HOUSING FINANCE MECHANISMS
in Indonesia

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FOREWORD

At the dawn of this new urban era, UN-HABITAT research shows that by 2030, two-thirds of humanity will be living in towns and cities. We thus live at a time of unprecedented, rapid, irreversible urbanisation. The cities growing fastest are those of the developing world.

And the fastest growing neighbourhoods are the slums. Indeed, the global number of slum dwellers is now at or close to the 1 billion mark. Excessive levels of urbanization in relation to the economic growth have resulted in high levels of urban poverty and rapid expansion of unplanned urban settlements and slums, which are characterized by a lack of basic infrastructure and services, overcrowding and substandard housing conditions.

Yet housing and the services that should be provided with it are one of the most basic human needs. It is enshrined in various international instruments, including the *Habitat Agenda*. And reducing the number of slum dwellers around the world is a cornerstone of the *Millennium Development Goals* set to fight poverty around the world. So if we fail to achieve the Goals in towns and cities, we will simply fail to achieve them at all.

It was with this crisis in mind that the United Nations General Assembly decided in its resolution of 26 February 2002 to transform United Nations Commission on Human Settlements into a fully pledged programme. The General Assembly in its resolution called on UN-HABITAT to take "urgent steps to ensure a better mobilization of financial resources at all levels, to enhance the implementation of the *Habitat Agenda*, particularly in developing countries." It also stressed "the commitments of member states to promote broad access to appropriate housing financing, increasing the supply of affordable housing and creating an enabling environment for sustainable development that will attract investment".

The *Habitat Agenda* recognizes that housing finance systems do not always respond adequately to the different needs of large segments of the population, particularly the vulnerable and disadvantaged groups living in poverty and low income people. It calls UN-HABITAT to assist member states to improve the effectiveness, efficiency and accessibility of the existing housing finance systems and to create and devise innovative housing finance mechanisms and instruments and to promote equal and affordable access to housing finance for all people.

In our quest to reach as many people as possible, a cornerstone of our agency's new Medium-term Strategic and Institutional Plan is partnerships. We have no choice but to catalyze new partnerships between government and the private sector. This is the only way to finance housing and infrastructure at the required scale – the scale needed to stabilize the rate of slum formation, and subsequently reduce and ultimately reverse the number of people living in life-threatening slum conditions.

It is clear that in the coming 20 years, conventional sources of funds will simply be unavailable for investment at the scale required to meet the projected demand for housing and urban infrastructure. Many countries around the world continue to face deficits in public budgets and weak financial sectors. Local governments have started to seek finance in national and global markets, but this is only in its initial phase.

New mortgage providers have emerged, including commercial financial institutions and mortgage companies. But only middle and upper income households have access to such finance, while the poor are generally excluded. Although social housing is becoming less important in Europe and in countries with economies in transition, the need to provide shelter that is affordable to low income households still exists, including in developing countries.

This is why the exchange of information and knowledge on human settlements finance systems is so important. It is why it receives increased recognition in facilitating the development of human settlements finance systems and in turning knowledge into action for developing practical human settlements finance methods and systems for these pressing problems.

Our *Human Settlements Finance Systems* series documents the state, evolution and trends of human settlements finance in member states, and examines the factors and forces which drive the development of human settlements finance systems and the roles of different institutions and actors in shaping the systems and trends, and reviews human settlements finance systems. It presents an interesting review of policies, instruments, processes and practices. It examines the strengths and weakness of these systems and practices, their relations to the housing sector and the broad economic and social sectors, and lessons learned from practices.

Indeed, the country review studies we present are a valuable resource for member States because it is a body of work that also shows how human settlements finance systems and models can be applied to local use and thus provide a wider range of options for human settlements finance. The series also serves as guidebooks for policy makers, practitioners and researchers who have to grapple daily with human settlements finance systems, policies and strategies.

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Executive Summary

The majority of new houses in urban Indonesia are built by contractors or financed by homeowners from their savings. Only about 200,000 to 240,000 units are financed through mortgage finance per year[1] out of a total requirement of 800,000 units: roughly half to 40 percent of which receive a mortgage-linked subsidy. Many homeowners use short-term loans to finance the construction of their homes from one of the many micro-lending institutions, but no data is available of the actual size of this type of lending and no special housing micro-finance product actually exists.

The construction of homes is close to the national requirement for new housing. Housing prices are not showing signs of an overheated market and house-price–to-income ratios (3 to 3.6) and to the overall CPI, appear modest.

The predominance of residential housing development has caused severe limitations, however, on the provision of services and infrastructure and as cities expand rapidly the quality of housing is declining. Indonesia's housing stock is showing major signs of stress in both areas.

This report focuses on two frontiers and examines ways of extending access to housing finance to households below the 60th percentile of the income distribution: 1) By improving efficiency and by providing progressive subsidies to households at the margin who can, with a subsidy, access a mortgage loan and either build a new house or renovate an existing one. 2) Formalize and strengthen micro-financing for housing to assist households who have land or who were given a serviced plot (with or without a core facility) by government to built their own house.

The report examines the constraints in the housing market beginning with a brief overview of the formal financial sector and the cooperative and micro-finance institutions of Indonesia. It shows how the current period of macro-economic volatility is having a negative impact on the expansion of the mortgage sector - just when this sector had made substantial improvements in the aftermath of the 1997/98 economic crisis. Nominal interest rates have increased since the end of 2004 because of rising inflation and, as a consequence, the number of non-performing loans has increased. Moreover, long-term investors have moved part of the deposits held in the banking system to short-term deposits, creating concerns about gaps in asset-liabilities. As a result, there has been a flattening out in mortgage lending in the past few years. The study concludes with a summary of the major constraints in the system and makes recommendations for the improvement of financing for the low-income sector, as summarized below:

[1] It comprised only 7.8 percent of all credit outstanding and was 1.83 percent of the total value of GDP in 2004.

A. There are serious gaps in accessing housing finance for two groups:

1. Lack of access to mortgages for creditworthy households whom the market is not yet serving. The top 30 percent earners have no trouble accessing a mortgage loan. It is the low income sector that has problems in entering the mortgage market because of high transaction costs and the credit risks to the lenders. The current subsidy programs may extend access to mortgage loans to the 40th percentile of the income distribution (the subsidy program can cover approximately 12.5 percent of demand for new homes with its current scale), but this leaves a large gap of creditworthy households not yet deemed mortgageable. Lack of finance for affordable housing in the resale market inhibits upward mobility in the formal housing market. Some lenders may fill that gap, but may require some support (see suggestions under B).

Recommended actions:

i) The Ministry of Housing and MOF/BI explore ways to tie savings with subsidized loans so as to establish lender confidence and increase owner equity particularly for *borrowers who have no fixed income*.

ii) Expand (small) upfront subsidies to a level of income closer to the current margin of banks' willingness to lend (for houses of Rp75 million and below); if mortgage insurance is to be developed, a subsidy for this group of borrowers at the margin could focus on the payment of the insurance premium to improve both lender confidence and borrower access to loans.

iii) Focus consumer education programs and consumer support systems on this group specifically.

iv) Allow part of the subsidy programs to be used for existing housing.

2. Lack of a special short-term, non-mortgage-based housing finance product for those households who do not qualify for or who do not desire a mortgage. Irrespective of the exact number of households with access to a regular mortgage loan, with or without a subsidy, about 40 percent, or more than 300,000 of the total of new households built annually, cannot qualify for loans because of low or uncertain income or poor collateral. Several banks and possibly some finance companies and micro-lending institutions could target this market. A new subsidy program is being developed that seeks to stimulate the expansion of this sector through the provision of guarantees for part of the loan. But there is, as yet, reluctance by insurance companies to buy into the scheme.

Recommended actions:

i) Provide training in housing micro-finance and give technical support to co-operatives and other such lenders who are technically weak.

ii) Provide liquidity support to micro-finance providers; such a function may be conducted by the SMF since it requires similar types of analyses as required for liquidity funding for finance companies and banks.

iii) Explore alternative risk guarantee subsidies for micro-finance in the form of closed escrow accounts for missed payments, which may improve lender confidence. When such micro-lending for housing becomes better known as a separate product, and the risks are better understood, it may be easier to develop credit insurance products.

B. There are important weaknesses in the mortgage system that needs to be addressed before it can expand down-market:

1. Credit risk remains high partly due to the lack of credit information and credit risk management mechanisms.

Recommended actions:

i) BI facilitates the establishment of a credit bureau.
ii) MOF and SMF establish public/private mortgage insurance.
iii) BI regulates consumer protection and improves consumer education.
iv) BI and SMF develop tools to educate borrowers.

2. Inadequate housing market information creates inefficiencies. BI has made a beginning in tracking house prices in 14 markets, but more comprehensive information is needed.

Recommended actions:

i) Ministry of Housing and/or the SMF set up an integrated housing data base that includes price and appraisal information, information on building permits issued and transactions completed for different types of houses, consolidate information on housing finance, etc.

3. Successful operation of the Secondary Mortgage Corporation (SMF) requires clarification of tax rules and adjustments to the limits on lending terms.

Recommended actions:

i) Clarify tax regulations to avoid double taxation on securitization activities.
ii) MOF explore the extension of the term for liquidity lending by SMF beyond the current three year limit.

4. Finance companies can play a role in medium-term mortgage lending with the availability of liquidity funding from SMF, which could increase competition in the mortgage sector and improve the diversification of risk for the FCs.

Recommended action:

MOF explore lifting the regulations for certain categories of financial companies that prevent their expansion into mortgage lending.

C. Other supply constraints hinder the flow of affordable (below Rp75 million) housing in the market:

1. A lack of supply of serviced land and tedious permitting procedures make it unprofitable for developers to use available land resources for middle and lower-middle income houses.

Recommended actions:

The enforcement of the permit system, measures to release public land for residential development in suitable locations, improvements in the process and reduction of upfront and hidden costs to gain development and building approvals.

2. The lack of construction finance provided by banks due to poor performance, forces developers to focus on projects where equity investments, rather than debt, finances construction, and makes contractor-built housing dependent on owner funding.

Recommended actions:

i) BI develop a circular with guidelines on prudent construction lending
ii) BI explore the establishment of special guarantees for construction lending (e.g., jointly with international development and investment agencies), although such guarantees could be expensive given the poor track record of such lending.
iii) Explore the establishment of an independent, fee-based housing quality guarantee program for new residential construction to ease the burden on lenders to conduct in-depth technical appraisals for moderate income housing and increase confidence to invest in this market segment

Chapter 1: Background and Objectives

The Millennium Development Goals expect an improvement in the lives of urban slum dwellers by the year 2020. It is recognized that governments alone cannot tackle the housing problems, even with ample outside assistance. Private and non-governmental financial assistance will be needed to leverage and increase investment in housing. In particular, access to debt finance for housing should increase the ability to acquire a home or make improvements. This evaluation of the Indonesian housing finance sector, both mortgage and micro-finance systems, is part of a series prepared for UN-Habitat, designed to share experiences across countries that could be of help to governments, private sector agents or international development agencies.

The timing of this report reveals the importance of macro-economic stability for the development of housing finance, particularly long-term mortgage finance. Recent increases in inflation and a rise in interest rates have slowed down developments in the housing finance sector.

This report discusses the improvements made in the housing finance sector, and considers future trends, and those areas where reform is needed. It anticipates that the current macro-economic and fiscal issues will work themselves out over the next year. While mortgage lending may slow down in the short term making lenders more risk-averse, expansion is expected over the long term.

The report briefly outlines the context in which the housing finance sector operates – the macro-economic environment and the overall financial system – before detailing the development, structure, and products of both the mortgage and micro-finance sectors for housing. It analyzes the housing market, house pricing and affordability, and examines government programs to expand financial access to lower-income groups. It concludes with a summary of the main recommendations.

Chapter 2: Country Profile

2.1 Population

Indonesia is the fourth most populous country in the world. It has a population of 217 million people (2004 figure). The 2000 census shows that 42 percent of the population lives in urban areas. Average population growth was only 1.49 percent during the last census period (1990 to 2000). It is focused on urban areas and is particularly high in the industrial growth areas of Riau, Belitung, Banten, and Maluku Utara. Rural areas show negative growth rate. The average growth rate for urban households was estimated at 3.5 to 3.75 percent in 2001 given an average household size of 4 persons (Hoek-Smit 2001), or an increase of approximately 800,000 urban households per year.

2.2 Political Environment

The Republic of Indonesia is a parliamentary democracy. Power, historically has been concentrated in the hands of the Presidency, particularly during the long reign of President Suharto. More recently, constitutional amendments have provided for a greater role for the legislature. The President still has legislative power and has the authority to appoint the cabinet, but since 2004 all political representatives, including the President, must be elected directly. The most recent elections held in July and September 2004, saw a smooth political transition of power to President Susilo Bambang Yudhoyono who has, promised to focus on macro-economic stability and a positive business environment.

Increasing oil imports, rising oil prices, a worsening current account situation and decreasing international reserves, compounded by the effects of a global increase in interest rates, has caused a depreciation of the Rupiah. The President invoked the gradual cut of fuel subsidies (the first came into effect in March 2005 and increased fuel prices by 29%), which caused a further rise in inflation and a related hike in interest rates. This caused some political disturbances in the country but the majority of the legislature backed the President's decision, regarded as long overdue.

Table 2.1 Population and Household Figures 1990 -2004

	1990*	2000*	2004**
Total Population	178.5 million	205.8 million	217.9 million
Annual growth rate	1.97	1.49	1.43
Average household size	4.5	3.9	3.9
Number of households	39.5 million	52 million	54.9 million
Percentage urban	30.9%	42.2%	42-45%
Estimated new urban households/ year			800,000

* *BPS Susenas 1990, 2000*

** *BPS Socio-Economic Survey, 2004*

Table 2.2 Inflation and Interest Rates, 1996 – 2005 (QII)

Year	Inflation Rate (%)	1-month SBI Rate (%)	3-month Time Deposits (%)	Interest Rate for Investment Credit (%)
1996	6.47	13.80	14.58	15.02*
1997	11.05	14.50	19.88	15.37*
1998	77.54	49.30	48.69	19.39*
1999	2.01	23.10	13.19	17.80
2000	9.35	12.50	13.33	16.62
2001	12.55	16.60	17.47	17.90
2002	10.03	13.50	13.65	17.82
2003	5.06	8.40	7.95	15.44
2004	6.40	7.43	6.99	14.05
2005 (Qtr II)	4.24	11.00	6.49	13.68
2005 (Sept)	9.06	11.00	8.51	14.17

**Un-weighted average of interest rates across all banks from Bank Indonesia*
Source: BI 2005 Economic Report on Indonesia 2004; BI 2005 Quarterly Report Vol 5, no.2 and BPS 2005.

2.3 Economic Performance

2.3.1 Economic Growth

GDP growth rates turned negative (-13 percent) as a result of the financial and economic crisis in 1998 but increased to pre-crisis levels of 5% in 2004, and exceeding 6% in the last quarter of 2004 and the first quarter of 2005. Real GDP growth has been strong since 2001; total GDP at current market prices was Rp532,568 billion in 1996, Rp1,290,680 billion in 2000 and Rp2,303,013 billion in 2004 (See Table 4.1; BI, 2005).

Economic growth outpaces population growth and per capita incomes rose from less than $550 in 1999 to just over $700 in 2001 and $1050 in 2004. There has been a deceleration in economic growth as a result of a weakening exchange rate and higher inflation. The slowdown reflects a number of growing risks in the Indonesian economy, linked mostly to the fact that Indonesia no longer is an oil and gas exporter but a net importer. Bank Indonesia's forecast is, however, that the expected growth rate will remain around 5.5% to 6% (year-on-year) for 2005 and at 5.5% to 6.5% in 2006.

After the crisis, GDP growth was attributed largely to increases in private domestic consumption - 69 percent of GDP in 2003 (EIU, 2005) - but it has declined in recent years to 66.5 percent (BI, 2005a) in favor of increased investment and, until recently, net exports. The relatively modest growth in private consumption in 2005 was due to the weak purchasing power and high interest rates, but was expected to rebound when macro-economic fundamentals improved.

2.3.2 Inflation, Prices and Interest Rates

Consumer Price Index (CPI) based inflation steadily came down to 5 or 6 percent after the crisis high of 12 or 13 percent in 2001. The first three quarters of 2005 saw inflation increase and estimated to reach over 15 percent by year end. This increase is attributable mainly to higher fuel prices.

Until 2004, food was the main driver of inflation. In 2004 non-food consumption exceeded food consumption for the first time since the crisis and CPI indices for housing, education and transportation showed higher CPI values than food.

Greater economic stability and lowering inflation from 2002 through to 2004 caused interest rates to be adjusted downwards as well. The current increase in inflation however, has reversed that trend and the benchmark SBI discount rate increased from 7.43 percent in December 2004 to 11 percent in September 2005 and 14 percent before the end of the year. In response, banks adjusted deposit rates and recently increased lending rates.

2.3.3 Fiscal Policy

Official estimates (10/2005) of the budget deficit were -0.9 percent of GDP - an increase from earlier estimates of -0.7 percent. The increase was due to a quadrupling of fuel subsidies and, to a lesser degree, to the cost of rehabilitation of Aceh and Nias after the Tsunami disaster. Government has initiated a program to eliminate fuel subsidies in three phases, starting in March 2005 (29%), and again in October 2005 (126%) and the last increase in early 2006. Half of the subsidy savings were to be put into a compensation fund for education, health and infrastructure and providing a one-off transfer to the poor. Disbursement from this fund, however, has been slow. A reduction in fuel subsidies is expected to see a decrease in the budget deficit for 2006 allowing Government spending priorities to remain in place:, such as increased civil servant salaries, increased spending on infrastructure and implementation of the fuel compensation program. No cuts in the current housing subsidy package were anticipated.

2.3.4 Trends in Income and Employment

Wages and per capita incomes. One of the critical impacts of the 1997 crisis was the decrease in real wages. From September 1997 to September 1998, real wages in the formal sector dropped sharply and came down to 1986 levels. Wage cuts were severe in the urban sector and concentrated at the bottom of the wage distribution level. *Real per capita national income* began to rise again during 2004 from Rp7.4 million in 2003 to Rp7.7 million/year.[2]

Substantial real increases in minimum wage levels were approved in most provinces beginning in 1999. Table 2.3 shows the minimum wage adjustments for Jakarta province, and gives the national average yearly minimum wage in USD.[3]

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[1] The average real growth in per capita income for the 1990-2000 period was 2.5 percent.

[2] There is some doubt, however, whether the current inflation hikes will be matched by minimum wage increases, since employers have to absorb the higher fuel prices and resist proposed increases in the minimum wage.

Table 2.3 Jakarta Provincial and National Average Minimum Wages 1998-2005

Year	MW/month in Rupiah* Jakarta Prov	% Change	Annual Inflation	MW/month In US$** National Average	% Change
1998	-	-	77.54%	$180	-66.60
1999	231,000	-	2.16%	$266	47.78
2000	245,000	6.06%	9.35%	$314	18.05
2001	426,250	73.98%	12.55%	$485	54.46
2002	591,266	38.71%	10.03%	$580	19.59
2003	631,554	6.81%	5.06%		
2004	671,550	6.33%	6.40%		
2005	711,843	6.00%	9.06%		

** National Labor Survey, 2005; **World Bank, 2005*

Another indicator of a gradual improvement in consumption and incomes is the decrease in the number of the people living below the poverty line. This figure declined gradually from its peak of 24 percent in 1998 to 17 percent in 2004, the pre-crisis level (BPS, 2004).

Structure of the labor force. Changes to the structure of the labor force occurred after the crisis – there was greater participation, the number of self-employed and family workers increased in the informal sector and unemployment rose, particularly among 15 to 24 years old (28 to 29 percent in 2004/05).

Unemployment figures have not decreased since 2002. The same is true for informal sector employees. The low labor absorption, particularly in the formal sector, is due partly to a mismatch between job seekers qualifications and the actual demands of the labor market.

Table 2.4 Labor Force Participation Rates, Unemployment, and Informal Employment 1997 - 2005

	1997	1999	2001	2003	2004	2005
Labor Force Participation Rate	66.3	67.2	68.6	67.8	67.5	68.0
Open Unemployment	4.70	6.40	8.10	9.57	9.86	10.26
Proportion of workers in informal sector**	63%	65%	70%	74%	74%	

*** In urban areas these figures were 43% in 1997, 46% in 1999 and over 50% since 2001*
Source: National Labor Force Survey, World Bank and Bank Indonesia, 2005

This is a long-term structural problem linked to education. Closure of labor intensive industries such as textiles and shoes, as well as the repatriation of Indonesians working overseas, increased unemployment levels as well as the numbers of *informally employed* (mostly in agriculture and trade) to 74% of the national labor force in 2003 - up from approximately 65 percent in 1999. The growth in formal sector jobs has exceeded those in the informal sector in February 2005 for the first time since the crisis (due mostly to shifts in the retail sector) and labor force participation has also increased.

The impact of these macro-economic trends on the housing market has been considerable. First, the crisis and the related fall in real incomes, affected housing demand. While the crisis did not negatively affect *aggregate employment,* the number of self-employed and family workers, informal sector employed and unemployed. The potential pool of borrowers who could use conventional mortgage loans was even smaller as a consequence. Lenders were reluctant to make loans to those employed in the informal sector.

Special savings and credit products need to be developed to ensure perceived lending risks to this group can be addressed (see below). Housing finance should be available to the majority of employed people. An increased sense of insecurity over future incomes, higher fuel prices and rising interest rates are all having a negative effect on the willingness of households to borrow long-term for housing. Second, the crisis disrupted the mortgage finance sector: current macro-economic disturbances have been a set back for this fledgling sector.

Chapter 3: The Finance Sector

3.1 Development and Structure of the Financial System[4]

In 1988 Indonesia adopted a comprehensive deregulation of the financial and banking sectors. It aimed to encourage mobilization of funds, efficiency of financial institutions and the development of the capital markets. The financial sector so far has been dominated by government institutions and constrained by credit regulations. During the 1990s serious attempts were made to bring inflation under control that resulted in lowering inflation risk premiums in long-term interest rates. The banking system, non-bank financial credit, investment institutions, and capital markets all experienced considerable expansion and increasing international integration. While the financial crisis brought this expansion temporarily to a halt, it is regaining momentum based today on a more solid regulatory system. The main threat to the financial sector at this moment is increasing inflation.

Given the importance of the banking sector in Indonesia (see Table 3.1), the initial focus of regulatory reform focused on reform of the non-bank financial institutions, such as finance companies, pension funds and insurance companies examining ways in which they could expand their role in unlocking financial resources and services. The newly established Indonesian Secondary Mortgage Corporation could play a critical role in this

Table 3.1 Assets of Banks and Non-Bank Financial Institutions in US$ as Percentage of GDP 31/12/2003

Assets	US$ million	% of GDP
Commercial banks	138,360	56.0
Insurance companies	10,496	4.2
Pension funds	4,431	1.8
Mutual funds	8,231	3.3
Finance companies	5,933	2.4
Venture capital companies	246	0.1
Stock market capitalization	54,539	22.1
Funds raised through capital market	4,222	1.7

Source: Ministry of Finance

** The cooperative and rural credit associations are not included in this table, since data on the sector are not collected in a homogeneous way. These institutions were estimated to hold assets of Rp5,338 billion ($595million) in 2004, which was nearly certainly an understatement.*

[4] Sections on the formal financial sector were adapted from Hoek-Smit, 2005.

Table 3.2 Structure of the Banking System 1997 - 2005

	1995	1997	2000	2005
State	7	7	5	5
Regional	27	27	26	26
Private	165	144	81	70
Foreign	0	44	39	30
Total	199	222	151	131

Source: Central Bank of Indonesia, 2005

development. Table 3.1 gives an overview of the financial assets of the banking and non-bank financial sector at the end of 2003.

3.2 The Banking Sector

Structure of the banking system. Deregulation of the banking sector after 1988 allowed foreign banks to invest in this sector, mostly in the form of joint ventures. This led to a proliferation of banks in the 1990s. Many had close ties with the real estate industry, but few practiced prudent underwriting of real estate projects. Nor was the expansion in the banking industry sufficiently monitored or supervised. These factors contributed to the severity of the financial and real estate crisis of 1997/98.

When interest and exchange rates increased in 1997, and corporations and businesses (including many developers), started defaulting on loans many banks became insolvent. Mortgage and individual loans performed relatively well compared to corporate loans despite major hikes in interest rates. The government closed many troubled banks (mostly private ones), recapitalized others with government bonds, and merged several state-owned and private ones. Today the government is divesting the banks it recapitalized.

Post-crisis, Indonesia has a well-developed state, regional, private and foreign banking network. There are 131 banks of which 5 are state-owned, including the only housing bank, Bank Tabungan Negara (BTN), and the largest micro-finance bank Bank Rakjat Indonesia (BRI). Most Regional Banks are owned by sub-national governments.

Figure 3.1 Total Outstanding Credit of Groups of Banks in Economic Sectors

1997-2005

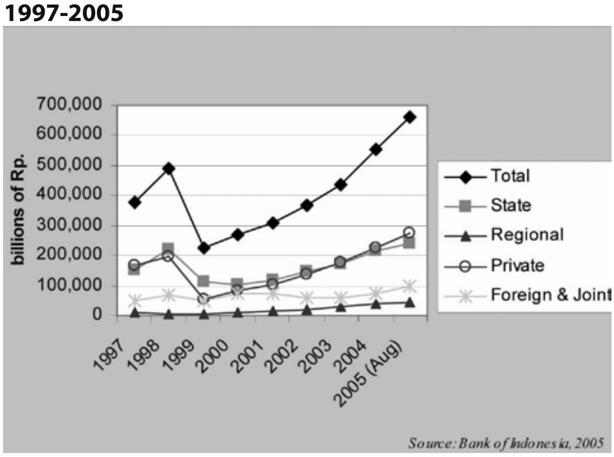


Table 3.3 Total Outstanding Credits of Commercial Banks by Group of Banks in the Economic Sector (Rupiah and Foreign Currency; in billions of Rp.)

	Total	State	Regional	Private	Foreign & Joint
1997	378134	153266	7539	168723	48606
1998	487426	220747	6570	193361	66748
1999	225133	112288	6793	56012	50040
2000	269000	102061	10106	82425	74408
2001	307594	117104	15419	101872	73199
2002	365410	145984	21518	136981	60927
2003	437942	173154	29198	175082	60508
2004	553548	217066	37246	224560	74676
2005 (Aug)	659571	241536	43560	276080	98395

Source: BI, 2005

Performance. Since the crisis, government sought to improve the safety and soundness of the banking system by developing a policy package -- the Indonesian Banking Architecture (API) -- which is gradually being implemented. In the early years after the crisis CAR levels were still below BI's required 12 percent level, which constrained lending. The position of banks, however, has strengthened and is conservative with CAR positions in the double digits (an average of 19.5 percent in 2005, (see Table 3.4).

Credits rose considerably during 2004, and were funded mostly by excess liquidity in the banks rather than through third party funds. There was a shift in earning assets from government and SBI bonds to credits when interest rates on government and SBI paper decreased in 2003 and 2004. While Loan-to-Deposit ratios (LDR) went up, these are still low at 53 percent in June 2005.

The liquidity of the banks is generally good as indicated by the high ratio of liquid assets to non-core deposits of over 98 percent. The blanket (100 percent) deposit guarantee provided by government after the crisis stabilized the deposit base of the banking sector., This full deposit guarantee system however, is about to be changed. The government and Bank Indonesia are preparing to establish a *Deposit Insurance Company*. It will be capitalized initially by government, which will take over the deposit guarantee function and will limit the scope of the guarantee over time. The intention is to bring down the coverage to a maximum deposit of Rp100 million by March 2007.

This more limited guarantee system may make large deposits less attractive however, and hence impact on the liquidity position of banks in general. Another potential short-term risk is linked to the increase in interest rates, which induces large-scale depositors to move to short-term deposits, worsening the duration position of the portfolio. Even if current mortgage portfolios constitute only a small percentage of total credit (approxi-

Table 3.4 Banking Sector Financial Indicators

	2001	2002	2003	2004				2005	
	Dec	Dec	Dec	Mar	Jun	Sep	Dec	Mar	June
Capital Adequacy Ratio (CAR)	19.90%	22.40%	19.40%	23.50%	21.10%	20.80%	19.40%	21.80%	19.50%
Loan to Deposit Ratio (LDR)	33.00%	38.20%	43.50%	43.70%	46.40%	48.10%	50.00%	51.20%	53.10%
Non Performing Loan (NPL)Gross	12.20%	7.50%	6.80%	6.30%	6.20%	5.60%	4.50%	4.40%	7.00%
Return on Asset (ROA)	1.50%	2.00%	2.60%	2.70%	2.70%	3.00%	3.50%	3.40%	2.20%
Return on Equity (ROE)	13.90%	15.00%	21.40%	29.20%	27.60%	25.80%	23.00%	25.50%	19.07%
Net Interest Margin (NIM)	3.60%	4.10%	4.60%	5.90%	5.80%	5.80%	5.90%	5.80%	5.75%

Source: BI and World Bank 2005

mately 8 percent), the outcome may in the short-term, have a negative impact on long-term mortgage lending.

Credit risk, as measured by the number of non-performing loans, decreased considerably for most banks, including for the state-owned banks, after the restructuring, was 4 to 5 percent in late 2004 and early 2005. The current increase in inflation and interest rates, and lagging real incomes, have increased non-performing-loans (NPLs), -- gross NPLs stood at 7% in June 2005 for the banking sector in general and 13% for State Banks.[5]

NPL ratios differ markedly for different types of loans.[6] For example, at the largest state

[5] This latter figure is due mostly to a sudden increase in NPLs in one of the largest state-owned Banks.

[6] No up to date details were available on the breakdown in the period of loan delinquency. The 2001 HOMI study conducted an analysis of default/delinquency data of current mortgage portfolios (not originations) of a sample of banks (excluding BTN). It found that in 2000 11.17 percent of the mortgage loans were 1-90 days overdue, and 6.9 percent were more than 90 days overdue. These figures were 24.9 percent and 9.5 percent respectively in 1999. Loss ratios (over 12 months delinquent) on BRI mortgage loans were the lowest, 1.1 percent in 2000 and below 1 percent in 2001. However, LDR ratios at BRI were extremely low, a sign that BRI may have been too risk averse.

owned commercial bank NPLs in *consumer credit* were just over 2 percent in August 2005, compared to *corporate credit* NPLs of 41 percent and commercial loans of 16.4 percent. NPLs of BTN's *mortgage* portfolio increased from 3.2 to 5.3 percent between December 2004 and August 2005, mostly due to high NPLs on subsidized mortgage loans (see below). Expected interest rate increases could cause these NPLs to rise further as the great majority of mortgage loans are adjustable rate loans without caps.

Banks profitability, as measured by ROA and ROE, increased gradually between 2001 and 2004 (ROA from 1.5 to 3.5 percent; ROE from 13.9 to 25.8 percent) , but has fallen during the second and third quarters of 2005 as a result of higher NPLs, foreign exchange impacts and smaller interest rate margins. The banks appear highly competitive both on rates and types of products they deliver. The main vulnerabilities appear to be macroeconomic volatility, weak risk management systems and poor governance.

D*istribution channels.* Indonesia is well banked despite its difficult geography. The large universal banks have extensive branch networks covering most main urban centers (e.g., Bank Mandiri with 20 to 30 percent market share in various banking areas, has more than 800 branches, more than 2500 ATMs). Several larger banks, including Mandiri, have connected all branches through the internet, which makes it possible to have headquarters carry out certain functions (including mortgage underwriting functions) that cannot be done at branch level. BTN, the government's housing bank has a fairly extensive and valuable branch network in urban areas. It has approximately 45 branches and 35 sub-branches and there are several hundred cash outlets and ATM machines. ATM machines are increasingly used in urban areas (e.g., Bank Mandiri has close to 300,000 daily ATM transactions).[7]

3.3 Finance Companies

There are 237 finance companies (FCs) in Indonesia, most of which are engaged in the provision of consumer credit (total outstanding loans of Rp42,600 billion in June 2005), and to a lesser degree in the leasing, factoring and credit card business. Total assets of FC increased to Rp78,900 billion in 2004 (MOF, 2005), an increase of 58 percent over the year before. These institutions fund themselves mostly with bank loans - domestic and off-shore (close to 40 percent of their funding in 2004)[8], - other types of loans (9.5 percent of funding) and by debt issuances (9 percent of funding) and capital (11 percent).

The consumer credit business run by FCs has a high performance rate (only 0.7 percent of loans were "doubtful" and 0.9 percent was classified as bad debt in 2004 down from 1.6 and 2.1 percent respectively in 2001). Consumer loans are predominantly focused on motor-bike and vehicle loans that can be easily repossessed in cases of default. Loans for housing comprised only 0.5 percent.

[7] These are not yet used for mortgage payments, nor are electronic transactions and mortgage related transactions are mostly paper-based.
[8] Loans to FC comprised 66 percent of new bank borrowing in 2004.

Table 3.5 Micro-Finance Loans and Savings Outstanding by Major Micro-Finance Banks, Cooperatives, Rural Credit Institutions and Pawnshops, 2004

(billions of Rupiah)

Institution	Unit/ Branch	Borrowers	Credit Prov.	Savers	Savings
Banks					
BPR (Regional Banks)	2,148	2,400,000	Rp9,431	5,610,000	Rp9,254
BRI Unit	3,916	3,100,000	Rp14,182	29,870,000	Rp27,429
Subtotal	6,064	5,500,000	Rp23,613	35,480,000	Rp36,683
Cooperatives and Credit Unions					
Savings/credit coops(KSP)	1,097	665,000	Rp531	N/A	Rp85
Savings/credit units (USP)	35,218	N/A	Rp3,629	N/A	Rp1,157
Credit Union & NGO	1,146	397,401	Rp505.7	293,648	Rp188
Subtotal	37,461	397,401	Rp4,665.7	293,648	Rp1,430
Other Non-Bank Credit Institutions					
Village savings/ credit post (BKD)	5,345	400,000	Rp0.2	480,000	Rp0.380
Rural credit fund (LDKP)	2,272	1,300,000	Rp358	N/A	Rp334
Shariah credit institute.(BMT)	3,038	1,200,000	Rp157	N/A	Rp209
Subtotal	10,655	2,900,000	Rp515.2	480,000	Rp543
Pawn Shops					
Pawn Shops (Pegadaian)*	264	16,867	Rp158	No Savers	No Savings
Subtotal	264	16,867	Rp158	No Savers	No Savings
Total	**54,444**		**Rp28,951**	**36,253,648**	**Rp38,656**

Source: Bambang Ismawan and Setyo Budiantoro, "Mapping Microfinance in Indonesia," Journal Ekonomi Rakyat, March 2005; adapted by the author.

** Official statistics put the number of Pawn-shops at more than 750, and the total amount of credit at more than $700 million or Rp7000 billion during 2004. BPD, 2004 and "Perum Pegadaian – Indonesia's Pawnshops," ProFi http://www.profi.or.id/engl/mapping/scripte/inst.pawn.PDF*

Table 3.6 Median Computed Income of Borrowers by Type of Credit Institutions, 2001

Median Computed Borrower Income	
Moneylender	Rp73,750
Family/Friends	Rp105,313
Bank Desa (Village Bank)	Rp121,938
Other Source	Rp139,778
BRI Branch	Rp290,246
Regular BRI Unit Borrower	Rp298,585

Source: BRI and Kennedy School, Harvard University, 2001

FCs are not allowed to make mortgage loans at present. With the recent establishment of the Secondary Mortgage Corporation (see below) it would be feasible to allow strong FCs to move into mortgage lending if they could have access to longer term funding through the SMF or had access to a facility that would secure their mortgage portfolios. This would diversify their risk away from consumer lending and increase competition in the mortgage sector. The SMF however, is only allowed to make liquidity loans up to three years under its current mandate, which is too short to entice FC's to enter this market.

3.4 Cooperatives/Credit Unions, Non-Bank Rural Credit Institutions and Pawnshops

There are close to 50,000 savings and credit cooperatives and credit unions, non-bank rural credit institutions owned and controlled by different levels of government, and government pawn-shops that play an important role in providing short term credit for small scale enterprises, individual consumption or for production activities. These institutions had approximately 3.3 million micro-loans outstanding in October 2004 for a total estimated amount of Rp5,338 billion and savings deposits of Rp1,973 billion[9] (excluding BRI and BPRs which were included in the banking sector analysis above and have approximately 5.5 million outstanding loans at a value of Rp23,600billion) (Gema PKM, 2004, Table 3.5).

These institutions make access to financial services widely available in Indonesia. The government of Indonesia actively stimulates the extension of micro-credit to small businesses and lower-income and rural households.

A 2001 study by BRI revealed that borrowers with different income profiles used different types of micro-credit options and different institutions (Table 3.6). The median income of households using BRI banking services was considerably higher than that of households who used other sources of finance. Whether such finding is a result of the use of BRI credit in increasing income, or whether better-off households have a higher propensity to draw on credit from BRI is not known. Another reason for this finding may be related to the fact that several village credit institutions are mostly vehicles for the disbursement of subsidized credit. The different institutions do

[9] The scale of the pawn shop sector appears to be underestimated in this GEMA study.

have different interest rates and recovery policies, which may also affect potential users.

Unfortunately, no breakdown is available of the actual uses of loans issued by these micro-finance institutions. Nor is information about their performance easily accessible. Performance of the cooperative sector and local government credit institutions generally is considered weak. This sector is not regulated and is supervised by Bank Indonesia only indirectly, and by the Ministry of Cooperatives, BRI, local government or trade-groups. New regulation is under way to strengthen their performance. The different types of micro-credit institutions are briefly described below.

*Cooperatives and Credit Unions.*__There are roughly 1100 savings and credit cooperatives and 35,218 savings and credit units of multi-purpose cooperatives. The cooperatives are regulated and monitored by the Ministry of Cooperatives, while Bank Bukopin acts as the Apex bank for the sector. New cooperatives and new branches must have a paid-up capital deposited in a state bank of Rp15 million for primary cooperatives and Rp50 million for secondary cooperatives. The ministry must approve branch offices that are required to maintain a qualified management board or professional manager.

Indonesian credit unions (CU) and cooperatives are organizationally alike and are treated increasingly similar by the law (Holloh, 2001). They are supervised by the Credit Union Central of Indonesia (CUCO). CUs offer loans and savings, as well as insurance products. Their loan products are mainly for income generation.

Other Non-Bank Credit Institutions. There are a host of different, mostly government-supported, rural credit institutions. These institutions receive their funding through government resources, often related to specific government programs. Their performance, as credit institutions, is weak, because customers give low priority to the repayment of loans.

These institutions are either supervised by BRI on a commission basis (Savings and Credit Posts –TPSP and BKD), by Regional Development Banks (e.g., the Rural Credit Fund Institutions - LDKP), or the Ministry of Home-Affairs (the village Savings and Credit Units). BI has made some attempts to improve the overall supervision and regulation for several of these credit institutions and convert some of them to rural banks.

Another large group of non-bank small credit institutions (>3000) is run on shariah principles and is supported by the national Center for Incubation of Small Businesses (Yayasan Inkubasi Bisnis Usaha Kecil, YINBUK), which also does their supervision.[10] These non-bank savings and credit units function like cooperatives but follow Islamic risk-sharing principles.

Pawn shops. There were more than 750 pawn shops in Indonesia at the end of 2004. They reached more than 15 million customers and disbursed more than Rp7,000 billion in credit in 2004. Pawn shops are run exclusively by the GOI.

[10] "BMT (Baitul Maal wat Tamwil) – YINBUK's Microfinance Units," ProFi http://www.profi.or.id/engl/mapping/scripte/inst.bmt.PDF

[11] Nimal A. Fernando, "Pawnshops and Microlending: a Fresh Look is Needed," in Regional and Sustainable Development, 4, no.1 (2003), Asian Development Bank.

The average loans of these low risk operations are less than Rp500,000 ($50). A typical loan lasts for 120 days with interest of 1.25 -1.75 percent calculated every 15 days. If the consumer does not pay back the loan, the object pawned is sold in auction. If the auctioned item sells for more than the client owes, the client receives the left-over money.[11] A 2001study showed that pawn-shops' return on assets was 4.5% and their return on equity was 17%.

3.5 Insurance Companies and Pension Funds

There are currently 167 insurance (life and non-life) companies in Indonesia (down from 178 in 1999), and several social insurance and workers' social insurance funds with investments of over Rp90,000 billion in 2005. In addition, there are several public and private pension funds with investments of approximately Rp60,000 billion in 2005. The largest of these is the public pension fund, Jamsostek, which represents more than 40 percent of the total investments of the sector.

Appendix 1 shows the breakdown of the investment portfolio of insurance companies and pension funds in Indonesia during the post crisis period of 2001 to 2003. In mid-2005 close to 40 percent of the funds were invested in various time and savings deposits in commercial banks and in Government or BI Bonds. This proportion steadily declined from a high of 70 to 80 percent during the crisis years of 1998/99, when deposits were 100 percent insured. Investment in corporate bonds, on the other hand, has increased substantially with the growth in that sector since 2002.

These institutions are a source of long-term funds that could play an important role in mortgage lending given the size of their investment portfolios relative to the approximate Rp12,000 billion in new mortgages that is originated every year and the total outstanding mortgage portfolio of Rp60,000 billion (see below). The increase in investments in corporate bonds bodes well for the potential appetite of long-term investors for mortgage-backed bonds or equities.

The regulator, the Ministry of Finance, currently limits the number of total investments by pension funds and insurance companies in real estate, i.e. land, buildings, mortgages or mortgage-backed financial assets, which can not exceed 10% of the investment portfolio. Regulators are aware, however, of the potential role these long-term investors could play in the development of the mortgage sector, and have expressed interest in new mortgage-linked capital market instruments appropriate for the insurance and pension fund industry. There is, however, hesitation about allowing insurance companies and pension funds to invest in derivative instruments, when both regulators and fund investors lack knowledge about this particular area.

3.6 Capital Market Institutions

There are two stock exchanges in Indonesia; Jakarta, which is focused on equity trading, and Surabaya, which trades government and private bonds. Both markets have performed well since the crisis, but recent economic instability has slowed growth.

Table 3.7 Capitalization Value and Percentage Increase of the Jakarta and Surabaya Stock Exchanges 1996 -2005 (billions of Rp)

Stock Exchange	1996	1999		2000		2004		2005 (Aug)	
BE Jakarta	215,026	451,815	110.1%	259,621	42.5%	679,949	161.9%	719,547	5.8%
BE Surabaya	191,572	407,721	112.8%	225,802	44.6%	399,304	76.8%	404,985	1.4%

Source: BPS and Central Bank of Indonesia 2005

The number of companies listed on the stock market increased from 347 in the year 2000 to 428 in July 2005, and the number of companies listed in the bond market increased from 91 in 2000 to 157 in July 2005.

3.6.1 Government Bond Market

The Government bond market had a capitalized value of Rp402,099 billion at the end of 2004, gradually coming down from its peak of Rp435,303 in 2001 at the end of the period of bank recapitalization after the crisis. The proportion of government bonds held by recapitalized banks has decreased substantially, from 98 percent in 2000 to 64 percent in 2004 (in terms of their capitalization value).

Most outstanding government bonds (55 percent) have a variable rate coupon, and 44 percent have a fixed rate and less than 1 percent are hedge bonds. The Surabaya Stock Exchange (SSE), the issuing and trading institution for government bonds, compiles a government bond index comprised of bonds with different maturity times, yield and total returns. Details are shown in Appendix 3 (as of 29-12-2005).

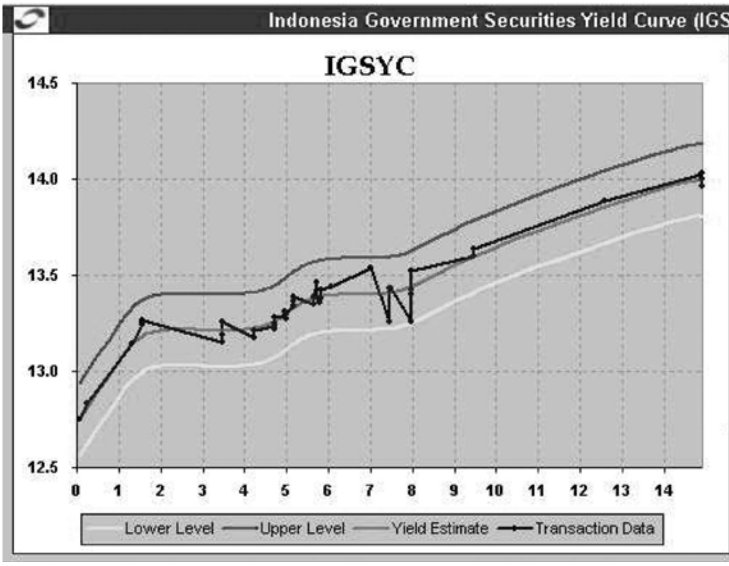
Since 2000, a well-developed Indonesian Government Securities Yield Curve (IGSYC) has been published by the SSE. It shows the yield to maturity of a composite of government securities derived from the Indonesian Government Securities Trading System, SBI rates, auctions of T-bonds and information from the electronic quotation system used by participants in the fixed-income securities market. This risk free yield curve goes currently out to a Time-to-Maturity of 15 years and will be extremely helpful in determining bid and offer prices of future SMF securities. Figure 3.2 shows the IGSYC yield curve for December 29, 2005.

Since December 2004, the yield curve flattened, inverting briefly in August 2005, and yields increased dramatically as a result of changing macro-economic conditions (Bursa Efek Surabaya, 2005). For example, median yields for a 9 year TTM security were 10.587 percent in December 2004 and increased to 14.035 percent in August 2005 (decreasing to13,552 percent in December 2005). These risk free yields are an indication of the yields required by investors in future mortgage-backed securities and are high relative to mortgage rates and cost of deposit funding by banks. Mortgage rates (adjustable) in the same period ranged from 16 to 18 percent.

3.6.2 Corporate Bond Market

The corporate bond market has grown rapidly since 2002, and stood at close to 14 percent of total bond market capitalization (or $55,000

Figure 3.2 Indonesian Government Securities' Yield Curves December 2005



29-Dec-2005

time	Estimated Yield High	Median	Low
1	13.243%	13.055%	12.868%
2	13.402%	13.215%	13.027%
3	13.403%	13.215%	13.027%
4	13.406%	13.218%	13.031%
5	13.492%	13.305%	13.117%
6	13.583%	13.395%	13.207%
7	13.591%	13.403%	13.216%
8	13.632%	13.444%	13.256%
9	13.739%	13.552%	13.364%
10	13.836%	13.648%	13.460%
11	13.921%	13.733%	13.546%
12	14.000%	13.812%	13.625%
13	14.074%	13.886%	13.699%
14	14.142%	13.955%	13.767%

Source: Surabaya Stock Exchange website

billion) in August 2005 (up from 5 percent in 2002). Of the total value of *newly registered* bonds of Rp41 billion in 2004, 43 percent were corporate bonds (Bursa Efek Surabaya, 2005). The great majority -- *80 percent-- of outstanding corporate bonds has a fixed rate coupon*, 5 percent has a floating rate and 14 percent a mixed rate. Local ratings show that 62 percent of corporate bonds are rated A, while 32 percent has a B rating. Trading frequency in corporate bonds increased by 50 percent during 2004 (over 4000 transactions) since yields on corporate bonds compare favorably to low interest rates on savings accounts. Indeed, large investors such as pension funds and insurance companies increased their corporate bond investments in recent years relative to holdings in savings accounts. (See Appendix 1)

The financial sector is the single largest issuer of corporate bonds and has the highest capitalized value of such bonds followed by the infrastructure, utilities and transportation sector. Some reference prices of corporate bonds with different maturities of two State banks involved in mortgage and micro-lending, BTN and BRI, are shown in Table 3.8. Prices reflect the current increases in government rates and the uncertainty about long-term rate developments. This data shows the relatively high cost of funding mortgages through corporate bonds compared with the cost of deposit funding.

3.6.3 Secondary Mortgage Company

The Ministry of Finance set up a working group to develop the legal and institutional framework for secondary mortgage transactions after the crisis. Access to capital market funding for long-term mortgages was considered an important building block in the modernization process. This effort resulted in the

Table 3.8 Reference Prices of Corporate Bonds of Selected Financial Institutions Surabaya Stock Exchange, December 29, 2005

Bond ID	Coupon	Maturity	WAP 7 days	WAP 14 days	WAP 30 days	Bid/Offer	Rating
BRI/500billion fixed rate bond/2004	13,5	9/Jan/2014	1.139	1.139	60.38		idA+
BTN/900billion/ fixed rate bond/2003	12.5	2/ Oct/2008	87.293	87.293	86.519	87/87.65	idA-
BTN/750billion/ bond/2004	12.2	25/ May/2009	0.975	0.975	55.553	86.5/87.25	idA-
BTN/250billion/ bond/2004	12.6	25/ May/2014	50.472	70.196	77.037		idBBB+

Source: Surabaya Stock Exchange website

establishment by government of the Secondary Mortgage Company in February 2005 by Presidential Decree No. 19/2005. The SMF will be discussed below.

3.6.4 Capital Market Supervision

Capital markets are supervised by the capital market agency, BAPEPAM, which was established in 1976. At that time is was both the organizer and champion of capital markets and their supervisor. Its dual function was eliminated in 1991 when it became the supervisory agency with tasks similar to the US Securities and Exchange Commission (SEC). BAPEPAM will supervise the capital market issuances of the SMF, while MOF is its overall regulator and owner.

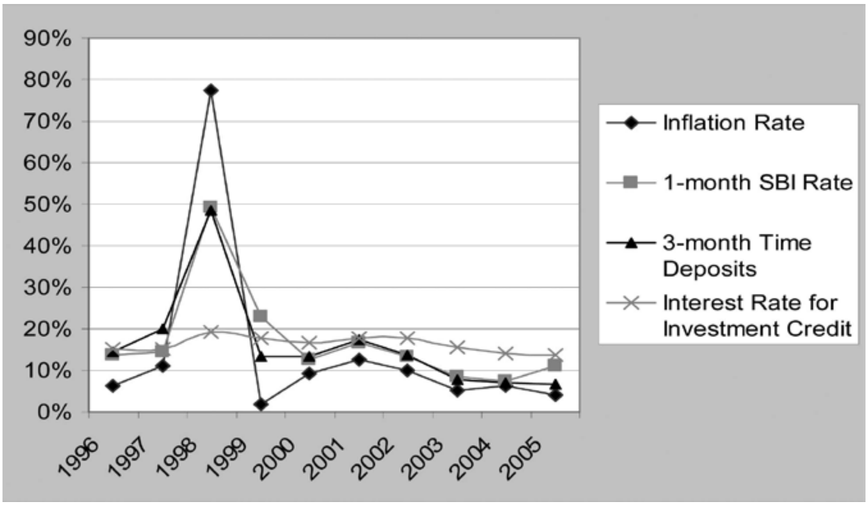
3.7 Interest Rate Movements

Most banks use the 3 months time deposit interest rate to reflect their cost of funds. Some banks use the average time deposit rate (1 to 24 months deposits). Pricing (repricing) of the portfolio is done by most banks on the basis of movements in the SBI rate, and the rates charged by their competitors. Current government and SBI rates are increasing because of inflation and increases in the US interest rate which makes the US more attractive for investment. The October 2005 BI reference rate was 11% and inflation was 9.06%, but both rates are expected to increase substantially when the effects are felt from further petrol subsidy cuts (inflation was 17 percent at the end of 2005).

Figure 3.3 shows the interest rates of the 3 months deposit, the SBI rates and the interest rate of investment credit that closely reflects the rates for mortgage lending since 1996 (see Table 2.2 for actual figures). Most of the banks that were interviewed for this study had recently adjusted

Their interest rates on deposit and savings accounts and on their new and outstanding loans were in the process of changing these rates. Mortgage portfolios were repriced to levels of 16 to 18 percent. The typical mortgage instrument is an adjustable rate mort-

Figure 3.3 Inflation and Interest Rate Movements of Selected Deposit and Credit Products from 1996 - 2005



Source: Bank Indonesia database

gage without short-term or life-time caps.

In summary, the financial system in Indonesia, while still dominated by the banking sector, is rapidly diversifying. In particular finance companies are playing an increasing role in medium- term credit provision, and the micro-finance sector is providing a growing number of low-income households and small companies with access to short-term credit. Capital markets are expanding not only in size but in equities and corporate bond markets compared to the government bond market. A newly established Secondary Mortgage Corporation intends to facilitate access by primary lenders to long-term capital market funds. Even within the banking sector the private banks have overtaken state-owned banks in the number of total outstanding credit, a trend that will continue with the ongoing move to bank privatization. Bank regulation and supervision is improving and regulatory reforms of the long-term investment sector are under consideration. In addition, improvements in the supervision and regulation of cooperative and rural credit institutions are strengthening this sector and extending access to non-secured credit for housing., The current rapid increase in inflation however, and uncertainties in the macro-economy are having a negative, (hopefully short-term), impact on these positive financial sector developments.

Chapter 4: Structure of the Mortgage Industry

4.1 Volume of Mortgage Finance

Outstanding mortgage credit[12] more than doubled since 1997 from close to Rp20,000 billion in 1997 to more than Rp50,000 billion in mid 2005. Interestingly, growth in mortgage credit has exceeded growth in other types of credit. Expressed as a percentage of GDP, mortgage credit is still only 1.83 percent compared to 3.12 percent before the crisis of 1997. Also, mortgage credit comprises only 7.8 percent of total bank credit (Table 4.1). While this is an increase over 1997 levels when mortgage credit was 5 percent of total credit, it is still extremely low relative to the housing demand and estimated and actual housing construction. Indeed, total new mortgage credit in 2004 was in the order of Rp12,000 billion, while the market value of formal investments in developer built residential and shophouse developments alone stood at more than Rp26,000 billion (see Appendix 2). This figure excludes the value of investments in individual contractor built new houses - likely to be much higher than investments by developers.[13]

[12] Mortgage credit includes all loans that use a lien on the property to secure the payments of the loan. Bank Indonesia distinguishes short-term construction credit, which does not use a formal lien on the property, from mortgage lending.

[13] Similarly, estimates of construction finance are low relative to total investment in construction; construction finance was roughly R4,000 billion in 2004, while the total value of commercial real estate construction was estimated at Rp66,200 billion (See Appendix 2). Part of this discrepancy can likely be explained by the reentry of overseas funds that were taken out of the country during the crisis. An additional reason may be that land resources frozen by IBRA are released and developers have incorporated the value of these lands in new developments.

4.2 The Structure of the Mortgage Market

Banks, whether state owned, regional or private, dominate the mortgage market. The10 largest banks now offer mortgage loans for new or resale housing or for home improvements. The crisis had a fundamental impact, not only on the structure of the banking sector in general, but on the structure of the mortgage industry.

First, it caused the redistribution of mortgage credit across different types of banks. Before the crisis, BTN, the government housing bank, dominated the mortgage industry, holding approximately 80 percent of mortgage accounts (then estimated at a total of roughly 1.5 million). I also held about half of the amount of outstanding mortgage credit. BTN suffered major losses in the financial crisis, but was restructured and recapitalized. The mortgage portfolios of closed banks and the non-performing mortgage portfolio of recapitalized banks (as well as their non-performing construction and corporate loans) were transferred to IBRA, the government agency tasked with cleaning up the asset portfolios of these banks and selling them to the highest qualified bidders. Table 4.2 shows the relative proportion of mortgage credit held by the different types of banks since 1997.

Government continues to strengthen the banking sector through improved regulation, mergers, and selective divestment of its ownership shares. These changes - in ownership structure and management of banks - lead to adjustments in credit strategies. Also, macroeconomic changes caused shifts to be made

Table 4.1 Total Banking Credit and Mortgage Credit relative to GDP 1996 – 2004 (billions of Rp)

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total GDP (Current Market)*	532,568	627,321	989,119	1,119,442	1,297,608	1,684,280	1,897,800	2,045,853	2,303,031
Total Bank Credit Outstanding	292,947	378,184	487,466	225,133	269,000	307,594	365,410	437,942	553,548
Total Bank Credit as % of GDP	55.01%	60.29%	49.28%	20.11%	20.73%	18.26%	19.25%	21.41%	24.04%
Total Mortgage Credit	15,049	19,547	17,471	12,838	15,976	19,912	21,773	30,108	42,099
Total Mortgage Credit as % of GDP	2.83%	3.12%	1.77%	1.15%	1.23%	1.18%	1.15%	1.47%	1.83%

** 2000-2004 from Bank Indonesia, Aggregate of four quarters; calculations by author*
Source: BSP and Central Bank of Indonesia

in the type of credit portfolio banks prefer. The current mortgage market structure may therefore still see some further fundamental changes. For example, most banks are expanding aggressively into consumer lending - the specialty area of finance companies. Large non-bank financial institutions intend to move into mortgage finance and BRI, the largest microfinance bank, intends to expand into small mortgage lending. In other words, former institutional specializations between micro- and mortgage lenders, universal banks and finance companies are increasingly blurred. The existence of the SMF may stimulate diversification in the mortgage sector further if finance companies are able to move into mortgage lending.

Second, for the first time since the banking sector deregulation of 1988, private banks are

Table 4.2 Percentage of Total Mortgage Credit by Bank Type 1997 - 2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005
State (%)	51.35	57.36	67.50	60.99	58.44	47.60	42.51	39.88	37.72
Regional (%)	4.32	4.45	6.85	10.23	14.33	17.67	16.76	14.40	11.80
Private (%)	42.33	35.99	23.27	23.68	25.32	33.25	39.59	44.56	49.14
Foreign & Joint (%)	2.01	2.20	2.38	5.10	1.91	1.47	1.14	1.16	1.25

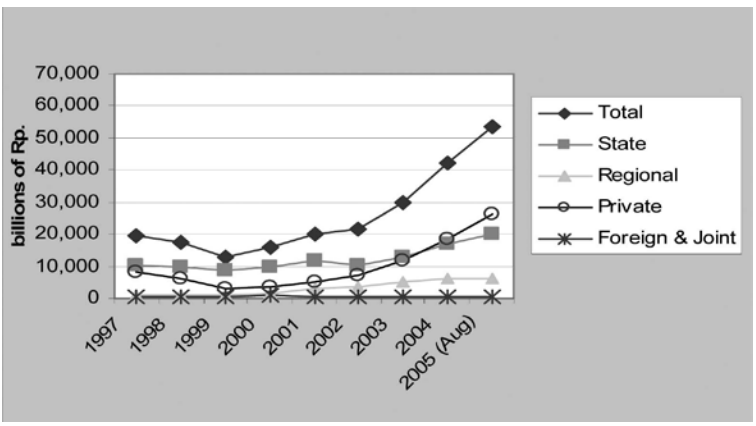
Source: Central Bank of Indonesia

holding a larger share of total mortgage credit than state banks. This shift is due not only to an increase in new mortgage lending by private banks but to the sale of sizable mortgage portfolios of closed or recapitalized state banks by IBRA. BTN currently holds only a 25 percent share of the mortgage market, while the remainder is divided across several states, regional and private banks who actively compete for market share (see Table 4.2, Figure 4.1). At the end of 2004 BTN held Rp10,400 billion out of a total of Rp42,100 billion in outstanding mortgage credit. During 2004 it made Rp2643.4billion in new loans or 22 percent of the total new mortgage volume of Rp11.991.

While for most banks the mortgage portfolio is only a small proportion of the credit portfolio (see Figure 4.2)[14], this proportion has increased steadily since 2002, particularly in private banks.

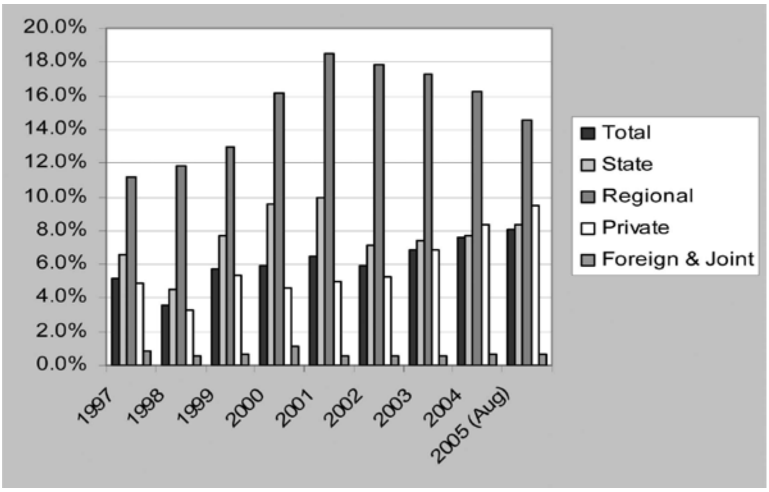
[14] With the exception of BTN which has 82 percent of its total credit portfolio in mortgage credit.

Figure 4.1 Outstanding Mortgage Credit by Bank Type (Rupiah and Foreign Currency)



Source: calculated by author from BI data

Figure 4.2 Outstanding Mortgage Credit as Percentage of Total Outstanding Credit for different types of Banks (Rupiah and Foreign Currency)



Source: calculated by author from BI data

Apart from BTN, the regional banks hold the highest number of mortgage loans relative to outstanding credit (mostly comprised of loans to civil servants). Given the generally weak performance of regional banks, due to the public ownership and governance structure of these institutions, the increase in long-term mortgage assets requires close attention by regulators.

4.3 Mortgage Products

Loan instruments. Adjustable mortgage instruments are the only type of mortgage loans generated in the non-subsidized market. There are no caps on interest rate adjustments. Rates are adjusted at the discretion of the lender and are not linked to a cost of funds index. Movements in the SBI rate are universally used to guide mortgage rate adjustments. Some banks use the SBI rate as a true index for the pricing and adjustment of short-tem consumer loans, e.g., BTN uses SBI plus 7 percent for its personal loan products.

Some banks have experimented with a 1 year fixed rate period after which the mortgage is moved to an adjustable rate regime. These loans are making a loss in the current inflationary environment and new origination has been stopped. The single focus on non-capped ARMs however makes long-term mortgage lending extremely sensitive and vulnerable to short-term market rate fluctuations as is evident in the current inflationary environment. This concern can be alleviated to some degree by increased access to long-term funding.

The only Fixed Rate Mortgages (20 years) are the old subsidized portfolios funded by soft loans form Bank Indonesia. This subsidy program has been eliminated and replaced by a subsidy that buys down the interest rates or provides an upfront grant to individual households. While the upfront subsidy is linked to an adjustable rate loan, the *buy-down is linked to a prescribed multiple accrual fixed rate mortgage regime* and leaves, therefore, interest rate risk with the lender. The reason for fixing the rate regime of these multiple accrual mortgage loans was a technical one rather than a principle one (see Section 7 below). The banks (specifically BTN) lack the technical capability to calculate buy-downs on adjustable rate mortgages.

There is also a concern by BTN that borrowers of subsidized loans do not understand the implications of the adjustable rate mortgage regime well enough, since subsidized mortgages carried fixed rates for the life of the loan in the past. There is an urgent need to introduce a consumer education program.

Loan conditions. Most mortgages are made for *8, 10 or 15 year terms with an average LTV of 75 to 80 percent.* LTV ratios range between 90 and 50 percent and are often negotiated on the bases of the perceived *risk of the property.* In case a consumer needs a higher than average LTV ratio because of savings constraints, the interest rate on the loan is increased. While these risk pricing tools are fairly rudimentary, they can only be improved when more comprehensive housing market and borrower information become available, and foreclosure procedures are further improved (see below). *The payment to income ratio is 35 percent on average.* Some banks differentiate between households with one or two incomes and give a lower payment to income ratio to two income households.

Mortgage interest rates and spreads. Mortgage rates steadily declined from approximately 20 percent for a 15 year loan in 2001 to 14 to 15 percent by the end of 2004. However, by October 2005 rates had increased to16 percent to 18 percent again. Most banks adjusted their rates upward during the months of September / October 2005. In 1998, during the crisis, rates peaked at 45 to 60 percent and mortgage lending, other than subsidized lending, stopped.[15] Deposit rates range from 9 to 11.5 percent, and average spreads on mortgage loans are in the order of 7 to 8 percent (Hoek-Smit, 2005). Such spreads may narrow somewhat when the deposit rates are adjusted upwards. Deposit funding appears to offer higher spreads than capital market funding through corporate bonds (see Section 3).

4.4 Transaction Costs Related to Acquiring a Mortgage Loan[16]

The transaction costs incurred by a residential buyer of a property are high in Indonesia. In most new moderate housing sales the bank and developer are the only parties involved with the customer and they coordinate the title transfer and building insurance with outside agencies. Whether this increases efficiency or increases costs is not clear. It does facilitate the property transfer and loan origination process for the customer. BTN, in particular, has the ability to speedily obtain titles and do the underwriting for large housing developments.

The total upfront amount is in the order of Rp2.5 to 3 million in fees and required savings. For a median income household these transaction costs alone are 2 to 3 times a

[15] In comparison, personal loans carry an interest rate of >25 percent, with the exception of personal loans made by BTN which are priced at SBI +7 percent.
[16] Sections 4.4 and 4.5 are based on interviews with selected lenders conducted for the World Bank study on Housing Finance in Indonesia (Hoek-Smit 2005)

monthly income. On top of this, a down payment of 10 or 20 percent is required (e.g., Rp3 million for a subsidized house and Rp10 million for a median priced house of Rp50 million).

There are no additional taxes involved in a transaction. VAT taxes on building materials and house sales are 10 percent and 15 percent respectively (see discussion below). The latter tax is shared between the buyer and the developer. These taxes are added to the sales price (and therefore increases the fees expressed as a proportion of the price or loan amount).

4.5 Overall Coverage and Performance of the Mortgage Market

There is no comparative information on the scale and performance of mortgage portfolios of individual banks. Nor is there a separate organization of mortgage lenders that provides information on this sector. Some findings from a small sample of banks are summarized as follows:

- Apart from BTN, there are, as yet, no lenders who serve the market for mortgages below Rp100 million. Yet the majority of households can only afford a house below Rp50 million and the median house price is approximately Rp40 to 50 million (US$5000 to US$6000).
- Sizable rate adjustments on ARMs have been made by banks during the last couple of months which partly explains recent increases in NPL ratios on mortgages. For example, the NPL for BTN's mortgage portfolio increased from 4.12 percent in 2004 to 6.16 percent in August 2005.
- There is intense rate competition amongst banks, but interest rate spreads are still high and not well analyzed. Some banks have started to put in place more sophisticated pricing and risk assessment systems. Future SMF funding may assist in this regard.
- Spreads in the personal loan business are substantially higher (and the risks are perceived as only modestly higher) and banks are expanding their non-collateralized consumer loan portfolios including that of home-improvements, car and auto loans. In addition, short-term loans are favored in the current inflationary period.
- BTN has amongst the lowest mortgage rates in the non-subsidized market and is, so far, unrivalled in this segment of the market.
- Prepayment is a constant worry and is as high as 15 percent per month in times of rate adjustments, according to several banks, even though prepayment penalties are in the order of 1 to 2 percent of the outstanding balance.
- Cross-selling is actively pursued by the larger diversified banks where mortgages are introduced as one of several financial products offered by the bank.
- The network of bank branches, including those of BTN, is extensive and makes mortgages widely available throughout Indonesia. If BRI were to expand its mortgage offerings and were to bring its major rural branch network (more than 4000) to bear on expanding mortgage credit or other housing finance products, the reach would be much wider.
- Banks conduct most of the functions related to mortgage lending; they originate, fund and service the loans. How-

ever, appraisals are sometimes done externally, particularly for main development projects. Fire and life insurance is commissioned out to specialized insurance firms.

Some general conclusions can be drawn from the analysis of the structure and performance of the mortgage industry:

(i) Recent trends in NPLs and profit margins resulting from current macro-economic shocks are a strong reminder of the critical importance of macro-economic stability in the mortgage sector.

(ii) Policy measures should focus on the worrying lack of access to loans below Rp100 million, e.g. assistance in credit and interest rate risk management, and alleviating high transaction costs in issuing small loans (see discussion below), stimulating participation by finance-companies to increase competition.

(iii) The lack of information on borrower's credit history and the lack of market wide information on house prices and price trends by geographical area, inhibits a more refined analysis of the credit and collateral risk in mortgage lending, and causes interest spreads to be higher and LTV ratios to be lower than necessary. It also prevents the establishment of mortgage insurance.[17]

(iv) Standardization/infrastructure for mortgage underwriting, origination and servicing systems has just been developed in some banks and will likely begin to pay off in lowering transaction costs when these banks go to scale. Lower transaction costs may give rise to an increase in smaller loans issued.

(v) There is growing awareness that any mortgage-based type of capital market funding would require standardized underwriting, origination and servicing systems. The SMF may assist in improving standardization of instruments, procedures and systems across banks.

4.6 Regulatory framework[18]

4.6.1 Mortgage Lending Regulations

Mortgage lending, i.e. credit secured by a lien on real property, is regulated adequately in the mortgage law (Udang Udang Hak Tanggungan) No.4/1996 and several related government circulars.

Mortgage liens are routinely used not just for mortgage loans but to secure micro-loans made by banks as well (for example, Bank Rakjat Indonesia, requires a mortgage lien as surety for its micro-credit where-ever feasible), even though no foreclosure and sale of the underlying asset is ever carried out in those cases. Savings accounts, for a specified amount related to the size of the loan and for the duration of the loan, are required as a form of surety by several lenders. Pension savings accumulated in pension funds, however, cannot be used as collateral for a loan.

The law does not limit the type of mortgage instruments used by lenders, nor is there a legal requirement to use specific reference rates or caps on interest rates. Prepayment of mortgages is allowed and so is the use of pre-payment penalties (see above).

[17] There is a state owned credit insurance company (Askrindo) that specializes in insuring Small-Scale-Enterprise credit. It is currently considering establishing credit insurance for housing micro-credit with a subsidy from the Ministry of Housing (see Section 7).

[18] This section is based on an update of Lee et al, 2001.

Long-term mortgage lending is mostly confined to banks because Finance Companies are not permitted to engage in long-term mortgage lending. Large non-bank financial institutions such as insurance companies and pension funds, are permitted to provide long-term mortgage loans and some recently have expanded that area mostly to provide mortgages to their members. This sectors mortgage and real estate investment is bound by regulation (currently at 10 percent of total investments).

Banks are supervised and regulated by Bank Indonesia. FC and pension funds / insurance companies all fall under the regulatory umbrella of the Ministry of Finance (MOF). This split may cause inefficiencies when non-bank financial institutions move into mortgage lending.

The mortgage sector currently does not receive specialized regulatory attention. The same CAR requirements (12 percent minimum) and NPL provisioning rules apply for all banks, whether their assets are composed mostly of mortgage loans such as BTN or not. Reserve requirements for mortgages were lowered in 2002 from 100 percent to 50 percent, in line with international standards. Mortgage lending is also not singled out for special taxation or tax benefits. Of course, tax on financial services and VAT apply to all housing related transactions. In the case of housing, this leads to many instances of double taxation which in turn increases the price of housing and can hinder the development of secondary mortgage transactions. Both building materials and the sale of finished houses are subject to VAT (10 and 15 percent respectively). On the credit side, stamp-duty is paid on the mortgage credit contract and VAT is likely to be applied in cases of sale of the asset in a secondary market transaction. If the asset remains on the books of the financial institution and a debt instruments is issued against it, no VAT applies. This latter issue is being discussed with government by the legal team of the SMF. These double taxation issues need to be addressed before new subsidies in the form of guarantees or tax breaks are considered for secondary mortgage market instruments.

4.6.2 Collateral Efficiency[19]

Property Titles. The great majority of urban home-owners now hold title to their land, either in the form of Hak Millik (freehold) or by way of a certificate of BPN. The registration system, however, does not guarantee titles and, therefore, the possibility of latent claims, fraudulent practices and unpredictability of court decisions remain an issue. Many improvements have been made in streamlining forms of title evidence, Deed of Mortgage and Sales Purchase Deed and in registration requirements and process at the local level. Procedures are being improved by the National Land Agency that trains the local registries. The costs of titling are still high for many people, i.e. for a moderate property, the titling costs are approximately Rp1 million.

Appraisals. The appraisal profession is self-regulated by two professional organizations who qualify their members. Financial authorities are not involved. Many banks have in-house appraisers but in case of large complex properties they hire outside appraisal firms or individual appraisers for second or even third opinions. The 2001 HOMI study found the

[19] This section is based on an update of Merill and Soeroto, 2001.

methods used by the appraisal profession lacking: too often the value of properties is based on "costs" or developer's sale prices rather than on real (resale) value.

Consumer credit information systems. Apart from the banks own records and the "bad debt" records of BI, there is no general information system on consumer credit. The bank relies on signed affidavits by borrowers that state their indebtedness and payment records. Absence of credit history information makes borrowing more expensive for the customer since banks use blocked savings accounts and low LTV ratios to protect against credit risk.

Several studies have been conducted of the feasibility of establishing a credit bureau. It appears difficult, however, to convince all lenders to contribute information to a central bureau. Eventually, some push from BI may be necessary to achieve this. Without sound credit information, it will remain difficult to assess credit risk and hence price the risk upfront. Mortgage insurance, which may become more important when mortgages are used as a basis to acquire capital market funding, will be difficult to develop or more expensive without credit information.[20]

Foreclosure. The mortgage law adequately addresses foreclosure in the case of default. Adapted from the 1848 Dutch Law its main weakness is the need for a court order to evict an occupant who refuses to vacate a property once the property has been foreclosed. This gives ultimate power to the chief of the court and tends to cause severe delays in the sale of a property.

The law also requires that the property is sold by auction in the case of foreclosure: either by private auction or through the government auction agency. In recent years this process has improved considerably. When private auction is allowed (e.g., by private banks) the entire foreclosure process can take as little as three months. When the courts are involved it can take up to nine months. The advantage of using the court route is that the occupant can be ordered to vacate the premises. Foreclosure costs vary for the different methods of auctioning and are difficult to assess since court involvement often means that 'informal' payments have to be made.

4.7 Construction Lending

There is a shortage of construction finance. The total value of construction finance in 2004 was approximately Rp4,000 billion, not even 1 percent of the value of formal construction by developers. Construction finance carries higher risks in general and in Indonesia these risks are compounded by property rights issues. Almost all construction loans defaulted during the financial crisis and even after the crisis defaults on construction loans were extremely high. In 2002 BI sent a circular to all banks to caution them against construction lending.

One of the consequences of the lack of construction finance is that developers have shifted to using more owner-equity in development projects (including by banks). In the

[20] Based on historical records of pre-crisis mortgage portfolios a mortgage insurance expert made preliminary estimates of the price of mortgage insurance in Indonesia, based on partial coverage of the loan amount. With a 20 percent down-payment and a 30 percent MI coverage of the outstanding balance, upfront one time premiums would be in the order of 7.5 percent of the loan amount (Hoek-Smit 2001).

housing sector, it gives rise to the use of a pre-sale system whereby the developer demands upfront payments for a large proportion of the sale price. Such a system focuses transactions on those who can save or access personal loans. Since consumer loans are considerably more expensive than mortgage loans, this system is, on the whole, less efficient and tends to hinder expansion into the moderate income groups. New systems of construction finance need to be explored with some urgency for residential construction.

4.8 Funding Sources and Secondary Mortgage Market

4.8.1 Current Funding Sources

Most funding of bank credit is done through deposit and savings accounts. There is currently a shift from time-deposits to savings and checking accounts because depositors want a shorter transaction time in an environment of rising interest rates. This shift is having an impact on the liquidity position of banks, causing some banks to move towards personal and working credit. This may cause a return to increased investment in government bonds (which have a current yield of 20 percent compared to 17 and 18 percent on mortgage rates). These trends may see a reverse next year if inflation decreases, but they show the volatile nature of the funding base for mortgages and the impact on supply. In addition, there is some uncertainty about the impact of imminent changes in the deposit guarantee system on the growth and stability of the deposit base which may have a negative effect on the stability of the funding base.

Funding other than deposit-based funding is limited and expensive. Several banks, including BTN, have issued corporate bonds (see Section 3, Table 3.8). However, such funding is costly relative to deposit funding.

4.8.2 Indonesian Secondary Mortgage Corporation

The SMF was approved by government and parliament on July 22, 2005 as a fully government owned limited liability company under the Ministry of Finance. It was capitalized with Rp1 trillion. Its full capitalization is permitted to reach Rp4 trillion over time and MOF prefers to seek outside (and particularly multilateral) investors for all or part of the remaining investment. The CEO and directors were named by MOF and so was the Board of Directors. MOF is also the supervisor/ regulator.

The mission of the SMF is broad -- i) engage as a secondary housing finance facility with banks and other financial institutions that provide home-ownership credits, ii) raise funds from the public to provide secondary housing financing by issuing long-term and short-term obligations, iii) other activities that support both these missions. Equally broad are the possible *activities* it may engage in; i) purchase financial assets linked to mortgage cash flows or leasing contracts, iii) issue mortgage backed securities and/or promissory notes, iii) other activities such as providing mechanisms to improve credit quality (credit enhancement), engaging in training and education of the housing finance sector, and establishing housing finance data and information systems. SMF loans to mortgage lenders may not exceed *a term of three years*, at least initially. This may move its focus towards securitization even if that is more expensive. The precise nature of the capital market products or mortgage backed loans that the SMF will develop has not yet been determined.

The SMF may extend its financial services to commercial banks and non-bank financial institutions. In particular for Finance Companies such funding base may facilitate a move into long-term credit if regulatory change will allow them to do so. However, loan-terms for liquidity funding will need to be expanded beyond the currently permitted three years.

Financial and fiscal sector fundamentals are not conducive to secondary mortgage financing for banks:

- Banks are still very liquid and do not need additional third party funds.
- The cost of funds to the banks will be high relative to mortgage rates and relative to deposit-based funding of mortgages. Mortgage bonds or securities however, may yield a better rate than corporate bonds of individual banks if the quality of the underlying asset is high.
- True sale of mortgages is taxed 15 to 20 percent VAT, which may annul any advantage of securitization.

The advantages of securitization include the elimination of reserve requirements (50 percent on mortgages) and of interest rate risk (which remains fairly limited because of the use of ARMs, but will become more relevant when banks want to move to part FRMs). In addition, credit risk may remain with the mortgage originator in the absence of specialized servicing agencies.

If liquidity in banks become tighter and should the current macro-economic turbulence subside, the extra liquidity and streamlined procedures to access capital market funding that a SMF can provide, could become more attractive and could increase the volume of mortgage lending.

Chapter 5: The Housing Sector in Indonesia

5.1 Characteristics of the Housing Stock

The great majority of households occupy a non-attached dwelling unit and the total stock is approximately 54 million housing units. Of this, approximately 24 million are in urban areas. Although the overall quality of the housing stock appears to be fairly good (using the household's own assessments the BPS Housing and Settlement Survey of 2004 indicates that 95 percent of the housing stock is in good to moderate condition), there are still over 2.5 million units requiring urgent replacement. The State Ministry of Housing estimates a backlog of 6 million and a requirement of more than 1 million new housing units per year to eliminate the backlog by 2020. This is the official policy goal and an enormous challenge for the GOI. There is awareness that to achieve this goal, a major expansion of the micro- and mortgage housing finance system is necessary.

Home-ownership is extremely high even in urban areas (70 percent). Importantly, the great majority of homeowners hold legal title deeds to the land after a massive campaign to improve land titles by the Land Agency (BPN). These rights are either full freehold title or a BPN certificate. This extension of property right clarification and registration is a major improvement over the past 15 years when approximately 80 percent of urban plots were not formally registered. A 2001 survey of low-income housing in 10 cities showed, however, that in traditional settlements and informal areas a much larger proportion of homeowners still had no title or certificate to their land (Hoek-Smit, 2001). Land titles are not guaranteed by government; they simply provide evidence of ownership.

Table 5.1 Housing Characteristics 2004

	Urban	Rural
Type of dwelling tenure		
Ownership	70	89
Lease	9	1
Rent*	7	0.5
Rent free*	2	1.5
Parent/relative	10	7
Other	2.5	1
Property Right to Land		
Freehold (milik)	91	96
Right to build**	8	3
Right to use	1	1

Source: BPS Housing and Settlements Statistics 2004

** Mostly private rental*

*** Developer rights before subdivision into individual parcels and individual titles*

Other *urban housing characteristics* can be summarized from the BPS Housing and Settlement Survey (2004) as follows:

- Close to 80% of urban housing is single storey non-attached; only about 1 percent is multi-storey.
- Close to 50 percent of units are between 50 -100M^2 and 34 percent are between 20 – 49M^2.
- 40 percent of plots are more than 70M^2; 17.5 percent are between 55 – 70M^2 and more than 40 percent are smaller than 55M^2.
- 58 percent of homeowners built their own house, 11 percent bought the house second hand and 8 percent bought their house from a developer.
- 41 percent inherited the land and 45 percent purchased the land separately or with the house.
- *65 percent of owner households paid for the house in cash, while 28 percent used a mortgage and 5 percent used non-mortgage credit.*[21]
- Close to half of owners with a mortgage had a loan term of 11-15 years and 11 percent had loan terms between 16 and 20 years.
- Only 5 percent of homeowners live in new settlements, 85 percent live in old settlements and more than 14 percent live along a river or sea bank or in other disaster prone areas.
- 75 percent of houses are prone to regular flooding.
- 53 percent have no wastewater disposal but 85 percent have a bathroom/ mostly a latrine.
- The great majority of houses are connected to electricity.
- Nearly 100 percent have access to “clear” water either piped or wells.
- More than 83 percent of households have TV.

The results show that self construction paid for by cash savings is the main method and means to acquire a home (65 percent). The main problems connected to the quality of the housing stock are lack of services and infrastructure, and regular flooding. Indonesia has excellent past experience with comprehensive upgrading programs of poorly serviced urban neighborhoods or kampungs. These programs, combined with a campaign to provide tenure to those who occupy land without title, have improved living conditions considerably. They have also increased the demand for micro-finance credit for incremental home-improvements.

5.2 House Prices

Comprehensive house price data does not exist in Indonesia because most housing transactions, if recorded at all, only refer to the transfer of ownership but not the actual sale price as a way of avoiding tax payments. There are a few proxy indicators that can be used as an indicator of movements in housing costs and prices.

[21] The finding that 28 percent of urban homeowners used mortgage loans for the acquisition of their homes appears high. Naturally, this figure includes owners who have paid off their loans. There are roughly 24 million urban housing units of which 70 percent, or 16.8 million, are owner occupied. If 28 percent of these owner-occupiers used a mortgage this would mean a total of 4.7 million mortgage accounts across all 2004 homeowners. Total mortgages outstanding (mostly new since the crisis) are approximately 1 to 1.5 million. That would require that 3 million pre-crisis mortgagors still live in their homes. It might be possible, but it is likely the survey has over-represented formal sector neighborhoods. See also the section on formal land-ownership.

Table 5.2 Average Prices of New Moderate-Income Houses and Percentage Increase by Type of House 2001 -2005 (millions of Rp)

	2001	2002		2003		2004		2005	
BTN Financed			%		%		%		%
21m2 house/ 60m2 plot	22.1	25.1	13.6%	28.1	12.0%	31.8	13.2%	35.7	12.3%
36m2 house/ 90m2 plot	35.6	40.3	13.2%	45.0	11.7%	51.6	14.7%	57.2	10.9%
Private Bank Financed									
36m2 house/ 90m2 plot	60.5	67.5	11.6%	75.2	11.4%	86.5	15.0%	98.6	14.0%
45m2 house/ 105m2 plot	73.4	81.7	11.3%	91.1	11.5%	105.1	15.4%	120.8	14.9%

Source: PSPI, January 2005 (2005 is an estimate by PSPI)

One general indicator of trends in housing expenditure and costs is the housing CPI. The general CPI index for 2004 was 113.98 (with 2002 as base year), while the housing index was 121.88, of which the "cost of housing index" was 120.91 and fuel, electricity and water was 137.68 (BPS 2005). These figures show that housing expenditures have increased faster than overall household spending but not by much.

More direct indicators of urban housing costs and prices are not easy to find in a large and diverse country like Indonesia. There are two sources of information on house-prices that use a similar and well-understood typology of *formal sector housing markets segments*:

1. Pusat Studi Properti Indonesia (PSHI) is a private real estate research firm which collects information on prices of new house construction and resale transactions in a limited number of markets. It differentiates between the high, medium, and low income housing market and further breaks down the low-income segment in to three types according to the source of finance used -- houses financed by private banks, by BTN without subsidies, and those that receive finance subsidies (see Table 5.2). In 2004 a modest house of 36M2 financed by BTN was priced at Rp51.6 million up from Rp45 million the previous year, or an increase of close to 15 percent.

Table 5.3 Bank Indonesia House Price Index in 14 Cities

	12-2002	12-2003	12-2004	2005 Q.III
Composite index	106	117	124	127
Small type index	107	123	128	134*

** The third quarter 2005 index was 130 for medium and 123 for large houses.*
Source: Bank Indonesia Residential Property Price Survey Quarter II 2005

2. Bank Indonesia (BI) tracks quarterly *new housing prices* in 14 cities. It started this survey in 2002 after the crisis had shown the dangers of a lack of housing market information. The survey distinguishes large, medium and small houses and compiles an index based on a survey of housing transactions.

Both surveys show price increases for newly constructed formal sector single family houses above 10 percent between 2002 and 2003. PSPI shows increases of 14 to 15 percent in 2004, while the BI index shows a lower rate of increase and an even lower annual rate of 5 to 6 percent since 2004. Both surveys indicate that prices of larger houses have increased less than smaller ones. This is most likely a function of greater demand for small houses relative to supply, which appears in line with income distribution and housing affordability figures given below. *Both CPI and BI data show that while housing costs increased faster than inflation, the housing market is not overheated and that supply is likely to be in relative balance with demand.*

5.3 Housing Production and Main Supply Constraints

The number of new units required yearly just to house newly formed *urban* households (excluding Tsunami reconstruction and existing housing backlog) is approximately 800,000 (Table 2.1). The modest increase in house prices (relative to inflation) is an indication that close to that number of urban housing units must be built. But how are these houses built and are they built in the formal or informal sector?

5.3.1 Number of Newly Constructed Houses

Large scale developer built housing constitutes a small portion of new construction work, but one which government is trying to stimulate. According to the PSHI survey, formal *developer constructed housing* reached 160,000 units in 2004 of which roughly one third was subsidized (see Table 5.4). This is close to the pre-crisis number of 204,000 units (1997). During 1998 only 119,000 formal developer built units were constructed (PSPI, March 1999) and in 1999 the number fell to 41,000 units, nearly all subsidized (BI and Kimpraswil, 2005).

Table 5.4 Number of Newly Developer Built Single Family Houses 2002-2004 (projection 2005)

House Type	2002	2003	2004	2005
High Income	2,900	2,600	3,200	3,500
Middle Income	9,400	10,200	12,450	14,800
Low Income (Private bank financed)	35,000	42,150	46,790	48,450
Low Income (BTN financed/without subsidy)	48,080	44,020	41,500	43,900
Low Income (BTN financed/with subsidy)	25,920	32,540	55,200	82,540
Total	121,300	131,510	159,140	193,190

Source: adapted from PSPI, January 2005

These figures exclude the commercial and multi-housing units produced by developers, i.e., shop houses and apartment buildings (which are mostly high end developments). The capitalized value of these commercial developments -- close to Rp20,000 billion in 2004-- was higher than the value of single family units produced by developers (see Appendix 2). The total number of individual housing units in such mixed developments is not known, but is only a fraction of the 160,000 developer built single family houses.

In the absence of widespread informal settlement expansion, most houses must, therefore, be built by individual homeowners who hire a contractor to build a house on land they own. There is no national accumulation of data on formal permits issued for residential construction by local governments, and few houses built in this way use mortgage credit. There is, therefore, no confirmation on the number of units built by individual homeowners. Since the registration of land titles has been expanded in the last decade, it is assumed that even if construction is not officially approved or may not comply with building codes and therefore "unauthorized," most land on which units are built are likely to be formally owned by the occupant or his/her relatives.

5.3.2 The Supply of Land for Housing

The cost of land is approximately 25 to 30 percent of the total cost of a formal sector new low cost house and somewhat higher for high-income houses. Land prices in urban areas increased by approximately 16 percent in 2001 and 2002 and by 14 percent in 2004, and has contributed to an increase in house-prices more than the cost of building materials (PSPI, 2005).

The supply of land for development is, however, severely constrained and one of the most important reasons for the low levels of developer built housing. IBRA (the government agency that acquired non-performing assets of banks recapitalized by the state after the crisis) has divested all of its land (and other) assets, yet large tracks of urban land are held by public agencies and private developer land banks and are not coming on to the market in an appropriate way. Affordable housing for the broad middle-income group – by far the largest group - is still considered less profitable by developers and a low priority in the use of their land. In addition, government has not expanded infrastructure to open up new land, further limiting the developer's appetite as well as options for moderate- income housing development projects. There are also significant numbers of small plots of land in urban areas that are undeveloped but serviced with secondary infrastructure and ripe for development (Lee, et.al. 2001).

These constraints in developing land are exacerbated by the way development permits are issued by local governments which fail to enforce developers to purchase land within permit areas and develop it in a timely fashion. While instituted to facilitate land development, developers are not penalized if they do not develop the land within the given period stipulated on the permit. In fact, developers can hold large tracks of land off the market without incurring any costs because they have not invested in the land. High costs and long delays in acquiring subdivision and building permits add to the inefficiency of land development. The result is that land with residential development potential is tied up, pushing development to the outskirts of urban areas.

GOI has set a high priority on the extension of infrastructure in the near future. Some of this infrastructure investment should help open those urban areas for development.

5.4 Household Incomes, Housing Demand and Housing Affordability

As previously mentioned, Indonesia requires approximately 800,000 new homes in urban areas to cope with new household formation. How much are households willing and able to pay for housing and for what type of housing?

Household income, rather than individual wages or per capita income, is the relevant base for the calculation of housing affordability. Interestingly, *household* consumption/income figures showed far less volatility during the crisis period than individual wage incomes and overall GDP. Households coped by moving household members in to informal employment and by extending female labor force participation. This meant a decline in household incomes was about half the size of the decline in individual earnings.

In October 2001 a detailed study of housing demand conducted for the Ministry of Public Works and Human Settlements, estimated the median monthly household income (50th percentile) for rural areas, urban areas, including DK Jakarta and excluding DK Jakarta, and for DKIJ separately (Hoek-Smit, 2001; see summary in Appendix 4). Table 5.5 shows the updated estimates for the median household income levels of different groups for the period 2001 and 2004.[22]

These inflation adjusted median household figures could be underestimated, since wages of formal sector workers rose by more than inflation during the 2001 and 2002 periods to make up for real wage decreases during the 1998 to 2001 periods. If one makes the assumption that informal wages tracked formal wages, then total household incomes could, in recent years, have risen in real terms.[23]

Cost affordability. Assuming that the median monthly urban income for 2004 is Rp.1.2 to Rp1.5 and the median price of a formal sector house is Rp.50 million (the price of a newly constructed 36M^2 house on a 90M^2 lot in 2004; and the estimated median price of resale properties), the urban price- to- income ratio is 3 to 3.6 for formal sector housing, which is relatively modest for emerging economies. *Housing, therefore, is relatively affordable and standards are flexible* and, as has been argued in the HOMI study, standards should in fact not decline (note the small size of new houses and small plot sizes).

Finance affordability. To buy a developer built house, potential owners and investors need finance. And, as in many emerging market economies, it is precisely the lack of access to finance or the high cost of housing finance that renders housing unaffordable, driving many homeowners to build their own houses gradually over time, from their own savings.

[22] No household income figures are maintained by BPS and current median household income data can only be derived by assuming that household incomes increased in line with inflation since 2002 (like the minimum wages and other income measures appear to have done).

[23] A back of the envelop calculation based on national per capita income figures for 2004 indicates that the average national household income would be in the order of Rp.1.67million per month, which would indicate a national median household income in the order of Rp.1.17 million per month, in line with the calculations of the median income above.

Table 5.5 Estimated Median Monthly Income Figures in Rp. and Monthly Payment for Housing and Loan

Housing Affordability	Rural	Urban	DKI Jakarta	Urban w/o DKI
Estimated Median Income/ month/2001	579,300	950,000	1,713,000	892,000
Estimated Median Income/ month/2004	712,514	1,166,500	2,106,917	1,097,122

Source: derived from Susenas 1999 and calculations by the author

Table 5.6 shows estimates of monthly payments for housing by a median income household: an income to payment ratio of 30 percent, and the affordable loan at current nominal interest rates of 17 percent on a 15 year loan. If a 30 percent down payment is required, urban households at the median income level could afford a Rp32 to 33 million house.[24]

Houses in this price bracket are built mostly under the special subsidized credit program now offered through BTN (see Table 5.2). Only BTN and Regional State Banks (BPDs) make mortgage loans below Rp75 million, and few banks make mortgage loans to households whose main income earners are employed in the informal sector. There is, therefore, a gap between the cost of a house that a

Table 5.6 Estimated Monthly Payment for Housing and Loan Affordability

Housing Affordability	Rural	Urban	DKI Jakarta	Urban w/o DKI
Estim. Median Income/ month/2004	712,514	1,166,500	2,106,917	1,097,122
Monthly Payment for Housing at 30% of income	213,755	349,500	632,075	329,140
Affordable Loan at 17%, 15 Years	13,900,000	22,710,000	41,070,000	21,387,000
Affordable House/ L+ 30% down	19,857,000	32,443,000	58,670,000	30,553,000

Source: derived from Susenas 1999 and calculations by the author

[24] If mortgage interest rates had continued to come down from 2004 levels to, let us say, 13.5 percent nominal (roughly 3 percent above the risk free rate of government paper at the end of 2004), this same household would have been able to afford a house of Rp38 to 39 million.

median income household can afford and that of a house financed in the mortgage markets. Without finance, developers are reluctant to engage in housing projects for that income group. Indeed, the total amount of new mortgage loans issued in 2004 of approximately Rp12,000 billion, could only have financed a maximum number of roughly 240,000 houses, subsidized and non-subsidized. Most other houses are likely to have been financed from savings or non-mortgage finance. The absence of upfront finance reduces housing demand. The quality of home, too will differ. *Affordability problems, therefore, relate mainly to the high cost of construction, and to the lack of access to medium to long-term financing.*

Chapter 6: Finance for Low Income Housing

Most banks will not give mortgage loans to urban households with an income below the 60th percentile (roughly 75 percent of the labor force). High transaction costs for mortgage loans below Rp35 to Rp25 million (US$3,500 to 2,500) are also considered unprofitable by most commercial banks. While the improvement of risk management systems will gradually expand mortgage lending to a larger section of creditworthy middle income households, the great majority of homeowners still depend on internal finance, subsidized housing finance programs and micro-finance to finance their homes. This section looks in more detail at two types of financial institutions that focus on the middle and lower-income sectors: BTN, the government housing bank, the main issuer of housing finance, and different types of micro-finance lenders.[25] Chapter 7 will take a closer look at housing subsidies focused on expanding access to housing finance.

6.1 Bank Tabungan Negara (BTN), the State Housing Bank

BTN's mandate is to provide housing loans to middle and lower-middle income households, which include loans subsidized by the government. BTN is the main user (and past administrator) of the mortgage subsidy program. We will discuss BTN's development over time and its current role in lower-middle income housing finance provision.

6.1.1 Overview

The state housing bank of Indonesia, Bank Tabungan Negara (BTN), was founded in 1897 as a savings bank. It was directed in 1974 to deliver subsidized housing finance to low and moderate income households. This occurred in an environment where most of the banking sector was composed of state-owned institutions, and tightly controlled. From among the state banks, BTN was singled out to become a housing bank.[26]

BTN's lending, mostly, was financed out of low-rate funds from the Central Bank and from a World Bank loan. In the 1980s and 90s, up until the financial crisis in Asia in 1997, it was making between 50 to100,000 subsidized loans per year. This was a small share of the potential market in a country of about 50 million households and approximately 700,000 to 800,000 new households being formed in urban areas annually.[27] Indonesia has an unusually small formal housing developer sector. The pool of houses meeting the requirements of mortgage financing is relatively small. Moreover, reliance on cash savings to acquire a home is a deeply entrenched tradition. Only 13% of those acquiring a home in the mid-1980s used any sort of loan.[28] Of these, only

[25] The Regional State Banks (BPS) is a third category of banks providing smaller mortgage loans, but there is little information on their mortgage portfolios and mode of operation.

[26] There is a detailed discussion of the history of BTN up to 1988 in Struyk, R. et al, 1990. Its development in recent years is summarized in Hoek-Smit 2002.

[27] Hoek-Smit, M, 2001, Effective Demand for Low and Moderate Income Housing in Indonesia, HOMI project, Kimpraswil, Government of Indonesia.

[28] These and other data from the 1980s are from Struyk, et al. (1990), Hoek-Smit (1999, 2002).

30% of the loans were from a formal financial institution (the rest were from employers, family, or cooperatives). Just prior to the 1997 crisis, BTN was issuing about 80% of the formal mortgage loans (Hoek-Smit, 2002).

In the initial phase of its role as a state housing bank, BTN developed several of the problems typical of government housing banks: using interest rate subsidies funded from special government lines of credit to the bank. BTN essentially monopolized the housing subsidy market and was able to charge large margins on its loans (lending at 9-15% based on an average cost of funds between 4-5%, plus collecting fees from developers). All subsidized lending was associated with specific housing developments, and the prices charged on those houses captured some of those subsidies (the typical interest rate subsidy was worth about 50% of the amount of the loan and the amount of the loan averaged about 80% of the value of the house).

These subsidies were primarily (75%) going to civil servants, initially under a preference system. The subsidies were given to relatively high-income households because only the stated income of the head of the household was used in determining eligibility. The loan terms were for 20 years (double that for loans from private banks) and prepayments were rare, since the effective rate on the loan was usually lower than the rate on bank savings accounts.

Despite this situation, BTN was facing a financial crisis at the end of the 1980s because of poor recoveries: over 25% of the loan book was delinquent over 90 days and 25% of these were over 18 months overdue. The bank supervisors overlooked the implications of this situation, and the liquidity of the bank started to suffer. The situation had little to do with difficulties in paying (especially since most households had much more income than was accounted for in the underwriting), but reflected the negatives of a heavily subsidized, state-sponsored lending system.

First, it was profitable to be delinquent. Foreclosure was not pursued; instead, payments were eventually rescheduled. Meanwhile, the interest earned on the cash was higher than the interest charged on the mortgage. Consistent with this understanding, delinquency rates were higher among more sophisticated borrowers, civil servants and those with higher incomes.

Second, all parties acted as if loan recovery was of secondary importance. Underwriting was perfunctory. Payroll deduction of repayments, even of civil servants, was not required. No effort was made to underwrite buyers of mortgaged houses in the resale market, allowing the purchaser to implicitly assume the loan. Efforts at delinquency management were minimal.

Third, the quality of construction and location suffered as developers strained to meet size and price limits, relying on low rate loans to entice buyers. This resulted in several house vacancies, no payments coming in, and no steps being taken to recover the loans.

In the 1990s, BTN addressed some of these problems but in so doing laid the basis for a new set of problems. It cut the delinquency rate to 18% and focused its subsidized lending further down-market. Simultaneously, private banks and even other government banks expanded into market-rate mortgage lending in the upper income ranges and even down into the upper-middle range that BTN was cutting back in. In addition, other appointed banks were given access to the subsidy program. As of 1997, although BTN was still granting about 80% of all loans, it was doing only half of the total rupiah volume of lending.

Rather than shrink its mandate and power, BTN successfully sought to diversify outside of its mortgage lending mandate. Between 1992 and the crisis of 1997, it aggressively expanded its corporate lending portfolio. The weaknesses in its capacities in this area were clearly revealed in the crisis, when 100% of its corporate loans went into default and 70% by loan volume had to be transferred to the centralized bad debt agency IBRA. Total loss was over USD 1 billion. Despite strong arguments for winding down its lending operation and revamping the subsidy schemes into an upfront subsidy administered by a special agency, and implemented through commercial banks, the political pressures to preserve jobs at BTN and its capacity for direct intervention in the housing market, dictated its recapitalization, permitting its continuation as a state housing bank.

6.1.2 Performance since the Crisis

In the early years after the crisis, BTN became the lender of last resort for the mortgage subsidy system. It started to engage in more risky lending to maintain its level of activity when the old subsidy scheme was transformed (higher LTV ratios and increasing construction lending to 30 percent of new credit in 2001), with increasing NPLs as a result. It has since refocused on its core business of lower middle income mortgage lending, both subsidized and non-subsidized, and its performance has gradually improved (Table 6.1 and 6.2).

BTN has in the order of 400,000 loans on its book and the average loan amount is Rp30 million for subsidized loans and Rp50 million for non-subsidized loans. At current rates (end of 2005), such loans are affordable for households between the median and 70th percentile of the urban income distribution. Private commercial banks, as yet, do not operate in this market segment.

NPLs on the new and cleaned-up mortgage portfolios are within the same range as other banks, but have increased in 2005 as a result of recent shocks in household incomes. Not surprisingly, NPLs on subsidized mortgages are higher than those on non-subsidized mortgages and increased relatively more in recent months (from 4 percent in 2004 to 6 percent in August 2005, while non-subsidized mortgages went from an NPL of 1.8 percent in 2004 to 3 percent in the same period)(BTN interview). *Net interest margins have increased and are in the 5 percent range, approximately 50 basis points below the banking sector's averages.*

The government rationalized the subsidy scheme: it switched to an upfront and interest buy-down subsidy (Chapter 7) of shorter duration and paid for out of the budget. However, the subsidized mortgages are still predominantly issued by BTN and it is not clear that BTN can compete on a level playing field in the provision of credit if the government were to move to upfront subsidies which beneficiaries could use at any qualifying bank of their choice.

One of the main challenges BTN faces is expanding its *funding base. It received the last BI soft loan of Rp2 trillion in 2002 (a 14 year interest only loan) and will have to depend on its own funding base when disbursements from BI cease.* BTN is predominantly deposit funded, but its deposit base is expensive both in operating costs and in interest expenses. It has floated

Table 6.1 BTN Performance Criteria 1996 – 2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	August 2005
Capital Adequacy Ratio (CAR)	72.20%	13.68%	-69.93%	-228.14%	8.65%	10.85%	11.39%	12.19%	16.64%	17.25%
Loan to Deposit Ratio (LDR)	91.23%	97.70%	214.10%	100.90%	48.10%	46.28%	51.31%	58.27%	67.90%	78.36%
Non Performing Loan (NPL) – Gross	9.36%	9.42%	47.99%	7.10%	3.27%	4.75%	4.76%	3.80%	3.21%	5.30%
Non Performing Loan (NPL) – Net	-	-	-	-	-	-	-	1.97%	0.22%	1.78%
Return on Asset (ROA)	1.81%	1.19%	-60.72%	-25.60%	-5.91%	0.49%	1.13%	0.82%	1.83%	1.76%
Return on Equity (ROE)	15.48%	12.09%	114.18%	-24.21%	369.99%	25.06%	31.31%	18.12%	40.93%	39.12%
Net Interest Margin (NIM)	4.01%	4.14%	-12.51%	-26.82%	-2.16%	1.24%	2.44%	3.35%	5.32%	5.25%
Profit Margin	11.98%	8.17%	523.84%	154.72%	-41.27%	3.86%	7.24%	5.04%	16.47%	16.00%

Source: BTN 2005

Table 6.2 Composition, Actual Credit and Credit Position of BTN

	2000		2001		2002		2003		2004		2005	
	Rupiah	%	**Rupiah**	%	**Rupiah**	%	**Rupiah**	%	**Rupiah**	%	**Rupiah**	%
New Credit	1,824,069	100.00%	2,344,897	100.00%	2,975,439	100.00%	3,332,911	100.00%	3,984,426	100.00%	3,533,336	100.00%
Subsidized Mortgage	1,352,631	74.15%	564,116	24.06%	438,395	14.73%	722,039	21.66%	1,268,025	31.82%	978,756	27.70%
Unsubsidized Mortgage	68,613	3.76%	881,007	48.30%	1,289,651	43.34%	1,433,089	43.00%	1,375,401	34.52%	1,223,323	34.62%
Construction Mortgage	136,559	7.49%	552,343	30.28%	669,578	22.50%	602,487	18.08%	451,579	11.33%	473,353	13.40%
Multi-Purpose	228,994	12.55%	279,708	15.33%	540,452	18.16%	543,270	16.30%	816,629	20.50%	721,163	20.41%
Consumer Credit	37,272	2.04%	67,723	3.71%	37,363	1.26%	32,026	0.96%	72,792	1.83%	136,741	3.87%
Outstanding Credit	7,674,042	100.00%	8,411,916	100.00%	10,210,983	100.00%	11,160,966	100.00%	12,608,978	100.00%	14,192,768	100.00%
Subsidized Mortgage	5,891,648	76.77%	5,631,578	66.95%	5,430,661	53.18%	5,376,171	48.17%	5,832,504	46.26%	6,263,172	44.13%
Unsubsidized Mortgage	1,029,819	13.42%	1,641,164	19.51%	2,637,098	25.83%	3,730,396	33.42%	4,504,673	35.73%	5,252,361	37.01%
Construction Mortgage	416,679	5.43%	778,977	9.26%	1,141,754	11.18%	1,372,310	12.30%	1,438,004	11.40%	1,644,078	11.58%
Multi-Purpose	226,497	2.95%	288,728	3.43%	438,937	4.30%	519,257	4.65%	648,402	5.14%	791,915	5.58%
Consumer Credit	109,399	1.43%	71,469	85.00%	562,533	5.51%	162,832	1.46%	188,395	1.47%	241,242	1.70%

Source: TN 2005, PSPI, December 2004

a number of bond issuances on the Surabaya Stock Exchange which received a rating of id-BBB for the subordinate 10 year bonds and idBBB+ for the 5 year normal corporate bonds (see Appendix 3 for specifics). Such funding is expensive relative to the competitive rates on the mortgage portfolio. The establishment of a Secondary Mortgage Corporation (SMF) was partly motivated by the need to stabilize BTN's future funding position (when BI soft funding ends). *The SMF must ensure, however, that potential risks in BTN's lending operations are not transferred to government or government investors through the SMF.*

With over 80 percent of its credit in mortgages, albeit mostly adjustable rate mortgages, it remains vulnerable to macro-economic volatility. BTN is under considerable pressure from other mortgage lenders with more diverse credit and mortgage portfolios. It is reluctant to re-price its portfolio upward while inflation and SBI rates increase, for fear of losing customers (a risk that currently affects both subsidized and non-subsidized mortgages).[29]

The current lending environment is more challenging for BTN than the pre-crisis period because it is competing in an adjustable rate mortgage environment without government support. It can avoid new dependencies on government funding by gaining preferential access to liquidity funding from the newly established Secondary Mortgage Market Corporation. Its improved performance has given rise to discussions about the possibility of privatization.

[29] BRI intends to introduce a new small mortgage credit product (Rp25million) that would compete directly with BTN's lower end mortgage offerings.

6.2 Micro-finance for Housing

Micro-finance lenders are a second category of financial institutions providing small "mortgage" loans or loan products where there is no collateral for short term. As discussed in Chapter 3, Indonesia has a variety of financial institutions involved in micro-finance: commercial banks, cooperatives and credit unions, government sponsored village savings and credit institutions, and pawn shops. However, microfinance has not been focused on housing. There are very few special savings and credit products tailored to facilitate home improvements, home expansion, including the development of rental rooms, and new construction on an incremental basis, i.e. loans with appropriate loan terms of up to 5 years that can be sequentially applied, have feasible collateral and savings requirements.

There are two main types of micro/mortgage-finance systems in Indonesia developed specifically for housing: i) Government led micro-finance lending programs tied to housing projects, which are mostly supported by international agencies, either for upgrading or new construction. ii) BRI's special Kupedes product for housing credit. These two types of micro-finance activities will be discussed in turn.

1. Government-sponsored micro-credit programs tied to housing projects. Over the years, several experimental credit programs for land and home-construction were initiated as part of government sponsored housing projects. Co-Bild, a UN-Habitat supported credit program, was the most recent example of such housing credit program. It was part of a housing project that emphasized affordable building technologies, community-based endeavors in house construction and improvement, and access to credit. The project provided subsidized credit through civic groups.

It turned out to be difficult to enforce repayment of loans under the project. Moreover, the scheme was not based on commercially viable principles that guaranteed its sustainability; e.g. it did not charge interest rates that allowed cost-recovery; underwriting of loans was based on community membership rather than on repayment history. Like other such housing credit programs before it, it was closed when donor support ended. Such short-term donor-led projects are endemic in the Indonesian housing programs.

There is an inherent conflict between the development of commercially-based MFH institutions, and project-linked credit programs that use subsidized funds to make loans at below-market rates through either financial or non-financial intermediaries. Such subsidized micro-credit programs often close when projects are completed or funds run out. Moreover, they often "crowd out" commercial micro-credit which cannot compete with subsidized government credit programs. International experience shows that it is more efficient to implement the credit component of such projects through specialized commercially run institutions that remain in existence long after a housing project is completed and that continue to provide credit to residents for incremental improvements on their homes.

2. BRIs Kupedes Products. BRI, the state bank specializing in micro-credit, over a decade ago decided to extend its flagship Kupedes micro-enterprise loan program into housing. The housing loans are not mortgage loans – that is, they are not secured by a lien on the property – but rather are underwritten on the basis of the homeowners' cash-flow projection in a similar fashion as the micro-enterprise loans, which carry regular Kupedes interest rates and terms. However, homeowners are often asked to provide the title deeds to the property as "collateral" to the loan, even though there is no lien on the property and the house cannot be sold in case of default. It is used to provide an additional incentive to repay.

The loans are meant to finance home improvements, and, less frequently, construction of housing on land already owned by the borrower. Loans are not provided for land purchase. Loans are also given for home extensions for renting purposes. Borrowers must be salaried or on a fixed income to receive home improvement or expansion loans. Most of the loans are between $250 and $2500 (although they can go as high as $15,000).

Shortly after the product was launched in 1994, a survey of BRI customers was conducted that included an analysis of the then new microfinance for housing loan program. The data indicated that only a limited number of KUPEDES loans were, in fact, being used for housing-related purposes relative to loans used for investment and working capital. The housing loans were characterized as follows:

- Loans were concentrated among employed homeowners, although not necessarily formally employed, and had a better repayment record.
- Loans were often used for income generating activities such as building rental units in owner-occupied housing.
- If loans were used for home improvements, they were underwritten based on the income stream from the homeowners activities resulting from earlier loans.

In 2001, a new survey of its micro-finance portfolio was conducted by BRI and Harvard's Kennedy School. It showed that a considerably larger proportion of the Kupedes

Table 6.3 Purpose of the Latest Micro-finance Loan Obtained from BRI

Purpose of Most Recent Loan	Kupedes Borrowers, Java/Bali	Kupedes Borrowers, Off Java/Bali	Potential Kupedes Borrowers Java/Bali	Potential Kupedes Borrowers Off Java/Bali
Working Capital	86%	62%	42%	39%
Housing	6%	29%	10%	9%
Purchase Land, Building, Equipment, Vehicle	4%	7%	9%	9%
Consumption, Health, Education, Ceremony, Jewelry	2%	0%	27%	30%
New Business	0%	0%	1%	0%
Pay Loan/Tax	0%	0%	1%	0%
Other	2%	2%	10%	13%

Source: BRI and Harvard Kennedy School, 2001, p. 23

micro-finance loans issued by BRI was used for housing purposes (Table 6.3) but that the figures differed for areas where subsidized micro-credit was available; 29 percent of loans were used for housing purposes outside of Java and Bali compared to 6% on Java and Bali, where many alternative micro-loan providers operate at lower cost and crowd out the market priced Kupedes program. There was a feeling among many of the BRI Unit managers that housing loans showed considerable potential and that they had improved living conditions of the borrowers. Unfortunately, no data is available on the use of micro-loans for housing by other micro-lenders.

Table 6.4 BRI KUPEDES Loan Portfolio and Savings Accounts: Selected Years

Year	KUPEDES Loans (Rp./Bil.)	12 Month Loss Ratio	Arrears	Total Savings (Rp./Bil.)	LDR
1984	111	0.98%	5.40%	42	3.80
1985	229	1.84%	2.08%	85	2.69
1992	1,648	3.40%	9.10%	3,399	0.48
1997	4,685	2.23%	4.73%	8,836	0.53
1998	4,697	1.94%	5.65%	16,146	0.29
1999	5,956	1.72%	3.05%	17,061	0.35
2000	7,827	1.11%	2.51%	19,115	0.41
Aug-01	8,954	0.03%	2.27%	21,078	0.42

Source: BRI, 2001

The infrastructure for the expansion of a micro-finance system for commercial housing exists in Indonesia. There are, however, some constraints preventing its widespread implementation. On the demand side, the high costs on non-secured lending are a big limitation. Interest rates on MF credit typically range from 28 to 40 percent, and even personal loans for motorbikes and vehicles (which are secured by the property) carry interest rates in the high twenties. These high rates make loans less feasible for house building.

On the lending side, the main constraint is the impact on the funding and liquidity position of micro-lenders. Micro-finance for housing loans is typically larger and longer term than business loans. The reason that BRI is successful in its micro lending is its efficiency in mobilizing savings. This makes it possible for BRI to move towards medium-term credit products. Table 6.4 shows a summary of BRI's savings and micro-enterprise loan portfolio until 2001. Other MFIs could possibly achieve similar results with a greater focus on the development of savings products and systems.

The housing policy project conducted in 2001 (HOMI project) proposed several measures to prepare the MFI sector to play a greater role in housing (Merill and Soeroto, 2001):

- Build capacity for this type of lending activity through the micro-finance network or another training center.
- Change the way government and donors subsidize borrowers through the provision of cheap funds to micro-finance institutions for below-market on-lending to borrowers. Subsidize instead the housing asset directly while strengthening the commercial base of MFIs (the gist of the proposed government subsidy program discussed below).
- Establish a liquidity window for housing micro-finance, since the non-bank micro-finance lenders do not have access to adequate funds for MFH. At the same time, Indonesia's network of low-income lenders is well positioned to enhance savings and this should not be discouraged.

These recommendations are still valid in the current context. In addition, one should also consider the following:

- Establish the proposed liquidity window as part of the recently established SMF to keep institutional costs down. This model is currently implemented in Mexico.
- Consider an alternative guarantee program for MFH loans where the guarantor places a number of monthly payments into an escrow account which the lender can access in the case of default, and to which the borrower can have access when the loan is repaid. Such a scheme was successfully implemented in Indonesia many years ago, but, as with so many donor schemes, it died at the end of the foreign-funded project.

In summary, if BTN and BRI are able to expand formal mortgage lending to households below the median income, with or without subsidies, formal developer housing projects could expand considerably. With some liquidity and regulatory support commercial micro-finance for housing could play a much more constructive role in assisting the lower-income sector and help improve their housing circumstances. Combined with further improvements in land regulation and acquiring development permission, such finance sector measures would go a long way in addressing the problems of low-income Indonesians.

Chapter 7: Housing Finance Subsidy Programs

7.1 The Old Interest Rate Subsidy Program

The cornerstone of the GOI housing policy was the mortgage (KPR) interest rate subsidy for loans for specific house-types. Under the system, lenders, predominantly BTN, received subsidized liquidity credit from BI for part of the loan amount and lent at fixed, below-market interest rates to qualifying homeowners. The interest rates charged to borrowers and the proportion of liquidity credit to lenders varied per size and cost of unit. BTN was also the administrator of the program.

All subsidized lending was associated with specific housing developments, implemented by developers, who captured some of those subsidies. The typical interest rate subsidy was worth about 50% of the amount of the loan and the amount of the loan averaged about 80% of the value of the house.

The scheme provided between 50,000-100,000 subsidies per year from 1980-1997. Its PV costs were about Rp4.5 million per subsidy in 2001 (about USD 450), on an average loan of Rp20 million at 15% against a 20% market rate. The total cost in 2001 was approximately Rp500 billion or about 0.03% of GDP. To this amount is added the sum of the inefficiencies related to lending through a state enterprise, plus the long-term costs of loan losses due to poor recoveries and entry into market-competitive sectors. Based on experience from 1980 to 1999, these costs could amount to over Rp500 billion per year. This implies that the total explicit and implicit annual cost of the scheme was about Rp1,000 billion or 0.06% of GDP per year (Hoek-Smit and Diamond, 2005).

The system remained unchanged for 20 years until the economic and financial crisis of 1997. The 1997 collapse was just the final straw for a system that had become untenable and that, increasingly, had a negative impact on the housing market and the finance sector. After the crisis, and as part of an IMF agreement, BI's liquidity funding for KPR subsidies was ceased and MOF had to carry the subsidy on its RDI budget. Several adjustments to the subsidy programs were tried out during 2001 and 2002, but ultimately it was phased out by 2004. BTN still has BI liquidity funding to compensate it for the remainder of the amortization period left on the subsidized mortgages on its book.[30]

[30] There is another subsidy scheme that needs brief mentioning. Civil Servants are taxed a small and progressive charge on their wages as a contribution to the Bapartarum fund. This fund is used to provide down-payment support to civil servants who buy a house and obtain a mortgage (mostly subsidized). The top income groups do not qualify for the scheme. Since the great majority of civil servants do not qualify for a mortgage, the subsidy still tends to be regressive. The subsidy amount is also very small and given the overlap with the new subsidy scheme it is no longer necessary.

Table 7.1 Nominal Value of Subsidized Mortgages and Total Number of Units Subsidized 1997-2003

	1997	1998	1999	2000	2001	2002	2003	Average
Total Nominal Subsidized Mortgages in Rp billion.	Rp1,429	Rp1,158	Rp427	Rp1,353	Rp564	Rp667	Rp359	Rp851
Total Number of Subsidized Units	175,659	130,677	41,717	97,057	39,613	39,979	16,578	77,326

Source: Central Bank of Indonesia and Ministry of Housing

7.2 The New Finance-linked Subsidy Programs

Two types of subsidy programs were introduced in 2004/2005. One program subsidizes the moderate income mortgage borrower and the other provides a serviced plot or housing infrastructure and loan guarantees for commercial micro loans for low-income homeowners. The intention is to disperse these subsidies through any qualifying lender and BTN is no longer the administrator of the new programs. However, the micro-loan guarantee component is still being worked out.

7.2.1 The Mortgage Subsidy Program

The mortgage linked program has two options: an upfront subsidy towards the loan amount or a buy-down on interest payments. Down-payments for both schemes are 15 percent for the top income group and 10 percent for the other groups. The maximum qualifying income level is Rp1.5 million per month which is around the median urban income and, as noted above, a household at this income level will generally not qualify for a mortgage loan without a subsidy. The lowest income group will only qualify for micro-credit for housing.

The buy-down program runs for 4, 6, or 10 years on a 15 year loan depending on the income group. The main issue with the buy-down is that the multiple accrual interest rate regimes are fixed for the duration of the buy-down period and the lender therefore takes the interest rate loss when interest rates go up and reaps the benefit when interest rates go down (although recipients may refinance when the rate differential is negative). This feature is a weakness in the program and is supposed to be phased out when lenders can develop the technology to calculate the interest rate deduction on adjustable rate loans. The constraint of having a maximum buy-down subsidy amount in a variable rate environment, will remain a design challenge.

Table 7.2 New Housing Subsidy Scheme: Income Groups, House Prices, Subsidy Amounts

Income Groups	Max House Price	Max Subs. Amount
Rp1.5mill – 900,00	Rp42 mill	Rp3 mill
Rp900,000 – 500,000	Rp30 mill	Rp4 mill
Rp500,000 – 350,000	Rp17 mill	Rp5 mill (capital grant)

Source: Ministry of Housing 2005

About 70 percent of the new subsidies pledged in 2004 were taken up by BTN, half of which were executed by August 2005. The Regional Banks (BPDs) have pledged most of the others but have not been able to implement them due to lack of funds.

The adjustment of mortgage subsidies away from the funding side of the banks directly to household subsidies has not yet resulted in the participation of a larger number of lenders in the low-income mortgage market, but may do so in future when credit risk management systems are improved. BRI is one such bank. It intends aggressively to move into the mortgage market of below Rp25 million where its only competition would be BTN.

To facilitate greater participation by other banks and avoid the creation of a gap in the mortgage market, *government may consider providing some (smaller) subsidy incentives for housing units priced higher than the current cut off point of Rp42 million and a maximum income level of Rp1.5 million. It would be closer to Rp75 million, which appears to be the lowest mortgage amount provided by mortgage lenders other than BTN. An extension of the program could succeed in attracting more lenders to the lower middle income market.*

While the actual PV costs of the old and new scheme are not much different, the hidden costs of inefficiencies are expected to be less in the new scheme. It will also be much more attractive to banks other than BTN.

7.2.2 Upfront Capital Grants linked to Micro Finance Credit with Government Guarantees

For households with an income below Rp500,000, who do not qualify for a mortgage loan, the government is developing a second subsidy scheme based on the same principles of equity and transparency. It wants to provide qualifying households with an infrastructure grant, i.e. a serviced plot, for a maximum of Rp5 million. The homeowner would be responsible for buying the house (or building it) by taking out micro-finance loans for progressive construction. Government would provide further incentives to current micro lenders to offer short to medium term loans (e.g. 1 to 2 year terms) by sharing the credit risk through credit guarantees. In this way, the government could ensure that the beneficiary householder would have equity in the house, which has proved important in fostering a sense of ownership in other countries. Such guarantees would, in future, be available to new constructions as well as to upgrading existing housing.

Government is negotiating with Askrindo, the state-owned credit guarantee company which specializes in SME loan guarantees, to initiate a guarantee for housing credits. So far, however, no agreement has been reached on the price and coverage of the guarantees.

Askrindo's current guarantee programs are linked to the requirement of government that banks commit to make SME-loans.[31] Askrindo developed an innovative guarantee scheme that penalizes banks with high NPL ratios on guaranteed SME loans by charging a higher rate for the guarantee. This appeared to work well. It has been under pressure though, to price the SME guarantees below the commercial rate and to enter into a guarantee program linked to a government housing subsidy program.

[31] In the past it was required that banks commit 20 percent of their loan portfolio to SME loans, but this criteria has since been abandoned.

As suggested above, government could provide the guarantee in the form of a lump-sum amount for a multiple of monthly payments (say for a maximum of six monthly payments) deposited in an escrow account at the lending institution that lenders could access if borrowers default on payments.

Making mortgage lending accessible to marginal households and assisting people who cannot acquire mortgage loans with a land/core house capital grant directly, is an excellent strategy in solving low-income housing problems which has long plagued Indonesia.

Chapter 8: Conclusions and Recommendations[32]

The mortgage sector was thoroughly disrupted by the financial crisis which hit Indonesia in 1998. It stopped non-subsidized mortgage lending, and it fundamentally altered the structure of the mortgage industry. The dominance of the Government Housing Bank (BTN) was diminished when other banks bought mortgage portfolios from the government agency tasked with buying and then selling assets from closed banks, and non-performing loans from banks that were recapitalized. Banks also began to make new mortgage loans when the macro-economic environment stabilized in 2003 and 2004. This expansionary trend has flattened in recent months because of rising inflation (17 percent by the end of 2005) and government interest rates. This led to an increase in nominal mortgage rates by 2 percent between the end of 2004 and October 2005. NPLs on mortgage portfolios increased and the appetite for mortgage lending and borrowing decreased. This trend has led to long-term investors moving their deposits to short-term holdings and in turn influencing the lender's attitude to expansion of mortgage portfolios because of liquidity concerns. These developments demonstrate the critical importance of macro-economic stability in the development of the housing finance sector.

It is expected that growth in the sector will be revived when macro-economic stability returns in the next year. The liquidity in the banking system is still high and when government rates go down, mortgage credit expansion should become attractive once again. When mortgage rates come down demand is likely to pick up, dependent naturally on adjustments in real incomes. Also, some important changes that were made after the crisis promises to assist the recovery:

1. The banking sector has been strengthened and is better supervised; sustainable deposit insurance has been established, and although not as generous as during the post-crisis year, it continues to stabilize the major funding base of the banking sector.

2. More banks, private and state-owned, have invested in building up the infrastructure for mortgage lending and this is creating a competitive environment; the subsidized liquidity funding to the State Housing Bank, BTN, was phased out and BTN currently holds and originates approximately 25 percent of the total mortgage debt.

3. Improvements have been made to the legal environment for mortgage lending; more homeowners are gaining access to the title deeds of their land, while the foreclosure time has been shortened.

4. There is a new, more efficient and transparent subsidy scheme that qualifies households at the margin of current mortgage lending and is available to all lenders.

5. A Secondary Mortgage Corporation has been established for gaining access to capital market funding, and allowing the gradual move towards fixed mortgage instruments or capped ARMs. This will help improve the credit quality of mortgage portfolios. While rate structures and high liquidity in the banking sector limit its attractiveness as a liquidity provider, it will be able to develop a pilot securitization deal for BTN and iron out legal and administrative issues in the process. It also may be able to attract finance companies into the mortgage sector and open up currently underserved market segments and increase the competition in the mortgage market which is now dominated by the banking sector.

There remain serious gaps in accessing housing finance for two groups:

1. Those who have creditworthiness and can afford a loan but the market cannot help in obtaining a mortgage. The top 30 percent of the income distribution will have no trouble accessing a mortgage loan, especially households with the main breadwinner in formal employment. Credit risk and high transaction costs and fees on loans hinder lenders from moving down-market. The current subsidy programs may extend access to mortgage loans to the 40th percentile of the income distribution (the subsidy program can cover approximately 12.5 percent of demand for new houses with its current scale), but that leaves a large gap of creditworthy households who are unable to obtain a mortgage. Lack of finance to buy more affordable housing in the resale market further weakens upward mobility. Some lenders may fill that gap, but may need some support.

Recommended actions:

i) The Ministry of Housing and MOF/BI have explored ways to tie savings for a home to a subsidized loan that will encourage lender confidence and increase owner equity particularly for borrowers with no fixed income.
ii) Extend (small) upfront subsidies to a level of income closer to the current margin of banks' willingness to lend (for houses of Rp75 million and below). If mortgage insurance is to be developed a subsidy for this group of borrowers at the margin would focus on the payment of the insurance premium to improve both lender confidence and borrower's access to loans.
iii) Focus consumer education programs and consumer support systems on this group specifically.
iv) Allow part of the subsidy programs to be used for existing housing.

2. Lack of special short term, housing finance options for households that do not qualify for a mortgage. Irrespective of the exact numbers of households that can access a regular mortgage loan, with or without a subsidy, at least 40 percent or more than 300,000 of the total number of new households formed annually, do not qualify for loans because of low or irregular income or poor collateral. Several banks and possibly some Finance Companies and micro-lending institutions may target this market. A new subsidy program is being developed that intends to stimulate the expansion of this sector through the provision of guarantees for part of the loan. But, so far, insurance companies are reluctant to buy into the scheme.

Recommended actions:

i) Provide training in housing micro-finance and technical support to cooperatives and other such lenders that are technically weak.
ii) Provide liquidity support to micro-finance providers; this could be conducted by the SMF as it requires similar types of analyses as those for liquidity funding for finance companies and banks.
iii) Explore alternative risk guarantee subsidies of micro-finance for housing in the form of closed escrow accounts for missed payments, which could improve

lender confidence. When micro-lending for housing becomes better known as a separate product, and the risks are better understood, it may be easier to develop credit insurance products.

Other weaknesses in the mortgage system that need to be addressed to encourage its extension down-market:

3. Credit risk remains high, partly because of the lack of credit history, and risk management mechanisms.

Recommended actions:

i) BI facilitates the establishment of a credit bureau.
ii) MOF and SMF take action to establish public/private mortgage insurance.
iii) BI regulates consumer protection and encourages consumer education.
iv) BI and SMF develop borrower education tools.

4. Inadequate housing market information creates inefficiencies. BI has made a beginning in tracking house prices in 14 markets, but more comprehensive information is needed.

Recommended actions:

i) Ministry of Housing and/or the SMF set up an integrated housing data base which includes price and appraisal information, information on building permits issued and housing transactions, and on housing finance, etc.

5. Successful operation of the Secondary Mortgage Corporation (SMF) requires clarification of the tax rules and adjustments to the limit of its lending terms.

Recommended actions:

i) Clarify tax regulations to avoid double taxation on securitization activities.
ii) MOF explore an extension to the three year term limit for liquidity lending by SMF.

6. Finance Companies can play a role in medium term mortgage lending with the availability of liquidity funding from SMF. This could increase competition in the mortgage sector and improve diversification of risk for the FCs.

Recommended actions:

MOF explore lifting the regulations for certain categories of Financial Companies that prevent their expansion into mortgage lending.

Other improvements are required in areas that hinder the flow of affordable (below Rp75 million) properties to the market:

1. The lack of supply of serviced land and tedious procedures in obtaining permits make it unprofitable for developers to use available land for middle and lower-middle income housing.

Recommended actions:

The enforcement of the permit system; measures that will release public land for residential development in suitable locations; improvements in the process and reduction of upfront and hidden costs to gain development and building approval.

2. The lack of construction finance provided by banks (related to poor past performance) causes developers to focus on projects where equity investments, rather than debt, finances construction, and forces contractor built houses to become dependent on owner funding.

Recommended actions:

a. BI develops a circular with guidelines on prudent construction lending.
b. BI explore the establishment of special guarantees to construction lending (e.g. jointly with international development and investment agencies), although such guarantees could be expensive given the poor track record of this type of lending.
c. Explore the establishment of an independent, fee-based housing quality guarantee program for new residential builds to ease the burden on lenders to conduct in-depth technical appraisals for moderate income housing, and to increase confidence in investing in this market segment.

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APPENDIX 1

Table 3.8 Investment Portfolio of Insurance Companies and Pension Funds 2001-2003
(billions of Rp)

	2001		2002		2003	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
Pension funds						
Total Investments	33,622	100.0	39,653	100.0	47,225	100.0
Bank deposits	23,139	68.8	27,521	69.4	26,815	56.8
BI bonds (SBI)	215	0.6	153	0.4	650	1.4
Government bonds	33	0.1	51	0.1	1,957	4.2
Corporate bonds	3,212	9.6	4,738	12.0	9,127	19.3
Shares	1,572	4.7	1,622	4.0	1,892	4.0
Mutual funds	357	1.1	503	1.3	1,702	3.6
Direct placement	2,319	6.9	2,334	5.9	2,351	5.0
Land &Buildings	2,379	7.0	2,363	5.9	1,534	3.2
Other	396	1.2	368	1.0	1,198	2.5
Insurance Co						
Total Investments	52,916	100.0	63,858	100.0	79,679	100.0
Bank deposits	31,013	58.6	37,141	58.2	35,150	44.1
BI bonds (SBI)	1,389	2.6	679	1.1	724	0.9
Bonds	4,748	9.0	9,984	15.6	21,209	26.6
Shares	1,319	2.5	2,796	4.4	4,274	5.4
Mutual Funds	3,817	7.2	1,310	2.1	3,221	4.0
Direct placement	3.870	7.3	4,003	6.3	4,752	6.0
Land &Buildings	1,200	2.3	1,882	2.9	1,981	2.5
Other	5,561	10.5	6,064	9.5	8,368	10.5
Total Insurance Co & Pension funds	**86,538**		**103,511**		**126,904**	

Source: Bank Indonesia and Ministry of Finance, 2005

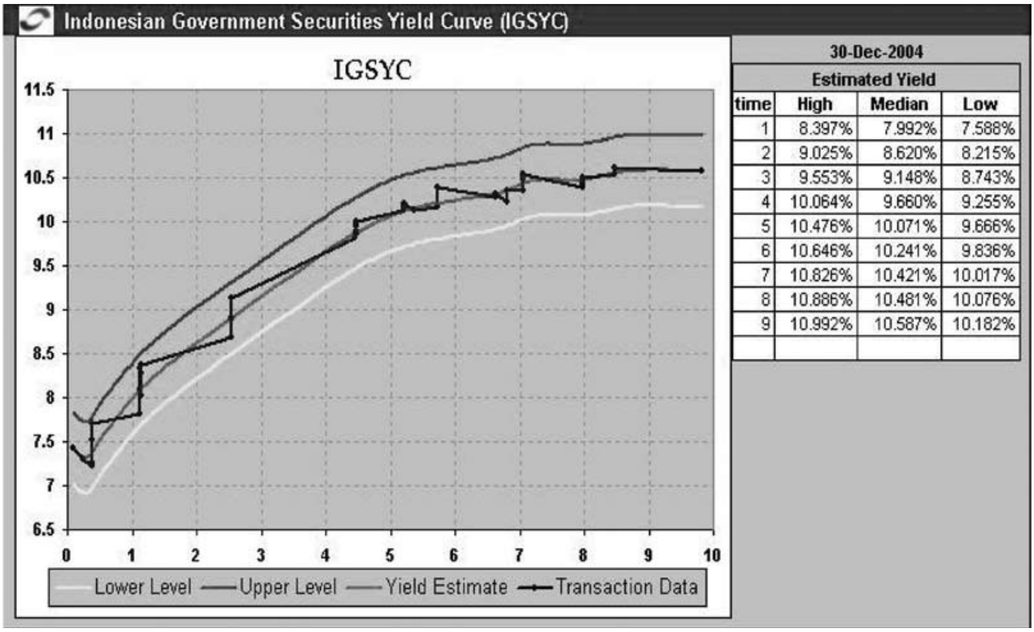
APPENDIX 2

Value of Commercial Developments in Jabotabek and Other Regions, 1999 – 2004 (billions of Rp.)

	m2	Year							
		1999	2000	2001	2002	2003	2004	2005	Total
Shopping Centers/ Jabotabek	3,498,053	1,469.00	2,756.09	4,484.30	9,828.00	15,937.90	21,368.02	19,363.63	75,206.94
Shopping Centers/Region	3,049,634	79.20	181.20	577.90	4,152.30	13,440.37	16,538.99	13,367.96	48,337.92
Office Developments/ National	417,748	499.60	726.70	604.20	106.14	577.43	870.90	1,066.25	4,451.22
Hotel Developments/ National	166,083	-	-	-	59.16	885.32	1,319.64	1,327.70	3,591.82
Shop Housing Developments/ National	-	1,096.00	1,922.00	2,220.00	3,938.00	5,582.50	6,364.05	7,812.15	28,934.70
Apartment Developments/ Jabotabek	3,107,644	271.15	797.95	915.89	1,484.00	4,064.58	7,909.72	11,859.84	27,303.13
Apartment Developments/ Region	131,304	-	-	158.40	249.40	361.82	236.24	311.19	1,317.05
Housing Developments/ National	-	1,993.00	3,495.00	4,037.00	7,129.00	8,708.00	11,571.00	15,078.00	52,011.00
Total Developments per year	-	5,408	9,879	12,998	26,946	49,558	66,179	70,187	241,154

Source: PSPI, January 2005

APPENDIX 3 Capital Markets



Indonesia Government Bond Index
Thursday, December 29, 2005

Bonds	Indices					
	Clean Price	Change	Yield	Change	Total Return	Change
All Government Bonds	91.508	0.177	13.389	-0.042	91.873	0.177
<= TTM < 5	93.994	0.019	13.225	-0.014	91.948	0.018
5 <= TTM < 7	90.653	0.105	13.461	-0.027	92.433	0.107
TTM >= 7	88.897	0.466	13.542	-0.096	91.328	0.478

BondIndex-20051229.csv
Source: Surabaya Stock Exchange website

Bond Market
Statistics Data as of August 2005

	2005		2004		2003		2002		2001	
	IDR	USD	IDR	USD	IDR	USD	IDR	USD	IDR	USD
Listed Issues (series):										
Corporate Bond	264	2	243	2	180	2	111	0	98	0
Government Bond	50	0	48	0	52	0	51	0	25	0
Government Tradeable	50	0	48	0	52	0	51	0	25	0
New Listing:										
Corporate Bond	47	0	81	0	80	2	12	0	15	0
Government Bond	6	0	3	0	3	0	27	0	0	0
Number of listed bond issuer (companies)	106	2	107	2	92	2	55	0	54	0
Trading Volume (IDR in billion, USD in million):										
Corporate Bond	18,010	4	15,776	1	13,511	6	6,092	0	1,115	0
Government Bond	464,432	0	512,989	0	314,059	0	130,787	0	66,222	0
Daily Average :										
Corporate Bond	97	0	65	0	56	0	25	0	5	0
Government Bond	2,510	0	2,129	0	1,292	0	534	0	269	0
Market Capitalization (IDR in billion, USD in million)										
Corporate Bond	59,523	105	58,791	105	45,390	105	21,520	0	18,831	0
Government Bond	406,398	0	399,304	0	390,482	0	397,967	0	64,654	0
Frequency of Reporting										
Corporate Bond	3,858	3	4,569	1	2,701	7	2,077	0	403	0
Government Bond	21,358	0	26,955	0	12,339	0	4,031	0	1,169	0
SSX Bond Index										
High	1,891.737		0.000		1,317.563		768.787		537.531	
Low	1,660.698		0.000		883.401		532.132		437.364	
Close	1,866.382		0.000		1,317.563		768.787		531.175	

Source: Surabaya Stock Exchange website

Reference Prices of Corporate Bonds of Selected Financial Institutions Surabaya Stock Exchange, December 29, 2005

Bond ID	Coupon	Maturity	WAP 7 days	WAP 14 days	WAP 30 days	Bid/Offer	Rating
BRI/500billion fixed rate bond/2004	13,5	9/Jan/2014	1.139	1.139	60.38		idA+
BTN/ 900billion/ fixed rate bond/2003	12.5	2/ Oct/2008	87.293	87.293	86.519	87/87.65	idA-
BTN/ 750billion/ bond/2004	12.2	25/ May/2009	0.975	0.975	55.553	86.5/87.25	idA-
BTN/ 250billion/ bond/2004	12.6	25/ May/2014	50.472	70.196	77.037		idBBB+

Source: Surabaya Stock Exchange website

APPENDIX 4

Homi Study Summary of Main Issues Related to Demand for Low and Moderate Income Housing

Marja Hoek-Smit, 2001

1. Drivers of Demand. The analysis focused on factors influencing the demand for housing, i.e. the decision to buy rather than rent, in particular for first-time home-buyers, and the decision to pay for housing of a certain price and quality and in a specific neighborhood. The main factors that drive demand are:

- new household formation
- income level in relation to house-prices and cost of housing, and income stability
- savings and wealth constraints
- life-cycle factors
- housing preferences
- user cost of home-ownership, in particular financing costs
- housing risk (the variation of house-prices over time, absence of rent risk)
- neighborhood externality risk (variation in neighborhood quality/externalities over time)

2. Housing Requirements. Total population and household growth will be focused in urban areas, while rural areas will be stagnant. The urban growth rate for the next few years is estimate to be 3.5 percent, of which approximately two-thirds will be due to in-migration from rural areas. The overall requirement for new urban housing is estimated at 700,000 to 750,000 units per annum. High urban growth will have major ramifications on local governments' housing strategies. Migrants are less likely to be homeowners and will therefore, decrease the overall housing spend.

Urban growth varies in the different regions. The highest urban growth rate is expected in the least urbanized regions. Housing assistance programs should focus capacity building efforts towards these areas.

3. Household Incomes and Income Stability. The current median monthly household income (50^{th} percentile) in urban areas, including and excluding DKI Jakarta, is Rp.950,000 and Rp.892,000, respectively. The median household income in rural areas is Rp.579,300.

The impact of the 1997 crisis saw a decrease in real wages but not in aggregate employment because many workers transferred to self-employment. Wage cuts have been greater in the urban sector and are concentrated at the bottom of the wage distribution level.

Household incomes showed far less volatility during the crisis than individual wage incomes and overall GDP. Households coped by having household members shift to informal employment and by promoting female labor force participation. It also led to an even higher percentage of self-employed and family workers (a total of 46 percent in urban areas), who gradually were re-absorbed by the labor market. The decline in household income was about half the size of the decline in individual earnings. Nevertheless, the crisis and the decline in household incomes had a major impact on housing demand.

The majority of self-employed and family workers borrow for housing through conventional KPR loans but it is difficult. Also, increased insecurity over future income is likely to have a negative effect on borrowing and could influence tenure choice. At the same time, high labor force participation will negatively affect possible direct self-help involvement by household members.

4. Cost Affordability of Housing. House prices in relation to incomes are modest and housing standards are not the main concern in the affordability of housing. Low to moderate-income homeowners can buy a house for an average price 2 to 4 times their annual salary.

- **Median prices (approximate) for existing housing** in predominantly low-income neighborhoods converged around Rp.18 to 20 million in the 10 city survey. KIP areas, which are generally better located, and are mostly mixed income neighborhoods, had a median house-price of roughly Rp.44 million, with a median yearly income of Rp.10.7 million (HOMI 10 City Survey, 2001).
- **Cost analysis of new construction in non-complying, but legal areas** show that a 21m2, self-constructed house on a 60m2 plot priced in the order of Rp.80,000 to 100,000 per m2 can be built for a minimum of Rp.20 million in main urban areas. Both land and construction prices depend on location and region. Developer built moderate income housing can cost Rp.25 million and above.
- **The lowest cost "housing" solution** is a plot with a core house without infrastructure for Rp.13 to 15 million, depending on location (see Puslitbang 2001 regional construction cost data).
- **Households have a preference for self-built housing** and 50-70 percent of the houses in CBHP, KIP and unimproved slum areas are built in this manner.

Average housing expenditure dropped dramatically to a low of 14 percent as a result of the financial crisis, but it is returning gradually to pre-crisis levels of 25 percent. Homeowners spend approximately 20 percent of their income on housing expenses, including utilities, while renters spend on average 16 percent of their income.

5. Finance Affordability. High interest-rates (20 percent), and high down-payment requirements (LTV of 70 percent) for mortgage lending, severely limits access to housing. Lack of down-payment may be the most important constraint. At the medium income level, urban households outside of Jakarta can afford Rp. 13 million in loans and with 30 percent down-payment they can afford a house of Rp. 18.7 million. If we anticipate interest rates of 15 percent, these same households could afford Rp. 17 million in loans for a total house value of Rp. 24 million.

Lender constraints focus on the high risk of default for low income and non-fixed salaried borrowers. Mainstream lenders typically do not make loans for houses with a value below Rp.40 to 50 million - affordable only to the 75th percentile of the urban income distribution level. Second-tier regional banks - who understand local conditions - make mortgage loans for properties valued as low as Rp.20 million - affordable to the 45th percentile. Liquidity constraints are a problem for some banks. When funds for lending are limited, long-term lending to risky customers with poor collateral is not a priority. Lowering the risk of default and foreclosure and insuring the cost of default could help lenders move down-market and increase access to funds for housing loans.

Un-secured micro-finance for housing with current interest rates of over 30 % is important mostly as a borrowing option of last resort (a Rp.2.4 million loan can be afforded by a household at the 20th percentile earning Rp.511,000 per month). Micro-finance institutions can be assisted in improving efficiency and extending access to housing finance. A housing-for-savings program, coupled with incremental construction or home improvements may be a useful orientation for a housing program for the lowest 40 percent of the urban household income distribution (Rp.750,000). Self-construction is the preferred route by low and moderate income households over the smaller RS/RSS turnkey house types (HOMI survey).

Investment and savings preferences for housing are low relative to savings for reasons of security for the future and education for the children. These findings are an indication that the house is not considered an asset that can be used to borrow against where needed.

6. Housing and Neighborhood Risk. Willingness to invest in housing is related to perceptions of risk in a house's value. Current moderate and low-income housing programs often deliver housing that has a lower value than the cost of construction. In addition, many houses in low-income housing areas do not have Hak Milik titles or formal permits. Resale of these houses is, therefore, more difficult and investment in housing is discouraged.

Much of a house's value is derived from the quality of a neighborhood, i.e. location, infrastructure, services, social integration and security. -Development and building permits take on average a year to obtain for low-income areas. There is no guarantee that services will be delivered, increasing the risks (i.e. the risk that house values are volatile because of unpredictable neighborhood factors).

Lack of access to services (health and education) and infrastructure (safe water, adequate sanitation, access to transport and roads, electricity) are the most critical factors in poverty creation. Housing assistance programs should provide housing that maintains its value. Delivery of property rights and infrastructure by local government should be an integral part of low income housing programs.

7. Consequences for Housing Assistance Programs.

First, housing assistance programs and particularly those that stimulate new developments, need to focus on urban areas, because household growth is expected to take place in cities.

Second, since urban growth will be made up predominantly of migrants, rental housing should be stimulated.

Third, analysis shows two types of constraints on extending demand to low and moderate-income housing:

- **An affordability constraint related principally to the difficulty of accessing housing finance and the high cost of servicing loans**. The housing market is effectively able to deliver housing for Rp.25 million or even Rp.20 million - considered sound collateral for a loan and sound investment for households. Included in the price of a house are costs related to property titles, regulatory approvals, proper location and infrastructure and services. Housing in this category need not incur a mismatch between cost and the value of a house, nor should neighborhood factors impact on house-values. Financial incentives to home-owners to address savings constraints or issues related to volatile income levels, could help stimulate demand and supply of moderate income housing. Equally, helping banks improve risk assessment and improve credit enhancement incentives, could facilitate down-market lending.

- **Housing affordability constraints caused by housing and neighborhood risks**. Real markets for low and moderate income housing below approximately Rp.20 million are "incomplete" and cannot be adequately assessed in terms of cost and risks. Finance cannot, therefore, be easily obtained and investments are risky because housing assets have an uncertain value. Providing financial incentives to homeowners or lenders could increase the investment risk for borrowers and financial institutions or it could simply result in new houses being built by the private sector. For this segment of the market, a more comprehensive approach to housing assistance is needed. A neighborhood-based approach is suggested that would provide direct supply-side assistance, e.g. provide property rights and regulatory clarity, land in adequate locations and social and physical infrastructure. This kind of support would encourage demand for housing. Incentives alone cannot increase housing development, but a neighborhood-based and supply-oriented approach could provide incentives to households and lenders to consider further investments.

Monthly Household Income Distribution Based on Consumption, derived from BPS Susenas, 1999

Percentiles	Rural Household	Urban Household	DKI Jakarta Household	Urban w/o DKI Household
10th percentiles	238,000	355,600	661,900	343,800
20th percentiles	315,100	474,500	846,700	452,000
30th percentiles	372,300	577,600	1,037,800	551,000
40th percentiles	426,600	680,000	1,238,800	644,800
50th percentiles	**486,800**	**797,200**	**1,439,900**	**749,400**
60th percentiles	556,300	952,500	1,711,300	879,300
70th percentiles	640,100	1,183,600	2,022,000	1,071,100
80th percentiles	757,800	1,447,500	2,500,000	1,345,700
90th percentiles	972,200	2,169,700		1,817,900

Source: Hoek-Smit 2001