Integrating Housing Finance into the National Finance Systems of Developing Countries - (Part I)

By James W. Christian

Introduction

The long-held view that housing is a product rather than an engine, of economic development is beginning to change. Considering housing a contributor to the development process carries with it significant changes in overall development strategy and requires that greater care and attention be given to the structure of the housing delivery system and its housing finance component than has heretofore been given in most developing countries.

Important evidence of this changing approach toward the provision of housing can be found in the position papers of the international agencies and among private organizations.

The most fundamental policy change will need to be from direct governmental provision of shelter to an "enabling" approach whereby the full potential and resources of all the actors in the shelter-production and-improvement process are mobilized.¹

The response to the enunciation of this principle has been swift. In its World Development Report 1989, the World Bank stated that:

The experiences of the 1980s have led many developing countries to reconsider their approach to development. Although countries differ in the extent to which they have already stabilized and restructured their economies, most have decided to rely more on the private sector and market signals to direct the allocation of resources. To obtain all the benefits of greater reliance on voluntary, market-based decision making, they need efficient financial systems.²

This study attempts to contribute to this effort by addressing issues that affect the scope and efficiency of housing finance. The study recognizes however that housing finance cannot be truly efficient unless it is part of an efficient housing delivery system and that the housing delivery system will perform less than optimally if development strategy does not accord to housing a relatively high priority. These considerations are important elements surrounding the main issue of the study — integrating housing finance into the national finance system of developing countries.

What does "integration" mean in this context? The concept can be pursued on several different levels. At the most basic level, "integration" means allowing saving and investing, borrowing and lending to be conducted at market prices and interest rates. In economic terms, market pricing is the most basic step in the direction of economic and financial efficiency.

On another level, "integration" refers to the institutional and regulatory structure of the financial system. Within the financial system, specialization in the allocation of resources among competing uses is another cornerstone of economic efficiency. In developing countries that have a paucity of institutional specialists, institutions ill-suited to certain types of financing may nevertheless be required to "allocate" part of their available credit to certain uses. Mandated credit allocation impairs the efficiency of the system. In other instances, specialization is more a product of regulatory mandate than relative supply and demand. In such instances the market is said to be "segmented" — only certain types of financial institutions are permitted to make certain kinds of loans, underwrite certain kinds of securities, borrow certain kinds of funds and so forth. Whatever its justifications, "segmentation" inhibits the free flow of financial resources among competing uses and poses a potential loss of efficiency by limiting the ability of financial institutions to respond to changing forces and needs within the economy.

At the third, penultimate level, not only does the legal and regulatory framework of the financial system permit the free flow

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This article was prepared by James Christian for the United Nations Centre for Human Settlements for a conference sponsored jointly with HDFC under the same title. Housing Finance International will reproduce, with the kind permission of UNCHS in two parts sections of this substantial document. Part I is taken from pp.1-3, pp.35-52 and pp. 104-118. James Christian is presently Senior Vice-President with the United States League of Savings Institutions in the USA.
of financial resources among competing uses, as market prices, it also provides an institutional superstructure to facilitate the movement of financial resources. Stock exchanges are an example of the type of institution included in this superstructure. Organized exchanges facilitate trading in equity securities, giving such investments greater liquidity and competitive pricing. For housing finance, secondary mortgage markets serve much the same purpose for mortgage securities.

While the legal and regulatory framework must assure the free flow of resources, it must also assure the disclosure, dissemination and integrity of Information Information concerning the participating firms and the prudential administration of the funds flowing through the system. This is no small task and its contribution to the efficiency of the financial system can easily be underestimated. An effective regulatory system and an information system that allows careful calculation of risk and return is utterly essential for a fully developed and integrated financial system to produce its full potential for economic growth and development.

Many developing countries may find even the first step — full market pricing - a difficult one to take. Particularly in housing finance, the subsidies implicit in administered pricing have come into being as a second-best response to a development strategy that frustrates both the development of a viable housing delivery system and a dynamic financial system. Once this hurdle is cleared, most developing countries will find the second step toward full integration relatively easy. Achieving the third level of financial integration, however, requires overt and conscious efforts to develop the domestic financial system.

**Segmented and Integrated Financial Systems**

In defining an "integrated" financial system, it is helpful to draw the distinctions between "integrated" and "segmented" systems. First, there is a legal and regulatory distinction; in a "segmented" system, the legal and regulatory framework inhibits exchanges between financial specialists. In an "integrated" system the legal and regulatory framework assures prudent practice in financial affairs but does not inhibit the free flow of financial resources among financial specialists.

An economic distinction is also evident. A "segmented" system, bound as it is to an inhibiting legal and regulatory framework, often allocates credit according to political principles; an "integrated" system disavows such allocative devices and grants credit according to market principles in which prices and yields accurately reflect the elements of risk, liquidity and uncertainty.

Such distinctions apply to developed as well as to developing countries. But in developing countries, the principal barrier to achieving an "integrated" financial system is the shortage of capital market institutions and specialists to channel funds to their most appropriate places in the system.3

"Integration" does not, therefore, imply the absence of specialization, but rather, the linking of specialized institutions to facilitate the free flow of financial resources. "Segmentation" implies the presence of specialized institutions, but operating within the confines of a legal and regulatory framework that inhibits the free flow of financial resources among alternative economic uses.

For example, one could characterize a "segmented" system as one in which commercial banks are allowed (by law) to originate and hold only commercial loans, housing finance institutions are permitted to originate and hold only home loans, investment bankers may deal only with private corporations and insurance and pension funds are allowed to invest only in, say, government securities. Under such circumstances, it is conceivable that funds mobilized by one type of institution may represent too large a supply relative to the demand expressed for the kinds of loans and/or securities in which that institution is allowed to invest; the obvious corollary is that some other sector may be starved for funds because the type of financial institution serving that sector is unable to mobilize sufficient funds to meet the creditworthy demand of that sector.

In the abstract, an "integrated" financial system, operating in a climate of perfect information, appears to be optimally efficient. In reality, however, an integrated financial system governed only by raw market forces is most unlikely to be optimally efficient because all, or even most, market participants do not have perfect information. In the absence of perfect information — about prices, techniques, risks and a host of other variables — a financial system governed only by market forces presents degrees of risk and uncertainty that prevent the full participation of all elements of the economy. How many households would surrender their savings to a financial institution without some reassurance that the institution was bound by law to manage their funds prudently and abide by whatever contractual guarantees the institution offered in exchange for their saving? Under such circumstances, households are likely to choose safer, but less productive, means of securing their savings.

It follows that an optimally efficient financial system must operate within a legal and regulatory framework that assures safe, sound and ethical practice in financial affairs while promoting the free flow of financial resources across the system. The legal and regulatory framework thus imposes limitations on the movement of funds in the interest of safety and soundness. But if properly conceived and structured to accommodate change and innovation, an effective legal and regula-
A Segmented Housing Finance System with Government Intervention

Chart 1

Institutional Investors (Insurance Companies, Pension Funds, Trusts)

Trees framework produces a gain, not a loss, of financial efficiency.

Other limitations on the free flow of funds across the financial system emerge from market reality. The market segments itself along lines of risk and liquidity. Even in an extremely well-developed financial system, funds that are idle for only a few days are unlikely to be invested in assets that do not mature for several years. And individuals or institutions that can ill afford to suffer losses are unlikely to invest in assets whose returns are highly uncertain.

Segmented Systems

Chart 1 presents a schematic of the financial flows to housing as they might occur in an institutionally "segmented" financial system.

The institutional structure of the financial system common to many developing countries consists only of commercial banks, government agencies and informal sector financial institutions — moneylenders, pawn brokers and rotating credit societies. A somewhat more developed structure includes specialized housing finance institutions such as savings and loan and building society systems or national housing banks. (A national housing bank could of course, be considered a government agency.) An even more developed system will include institutional investors — insurance companies, pension (or provident) funds and trusts. The
schematic shows these institutions in dashed-line boxes to emphasize that, in many developing countries, the financial system is essentially limited to commercial banks, government agencies and informal sector arrangements.

The financial flows represented in this schematic show housing drawing funds exclusively from specialized housing finance institutions and from government agencies — national housing authorities, local and provincial government entities responsible for government housing programs. Funds are also shown flowing from informal sector credit institutions. It should be clear, however, that credit advanced by the informal sector is typically of very short maturity and useful primarily, if not exclusively, in self-help housing construction.

In this schematic, commercial banks and institutional investors (insurance companies, pension funds and trusts) are drawn into housing finance through their purchase of government bonds which indirectly support government budget allocations for housing construction and home purchase loans.

The government agencies draw funding for housing from these general obligation bonds and from tax revenue collected from households and business enterprises. The housing finance institutions are funded almost exclusively by household savings deposits and have little or no recourse to institutional refinancing. Loan repayments, of course, provide additional funds for new lending, but generally this system is constrained by governmental budget resources, the direct saving of households and the repayment flow from the outstanding home loan portfolio.

Such a system could result from a conscious design with roots in the government's desire to control or strongly influence the flow of credit in accordance with development plan priorities. In this event, rigid segmentation of the financial system below the rate required by the market in compensation for the various types of risk to which investors are exposed. Under such circumstances, households in particular have alternatives that do not benefit the efficiency of the financial system. Household savings are held either as currency, find their way into unproductive hoards of commodities (gold, carpets, even building materials) and into the pure market informal sector financial world of moneylenders and rotating credit societies where yields are likely to be many times those allowed in the (controlled) formal sector.

From the point of view of the housing finance sector, interest rate controls and interest rate subsidies may appear to benefit the neediest members of the society by helping to make decent shelter affordable. Weighed against these considerations, however, are the inhibiting effects on savings mobilization and the general efficiency of the financial system; an efficient financial system can deliver substantially more funds for housing than an inefficient one.
Integrated Systems

The schematic of a developed and "integrated" housing finance system is shown in Chart 2.

In this schematic, which represents a developed financial sector, rich in institutional diversity, savings are shown flowing from the household sector to depository institutions (housing finance institutions and commercial banks) and to life insurance companies, pension funds and trusts. One might also add direct investment by the household sector in government and corporate securities and in corporate equities if the schematic were extended to cover all elements of the financial system, not just housing finance.

Where employers make contributions to the pension funds of their employees and purchase health and life insurance policies as a fringe benefit of employment, savings also flow from the employer sector that can also become available for investment in housing finance.

The depository institutions, because they are typically retail establishments, are viewed here as the principal originators of home mortgage loans. The depositories may hold these (whole) loans in portfolio or they may sell them to other investors. Dashed lines represent a first stage integration in which whole loans are sold to insurance companies, pension funds and trusts. As visualized here, the originating institutions continue to service the loans (collect and remit loan repayments to the investors), so that "cash" flows in both directions between these institutions — cash for the purchase of the loans and cash from the remittance of the borrowers' principal and interest payments.

A second stage integration is achieved when mortgages enter the open capital market and investment bankers and secondary mortgage market specialists become involved. Whole loans then flow to these specialists where they are pack-aged, underwritten as mortgage-backed securities and sold either as mortgage pool participation certificates or as multi-class securities with different cash flow properties than the underlying mortgages. The different risk and maturity (cash flow) characteristics of these mortgage-backed securities make them more attractive to investors, including the depository institutions which originated the loans in the first place.

Cash again flows both ways as the mortgage pool managers (investment bankers, secondary mortgage market specialists) purchase whole mortgages from the depositories, the depositories remit loan repayments on the whole loans, and the pool managers return interest and principal to the investors in accordance with the terms of the mortgage-backed securities and/or their certificates of participation in the mortgage pool.

The presence in this system of investment bankers and secondary mortgage market specialists is particularly noteworthy. Their task has three key elements:

Chart 3
The Flexibility of an Integrated System

Commercial Banks

Demand

Housing Finance Institutions

Demand

Institutional Investors

Demand

Demand
(1) pooling whole mortgages originated by both housing finance institutions and commercial banks and securitizing the mortgage pool

(2) selling those mortgage-backed securities not only to institutional investors, but also to commercial banks and housing finance institutions and

(3) managing the mortgage pool to assure that investors receive interest and principal payments on schedule.

The importance of these functions to housing finance lies essentially in structuring home mortgages to the portfolio needs of a variety of financial institutions, thereby allowing the flow of funds to housing to expand and contract in response to the demand for housing finance. In effect, an "integrated" system is a flexible system whereas a "segmented" system is a rigid one. Chart 3 presents the essential notion.

Housing finance institutions, as the system's home financing specialists, are viewed here as the "core" of the housing finance system. In the first instance, their ability to lend is limited by the flow of household saving and home loan repayments. If the demand for home financing increases beyond their (restricted) ability to fund the additional demand from their own resources and they are able to sell whole loans from their portfolio, they are able to acquire the funds with which to make additional mortgage loans. The portfolio assets they sell flow into the secondary mortgage market where they are pooled, securitized and sold to institutions that would not, in the normal course of their business, originate home loans. The flow of funds to housing finance thus expands in response to an increase in demand and the system, perforce, becomes more flexible.

Flexibility works both ways, of course. Should the demand for housing finance decline relative to the demand for other types of credit, even though the flow of saving and loan repayments to housing finance institutions is maintained, housing finance institutions can purchase mortgage-backed securities through the secondary mortgage market, thus channeling their excess funds to other specialized institutions to satisfy the increase in demand for other types of credit. Thus, the housing finance system can expand and contract as the relative demand for housing finance expands and contracts.

Preconditions for Financial Integration

Most developing countries do not possess all the institutional elements required for a fully integrated system or, if they do, some are vestigial. In many cases, the primary mortgage market is a part-time activity of commercial banks — there are no specialized housing finance institutions and there is no secondary mortgage market. Institutional investors, such as life insurance companies and pension (or provident) funds may exist, but be so small as to represent an insignificant pool of resources. And the collection of highly skilled specialists required to package and service mortgage-backed securities may be non-existent.

Table 1 offers some indication of the extent of this problem in developing countries. For 1988, the table compares stock market activity in developed and developing countries according to the market capitalization of the companies listed on the exchange, the ratio of the value of the shares traded to market capitalization and the market capitalization of listed companies per capita.

These data are no more than a general indication of the depth of the expertise available in developing countries to deal with the complexities of mortgage-backed security trading. Valuing and trading the shares of companies is, of course, somewhat different from valuing and trading debt securities, much less synthesizing mortgage-backed securities from pools of individual mortgages. Yet stock market activity is much more like secondary mortgage market activity than depository institution activity: the skills and infrastructure necessary for stock market activity can more readily be adapted to secondary mortgage market activity than depository institution skills and infrastructure can.

It is encouraging to note that at least 28 developing countries have organized stock exchanges. For the most part, however, activity levels and capitalization per capita are quite small relative to the exchanges of developed countries.

Specialization and Financial Integration

If the task of creating an integrated financial system appears particularly daunting for developing economies, it is reasonable to ask whether this degree of institutional diversity is really necessary. Each specialized institution and each market specialist must be compensated and those administrative costs must be passed on to borrowers. Could interest rates charged on loans be lower or interest rates paid on deposits be higher if functions were consolidated under fewer institutional types?

This question must be answered in the context of a trade-off between the benefits of specialization and competition and the benefits of lower administrative costs on the level of interest rates through institutional consolidation. Moreover, the answer is neither definitive nor absolute; there is some scope for institutional consolidation in an integrated system, but the following discussion should establish that the benefits of specialization and competition are, on balance, superior.

First consider that financial institutions have both savings mobilization and re-
# Stock Market Activity, 1988 (U.S. Dollars)

<table>
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<th>Region &amp; Country</th>
<th>Number of Companies</th>
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source allocation functions. It is useful here to think of financial institutions “selling” a product in their savings mobilization activities and “buying” a product in their resource allocation activities. In this case, the “product” is a claim to future income. For example, a depository institution “sells” its promise to repay principal and interest (future income) to the depositor for the use of his funds; in using those funds to make loans, the institution is “buying” the borrower’s promise to repay principal and pay interest (future income) to the lender for the use of the funds. An insurance company “sells” its promise to pay in the event some untoward event befalls the insured; the insurance company receives payment (premiums) from the insured person or company and then must use the premium income to “buy” income-producing assets to cover its operating costs, produce a profit for the venture and to assure the company’s ability to pay claims against its promises.

Looking at financial services in this way permits comparison with commercial enterprises in the goods-producing and distributing industries. Manufacturing firms may have several product lines, but no manufacturing firm produces everything. Similarly, although retail department stores are found in the goods market, one does not expect to be able to buy everything from the same establishment. Indeed, conglomerate enterprises have generally proven to be less efficient than those that specialize in one or no more than a few product lines. Specialization leads to expertise which leads, in turn, to efficiency.

If these observations are valid for the goods market, they are at least as valid for the financial services market because in most, though not all, instances financial institutions are buying from and selling to the same customers. This aspect of the financial services industry reinforces the tendency toward specialization.

Next consider more directly the underwriting skills involved in the various financial transactions involved in the financial system. Commercial business enterprises require loans to finance the carrying of inventory — in effect, advances to acquire and hold goods until they are sold; the proceeds of the sale of these goods are then used to repay the loan. Ordinarily, the loan is secured by a claim against the goods should the borrower default. But the underwriting of the loan requires an assessment of the firm’s ability to sell the goods because it may be presumed that the borrower would default only if they could not be sold. If this were the case, the lending institution’s collateral would be poor security; if the firm could not sell the goods, the lending institution could scarcely expect to be more successful. In the end, the underwriting decision is one based on an evaluation of the firm’s management, the strength of the enterprise’s capital, its past performance and an assessment of the strength of demand for the product line offered by the firm.

Similar considerations enter into the underwriting of a firm’s request for a loan to finance the purchase of new machinery, expand its factory facilities or its retail space. Essentially, the underwriter must assess the firm’s prospects for success if the loan is granted. Are the profit projections realistic and do they assure an adequate margin over the debt service on the requested loan?

Underwriting a home mortgage loan is a slightly different matter. As with a commercial borrower, the home mortgage underwriter must determine the borrower’s ability to service the debt based on past and current income and the likelihood of the borrower’s continued employment. But the underwriter’s decision turns somewhat more on the appraised value of the property being financed than it does in the case of a commercial loan because the home can usually be resold more readily for full value of the debt in the event of default than unwanted stocks of goods or machinery that makes unwanted goods. Additional security for the loan is provided by requiring the home buyer to pay a portion of the purchase price from his own funds; the borrower’s “capital” is explicitly pledged to the property being financed, not to the business enterprise in general.

Broad similarities are evident in this description of the underwriting process for different kinds of loans, but so are significant differences. First, the borrowers are different — commercial enterprises in the case of commercial loans and households in the case of home mortgages. Second, the primary security for a commercial loan is the quality of the borrowing firm whereas the primary security for a home mortgage is the value of the property. Commercial loan underwriters must therefore be expert in the affairs of business enterprise and in the market for goods and services; mortgage underwriters must be expert in the affairs of individual households and in the residential real estate market.

Now consider that commercial loans, particularly those for financing business inventories, have short maturities while home loans typically have much longer maturities. If short maturities constitute the key element in the definition of the money market and long maturities constitute the key element in the definition of the capital market, then commercial loans belong to the money market and home mortgages belong to the capital market.

Finally, consider that institutions specializing in commercial lending draw a substantial portion of their funding from the deposits of commercial enterprises while institutions specializing in home mortgage lending draw the major portion of their funding from households. This is no accident. Borrowers who wish to “sell” their debt to a particular financial institution may go to some pains to establish a “customer relationship” with that institution by depositing funds there. The finance
institution also benefits from that customer relationship and seeks to preserve and nurture it. After all, profit to the institution derives from the margin between the prices of its "purchases" and "sales" of promises to pay. Therefore financial institutions naturally give preference to their best customers; the tendency toward specialization is consequently reinforced in the normal course of business.

Today, commercial banks are, by far, the most prevalent type of financial institution, particularly in developing countries. Their primary resources are drawn from sight (checking, demand) deposits, time and savings deposits. Most housing finance institutions are also deposit-based and are a far more recent financial innovation. They are, moreover, much less prevalent than commercial banks. Every developing country has at least one commercial bank; many developing countries have no specialized housing finance institutions.

Where specialized housing finance institutions have been created, they typically represent a response to the failure of commercial banks to serve the housing finance needs of the community adequately, if at all, for the reasons suggested above.

Given that housing finance is a capital market activity, not a money market activity, one might reasonably look to other types of financial institutions as alternatives to deposit-based housing finance institutions. Life insurance companies, pension (or provident) funds and trusts, for example, are capital market institutions by virtue of their funding sources. These institutions receive long-lived streams of premium receipts in the case of insurance companies, capital contributions in the case of pension and provident funds and relatively large lump sums in the case of trusts. The cash outlays against their promises to pay can be anticipated reasonably well, or at least with greater precision than deposit-based institutions can anticipate net deposit withdrawals, so they have great freedom to invest in long-lived assets, such as home mortgages.

Where, however, would such institutions acquire home mortgage loans? Perhaps from the households they insure, but this entails the establishment of loan origination offices and a staff to underwrite, originate and service those loans (collect loan payments and deal with defaults) for their investment portfolios, which implies administrative costs that may be unacceptable if alternative investments (government and corporate bonds) are available.

For developing countries, the issue is almost most because insurance companies, pension funds and trusts are even less in evidence than specialized housing finance institutions.

A fully "integrated" financial system might eventually preclude the need for some of these institutions. Commercial banks might, for example, assume the mortgage loan origination and servicing functions of specialized housing finance institutions so long as they were able to sell the mortgages they originated through the secondary market to insurance companies, pension funds and trusts.

The current reality of most developing countries makes such an integrated financial system much less an immediate prospect as a goal to work toward and to realize in the future.

In the process, most developing countries will find both the cause of housing finance and financial development well served by the creation and promotion of specialized housing finance institutions, for without development of the domestic financial system, there is no hope for an "integrated" housing finance system.

To choose financial integration as a long-term objective for the housing finance system is choosing economic and financial development over stagnation. Financial development is essential for economic development and the pursuit of a more efficient housing finance system can contribute most significantly to this cause.

Financial integration along the lines of the institutional structure described above vastly expands the ability of housing finance institutions to manage interest rate risk, thereby reducing the most significant vulnerability of term intermediaries.

In ideal circumstances - which have yet to be achieved even in the developed world - housing finance institutions apply their home loan underwriting expertise to originate sound mortgage loans. Those (whole) mortgage loans are then sold into the secondary mortgage market where they are assembled into pools. The mortgage pool manager then "securitizes" the pool, creating mortgage-backed securities that have maturities based on the cash flow generated by the mortgage pool. Some of these securities have short-term maturities that match the short-term maturities of depositary liabilities; other securities have longer-term maturities that match the longer-term obligations of pension funds and insurance companies. Asset and liability maturities are thus matched up across the financial system, thereby minimizing interest rate risk both for the system and for housing finance institutions.

**Toward a Strategy for Financial Integration**

A strong financial system begins with sound fundamentals and a solid foundation. Many, if not most, developing countries still lack well-developed, efficient primary housing finance systems. The primary system is necessarily the "core" from which financial integration must proceed.

Much of the preceding chapter was de-
voted to issues and choices involved in designing and developing that primary system. The present chapter considers how developing countries can prepare for financial integration even as the development of the primary housing finance system proceeds.

**Integrating the Housing Finance System and the Open Market:**

**Research Requirements**

In pursuing the objective of integrating the housing finance into the national financial system, the design of a new housing finance system or the reform of an existing system should include an assessment of the nation's actual and potential financial resources and identify the existing laws, regulations and policies that inhibit the free flow of financial resources across the financial system. The basic elements of this task may fall to the staff of the central bank and/or the ministry of finance. Law, regulation and policy are not, however, the only forces that affect the feasibility of financial integration.

Lack of scale economies, capital market institutions, qualified personnel, techniques and financial instruments may also represent obstacles to be overcome on the road to financial integration. And overcoming one or another of the immediate problems may create new obstacles. Problems likely to be encountered along the way to financial integration should be identified early in the reform process because they may affect immediate choices regarding the primary housing finance system.

**Limits to Integration**

Not every developing country should contemplate financial integration in its most sophisticated manifestation of national stock markets, bond markets and secondary mortgage markets. Indeed, in many countries, this level of institutional sophistication will simply be uneconomic for the foreseeable future. Small, currently low-income countries are much better advised to concentrate their efforts on building a strong primary housing finance system and taking the necessary legal and regulatory steps to implement a first-stage integration (i.e., market pricing).

For these countries, hope for the greater efficiencies of full integration probably lie with efforts to create sophisticated regional capital markets. Here, problems not previously discussed in this study come to the fore, the most important of which is exchange-rate risk. Exchange-rate risk introduces into the process of financial integration a vastly more complicated issue than any we have discussed and entails international cooperation and collaboration on a scale that lies beyond the scope of this study. We mention this issue mainly to emphasize that a country's aspirations for financial integration should be tailored to the efficiencies the domestic economy realistically affords.

**Standardization of Loan Contracts**

Even conventional mortgages written to standard amortization schedules - most notably the fixed-rate, amortizing mortgage - must have standardized documentation to be suitable for securitization or sale. That is, the legal document that constitutes the mortgage must contain the same provisions over time and from one institution to the next. This is the essence of "standardization."

Open market investors, whether they be individuals or other institutions (life insurance companies, provident funds, commercial banks), will ordinarily be most interested in purchasing a "participation certificate" (a security) in a pool of mortgages. The "participation certificate" (PC security) will typically be denominated in an amount small enough to be appealing to investors and will represent only a fraction of the mortgage pool. For example, if the mortgage pool had a face amount of $10 million, the PC might be denominated in $1,000 amounts. Investors can therefore buy 5 PCs or 20 PCs - whatever amount suits their investment need - but each PC must represent an interest in a legally homogeneous pool of mortgages. Hence, the need for standardization of the individual mortgages that make up the pool. Standardization thus facilitates the purchase of mortgages by open market investors and, most importantly, facilitates their subsequent trading (therefore, the liquidity of the instrument). Put differently, the idea is to make an individual mortgage as nearly like a commodity (coffee, peanuts, soy beans, copper) as possible. Innovations in the security that may be required over time to appeal to changing investor needs or interests can therefore be made more readily.

Thus, the configuration of the "standard" mortgage is less important than the fact that it is standardized. Who, therefore, sets the standard? This is an important question for the design of a housing finance system aspiring to integration.

An obvious answer that comes to mind is the regulatory agency. But this may not necessarily be the best answer. The best answer may be the open market institution or institutions that deal in mortgage-backed securities. Such institutions are closer to investor sentiment and investor needs than the regulatory agency. Moreover, the regulatory agency has more than enough to worry about in maintaining the safe and sound operation of the primary housing finance institutions.

The expertise needed to develop and trade mortgage-backed securities may be available in the collection of financial firms engaged in stock and bond trading. Presented with the problem of developing a mortgage-backed security for trading on an organized exchange, investment bankers and stock brokers are more likely to be able to devise a standard mortgage.
instrument that will work in the marketplace than the regulatory agency.

Interaction between the investment bankers and the housing finance institutions is essential in any event. It will serve no good purpose for the investment bankers to devise an instrument that can be pooled, securitized and traded efficiently in the open market if housing finance institutions cannot originate such loans because they do not suit the needs of borrowers.

Not all, or perhaps even most, developing countries currently have stock exchanges or active bond markets. In those cases, commercial banks may be the most likely substitute for an open market. It follows that coordination between the commercial banks and the housing finance institutions is essential to the development of a standard instrument which can either be securitized by the housing finance system itself or sold without securitization to commercial banks. Standardization is only slightly less important in this context than when mortgage-backed securities are destined for sale and trading on the open market.

Should specialized secondary mortgage market institutions be established in developing countries? Secondary mortgage markets must exist, but identifiable secondary mortgage market institutions may be superfluous.

In one respect, specialized secondary mortgage market institutions can be useful in providing an restricted market for packages of mortgages that are too small to be formed into a mortgage pool by any single housing finance institution. This would be an especially important function in a housing finance system composed of numerous, small depositories. A specialized secondary mortgage market institution can also serve as an interface with the investment banking community and a promoter of mortgage-backed securities. Furthermore, in situations where expertise is in short supply, concentration of the requisite skills in a single institution serves to economize on limited human capital.

In another respect, a secondary mortgage market represents another layer of staffing and expense between loan originating institutions and the open market. The necessary expertise to assemble, securitize and manage mortgage-backed securities can be developed within the investment banking community to perform the functions of a secondary mortgage market institution. In establishing a secondary mortgage market institution, a nation therefore runs the risk of unnecessarily duplicating institutional structures and incurring greater transactions costs in the process.

One could, of course, visualize a secondary mortgage market institution as an interim step in the process of financial integration, one that would serve its purpose and gradually dissolve.

Open Market Institutions

A number of developing countries already have stock exchanges in operation (see Table 1). Although the available data do not discuss their operations in detail, it may be presumed that the existence of a stock exchange indicates the presence of brokers, dealers and investment bankers who are probably also trading bonds. This is the institutional infrastructure needed for securitizing whole mortgages, managing mortgage pools and trading mortgage-backed securities on the open market.

The existence of an active stock exchange and a bond market may be a necessary condition for a secondary market in whole mortgages and mortgage-backed securities, but there are other important considerations to be taken into account. Perhaps the most important of these is the volume likely to be generated in the mortgage-backed securities market.

Cost efficiencies for the housing finance system can only be generated if the addition of several layers of expertise which must be compensated - produces a large flow of resources at very little cost. Put differently, most of the cost of forming a mortgage pool, securitizing the pool and managing it on an on-going basis is fixed cost; a $10 million dollar mortgage-backed security issue costs about the same as a $100 million issue. The per unit costs are, therefore, vastly different.

It follows that developing countries that cannot reasonably expect to originate a large annual volume of mortgages suitable for securitizing may be better advised to look for another avenue to financial integration.

Direct placements probably represent the most likely alternative and commercial banks, pension (or provident) funds and insurance companies the most likely investors. Here there are at least two ways of proceeding.

The most straightforward is placement of a pool of mortgages assembled by the housing finance institution that originated the loans. The originating institution continues to service the loans (i.e., accounting, payment collection, delinquency control, remittances to the investor) for a fee while the investor receives the net income from the pool and is free of the administration of the pool. In one variant, the investor assumes title to the mortgages that comprise the pool along with the default risk. In another, the housing finance institution retains title (and the default risk) to the mortgages and issues a bond secured by a pool of mortgages. (This is known as a mortgage-backed bond.)

The principal advantage of either of these approaches is that it allows the housing finance institution and the investor to
construct a mutually satisfactory arrangement. The disadvantage is that the more customized the arrangement, the less liquid the investment. Direct placements also require the housing finance institution to employ personnel who are expert in such transactions or use the services of an investment banker or broker who is qualified. The fundamental economic question then becomes whether or not the housing finance institution's net unit costs of raising funds are greater with private placement of mortgages or with mobilizing the additional deposits needed to hold the mortgages in portfolio.

Assuming cost comparisons favor raising funds through a sale of mortgages or bonds secured by mortgages and where the volume of mortgages likely to come on the market is small, direct placement will probably turn out to be the most cost efficient approach to financial integration. Investors (institutional or individual trusts) must, of course, be present.

The most likely investors in direct placements are pension (or provident) funds and insurance companies. The maturities of the liabilities of these institutions generally suit investment in long-term assets such as mortgages. Priced at market rates, yields on home mortgages can be quite competitive with yields on alternative investments for these institutions.

"Closed-end" mortgage mutual funds (MMF) represent a third approach offering some promise as a means of financial integration in countries unlikely to generate a large volume of mortgages. In brief, through a trust arrangement, the housing finance institution offers institutions and individual investors the opportunity to participate in the earnings of part of its mortgage portfolio. Investors in the fund become, in effect, limited share holders; their risk and return relate only to the mortgages placed in the MMF held by the trust.

Liquidity of the shares must be forced onto the open market; investors must not be allowed to "put" their shares back to the trust or the housing finance institution. The opportunity for the success of an open market in MMF shares then depends significantly on their denominations; relatively small denominations are more likely to create a broad, deep and resilient market.

There is, of course, the danger that very small denominations will compete against deposits. A compromise is therefore warranted. The denomination of MMF shares should be small enough to attract a wide range of investors, but not so small as to constitute a substitute for time and savings deposits.

In this regard, it should be noted that whatever the denomination, MMF shares are unlikely to ever be perfect substitutes for deposits. First of all, the MMF investor is exposed to default risk on the mortgages in the fund and to market risk on the value of the shares. For example, the value of the shares could be expected to fluctuate with market interest rates; if the MMF contained mortgages with an average yield of, say, 12% and current market rates of interest fell to, say, 9%, the value of the MMF shares should rise; conversely if current market rates should rise.

Time and savings deposits typically carry an explicit rate of interest and return par values; credit risk and interest-rate risk are assumed by the institution offering the deposits. Individuals with very small cash balances may be unwilling to accept either of these risks and prefer, no matter how small the denomination of the MMF shares, to hold their funds as deposits. Individuals with larger cash balances may be willing to accept some risk in exchange for the prospect of a higher average return. Such individuals are likely to hold only part of their funds on deposit and place some portion in higher yielding (and riskier) investments regardless of the existence of MMFs.

Most important, however, is the potential for drawing commercial banks into mortgage investment through participation in MMFs. As we have noted earlier, commercial banks prefer to minimize their interest-rate risk by investing their deposits in short-term assets (or at least in assets that reprice as often as their deposits do). If a significant market could be developed for MMFs, however, they would offer commercial banks a liquid asset diversification (or hedging) device that could be quite appealing to them. If market rates declined, the value of their MMF shares would rise, offsetting at least some of decline in their portfolio yield. Of course, if market rates rise, the value of the MMF shares will fall, but the banks would be compensated by higher yields on their commercial loans. Investing in MMF would thus contribute to the stabilization of bank earnings.

None of these approaches to financial integration will work well, if at all, without market-determined interest rates. That, as we have noted, is the first and most important step along the road to financial integration.

Achieving financial integration also entails some additional legal and regulatory measures. Institutions and individuals who invest in open market securities are presumed to be aware of the market risks. Securities law and regulation therefore tend to focus heavily on assuring the access to and the completeness and integrity of the information upon which investment decisions are based; brokers, dealers and brokers, dealers and investment bankers must be required to tell the investing public "the truth, the whole truth and nothing but the truth." The law should provide severe penalties for failing to deliver this kind of information to the public and the agency that supervises security underwriting and trading must enforce such laws diligently. Law and regulation
must also be put in place to prevent conflict of interest and "insider" trading in securities.

Taking all these factors into account at the time a blueprint for housing finance system design and/or reform is developed will influence the direction of the development or reform of the housing finance system. Steps can therefore be taken to put the necessary measures in place to hasten the integration of the housing finance system as the task of developing or restructuring the primary housing finance system proceeds.

Up to this point, we have discussed financial integration from the point of view of moving mortgages out of the originating housing finance institutions into the open market. Another kind of financial integration is also of particular relevance for developing countries - integrating the informal sector financial system into the formal system.

**Integrating the Informal Sector**

Although the estimate will vary from country to country, roughly 70% of shelter financing in developing countries comes from the informal sector. This estimate alone is sufficient to accord a very high development priority to the integration of the formal and informal housing finance systems in developing countries.

**Defining the "Informal" Sector**

In general, the "informal" sector of an economy or an urban area is distinguished from the "formal" sector by the extent to which government is functionally cognizant of the activities carried on. In more specific terms, the International Labor Organization defines the informal sector in the following terms:

- Family ownership of enterprises,
- Reliance on indigenous resources,
- Small scale of operations,
- Labor-intensive, adaptive technology,
- Skills acquired outside the formal school system, and
- Unregulated and competitive markets.

In many, if not most, developing countries a substantial proportion of the urban population lives and works in the informal sector and squatter settlements among the most visible manifestations of the sector's existence. Informal settlements are, for the most part, the consequence of rural-to-urban migration inspired by the hope of broader employment and educational opportunities. The migrants bring with them not only hope, but also ambition and initiative. If formal sector institutions fail to meet their needs and ambitions, informal sector arrangements fill the gaps, either by devising new arrangements or by transplanting and adapting traditional patterns from the countryside. Among these patterns are informal financial arrangements.

**Informal Sector Finance**

The informal sector provides finance for shelter construction in three basic ways:

**Self-Finance:** The most basic form of shelter financing in the informal sector is self-finance. Individual households simply draw from current income and/or borrow from relatives to buy building materials for self-help construction or to pay a small contractor for his construction services. Current income in this context refers to all sources of family income, not simply the income drawn from the principal occupation of the household head. It is quite common in the informal sector for a household to have multiple sources of income. The husband may hold two or more jobs, the wife may operate a small enterprise or engage in part-time or seasonal employment and the older children frequently earn income from a variety of small tasks.

From the point of view of a loan underwriter employed by a formal sector financial institution, such incomes are difficult to "score" on a loan application because they cannot adequately be confirmed or documented. This fact of life in the informal sector demands techniques especially adapted to the informal sector to achieve financial integration; a simple transfer of techniques and institutions from the formal sector are unlikely to be successful.

**Trade Credit:** Another form of financing common in some developing countries is the extension of credit by small building contractors. In some cases, trade credit of this sort does not involve a "note" or even the payment of interest. The equivalent of interest is incorporated into the price. For example, the contractor offers one price for the job (building a room or a roof) if payment is to be in cash, a higher price if the customer wishes to pay the amount in installments over, say, a year and a still higher price if payment is to be made over a longer period of time. Rough calculations of the interest paid through these arrangements is almost invariably much higher than interest rates prevailing in the formal sector.

Small contractors and building materials suppliers who extend such credit are often being financed in part by formal sector financial institutions; they are not simply lending their own capital. There is, therefore, an established, but often unrecognized, linkage between the formal and informal sectors that could be expanded and strengthened.

**Rotating Credit Societies:** Rotating credit societies operate in all four major regions of the developing world — Africa, Asia, the Middle East and Latin America. Generally formed by relatives, friends and other members of the community or
neighborhood who are known to one another. Rotating credit societies are known by a variety of names — tontine in West Africa, esusu in Nigeria, harambee or obilimba in Kenya, ekub in Ethiopia, sanduk in Sudan, garmiya in Egypt, bisi in Pakistan, cheethus in Sri Lanka, hwe and kuttu in Malaysia, len chaer in Thailand, arisan in Indonesia, palawugan in the Philippines, kye in Korea, oo in Hong Kong and generally as sociedades mutuales in Latin America.

These informal, voluntary associations typically require their members to contribute a predetermined, equal amount of money to the pool of funds on a weekly or monthly basis. Each member of the association has the right to use the funds (i.e., to borrow) under some established procedure. Typically, each member of the society is eligible to receive the total amount of funds contributed at a single periodic meeting once. The group dissolves or is re-established after each member has received his one opportunity to receive the pool. Suppose, for example, that the society has 12 members, each contributing $50 a month. The “pool” thus amounts to $600 each month. In some cases, the “pool” is allocated according to lot; in others, each member bids for the privilege of using the pool, in which case, he must pay the amount he bid to all the other members of the society. If, for example, the “bid” were $33, the successful bidder would receive the $550 as the monthly contribution of all the other members of the society, less the $33 he would pay for the privilege of using the pool ($3 x 11 other members). His net proceeds would therefore be $517. This individual is then no longer eligible to receive the pool of funds, but must continue to contribute until all members have had a turn of using the pool. Over the 12-month period, this individual will have contributed a total of $550 (he does not actually contribute in the month he receives the pool), will have paid out $33 in payments to other members, but will have received payments on the order of $33 from other members.

From this example, it is clear that the incentive to participate is the ability to obtain a relatively large lump sum of money at one time that can be “repaid” over time.

Most studies indicate that funds from rotating credit societies are devoted either to financing small business activity or consumer goods purchases, not for housing finance. The essential point then is the fact that the existence of such societies constitutes an institutional structure that might be linked to the formal sector and demonstrates the understanding of saving and borrowing arrangements by rotating credit society members.

In their study of len chaer in squatter settlements in Bangkok, Angel, de Goede and Sevilla noted a feature of informal sector finance that is at least as important for the feasibility of integrating the formal and informal financial sectors:

It is very difficult for low-income people to obtain loans or credit from banks or other formal financial institutions which share the conservative conviction that the poor cannot meet regular payments. There is also a related belief that, since poor communities do not have proper mechanisms of social control, written laws and regulations are needed to maintain order. Contrary to this view, we have found that poor people are extremely conscientious about meeting the payment obligations of share games. Social control is maintained, and fear of ostracism prevents members from cheating.

Techniques for Informal Sector Integration: Three basic approaches to linking the formal and informal sectors appear possible and feasible.

**Outreach:** The first of these three approaches is essentially an effort to extend formal sector financial services to the informal sector. There need be no set pattern to the approach, but some of its elements may include:

- Mobile branches of the formal sector institution make regularly scheduled visits to squatter areas to collect savings and receive loan applications.
- Existing employees of the financial institution are paid commissions for generating new accounts and servicing loans in informal sector communities during their off-duty hours.
- The formal sector institution enters into agreements with a network of “agents” who are not employees of the institution to act as intermediaries between the institution and the agents’ communities in the informal sector; this technique appears to be used most commonly for loan origination and servicing and the agent remains responsible for delinquencies and defaults.

**Mutual Accounts:** The second approach is that of a formal sector financial institution offering “mutual accounts” to an organized group in the rural or urban informal sector. An example is drawn from an African country in which rural-to-urban migrants maintain strong ties to their village of origin. Although this example relates to credit being provided to a rural village, it is only a small conceptual step to applying the technique to the urban sector. Its principal elements are:

- The mutual account is established in the name of the village by village members who are working in the urban sector.
The village representatives are responsible for collecting savings from the village and from other members of the village working in the urban sector.

The housing finance institution agrees to make a loan of a specific amount once the savings balance in the mutual account reaches a predetermined level. The proceeds of the loan are used for building homes and community facilities, such as schools and health clinics, in the village. Loan repayment is made through the village representatives.

Although the cultural and kinship bonds among members of the same village may be stronger than among members of a neighborhood in a squatter settlement, the potential nevertheless exists for the application of this approach in the urban informal sector. The established structure of the rotating credit society might reasonably serve in the place of the village.

Affiliation: The third approach entails a more structured relationship between informal sector financial organizations and the formal sector financial institution, one that might be developed directly or that might evolve from the establishment of a mutual account.

Essentially, rotating credit societies or their equivalents would become “affiliates” of the housing finance institution, in a manner similar to the relationship that exists between correspondent banks. The affiliates are community-based, their organizers are known to and respected by the community and the community is known to them. These characteristics are essential to the establishment of confidence in the deposit relationship between the individual and the institution and to sound loan underwriting and loan administration in the informal sector.

Angel, de Goede and Sevilla found the role of the organizer (leader) of a lenchaer in Bangkok to be of crucial importance:

... Members are generally recruited at the invitation of a leader. Membership then is generally limited to a leader’s circle of friends. Trustworthiness of potential participants is established over long years of mutual acquaintance and frequent social interaction...

The primary consideration for evaluating a leader’s qualities is the people’s subjective perception of his personality. A positive perception is based on the credibility of the leader—that he will not abscond with the money, and that he will honour his guarantee against default by a new member, unknown to the others. The trust works both ways; a corresponding evaluation of prospective members is made by the leader. Therefore, the relationship between a leader and a member must be close enough to evaluate each other’s trustworthiness.¹¹

In an affiliation, the formal sector institution and the informal sector institution each bring something to the bargain. The “leader” of the informal sector institution offers the understanding and knowledge of a specific market area and the trust of the clientele. The formal sector institution offers access to a larger pool of loanable funds than the affiliate could develop for itself operating independently.

The details of affiliation would, no doubt, vary considerably from one situation to the next, but there are several general principles that all might observe.

First, affiliation, rather than branching of the housing finance institution, is designed to take advantage of an existing set of informal financial organizations that have already developed techniques for mobilizing saving and originating and servicing loans in the informal sector. The scale economies achieved through affiliation should serve to make these techniques more effective; affiliation should not supplant those techniques with the standard operating procedures of the formal sector. Improvements can still be made in the techniques and procedures employed by the informal sector institution; indeed, some changes will have to be made just to implement affiliation. The affiliate should nevertheless have wide discretion in its underwriting and loan administration practices and procedures, since these are adapted to the economic and social circumstances of the informal sector.

Second, in lending to affiliates, the formal sector housing finance institution will almost invariably have to modify some of its own procedures. The usual income and collateral requirements employed in the formal sector will simply be inapplicable for informal sector lending. Indeed, the use of short-to medium-term lines of credit, or advances, renewable with a satisfactory repayment record, would seem to constitute the device least disruptive to the formal sector institutions standard loan policies and procedures.

For example, the basic elements of the relationship could involve a combination of a blocked compensating balance and a medium-term line of credit. The limit on the credit line might initially be some low multiple of the compensating balance. To illustrate, assume that a rotating credit society is established by ten families in order to finance the construction or improvement of their homes. Assume further that each family has accumulated $200 in savings, so that their total pool of funds amounts to $2,000. The families have multiple sources of income, but their income streams may be unstable. Each family is known to every other family through kinship, village origin and/or by long-standing acquaintance with the organizer (leader) of the society.

Upon affiliation with a formal sector housing finance institution, their pool of savings is deposited with the institution in a
blocked compensating balance and a credit line of, say, twice the compensating balance is established in the name of the credit society. Now the society has access to a pool of funds equal to $4,000, secured not by a mortgage, but by the blocked compensating balance of the society. This compensating balance will, of course, earn interest at the housing finance institution's standard rate.

A numerical example may serve better than words to illustrate how such an arrangement might work. Each of the 10 families seeks a loan of $2,000 — 10 times their current savings. They are willing to contribute each month for 10 years an amount equal to the monthly payment required to amortize a 10% loan over those 10 years. That amount is $26.43, but for simplicity, we will set the amount at $25.00. Beginning in the first year, two families can each obtain $2,000 from the pool each year through the first five years of the program; all ten families will have received their loans within five years.

The housing finance institution and the manager of the pool, however, must construct amortization schedules for each drawdown against the line of credit with decreasing maturities to assure that all loans are repaid in a ten-year period. That is, the first drawdown of $4,000 is scheduled for repayment over 10 years, the second drawdown of $4,000 (in year two) is scheduled for repayment in nine years and so on. Table 2 contains the details of the example.

It will be noted that, after the first year, the compensating balance always exceeds the minimum balance required. These surplus funds can best be viewed as a reserve against delinquency and as a "provident" fund for the members of the society. At the end of the 10-year period, when all loans have been repaid, each member of the society will receive his proportionate share of the balance remaining in the fund.

Note also that the aggregate annual contribution of the members of the society is insufficient to make the payment on all 10 loans; by building up the compensating balance in the early years of the program, the interest earned on the compensating balance almost covers the payment shortfall.

There are at least two appealing features of this plan. First, its principles are very similar to rotating credit societies operating in the informal sector today; the main difference is that it extends over a much longer period of time than is common among rotating credit societies. Second, its principles also bear a striking resemblance to the early building societies and savings and loan associations, which ultimately became the backbone of the housing finance systems of the United Kingdom and the United States.

Although originally "terminating" societies and associations — ending when all the original members had received and repaid their loans, just as illustrated above — the early societies evolved on-going programs and became permanent institutions by continually taking in new members.

This, it is entirely reasonable to suggest that the same kind of evolution might occur in the developing world, with the "affiliated" societies evolving into branches of formal sector housing finance institutions or, in the British and American tradition, becoming independent, formal sector housing finance institutions.

| Table 2 |
| Illustration of a Loan Program between a Formal Sector Institution and an Informal Sector Affiliate |

<table>
<thead>
<tr>
<th>End of Year</th>
<th>Loan Tranches</th>
<th>Required Annual Payment</th>
<th>Society's Annual Contribution</th>
<th>Compensating Balance</th>
<th>Actual Comp Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$3,755</td>
<td>$3,755</td>
<td>$634</td>
<td>$3,000</td>
<td>$1,877</td>
</tr>
<tr>
<td>2</td>
<td>3,484</td>
<td>3,484</td>
<td>1,310</td>
<td>3,000</td>
<td>3,594</td>
</tr>
<tr>
<td>3</td>
<td>3,184</td>
<td>3,184</td>
<td>2,038</td>
<td>3,000</td>
<td>5,116</td>
</tr>
<tr>
<td>4</td>
<td>2,853</td>
<td>2,853</td>
<td>2,835</td>
<td>3,000</td>
<td>6,367</td>
</tr>
<tr>
<td>5</td>
<td>2,488</td>
<td>2,488</td>
<td>3,125</td>
<td>3,000</td>
<td>7,304</td>
</tr>
<tr>
<td>6</td>
<td>2,084</td>
<td>2,084</td>
<td>2,922</td>
<td>3,000</td>
<td>6,118</td>
</tr>
<tr>
<td>7</td>
<td>1,638</td>
<td>1,638</td>
<td>1,596</td>
<td>3,000</td>
<td>4,809</td>
</tr>
<tr>
<td>8</td>
<td>1,145</td>
<td>1,145</td>
<td>1,349</td>
<td>3,000</td>
<td>8,362</td>
</tr>
<tr>
<td>9</td>
<td>601</td>
<td>601</td>
<td>755</td>
<td>3,000</td>
<td>1,764</td>
</tr>
<tr>
<td>10</td>
<td>-0-</td>
<td>-0-</td>
<td>-0-</td>
<td>3,000</td>
<td>-0-</td>
</tr>
</tbody>
</table>

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NOTES

1 United Nations Commission on Human Settlements, Global Shelter Strategy to the Year 2000, 1988. See also the work presented in the Proceedings of the Second International Shelter Conference and Vienna Recommendations (Washington, DC: National Association of Realtors, 1987). This conference was sponsored by 14 groups representing private sector interests in various countries around the world and was attended by representatives of 32 nations.


3 The absence or weakness of capital market institutions may, in turn be the product of inappropriate or poorly managed macroeconomic policies, particularly those that fail to prevent inflationary conflagrations. Financial systems, especially their capital market component arc both powerful and fragile; they cannot withstand for long the ravages of either inappropriate macroeconomic or regulatory policies.

4 "Closed-end" mutual funds have a limited number of shares available for purchase. "Open-end" mutual funds offer an unlimited number of shares and are typically offered by a mutual fund company which, when faced with demand for more shares, buys more assets to meet the demand. For mortgage mutual funds, the "closed-end" form is preferable because the housing finance institution will want to control the volume of mortgages it places in trust. Moreover, in countries where mortgage volume may be limited, "open-end" fund managers might not be able to satisfy an share demand.


9 Ibid, p. 131.

10 This section of the study is adapted from Christian, Housing Finance for Developing Countries, op. cit., Chapter 6.

11 Angel, de Goede and Sevilla, op. cit., p. 132.

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reason why these should be initiated by developments in the structure of the financial services sector.

12 See P Minford, M Peel and P Ashton.


21 By contrast, rising land prices in Japan may be more related to the fundamentals identified above (possibly together with a speculative bubble) and an increase in bank lending to companies.

22 With regard to Japan, Frankel (see J A Frankel. "Japanese finance: ar survey". NBER Working Papers No 3156), for example, suggests that high house prices and large downpayments could partly account for the high saving ratio. Horlicka (see G Horlicka. "Why is Japan's private savings rate so high?". Finance and Development, December 1986) argues that demographics, and in particular the low share of the elderly in the total population, are much more important. Demographic changes could also in part explain movements in the saving ratio in other countries.

23 While gearing in Japan remains low, it has clearly increased very sharply. This is presumably partly related to the rapid growth of house prices which has implied that for any given loan to value ratio, gearing rises. In addition, however, it could reflect increased liberalisation.

24 This inaugurated a phased elimination of the tax deductibility of interest payments on consumer instalment credit while mortgage interest payments remained deductible with increased limits.


26 See M Bolet, International housing finance factbook. International Organisation for Housing Finance Institutions, 1987, for a more detailed analysis of national housing finance institutions. Also G Butterworth et al. Housing finance in Eu-