50 billion baht.

There are two types of commercial banks in Thailand – domestic banks and foreign banks in Thailand. The branches of foreign banks can provide full commercial banking services the same as the domestic licensed banks, but as a foreign-owned corporation are allowed to open only one branch in Thailand. This limits the extent to which foreign banks can compete in consumer lending, particularly in the provinces.<sup>4</sup>

GHB was founded in 1953 as a government owned and operated organization operating under the supervision of the MOF.<sup>5</sup> GHB was initially both a housing finance provider and housing developer, until 1973 when the NHA was established to take over housing development for the general public. At that time GHB began moved to becoming a full-scale bank offering both deposit and loan services. GHB directs its lending into government and low-income housing plans, and is the single largest lender in the market, with 369.8 billion baht of residential loans outstanding at the end of 2004.

NHA is a public developer of housing established in 1973 under the Ministry of Social Development and Human Security.<sup>6</sup> NHA aims to develop and provide housing to low-income people and to solve the problems of slum areas. NHA current focus is the Baan

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<sup>4</sup> Tilleke & Gibbins International Ltd., “Thailand Legal Basics: Financial Related Laws,” January 2005

<sup>5</sup> GHB, *Annual Report*, 2004.

<sup>6</sup> NHA, *Annual Report*, 2004; and “National Housing Authority, 32<sup>nd</sup> Anniversary,” a special publication of the Bangkok Post, copy provided by NHA.

Eua-Arthon Project to develop 600,000 units of housing for very low income households within 5 years. NHA has recently expanded its role to become a center for housing research, with a focus on low income residents and slum dwellers in the Bangkok metropolitan region, standards for low-income housing, estimating housing demand, and research and development of construction technologies and low-cost construction materials.

GSB was created in 1947 as a state bank under MOF to encourage the thrift and savings habits of the Thai people. GSB's mission was expanded in 1998 to include the development of financial instruments and businesses, and to be engaged in non-traditional services such as foreign exchange, financial consulting, and issuing letters of guarantee. The GSB utilizes public savings to invest in government bonds and promissory notes. GSB provides only post-financing for housing projects, providing housing loans to lower-income customers, and has a similar customer base as GHB. They have not been competitive in this market and have provided zero down payment loans in order to compete. GSB is just now gaining access to the NCB data and implementing a credit scoring system. GSB has about 10-years of historical loan performance data, and undertakes detailed analysis of NPLs by location and customer characteristics. At present, GSB has greater liquidity and lends to GHB through inter-governmental agreements. GSB and GHB are highly competitive, but share information on approaches to risk management. GSB also lends through NHA to low-income borrowers for NHA large-scale housing programs. GSB also provides micro finance to small entrepreneurs, and community funding for administration at the village level.

### *Mortgage Products*

The predominant mortgage product in Thailand is a 25- to 30-year floating-rate loan with interest rates set in reference to the lending institution's posted MLR or MRR plus or minus a posted margin. Table 4 summarizes the current loan terms available from the major commercial banks and SOEs. Alternative mortgage products include fixed-rate loans with interest rates fixed for an initial 3 to 5 years, and then floating under similar terms to other floating rate loans.

Although the predominant mortgage product is a floating-rate loan, loan payment terms are structured so that the initial payment levels are set at a level above that needed to amortize the mortgage over the remaining term to maturity at the prevailing market rate. In addition, the coupon rate on the mortgage remains fixed as long as MLR remains within a pre-specified range. As a result, Thai mortgage borrowers have come to expect the kind of stability in mortgage coupons that is usually associated with fixed-rate mortgages. Because the payment levels exceed those needed to amortize the loan, partial prepayments (curtailments) are built in to the payment structure, helping borrowers to build equity more quickly, and reducing the net interest income and profit margins of mortgage lenders.

The features of floating rate mortgage products are not entirely market determined, as some conditions have been imposed by regulation to protect mortgage borrowers from changes in payments due to interest rate fluctuations.<sup>7</sup> For example, under BOT regulations lending institutions are required to consider extending the period for installment payments instead of increasing the amount of the installment payment in response to an increase in interest rates. In cases where the market rate of interest increases, but the installment payment is still sufficient to cover the increased interest, financial institutions are prohibited from increasing the installment payment more than once per year and by no more than 10 percent. In the case of large increases in market interest rates where the current installment does not cover the increased interest, the installment payment must be increased to a level that covers the interest due. Customers who enter into loan contracts that provide for fixed interest rates subject to change for every 3 to 5 years throughout the contract term do not receive similar protections, and the adjustment of new installment payments for each 3 or 5 years may exceed the 10 percent.

As a result of these limitations, Thai borrowers do not perceive long-term level-payment fixed-rate mortgages as offering sufficient additional benefits to justify their higher initial coupons rates. While this view was shared by many of the respondents, it is not clear that Thai borrowers are actually resistant to fixed-rate products, or that lenders have not been motivated to offer these products, particularly given the situation of excess liquidity in recent years that has reduced the need to access external capital markets. The development of mortgage securitization could result in a broader offering of fixed-rate loan products. Business loans in Thailand are more likely than consumer loans to utilize fixed-rate financing.

Commercial banks tend to focus their retail lending in the middle- to higher-income brackets, generally financing properties selling for THB 500,000 and up in the Bangkok region, somewhat less for properties in up-country provinces. They also support financing for lower-cost condominiums in Bangkok.

GHB indicated that consumers have not found mortgages with 5-year and 10-year fixed-rate products attractive, and borrowers taking their 3-year fixed-rate products have tended to refinance elsewhere after 3 years. GHB has introduced another 3-year fixed-rate product at a 50 basis point discount, along with a number of other possible product combinations on 30-year loans, including: fixed 3 years and renewable 10 times, fixed 5 years and renewable 6 times, fixed 10 years and renewable 3 times, and other combinations.

### *Interest Rates*

Table 5 reports average lending rates for GHB and commercial bank mortgage lending since 1996. Tables 6 and 7 show the current lending and deposit rates for commercial banks. MOR, MLR, and MRR correspond to bank's minimum overdraft, lending, and

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<sup>7</sup> Bank of Thailand, "Criteria for Extension of Housing Credits," No. ThorPorThor.SorNorSor.(22) 14/2543, January 4, 2000. Unofficial translation posted on BOT website.

retail rates, respectively. These rates are used as reference rates in setting coupon levels on floating rate loans as described above.

The current domestic Treasury yield curve is shown in Chart 1.

### *Collateral Efficiency*

Two forms of land tenure exist in Thailand – leasehold and freehold. Leasehold title grants ownership rights to property, agriculture, or other products on, under, or from under the land, but does not signify ownership of the land. Leaseholds are granted for a maximum of 30 years and may be renewed for another 30 years. The property can only be used for the purpose stated in the lease, and cannot be sublet, altered, sold, or transferred without prior consent. Freehold title is the most popular form of land ownership. Most real estate projects are built on freehold land, although in Central Bangkok leasehold title is more common.

Land ownership is treated separately and quite differently from ownership of immovable property (buildings).<sup>8</sup> Foreign individuals and foreign companies are prohibited from owning land in Thailand, however, there are no restrictions on building ownership, so foreigners may own buildings constructed on land that is leased. The Condominium Act 1991, as amended, permits groups of foreigners to acquire condominium units as long as the share of foreign ownership does not exceed 49% of the total area of all units in the building. The Land Department requires the foreign investors to document the ownership structure of these investments.

Land transactions are registered in the Land Office in the province where the property is located. District Land Offices are used in the case of property located in the Bangkok area. All land transactions must be recorded in writing, include a title deed, and be registered.

To summarize the various forms of land ownership:

Title Deed (Chanote) -- The purest form of land ownership which ensures easy transfer. Issued mainly in urban areas. One original is kept in the District Land Office and the other original is given to the owner. This is the highest form of land title for land which has been surveyed, usually by the Land Office, and offers irrefutable evidence of the land area and ownership. Land available for sale in most parts of Thailand offers this form of title.

Confirmed Certificate Of Use (Ngor Sor Saam Gor) – A document that certifies the right to use land, often issued pending title deed.

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<sup>8</sup> This discussion of land ownership and registration issues is based on “Land Systems, Rules, and Regulations,” in Thailand Legal Basics, pp. 40-47, Tilleke & Gibbins International Ltd., January 2005.

Certificate Of Use (Ngor Sor Saam) – Similar to the confirmed certificate of use, but lacking completion of formalities like aerial photos. Transfer of this form of certificate requires a 30-day posting of intent at various locations (provincial Land Office or Branch Land Office, District Land Office or Branch District Office, House of the Village Headman, at the location of the land, and the Municipal Office if the land is in a municipality), prior to registration by the Chief District Officer or Assistant District Officer.

Certificate of Possession (Sor Kor Neung) – Only recognizes possession and does not confer ownership rights. Although the certificate is non-transferable, the person in possession may transfer physical possession of the property. Required for issuance of a Certificate of Use. Most common in rural areas.

Tax Receipt – Evidence of possession, but not conferring ownership rights with possession. Useful when applying for a Certificate of Possession.

Condominium Unit Title Deed (Nangsue Kammasit Hong-Chut) – Evidence of ownership of a condominium unit. Similar in importance to a Land Title Deed and applying similar administrative procedures.

The Title Deed (or Condominium Title Deed in the case of condominiums) appears to be the only form of title that can be efficiently pledged by lenders, since this form confers actual ownership that is registered. Commercial bank underwriting guidelines indicated that the land registration is one of the required documents for loan approval. It has been noted that the ownership rights of the person entered into the register are recognized under the Thai Civil and Commercial Code. There has been a long-term effort to survey all land in Thailand and convert inferior titles to Chanote.<sup>9</sup> Other forms of title are more in the nature of testimonial deeds, but are frequently sold, leased, and used as mortgage collateral.<sup>10</sup> Generally these forms of title require 30 days public notice before any change in the status of the land can be registered.

A mortgage of land does not include mortgage rights over buildings put up on the land after the date of the mortgage unless this is explicitly provided for in the mortgage. It is not common for buildings and other immovable property to be mortgaged separately from the land, and ownership of the buildings is transferred at the Land Department at the same time as the ownership of the land covered by the Title Deed.<sup>11</sup>

No system of title insurance exists in Thailand. One real estate information and property valuation expert reported that the land title system has been in operation for over 100 years and was originally adapted from the Australian system. He indicated that in urban areas like Bangkok there is generally no need to undertake a title search, and that

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<sup>9</sup> Anthony Burns, “Thailand’s 20 Year Program to Title Rural Land,” background paper prepared for the World Development Report 2005.

<sup>10</sup> William Pinsent, “Buying Property? Ask William,” The Property Page, Phuket Gazette, undated article at <http://www.phuketland.com>.

<sup>11</sup> Jones Lang LaSalle, “Corporate Occupiers Guide: Thailand,” August 2005.

documentation of title at most Land Offices can be undertaken in less than one day. The situation in the provinces is less uniform, where there is a need to improve the transparency of the titling process. The same respondent indicated that property records are not public information, and that payments to local officials may be required to obtain data for commercial research purposes.

### *Escrow*

A new Escrow Account Act is expected to be in place in the next one to two years. The Act will provide for the establishment of escrow accounts at the buyer's request, with developers subject to penalty when rejecting these requests. The escrow account will provide for full repayment of the buyer's downpayment when the developer defaults on the sale and purchase agreement. At present few projects utilize escrow accounts – primarily those in the high-end (over 10 million baht) order-to-built segment. The establishment of the Escrow Account Act will create barriers to entry of smaller developers with less capital support since funds from downpayments will no longer be available as working capital. Developers offering prebuilt units are not expected to be affected by the new procedures.<sup>12</sup>

### *Property Valuation Standards*

The quality and reliability property valuation standards in Thailand were brought into question during the 1997 crisis.<sup>13</sup> Since that time, significant effort has been made to upgrade appraisal standards and to enforce already existing codes of ethics. Until recently, property valuers have been largely self-governed by standards and practices for valuers set forth by the Valuers Association of Thailand and Thai Valuers Association, following international standards for training and qualification, such as those of the International Association of Assessing Officers. Valuations for public purposes must be carried out by listed key valuers approved by the SEC.<sup>14</sup> The registration of key valuers is renewed by the SEC every two years, and the professional associations are playing a more significant role in the approval of key developers for public purposes.

BOT recently issued notifications requiring that collateral appraisals conform, at a minimum, to generally accepted appraisal standards and codes of conduct such as those used by the Valuers Association of Thailand and Thai Valuers Association.<sup>15</sup> Under the BOT guidelines, commercial real estate must be appraised or valued by applying the cost approach, the direct sales comparison approach, or the income approach; and residential real estate must be appraised or valued by applying the direct sales comparison approach.

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<sup>12</sup> Jones Lang LaSalle, "How the Escrow Account Will Affect Thailand Property Market?" Bangkok Economic Insight, November 15, 2005.

<sup>13</sup> See David Layne, "The State of Valuation in Thailand," The Appraisal Journal, 70(3), July 2002.

<sup>14</sup> CB Richard Ellis, "Thailand's Key Valuers," at [www.cbre.co.th](http://www.cbre.co.th).

<sup>15</sup> BOT Notification No. 797-2548, "Regulations for Collateral Valuation of Financial Institutions," May 4, 2005.

The appraisal may be conducted by an in-house appraiser as long as the appraiser is not involved in credit granting, investment, or debt collection activities and has no direct interest in the debtors or the collateral. Similar requirements apply to outside appraisers. Financial institutions must establish appraisal committees to approve the independent appraiser. In cases where an independent appraisal is required, the appraisal valuation may not be changed by the committee, but the committee may engage a new independent appraiser and adopt any value in between the two values set by the independent appraisers. In cases where the collateral does not require an independent appraiser, the appraisal committee may increase or reduce the appraised value, but in both case the justification must be expressed in writing. In cases of noncompliance with these regulations, BOT may order the financial institution to decrease the market value of the collateral.

GHB is developing a new GIS for their collateral system. They presently have the GIS for the BMR operational and have loaded data for the rest of Thailand into the system. GHB now retains all transaction records providing property valuations. Previously, GHB's collateral system would replace previous property valuations with the most recent valuation, resulting in the loss of historical data. BOT presently uses information from GHB's collateral system to develop land and property indexes. GHB will develop AVMs for use in conducting QC on property appraisals. Table 8 shows the time series values of the property and house price indexes produced by BOT.

### *Credit Environment*

In the opinion of one commercial bank respondent, there is still a general lack of social discipline toward credit and repayment in Thailand, but expectations are that the National Credit Bureau will help to move the market forward by increasing consumer discipline. Although there is a high incidence of false credit applications, it is not cost effective for commercial banks effort to pursue legal action versus simply declining credit. A great deal of effort is expended on verification of income and employment, which generates additional overhead on loan processing. The market is not close to utilizing on-line loan approval processes, although some pre-approval activity is currently undertaken on-line.

GHB is viewed as a competitor of the commercial banks, more so in the provinces where the commercial banks tend to target lower-income households than in the Bangkok region, thus bringing them into more direct competition with GHB. The commercial banks have become more consumer oriented as a result of this competition. On the other hand, GHB is not viewed as either a necessary structural component of, or a structural impediment to, private mortgage market development.

### *Mortgage Insurance*

At present there is no mechanism for subscribing to mortgage default insurance in Thailand. Following on a World Bank feasibility study of mortgage insurance conducted

in 2002, GHB, IFC, and CHMC executed a memorandum of understanding in May 2005 to promote the development of mortgage insurance in Thailand. IFC will provide review and comment on a feasibility study being prepared by CHMC in collaboration with GHB. CHMC has sent a draft report to GHB and IFC has sent a preliminary business plan. GHB reported interest by international MI providers, pending review of the CHMC report, and hopes to get the project off the ground next year, with GHB as the largest initial subscriber.

Respondents from more than one commercial bank did indicate that they would be interested in subscribing to a mortgage insurance product if one existed, but generally mortgage insurance is not a pressing issue to the commercial banks. Their focus on lending to higher income borrowers taking loans in the 70-80 percent LTV range reduces the perceived need for mortgage insurance, and the lack of a secondary mortgage market reduces the need for third-party credit enhancements on mortgage-related securities.

Residential mortgages currently received a favorable 50-percent risk weighting and mortgage insurance is not recognized under current capital rules. BOT will adopt some components of the Basel II Accord by late 2008, including an option to adopt the IRB approach. This could provide a mechanism through which to provide for recognition of third-party credit enhancements like mortgage insurance on minimum capital requirements for residential mortgages.

The development of MI will strengthen the infrastructure of housing finance in several ways, by facilitating lending to lower-income households and at higher LTVs, by providing a mechanism for credit enhancement of mortgage portfolios and mortgage-related securities, by providing independent underwriting of mortgage credits, and by providing an additional layer of capital aimed at protection against catastrophic losses. Development of MI in Thailand at this time would be very timely in light of the attention that alternative approaches to credit loss mitigation may receive under implementation of the Basel II capital accords.

The 5-year lease-purchase arrangement followed by a mortgage to be used by NHA to support the purchase of low-income housing under the Baan Eua-Arthorn Project is one method of enhancing the credit quality of a mortgage by allowing borrowers to demonstrate their ability and commitment to making regular payments. As such, this approach may be viewed as a substitute for other forms of credit enhancement, such as mortgage insurance, that facilitate lending to lower-income borrowers or those making smaller borrower contributions (downpayments) and higher loan-to-value ratios (LTVs).

Credit affordability can be enhanced both through programs that lower required downpayments and/or monthly payment obligations. There are loan programs in the United States that expand affordability along one or both of these dimensions that are not offered in the Thai market. For example, simultaneous first- and second-lien programs enable borrowers to purchase higher cost homes with smaller downpayments in the absence of MI. To offset the increase in monthly payments from having two loans, some lenders offer first- and second-mortgages that allow borrowers to pay only interest and no

principal (zero amortization) or provide optional payments (negative amortization). Generally, loans with negative amortization features will lower monthly payment burdens, but entail greater risk of borrower default. Although these loans have grown in popularity and strong house price appreciation has reduced foreclosures, these high-risk alternatives are receiving increased scrutiny and guidance by financial supervisors.

### *Non-Performing Loans and Mortgage Foreclosure*

NPL levels remain very high in Thailand, particularly in the real estate sector where they exceed 18 percent of outstanding loans. Tables 9 and 10 show the levels and percentages of NPLs for all loan types since 1999 for private and state-owned commercial banks and finance companies.

Statistics from the BOT combine all real estate business when reporting NPLs outstanding, so it is not possible to separate residential from commercial real estate NPLs. Elsewhere the BOT research indicates that approximately 70% of real estate developments are for housing units.<sup>16</sup>

NPLs, which BOT now defines as impaired loans, comprise loans variously classified as substandard (20-percent minimum loss allowance), doubtful (50-percent minimum loss allowance), doubtful of loss (100-percent minimum loss allowance), and loss.<sup>17</sup> Although there has been some effort by regulators to align NPL classification guidelines with international practices, some observers believe that reported NPL levels for the banking sector would be higher if international classification and provisioning standards were applied.<sup>18</sup>

Relative to other Asian markets, there is little secondary market activity in NPL portfolios since banks generally attempt resolution through loan restructuring or transfer to an AMC. Loans subject to restructuring are not included in the reported NPL numbers, but there is no certainty that these assets will ever return to a performing status.

A variety of approaches to debt restructuring have been employed to mitigate losses on non-performing loans, including: (1) lowering payment requirements; (2) extending loan repayment terms; (3) providing interest rate “holidays”; (4) decreasing interest rates; (5) allowing for interest-only service of the loan; and (6) pre-foreclosure sale of the collateral property.

Different levels of loss provisioning are required for loans in different stages of the foreclosure process, and debt restructuring can result in removal of a loan from NPL

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<sup>16</sup> See Don Makornthab, Suchot Piamcho, and Chatsurang Kanchanasai, “Bank Lending, The Housing Market and Risks: A Test for Financial Fragility,” BOT Discussion Paper DP/05/2004, November 2004, bottom of page 7.

<sup>17</sup> “Redefining ‘Non-Performing Loans’ (NPLs) and Preparation of Report Required to be Submitted by Commercial Banks,” BOT Circular BOT.FPG.(22)C.7/2546, 16 January 2003.

<sup>18</sup> PriceWaterhouseCoopers, “NPL Asia,” Issue 5, April 2005.

status. Loans removed from NPL status are placed on a watch list for 3 months, and after 2 years the borrower must begin to repair any arrearages remaining from the original delinquency.

The foreclosure process starts after 90 days delinquency, and it takes approximately 1 year on average to complete the foreclosure process. Cases resolved in the courts can take as long as 5 years on some cases. The borrower can also negotiate for the property in the courts. Foreclosure efficiency has improved since the 1997 crisis, both as a result of internal improvements by the courts, in part due to the greater experience engendered by having gone through the crisis.

One factor mentioned as contributing to stagnation in the percentages of NPLs since 2003 is the relative difficulty of marketing second-hand homes in Thailand and the inability of the original mortgagors to sell their homes and payoff their loans. A resurgence in new construction and more stringent underwriting standards on second-hand homes (for example, lower LTV requirements) have reduced the value of these properties. The situation of excess liquidity may also be a factor. With excess capital, it may be more profitable to hold these loans on the books, even if they are subject to higher loss allowance minimums, in the hopes of one day returning them to performing status.

The government has introduced a provision for reduced transfer taxes, starting in October 2005 and continuing for the next year as an incentive to home purchasers to acquire second-hand homes, including NPAs, and enable banks to reduce their inventories of existing housing.

Respondents from the insurance sector indicated that the government generally overlooks the insurance sector when setting regulations related to mortgage lending, debt restructuring, and management of NPLs or NPAs to the disadvantage of insurance companies. Insurance companies engaged in mortgage lending are not eligible for tax waivers and other incentives introduced after the 1997 crisis. For example, the tax waivers on NPLs prior to foreclosure that are provided to commercial banks are not available to insurance companies.

Conservative lenders like insurance companies attempt to minimize LGD by limiting lending to borrowers purchasing new single-family principal residences, and avoiding vacant land, second homes, and condominiums. Insurance companies tend to have more conservative underwriting standards than commercial banks.

One factor contributing to higher LGD for NPLs on condominiums is the accrual of condominium fees and the priority claims of the condominium juristic person.

Under Thai law, the mortgage debt bears interest during default at the rate that is permitted by law, however, there is no compounding of this interest (interest on interest is prohibited).

### *Credit Scoring and Other Models for Credit Risk Management*

Commercial banks are employing credit scoring models in their underwriting and GHB is negotiating with an outside contractor to develop a similar capability. GSB has recently gained access to NCB data and is implementing its own credit scoring system.

Siam Commercial Bank indicated that their scoring model is used for automated underwriting, with a potential for manual overrides. They have data back to 2001 for credit scoring, and undertake vintage analysis of their loan portfolio for the purpose of monitoring NPLs. They are considering revisions to the model to take into account a perceived shift in the model parameters in recent months.

Although Siam Commercial currently undertakes no reappraisals of collateral on performing loans, they plan to implement a 3-year reappraisal cycle on performing loans in anticipation of the implementation of Basel II. Due to the potential cost of reappraisals on more than 200,000 loans, they are negotiating with BOT to allow use of “on the table” rather than manual appraisals on performing loans. BOT currently requires annual reappraisals on NPLs.

Customer data are shared with the National Credit Bureau, although currently there is no legal requirement for data sharing. They have encouraged BOT to implement mandatory data sharing on commercial bank lending, but at present BOT has not elected to pursue this.

Siam Commercial undertakes risk-based pricing, taking into account ROC on housing loan projects. They utilize a single scoring models for all product programs and projects, arriving at one of four possible ratings: AA, A, B, C. Loans in the last category tend to involve smaller houses, purchased by middle- to lower-income households, and are priced higher than other projects. House price level criteria are applied throughout, with most exceeding THB 600,000 in Bangkok, and THB 500,000 up country.

Kasikorn Bank indicated that DTI ratios are more important than LTV ratios in underwriting loans to Thai borrowers. Cash flow is considered the most critical element, and lenders often stress test potential borrowers by underwriting loans using an interest rate 200 basis points above the initial coupon rate.

Mortgage portfolio performance in recent periods has been very strong, and net additions to NPL status at the commercial banks are very low. For example, Siam Commercial Bank reports that credit migration from normal to NPL status has not exceed 18 basis points for the past three years, and has been declining. GHB’s most recent annual report indicates that net additions to foreclosed properties as a percent of total loans were 48.91 basis points in 2003 and 49.51 basis points in 2004, while total loan loss allowances have declined from 8.3% in 2003 to 7.3% in 2004.<sup>19</sup>

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<sup>19</sup> Annual Reports for 2004.

Interest rates are generally indexed to MLR (less a margin of 25 to 75 basis points). As of October 2005, MLR was at 6.25 percent.

Private property developers sometimes provide interest rate subsidies that lower the initial coupon rate to 0 percent for a period of 6 months to 1 year, and recover the cost of these subsidies through higher sales prices on the property. This undermines the quality of data on collateral values and LTV ratios. A similar situation has arisen in the United States in lending through the FHA MMIF program as a result of downpayment assistance provided by non-profits established by property developers. Default rates on these loans are typically 2 to 3 times higher than for loans with no such downpayment assistance.

### *Mortgage Securitization*

Thailand has a civil law legal system based on reforms introduced at the beginning of the 20<sup>th</sup> century by King Chulalongkorn.<sup>20</sup> The major Codes of Thailand are: Civil and Commercial Code, Penal Code, Civil Procedure Code, Criminal Procedure Code, Revenue Code, and the Land Code. Laws generally, and particularly laws regulating commerce, are drafted in broad terms, with power delegated to government ministries to issue regulations and notifications. There is no basis for submission to the jurisdiction of a court outside of Thailand, and the courts of Thailand will not enforce any judgment or order obtained from a foreign court. Once Thailand has entered into a treaty that has been duly ratified and published it has the force of law. Treaties pertaining to double taxation are relevant to the securitization process.

Prior to 1997, securitization law was governed by the Civil and Commercial Code and Securities and Exchange Commission Act. In 1997, the government passed the Emergency Decree on Special Purpose Juristic Person for Securitization, B.E. 2540 (the Emergency Decree) to facilitate securitization transactions. The Emergency Decree relaxed the notification and fee requirements and established provisions for “true sale” on the transfer of mortgages to an SPV, as well as other provisions for “bankruptcy remoteness” and corporate formation. The MOF and SEC have recently proposed amendments to Emergency Decree aimed at correcting certain aspects of the legislation that have been found to be inconsistent with the securitization process.<sup>21</sup> These modifications apply to sections dealing with the transfer and valuation of securities, establishment of an SPV in the form of a trust, calculation of interest rates, and fraudulent transactions.

As described by MOF, the existing SPV law continues to be a legal impediment to mortgage securitization. In addition, issues related to withholding and double taxation must be addressed by the Revenue Department and SEC, where there is concern about the use of SPVs to establish tax havens. Any ruling on the tax issues must await the amendments to the SPV legislation, which is a slow process.

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<sup>20</sup> Chaipat Kamchadduskorn, “Securitization in the Land of Smile,” Siam Premier, October 2001.

<sup>21</sup> “Memorandum of Principles and Rational Comprising the Draft Royal Enactment on Special Purpose Juristic Person for Securitization B.S.2540,” copy provide by MOF, Fiscal Policy Office, October 19, 2005.

Aside from a small number of government-sponsored demonstration efforts at mortgage securitization, a secondary mortgage market is non-existent. Commercial banks have not been motivated to push development in this area for a number of reasons, including: (1) excess liquidity in the banking system that has reduced the need to raise additional capital; (2) the prevalence of floating-rate mortgages that reduce the interest-rate risk exposure of mortgage portfolios; (3) the lack of historical loan performance data for use in sizing the credit risk and interest rate risk on residential mortgages; (4) the lengthy foreclosure process; (5) tax, accounting, and regulatory issues that create ambiguities with regard to the concepts of “true sale” and “bankruptcy remoteness” required for securitization; and (6) SPV formation issues. For the most part, issues related to the items in (5) and (6) have been resolved through amendments to the original securitization act, or are currently in the process of being amended.

MOF noted that in contrast to the situation at the commercial banks, liquidity is an issue for GHB as they continue to extend new loans to lower-income households as part of the government’s larger plans for infrastructure investment. MOF noted that GHB lending comprises almost 50 percent of the current flow of mortgage lending in Thailand. GHB aims to raise 20 billion baht in capital in the near future, and MOF is encouraging them to do so through securitization of existing assets. The FPO is seeking ways to synergize the GHB-GSB relationship, and to support the operations of SMC, by having GHB execute their secondary market transactions through SMC for sale of the securities to GSB.

GHB reported that they are in the process of hiring an advisor on securitization to assist with the selection of data, a servicing system, and dealing with international cross-border issues. They envision being in a position to undertake securitization next year. The legal path to securitization now appears to be clear, but recent interest rate movements have been unfavorable. They envision undertaking structured transactions utilizing floating rate loans as collateral.

SMC is the one specialized institution established to promote secondary mortgage market development. SMC is a government-owned state enterprise under the supervision of MOF. SMC was established in January 1998 with an initial capitalization of 1 billion baht. Under the SMC law, the government will guarantee loans up to four times capital. SMC bonds receive a 20-percent risk weighting for minimum capital and qualify for use as a statutory liquidity reserve. SMC’s business plan entails operating in manner similar to Fannie Mae or Freddie Mac in the United State, combining portfolio investments and mortgage securitization. SMC debt obligations include bonds with 1-, 2-, 3-, and 5-year maturities.

SMC has undertaken a small number of actual transactions, mentioning 400 million and 600 million baht securitizations with GHB and GSB, respectively, and another 1.1 billion in risk sharing arrangements with Bank of Asia and Tanaka Finance. Aside from the situation of excess liquidity reducing the need to securitize, commercial bank respondents indicated that securitization of loans with the Secondary Mortgage Corporation has been considered too costly and burdensome. Also, one respondent indicated that even though

the Emergency Decree provided for the sale of mortgages and mortgage servicing rights, many historical mortgage contracts did not allow for their loans to be resold.

In contrast to the commercial banks, liquidity is an issue for GHB, which will need to raise additional capital to lending for the large scale NHA housing projects. GHB reported that they are in the process of hiring an advisor on securitization to assist with the selection of data, a servicing system, and dealing with international cross-border issues. They envision being in a position to undertake securitization next year. The legal path to securitization now appears to be clear, but recent interest rate movements have been unfavorable. They envision undertaking structured transactions utilizing floating rate loans as collateral. MOF/FPO reported that they are seeking ways to synergize the GHB-GSB relationship, and plan to pull together GHB and SMC to undertake a 20 billion baht securitization for sale to GSB. The securitization would be in the form of a structured transaction using floating rate loans as collateral.

There is still a general lack of discipline in the market toward credit and repayment, and the commercial banks generally do not find it to be cost effective to pursue individuals who submit false applications. As a result, they spend a great deal of effort on verification of income and employment, implying a high level of overhead in loan pricing. However, it is perceived that the existence of the National Credit Bureau will move the market ahead in this respect.

There have been developments deemed positive for the development of mortgage securitization, and there was a general consensus that mortgage securitization “will happen.” Lending by commercial banks is currently managed in a manner that would support the pooling of assets for securitization, and investor understanding of securitization has increased as a result of recent credit card securitization transactions and securitization of non-performing mortgage loan portfolios. Since the 1997 crisis, there have been improvements in foreclosure efficiency, including internal improvements in loss mitigation and NPL management, and improved efficiency in the courts. Property title and registration are well developed in Thailand, and do not represent significant limiting factors to mortgage lending and securitization. The establishment of the National Credit Bureau is expected to improve consumer discipline.

### *Credit Bureau Development*

The 1995 Financial System Master Plan called for the establishment of a credit bureau in Thailand. The development of a private sector credit bureau was championed by the AFC, joined by the MOF, which together invited presentations and developed a short-list of potential foreign technical partners. The large commercial banks did participate at this stage, the government was reluctant to force participation, and the 1997 crisis resulted in a suspension of this original effort. Following the 1997 crisis, BOT, MOF, and the SEC revived the effort to establish a credit bureau, which resulted in the establishment of the TCB in September 1999, with the GHB and a local technical partner as shareholders.

The commercial banks proceeded with the development of a private sector credit bureau, the CCIS, in partnership with both Thai and local technical partners. Both bureaus began operation in early 2000.

The TCB implemented software developed by its local technical partner, and started with a retail consumer loans database inherited from its technical partner, and obtaining additional data from state banks and non-bank financial institutions such as credit card issuers and hire-purchase firms. The CCIS purchase foreign software and started with corporate and up-market retail loans, using the same data that commercial banks were submitting to BOT. The TCB enjoyed an initial cost advantage over the CCIS through the use of a local technical partner for software development.

In early 2000, BOT drafted credit information legislation known as the Credit Information Business Act, or CIBA. Under CIBA, financial institutions eligible for credit bureau membership included commercial banks, finance companies, securities brokerages, credit fonciers, life insurance companies, general insurers, credit card issuers, financial institutions set up by special laws, and other credit-granting entities as might be announced by the Credit Information Protection Committee, or CIPC, the body responsible for oversight of credit bureau matters and chaired by the Governor General of BOT.

The CIBA, which applied to both credit bureaus, required the submission of correct and up-to-date credit information (regardless of permission by the original data owner), combined with a requirement to notify the original data owner within 30 days of submission, followed by monthly notification for data updates. Failure to comply could result in fines and/or incarceration of 5 to 10 years for both operators and members of credit bureaus. The CIBA also required disclosure to members, by written consent of the data owners, of any credit information to be used for the purpose of granting credit. Numerous additional consumer protections were included, including the right to know what types of information were collected, to inspect the information, to request correction of incorrect information, to know the causes of denial of credit when this is based on credit bureau information, to appeal adverse credit decisions based on credit bureau information, and to examine their information at any time for a fee not exceeding 200 baht.

The CIBA passed all readings in late 2002 and became effective in March 2003. The ambiguity of the law and the excessive enforcement penalties (participation was still voluntary) resulted in the immediate resignations of the members, management, and directors of both TCB and CCIS. Both credit bureaus suspended operations for 2 to 3 months. Concerns expressed by the World Bank and CDIA and the resulting media attention prompted BOT to form the CIPC to issue additional notifications allowing more flexible parameters for participation. Both credit bureaus subsequently reopened for business in June 2003.

New CIPC guidelines require only annual notification, instead of the 30-day notification requirement in the original CIBA. Permission from the consumer is required for the

release of information by the bureau. In practice, banks or other lenders may act as agents for the credit bureau and consent can be granted as part of a loan application, although banks must still submit evidence of consent to the credit bureau.

At the encouragement of BOT, talks commenced in 2003 and 2004 to merge the two credit bureaus, which resulted in the formation of the NCB. NCB is currently the only consumer credit data bureau in Thailand. The CIBA currently allows the entry of competitors.

Members of the NCB must submit information to the bureau each month, within 3 weeks after the end of the month. By law, members must submit all positive and negative accounts. Credit reports generated by NCB to members look back 36 months to show the payment history of existing debt obligations. Credit information is compiled on credit cards, housing loans, lease and hire-purchase commitments, personal loans, overdrafts, and commercial purpose loans. No information on employment or assets is collected. Although collection of bankruptcy information is permissible under CIBA, at present this information is not recorded. The bankruptcy courts just recently started using standardized 13-digit citizen identification numbers, so it is possible that bankruptcy information will be collected in the near future.

NCB is not permitted under the CIBA to undertake additional value added projects, such as credit scoring, although legislative amendments under consideration may allow them to undertake other activities. NCB is presently investigating credit scoring. At present they do not have a capability to undertake automated fraud detection. The software platform used by NCB is based on technology acquired from TransUnion LLC, one of the three large credit information services in the United States. Access to the system is available through the internet (via member's ISP), extranet (online dial-up to the NCB data center), or through a leased line (direct connection between member's and NCB's routers).

Membership in NCB is required to access credit records, even with the consent of the original data owner. There are two levels of membership in NCB: Type A membership provides access to both positive and negative accounts at a fixed cost of 50,000 baht per month, plus a fixed fee of 12 baht per successful inquiry, and 6 baht per unsuccessful inquiry. Type B membership provides access to negative accounts only at a fixed cost of 30,000 baht per month, with the same marginal cost per inquiry. Volume discounts are available at the 5,000-, 10,000- and 20,000-search levels. Unsuccessful inquiries result in the creation of additional credit records. NCB currently provides about 800,000 transactions per month, with expectations of significant growth in the near future. In terms of overall market coverage, NCB has approximately 20 million credit accounts for 30 million adult consumers in Thailand.

Most major financial institutions participate as members in NCB. Property developers are not eligible for membership, and although the NHA is eligible, it is not currently a member. Although membership is not available to the sales arms of, for example, automotive manufacturers, it is available to the leasing arms of these firms. Insurance

company mortgage portfolios are typically not large enough to justify membership in the National Credit Bureau. As a result, they undertake manual verification of consumer loan application data (bank statements, employment, other debt obligations, etc.).

### *Real Estate Information Center*

At present there are few centralized real estate and mortgage databases in Thailand. The Real Estate Information Center (REIC) is being developed by GHB under MOF supervision.<sup>22</sup> REIC was established by a Cabinet resolution in August 2004 and began operations in September 2004. MOF appointed REIC Board of Directors, whose role is to determine and monitor REIC operations independently of the GHB. The REIC currently has 30 staff members, and the REIC Director holds a position equivalent to a GHB SVP.

GHB has the largest loan-level historical database, but this is limited primarily to the lower- and middle-income segments of the mortgage market. Commercial banks have compiled their own data for purposes of loan underwriting and risk management. The centralized data of the REIC will not provide a comprehensive view of Thai housing and mortgage markets without participation and data sharing by the commercial banks.

REIC is organized along five basic functions: statistics and data processing; real estate research; planning and budgeting; public relations and information services section; and information technology section.

REIC's objectives include: to be a reliable and up-to-date center for real estate information in Thailand; to be MOF's and other government agencies' real estate information source for national economic planning; and to be the primary real estate information source for the private and public sectors.

REIC major stakeholders include: government, financial institutions, developers, appraisers, real estate agents and brokers, home builders, property managers, institutional real estate investors, and academics.

REIC aims to cover seven specific real estate sectors, including: residential property, office buildings, department stores and shopping centers, hotels and resorts, factories and industrial estates, golf courses, and land subdivisions. Additional operations include evaluating and forecasting the real estate industry environment; forecasting Thai property market supply, demand and prices; disseminating real estate information to the public; and establishing a real estate industry consulting center and knowledge base. REIC products will include: supply indicators such as land subdivision permits, building permits, housing starts and housing completions; demand indicators such as housing transfer fees or housing mortgage fees; housing price indexes; and other indices for

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<sup>22</sup> Summary material provided by REIC, supplemented by additional information obtained from the REIC web site.

housing finance, NPLs, population, population income and interest rates. REIC services will include analytical reports focusing on real estate market and trend analysis; and building real estate business forecasting models; real estate research and studies, training and seminars; news reports; collecting laws and regulations and serving as a repository of all relevant real estate, property laws, and regulations; providing a research abstract center; and publishing a real estate industry calendar.

House price and land value indexes based on GHB collateral data are currently produced by BOT and republished by REIC. As REIC establishes its own staff and internal computation capacity it will assume responsibility for production and publication of the house price indexes and other data reports.

### *Rating Agencies*

There are two rating services that operate in Thailand: Fitch Ratings and TRIS Rating Service.

TRIS Rating was the first rating agency in Thailand. Major stakeholders include the commercial banks, GSB, MOF, IFCT, SET, ADB, and securities, finance, and insurance companies. TRIS provides ratings for Thai corporate bonds and some SOE bonds.<sup>23</sup> TRIS has rated at least one commercial securitization, but never released the rating since the deal did not gain acceptance in the market. TRIS representatives indicated that MBS are difficult to understand for most Thai investors, and that the SPV concept is untested and lacking clarity regarding the meaning of “true sale.” They indicated that GHB is the most appropriate institution to undertake the first MBS issue since it has the best data. TRIS respondents expressed general concern with the lack of data.

Fitch Ratings has provided ratings on seven transactions over the past four years. Contacts at Fitch Ratings emphasized the lack of MBS in this market due to competition among commercial banks and excess liquidity in the banking system. Fitch indicated that investor understanding of securitization is increasing, and that recent credit card securitizations and an NPL securitization deal with Lehman Brothers three years ago have provided demonstrations. Fitch also emphasized the issue of data quality and availability. Fitch has worked with NHA on a securitization deal, but it had to be repurchased. Fitch has undertaken self-initiated ratings on three large property developers: Land and House PCL, Asian Property PCL, and Property Perfect PCL. Fitch reported that Land and House PCL has recently received a banking license under the new Financial Sector Master Plan requirements and intends to use a securitization vehicle to fund their banking operation.

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<sup>23</sup> It was indicated that GHB is exempted from these ratings.

### *Financial Sector Master Plan*

The Financial Sector Master Plan, introduced by BOT in 2003, aims to attain three main goals:

- (i) Comprehensive financial services for all potential users, with no significant difference in the level and quality of services between urban and rural areas.
- (ii) Efficient, stable, and competitive financial sector, with a balanced composition of available sources of financing, namely: financial institutions, debt instruments, and equity market.
- (iii) Fairness and protection for consumers.

The Financial Sector Master Plan includes major changes aimed at restructuring Thai financial institutions. For example, the plan recognizes only two forms of deposit-taking institutions – commercial banks and retail banks<sup>24</sup>. Commercial banks are larger well-capitalized institutions that may provide most financial services to all groups of customers, but are not permitted to engage in trading, insurance underwriting and brokering, or underwriting equity securities. Retail banks may offer financial services to retail customers and SMEs subject to the same limitations as commercial banks, but they cannot conduct business related to foreign exchange and derivatives products. While all types of financial institutions were previously allowed to apply for and receive banking licenses, the new plan requires finance companies and credit fanciers to choose and qualify for one of these two forms of organization. The plan has given incentive for financial institutions to consolidate their services through mergers, acquisitions, reorganization, and re-licensing. During the initial period of implementation, which commenced in January 2004 and continuing for three years, no new banking licenses will be granted, after which time the BOT will assess the situation and need for additional banking licenses.

The plan also aims to restructure foreign-owned financial institutions to enable them to play a greater role in the economic and financial development of Thailand. Under the plan there will be two types of foreign bank licenses. Subsidiaries of foreign banks will be allowed the same scope of business as commercial banks and be allowed to open one branch in Bangkok and metropolitan areas and three branches outside. Full branches of foreign will have the same scope of business as commercial banks but will not be allowed to open any branch offices. During the first three years of implementation, BOT will encourage BIBFs to upgrade to full branches or subsidiaries, and existing full branches may apply to be upgraded to subsidiaries. After 3 years, contingent on suitable economic conditions, new commercial banking licenses may be issued to new foreign investors to increase competition and efficiency in the financial sector. Implementation of the Financial Sector Master Plan will be based on notifications issued by MOF providing

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<sup>24</sup> Summary of the Financial Sector Master Plan based on Elizabeth Suzanne Miller and Cynthia Pornavalai, “The Financial Sector Master Plan: Inspiring Changes Among Thailand’s Banks,” Tilleke & Gibbins International Ltd., July 2005; and summary documentation obtained from the BOT web site.

guidance on the terms, conditions, and procedures for submitting banking applications to BOT.

The anticipated impacts of the Financial Sector Master Plan include better services provided to the general public from financial institutions, greater consumer protections and fair treatment, and an easing of limitations on the scope of business of financial institutions. For example, finance and credit foncier companies can seek upgrades to commercial banks with a broader scope of business activity than they now enjoy, enabling them to compete more effectively with other financial institutions.

The government's infrastructure mega-project plan includes development of approximately 1.4 million housing units for low income households across three distinct projects, as summarized below.

### *Single-Family Property Development*

Table 11 reports new housing units completed by property type, and Table 12 reports construction loans to developers by residential purpose.

Commercial development of single-family residential property has tended to follow a "pre-sale" scenario in which developers were able to acquire land at relatively low cost, develop a model home and advertising brochures, and to arrange purchase by individuals who would then obtain bridge financing to support the property construction. At the end of construction, the purchaser would obtain standard mortgage financing. A new model of "pre-built" property development has emerged under which larger developers are able to finance the speculative construction of entire property developments, simultaneously constructing several properties at lower cost, and then offering them for sale to homebuyers as finished properties.

Increased prefinancing has limited delays due to alterations demanded by customers and shortened the construction period, but it has also delayed the receipt of down payments and reservation fees by developers, thus increasing their financing costs and risks. The banking share of prefinancing has increased since the 1997 crisis due to the failure and disappearance of many finance companies, however total prefinancing levels are still below their pre-crisis levels. Another significant development is the increase in market capitalization of the property sector since 2003, although recently new flows from debt instruments have exceeded those of equity in response to low borrowing costs.

In reviewing commercial bank underwriting guidelines, there do not appear to be any owner-occupancy requirements for residential mortgages, implying that individuals may receive mortgage loans to construct or purchase rental income properties. GHB explicitly offers construction loans and post-financing for development of rental apartment projects targeted at low- and middle-income groups, subject to a number of restrictions on the location of the properties near employment centers with public transportation.

There are significant differences in quality and marketability between newly built and second-hand (existing) properties in Thailand. Typically, second-hand homes have been difficult to value and there are few specific mortgage products to support this segment of the market. Appraisals conducted to underwrite mortgage loans on second-hand properties are reduced to reflect the uncertainty about their quality relative to new construction, which also limits the volume of lending supporting the purchase of existing housing.

The government has recently introduced temporary transfer tax incentives to promote the sale and purchase of second-hand homes, in an effort to help reduce the stockpiles of non-performing assets still held by banks.

### *Baan Eua-Arthorn Project*

The NHA has developed the Baan Eua-Arthorn Project to provide 600,000 housing units to low-income households during the period 2003-2007. The target population will be disadvantaged households without residential quarters, junior civil servants, and government employees having incomes less than 15,000 baht (USD 375) per month in 2003, rising to 17,500 baht (USD 437) per month in 2005. The housing will consist of pre-built units costing 470,000 baht per unit. The cost to homebuyers will be reduced to 390,000 baht through direct government subsidies of 80,000 baht per household. Government subsidies will also be provided for the costs of public utility development and construction of community facilities.

The project will include small to medium size condominium units suitable for singles or new families with 2-4 member situated in urban areas; and medium to large single-house or twin-house units suitable for larger families situated in suburban areas. The condominium units will be in 5 storey buildings having either studio units (24 m<sup>2</sup>) or one bedroom units (33 m<sup>2</sup>). The suburban units will include two-storey single houses, two-storey duplexes, and two-storey row houses on small land plots (16-24 wa<sup>2</sup> or about 32-48 m<sup>2</sup>).<sup>25</sup> Approximately 80 percent of the units will be constructed in Bangkok or perimeter of Bangkok, and 20 percent of the units in the provinces. Land for the project will come from NHA-owned land, public agencies' land, the sale of NPAs, private land, and joint ventures.

The properties will be purchased using a hire-purchase agreement with fixed interest rates between 5-7% during the first five years and floating thereafter. After the initial five years the household will receive the rights to the property and must obtain a mortgage. Purchasers who obtain post-financing will retain a right of occupation for up to 30 years; otherwise they must vacate the property. Private developers have been invited to submit proposals to provide "turnkey" units, and presales are required to demonstrate existing demand. Thus far, projects have ranged in size from 100 to 10,000 units, with the average project size approximately 500 units.

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<sup>25</sup> The basic land unit in Thailand is the rai, equal to 1,600 m<sup>2</sup>; 1 rai equals 400 square wa; 1-acre equals 2.5 rai; and 1 wa equals 2 meters.

NHA guarantees loan repayment for the first 5 years. GHB has established a revolving fund of 300 million baht to enable NHA to repurchase and resell units of hire-purchasers who become more than 3 months delinquent in their payments, with accrued interest on the missed payments beyond 3 months to be fully subsidized by the government.

NHA has constructed 100,000 units since 2003, the majority located in the BMR.

### *Baan Mankon Project*

The Baan Mankon Project will develop housing and associated community facilities for slum people.<sup>26</sup> The Ministry of Social Development (MSD), represented by the Community Organizations Development Institute (CODI), will be responsible for implementation of the project nationwide. Pilot projects were implemented in 10 communities totaling 1,525 units in 2003; and 174 communities in 42 cities totaling 15,000 units in 2004. The government has approved implementation by 2008 of 285,000 units with a government subsidy of 19.4 billion baht.

The underlying philosophy of the project is to alter the role of villagers from beneficiaries of government largesse to project owners. The project aims at both construction of secure housing and local community infrastructure development. The approach entails a range of development types, including: slum upgrading, re-blocking, land sharing, reconstruction, and relocation or land purchasing. The program will support upgrading in situ where possible, otherwise develop new homes close by.

Housing loans can be applied to purchase land or to construct houses. Housing loans to community organizations will be provided at 2% interest per year, with a 15-year loan period, for up to 300,000 baht per unit. Community organizations can add margins of 2-4%, so that members will pay around 4-6%. The government will subsidize for housing development costs up to 20,000 baht, with the remaining financing housing loans at market rates of interest.

Under this project, slum residents can form cooperatives eligible for borrowing from GHB, with CODI in a first-loss position. GHB is currently supporting, but GHB officials indicated that the cost to CODI is too high and requires external financial support. Further support from BOT is not forthcoming and GHB officials encouraged the World Bank to assess the eligibility of CODI for soft loan support.

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<sup>26</sup> See "Baan Mankong Handbook: Implementing the Baan Mankong Community Upgrading Program in Thai Cities," CODI, April 2004; and Somsook Boonyabanha, "Baan Mankong: Going to Scale with 'Slum' and Squatter Upgrading in Thailand," *Environment and Urbanization*, 17(1):21-46, April 2005.

### *Treasury Houses Project*

The Treasury Department, which owns most land in Thailand, can set low lease rates for public sector development projects. Under this project, conducted in conjunction with NHA, the Treasury Department will recover land currently leased to the armed forces and build houses priced in the range of 600,000 to 1.2 million baht. Because land represents approximately 60 percent of the cost of housing, the cost will be reduced by employing a 30-year leasehold arrangement. The properties will qualify as collateral for GHB financing.

### *Housing Market Data*

Table 13 reports the total housing stock for Bangkok and the provinces for each year from 1994 to 2004. Table 14 reports total registration fees collected on property transfers. These data give an indication of the volume of transactions leading to property transfers given that the property registration fee is a constant at 2 percent.

Transactions costs for housing units that are paid to the Land Office include a registration fee (2% of house value), stamp duty (0.5% of house value), income tax (depending on ownership period), business tax (if the property is transferred within 1 year in the case of a house, or 5 years in the case of land), and a mortgage registration fee (1% of the mortgage). Overall settlement costs in the range of 4.5% to 5% are relatively high in comparison with those in the United States, where total settlement charges range from 1.5% to 3% in most jurisdictions.

### *Population, Income, and Price Levels*

Table 15 reports the total population and population growth rate of Thailand, Bangkok, and the provinces over the period from 1994 to 2004. Total population actually declined between 2003 and 2004.

Table 16 shows the levels of GDP and national income for the years 1995-2003. The table also reports per capita income and per capita savings levels during the same years.

Table 17 reports consumer house price levels for the nation of Thailand, for Bangkok, and for major regional divisions.

## **Recommendations**

### *Credit Risk Management, Capital Standards, and Mortgage Insurance*

1. Encourage risk-based pricing of mortgages by applying capital standards that align more fully with mortgage credit risk. Improve the risk sensitivity of risk weights applied to mortgage assets when computing minimum capital.
2. In view of the government's goal of encouraging further consolidation in the banking sector under the Financial Sector Master Plan, require the largest commercial banking institutions to adopt some variant of the Basel II A-IRB approach to minimum capital.
3. Grant regulatory minimum capital concessions for the use of third-party credit enhancements. Risk-based capital standards should recognize the loss mitigating impacts of MI or other forms of third-party credit enhancements. This will help to accelerate the market acceptance of MI with additional benefits to mortgage borrowers and investors.
4. Establish appropriate regulations and oversight for a new MI industry, including the imposition of monoline insurance restrictions (i.e., no cross-selling of other forms of insurance), limitations on mortgage- or housing-related investments, minimum claims-paying ability ratings, and capital standards to support uninterrupted MI coverage under catastrophic loss scenarios.
5. Limit private MI to first-loss coverage, with lenders or investors to bear additional losses, to avoid potential moral hazard problems. Give MI providers ultimate underwriting authority to accept or reject applications for mortgage insurance, subject to appropriate fair-lending requirements.

### *Interest Rate Risk Management*

1. Expand BOT reporting requirements on asset and liability durations to include stress testing of commercial bank investment portfolios on a regular basis. Where possible this should be undertaken using the internal models of banking institutions validated through BOT examinations.
2. Require banks to use their internal models to assess the impact on MVE of alternative interest rate shocks and yield curve changes.
3. Develop capital standards for IRR exposure as an additional component of minimum capital in conjunction with other Basel II requirements.

### *Securitization*

1. Limit GHB and GSB on-balance sheet mortgage investments to encourage the development of mortgage securitization and reduce the concentration of interest rate risk exposure to the government and taxpayers.
2. Consistent with preceding recommendation, integrate the functions of SMC within GHB and GSB to avoid unnecessary redundancy and inefficiency in mortgage securitization by SOEs.
3. Provide commercial banks incentives to invest in mortgage-related securities issued by GHB and GSB by providing capital concessions for investments in securities issued by SOEs.
4. Require the sale of some portion of proposed GHB securities supporting large scale NHA housing development projects to private investors, rather than concentrating additional IRR at another SOE by selling them to GSB.
5. Encourage GHB and GSB to develop securitization apart from the funding of large scale NHA housing projects. Examine the feasibility of providing government guarantees for securities to be issued by NHA and backed by cash flows from large scale housing development projects, independently of guarantees provided GHB or GSB.
6. Encourage the development, application, and understanding of structured finance and reduce the concentration of IRR at GHB by supporting issuance of covered mortgage bonds or similar on-balance sheet instruments.

### *Mortgage Product Development*

1. Modify existing BOT limits on mortgage payment adjustments under increasing interest rates to provide greater flexibility to mortgage lenders and encourage a wider range of mortgage products to consumers. Current regulations reduce the ability of lenders to offer a full menu of products to suit the risk preferences of consumers. Borrower protection against large changes in interest rates should be retained, but in a manner that encourages lenders to offer more distinct fixed-rate and floating-rate mortgage products.
2. Provide consumer education on the potential benefits and risks of alternative FRM and ARM mortgage products.
3. Encourage additional FRM products to benefit mortgage borrowers by reducing the risk of payment shocks, while assuring lenders can demonstrate adequate asset-liability management or can securitize fixed-rate loans to manage IRR.

### *Real Estate Information*

1. Mandate participation of the commercial banks in mortgage and housing data sharing arrangements, along with GHB and GSB, under the auspices of the REIC or a similar body.
2. Establish the independence of the REIC from GHB to encourage more willing participation by other institutions.
3. Utilize industry-wide historical data on mortgage performance, in conjunction with the risk profiles of individual commercial banks, to establish appropriate performance standards under the Basel II minimum capital framework.

### *Collateral Efficiency and Property Valuation*

1. Develop uniform national standards for property title and mortgage registration in all regions.
2. Developed electronic data systems for title and registration information and make this freely accessible on the internet.
3. Improve the collection, distribution, and application of information on second-hand properties to enhance their collateral value as security against mortgage loans and to expand access to capital markets among lower-income property owners.
4. Encourage further development of uniform and internationally recognized property appraisal standards by requiring their application to mortgages receiving concessionary capital risk weights.

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## List of Acronyms and Abbreviations

ADB	Asian Development Bank
AFC	Association of Finance Companies
A-IRB	Advanced Internal Ratings Based
AMC	Asset management company
ARM	Adjustable-rate mortgage
AVM	Automated valuation model
BCBS	Basel Committee on Banking Supervision
BIBF	Bangkok International Banking Facility
BMR	Bangkok Metropolitan Region
BOT	Bank of Thailand
CCIS	Central Credit Information Service
CDIA	Consumer Data Industry Association
CHMC	Canada Housing Mortgage Corporation (Canada)
CIBA	Credit Information Business Act
CIPC	Credit Information Protection Committee
CODI	Community Development Organizations Development Institute
DTI	Debt to income
EVP	Executive Vice President
FHA	Federal Housing Administration (USA)
FPO	Fiscal Policy Office
FRM	Fixed-rate mortgage
GDP	Gross Domestic Product
GHB	Government Housing Bank
GIS	Geographical Information System
GSB	Government Savings Bank
GSE	Government-Sponsored Enterprise
IFCT	Industrial Finance Corporation of Thailand
IRB	Internal Ratings Based
IRR	Interest Rate Risk
ISP	Internet service provider
LGD	Loss given default
LTV	Loan to value
MBS	Mortgage-backed security
MI	Mortgage Insurance
MLR	Minimum lending rate
MMIF	Mutual Mortgage Insurance Fund (USA)
MOC	Ministry of Commerce
MOF	Ministry of Finance
MOI	Ministry of Interior
MOR	Minimum overdraft rate
MRR	Minimum retail rate
MSD	Ministry of Social Development
MVE	Market Value of Equity
NCB	National Credit Bureau

NHA	National Housing Authority
NPA	Non-performing asset
NPL	Non-performing loan
NSO	National Statistical Office
PCL	Public Company Limited
PD	Probability of Default
QC	Quality control
REIC	Real Estate Information Center
ROA	Return on assets
ROC	Return on capital
ROE	Return on equity
SET	Stock Exchange of Thailand
SOE	State owned enterprise
SPV	Special Purpose Vehicle
SVP	Senior Vice President
TAMC	Thai Asset Management Company
TCB	Thai Credit Bureau

**Table 1 : New Home Loans Granted, Home Loans Outstanding, and GDP 1994-2005**

Year	New Home Loans Granted		Home Loans Outstanding		GDP and Mortgage Debt	
	Loans	Growth (%)	Loans	Growth (%)	GDP	Loans / GDP (%)
1994	209,811	--	444,899	--		
1995	223,408	6.50	575,211	29.60	4,186.2	13.74
1996	241,172	8.00	708,633	23.20	4,611.0	15.37
1997	202,720	-15.90	793,521	12.00	4,732.6	16.77
1998	103,733	-48.80	769,379	-3.00	4,624.4	16.64
1999	64,301	-38.00	712,402	-7.40	4,637.1	15.36
2000	108,886	69.30	688,544	-3.30	4,922.7	13.99
2001	112,611	3.40	687,458	-0.20	5,133.5	13.39
2002	164,851	46.40	763,665	11.10	5,446.0	14.02
2003	296,661	80.00	888,472	16.30	5,930.4	14.98
2004	294,403	-0.80	1,035,087	16.20	6,576.8	15.74
2004 (Q1-Q2)	133,174	--	962,363	--		
2005 (Q1-Q2)	123,730	-7.10	1,122,789	16.70		

Notes: Loan totals reported as baht in millions, GDP reported as baht in billions.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data from Bank of Thailand. Data collected from commercial banks, finance companies, credit fanciers, Government Housing Bank, Government Savings Bank, insurance companies, and National Housing Authority. Data for 2005/Q2 Government Savings Bank was preliminary data and insurance companies excluded. Loans for developers excluded. GDP data from BOT.

**Table 2 : Home Loans Outstanding Classified by Residential Purpose**

<b>Year / Quarter</b>	<b>Land</b>	<b>Land and House</b>	<b>Shophouse</b>	<b>Condo</b>	<b>Total</b>	<b>Growth (%)</b>
2003 Q4	35,319	341,563	27,557	49,245	453,684	--
2004 Q1	35,626	349,202	29,295	51,108	465,231	--
2004 Q2	37,184	369,342	29,806	52,456	488,788	--
2004 Q3	36,097	398,842	32,954	54,610	522,503	--
2004 Q4	37,239	422,119	30,143	60,483	549,984	21
2005 Q1	37,001	435,861	61,950	31,006	565,818	22
2005 Q2	36,908	446,732	62,564	32,067	578,271	18

Notes: Baht in millions.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data collected from commercial banks, finance companies, and credit fanciers by the Bank of Thailand. Government Housing Bank and other financial institutions were not included.

**Table 3 : Sources of Home Lending 1998-2004**

<b>Lending Institution</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Government Housing Bank	288,200	275,470	270,772	270,024	290,112	327,891	369,803
Government Savings Bank	24,224	23,066	26,844	35,040	52,698	89,737	105,061
Commercial Bank	417,796	382,264	361,172	356,032	400,378	447,992	544,481
Finance Company	22,177	12,648	10,887	9,672	6,562	5,602	5,383
Others	16,982	18,954	18,869	16,690	13,915	17,250	10,369
Growth (%)	-3.04	-7.41	-3.35	-0.16	11.10	16.30	16.50

Notes: Baht in millions.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data from the Government Housing Bank.

**Table 4 : Home Loan Terms and Conditions**

Lending Institution	Maximum Loan Term	Maximum LTV	Interest Rate	MLR / MRR	Prepayment Penalty Within Years 1 to 3
Government Housing Bank	30 years	70-80% of appraisal value.	1-10 years fixed rate at 3.25-7.00%, then floating rate at MRR-0.75%.	MRR = 6.75%	2-3% of loan limit.
Government Savings Bank	30 years	70-85% of appraisal value.	2 years fixed rate at 3-4% than floating rate MLR±0.25%.	MLR = 6.00%	2% of loan limit
Krung Thai Bank	30 years	90-100% of appraisal value.	1 year fixed rate at 3% than floating rate MLR-0.75%.	MLR = 6.25%	2% of loan limit
Bangkok Bank	30 years	70-80% of appraisal value.	1-2 years fixed rate at 3-4.75% than floating rate at MLR.	MLR = 6.25%	2% of loan limit
Siam Commercial Bank	30 years	70-85% of appraisal value.	1 year fixed at 3.25% than floating rate at MLR.	MLR = 6.25%	2% of loan limit
Kasikornbank	30 years	80% of appraisal value.	1 year fixed at 3.5% than floating rate at MLR.	MLR = 6.25%	2% of loan limit
Siam City Bank	30 years	90% of appraisal value.	2 years fixed at 4.5% than floating rate at MRR-0.5%.	MLR = 6.25%	2% of loan limit
UOB Ratanasin	25 years	80-90% of appraisal value.	1 year fixed at 2.99% than floating rate at MRR-0.75%.	MLR = 6.50%	2% of loan limit
Bank of Asia	30 years	90-100% of appraisal value.	1 year fixed at 2.99% than floating rate at MRR-0.75%.	MLR = 6.25%	2% of loan limit
Bank of Ayuthaya	30 years	75-80% of appraisal value.	1 year fixed at 3.25% than floating rate at MRR-0.25%.	MLR = 6.75%	2% of loan limit
Thai Military Bank	25 years	90-100% of appraisal value.	1 year fixed at 3.25% than floating rate at MRR-0.50%.	MLR = 6.50%	2% of loan limit
Thanachart Bank	30 years	85% of appraisal value.	2 years fixed at 3.5-4.5% than floating rate at MRR-0.5%.	MLR = 6.25%	2% of loan limit

Sources: Summary information provided courtesy Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data from Bank of Thailand.

**Table 5 : Interest Rates on Home Loans 1996-2005**

<b>Year</b>	<b>Government Housing Bank Rate (%)</b>	<b>Commercial Bank Rate (%)</b>
1996	12.75	13.75
1997	12.00	13.25
1998	15.00	15.25
1999	11.50	12.00
2000	8.75	8.75
2001	7.75	8.25
2002	7.25	7.20
2003	6.50	6.75
2004	5.75	6.00
2005	5.75	6.00

Notes: Average rates as of year end.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data from the Government Housing Bank.

**Table 6 : Commercial Bank Loan Rates as of November 10, 2005**

<b>Bank</b>	<b>MOR</b>	<b>MLR</b>	<b>MRR</b>	<b>Ceiling</b>	<b>Default</b>	<b>Credit Card</b>
Bangkok Bank	6.50	6.25	6.75	10.25	14.50	18.00
Krung Thai Bank	6.50	6.25	6.75	14.50	14.50	-
Kasikornbank	6.50	6.25	6.75	17.75	21.75	17.75 - 18.00
Siam Commercial Bank	6.50	6.25	6.75	10.25	15.00	18.00
Bank of Ayudhya	6.75	6.50	6.75	19.75	27.00	-
Thai Military Bank	6.75	6.50	6.75	10.25	14.50	17.50 - 18.00
Siam City Bank	6.75	6.50	6.75	18.00	21.00	17.25
Bank of Asia	7.25	6.75	7.50	18.00	18.00	18.00
Bank Thai	6.75	6.50	7.00	24.00	28.00	-
Standard Chartered Bank	7.00	6.70	7.70	21.50	29.00	18.00
UOB Radanasin Bank	7.25 - 4.25	6.75	7.50	18.00	18.00	18.00
Thanachart Bank	6.75	6.50	7.25	14.50	18.00	-
TISCO Bank	7.00	6.50	7.25	28.00	28.00	-
International Commercial Bank of China	8.50	8.00	8.50	12.00	15.00	-
Kiatnakin Bank	7.00	6.75	7.25	28.00	28.00	-
<b>Average</b>	<b>6.7167</b>	<b>6.5967</b>	<b>7.1467</b>	<b>17.65</b>	<b>20.6833</b>	<b>17.9063</b>

Notes: Percent per annum.

Sources: BOT.

**Table 7 : Commercial Bank Deposit Rates as of November 10, 2005**

Bank	Saving	Fixed			
		3 Month	6 Month	12 Month	24 Month
Bangkok Bank	0.75	1.75 – 2.00	2.00 – 2.25	2.25 – 2.50	2.75
Krung Thai Bank	0.75	1.75 – 2.00	2.00 – 2.25	2.25 – 2.50	2.75
Kasikornbank	0.75	1.75 – 2.00	2.00 – 2.25	2.25 – 2.50	2.75
Siam Commercial Bank	0.75	1.75 – 2.25	2.00 – 2.50	2.25 – 2.75	2.75
Bank of Ayudhya	0.75	1.75 – 2.25	2.00 – 2.75	2.25 – 3.00	2.75 – 3.50
Thai Military Bank	0.75 – 1.50	1.75	2.00	2.25	2.75
Siam City Bank	0.75 – 2.50	1.75 – 2.50	2.00 – 2.75	2.25 – 3.00	3.00 – 3.50
Bank of Asia	0.75	1.75 – 2.50	2.00 – 3.00	2.25 – 3.25	2.75 – 3.25
Bank Thai	1.00 – 2.25	1.75 – 2.75	2.25 – 3.00	2.50 – 3.25	3.25 – 3.75
Standard Chartered Bank	0.50 – 4.00	2.75 – 3.25	3.00 – 3.25	3.25 – 3.50	3.30 – 4.325
UOB Radanasin Bank	0.75	1.75 – 2.50	2.00 – 3.00	2.25 – 3.25	2.75 – 3.25
Thanachart Bank	2.00	2.25 – 3.00	2.50 – 3.25	3.00 – 3.50	3.50
TISCO Bank	1.50 – 1.75	2.00 – 3.50	2.25 – 3.75	2.50 – 4.00	3.25 – 4.50
International Commercial Bank of China	0.75	1.75	2.00	2.25	--
Kiatnakin Bank	0.75	3.00 – 3.50	3.25 – 3.75	3.25 – 4.00	3.25 – 4.50
<b>Min – Max Rate</b>	<b>0.50 – 4.00</b>	<b>1.75 – 3.50</b>	<b>2.00 – 3.75</b>	<b>2.25 – 4.00</b>	<b>2.75 – 4.50</b>

Notes: Percent per annum.

Sources: BOT.

**Table 8 : Bangkok Metropolitan Area Property and House Price Indexes 1991-2005**

Year	Land and House Index	% Change	Townhouse Index	% Change	Land Index	% Change
1991	100	--	100	--	100	--
1992	113.5	13.5	110.9	10.9	119.4	19.4
1993	124.7	9.87	121.9	9.92	138	15.58
1994	124.4	-0.24	125.4	2.87	140.5	1.81
1995	132.4	6.43	131.8	5.10	150.6	7.19
1996	135.2	2.11	135.1	2.50	155.1	2.99
1997	144	6.51	140.5	4.00	163.4	5.35
1998	141	-2.08	136.5	-2.85	153.1	-6.30
1999	127.1	-9.86	124	-9.16	135.5	-11.50
2000	131.2	3.23	128.8	3.87	144.9	6.94
2001	130.9	-0.23	128.7	-0.08	143.4	-1.04
2002	131.8	0.69	128.6	-0.08	142.3	-0.77
2003	135.7	2.96	131.5	2.26	144	1.19
2004	143	5.38	136	3.42	146.1	1.46
2004 Q2	141.2	--	134.9	--	145.7	--
2005 Q2	152.3	7.86	142	5.26	153.2	5.15

Notes: Price indexes calculated from collateral data obtained from Government Housing Bank. Millions at year end. New units completed means the completion of not less than 70 percent and already submitted for house registration.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on estimates obtained from the Bank of Thailand.

**Table 9 : NPL Outstanding Classified by Business Sector 1999-2005**

<b>Business Sector</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005 Q2</b>
Agriculture, Fishing and Forestry	47,949	27,215	20,869	25,732	20,643	16,420	16,062
Mining and Quarrying	9,116	6,260	2,891	4,569	2,689	3,879	3,450
Manufacturing	551,645	205,563	81,234	199,703	195,551	183,535	189,577
Construction	114,198	56,115	34,102	49,115	37,837	41,721	33,424
Wholesale and Retail Trade	329,229	135,431	94,356	143,945	107,226	114,475	114,421
Imports	96,279	25,795	12,235	22,581	25,772		
Exports	59,162	18,747	9,024	18,387	20,626		
Banking and Other Financial	71,310	24,567	6,218	15,298	9,392	10,000	11,088
Hire-Purchase Business	242	-	0.00	142	134		
<b>Real Estate Business</b>	<b>368,299</b>	<b>129,446</b>	<b>52,764</b>	<b>78,736</b>	<b>48,056</b>	<b>59,951</b>	<b>58,693</b>
Public Utilities	34,411	10,915	6,949	19,381	16,727	19,329	13,915
Services	212,574	87,454	46,510	60,786	45,100	47,639	50,909
Personal Consumptions	200,010	129,833	106,841	128,271	111,657	94,923	89,785
Others	--	--	--	--	--	--	2,222
<b>Total</b>	<b>2,094,424</b>	<b>857,341</b>	<b>473,991</b>	<b>766,646</b>	<b>641,410</b>	<b>591,872</b>	<b>583,546</b>

Notes: Baht in millions at year end.

Sources: Bank of Thailand.

**Table 10 : NPL Percentages Classified by Business Sector 1999-2005**

Business Sector	1999	2000	2001		2002		2003		2004		2005 Q2	
	%of all NPL	%of all NPL	%of all NPL	% of sector loans	%of all NPL	% of sector loans	%of all NPL	% of sector loans	%of all NPL	% of sector loans	%of all NPL	% of sector loans
Agriculture, Fishing and Forestry	2.29	3.17	4.40	19.34	3.36	23.36	3.22	17.34	2.77	14.84	2.75	14.97
Mining and Quarrying	0.44	0.73	0.61	18.83	0.59	19.54	0.42	19.35	0.66	16.38	0.59	17.37
Manufacturing	26.36	24.01	17.14	6.85	26.05	15.94	30.49	15.71	31.01	12.57	32.49	12.66
Construction	5.45	6.52	7.19	21.87	6.41	31.51	5.90	26.64	7.05	26.15	5.73	22.00
Wholesale and Retail Trade	15.72	15.70	19.91	16.22	18.78	21.94	16.71		19.34		12.36	
Imports	4.60	3.05	2.58	10.46	2.94	16.76	4.02	17.79				
Exports	2.82	2.25	1.90	7.08	2.40	16.04	3.22					
Banking and Other Financial	3.40	2.82	1.31	0.71	1.99	1.70	1.46	1.22	1.69		1.45	
Hire-Purchase Business	0.01	0.00	0.00	0.00	0.02	31.11	0.02	--				
<b>Real Estate Business</b>	<b>17.58</b>	<b>15.09</b>	<b>11.13</b>	<b>19.33</b>	<b>10.27</b>	<b>27.80</b>	<b>7.49</b>	<b>18.06</b>	<b>10.13</b>	<b>18.68</b>	<b>10.06</b>	<b>18.28</b>
Public Utilities	1.64	1.27	1.47	3.06	2.53	6.87	2.61	6.75	3.27	5.72	2.38	3.95
Services	10.15	10.26	9.81	15.30	7.93	18.98	7.03	13.24	8.05	11.36	8.72	10.78
Personal Consumptions	9.55	15.13	22.54	19.03	16.73	19.39	17.41	13.51	16.04	9.70	15.39	8.65
Others	--	--	--	--	--	--	--	--	--	--	0.38	3.08
Total / Average	100.00	100.00	100.00	10.46	100.00	15.67	100.00	12.74	100.00	10.76	100.00	10.34

Notes: Percent of total market and percent of total loans in sector are reported.

Sources: Bank of Thailand.

**Table 11 : Bangkok Metropolitan Area New Housing Units Completed 1995-2005**

Year	Self-Built	Developer Built	Condo	Total	% Growth	% Developer Built
1995	32,118	79,824	66,911	178,853	--	82
1996	28,059	77,982	70,575	176,616	-1	84
1997	27,418	58,376	62,837	148,631	-16	82
1998	22,716	13,360	30,978	67,054	-55	66
1999	15,497	4,469	9,063	29,029	-57	47
2000	18,064	8,331	6,679	33,074	14	45
2001	19,639	9,691	4,650	33,980	3	42
2002	17,693	14,371	5,118	37,182	9	52
2003	18,598	30,088	7,399	56,085	51	67
2004	19,859	40,752	8,439	69,050	23	71
2005 Q2	11,688	17,807	5,073	34,568	16	66

Notes: Millions at year end. New units completed means the completion of not less than 70 percent and already submitted for house registration.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data collected by Department of Land, Interior Ministry.

**Table 12 : Construction Loans to Developers Outstanding Classified by Residential Purpose**

<b>Year / Quarter</b>	<b>Land</b>	<b>Land and House</b>	<b>Shophouse</b>	<b>Condo</b>	<b>Total</b>	<b>Growth (%)</b>
2003 Q4	2,186	72,301	25,263	50,829	150,579	--
2004 Q1	2,271	81,808	28,967	54,871	167,917	--
2004 Q2	2,186	93,347	27,043	56,490	179,066	--
2004 Q3	2,148	114,686	16,371	57,554	190,759	--
2004 Q4	2,145	117,870	15,276	58,548	193,839	29
2005 Q1	2,175	118,817	15,498	58,979	195,469	16
2005 Q2	1,999	120,620	15,459	57,079	195,156	9

Notes: Baht in millions.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data collected from commercial banks, finance companies, and credit fanciers by the Bank of Thailand. Government Housing Bank and other financial institutions were not included.

**Table 13 : Housing Stock 1994-2004**

<b>Year</b>	<b>Total</b>	<b>% Growth</b>	<b>Bangkok</b>	<b>% Growth</b>	<b>Up-Country</b>	<b>% Growth</b>
1994	14.90	--	2.58	--	12.32	--
1995	15.64	5.00	2.79	8.00	12.85	4.30
1996	16.33	4.40	2.92	4.90	13.41	4.40
1997	16.48	0.90	3.11	6.20	13.37	-0.30
1998	15.93	-3.30	3.20	2.90	12.73	-4.00
1999	16.49	3.50	3.28	2.70	13.21	3.80
2000	16.56	0.40	3.29	0.30	13.27	0.50
2001	16.91	2.10	3.35	1.70	13.56	2.20
2002	17.30	2.40	3.42	2.30	13.88	2.40
2003	17.85	3.10	3.54	3.40	14.31	3.10
2004	18.43	3.20	3.64	2.90	14.79	3.40

Notes: Millions at year end.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data collected by MOI.

**Table 14 : Property Registrations**

<b>Year</b>	<b>Total</b>	<b>% Growth</b>	<b>Bangkok</b>	<b>% Growth</b>	<b>Up-Country</b>	<b>% Growth</b>
2002	5,317	--	2,662	--	2,655	--
2003	8,746	64.5	4,749	78.4	3,997	50.5
2004	10,685	22.2	5,968	25.7	4,716	18.0
2005 Q2	5,593	--	3,111.5	--	2,482	--

Notes: Baht in millions, based on registration fee of 2% of property value.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data collected by MOI.

**Table 15 : Total Population 1994-2004**

<b>Year</b>	<b>Total</b>	<b>% Growth</b>	<b>Bangkok</b>	<b>% Growth</b>	<b>Up-Country</b>	<b>% Growth</b>
1994	59.09	--	8.85	--	50.24	--
1995	59.44	0.60	8.89	0.50	50.55	0.60
1996	60.11	1.10	9.00	1.30	51.11	1.10
1997	60.81	1.20	9.11	1.20	51.70	1.20
1998	61.86	0.10	9.24	1.40	52.22	1.00
1999	61.66	0.30	9.30	0.70	52.36	0.30
2000	61.87	0.40	9.40	1.00	52.47	0.20
2001	62.30	0.70	9.52	1.40	52.78	0.60
2002	62.79	0.80	9.66	1.50	53.13	0.70
2003	63.07	0.40	9.81	1.50	53.26	0.30
2004	61.97	-1.80	9.63	-1.80	52.34	-1.70

Notes: Millions at year end.

Sources: Summary information provided courtesy of Kasikornbank, Consumer Loans Product Management and Marketing Department, based on data collected by Interior Ministry.

**Table 16 : Gross Domestic Product and National Income 1995-2003**

<b>Year</b>	<b>GDP</b>	<b>National Income</b>	<b>Personal Income Per Capita</b>	<b>Personal Savings Per Capita</b>
1995	4,186,212	3,149,869	45,762	5,355
1996	4,611,041	3,393,983	49,520	4,632
1997	4,732,610	3,437,720	51,360	4,901
1998	4,626,447	3,311,048	52,091	7,684
1999	4,637,079	3,334,840	51,384	6,623
2000	4,922,731	3,635,237	52, 828	5,583
2001	5,133,502	3,776,160	53,913	4,036
2002	5,446,043	3,978,942	55,345	2,904
2003	5,930,362	4,314,811	60,014	6,606

Notes: GDP and National Income in millions of baht, per capita income and savings in baht.

Sources: BOT.

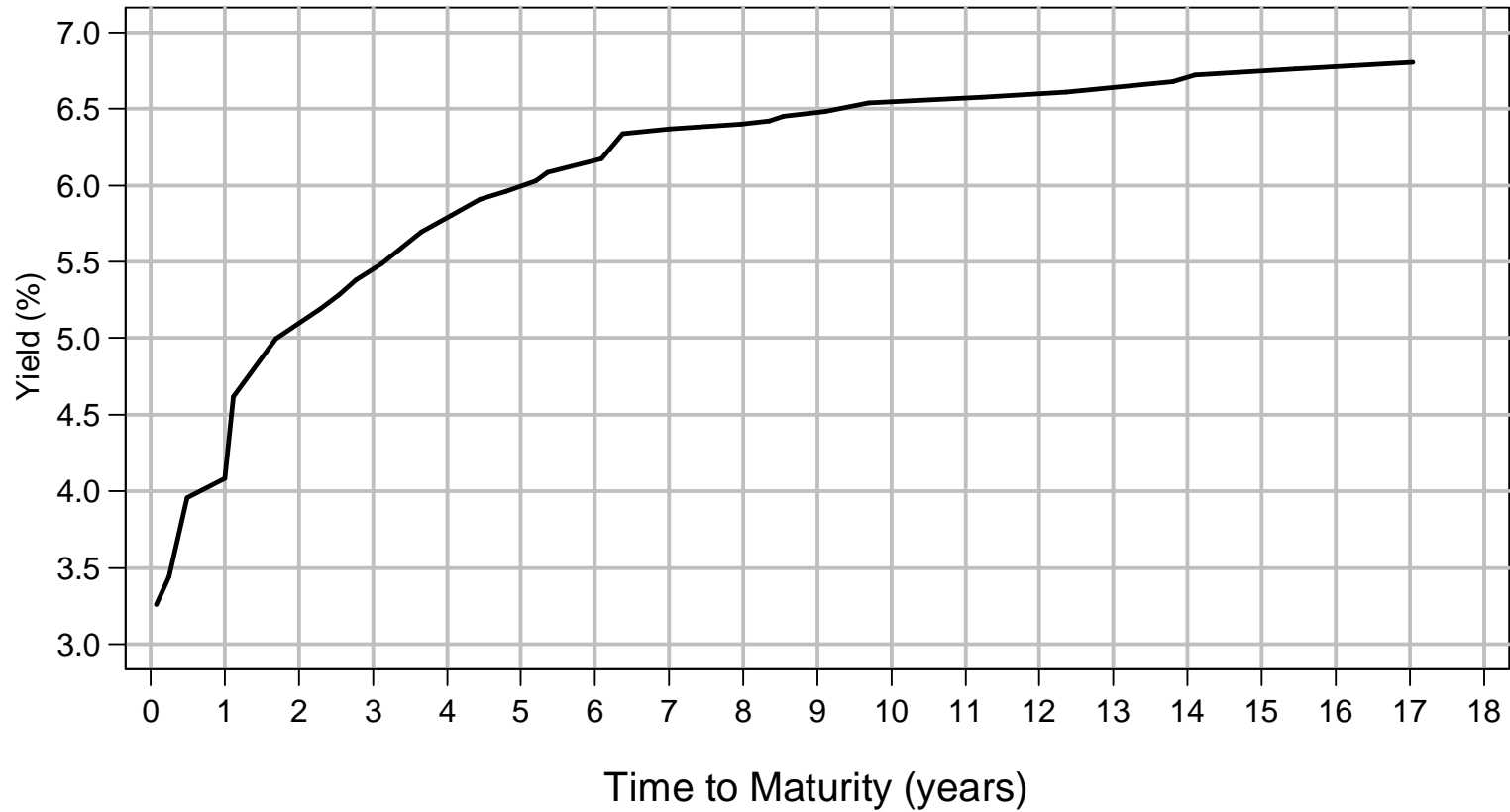
**Table 17 : General Consumer Price Index 1994-2004**

<b>Year</b>	<b>National</b>	<b>Bangkok</b>	<b>Central Region</b>	<b>Northern Region</b>	<b>Northeastern Region</b>	<b>Southern Region</b>
1994	78.2	78.8	76.4	79.3	75.7	76.7
1995	82.8	83.3	81.3	83.6	80.6	81.6
1996	87.6	88.2	85.9	87.7	85.6	86.6
1997	92.5	92.7	91.3	92.6	92.3	92.1
1998	100.0	100.0	100.0	100.0	100.0	100.0
1999	100.3	100.4	100.1	100.7	100.1	99.8
2000	101.9	101.9	101.5	102.6	101.4	101.5
2001	103.5	103.6	103.4	104.5	102.6	103.7
2002	104.2	104.1	104.5	104.8	103.6	104.3
2003	106.6	106.2	108.0	107.3	106.5	107.2
2004 Q3	110.1	109.5	112.5	111.2	110.6	111.3

Notes: 1998 = 100.

Sources: Summary MOC.

Chart 1 - Thai TBC Government Bond Yield Curve  
(As of 28-Oct-2005)



— Average Bid Yield (%)