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STUDY OF FINANCIAL MEANS OF REDUCING RESIDENTIAL PRICES IN INDONESIA

FINAL REPORT

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Finally, we would like to state that the opinions and recommendations contained in this Study are those of the author and PADCO, Inc., and do not necessarily represent the views of USAID or the Government of Indonesia.

ABSTRACT

The purpose of this study is to assist the Government of Indonesia to identify alternative ways to lower housing costs to consumers by financial techniques. Particular emphasis is placed on how these techniques can increase the affordability of housing for low-income families. The scope of work focuses only on the financial engineering aspects of housing, which can be defined as the tools, techniques and mechanisms through which housing is financed for the housing buyer or renter. This study does not cover subjects related to the production of housing, such as building methods and costs, plot and house sizes, housing design, etc. Nor does it encompass certain aspects of housing that would normally be considered part of a financial engineering exercise, such as subsidy programs and costs, and tax related incentives, both of which are used to bring down housing costs to the consumer, since these could not be adequately addressed within the time frame of this study.

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EXECUTIVE SUMMARY

Housing finance in Indonesia is characterized by the existence of two distinct markets: a formal housing market that serves 15 percent of the urban population through credit from established public and private sector financial institutions, and an informal market serving about 85 percent of the urban population, and virtually all rural areas, where housing is built without credits from these formal sector institutions. By most accounts, housing supplied under the formal and informal systems have worked fairly well to date in meeting the demand for housing. But, as the urban areas expand, supply and affordability problems are increasing.

All residential lending programs in Indonesia can be categorized either as subsidized or as market rate (non-subsidized) loan programs. In general, subsidized loans are made principally by the state-owned lender, BTN, while market rate loans are made by a number of private and state lending institutions. The market for subsidized loans are families in the lower to middle income brackets, while all families, in theory, are eligible for market rate loans. In practice, both affordability and access limit market rate loans generally to upper income families. There are also a few home lending programs that are attempting to provide market rate loans to lower-income people, thereby showing that they can afford to borrow at market rates.

The developed countries offer a number of instructive examples of affordable housing programs. One of the trends in those countries is that the role of the private sector in financing affordable is declining, while the role of the private sector is increasing. In large part, this is due to a decline in government revenues to support "social" programs, although to some degree, it is also a general belief in the developed countries that the private sector is more capable and efficient than the public sector in the provision of affordable goods and services. Secondly, all developed countries maintain some sort of subsidy program to assist the lowest-income families who are unable to afford housing accommodations at market rates. Another trait of the developed countries is that mandatory or obligatory programs to generate funds for affordable housing are not used. Instead, various incentives are employed to mobilize lower cost funds that in turn can be channeled to housing for poor people.

The more advanced developing countries offer other examples on how affordability can or cannot be enhanced. Malaysia shows how competition can be utilized to generate more mortgage lending activity, while Thailand demonstrates how government actions can promote affordability. Singapore is the exception that proves that mandatory savings programs can provide the necessary funds for housing. India, on the other hand, proves that low-income families can afford housing at market rates, and that the private sector can provide low-income housing finance. Pakistan is very instructive in demonstrating that government policy can adversely affect the availability and affordability of housing. Finally, two non-Asian countries, Chile and Mexico, are excellent examples on how to use innovative financial instruments to enhance the affordability of housing for lower income families.

The recommendations in this study include expanding and building on the successful Kupedes program which has provided market-rate loans to low income families to improve their housing and to produce rental housing. This includes not only eliminating the obstacles that prevent the BRI from expanding this program, but also encouraging other commercial banks to initiate similar programs. The MENPERA community based housing program, which has demonstrated that affordability in the production of housing can also be enhanced, should be continued and improved so that it can complement the programs that employ financial means to increase affordability.

Building on the use of Adjustable Rate Mortgages that allow Indonesia's commercial banks to make mortgage loans, other types of variable rate mortgages should be tried out as one way to increase affordablity. Given the high rate of savings among Indonesians, more efforts should be made to link savings to lending programs, especially now that the new mandatory housing saving program for civil servants is well underway. Finally, since government resources for housing will continue to fall short of the need, private sector commercial banks will, in the long run, be the largest providers of mortgage finance in Indonesia, through market rate housing loans. The private sector should therefore be encouraged and supported in its efforts to meet this need.

The study recommends a number of steps to be taken. Among these recommendations are the: (1) Institutionalization of the inter-agency group on housing finance for low-income families; (2) Preparation of an assessment of rental housing as one way to increase housing accomodations and enhance affordability for low-income people; (3) An analysis and open discussion of the most effective and equitable way to utilize newly generated resources from the mandatory housing savings program for civil servants; (4) A Seminar on the use of alternative variable rate mortgages to enhance affordability; and (5) A study tour of Thailand to have a look at that country's very successful housing affordability programs.

INTRODUCTION

The purpose of this study is to assist the Government of Indonesia to identify alternative ways to lower housing costs to consumers by financial techniques. Particular emphasis is placed on how these techniques can increase the affordability of housing for low-income families. The scope of work focuses only on the financial engineering aspects of housing, which can be defined as the tools, techniques and mechanisms through which housing is financed for the housing buyer or renter. This study does not cover subjects related to the production of housing, such as building methods and costs, plot and house sizes, housing design, etc. Nor does it encompass certain aspects of housing that would normally be considered part of a financial engineering exercise, such as subsidy programs and costs, and tax related incentives, both of which are used to bring down housing costs to the consumer, since these could not be adequately addressed within the time frame of this study. Annex A is an extract of the Scope of Work.

The focus of this study is essentially urban, since all formal housing programs serve the urban areas only. The study's context is within the framework of the Government policy on housing finance which calls for the creation of a financial system in the housing and settlements sector through which funds will be mobilized by compulsory and voluntary contributions and which will operate within existing market mechanisms. The policy also calls for the use of non-formal financing sources to increase incrementally funds from the formal financial sector for the housing and settlements sector.

It is important to point out that other housing cost components cannot be ignored since they are integral parts of the housing sector. The issue of subsidies is particularly relevant since interest rate subsidies are the principal method through which housing affordability, albeit limited, is enhanced in Indonesia. Therefore, it is strongly suggested that this study be read in conjunction with other relevant and complementary studies. Probably the most important study is the Urban Institute's *The Market for Shelter in Indonesian Cities*, published in 1990, which gives a broad and comprehensive analysis of the country's housing markets. In October, 1993, USAID financed the preparation of *Indonesia: Housing Sector Assessment*, which covered changes in the sector since the earlier study. The List of References in Annex B provides other good sources of information that may be used to supplement the information in the studies noted above.

The timing of this study is propitious. Recent changes in Government policy with respect to its main subsidy program and resource mobilization efforts, along with advances in the banking sector and the upswing of interest in mortgage lending by commercial banks indicate that residential lending is playing a much larger role in Indonesia's economy. Moreover, the World Bank estimates that when the ratio of M2 (a money supply indicator) to Gross National Product, which indicates the degree of depth and sophistication in a nation's financial system, exceeds 0.5, then that country possesses the level of liquidity to enable financial institutions to begin to lengthen the term of their assets and liabilities, and to start to diversify their assets to a considerable degree. Indications are that Indonesia exceeded that ratio three years ago, and in fact, the ratio today is about 1, meaning that financial institutions here are well-positioned to increase their involvement in housing finance.

The principal audience for this study is Government of Indonesia officials, and any and all decision makers in the public and private sector of Indonesia who are interested in improving the nation's housing situation, especially for the poorly housed segments of society. It is expected that this audience will use the information, analyses and suggestions in the study to engender discussion on the issue of housing affordability, which eventually will lead to the development and adoption of innovative policies and programs in this critical sector of the economy. It is also expected that this study will complement the efforts to develop a secondary mortgage facility in Indonesia.

1. Overview of the Housing Finance Sector in Indonesia

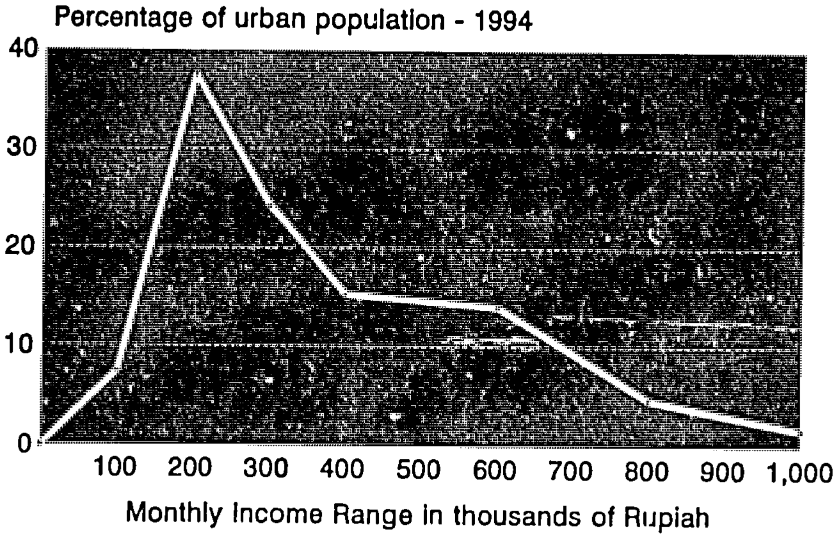
Housing finance in Indonesia is characterized by the existence of two distinct markets: a formal housing market that serves 15 percent of the urban population through mortgage loans from established public and private sector financial institutions, and an informal market serving about 85 percent of the urban population, and virtually all rural areas, where housing is built without loans from these formal sector institutions. By most accounts, housing supplied under the formal and informal systems have worked fairly well to date in meeting the demand for housing. But, as the urban areas expand, supply and affordability problems are increasing.

All residential lending programs in Indonesia can be categorized either as subsidized or as market rate (non-subsidized) loan programs. Loans with an interest rate subsidy are made principally by the state-owned lender, BTN, while market rate loans are made by a number of private and state lending institutions. The market for subsidized loans are families with monthly incomes starting at around Rp.175,000, for a loan at an 8.5 percent interest rate, to as high as Rp. 750,000, for an 11 percent interest rate loan, while all families, in theory, are eligible for market rate loans. In practice, both affordability and access issues limit market rate loans generally to upper income families. There are also a few home lending programs that are attempting to provide market rate loans to lower income people, thereby showing that they can afford to borrow at market rates.

Within the formal sector, housing loans are available through the commercial banking system for selected income groups. For urban families with incomes at the upper 3 to 5 percent of the income scale, long-term market rate loans are available. For families with incomes between Rp. 175,000 and Rp.750,00, long-term (up to 20 years) subsidized loans can be obtained. Finally, for families in the lower income brackets in general, short-term, high market rate loans can be accessed through the BRI program (see below). The table on monthly income distribution for urban families as shown below, indicates clearly that housing credit is available for a relatively few families at the upper reaches of the income scale, although a broad range of families below the 90th percentile range are eligible for subsidized loans. In general, loans are not available for families at the lowest income levels, which covers about 35 percent of the urban population nor are they available for a smaller number of families with incomes between Rp.750,000 and Rp. 1 million, almost another 10 percent of the total. It should also be pointed out that the supply of housing is insufficient to meet the demand regardless of the availability of credit.

Figure 1

PERCENTAGE DISTRIBUTION OF HOUSEHOLD INCOME IN URBAN AREAS



Housing loans through the primary or retail lending market is dominated by the public sector, principally the Bank Tabungan Negara (BTN), a government savings and lending institution that specializes in mortgage lending. In 1993 alone, BTN granted 93,700 loans, most of which were used by families to acquire newly constructed homes, and is a significant increase over the volume of loans in previous years. It is estimated that BTN provides financing for about 80 percent of all the homes built annually throughout the country. The remaining home loans granted through the formal sector were financed by private sector lending institutions, of which the most prominent is Bank Papan Sejahtera. As a newly privatized commercial bank, Bank Papan has decided to continue its specialized role as a housing lender. However, with the continued liberalization of the financial sector, commercial banks have increased significantly their participation in the residential mortgage market, particularly since mid-1993. Finally, building on its very successful Simpedes savings program, the Bank Rakyat Indonesia has operated a lending program to include home improvement and rental housing loans which offers many lessons on how to enhance housing affordability for poor families.

The Government of Indonesia has maintained a housing subsidy program for almost 20 years. The essence of this subsidy program is the availability of loans at below market interest rates, most of which are being made at about one-half the generally accepted market rate although some, at 16 percent, are being made only slightly below the market rate. In 1990, the State Ministry of Housing revised its subsidy programs so that families with incomes lower than those families assisted in previous years would be eligible. The essence of the subsidy program requires that PERUMNAS (the state owned housing development company) and private developers develop and build two basic types of low-income housing, Rumah Sederhana or RS (simple or basic houses) and Rumah Sangat Sederhana or RSS (very simple or basic houses). Purchasers of these houses are eligible for a subsidized loan from BTN and to a lesser degree, from Bank Papan and other commercial banks. The existence of this subsidy program is the principal reason why lower income families from the 35th decile to about the 90th decile have access today to affordable housing from the formal financial sector, although the supply falls short of the demand, particularly for private sector employees. Of the 93,716 loans made by BTN in 1993, 67,244 or about 72 percent were subsidized loans with interest rates between 8.5 and 16 percent.

At the higher end of the income scale are families who can afford to borrow at market rate terms from the commercial banks. As indicated above, these are families living in urban areas whose incomes are in excess of Rp. 1 million monthly. They are able to obtain housing loans at current market rates of 17.5 to about 22 percent, for periods up to 15 years. The commercial banks make variable interest rate loans to cover the interest rate risk, which permits them to make long-term loans. These banks are also beginning to apply various financing techniques to enhance the affordability of their loans, techniques that might also be applicable to lower income housing loans.

The size of bank loans is in keeping with the level of borrower incomes. At one large commercial bank, the average loan is Rp. 80 million, while at another, the average is Rp. 90 million. While the commercial banks are making loans lower then the average, they are in agreement that loans of less than Rp. 10 million are not profitable due to high administrative costs. At Bank Papan, which specializes in home lending, the average loan last year was Rp. 44 million, while at BTN the average market rate loan was only Rp. 25 million that same year. If mortgage lending continues to be a good place for a bank to put its assets, then the competition will increase, and in all likelihood, as the middle income market becomes saturated, the banks will begin to make smaller loans, thus serving middle-income families.

Today commercial banks are increasing consumer lending for housing purposes. In one large privately held commercial bank, the value of all housing loans in mid-1993 was only Rp. 50 billion; by mid-1994 this figure had grown to Rp. 410 billion. In another commercial bank the figures are just as impressive, showing an increase in housing loans from virtually zero in mid-1993 to over Rp. 300 billion in mid-1994. In nearly all of the large banks, housing loans have grown significantly.

It is important to comment here on the Government's plans for the housing sector. Repelita VI envisages the construction and financing of 500,000 units of RS and RSS housing over the next five years, of which 300,000 units would be constructed by PERUMNAS and 200,000 by private sector developers. This is estimated to be about 15 percent of the urban housing requirements over that same period. Assuming that about 350,000 would be RSS units at an average cost of Rp. 4.0 million, and 150,000 RS units at Rp. 8.0 million each, then the financing required would be about Rp. 2,600 billion in 1994 prices. Assuming again an inflation rate of 8 percent per annum, then this figure would increase to Rp. 3,500 billion by the end of the five year period. If the sources of funding for this five year period remain a combination of bank and Government funds[1], then the mortgage lending institutions would have to provide Rp. 1,750 billion in market rate loans, Bank Indonesia would loan another Rp. 1,484 billion at below market rates, and the Ministry of Finance would loan Rp. 266 billion at a zero interest rate.

1.1 The Affordability Issue

Before completing this brief overview of the housing finance sector, it is necessary to define better what "affordability" is and what it is not. Housing "affordability" is best understood as the ability of potential Indonesian borrowers to meet the consumer cost, principally the mortgage payments, of housing suitable for their needs without incurring unbearable hardship which would cause the borrower to default on the loan payment. Based on this financial definition, the cost of acquiring (buying or building) a home is contingent on the financial capacity of the borrower to pay for that home under certain lending conditions, assuming some sort of credit mechanism is used to finance the home. On one side of the equation is the cost of the home itself, plus such major financial factors such as the interest rate and the term (tenor) of a loan, all of which goes into determining the periodic loan payment or cost. On the other side is the income of the borrower, and the percentage of this income that the borrower can dedicate to make the loan payment. Matching those two equations determines affordability.

[1] See section 2.1 of this study for the percentage breakdown by source.

Affordability should not be confused with "access". Housing access refers to the formal rules governing the ability of a borrower to obtain housing regardless of the borrowers ability to afford the housing. For example, in Indonesia, most, if not all, home lending institutions have criteria with respect to the borrowers employment status; that is, whether or not the borrower is salaried or self-employed. Self-employed people clearly have more difficulty in qualifying for a housing loan, regardless of income, and sometimes are rejected for a loan because of a lack of a regular salary. Another access obstacle is the lack of a proper land title for a property on which a borrower might request a housing loan. In both of these instances, it is not the issue of affordability that is inhibiting the borrowers' access to a housing loan, but rather non-affordability issues dealing with access to the bank loan itself. A third access-like obstacle is the regulatory process related to the development and purchase of a home.

In many cases, these types of access criteria are a greater obstacle to the acquisition of a home in Indonesia than the affordability issue itself. Until the access issues are overcome, the affordability of formal credit is will not be achievable either. Thus, overcoming these twin obstacles of affordability and access are critical to the development of a active housing finance market in Indonesia.

2. Current Lending Programs

2.1 Subsidized Loans.

The interest rate on subsidized housing loans results from combining resources from several sources: zero interest rate loans from the Ministry of Finance, 3 and 7 percent loans from Bank Indonesia, and market rate funds provided by the lending institution from which a borrower obtains the mortgage loan. At the present time, the break down of sources are of 7.6 percent of the funds from the Ministry of Finance, 42.4 percent from Bank Indonesia, and the remaining 50 percent from the lending institution. This combination permits the BTN, or in a few cases, the Bank Papan and some other commercial banks, to make mortgage loans at an interest rate of 8.5 percent for RSS houses, and 11.0 percent for RS houses. The term or maturity of these loans is fixed for a period of up to 20 years.

The largest supplier of subsidized loans, the BTN, has three basic lending packages. Package A to acquire RSS housing consists of housing loans of Rp. 4.05 million to Rp. 5.49 million at an interest rate of 8.5 percent, with an borrower income limit of Rp. 250,000 monthly, and RS housing loans of Rp. 7.5 million and 8.5 million at 11 percent, with an income limit of Rp. 750,000; package B to acquire larger RS housing with loans between Rp. 11.69 million and Rp. 27.56 million at 16 percent interest with an income limit of Rp. 1.25 million; and package C for all market rate loans. Down payments range from about 10 percent for the RSS up to 30 percent for other types of loans. The principal beneficiaries of subsidized loans are civil servants, and in fact, about 80 percent of BTN beneficiaries consist of members of that group. Given the terms of a Rp. 4.0 million loan, for example, (8.5 percent, 20 years), the monthly payment would be Rp. 35,000. A beneficiary of this loan would require a monthly income of almost Rp. 200,000 to qualify, assuming he is able to dedicate as much as 20 percent of his monthly income to make the loan repayments[2].

2.2 Unsubsidized Loans.

Market rate or unsubsidized loans are more varied in design, but in nearly all cases, the interest rate on most mortgage loans today range from 17.5 to 22 percent[3]. This interest rate structure is true for unsubsidized loans from the BTN as well as commercial bank loans. Commercial lenders generate their funds principally from demand and savings accounts, time deposits, certificates of deposits and, in a few cases, bond issues, with the principal purchaser of bonds being pension funds and insurance companies. Certificates of deposits may have a maturity of up to two years, although most are for one year, while bonds are generally sold for periods up to five years, although the payment may be adjusted periodically to reflect prevailing interest rates for this type of issue.

All commercial bank market rate loans to homebuyers are adjusted periodically. For example, the Bank Papan is making mortgage loans at an annual interest rate of 17.5 percent for an average term of 10 years, with shorter or longer terms (up to 15 years maximum) depending on the circumstances. Other commercial banks are making loans with interest rates as high as 22 percent, with factors such as the borrower's credit history and the ratio of the loan to the value of the property being the main determinate of the interest rate. All commercial banks utilize an adjustable rate mortgage (ARM) whereby the interest rate on mortgage loans may be adjusted periodically, generally every 6 months but in no case less than the anniversary date of the loan. The basis for adjusting a mortgage loan is to reflect the changes, up or down, in the base lending rate of the lending institution during the adjustment period.

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[2] BTN permits a borrower to apply up to 33 percent of income to housing payments

[3] Actually the interest rate on mortgage loans may be even lower, say 14 percent, as they are bought down by developers as a "teaser" to market the housing development. They may also rise as high as 24 percent, but this is the extreme limit.

The ARM interest rate is not based on some predetermined index as would be stipulated in the mortgage loan agreement. Instead it is based on what the banks call their "Base Lending Rate", which is an internally generated figure that each bank calculates, based on its cost of funds, margins and other factors used in determining its lending rate structure. There is no limit on the percentage amount that the interest rate can be increased (decreased) at the time of adjustment, nor is there a limit on the total percentage increase in the interest rate over the life of the loan.[4] Thus a significant interest rate risk is assumed by the borrower. However, since the interest rate increase will raise the mortgage payment, the risk of loan default rises as the payments rise. It should be pointed out that under the system being used by most commercial banks today, the only change resulting from this adjustable rate lending program is that the monthly payments change. The term of the loan and the balance of the loan never vary from the amortization table.

At least one commercial bank has introduced a graduated payment adjustable rate (GPAM) loan. As applied by this bank, the financial instrument incorporates both the feature of an adjustable loan, as described above, and a graduated payment whereby the monthly loan payment is fixed at a rate below the amortized rate in the first year. While there are many variations of a GPAM, this particular commercial bank has established an instrument where the first year payment is only 75 percent of the monthly payment as calculated under the amortization table. Then each year for the first four years, the monthly payment is increased by 10 percent. At the same time, the interest rate is also adjusted (upward or downward) based on changes in the Bank Lending Rate. Since it is possible for the loan balance to actually increase over the four year period, the loan balance is recalculated at the end of the initial four year period, and for the remainder of the loan period the loan is amortized based on the new loan balance, but using only the adjustable feature of the loan.

The term of the GPAM loan is for only 10 years, meaning that the graduated payment and the adjustable features are applied over the first four years, and only an adjustable loan is in place over the remaining six years. The interest rate is the same as a pure adjustable loan, so therefore the borrower does not receive a lower interest rate as a result of taking out this type of loan, only a smaller loan payment in the initial years. The key attraction of the GPAM loan is <u>affordability</u>. With an initial "discount" in the early years, the loan is more affordable to a prospective home buyer. For example, based on the first year reduction of 25 percent, a borrower would only make, for example, a monthly payment of Rp. 750,000 instead of Rp. 1,000,000 in that first year. Based on that bank's requirement that no more than one-third of a borrower's

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[4] In the U.S. for example, the usual ARM loan contract will stipulate that the annual percentage increase will not exceed 2 percent in any one year, and that the total increase over the life of the loan will not exceed 6 percent.

income can be applied to the monthly loan repayment, then the monthly income requirement for that borrower under the GPAM loan can be decreased from Rp. 3,000,000 to Rp. 2,250,000. Thus a borrower with the lower monthly income can afford to purchase the same house as the borrower with the higher income, if he obtains a GPAM loan.

As expected, there are increased risks in the GPAM which are associated with the increase in affordability. The borrower is assuming that his income will increase by at least 10 percent in each of the first four years to cover the 10 percent increase resulting from the rise in the graduated monthly payment, as well as an additional amount to cover any change resulting from the interest rate adjustment. However, the outstanding loan balance may increase, not decrease as would be expected under a normal amortization schedule. In any case, the bank can expect the possibility of a default if the borrower's income does not keep up with the increase in the monthly payment.

Most commercial banks are not using this or similar types of variable rate mortgage loans with affordability features. In fact, in the commercial bank where it is being used, it is not widespread due to the lack of familiarity among lending officers, and the relative difficulty in explaining it to prospective borrowers. Nevertheless, it is a legitimate financial means to increase the affordability of housing in Indonesia.

2.3. State Ministry of Housing (MENPERA) Programs.

MENPERA's has initiated the Triguna housing program, which is a pilot project to develop affordable housing on a community or group basis for low-income Indonesians. To date, only about 500 units of RS and RSS units have been developed under the Triguna program, but its success so far in lowering housing production costs indicates that it can have an impact on housing affordability. The gist of this program is that groups of families working and borrowing together can increase significantly the affordability of and access to housing. Under this program, a group of low-income borrowers may receive three types of loans, usually in sequence: a land purchase loan, a home construction loan, and an income generating loan, all of which are related to housing. However, once the housing is built, the mortgage loan is made directly to the owner-occupant of each unit.

This program attempts to reduce housing production costs to enhance affordability, so in that sense financial techniques do not play a role in reducing costs. MENPERA asserts that production costs are slashed dramatically, due to the use of self-help techniques and small contractors, coupled with the elimination of large developer costs. Construction and mortgage financing is provided by the BTN through its subsidized lending program, so there is nothing unique about the financing technique.

However, financial techniques can come into play because the cooperative group carries out certain administrative and collection tasks, presumably lowering the servicing cost component of the mortgage loan.

2.4 Civil Servants Housing Savings Program

In January, 1993, the Government of Indonesia established the Badan Pertimbangan Tabungan Perumnas Pegawai Negeri Sivil (BAPERTARUM), the Civil Service Housing Savings Advisory Board. The purpose of this program is to create a new savings program whereby all civil servants are required to make mandatory payroll contributions to a fund, the proceeds of which are used to provide grants for a down payment on the purchase of a home or for the construction of a home if the civil servant already owns a piece of buildable land. These savings deposits are made in the name of the civil servant who makes the savings. No interest is paid on the saving account, so the value of the account only increases at the rate that the deductions are deposited monthly. Only civil servants at levels 1, 2 and 3 are eligible to borrow, although all civil servants, including level 4 civil servants, are required to make contributions. The monthly contributions are fixed at Rp. 3,000 for Level 1, Rp. 5,000 for Level 2, Rp. 7,000 for Level 3, and Rp. 10,000 for Level 4. The maximum grant is Rp. 600,000, 750,000 and 950,000 for Levels 1, 2, and 3 respectively. A civil servant who does not receive a grant is able to receive the entire amount of his savings at retirement.

To date, some Rp. 300 billion has been collected, while at the present rate of collections, Rp. 18 billion is being added each month. Under the present configuration, 60 percent of the funds collected are being set aside to make grants, of which Rp. 2 million have been made so far. The remaining 40 percent collected is available for other housing purposes, however it has not yet been decided exactly how these remaining funds will be used. Apparently, some of these funds have been loaned to construct housing under the RS and RSS programs.

The BAPERTARUM program has the potential of generating huge sums of money for housing purposes. How these funds, particularly the 40 percent not applied to grants, are used is vitally important for the housing sector. One issue which might be raised is the lack of an interest payment feature on the savings deposits. This might not be an issue for civil servants who receive grants, but for civil servants who already own a home and therefore do not have access to a grant, the money received at retirement will have lost a considerable amount of its purchasing power due to inflation.

Conversations are also being held among the Indonesian Ministries of Housing, of Industry and of Manpower to determine if this or a similar program can be applied to the private sector.

2.5. The Kupedes Lending Program.

Bank Rakyat Indonesia (BRI) is a state-owned commercial bank that has developed a specific commercial lending program, the Kupedes Program. This innovative lending program features relatively short-term loans of 2 years on the average with a maximum of three years, at an annual interest rate of 32 percent. One element of this program is housing loans, which as consumer loans are only a small part of its overall lending programs, perhaps no more than 5 percent of total loans. Yet even the relatively small size of this program shows that there is a market for unsubsidized, yet profitable, home lending that reaches relatively low-income families. This remarkable feature alone warrants a separate section in this study.

The Kupedes program initiated operations in rural areas, although some six years ago, it expanded its operations to the urban areas. Only 10 years old, the main thrust of the Kupedes program is to assist the agricultural sector. Through its more than 4,000 units, branches and cash posts, it covers virtually the entire nation, which is one of its chief attractions to rural clients. At the present, its total loan portfolio including housing loans consists of 1,977,000 loans for a total value of Rp. 2,228 billion. Equally impressive is the source of funding for these loans, which is the savings generated within the same branches and offices through the Simpedes program. Today, there are 12,264,000 savings accounts representing Rp. 4,719 billion in savings. In June of 1994 alone, there was a net increase in savings accounts of 155,000, and a net increase in savings of Rp. 149 billion. Thus for each borrower there are more than six savers, and for each rupiah loaned, there are 2.7 rupiahs saved.

Since the inception of this program, losses have been minimal. The long-term loss ratio for the past ten years is 2.78 percent, while for the past 12 months, non-collections are only 1.02 percent of the outstanding loan portfolio. Within the BRI, the Kupedes program, which accounts for about 13 percent of BRI's lending portfolio, is one of the healthiest lending programs, and one that requires little attention from senior management. The 32 percent interest rate, which is required because the small size of the loans necessitates a high interest rate to cover origination and administrative expenses, is adequate to absorb the loan losses.

As mentioned, the home lending component of the Kupedes program is a small, but growing part of BRI's portfolio. Most of these consumer loans are used to improve and expand existing housing. In general, a borrower may take out a loan either to expand or improve his family living accomodations or to build a room for rental purposes. To qualify for a loan, a borrower must either meet the BRI's affordability and access criteria, including showing that he has a salary, or demonstrate that the loan will be used for income generating purposes, normally rental use. Most housing loans are in the Rp. 1 million to Rp. 3 million range, with the average loan being only Rp. 1.76 million, while the average term is 19 months. The monthly payment on a housing loan granted at these terms, with a 32 percent interest rate would be about Rp. 120,000. Information on the incomes of the borrower is not available, but given the monthly payment of the average loan, it is probable that most borrowers would be considered low- or low-middle income families. The housing loans, like all Kupedes loans, are at a fixed rate, and the repayment schedule is tailored to fit the borrower's income stream. The usual borrower is someone who already owns a home, and can show evidence of ownership. Most, if not all, housing borrowers live in urban areas.

The Kupedes Program is instructive to the housing sector for many reasons. First of all, it shows that unsubsidized loans can be structured in such a way that they are affordable for low-income families. Two, it shows that families will take out housing loans at relatively high interest rates (13 percent higher interest rates than commercial bank loans to middle- and upper-income families), if the term is limited and the payment schedule tailored to fit the borrower's income stream. And thirdly, it demonstrates that there is a market for loans to low-income families who want to improvement their homes and to generate income from the development of rental housing.

This last point is particularly critical in that rental housing has been relatively overlooked as one way to increase the supply and condition of housing. To date, the housing industry has focused on promoting the development and construction of owner-occupied housing for sale, while it is arguable that there is a huge market for rental housing for low-income workers and families through the development of programs similar to the Kupedes consumer loan program for rental housing. If this is true, as is likely, that it would prove that unsubsidized loans could be used to increase the housing stock in Indonesia at no cost to government.

2.6. Supervision and Control

At the present time, all banks in Indonesia are either Commercial Banks or Rural Banks, the difference being that the latter has smaller capital requirements and is limited to rural areas. There are no housing finance companies or banks that are specifically chartered to make housing loans. All commercial banks, including BTN and other state owned banks, are supervised by Bank Indonesia, the central bank, which also writes the Prudential Regulations and authorizes the establishment of new banks. All banks are required to adhere to the CAMEL banking standards.[5] No specific regulations apply to commercial banks with respect to residential mortgage lending.

[5] These are the international requirements set by BIS (Bank of International Settlements) that cover the 5 major bank standards of Capital, Assets, Management capacity, Earning and Liquidity

Commercial Banks may opt to specialize in housing lending, as has Bank Papan and BTN, both of which are classified as commercial banks. In most banks, housing loans are considered consumer loans, on par with auto loans, and as such, are part of the consumer lending division. Not one of the banks interviewed for this study has created a separate mortgage lending division.

Since 1991 all commercial banks are required to invest at least 20 percent of their loan portfolio in small companies with assets not exceeding Rp. 650 million (excluding land and building), with a maximum loan of Rp. 250 million per loan per company. Few banks have been able to meet this requirement, and apparently, the sanctions for failure to do so are not onerous. In fact, since most of Bank Papan's housing loans meet this requirement, it has been able to sell some of its almost 100 percent mortgage loan portfolio to banks which need to increase the percentage of small loans in their own portfolios.

3. Affordability in Other Countries

3.1 The U.S. Picture.

Most countries utilize a combination of government subsidies and incentives to try to lower the cost of housing so that lower-income families can attain better and housing. While the U.S. might not be the best example for Indonesia, suffice it to say that the U.S. government has tried a broad range of techniques to lower the cost of housing through financial means. Techniques used (and many continue to be used) include the use of government guaranties (FHA and VA insurance and guaranties) for private sector loans to decrease lending risks as well as reducing the financial cost to borrowers; municipal bonds backed by government guaranties to raise funds from the capital market to build low-income public housing; direct loans from the government at below-market interest rates (the 221(d)(3) program) to developers to construct low-income rental and cooperative housing; government interest rate subsidies which brought a low-income borrower's effective mortgage costs down to a rate as low as 1 percent (235 program); government paying the difference between the amount of rent at market rates for newly built housing and the amount the renter can afford based on income (Section 8 Program); and finally the Voucher Program, whereby the government issues a voucher to a poor person that he/she can use as payment towards the rental of a housing unit.

All these affordability programs, and others not mentioned, have or had flaws, and often they were phased out when the flaws were recognized, which led to the development of yet another subsidy program. One might say that the 221(d)(3) program was a 1950s program, to be replaced in the 1960s by the 235 program, which in turn was replaced in the 1970s by the Section 8 program, then the Voucher

Program in the 1980s. Some programs continue, including the FHA and VA guaranty programs, which are successful at enhancing affordability at no overall cost to government. The public housing programs, with all their shortcomings, continue, although some Public Housing Authorities have introduced innovative ways to make these housing developments more viable places for poor people to live.

Nevertheless, while these housing programs have increased the opportunities of poor people to afford decent housing, the overall financial costs to the U.S. Government are enormous, while the social costs are almost unbearable in many cities. The Voucher program, which is being used today, it is heavily criticized in many circles because it does not lead to an absolute increase in the low-income housing stock. Thus the present U.S. Administration may soon replace it with another affordability program. However - and this is a very important however - this U.S. Administration, after almost two years in office, has not yet devised a new program, which may be because the U.S. Government, like governments worldwide, suffers from budget constraints. Clearly, it is having difficulty developing new programs in housing and related areas that require large government subsidies.

This shortage of government funding is one of the main reasons why the U.S. private sector is so heavily involved in the development of affordable housing programs. Some of the most innovative programs for achieving affordability have emanated from home lending institutions in combination with quasi-government agencies, such as Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Gennie Mae), that provide liquidity to the housing market. Historically, the Fixed Rate Mortgage (FRM) was the only financial instrument available in the mortgage market. During the 1970s, a combination of dampened economic growth, higher rates of inflation, and increases in inflationary expectations served both to increase the rates of FRMs and to encourage the development of alternative mortgage instruments. In fact, by early 1981, the interest rate on a newly granted FRM reached as high as 18 percent, about the same as the current interest rate on long-term adjustable mortgages in Indonesia. At that rate, few people in the U.S. could afford a mortgage loan, as housing construction and sales plummeted.

This led to the introduction and increased use of variable rate mortgages (VRM) to complement the use of FRMs. Today, a wide variety of VRMs are used in the U.S. from fairly simple Adjustable Rate Mortgages, which is the most common, to Graduated Payment Mortgages, Growing Equity Mortgages, Price Level Adjusted Mortgages, and so on. Annex D gives a brief description of the most common VRMs, along with the advantages and disadvantages of each. As a general rule, VRMs increase the affordability of mortgage loans and decrease one or more of the lending risks. They may also increase the risk to the borrower and lead to an increase in defaults. Regardless, the use of variable mortgage loans in the U.S. has expanded the affordability of housing.

3.2 Affordability in Developed Countries.

While the U.S. has been very innovative in the housing finance sector in recent years, other developed countries, principally European countries, were much more creative in earlier years. The U.K. and Canada, among other countries, developed variable rate mortgages years before the U.S., showing early that these kinds of financial techniques increase affordability. In fact, it appears to have been in the U.K. where the concept of pooling collective savings in one institution to on-lend for housing was first conceived, thus linking low-rate saving to low-rate loans to enhance affordability. Germany and France led the way in creating contract saving schemes which helped to guarantee that there would be a supply of funds to meet the demand for housing, which essentially eliminated the demand for outside sources of potentially more expensive capital. On the other hand, Denmark showed that through the effective use of the capital markets, fixed rate mortgages could still be feasible and affordable.[6]

The road to affordability in European countries has been varied. The U.K. relied heavily on subsized public housing (council flats) as the best means of assuring lower-income families access to affordable housing. However, in the 1980s, government policy used large price discounts to encourage the tenants of the council flats to purchase their rental accommodations. This resulted in an increase in of home purchases, in fact, home ownership in the U.K. increased by 12 percent in 1980s. Council flats for rent at low rates are still built today, but at a much lower rate than previously. There are a few other subsidy programs in the U.K. but in general, they are insignificant in numbers to enhance overall affordability. Instead lending institutions in the U.K. continue to rely on what is called a renewable rate mortgage loan, which is adjusted periodically by the lender, based on the cost of funds. The renewable rate loans are generally accompanied by an endowment mortgage which is an interest-only bullet loan. At closing, the borrower takes out a life insurance policy, which, at maturity, repays the principal balance on the loan. This lowers the borrower's mortgage interest rate, making the loan more affordable. The overall thrust in the U.K. mortgage market is to rely on competition to enhance affordability, through the application of less regulation to the housing finance sector, but tighter supervision.

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[6] For detailed information on housing finance in Denmark, France, Germany and the U.K. (as well as the U.S.) see Diamond and Lea, Housing Finance in Developing Countries, 1992.

France has one of the largest subsidy programs in Europe, although since 1984, subsidized loans as a means of affordability has declined significantly. For example, the major subsidized lending program, the Assisted Loan for Homeownership or PAP in French, for lower-income families, has fallen from 26 percent of all new loans in 1984 to 5 percent by 1990. Instead, the major contribution to affordability in France are the CEL and PEL contract savings plans. Under these plans, savers receive a below-market rate return on their savings, plus a state-funded premium, but in turn these same borrowers are eligible to receive a below-market mortgage loan. Loans are seldom large enough to purchase a new home, however, they are excellent for use as a down payment on a new home or to improve or expand an existing home. A key advantage of these programs is that the mortgage interest rate is fixed over the life of the loan. Thus, a saver receives a smaller return on saving than would be normal (although the government premium softens this blow somewhat), but is able to afford a larger housing loan at a fixed interest rate. Apparently, the trade-off works since the French continue to save and borrow from the CEL and PEL programs.

In general, this very limited description of a few programs in the developed countries indicates several clear trends. One is that the role of the private sector is declining, while the role of the private sector is increasing. In large part, this is due to a decline in government revenues to support "social" programs, although to some degree, it is also a general belief in the developed countries that the private sector is more capable and efficient than the public sector in the provision of affordable goods and services. On the other hand, all developed countries maintain some sort of subsidy program to assist those families at the lowest income brackets, whose incomes are inadequate to afford housing accommodations at market rates. Another trait in the developing countries is that mandatory or obligatory savings programs to generate funds for affordable housing are not used. Instead, various incentives are employed to mobilize lower-cost funds that in turn can be channeled to housing for poor people.

In reviewing the developed country experiences, it should be kept in mind that the income levels and overall number of poor people in those countries are much different than in many developing countries, including the more growth oriented countries like Indonesia. While their experiences are valuable, they should be viewed within a developing country context--instructive but not necessarily applicable.

3.3 Developing Countries.

Some of the best examples of affordability are found in the more advanced developing countries, many of which are in Asia. In each of the country examples discussed below, one aspect of the affordability issue is taken as an example from which Indonesia might profit.

- **Malaysia: Competition is Good for Affordability.** With one exception, Malaysia has relied on the free market to assure the availability of housing finance, but not necessarily the affordability of housing. The exception is the Treasury Loan Program (TLP), which provides subsidized loans to civil servants. As a result, only about 22 percent of all lending is subsidized, i.e. below market rate loans, and only government employees are eligible. Thus, all non-government employees who desire access to formal housing - and the formal sector accounts for over 50 percent of all new homes - must obtain market rate loans from the commercial banks, the finance companies, or even the old-line building societies. In addition to the impressive growth of Malaysian economy, which has led to an increase in the purchasing power of most Malaysians, competition among the lending institutions for the remaining 78 percent of the loans has been the major contributing factor to the availability of affordable loans. And, as is being seen in Indonesia recently as well, mortgage lending is not only profitable, but it is the most secure type of bank lending program, a fact that has also led to more competition - and lower interest rates - among Malaysian banks for these types of loans.

- **Thailand: Government Action Can Enhance Affordability.** One of the most striking examples of a government agency using its authority to promote affordability is in Thailand. The Government Housing Bank (GHB), a specialized housing bank in Thailand, has been an innovator both in the mobilization of funds for housing and in the design of mortgage instruments. In general the GHB has acted as an entrepreneurial institution, but with social responsibility. In the mid-80s, by offering to refinance (at lower interest rates) outstanding mortgages of commercial banks, the GHB began to emerge as a strong competitor to commercial banks, who responded in turn by increasing significantly their lending for mortgages in the following years. The GHB has also demonstrated the feasibility of lending profitably to a clientele of comparatively modest incomes, a clientele which has, in turn, been profitably sought out by commercial banks for their own mortgage loans. All of these GHB-led actions have led to an increase in the ability of all Thais to afford decent housing. And it should be noted once again that the GHB does all these things and still makes a profit.

- **Singapore: Government Mandates Can Work.** While the Thailand Government uses its authority to promote housing affordability, Singapore uses its authority to mandate housing affordability, a significant difference. In 1955, the Singapore Government created the Central Provident Fund, to provide financial security for workers in their retirement or unable to work. Under this Fund both the employer and employee make mandatory contributions to the employee's (and now the self-employed) account. Both private and public sector employees are covered. Prior to retirement or disability, the savings, which accrue interest, can be used for a variety of purposes, including housing purposes. Under the housing rubric, the savings can be used to buy Government-built apartments or private residential properties. As a result of this program, Singaporeans are one of the best-housed people in the world. While this program has been very successful, it should be pointed out that it has not been so successful in other countries where it was tried.

- **India: Low-income Families Can Afford Housing.** In a country where per capita incomes are lower than Indonesian incomes, where foreclosure is a virtual impossibility, and where the Government was suspicious of the private sector, one institution, the Housing Development Finance Company of India (HDFC), almost single-handedly created the mortgage market. The HDFC accomplished this feat by focusing its mortgage lending programs on families with incomes around and below the median income. To the HDFC, affordability was not really a daunting issue. It simply structured its loans to fit the ability of the borrower to repay the loans. Granted that some of its early resources were derived from external sources whose interest rates were somewhat below prevailing rates, the HDFC has been able to continue its lending program to the present day, using domestically generated funds. While competitors are springing up who also recognize now the market for lending to lower-income families, the HDFC continues to offer innovative mortgage lending programs, using funding raised through innovative means. One of the keys to HDFC success is that it is an entrepreneurial institution, and has worked well with private sector developers. Yet it still directs its loans to a core clientele, lower-income families.

- **Pakistan: Government Action Hurts Affordability.** The housing situation in Pakistan continues to worsen. Urban slums, called Kaachi Abadis, proliferate, and there is little prospect that this phenomenon will improve. The principal reason for this situation was the overwhelming dominance of one state owned institution, the House Building Finance Corporation (HBFC), that provided low-cost loans to favored clients, using low-cost resources provided by the State Bank of Pakistan (the Central Bank). Commercial banks and other financial institutions were not permitted to offer housing loans, so the only housing related loans were basically short-term consumer loans made for housing purposes. Since there was no mortgage market, access to the formal financial sector, that is, the HBFC, was sorely limited.

Therefore, affordability did not really count; if one had access to the HBFC, one was able to obtain a loan. Today the government has realized that by permitting one institution to provide a few loans, the bulk of the population was cut off, regardless of ability to pay. Finally in June of 1994, the State Bank stopped making loans to the HBFC. Efforts are also being made today to promote the nascent housing finance companies to fill the void for housing lending at market rates. But given past history, it will be a long time before the average Pakistani, much less lower-income families, will be able to obtain affordable loans.

- **Chile: Innovative Financial Techniques Really Work.** One of the most successful developing countries, Chile has been in the forefront of innovative financial programs to enhance the affordability of housing. The essence of its "housing subsidy" program is the marriage of the borrower/saver, the national government and the private sector. It presupposes that low-income families need housing, that they have the ability to contribute towards that end, and that the State and the Private Sector can facilitate housing affordability. Under this program, when a qualified low-income borrower has demonstrated that he/she can save regularly for housing purposes in a participating lending institution, then the State will match that savings at some proportionate rate, i.e. a subsidy payment, to help purchase a home. The subsidy or matching contribution will be in the form of a voucher that the homebuyer can use to lower the purchase price of the housing unit. At closing, the homebuyer will then utilize the savings to make the down payment, and the voucher to pay part of the purchase cost to the builder/seller. With these advantages, the homebuyer can then afford to take out a mortgage loan from his participating bank to finance the remainder of the purchase price. The one-time subsidy from the Government, which is an incentive for the saver to save in the formal banking system, is made directly to the beneficiary. This type of subsidy is generally considered the most effective, efficient and equitable way to subsidize housing as a way to achieve affordability.[7]

- **Mexico: DIMs Enhance Affordability.** Another awakening giant across the Pacific, Mexico has successfully used an innovative type of variable rate mortgage called the Dual Index Mortgage (DIM) to enhance affordability. As its name implies, it uses indexes to make two adjustments to the mortgage loan during the payment period. One adjustment is to the monthly payment and is based on a family income index to maintain the affordability of the loan. The other adjustment is to the nominal balance of the loan and is based on an inflation related index to protect the real value of the lender's loan. The use of two indexed adjustments helps solve the common problem in adjustable loans whereby the new mortgage payment after the adjustment is no longer affordable to the borrower. As applied in Mexico, the DIM both increases affordability and reduces the lenders risks. Government and private lenders in Mexico have used this financial technique successfully to lower housing costs for lower income Mexicans.

4. Possible Changes in Indonesian Practices.

Over time, the growth of the Indonesian economy and the incomes of all Indonesians will narrow the gap between the cost of housing and the ability of families to afford decent housing. This has occurred in many of Indonesia's closest neighbors, including Singapore and Thailand, whose high economic growth rates began much earlier. Given

[7] See V. Dominquez Vial, El Sistema Financiero Habitacional en Chile, 1993.

Indonesia's present growth rates and policies, there is good reason to believe that the country will achieve much the same. In short, prosperity with equality is the best long-term solution to the nation's housing affordability problem.

A second answer to the affordability problem would be for market interest rates to decline. If there was a 1 percent decline in the interest rate from a rate of about 18 percent, then the affordability rate for housing would increase by about 5.5 percent. With each 1 percent decline thereafter, the affordability rate increases at ever higher rates. But given the present rate of inflation, coupled with the open capital market policy of the Indonesian Government, among other factors, interest rates cannot be expected to fall from the present level anytime soon. No economist, not even the most astute seer, can predict future interest rates. But again, as the Indonesian economy grows, matures and deepens, interest rates will begin to fall into line with the rates in neighboring countries. For both of these solutions, it is just a question of time.

In the meanwhile, millions of Indonesians need to improve their housing and living conditions, yet the twin issues of affordability and access are pricing them out of the housing market. Since they cannot be expected to wait - nor should they wait - something must be done to improve the affordability of housing. Below is a list of a few of the possible solutions for the Government of Indonesia to consider. They address the affordability as well as the access issue.

4.1. Expand and Build on the Kupedes Program.

One of the most interesting and innovative lending programs in Indonesia is the BRI's Kupedes Program. As explained in Section 2, this program provides small loans to lower income families at market rates, using as the financial resources the savings made by those borrowers and their neighbors. All loans are based on what the borrower can afford, thus affordability is the key to the program's success even though at an interest rate of 32 percent, some skeptics still wonder how the program can continue to draw in borrowers.

The housing loan component is a small but growing part of this larger program. Housing borrowers consist of homeowners who wish to expand or improve their living quarters or who want to generate additional income by building rental accommodations. Usually these rental accommodations will comprise a room added to the house or elsewhere on the owners plot. Given the short term of the housing loan, the room is fully paid for in about one and one-half years, at which time the owner has a stream of income from the rents. The owner then has the option of building more rental rooms - assuming adequate space on the plot - or simply using the rents from the first rental to supplement his income. Nothing could be simpler.

One of the surprising revelations of the Kupedes home lending program is that the collection rate for rental housing loans is higher than the rate for home improvement loans. Moreover, rental housing loans are in virtually all instances made to non-salaried persons, whereas, the homeowner loans are made to salaried borrowers. The obvious conclusion here is that rental housing loans made to non-salaried borrowers are safer loan than owner-occupant loans to salaried borrowers, just the reverse of conventional thinking.

The single largest problem inhibiting the expansion of this very successful program is the issue of land titles. With good reason, the BRI is hesitant to lend to potential borrowers who cannot show that they own the land on which the home loan is being made. According to the BRI, it constantly has to reject loan requests from applicants who are unable to show land ownership or the equivalent security. Since the amount of savings with BRI far exceeds the amount borrowed, the BRI has the resources to grow the program significantly. Moreover, the BRI home lending component generally operates in the urban areas, where the need for formal housing finance is greatest. Therefore, the Government of Indonesia could make a major impact on the housing sector by resolving the issue of land titles.

It should be pointed out once again that the problem to be solved here is one of access not affordability. The BRI Kupedes Program is the only major housing loan program in Indonesia that has proved that unsubsidized housing, both in its production and the consumption aspects, is affordable for low-income families.

4.2 Promote the Expansion of Affordable Low-income Housing Programs.

One of the truisms of a market based economy is that if one business is making money in a particular economic activity, other businesses are sure to copy that same activity, and sooner rather than later. This is the case with respect to home lending in Indonesia. Two phenomena are occurring. One is that most commercial banks have begun to recognize the potential of consumer based retail lending. More than one commercial bank has stated flatly that the thrust of his bank today and in the future is consumer lending. Since home lending is generally recognized as one of the safest types of consumer lending due to the collateral of the property against which the loan is being made, it is clear that mortgage lending will continue to grow. Obviously, all the commercial banks are hearing the same message: home lending is the best place to put the bank's assets.

The second phenomenon is that the Kupedes experience has not gone unrecognized by the commercial banks. BRI reports that commercial banks are opening branch offices almost next door to its most successful branches. This was confirmed by an officer of a commercial bank who stated that his bank was opening new offices in areas adjacent to BRI offices. To date, BRI does not appear to be concerned about this new competition, indicating that these newcomers do not really understand this market. But, this attitude is not likely to continue. Bankers, if anything, know how to make adjustments if it means making money, and if they do not understand this market now, one or more of them soon will.

What are the prospects of lowering financial costs to enhance the affordability of housing? It is probable that increased competition within the free market commercial banking industry, coupled with emulation of the successful Kupedes program, will enhance affordability by increasing the number and the type of housing programs for lower-income families. As the present market for commercial bank housing loans is saturated, these banks will probably begin to target families with incomes slightly lower than their current market. This is not to say that the very lowest income families will benefit from these activities, but rather that more people in general will have access to formal sector financing, presumably families whose incomes fall between the subsidized lending by government and the unsubsidized or market programs in the private sector.

Is there anything the Indonesian Government can or should do in this area? The answer is yes and no. The Government should use its influence to promote the increased development of low-income housing programs. This should not be done by any kind of new mandatory or obligatory credit programs, nor by the Government trying to emulate the Kupedes lending program. The Government should not require the BTN to develop a Kupedes-like program using subsidized funds since this would prevent any possibility of the commercial banks developing similar programs.

Instead the Government should disseminate information to the commercial banking sector about the Kupedes program and how it works. This would show that it is possible to provide rental housing loans as one way to increase the housing stock and thereby enhance affordability, by pointing out the safety of these types of loans. The Government should do its best to encourage other commercial banks to develop Kupedes-like programs. The Government should also promote the concept of a partnership with the private sector to encourage greater participation of dynamic Indonesian businesses and financial institutions in the housing sector..

4.3 Continue Experimenting with MENPERA Promoted Group Housing Programs.

The experimental TRIGURA program affects housing affordability principally in that it reduces the production costs of housing. For that reason alone, and assuming that it continues to demonstrate real cost savings, MENPERA should continue the development of this and similar kinds of programs. In addition, MENPERA should monitor any other programs being developed in the country so as to provide vital information on the successes (or failures) of the techniques being used to enhance affordability.

4.4 Utilize New Financial Instruments.

Indonesia's commercial banks are already utilizing Adjustable Rate Mortgages to cover the lending risks associated with changes in their cost of funds. However since there are no long-term fixed rate loans being made today in Indonesia, it is not clear to what degree these ARMs are less expensive than an unknown fixed rate loan. In other countries where ARMs are used, an ARM is several interest points lower than an FRM. As mentioned previously, the only fixed rate loans for housing are the Kupedes loans, but they are considered short-term since they do not exceed 3 years, although presumably a part of the 32 percent interest rate is factored in to cover any possible increase in the BRI's cost of funds. Therefore it is impossible to calculate the increase in affordability to be derived by use of ARMs verses the use of FRMs. But it is quite likely that if market rate 15 year FRMs were made today in Indonesia, the interest rate would be at least several percentage points over the adjustable rate loans that commercial banks commonly use.

One the other hand, the Graduated Payment-Adjustable Mortgage (GPAM) is a truly affordability enhancing mortgage. The formula used by one Commercial Bank, as explained in Section 2 of this study, increases significantly the affordability of housing, albeit for the upper income group. Using the example in that section, a borrower with a monthly income of Rp. 2,250,000 borrowing under the ARM loan program would only be able to qualify for a loan of Rp. 46.5 million. However if that same borrower, whose income is still Rp. 2,250,000 monthly, uses a GPAM loan, he would be able to afford a loan of Rp. 62.1 million. This is evidence that one type of variable rate mortgage can lead to an increase in housing affordability in Indonesia.

Experience to date shows the GPAM loans and possibly other types of variable rate mortgages can work in Indonesia. All commercial banks are using ARMs, and with at least one having experience in another type of VRM, it is entirely conceivable that commercial banks could employ other types of VRMs.

4.5 Link Savings to Home Lending.

Mandatory savings mobilization programs as one way of obtaining below market rate funds to channel into the housing market can be effective, as has been shown in Singapore. On the other hand, these kinds of mandatory saving programs can be disastrous if not properly designed and managed. The Government of Indonesia's BAPERTARUM program is now generating large amounts of funds, with the possibility that a similar program may spread to private sector employees. How the 40 percent of the BAPERTARUM program not targeted for grants is to be used is a critical issue for the housing sector. One suggestion might be to link these funds to a savings program so as to generate even more housing funds, and to incorporate an interest rate so that the money does not lose all of its purchasing power. Another might be to give priority to people who have complementary savings accounts with lending institutions providing long-term mortgage financing so they can obtain loans to cover the remaining financial needs. Clearly, the ability of the Indonesian people to save at high rates ought to be an increasing factor in the development of the housing finance system.

4.6 Commercial Bank Lending for Housing: Keep It Up.

It is clear from this study that the emphasis is on the private sector being the best vehicle to enhance affordability . This is true because worldwide experience, including the experiences of those countries discussed in this paper, has shown that government resources for housing are limited. Furthermore, this is true even as countries like Indonesia are experiencing very high rates of economic growth, and more and more Indonesians every day are moving into the middle class ranks, with increasing capacity to pay more for the necessities of life, including housing. Therefore, it is not because of any particular love for the private sector that this course of action is suggested, but rather a recognition that the Government of Indonesia does not and will not have the necessary resources to subsidize more than a small amount of the required housing.

The increasing emphasis of the Government of Indonesia in trying to reach the lowest income groups with afforable housing is laudable. It is arguable whether the subsidy program in force today in Indonesia is the most effective and efficient way to use these funds, nevertheless, Indonesia's program is in the right direction. A major concern, however, is whether Bank Indonesia will be able to continue indefinitely providing below-market interest rate loans. If it has to reduce or eliminate these funds, the impact on the BTN would be very damaging since about 40 percent of BTN's annual lending volume consists of subsidized loans.

5. Benefits to the Poor

As the study indicates, there are three major financial programs in force in Indonesia that enhance the affordability of housing for poor people:

- the housing subsidy program which provides for loans at below market interest rate terms for purchasers of RS and RSS housing, and is a purely financial technique; and,

- the housing loan component of the BRI's Kupedes program which provides short-term loans at market rates for low-income families. This program does not so much as lower the cost of housing but rather it provides access to housing loans for low-income people who otherwise would probably not be able to obtain credit at affordable terms.

- the BAPERTARUM program that uses mandatory savings from civil servants to provide grants for down payments and home construction to benefit the same civil servants. As a grant program for civil servants, it differs significantly from the two lending programs listed above.

To the extent that these three programs grow, more people will gain access to affordable housing. This study does not recommend that the interest rate subsidy program be increased or decreased, because the scope of work for this assignment precludes any analysis of this topic. However, given the consensus as to the state of the GOI's financial condition and policy, it is highly unlikely that this subsidy program will be expanded in the near future.

On the other hand, it is recommended not only that the BRI expand its Kupedes Program for housing loans (assuming progress in made in resolving the land title problem), but that the Government actively promote and encourage other financial institutions to undertake similar lending programs. It is not possible to calculate or even estimate to what extent these types of programs could be expanded, except to say that the horizons are almost limitless. But if there is one program on which the Government of Indonesia and the private sector should focus to help poor people, it would be the Kupedes and Kupedes-like programs. Expansion of this program would also provide more rental accomodations, which would increase the stock of affordable housing for lower income people.

The exact use of the 40 percent of the housing savings in the BAPERTARUM program that is not targeted for grants is still being considered.

The potential for using these funds to benefit poor families whose incomes are too low to qualify for subsidized housing loans is appealing. How this could be done should be the basis of further analysis and discussion.

As mentioned, the Government should continue to experiment with the development of community based housing programs, although the main cost saving element of this type of program is the savings related in the production of housing, not in the consumption end where financial techniques come into play.

Finally, if variable rate mortgages, such as a Graduated Payment-Adjustable Mortgage, begin to flourish in Indonesia, then consideration should be given to applying this and other financial techniques to ever lower income mortgages, even those subsidized mortgages being provided through the BTN and other lenders. In this way, housing for lower income families will become more affordable. If the Government is able to apply these techniques to subsidized loans, then the amount of funds available for subsidized housing programs can be stretched out and more loans granted than would otherwise have been granted.

6. Next Steps

6.1. Institutionalization of the Housing Review Group. The August 1994 meeting of an inter-agency group of both public and private sector representatives to discuss the issue of housing finance for low-income Indonesians was an excellent way to focus more attention on this critical problem and in bringing together the principal players in the housing sector. It is through this kind of meeting that the Indonesians will make significant progress in arriving at answers to resolve the housing problem. Therefore this type of dialogue should be continued in a more formal and consistent format.

6.2 Preparation of a Rental Housing Assessment. The prospects for using rental accomodations to increase the stock and affordability of housing for lower income Indonesians should be better understood. Therefore an assessment of the demand and supply of rental accomodations in the urban areas should be carried out as soon as possible. This study would encompass a review of the problems and issues in expanding the supply, the sources of financing, costs, the target groups, etc. It is expected that the results of this study will determine the feasibility of expanding the production of this type of accommodation, as well as the best ways to accomplish this goal.

6.3 Alternative Use Study of the BAPENTARUM Funds. The assumption here is that a definitive use of the 40 percent of the funds not allocated for grants, has not been made. If true, then a thorough analysis of how these remaining funds can be used to enhance the provision of affordable housing would be useful. Issues such as linking these funds to savings, the decline of purchasing power of the fund, and the provision of assistance to the lowest income groups would be legitimate areas to explore and discuss.

6.4 Seminar on Alternative Mortgage Instruments. Given the need for Variable Rate Mortgages to enable the commercial banks to provide mortgage loans, and the possibility of using other types of VRMs to complement the Adjustable Rate Mortgages now being granted, it would be useful to provide the commercial banks with additional information on VRMs. One way to provide this information would be by offering a short seminar on this subject to interested bankers, possibly through or in cooperation with the Indonesian Bankers Institute.

6.5 Study Tour of the Thailand Housing Market. Thailand has probably been the most successful of the Southeast Asian countries in demonstrating how cooperation between the public and private sectors has led to an increase in affordable housing. Therefore, it would be useful to carry out a study tour of Thailand's housing market. Participants would be those government and private sector officials who have demonstrated a particular interest in addressing this problem. Certainly, the members of the Inter-agency Group discussed above would be prime candidates for participating in this Study Tour.

ANNEX A

STATEMENT OF WORK

FINANCIAL MEANS OF REDUCING RESIDENTIAL PRICES

BACKGROUND

The ratio of the cost of urban housing to incomes in Indonesia is believed to be significantly above the average for middle income countries, and above a level that has been shown to be achievable elsewhere (e.g. Thailand). This implies that it should be possible to make a significant reduction in the price of housing.

The Government of Indonesia has recently taken a number of steps to improve the financing and production of housing by the private sector (including relaxing requirements which inhibited commercial banks from mortgage lending; reducing the level and extent of subsidy provided by the national housing bank, BTN; and initiating a review of option for establishing a secondary mortgage facility). However, although most of these and other developments will probably increase mortgage lending, their impact on the cost of housing and housing finance may be relatively small.

The purpose of this study, therefore, is to identify alternative ways in which the GOI or other agencies could lower housing costs to consumers by use of financial techniques, with a particular emphasis on reducing the price of housing finance to the poor.

Tools that are likely to be suggested will probably include, but not be limited to, the following :

- alternative mortgage instruments
- more efficient underwriting
- mitigation of other risks associated with mortgage lending, including mortgage insurance
- more targeted supervision by the central bank, BI
- accessing lower cost funds

The study will also identify institutional ways in which these tools have been introduced in other countries.

The study will not address the question of government subsidy for housing, since (a) this would require a significantly larger study than is proposed, and, in any case (b) more substantial cost savings are likely to be achievable from the improvement of financial efficiency than from a limited volume of subsidy.

Nor will the study be able to address the question of reducing costs through tax incentives in any detail, although broad questions, of, for instance, tax relief for mortgage interest payments, will be noted.

The study will not cover issues relating to the establishment of a secondary mortgage market or a secondary mortgage facility, since these are being developed in another forum.

OBJECTIVE

To advise the Ministry of Public Housing (MENPERA), Government of Indonesia (GOI), about the feasibility of using financial means of reducing the price of housing to consumers, with a particular emphasis on reducing the price of housing finance to the poor.

STATEMENT OF WORK

Task 1 : Preparatory Work

Before departure for Indonesia, the consultant shall familiarize her/himself with current literature about the housing sector and housing finance in Indonesia. The Mission will ensure that this literature is available to the team. It includes :

Republic of Indonesia. *National Housing Policy and Strategy*. National Housing Policy Board, Jakarta, 1991.

Republic of Indonesia. *Implementation of the Global Strategy for Shelter to the Year 2000*. Prepared for the 14th Session of the Commission on Human Settlements, 1993.

Douglas Diamond. *Indonesia : Housing Sector Assessment*. RTI for RHUDO/Jakarta, October 1993.

Michael J. Lea. *Indonesian Secondary Mortgage Market Study*. The Urban Institute for USAID/Indonesia, June 1993.

Raymond Struyk et al. *The Market for Shelter in Indonesian Cities*. The Urban Institute Press, 1990.

Task 2 : Review Current Mortgage Lending Practice

The consultant will consult published sources (including recent consultants' reports for USAID on the feasibility of establishing a secondary mortgage market, and "Indonesia : Housing Sector Assessment") and will interview representatives of the GOI, Bank Indonesia, BTN, Bank Papan Sejahtera, Bank Rakyat Indonesia (BRI), and officials of private commercial banks which undertake mortgage lending, in order to prepare a description of the current principles and practice of mortgage lending and its supervision in Indonesia. The consultations will take place in Jakarta.

Task 3 : Compare Current Indonesian Practice with International Practice

The consultant will write a brief comparative analysis of any significant differences between practice in Indonesia and practice elsewhere which may result in comparable financial costs in Indonesia being higher than in other countries.

Task 4 : Suggest Possible Changes in Practice

The consultant will recommend which, if any, practices could be changed in order to reduce financial costs, and will briefly describe institutional arrangements in comparable situations elsewhere in which similar changes have been made. The consultant will identify the order of magnitude of cost savings associated with each of the proposed changes.

Task 5 : Evaluate Benefits to the Poor

For each change of practice identified, the study will address the extent to which the poor (households below the median income) are particularly adversely or differentially affected by the various technical problems that are identified in the study. In addition, it will prioritize the various tools with respect to the net benefits that might be made available to the poor if the tool is appropriately implemented in Indonesia. It is recognized that, given the limited resources available for these purposes, quantitative estimates of the net benefits might not be able to be obtained. The study will recommend which tools the author believe are likely to be the most useful in reducing housing costs to the poor in Indonesia.

ANNEX B

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ANNEX C

LIST OF PERSONS CONTACTED

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BANK BALI

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ANNEX D

VARIABLE RATE MORTGAGES

Variable Rate Mortgages (VRM) is the generic term for all mortgages other than Fixed Rate Mortgages (FRM), that together comprise the instruments and techniques used to finance residential properties. Altogether, there may be a dozen or so basic types of VRMs that are used in various countries. All require the use of one or more financial indexes as the basis for calculating the adjustment(s) to the mortgage. In the U.S., Fannie Mae maintains a data base of no less than 41 separate indexes, from which a mortgage lending institution may select one or more to help design a VRM. In reality, only a handful of these indexes are used with any frequency. The three most common indexes are those based on the one-year, three year and six-month Treasury securities; the six-month negotiable Certificate of Deposit; and the weighted average cost of funds in the 11th Federal Home Loan Bank District. Listed below is a brief description of some of the most widely used VRMs in the U.S., along with the basic advantages and disadvantages of each. In addition, a description of the still widely used FRM is given as a reference point for the VRMs[1].

1. Fixed Rate Mortgages.

Description: A Borrower borrows a given amount of money at a given interest rate for a given period of time. The loan is repaid in equal monthly installments during the life of the loan. With each monthly payment, the loan balance declines and by the end of the term of the loan, the loan balance is zero or approximately zero.

Advantages: The interest rate and the monthly remain the same until the loan is repaid fully, thereby producing a peace of mind and a sense of ease for the borrower. With each monthly payment, the balance declines, and the property owner's equity increases.

Disadvantages: At relatively low interest rates, the FRM is attractive, but at very high interest rates, it may not be affordable, and VRMs may be more appealing, since interest rates on the latter are lower.

2. Adjustable Rate Mortgages (ARM)

Description: The initial payment of the ARM is calculated the same way the monthly payment of the fixed-rate mortgage is calculated. However, the monthly payments of ARMs are adjusted periodically. They may be adjusted every year, once every three

[1] This annex relies heavily on The Professional's Desktop Guide to Real Estate Finance, by A. Yohannes. This book also contains various formulas and procedures for calculating VRMs.

years, once every five years, or at other frequencies. The monthly payments could go up or down. The term of the could also increase, and the loan balances could rise. However, the adjustments are usually subject to caps on increases. An index rate is used as the basis for adjusting mortgage rates. The ARM is the most common VRM used in the U.S.

Advantages: Compared to FRMs, ARMs have lower initial interest rates, which allows more people to qualify for a given loan, because the monthly payment for the first adjustment period is lower. Another advantage is that they allow borrowers to benefit from decline a in mortgage rates.

Disadvantages: The major objection to ARMs is the uncertainly associated with the monthly payments and the loan balances. If mortgage rates rise, the monthly payment will rise or the loan balance will rise if the monthly payment is not raised. Unless there are interest rate and payment caps, the potential increases in the monthly payments are large, causing financial hardships on borrowers.

3. Graduated Payment Mortgage (GPM).

Description: The GPM is a fixed rate mortgage; the overall note or contract is fixed. However, the monthly payment starts at a level that is lower than the monthly payment of a comparable fixed rate mortgage, and then rises at a specified rate for a specified period, to a level higher than that of the comparable fixed rate mortgage and then remains the same for the remaining term of the loan.

Advantages: The main advantage of the GPM is that it enables more people to qualify for a loan. Borrowers are qualified at the initial payment, which is lower that the payments in subsequent years or the monthly payment of a comparable FRM. The second advantage is that the borrower knows what the payment will be at the time the loan is approved.

Disadvantages: A major drawback of a GPM is negative amortization. Despite the monthly payments, the loan balance rises to a certain point, although some lenders offer GPMs without this unpleasant feature. Another drawback is that the expected increases in the borrower's income may not be large enough to cover the scheduled increases in the monthly payments.

4. Growing Equity Mortgage (GEM)

Description: A GEM is a fixed rate mortgage in which the monthly payments increase at a predetermined rate for a specified period of time. The increases in the monthly payment are applied fully to the principal. As a result the life of the mortgage is reduced.

Advantages: The borrower knows at the time of closing what the monthly payments will be, and when the loan will be paid off. There is no uncertainty about payment amounts. Although the monthly payments increase from year to year, the applicant is qualified using the monthly payment of the first year, but there must be a reasonable expectation that the income of the borrower will also increase. Unlike a GPM, a GEM does not generate negative amortization. Finally, the GEM accelerates the equity buildup and the mortgage is paid off more quickly. This feature may be attractive to the lender because the faster equity buildup could reduce the probability of default.

Disadvantages: The major problem is that the borrower may not be able to meet the increases in the monthly payments. Either the borrower's income will not grow fast enough, or other expenses of the borrower may increase.

5. Graduated Payment-Adjustable Payment (GPAM)[2]

Description: The GPAM combines features of the Adjustable Rate Mortgage (ARM) and the Graduated Payment Mortgage (GPM). As in a GPM, the initial monthly mortgage payment is smaller than the monthly payment of a comparable, fixed rate mortgage, but rises at the graduation rate during the adjustment period. At the end of the first adjustment period, the monthly payment could increase at a rate higher than the graduation rate, if interest rates increase and there are no additional caps on payment increases. After the graduation period, any increase in the monthly payments reflect increases in the note rate. Furthermore, every five years, the payment may increase to a level that would fully amortize the loan balance over the remaining term of the loan.

Advantages: The relatively low initial monthly permits the borrower to qualify for a larger loan. Also, if the note rate declines, the monthly payments could go down. From the lender's point of view, the risk of interest rate changes is largely shifted to the borrower.

Disadvantages: The major disadvantage of a GPAM is that the monthly payments increase during the graduation period. Negative amortization is another problem. Finally, increases in future interest rates could cause further increases in monthly payments. To a large extent, the borrower bears the risk of interest rate fluctuations.

6. Price Level Adjusted Mortgages (PLAM)

In a PLAM, the monthly payment for each year is calculated using the real interest rate rather the nominal interest rate. (The real interest rate is approximately equal to the

[2] A version of this VRM as used in one commercial bank in Indonesia is discussed in Section 2 of this study.

nominal or actual interest rate on the note minus the inflation rate.) In addition, the mortgage balance is adjusted for inflation. If prices increase, the balances are revised upwards, resulting in higher monthly payment. Essentially, the PLAM protects lenders against inflation.

Advantages: From the borrowers viewpoint, the main advantage of a PLAM is the relatively low payment in the first year. If prices remain stable, the low payments continue, although the likelihood of stable prices over a long period of time is slim. From the lender viewpoint, the primary advantage of this type of mortgage is protection against inflation. The real rate of return on the loan is stable.

Disadvantages: In times of high inflation (hyperinflation), PLAMs spell disaster for borrowers. The loan balance and the monthly payments rise sharply and unless incomes rise proportionately, borrowers may not be able to handle the payment increases. This situation also increases the riskiness of the lender's portfolio because the probability of default rises.

7. Dual Index Mortgage (DIM)[3]

Description: The DIM addresses the problem of sharp rises in the loan balance and monthly payments that occur under the PLAM in high inflationary times. The monthly payments are indexed to some measure of income to maintain the affordability of the loan, while the nominal balance of the loan is indexed to a measure of inflation to protect the real value of the lender's loan.

Advantages: The borrower can afford a larger loan, while at the same time gaining protection against the possibility of default on the loan. The lender's real rate of return is protected if the loan is fully amortized.

Disadvantages: Unless the loan term is caped, the borrower could continue making payments indefinitely.

[3] This type of mortgage is used in Mexico, as discussed in Section 3 of this report, but to date, has not been used in the U.S.