Housing Finance in Emerging Markets:

A Policy framework

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This paper briefly sets out a framework for analysing housing finance in emerging markets. It comprises two sections and three appendices –

Section 1 Housing finance – essential features and importance

Chapter 2 The benchmark – a fully functioning housing finance system

Appendix 1 Prudential supervision of mortgage lending

Appendix 2 Mortgage insurance

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Section 1

Housing finance – essential features and importance

This section briefly sets the scene for an analysis of a housing finance market. It defines, describes the basic forms of and analyses the importance of housing finance.

A definition of housing finance
Housing finance can be defined simply as the mechanism by which the construction or purchase of housing by individuals is financed. It is distinct from financing construction by a commercial developer, although often there is a link between this and housing finance.

Why housing finance is needed
The purchase of most goods and services is funded out of current income so financing mechanisms are not needed. Only where expenditure on an item is large in relation to income is financing needed. The purchase of cars is often financed with the help of loans. Lower income groups also borrow to purchase other consumer durables.

For housing however, a finance mechanism is needed by almost all purchasers. Housing is the most expensive item which most people ever purchase. The average price of a house is somewhere between three times and twenty times average income, typically being lower in more industrialised countries and higher in low income countries.

Clearly, only a few households can afford to pay for their housing out of current income. Also, because housing has a long life, frequently over fifty years, there is a good case for spreading the costs of purchasing or constructing it over the life of the product.

There are just three ways in which house purchase or construction can be financed by individuals –

- Using current income.
- Savings.
- A loan to be repaid out of future income.

These mechanisms, which are generally used in combination, are now considered in turn.

Current income
Where people have very low incomes or no formal income at all then it follows that they are unable to accumulate savings and also will be in no position to borrow money because they will be unable to repay it. However, such people still

need housing. In every developing country, most housing is built by its occupiers, generally over a period of years. Typically, they will buy materials as they need them and as they can afford them and do all of the labour themselves. They may receive help from their family and local community in exchange for giving help to others at another time.
This incremental process is sometimes combined with informal, and to a lesser extent formal, loan finance as income levels increase from the lowest.

Savings
Most people accumulate some savings over time. Typically, and certainly in industrialised countries, these are held in monetary form but savings can also be in physical assets and even cattle. There are several rationales for saving including the "rainy day" principle, but most importantly saving is to fund large items of expenditure of which housing is the largest. There is evidence that people will be encouraged to save for the purpose of subsequent purchase or construction of a house.

Rarely will loan finance provide 100% of the cost of building or buying a house so some personal savings are essential. In a mature housing market, where people buy and sell houses a number of times during their lives, any profits from the sale of one house, which can be regarded as a form of saving, are generally ploughed into the purchase of a subsequent house. Typically therefore, people buying for the second or subsequent time put in more savings and require a lower loan than those buying or building for the first time.

Income earned abroad plays a major role in financing housing in many developing countries. People can earn much more abroad than at home and many people work abroad for a time so as to build up savings to buy or build a house at home or to help finance the housing of relatives. Earnings from abroad can also be used to finance incremental building.

The savings of other family members are also used by many people to pay for their housing. It is worth noting that in many industrialised countries parents contribute to the purchase price of housing which their children buy.

Loan finance
There are three basic types of loan finance for house purchase.

The first is informal finance, that is a loan from a relative, a local community organisation or some form of rotating credit society which typically exists in many developing countries. Such loans are generally for small amounts and for short terms. They are typically used only for incremental building to finance any "lumpy" items of work such as purchase of the plot or putting on a roof. By its very nature, little data is available about this form of finance.

One stage up from informal finance is a bank loan not secured by the property. This covers a wide range from what is almost informal finance to what is in effect mortgage finance. Where those buying or building are unable to obtain a loan secured on the property, and therefore at the most favourable rate, they may use loans from the banking system that are not secured and which therefore generally carry a higher interest rate. Such loans can be similar to informal loans, that is for relatively short periods to help finance incremental building. They are more likely to exist where mortgage security is not available, which in most cases means because the law either does not allow loans to be secured against property or if it does that the security is meaningless in practice. In many developing countries, in particular where, on the face of it, there are no long term house purchase loans, banks may in practice fund house purchase for construction by making a short term loan not secured on the property which is then rolled over several times so that it has the characteristics of a long term loan.

In countries where a mortgage offers no security to the lender a formal bank loan may look exactly like a mortgage loan other than the security, and indeed may carry a similar rate of interest to what a mortgage loan would carry. This can happen where the lender has an alternative form of security such as a guarantee by a bank or an employer, or a guarantee by the developer of the property underwritten by insurance.

The most efficient method of financing house purchase is by a mortgage loan, that is a long term loan secured on the property. The essential feature of a mortgage loan is that if the borrower defaults the lender has the property as security and is able to recover their loan through the sale of the property, although there will be exceptional cases where the market conditions might prevent this happening. Because the security offered by mortgages is so good, the rate of interest on a loan secured by a mortgage will be lower than the rate of interest on other bank loans. The exceptional security offered by mortgages is also recognised by international regulatory standards which provide for a lower capital requirement for residential mortgage loans. In turn, this enables lenders to charge a lower rate than would otherwise be the case.

It is necessary to note one special form of loan finance for housing, that is finance provided by the developer. Developers do not want to fund those who buy the houses they build but in some cases have no choice but to do so in the absence of a proper mechanism. With developer finance the buyer pays for the dwelling over a period of perhaps seven years in regular instalments. Title does not pass until the final payment is made, exposing the buyer to considerable risk. There is no formal loan and therefore no rate of interest. However, the total amount paid is significantly more than a cash buyer would pay; an effective interest rate can be calculated by comparing the cash price with the extended purchase price and would normally be very high compared with what a reasonable mortgage rate would be.

The quality of a housing finance system

Every housing finance system includes all of the mechanisms described above, that is use of current income, savings, and three types of loan – informal loans, bank loans not secured by mortgage and mortgage loans. The distinction between the three is also very blurred, particularly in countries where extended families are the norm. For example, a house may be constructed using a combination of remittances from abroad from the children of the occupiers, a cash contribution from parents, informal loan finance, and physical help with construction by other members of the extended family.

In developing countries, it is rare for more than 5% of housing construction to be financed through the formal banking system. Incremental building financed out of current income is the norm. As developing countries grow, so informal credit, non-mortgage bank credit and finally mortgage credit become more important.

In the most advanced countries, a typical first time buyer will expect to be able to borrow at least 80% of the purchase price of the property at the lowest loan rate available on the market, typically just two percentage points above the cost of funds.

The task for a developing country is to shift its housing finance system as far as possible towards the mortgage end of the spectrum and away from the incremental building end.

Why housing finance is important

Land ownership and mortgage finance go together and there is strong evidence that secure land tenure contributes to economic growth. Galal and Razzaz (2001) have commented –

> "The case for reforming land and real estate markets is compelling when viewed either from the poverty reduction or a broader economic development prospective. There is extensive and growing literature in support of the positive association between land distribution, poverty reduction, and economic growth. There is also extensive literature, which suggests that reforms to secure land tenure increase the productivity of land and its value. Since most of the assets owned by the poor are held informally, this finding suggests that land and real estate reform are especially beneficial to this disadvantaged group."

Galal and Razaz cite studies showing that rural poverty and landlessness go hand in hand and that there is a correlation between inequality in land ownership and economic growth. They review the literature on the effects of insecure tenure on the value of land. The studies show that residential plots with a clear title sell at a premium of between 25% and 50% over comparable plots without a clear title. Deininger (2003) confirms this –

> "A first benefit from increased tenure security that can easily be measured is the increase in land users' investment incentives. Some studies have

> reported a doubling of investment, and values for land with more secure tenure are reported to be between 30 and 80% higher than those for land where there is a higher probability of losing it."

Galal and Razaz go on: "The literature assessing the impact of land tenure arrangements on productivity indicates that insecure land tenure arrangements translate into lower output per unit of land, while more robust rights contribute to productivity. Again, this is manifested in urban areas where investment in housing is correlated to the sense of security of tenure as well as in rural areas which focused on increased agricultural output."

Making a housing finance system more efficient is important for any country at any stage of development. The more efficient the housing finance system the cheaper and simpler it will be for people to buy and sell houses. The lower the cost of mortgage finance in relation to the cost of funds, the more people will be able to buy and repayments on loans for all buyers will be a lower proportion of income. In turn this increases the demand for housing. A more efficient housing finance system therefore enables people to be better housed and also stimulates the house building and supply industry.

Finally, housing finance is important because it contributes to a deepening of the financial system. In many developing countries, only a tiny proportion of the population have bank accounts, and inefficient means are used for both transactions and saving. If people see that saving with a formal financial institution will help them obtain a loan in due course they will save. This contributes to a general formalisation and monetisation of the economy with all the efficiency gains that that entails.

Section 2

The benchmark – a fully functioning housing finance system

This chapter sets out what a fully functioning housing finance system looks like and describes the various inputs needed to achieve that outcome. This provides a benchmark against which any housing finance system can be measured.

The output test

A fully functioning housing finance system cannot be described by reference to institutions or loan instruments. These are the means to an end; an effective housing finance system can use any combination of institutions and instruments. Rather, the test for a fully functioning system must be that it meets three characteristics –

- Loans to finance house purchase of at least 70% of the value of the property are readily available on demand from a number of competing institutions for periods of at least 15 years.
- Loans are available for the purchase of secondhand as well as new properties and for the purchase of apartments as well as single family dwellings.
- The rate charged is a reasonable spread over the cost of funds. The spread covers costs of administration, bad debts and profits. The following table shows typical spreads in very round terms.

Interest rate spreads

	Banking business generally %	Mortgage business %
OECD countries	4	2
Middle income countries	7	5
Sub-Saharan Africa	13	10 - 12

The more efficient systems should be able to produce spreads well below these levels.

The effectiveness of housing finance arrangements can partially be measured by an analysis of mortgage debt/GDP ratios. However, a word of caution is necessary. Mortgage debt may not be a fair reflection of loans for house purchase. As was explained in Section 1, some non-mortgage loans used for house purchase can have similar characteristics, including interest rate spread, as mortgage loans. The following table shows average mortgage debt/GDP ratios.

Mortgage debt/GDP ratios

	Typical mortgage debt/GDP %
USA	90
Western Europe	45
Central Europe	7
Developing countries	2

However, it should be noted that countries in a similar stage of development have widely differing mortgage debt/GDP ratios. An EMF study (2004) shows that in Western Europe the residential mortgage debt/GDP ratio ranged from 13% in Italy to 100% in the Netherlands with the average being 45%. In the Eastern European states the range was from 5% in the Czech Republic and Poland to 8% in Latvia and Hungary.

The proportion of the value of housing construction financed by the formal housing finance system is another measure of the effectiveness of a housing finance system. This is very difficult to measure and there are no relevant international studies. However, data for the UK shows that the number of loans on new houses is around 70 – 80% of the number of new private houses built each year. Other industrialised counties show a similar level.

Input tests – macro level

A fully functioning housing finance system cannot be created independently of the political and economic state of a country. Conversely, if a country is economically and politically stable then the chances are that a reasonably effective housing finance mechanism will develop even if a number of the other input tests are not met.

Political stability is important. People investing their own money in housing need to be certain that they will not lose their investment as a result of political action which may range from a civil war to retrospective legislation and cancellation of property rights. It takes a long time for the effects of political instability to wear off in this respect. For example, in Britain for many years investment in private rented housing was depressed partly because of a fear, unjustified, that there would be retrospective legislation which would work to the detriment of landlords.

Corruption is an important feature of the extent of political stability. Corruption is a major problem in many emerging markets. Where a country has a high degree of corruption then the housing market will be particularly affected given the long term nature of housing transactions and loans to finance house purchase. If bribes have to be paid in order, for example, to secure permission to build or to buy a house or to have title registered or even to obtain a loan, then however good a system might look on paper it will not work well in practice.

Monetary stability is equally important. The purchase of a house is a long term financial transaction generally involving loan finance. If interest rates are high and volatile then it is not possible for long term loans to be made regardless of which housing instrument or financial institution is in the market. High inflation also discourages the saving that is necessary to fund house purchase loans. As with political stability, the effects of economic instability can take a long time to wear off even if economic conditions change dramatically.

Input tests – housing
The vast majority of all housing in most countries, and certainly all developing countries, has been privately constructed with no form of government support and indeed often in the face of government discouragement. Informal housing cannot generally be financed to a significant extent by formal housing finance mechanisms. A fully functioning housing finance system can operate only within a framework that permits properties of a satisfactory standard to be constructed and sold.

Building codes are an important part of this infrastructure. People purchasing houses and lenders financing the purchase of houses need to be certain that properties have been built to a satisfactory standard and that they are not vulnerable to damage or even destruction by weather or other natural elements including, for example, earthquakes.

The State has the responsibility for ensuring the provision of some of the *physical infrastructure* such as roads, electricity and water supply. While developers can work round inefficiencies in this respect, these can greatly increase the cost of dwellings and therefore increase the affordability problem.

Good urban planning helps to provide a satisfactory environment in which the value of investment in housing will be maximised. Ideally large scale development is needed. This not only reduces unit cost significantly but also allows for community facilities such as schools, roads and open areas, and depending on the scale sometimes also services such as refuse collection and security.

Investment in housing requires the necessary legal mechanisms (covered subsequently) to be in place. Developers, whether individuals or companies, need to be certain that they have *adequate legal title* to the land on which they are investing their money or to the property they are purchasing.

In practice, most housing development in emerging markets is financed by the developer, whether a company or an individual. However, the availability of *banking finance for developers* separately of any finance required to purchase a property will facilitate an increase in construction activity.

There is also a negative test in respect of housing. It is tempting for governments to impose *social obligations on developers*, for example to provide low cost housing or to contribute to infrastructure costs. It is not unreasonable that there should be some such obligations but they need to be transparent, not imposed retrospectively and reasonable in relation to a particular project.

Input tests – the financial system

The acquisition of housing is best financed by large loans, typically three to four times the annual income of the borrower, over an extended period, typically between 15 and 25 years. Such finance can be made available only from financial institutions.

A housing finance institution can raise its funds from one of three sources –

- Deposits by individuals. People will deposit money in financial institutions only if they have confidence in the soundness of those institutions and if they receive in return a reasonable rate of interest. There is also some evidence that people will be more inclined to save money with financial institutions if they believe that they will subsequently be able to obtain a loan to finance house purchase from those institutions.
- The capital markets. It needs to be borne in mind that much of the funding in the capital markets comes originally from retail investors and is transformed into larger financial instruments through financial institutions.
- Long terms savings institutions such as pension schemes (which may be compulsory) and life insurance companies.

A fully functioning financial system, regardless of the housing finance element, requires *sound prudential regulation* by a competent regulator, generally although not always the Central Bank. That regulation must aim at ensuring that financial institutions are sound financially, able to meet their long term liabilities. If regulation is too lax financial institutions will fail causing a lack of confidence in financial institutions. If regulation is too strict banks will be prevented from expanding and will increasingly be by-passed.

Subject to the legal test described below being met, loans to finance house purchase are generally regarded as more secure than other types of loan and therefore the capital that financial institutions need to back house purchase loans is less than that needed to back other loans. This needs to be recognised by the financial regulator.

There are also some negative aspects of this test which require governments not to do things. *Governments must not engage in directive lending*, that is forcing financial institutions to lend to particular sectors or to individuals to whom they would not otherwise lend. Such directive lending is invariably done for political reasons rather than to benefit a particularly needy interest group. It distorts the market and reduces the amount of money that can be loaned in the remainder of the market.

Similarly, there should be *no artificial restrictions on interest rates* that can be charged. The effect of putting a ceiling on interest rates is to reduce the amount of lending. Financial institutions do not respond to interest rate ceilings by reducing their lending rates; rather they respond by reducing or ceasing lending completely.

Regulators and governments should not seek to stipulate loan characteristics. Ideally borrowers would like long term loans at a low fixed rate of interest that they can redeem at any time without penalty. However, such loans are prudentially sound only if the general level of interest rates is low and stable. As no country can guarantee these conditions for the future mortgage loans must be designed accordingly. Fixed rate loans can be financed only by fixed rate funding. In all emerging markets and most developed markets there is an insufficient supply of long term fixed rate funding. A disadvantage of fixed rate loans is that borrowers become locked into to a loan at a rate that might soon be well above a market rate. If borrowers are allowed to redeem without penalty than the lender faces a significant loss. Recognising these points, most mortgage lending is either on the basis of rates fixed for a limited period – say three years – or is at a variable rate. In some countries the lender is free to vary the rate of interest as they wish, competition from other lenders preventing this power being used to exploit borrowers. Other countries require variable rate loans to be tied to a cost of funds index outside of the control of the lender. A country seeking to develop a housing finance market must allow lending institutions the greatest possible freedom in determining the characteristics of loan instruments, subject only to preventing captive borrowers from being exploited. For example, the combination of a variable rate and a significant prepayment penalty is unreasonable.

Governments may be tempted to favour particular types of institution or even to seek to restrict house purchase lending to one or a few institutions, typically with a name including the words "housing bank". While specialist housing finance institutions may well be desirable in a developing country and while it may well be reasonable for government or international agencies to provide the capital for such institutions, such support should not extend to preventing artificially other institutions from operating in the same market. In fact there has been a general move away from a special housing finance circuit served by a specialist government backed lender and a move towards regarding housing finance as a basic banking product which retail banks are best able to provide and which contributes to the deepening of retail banking facilities.

Input tests – security

What distinguishes housing finance loans from other loans is the exceptional security that is afforded. That security rests on a combination of factors –

- The loan is normally *repaid by the borrower out of his income* independently of the value of the property or indeed any rent that can be earned by letting it out.
- The loan is *secured against a physical* asset rather than, for example, a building being constructed or a business where the security is just the cash flow. In the event of the borrower defaulting on the loan the lender is able to take possession of the property and sell it so as to recover its loan. The physical asset can also be rented out to produce income to cover the cost of the loan.
- House purchasers normally have some *insurance* which helps to protect the lender, and the lender may also be able to benefit from insurance.

Where these conditions, particularly the second, are not met then although a loan may be used to finance the purchase of the house, it is not a mortgage loan that is secured on the property and accordingly will be more risky and therefore will not benefit from the low rate of interest that mortgage loans carry.

In order to provide this security the government has responsibility in two areas –

1. Establishing and maintaining a *sound system of land ownership and title registration* such that the owner of the property or the lender has the security of the property.
2. A *mortgage law* which provides that in the event of the borrower defaulting on the loan the lender is able to take possession and sell the property with vacant possession so as to recover its loan. In many countries this right does not exist or is restricted, and accordingly loans carry a higher rate of interest because the lender does not have the security of the property. It is important that this test is not only met in theory, that is by an appropriate law being in place, but also in practice, that is that the lender is able to obtain possession without incurring undue costs or having to wait an undue period. The legal system has to be able to handle possessions in an efficient way and lenders must have certainty in this respect rather than operate in the knowledge that they will not be able to obtain possession at all or the extent to which they will be able to depends on the efficiency of the court process, and in some countries the extent to which judges can be bribed.

Input tests – housing transactions

The process of purchasing a house is at best complex and even in the most advanced economies can be both costly and time consuming. The more the cost can be minimised the more efficient the market will be. Conversely, if the process is unduly expensive or time consuming then it will not be possible to establish a fully functioning housing finance system. An efficient mechanism requires –

- A *network of professional appraisers* operating according to generally accepted principles such that developers, house purchasers and lenders all have reasonable certainty as to the value of a particular property. The

appraisal process is greatly facilitated if the test on building codes is met, that is appraisers do not have to go to undue lengths to satisfy themselves as to the structural soundness of the property. The appraisal process is also facilitated the larger the market and therefore the more transactions there are and also the greater the general availability of data on house values and prices. There may be scope for the government to facilitate the acquisition, analysis and sharing of such data.

- *Agents who facilitate the sale process*, who can be lawyers or appraisers or they can be an independent profession. The scope for malpractice in this market is substantial and some regulation of it is needed.
- The process of *transferring title must be efficient and relatively cheap* such as not to frustrate the house purchase process or to impose a tax on house purchase.

Insurance and guarantees

A fully functioning housing finance system is facilitated if a number of different types of insurance are in place –

- *Property insurance* to cover against damage to the property thereby helping to maintain the value of an investment in property by an individual and a lending institution.
- *Life insurance* which can pay off an outstanding house purchase loan in the event of the death of the borrower. This provides additional security both to the borrower, or rather to his family, and also to the lender.
- Specialist *credit risk insurance* such that in the event of a borrower defaulting, a property being taken into possession and sold at a loss, the lender is able to recover part or all of the loss through a pooling of risks with other lenders through a mortgage insurance programme. In a number of countries, including developed countries, the government is active in the mortgage insurance market. In a developing market government action may well be necessary to facilitate the development of mortgage insurance. Appendix 2 briefly describes mortgage insurance.

In markets where all the other security tests are not met, in particular in relation to taking possession, then guarantees can also play an important part by providing additional security. Often guarantees are made by friends or relatives or by employers and in such cases there is some moral pressure on the borrower not to default on the loan. However, guarantees as a substitute for primary security are a second best solution and serve to restrict the number of people eligible for housing loans.

Input test – transparency and fairness

This test is somewhat vaguer than other tests and also to some extent embraces points already made.

Governments in most economies, but particularly emerging markets, are inclined to use subsidies to deal with an obvious affordability problem. However,

subsidies to house purchasers, particularly interest rate subsidies, cannot contribute significantly to a fully functioning housing finance system and may be counter-productive –

- Governments cannot afford to provide significant subsidies to house buyers.
- Those who purchase houses, particularly in developing countries, are among the higher income groups and there is no merit in providing subsidies from which the poor are automatically excluded.
- Subsidies in whatever form distort the market, generally in ways not anticipated by those who introduce them.
- In practice, subsidies and corruption become closely entwined. The main beneficiaries of subsidies tend to be those who support or work for the government, in particular civil servants.

Similar points apply in respect of directing financial institutions or private developers to behave in a particular way. Such directions again introduce distortions into the market which are likely to have an unfair result and given that they are generally not transparent they also introduce greater uncertainty into a market where certainty is important.

Any government support should be limited to general tax or other incentives which have the effect of encouraging large scale development and increasing affordability. However, it is important to ensure that any such incentives are not captured by the developer. If there are any tax breaks or other incentives for individuals these should be capped at a low level.

Input test – the enabling role of government

Governments may create and support particular housing finance institutions, instruments or programmes but they do not create housing finance systems. Every country has a housing finance system, most of which operate independently of any government policy. The government's role is not to decide the best form of mortgage instrument, what type of institutions should be allowed to make loans to house buyers or the terms of those loans. But in practice this is what many governments seek to do while failing to do those things that governments must do.

The government does have a major enabling role in respect of the development of a fully functioning housing finance system and if that role is not performed then there will not be a fully functioning system. That enabling role comprises –

- Ensuring that sound arrangements are in place in respect of land ownership and title.
- Ensuring that in practice housing finance institutions that lend on the security of property are able to use that property as security should they need to.
- Establishing and implementing effective building codes.

- Providing or enabling the physical infrastructure without which housing development cannot take place.
- Regulating financial institutions to ensure that they remain sound.
- Regulating agents who facilitate the purchase and sale of houses.
- Providing some limited pump priming, for example through mortgage insurance, to stimulate to the growth of the market.

To fulfil this role is challenging even for the most competent of governments as it requires concerted action by a number of different government departments and agencies in which there are all the jealousies and politics inherent in any political system. The government's enabling role therefore includes an important leadership function with clear responsibility being given to a minister and officials to ensure that all of the necessary arrangements are in place, and as importantly that the government does not seek to meddle in and micro-manage the housing finance system.

Overview

This Section has given a formidable list of tests that have to be met if there is to be a fully functioning housing finance system. Where the tests are not fully met then work-arounds can often ameliorate the position. For example –

- Where there are no effective building codes or the appraisal process is not well developed then a lending institution will lend a lower proportion of the value of a property.
- Where a lender is not able to realise its security then it may take additional security in the form of a guarantee from an employer or a relative.
- Where in practice it is impossible for financial institutions to make long term loans to house purchasers then developers will sell properties on a hire purchase basis, that is the purchaser buys them over a shortish period, typically no more than seven years, with title not passing to the purchaser until the final payment is made.
- Where there are interest ceilings these can partially be overcome by charging fixed fees in addition to interest.
- Where there is no efficient land registration system or generally title to a property is not clear then title insurance can help to deal with the problem.

However, the effect of all of these work-arounds is to increase the cost of house purchase loans and reduce the number of people able to qualify for them. The example has already been given that if guarantees are required from employers, then those without employers able to give such guarantees are denied access to the market. Some of the work-arounds illustrate the counterproductive effect of regulations. For example, if banks are not able to realise their mortgage security they will be less inclined to lend and developers will instead sell directly on a hire purchase basis where the purchaser has far less security and can be vulnerable to losing his home even when he has met 90% of the payments on it. The rate of interest on such developer finance is also much higher than the rate of interest that would apply on a loan secured on property. Another illustration comes from

Russia. Lenders cannot generally take possession of a borrower's principal home. Lenders get round this by making a loan to a company that owns the property with the person living in it officially having a second and principal place of residence. If the house buyer does not keep up repayments then the lender quickly has possession.

Some of the input tests are so important that no housing finance system can operate unless they are met. To a large extent others are of more peripheral importance but the key point remains that to the extent that the tests are not met then the resultant housing finance system will be further and further removed from the fully functioning system described at the beginning of this chapter.

A fully functioning housing finance system requires all the input tests to be met; the absence of just one can be sufficient to stifle the development of a system. In their analysis of reforming land and real estate markets, Galal and Razzaz (2001) come to the following important conclusion –

> "Partial reforms may not always lead to the desired outcome. In some cases, there is the possibility that the individual reform was intended to relax a constraint that was not binding in the first place (eg providing individual titles in areas with strong communal property rights). But it is also possible and even likely that reforms to secure property rights may not lead to the full benefits because mortgage finance is missing, or the prices of goods and services derived from land and real estate are distorted. In other words, instruments such as land redistribution, land registration, credit subsidies, physical upgrading, etc are each likely to be necessary but not sufficient to induce poverty reduction or growth. They are more likely to deliver positive outcomes if they are well co-ordinated as part of a reform package. This conclusion suggests the need for an integrated framework to approach land and real estate reforms."

Appendix 1

Prudential supervision of mortgage lending

[Note: this appendix is a modified and updated version of a chapter in the consultant's report *The development of the mortgage market and prudential supervision in Russia,* prepared for the World Bank, June 2003]

House purchase loans can be made by banks or by non-banking institutions. The regulatory regimes for the two types of institution can legitimately differ but they need to be constructed in a harmonious way so that there is no opportunity for regulatory arbitrage. This appendix concentrates on supervision of banking institutions and then draws some implications for the supervision of non-bank institutions.

The Basel rules

In most countries there is now a well established framework for the supervision of mortgage lending by banking institutions based on guidelines produced by the Basel Committee of Banking Supervisors. Although the rules apply to international banks the principles are widely accepted as the benchmark for banking supervision. The current set of rules is known as Basel 1. In 2004 agreement was reached on Basel 2 which will supersede Basel 1 over the next few years.

Supervision of bank lending for house purchase should be regulated as part of the normal prudential supervision of banks. This assigns risk weights to various categories of assets. Loans generally carry a 100% risk weighting for which an 8% capital requirement is considered the minimum. Government securities carry a much lower risk weighting reflecting the security they offer. Because loans secured on residential property are more secure than bank lending generally, under the current Basel rules loans to house purchasers carry a 50% risk weighting. Under the new Basel 2 rules the risk weighting is reduced to 35%. The full text from the Annex to the new rules is set out below –

> **"Claims secured by residential property**
>
> 15. Lending fully secured by mortgages on residential property that is or will be occupied by the borrower, or that is rented, will be risk-weighted at 35%. In applying the 35% weight, the supervisory authorities should satisfy themselves, according to their national arrangements for the provision of housing finance, that this concessionary weight is applied restrictively for residential purposes and in accordance with strict prudential criteria, such as the existence of substantial margin of additional security over the amount of the loan based on strict valuation rules. Supervisors should increase the standard risk weight where they judge the criteria are not met.

16. National supervisory authorities should evaluate whether the risk weights in paragraph 15 are considered to be too low based on the default experience for these types
of exposures in their jurisdictions. Supervisors, therefore, may require banks to increase these risk weights as appropriate."

The Basel 2 rules require that when qualifying residential mortgage loans are past due for more than 90 days they will be risk-weighted at 100%, net of specific provisions. If such loans are past due but specific provisions are no less than 20% of their outstanding amount, the risk weight applicable to the remainder of the loan can be reduced to 50% at national discretion.

National regulators will make their own rules within this general framework. The British Financial Services Authority is proposing to apply the 35% weight to the proportion of a loan up to 75% loan to value ratio with a 75% weighting thereafter. They are also considering allowing companies that do not have systems in place to use this framework to weight all residential mortgages at 45%.

This lower risk weighting than for normal loans is justified on both theoretical and empirical grounds. The theoretical grounds are that –

- Unlike most commercial loans the income earned to repay the loan does not derive from the investment financed by the loan. Loans are repaid out of income earned by borrowers and borrowers prioritise loan repayments because failure to do so might mean them losing their home.
- If borrowers lose their income then other means may be available to repay the loan, including income from other family members, savings, income from renting out part of the property, social security payments and in some countries the proceeds of insurance policies.
- If borrowers are unable to repay their loans the lender is still protected because it can possess the property with vacant possession and sell it. The lender is likely to be able to recover the loan from the proceeds because the security is readily marketable (unlike the security for many commercial loans), the loan will have been for no more than 80% of the value of the property, the chances are that house prices have risen since the loan was taken out and insurance may cover any loss that the lender may make.

Empirical evidence also shows that residential mortgage lending is safer than other forms of bank lending. This is demonstrated not only by the loss experience but also by the willingness of lenders to make residential mortgage loans at a narrow spread over the cost of funds. In developed economies this is typically under two percentage points.

It is important to note that the 50% risk weighting follows from the theoretical points in this section, backed up by empirical evidence on the loss ratio. If this supporting evidence is not available in an economy the 50% risk weighting cannot be justified.

Supervision of the quality of a mortgage lender's portfolio
Banking regulators also need to consider the quality of a bank's overall portfolio of mortgage loans to assess whether the capital it holds is adequate, or put another way whether the risk weighting is appropriate. If a portfolio is relatively risky then the regulator can legitimately require a higher capital requirement. The following factors are relevant to the security offered by individual mortgage loans and to the quality of the mortgage loan portfolio of a bank –

- The loan to value (LTV) ratio. Empirical evidence shows that this is a particularly significant factor in determining the likelihood of mortgage defaults and resultant losses. The rating agency, Fitch ICBA, has established the following relationship between LTV and expected loss from the experience of six countries (Australia, Germany, Holland, Spain, the UK and the US).

LTV range	Expected losses relative to LTV of 75.01%-80%
50.00% and below	0.00
50.01% - 60.00%	0.09
60.01% - 65.00%	0.25
65.01% - 70.00%	0.46
70.01% - 75.00%	0.70
75.01% - 80.00%	1.00
80.01% - 85.00%	1.39
85.01% - 90.00%	1.92
90.01% - 95.00%	2.67
95.01% - 98.00%	3.40
98.01% - 100.00%	4.14

  It will be seen that a loan with an LTV of 75-80% has a four times greater expected loss than one with an LTV of between 60-65% and a loan with a LTV of 95-98% has an expected loss 3.4 times higher than a loan with an LTV of 75-80%. Because the LTV ratio is so significant lenders (and regulators) may put a ceiling on the ratio, typically 75 – 80%. A market has also developed for mortgage insurance (see below) which insures the top slice of the loan and, in a mature market, may allow a loan to exceed the maximum ratio.
- Loan to income ratio. Other things being equal, the higher the loan to income ratio, the greater the risk of default. A regulator may wish to see a maximum loan to income ratio and may look at the average loan to income ratio for a bank in comparison with other banks. However,

this does assume that the income figure is meaningful, which is not always the case in emerging markets.

- This spread of risk, for example large exposures, the geographical spread of lending and the spread of lending between types of home buyer.
- Insider lender, in particular lending to purchasers of properties the construction of which the bank has financed or which the bank itself owns, such as property taken into possession because the borrower has defaulted.
- Appropriate credit checks on the borrower.
- Any guarantors, for example a relative or an employer. In developed systems these are unusual and pose their own problems. In transitional economies they may be necessary to compensate for weaknesses in the security, but there should be a medium term objective to reduce reliance on such guarantees.
- Mortgage insurance. In many countries there are arrangements by which lenders can insure the “top slice” of a loan. Such arrangements might, for example, provide that in exchange for a premium an insurance company will meet any shortfall up to, say, 20% of the value of the loan in the event of the borrow defaulting, the lender repossessing the property and selling it but being unable to recover its debt. There are a number of other types of mortgage insurance. The institutions which can provide such insurance include commercial insurance companies and governmental agencies. Mortgage insurance schemes can also be a means by which other lending requirements can be enforced. For example, mortgage insurance might be available only if loans meet certain requirements, such as a maximum LTV ratio, a maximum size and a maximum loan to income ratio.

Supervision of the interest rate risk

The prudential supervision and capital requirements for banks also need to recognise any interest rate risk that the lender takes. In theory, a bank can take no interest rate risk either by –

- Making fixed rate loans funded by fixed rate liabilities of the same maturity. For example, 25 year loans would be funded by 25 year bonds, five year loans by five year bonds or deposits, etc.
- Making variable rate loans funded by variable rate deposits, that is the rate of interest on loans can be increased at any time in line with the increase in the cost of deposits. In some systems, the lender has discretion as to when, and by how much, to change interest rates with the market providing the necessary protection to borrowers. In other systems interest rates must be tied to a cost of funds index.

In practice, however, a lender cannot entirely eliminate interest rate risk whichever system it uses. Fixed rate loans present a risk when interest rates fall.

If the borrower has the right to redeem the loan at any time without penalty or with a penalty that does not reflect the loss that the lender could incur then the lender carries a substantial risk. Even if the borrower cannot redeem there is an increased default risk if interest rates fall as borrowers may refuse to continue paying what they see as an above market interest rate. This particular risk is reduced the more stable the general level of interest rates. The lender can also reduce the risk by limiting the period for which a rate is fixed. For example, a loan can be for a fixed rate for five years, the borrower then having the option of rolling over the loan into another fixed rate loan or a variable rate loan. However, the lender may suffer the same risk as the variable rate lender if interest rates rise rapidly over this five year period.

With variable rate loans the risk of default is increased if interest rates rise rapidly as borrowers may be unable or unwilling to meet the higher repayments. To a limited extent, lenders can mitigate the effects of higher interest rates by extending the loan term. Again, in a stable economy with relatively stable interest rates this risk is reduced.

Generally, long term lending of any form is risky in an economy where interest rates are unstable. Short of government guarantees (for example compensating lenders when borrowers prepay long term loans in response to an interest rate fall) there is no means of isolating totally lending institutions from interest rate risks in respect of long term residential mortgage lending. Beyond the obvious points (such as not allowing long term loans to be made without long term liabilities to back them) banks and regulators must look to the stability of interest rates generally and managing the resulting risk. In an unstable environment, particularly one characterised by a high rate of inflation and correspondingly high interest rates, banks (and their supervisors) may decide that it is imprudent to make any loan with a maturity of more than three or five years. In these circumstances, to the extent that banks finance house purchase at all they do so through a succession of short term loans, although the borrower can never be certain that the next loan will be forthcoming.

Term mismatch

At first sight lending for say 25 years requires matching liabilities. However, in practice the demand for long term mortgage loans far exceeds the availability of long term funding. Any mismatch can be managed in one of two ways. The first is through use of the variable rate mortgage which enables banks to respond to an upward movement in interest rates by increasing their mortgage rates rather than being un-competitive and facing a liquidity crisis as deposits are withdrawn. The second is for there to be a limit on the proportion of short term deposits that can be used to fund long term loans. In practice, perhaps 80% of retail deposits are fairly stable so using 15 – 20% to fund long term loans may well be regarded as safe, particularly if variable rates are used.

Loan loss provision
There is scope for alternative practices in respect of loan loss provision, much depending on the state of development of the mortgage market. In a mature market a bank may be permitted to establish its own loss provision based on its actual record. Typically, a bank will review the whole of its lending portfolio and make a bulk provision, rather than a bottom-up approach based on individual loans. However, a supervisor should permit this approach only if it is confident that the bank is being realistic and that its track record is reliable in respect of forecasting actual losses. In a developing market a supervisor should take a more interventionist approach with some broad requirements, generally relating to loans that are so many days in arrears and properties in possession. It is important that these rules do not become too detailed and restrictive such as to deter banks from making residential mortgage loans or restructuring those loans subsequently. For example, it is inappropriate to require provisions (even if zero) to be made for every single loan given that the loans can be categorised into broad groups quite sufficient for the purposes of provisioning. The supervisor's main objective must be to ensure that there are systems in place so that banks know the status of all their loans and make reasonable provisions. The role of auditing is important here.

Supervision of lending by non-banks
The purpose of the supervisory mechanism outlined in the previous sections is to protect bank depositors by ensuring that banks are well capitalised for the nature of their business. The purpose of international harmonisation of the rules is to prevent regulatory arbitrage, that is banks locating their business in territories with a favourable regulatory regime and thereby being able to compete unfairly in markets where the domestically based institutions are subject to more stringent regulation.

Should non-bank mortgage lenders be subject to the same prudential requirements as banks? (This is a quite separate issue from any requirements to protect the borrower, for example in respect of the information they must be given and the arrangements under which possession may be taken. These requirements should apply to all mortgage loans.) The answer depends on the nature of the lender.

If the non-bank lender is a private institution in which banks do not have an interest there is no case for prudential regulations applying because there are no depositors to protect. However any bank lending to such institutions should be treated like other bank loans, with a 100% risk weighting and subject to rules in respect of large exposures, concentration of risk etc. If the funding is through the securities market then the institution must comply with the requirements of the securities regulator. In practice, few such private organisations exist. Where they do they are generally engaged in secondary market activity. Their funders are likely to require them to match some of banking regulator's requirements, for example in respect to loan to value ratio and concentration of risk. Where

mortgage insurance exists the insurer will have the same requirements for loans regardless of whether they are made by a bank or a non-bank.

Where a non-bank lender is owned by a bank or a group of banks the activities of the lender should be consolidated with the parent bank. There may be sound business reasons why a bank prefers to undertake some or all of its residential mortgage lending through a subsidiary which is not itself a deposit-taker; avoiding regulatory requirements is not a sound business reason. The rules on consolidation must prevent such arbitrage. For example, not requiring consolidation unless the bank's holding is at least 40% of the total equity of the non-bank gives obvious scope for arbitrage.

Supervision of mortgage lending by non-banks is most crucial in respect of state owned mortgage banks. These have been created in many emerging markets, with almost universal adverse effects. The banks exist only because of a state guarantee and generally they have access to funds from the state budget. Such banks invariably lend to the middle classes and are often inefficient. They compete unfairly with private institutions and thereby hinder the development of a private and sustainable mortgage market.

There is a case for state mortgage banks to help develop a mortgage market where none previously existed, and in any event policy cannot wish away those banks that already exist. The longer term objective must be to abolish or privatise such banks. In the meantime the supervisory regime applying to commercial banks should be applied equally to them. This prevents unfair competition with private banks and is justifiable in its own right through helping to secure more effective and transparent management of the banks. It also helps the banks put themselves in a position that will enable them to operate effectively when cut off from state support if that is feasible.

Appendix 2

Mortgage insurance

Mortgage insurance is a specialist form of credit insurance which provides protection to the lender. In the event of a borrower defaulting on their loan and the property being taken into possession and sold but not at a price sufficient to cover the outstanding debt and costs then the insurance policy pays out to the lender. One form is for the “top slice” of the loan to be insured, that is, for example, any amount in excess of say 70% of the valuation. An alternative is for a proportion of the whole loss to be met by the insurance company.

Mortgage insurance schemes can take various forms but a common feature of most schemes now, particularly after substantial losses were incurred on mortgage insurance business in the 1990s, is an element of co-insurance whereby the lender assumes some of the risk.

Most mortgage insurance, even in industrialised countries with sophisticated financial systems, is provided by specialist government agencies. These were often established in difficult and different circumstances when an element of government “pump priming” was needed to help a mortgage market develop. It proves very difficult in practice for such institutions to divest themselves of their business even when they are able to do so.

In a few countries, notably the United Kingdom, mortgage insurance is provided by the major insurance companies. In the past this insurance has often been tied in with other forms of insurance, for example insurance of the houses being mortgaged.

In America, in particular, there are a number of specialist private insurance companies, which are now seeking to operate internationally.

Mortgage insurers do not simply accept the risk that is presented to them by the lender, although a number did in the past with serious consequences. As a condition of insuring loans, the mortgage insurer will normally insist that a number of criteria must be met, for example –

- A maximum loan to value ratio.
- A maximum loan to income ratio.
- The property meeting defined characteristics, for example in relation to the type of construction.
- The borrower should not previously have defaulted on a loan.
- A reasonable spread of loans in respect of type of property and location.
- A protocol according to which accounts are serviced.
- The provision of data on lending and prompt notification of loans falling into arrears.

The annex sets out the criteria currently used by the Canada Housing and Mortgage Corporation to illustrate these points.

Mortgage insurance, if properly managed, can offer considerable benefits to the lender and to those purchasing houses. The lenders will be able to offer either a greater volume of lending or more high percentage loans than would otherwise be the case because the risk that they face is reduced.

The criteria imposed by the mortgage insurers impose an element of external discipline on the lenders that can help prevent them making bad loans and ensure that they are run in a sound way.

The criteria established by mortgage insurers become generally accepted as standard lending criteria. They may be used, for example, by regulators to determine which loans qualify for reduced capital backing. Where there is any form of secondary market then the criteria are likely to determine the loans that qualify to be sold or to be securitised.

Mortgage insurance facilitates the collection, analysis and dissemination of data on mortgage lending, in particular the relative risks of particular types of loan characteristic or borrower. In many countries it is the mortgage insurers who often provide most of the key data about the operation of the mortgage market. The best example of this is the Canada Mortgage and Housing Corporation, originally established as a mortgage insurer and which now is the source of data on the housing market.

However, being in the mortgage insurance business also carries risks. The business must be treated as insurance, subject to the disciplines that apply to other insurance companies. The business must be properly underwritten and the premium charged to the lenders must be a fair reflection of the risk of the business being taken on. Where mortgage insurance is given too easily then this is likely to facilitate bad lending, ultimately at a significant cost to the insurer. Where the insurer is a government agency there is a temptation, often not resisted, to use mortgage insurance as a weapon to require mortgage lenders to behave in a way that is not commercial or prudentially sound. For example, mortgage insurance might be made available on favourable terms in respect of a particularly risky group of borrowers for political reasons. Lenders may find that if they wish to do business they have no choice but to do the business that the mortgage insurers want even if in their own minds they know that it is not sound.

For a country developing a housing finance system, mortgage insurance can play a useful part. It is the one area where government intervention is required and can be provided at a reasonable cost in a way that is even handed and not distortive of competition, provided of course that the risk business is run on sound insurance lines.

Annex

CMHC requirements
Set out below are the requirements to qualify for Canada Mortgage and Housing Corporation homeowner mortgage loan insurance –

- 1-4 units, one of which must be occupied by the borrower.
- 95% maximum loan to value ratio for single units, falling to 90% for 3-4 units.
- An interest rate which falls within certain criteria in relation to the lender's "posted rate".
- A maximum loan period of 25 years.
- Housing costs must not exceed more than 32% of gross household income.
- For new buildings, the builder must be registered with a home warrantee provider.
- There are maximum house prices where the loan to value ratio exceeds 90%.

The standard application fee is $165. The premium is linked to the loan to value ratio reflecting historical experience that the higher the loan to value ratio the greater the risk of default. The premium on the total loan is 0.5% for loans up to 65% of valuation, then rising steadily to reach 3.25% for loans between 90% and 95% of valuation.

Appendix 3

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Appendix 6

The author

Mark Boleat has over 25 years' experience in trade associations in the housing and finance sectors in the United Kingdom. Between 1986 and 1993 he was Director General of the Building Societies Association. During this time he was responsible for a demerger which created the Council of Mortgage Lenders, of which he was also Director General, and he was Secretary General of the International Housing Finance Union and Managing Director of the European Federation of Building Societies from 1986 to 1989. From 1993 to 1999 he was Director General of the Association of British Insurers, the largest trade association in Britain.

He has chaired one of the largest housing associations (organisations which provide subsidized rental housing) in Britain and for five years was a member of the Board of the Housing Corporation, which funds and regulates housing associations.

Mark Boleat is the author of the first ever study of housing finance at the international level *National Housing Finance Systems: A Comparative Study* (1986) and he was the founder editor of *Housing Finance International* (1986 – 89). He has undertaken consultancy work on housing finance for the World Bank, the International Finance Corporation, the OECD, the United Nations, the Government of Jersey and major banking institutions.

He has also published a number of books on trade associations including *Trade Association Strategy and Management* (1996) and *Managing Trade Associations* (2003) and has undertaken consultancy projects for British and European associations.

Mark Boleat is a director of Countryside Properties (a large British housebuilder and developer) and the Comino Group (a software company) and has previously been a director of three life insurance companies. He is also a member of the Gibraltar Financial Services Commission, the British National Consumer Council and the Court of Common Council of the City of London.

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