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International Union for Housing Finance
6th Floor, York House, 23 Kingsway, London WC2B 6UJ,
United Kingdom
Tel: +44 (0)20 7440 2210 Fax: +44 (0)20 7836 4176
http://www.housingfinance.org
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Editor's Introduction

by Friedemann Roy

Initially, many experts believed that the repercussions of the US subprime crisis would be fairly soon digested and a return to business as usual could have been accomplished in a little while. As the tightening money markets in Europe and the rising difficulties of lenders in some European countries show, national housing finance markets have become much more interrelated than a few years ago.

When will there be an end to the turbulences which are currently rattling US and western European capital markets? Our first article written by Betrand Renaud and Kyung-Hwan Kim aims to provide an answer to the question. They state that "the bulk of interest rate resets [in the US] has yet to come. Each quarter until the end of 2008 more than 400,000 subprime loans will be reset." Thus, we may deal with this crisis for a little longer.

Overall this article provides a profound analysis of the now unwinding global housing boom of 1996 – 2006. First, the authors assess the global structural factors that have been driving this boom both in developed countries and emerging markets. The second part concentrates on the consequences on the housing markets following the bursting housing bubble in the US. *The Economist*, in a recent article[1], observes that housing markets in some emerging economies seem entirely unaffected, supporting the theory of "decoupling", ie economies are less tied to America than they once were. The future may reveal whether this idea can be upheld.

The second article, presented by Olivier Hassler and Simon Walley, complements the discussion initiated in the first article. They seek an answer about sound refinancing practices. In this context, they look at the main benefits which can be derived from the creation of a mortgage liquidity facility and the conditions under which they can operate most effectively. In addition, they detail some of the pre-conditions necessary for its creation, thereby summarising key techniques to be used in obtaining security over the mortgage collateral. Lastly, they deal with two important aspects which are crucial to building confidence in mortgage liquidity facilities, ie how they are regulated and how their corporate governance is organised.

The third article by Victor Mints relates the current experience in Russia with securitisation to the current credit squeeze in the international markets. Russian banks have funded their mortgage loan portfolios by accessing the capital market through securitisation. He believes that fundamental risks inherent in housing finance have been managed in an inadequate way. His assessment culminates with an assessment of how such risks may be better taken on.

The fourth article is an update of a contribution made by Christine Whitehead and Judith Yates on the prospects of shared equity products to support access to housing[2]. It may be a proof that in countries with still rising house prices (like Australia) the lenders' risk appetite has not waned, which is reflected in the promotion of such (more risky) products.

The next three articles draw our attention to a continent in which housing finance has so far been of less importance given a weak enabling environment coupled with fragile macroeconomic conditions - Africa. However, sound economic growth and a strong will of governments to tackle necessary reforms of laws and institutions during the last few years allowed for emerging mortgage markets throughout the region. The first article, provided by Raymond Struyk, on consumers' knowledge of mortgage finance and property registration refers to a crucial aspect of market development. If households do not build confidence in mortgage financing, markets will not fly. Therefore, education campaigns are clearly important to generate knowledge and ultimately loan applicants. This paper reports on results from a February 2007 survey of 504 Cairo consumers from better socio-economic groups designed to determine their understanding and knowledge of these instruments and their attitude towards them.

The next article by Kecia Rust evaluates the role of housing microfinance in supporting sustainable livelihoods in Africa. The relationship of this financing technique, which is deemed appropriate for the majority, and the development of housing assets in support of sustainable livelihoods, which are critical for the majority, is relatively unexplored. After considering the innovation of housing microfinance in Africa where levels of affordability among the majority make mortgage finance an unrealistic housing finance option, the paper explores the role of housing microfinance in growing the housing asset and supporting sustainable livelihoods.

The last article refers to Ghana which has recently experienced the emergence of a vibrant housing finance market. Agatha Quayson describes a project that aims to support the nascent development in the country by both tackling reforms of the enabling environment and the need to build capacity within financial institutions to establish modern lending operations.

I hope you will enjoy reading these articles. Finally, I would like to point to a recent IMF publication *Staying focused on the big pictures in times of turbulence*, published on 13 November 2007. Reducing surprise and uncertainty (ie promoting transparency) will help to restore confidence in the markets. The IMF lists a number of measures to be taken into consideration by policy makers to preserve economic performance, thereby similarly supporting continuous innovation. In this regard, the International Union could also have an important function by spreading information and fostering dialogue between national policy makers and lenders as well as the international financial community. Let's move on!

[1] See The Economist, "Global house prices: run down", December 8th – 14th 2007, page 82 to 83.

[2] A shared equity product allows for the division of the value of the dwelling between more than one legal entity.

The Global Housing Price Boom and its Aftermath

By Bertrand RENAUD and Kyung-Hwan KIM[1]

The unprecedented global housing boom of 1995-2006 is now unwinding. It has affected almost all advanced economies and a very significant number of emerging economies. Housing prices have even accelerated during the period 2002-2006. What were the global structural factors that have been driving these synchronized national housing booms? How did the low interest rate era and the high rate of mortgage innovation induce significant behavorial changes among households and transformed mortgage markets? Why did these housing price booms differ between "global cities" and the others, and what has been the impact on the affordability of housing? In what way did poor regulation and supervision of US subprime lending innovations lead to a debacle? Why did US non-performing subprime loans trigger a much wider and deeper structured finance crisis? What are the prospects for the unwinding of this first global housing boom in different countries and for the global economy?

A historically unprecedented global housing boom is now unwinding. The financial crisis that has erupted in August 2007 marks the end of a major global credit cycle that has significantly benefited the growth of the housing sector and mortgage markets in most advanced OECD economies and in a large number of emerging economies as well. For several years, central bankers, bank regulators and economists monitoring global financial markets had worried about the widespread under-pricing of risk (BIS 2005 and 2006; IMF 2005). A financial crisis was seen as an accident waiting to happen somewhere in the global financial system. Opaque hedge funds were often mentioned. The actual trigger has been the US subprime mortgage market.

It is too early to tell in what manner and how soon global financial markets will recover their full stability. The dynamics of the US subprime market with its direct and indirect impacts on the performance of the US economy is also a distinct story of its own. Yet significant questions about this unwinding global housing boom can already be addressed: how strong has the global housing price boom been in different countries? What has been driving these synchronized housing booms? Why did rates of housing price increase vary across regions and cities of the countries experiencing these booms? How did these housing booms affect housing affordability for middle and low-income households? Will their unwinding seriously affect the economies of some of these countries, and the global economy?

The global housing boom of the decade 1995-2006

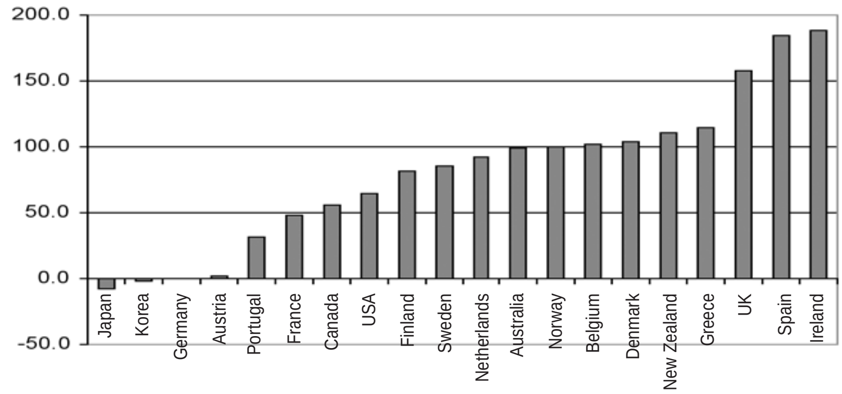
The global boom of 1995-2006 marks a new era for housing. Early analyses of the global boom by the Bank of International Settlements, IMF and OECD (BIS 2005 and 2006; IMF 2005; Girouard-OECD 2006) revealed increasingly correlated housing price increases among most – but not all – advanced economies that became very significant during the period 1995-2001. They also showed that housing prices in many countries accelerated further during 2002-2006.

Housing price indices vary in design, coverage and data quality across countries in advanced economies. In emerging markets they are often fragmentary. For the same market, there can also be several indices giving somewhat different readings as is the case in the US. Estimates of the growth of housing prices across OECD economies have also been made by analysts using different methodologies. As a result, rankings of countries in terms of housing price inflation vary for the countries in the middle range of price gains depending on methodology and choice of index. But most studies provide consistent results for the two extremes of the distribution of housing prices. At the bottom we find countries with no significant real price inflation such as Germany and Japan. At the top we find countries with extremely high real price growth such as Ireland, Spain and the UK.[2] The BIS data used in Figure 1 suggest that for most countries, real housing price increases have ranged somewhere between 50% and 120% during this exceptional boom. (Égert and Mihaljek, 2007).

[1] Bertrand RENAUD is Principal, Renaud Associates and former Housing Finance Adviser at the World Bank Bertrand.renaud@att.net . Kyung-Hwan KIM is Academic Dean, Sogang University, Seoul, Korea; kyungkim@sogang.ac.kr. Comments and editorial suggestions from Friedemann Roy, Marja Hoek-Smit and Claudio Pardo are gratefully acknowledged.

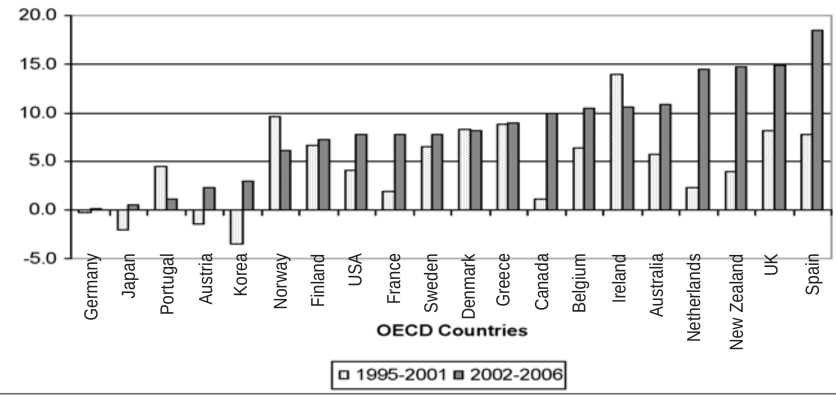
[2] FitchRatings [2007] gives a different ranking of real price increases from the BIS data. Miles and Pillonca (2007, Exhibit 9) give a third ranking of countries with a level of real price increases similar to the BIS data. Ahearne et al. [2005] covers real house prices between 1970 and 2005 in 18 countries that add up to 68.5% of the 2006 global GNP. This study gives somewhat different estimates of housing price increases by countries, significantly so in the case of France where prices would have risen by almost 200% between 1996 and 2005

FIGURE 1: Real house price increases across OECD countries, 1995-2006.



If we look at average annual rates of price increase, two other features of the boom emerge as shown in Figure 2.[3] First, with most house price increases well above 50% in real terms their growth has been much faster than the growth in average real incomes of almost all countries. Indeed housing markets are now often clearing at real prices that are about twice as high as they were ten years ago. Notable exceptions to these strong housing price booms are: Germany due to slow growth and the real estate problems after reunification with East Germany; Japan and its "lost decade" in the aftermath of its massive bubble; Korea due the 1997 financial crisis; and, Switzerland because of its unusual market structure and low ownership rate of 34% (Bourassa and Hoesli, 2006). Second, there has been a significant housing price acceleration during the second half of the boom over the period 2002-2006, except in a few countries like Ireland where the annual rate of real house price inflation had already been exceptionally high over the period 1995-2001.

FIGURE 2: OECD real annual housing price increases. Accelerating inflation in 2002-2006 compared to 1995-2001.



[3] Figure 2 is based on data from Égert and Mihaljek [2007]

There has been a similar housing price acceleration in many emerging economies. For instance, in most economies of Central and Eastern Europe housing prices were stable during the 1990s. But since the early 2000s, many of these countries have experienced double-digit annual growth rates of real housing prices. In contrast, housing price increases have been less significant among East and Southeast Asian economies where real housing prices remain below their level prior to the 1997 financial crisis.[4] In major cities of emerging economies like China, India, Russia and Brazil, housing prices are also rising rapidly since 2000 while national mortgage markets remain of limited depth.

In the US, the rare housing price series compiled over the very long period 1890-2005 by Robert Shiller [2006] shows how exceptional the 1996-2006 housing boom has been in duration and amplitude by historical standards. Using the S&P/Case-Shiller national index, which is the best gauge of American house prices, US prices peaked in 2006 after rising by 134% in one decade. What is equally striking is that the US boom appears modest among OECD countries and is at the lower end of the price range in Figures 1 and 2. As another caution about the current quality of comparative housing market data, the Case-Shiller index suggests that the BIS data could be underestimating the overall magnitude of global house price gains.

What has been driving these synchronized national housing booms?

The national housing booms of 1995-2006 reflect the confluence of a number of factors: rising housing demand driven by income gains and demographic changes, historically low nominal and real interest rates; growing lender competition that became intense in the most developed financial markets; innovations in mortgage loan designs as well as in the delivery of these new mortgage products; and, most of all, by an abundance of capital from bank lenders and mortgage security investors. Expectations of rising housing prices on the demand side combined with expectations of lower risks on the lending side to fuel these powerful booms as is always the case in a housing boom. Then a mistimed financial stimulus can turn a boom that could be ready to unwind into a costly bubble, as happened in the US, see below. [5]

This global housing boom is an important outcome of the profound transformation of the global economy that started in the early 1980s with financial liberalization and new macroeconomic policies. Besides wars and reconstruction periods, economists now highlight three major periods in the global economic history of the 20th Century: the Great Depression of the 1930s, the Great Inflation of the 1970s, which gave way to the Great Moderation of the past two decades marked by declining GDP volatility and low and steady inflation. (Borio, 2006)

The benign economic environment of the past two decades results from deep interactions among megatrends that have fundamentally altered the structure of the global economy: rapid financial liberalization; the information technology revolution; a very high rate of financial innovation; trade liberalization and a rapid growth of global trade supported by major transportation innovations that have sharply lowered the costs of shipping goods and personal travel.

Financial globalization measured by gross external assets and liabilities relative to a country's GDP has about tripled since the mid-1970s (IMF, 2007). The depth of the global financial system measured as the ratio of total global financial assets to nominal world GDP has risen from 108% in 1980 to 316% in 2005 (McKinsey Global Institute, 2007). High income countries account for most of this increase in financial globalization. The Bank of England (October 2007, Figure A) estimates the size of the global financial markets at the end of 2006 at 149.1 trillion dollars. Meanwhile the global nominal GDP itself has grown from USD 10 trillion in 1980 to USD 48.2 trillion in 2006, with high income countries as defined by the World Bank representing $36.6 trillion.

Three major structural changes have been especially favorable to the global development of long-term finance and the deepening of mortgage markets. The development of securitization has added a new channel of funding to traditional forms of deposit-based funding by lenders. A new era of very low and stable inflation has drastically reduced the inflation risk premium in long-term lending. The volatility of advanced economies has been reduced by half, which has led to more stable employment and therefore more stable housing demand and improved efficiency in the sector.

First and foremost is the major innovation of mortgage securitization in the late 1970s.[6] Securitization creates a new funding channel for housing in addition to traditional forms of deposit-based funding that were prone to stop-go lending in the US, especially prior to financial liberalization in the 1980s. Over time, funding with residential mortgage backed securities (RMBS) expanded from domestic to international capital markets. Because securitization is a major way to contain capital costs for banks, the development of asset-backed securities (ABS) for non-housing loans like credit cards or car loans

[4] See for instance Figure 2 in Gyntelberg et al. [2007]

[5] There have been vigorous debates whether asset bubbles in progress can be spotted before they burst (Stiglitz ed.1990). Housing bubbles involve real assets, not financial assets. Some telltale signs of a housing bubble in progress are: a rapid multiplication of brokers well above the industry trend line, an accelerating rate of property transactions, a higher and rising percentage of investors as opposed to owner-occupants, a deterioration in the quality of loan underwriting and the offer of increasingly risky loans (Renaud, 1997). Housing price-rent ratios that sharply rise above historical trends are also significant red flags (Mikhed, Vyacheslav and Petr Zem_ík,2007)

[6] The first private RMBS was issued in 1977. See Lewis Ranieri, "The Origins of Securitization, Sources of its Growth, and Its Future Potential," Chapter 3 in Kendall and Fishman [1999].

developed quickly. Securitization is now a major pillar of the structured debt finance revolution in modern finance.
By expanding sources of funding, securitization can make new types of loans possible because no innovative mortgage product can be brought to market as a line of business without a sustainable way to fund it. The growth of the US subprime market is currently the most visible outcome of the securitization innovation with much debate about the strengths and "agency" problems of the "originate and distribute model".

The steadily declining market share of 'portfolio lending' in the US and other markets is a good illustration of the impact of financial liberalization. It has been a significant part of the broader transition from government-led financial systems relying on 'special circuits' to finance housing prior to the 1980s to market-led financial systems. This transition was essentially complete in advanced economies by the mid-1990s when the global housing boom started.

Facing the prospects of rapid integration and growth of European capital markets, "covered bond" instruments have also been modernized and standardized. The covered bond market has been growing rapidly as it offers another attractive low-cost and transparent funding channel to chief financial officers (CFO) who must constantly secure alternative sources of funding -- as the failed business plan of Northern Rock in the UK has just illustrated. It is also generally agreed that the implementation of the Basel II Accord should stimulate the use of covered bonds by modifying the relative capital cost of issuing covered bonds compared to RMBS securitization.

The second major change is the transformation of central banking and of the monetary regime. The lesson of the Great Inflation of the 1970s is that there is no long run trade-off between price stability and achieving full employment and growth. It now defines a widely shared monetary policy consensus managed by independent central banks. (Goodfriend 2007). The past two decades have been a golden era of central banking that has produced steady economic growth at low inflation (Mishkin, 2007b; The Economist, 2007). A recent analysis of a sample of 21 industrialized and emerging economies compared to a control group of 13 industrialized economies shows that explicit inflation targeting by central banks improves economic performance. Explicit targeters reduced their inflation rates from an average of 12.6% to 4.4%. Emerging economies that suffered from higher inflation saw the biggest drop – to 6% after they began targeting inflation. Developed economies with inflation targeting did better, dropping to an average of 2.2 percent. Interestingly, developed economies that were only informal targeters not bound by a pre-announced inflation target did even better with 2.1% inflation (Mishkin and Schmidt-Hebbel , 2007). A global transitory factor that has been also very supportive of low inflation, but will not repeat itself again, was the massive entry of China and India into the global economy after decades of closed economy policies.

During an asset boom there is a feedback mechanism between rising asset prices and liquidity as strong asset prices strengthen the balance sheets of financial institutions that are more willing to lend. As a result, the risk premium embedded in interest rates was very low and liquidity was plentiful. As shown by new research in behavioral finance, euphoria often amplifies such liquidity effects (Shiller, 2005).

In the specific case of the US, monetary economist John Taylor has argued that the Federal Reserve set inappropriately low Federal Funds Rates during the period from 2003 to 2006 – these rates were even negative in real terms in 2002 and 2003 (Taylor, 2007). Because long-term rates respond to changes in expected future short-term rates, low short-term Federal Funds Rates may have also lowered interest rate expectations and long-term rates. The excess liquidity associated with this easy monetary policy turned the US housing boom into a bubble. Given the high level of integration achieved in global financial markets, the spillover effects of US monetary policies on global long term rates and other housing markets must have been significant and is the probable reason for the acceleration of global housing prices during the second phase of the boom between 2002 and 2006. Since August 9, 2007, liquidity and the risk premium have been adjusting sharply in the US and the global financial markets.

The third major change has been the significant decline in the volatility of output in advanced economies. Fluctuations in economic growth measured by GDP have fallen by half since the early 1980s. In the US, gains in reduced GDP volatility came from two main factors (McConnell et. al. 1999). The largest contributor is better inventory management linked to 'just-in-time' production supported by corporate IT innovation, the container transport revolution and air cargo. The second is lower residential investment volatility associated with the financial deregulation of housing finance marked by the ending of Federal Reserve's Regulation Q and access to new funding through securitization.[8] A third and lesser factor was trade liberalization and more stable trade flows.

[7] In Continental Europe, capital market funding of mortgage loans goes back to the middle of the 19th century. Denmark has a mortgage bond history that goes back to 1797. It has long operated under a mortgage law going back to 1850 that was substantially upgraded by the Danish Mortgage Credit Act of 1970. Today, Denmark has the deepest residential mortgage bond market in the world representing 98% of GDP in 2006. However, Switzerland has the largest ratio of total mortgage debt outstanding to GDP of 132% in 2006, see Figure 3 below.

[8] Regulation Q is a financial regulation put in place by the Glass-Steagall Act of 1933. It limited the interest rates that banks could pay, including a rate of zero on demand deposits. As interest rates rose with inflation, Regulation Q accentuated a stop-go pattern in the funding of housing. Regulation Q ceilings for savings accounts were phased out in the early 1980s by the Monetary Control Act of 1980.

A recent study shows that 16 out of 25 OECD economies including the largest ones such Australia, UK, France, Germany and Spain have also experienced marked improvements in economic volatility (Cecchetti, el al. 2006).

Building on these three structural transformations, the global surge in housing prices between 2000 and 2005 is associated with a strong demand for housing supported by exceptionally low nominal and real interest rates and by the highest annual growth rates of the global economy on record. Long-term interest rates that drive mortgage markets remained surprisingly low -- a monetary issue that became known as Federal Reserve Chairman Alan Greenspan's "conundrum". In addition, securitization and the accelerated use of credit derivatives as new types of credit risk transfer (CRT) instruments were thought to be improving significantly the efficiency of financial markets.

Innovative mortgage products

Global economic growth and the strong effective demand for home ownership in combination with these three major structural changes have eased mortgage credit rationing. In addition to securitization, additional improvements in the mortgage markets allowed the shift to risk-based lending. In particular, the development of credit bureaus lowers information asymmetry between lenders and borrowers. There has been a significant expansion in the volume of mortgage loans, an increased diversification of loans products with more floating rate loans, and the introduction of hybrid products with an initial fixed-rate period followed by a variable rate period.

Competition among different types of lenders has reduced interest margins on housing loans and has lowered interest rates for borrowers. In the highly developed UK mortgage market, supply has diversified into a very wide continuum of mortgages in terms of degree of fixity of repayments and associated prices. Lenders also attempt to differentiate themselves from the competition. The landmark Miles study reports that "estimates of the number of products in the prime market are consistently over 4,000". Obviously, many of these products have almost identical underlying financial features. Yet the number of financially different loans itself is very large.[9]

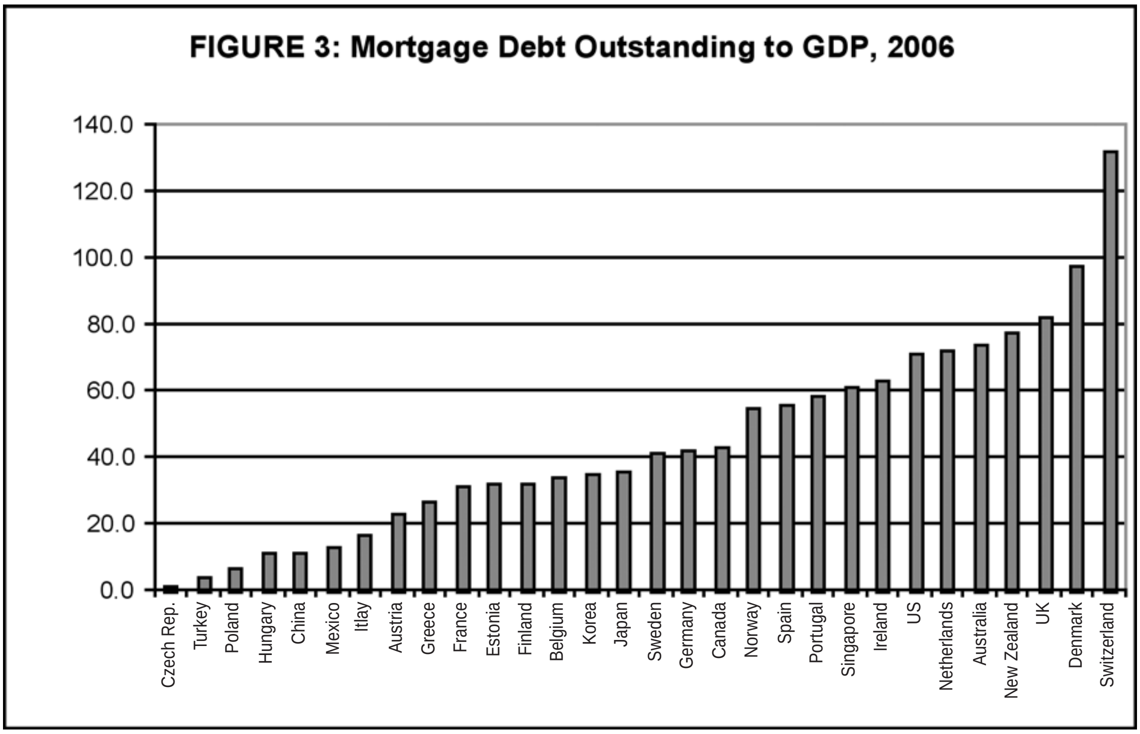
Given the rapid pace of innovation and the proliferation of new and more complex mortgage loans, in many countries the mortgage choice decision is an important consumer issue. Many borrowers do not pay much attention to the likely future relative costs of different mortgages. Hence, the central role played in consumer protection by the concept of the annual percentage rate (APR) as a summary measure of the overall cost of a mortgage -- but not an indicator of possible future risks in the case of adjustable loans. The hidden true future cost and risks of loans made to financially uneducated borrowers is a major dimension of the subprime mortgage crisis, among several other disturbing aspects of the subprime lending boom for such a leading financial system as the US.

Mortgage markets have deepened significantly in almost every country during the global boom, with Germany and Japan being exceptions. Within Europe, mortgage market depth still ranges very widely across countries. Yet, with the sustained integration of global markets variability of the cost of mortgage debt is much lower than before 1995. Within the Euro area, there is now relatively little variability across countries after adjusting for the design features of the mortgages used in each country. Already in 2003, the spread in effective mortgage rates was about 65 basis points (Mercer Oliver Wyman, 2003). Retail mortgage markets may remain differentiated, but wholesale funding markets are well integrated. Figure 3 shows the wide range of ratios of mortgage debt outstanding (MDO) to GDP in 2006 across 30 countries representing 81.5% of world GDP. Now MDO/GDP ratios in advanced economies are often a multiple of what they were in 1980.

The low interest rate era has induced significant behavioral changes among households leading to major changes on both sides of the household balance-sheets with much larger house values on the asset side and larger mortgage debt on the liability side. Regarding cash flow, the three factors affecting housing demand are: lower nominal and real mortgage credit rates, higher LTV ratios that reduced prior savings requirements and widespread lengthening of loan maturities and amortization periods. The net effect was lower debt-to-income ratios. The public policy question in each country now is whether the balance-sheet and cash flow position of the household sector has become more resilient to an economic shock and a housing downturn.

One vivid example of a market transformation is the housing boom in Spain (Renaud, 2005a). There, the nominal mortgage rate dropped from 17% in 1991 to 4% in 2005 while real mortgage rates dropped from 12% to 1%. At the same time loan maturities increased from 10 to 25 years. The impact has been very powerful. The average volume of annual housing construction has tripled from 200,000 to 600,000 housing units and the share of residential construction in GDP has more than doubled from 4% in 1995 to over 8% in 2006. The MDO/GDP ratio has risen from 15% in 1995 to 56% in 2006. Gross household debt that includes other consumer debts has risen from 41.6% of disposable income in 1995 to 140% in 2006. On the other side of the balance-sheet, real housing prices have risen by about 170% from 1996 to 2006. The national ratio of housing prices to household income has climbed from 2.8 to 5.5 times suggesting a significant decline in ownership affordability for young households and lower income groups, as discussed further below.

[9] Miles [2003] p. 49. In 2003, the UK's Financial Services Authority (FSA) identified 260 different mortgage loan products falling into seven main financial categories of loan design, Miles [2003], Table 4.1 page 53.



Source: Miles and Pillonca (2007) with additional countries added.

Spatial differentiation of housing price booms: "global cities" and the others

Finance is global but housing is local, and so is the price elasticity of housing supply that is determined by local land use regulations and access to urban land. Lower housing supply elasticity leads to higher price volatility. This spatially selective dynamics is particularly visible in large countries like the US where "in 2005, seven states account for 47% of the nation's total real estate values and land values are even more concentrated" (Case, 2007). The impact of the boom has been sharply differentiated across cities as illustrated by Figure 4.

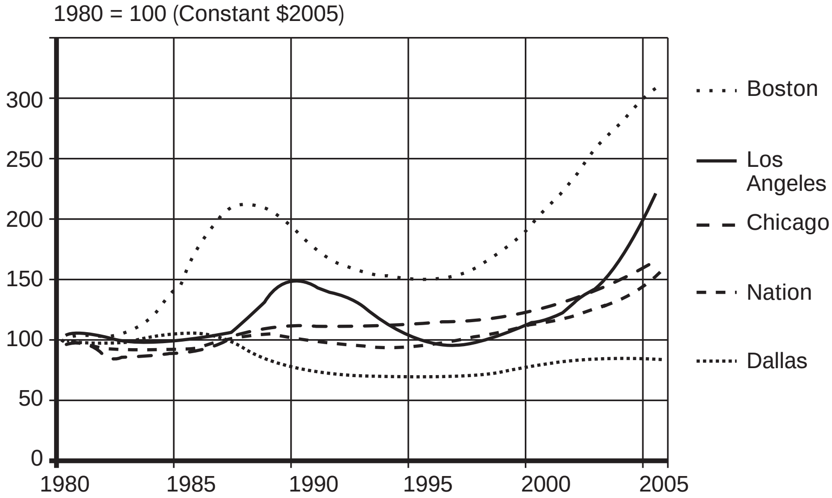
Major differences in real estate market performance and the rise of metropolitan competition in the global economy have led to the concept of "superstar cities" (Gyourko et al. 2006). 'Superstar cities' are defined as cities that succeed in attracting a disproportionate share of highly skilled, high-income and high net-worth households that are able and willing to pay a high price for housing. Gyourko et al note that "differences in house price and income growth rates between 1950 and 2000 across US metropolitan areas have led to an ever-widening gap in housing values and incomes between the typical and highest-priced locations". "Scarce land leads to a bidding-up of land prices and a sorting of high-income families relatively more into the desirable, unique, low housing supply markets of these superstar cities." Continued growth in the number of high-income families in the US provides support for ever-larger differences in house prices across inelastically supplied locations and income-based spatial sorting. This spatial sorting occurs not only at the metropolitan area level but also internally at the sub-metropolitan level.

Proponents of the 'superstar city' concept argue that these housing market processes are a long-term structural phenomenon (1950-2000) that goes beyond the current 1995-2006 global housing boom.[10] Concerned with potential contagion effects on the macroeconomy caused by the credit crunch for large "jumbo" mortgage loans, Federal Reserve Chairman Bernanke has unexpectedly proposed to raise the size limit of 'conforming' loans that can be securitized by Fannie Mae and Freddie Mac from $417,000 to $1.0 million.[11] Such a regulatory move would also favor high-price superstar cities and superstar neighborhoods.

[10] Shiller discounts the "superstar cities" argument as merely reflecting the psychology of the housing boom and a wishful thinking bias. See Shiller "The Myth of Superstar Cities", Project Syndicate, May 20, 2007. Yet a 50-year trend is not easily ignored, nor is recent analytical work on metropolitan competitiveness in the global economy.

[11] Chairman Ben Bernanke's testimony to the US Congress, 8 November 2007.

FIGURE 4: Housing Price Booms Differ Across US Cities



Source:Wheaton and Nechayev, 2006.

Rigid urban planning regulations can have a major impact on local housing supply elasticity. In the UK, a high rate of financial innovation has collided with a very inelastic housing supply to produce some of the highest international rates of housing price appreciation. The causes were detailed by the Kate Barker report to HM Treasury (Barker 2004). The Netherlands have experienced a similar outcome. In Spain, the devolution of urban planning to local governments implemented in the early 1990s has led to an unexpected fall in the elasticity of housing supply in major Spanish markets due to increased regulations by local authorities.

The global housing boom has affected the affordability of housing ownership

Housing markets and institutions differ significantly across countries, even across the 18 high-income countries that are the focus of comparative studies by central banks. Yet, in most markets the sharp surge in housing prices – especially during the period 2000-2006 - contrasts with earlier decades when indices of real housing prices, real rents and construction costs were moving closely together and remained not much higher than CPI inflation. As a result of the continuing rise in house prices, the initial affordability benefits of lower interest rates and longer loan maturity for middle and low-income households were eventually dissipated by rapidly rising prices as wage gains were not commensurate. Housing became a channel of wealth redistribution (Muellbauer 2005).

Two important factors in the decline of affordability have been the competing demand from investors and the type of lending available. In France, a study indicates that by 2004 the capacity to borrow of many households was no longer large enough to match the rising prices of existing housing (Boisvieux and Vorms, 2007). In New Zealand, a central bank study concludes that “the decline of real interest rates is likely to be the cause of the rise in housing prices and the decline of homeownership rates in New Zealand since 1990” (Coleman, 2007). The study attributes this outcome in New Zealand mainly to the ability of richer investors to outbid lower-income households and young families. Generalizations across markets are risky, yet it is an obvious hypothesis to expect affordability problems to be most pronounced in the markets where housing prices have risen the highest such as Ireland, Spain, the UK, Australia and the Netherlands. Then the question will be what policies might mitigate the problem in each market.

It is worth keeping in mind that even if there had not been strong price increases, low inflation, taxation and monetary policy can affect lower income groups negatively by increasing their user cost of housing capital in comparison with higher income groups (Quigley and Raphael, 2004). Most advanced economies are facing significant affordable housing issues, especially in the superstar cities. Rental markets also matter. Pushing homeownership irrespective of buyer qualification is part of the current US subprime problems.

The case of the US subprime market

The US subprime market deserves special attention on two different accounts. First as a market segment where financial innovation appeared to be very successful in addressing the affordability problem and extending access to home ownership to new social groups, which is a challenge that few other countries were meeting

(FDIC, 2006). Second, the subprime crisis has been the trigger of the much wider financial crisis and credit crunch that is still unfolding.

Low and moderate-income households and racial and ethnic minorities have been at the center of the subprime boom (Gramlich, 2007) . "Subprime" lending refers to higher-interest loans that involve higher credit risk. A primary criterion is a FICO credit score below 620 based on the credit risk scale developed by Fair Isaac and Co (FICO). Even with a higher score, other factors such as the down payment, income characteristics and their documentation, or the property collateral can make a borrower ineligible for a prime loan. An "Alternative-A", or Alt-A loan, can be made to borrowers with marginal to good credit who are at the borderline of the underwriting guidelines for fully complying prime loans. Non-prime lending that covers both Alt-A and subprime loans rose rapidly from 11% of all new mortgages in 2003 to 40% in 2006. At the peak of the boom, the quality of mortgage loans deteriorated significantly. "Risk layering" is an informal expression that has gained wide currency. It refers to the inclusion of several distinct risky design features into the same loan whose interactions in the actual overall credit risk can be underestimated for various reasons, including a lack of adequate historical data.

After 2003, strong price appreciation and declining affordability had induced a rapid expansion of the use of "non-traditional mortgage" products (NTMs) designed to stretch the buying capacity of borrowers, both prime and non-prime, in metropolitan areas with the highest housing prices and also facing higher risks of a price decline. These new loans include "interest-only" or (I-O) loans with no principal payment for the first 5, 7 or 10 years and sharply higher payments thereafter. "Option ARMs" are I-O loans where the borrower has various payment choices every month. "Minimum-Payment" loans do not cover the full loan interest and lead to negative amortization. "Piggy-Back" loans or "simultaneous second lien" loans combine a "conforming" loan saleable to Government Sponsored Enterprises (GSEs) with a home-equity line of credit (HELOC) from the same or a different lender. Their goal is to maximize the LTV ratio while avoiding private mortgage insurance. Piggy-back loans are poorly reported "silent second loans" whose share doubled during the final years of the boom. The average size of these "piggy-back loan" packages was some 40% larger than single loans. Due to the current ceiling of $417,000 on conforming loans it has been the riskier and more costly HELOC second loan that has grown the fastest.

The US subprime case is a good illustration of the paradoxical deterioration of housing affordability during this long boom, as discussed earlier. What did not need to happen and is specific to the US is an almost laissez-faire regulatory framework resulting from the patchwork of federal and state regulators, and legislatures subject to various degrees of industry lobbying. This environment invited regulatory arbitrage and eventually facilitated unethical and fraudulent behavior by poorly regulated state-licensed lenders and unlicensed new mortgage brokers on a very large scale at the peak of the boom. There was also the lack of adequate consumer protection for the financially least-educated segments of the population. This environment encouraged the very visible deterioration of lending standards, flawed or fraudulent property valuations, manipulations of credit scores and income documents, and other problems. Gramlich (2007) has pointed out the irony of devoting the best federal regulatory work to the most mature and least risky part of the mortgage markets while leaving essentially unregulated critical elements of a new and much more risky market segment. The reputational impact for the entire US mortgage market on global financial markets has been very sharp.

The US subprime market has grown to 7¾ million loans representing 14% of the total US mortgage debt outstanding, which was estimated at about $13 trillion at the end of 2006. [12] Delinquency rates on subprime mortgages have increased sharply and tripled since 2005. Distress is concentrated among the two-third of subprime borrowers with variable-rate mortgages. Some 17% of them are already in serious delinquency including foreclosures that have amounted to 320,000 loans per quarter in 2007, a 33% increase over the previous two years. [13] Four factors are at play: unemployment is rising in middle-west states like Ohio and Michigan; stable or falling local housing prices that would prevent borrowers from refinancing even when their contracts permits it; the poor quality of loans originated in late 2005 and 2006. Most importantly, substantial payment increases at the time of the interest rate reset have been of the order of 25% to 30% for the now notorious "2/28" loans because the first two years of payments were set at interest rates below market as "teaser rates".

Many of the subprime mortgage loans that went bad in 2007 did so before their interest rate reset. Some of these loans had gone to speculators who planned to flip their houses but no longer could, others went to borrowers that should never have been qualified for a loan, and still others had elements of fraud. The bulk of interest rate resets has yet to come. Each quarter until the end of 2008 more than 400,000 subprime loans will be reset compared with 200,000 resets per quarter during the first half of 2007. A major and

[12] FRB Governor Randall S. Kroszner remarks "The Challenges Facing Subprime Mortgage Borrowers," November 5, 2007 on the FRB website.

[13] For a loan level analysis based on about 50% of all subprime loans, see Yuliya Demyanyk and Otto van Hemert "Understanding the Subprime Mortgage Crisis", Federal Reserve Bank of St Louis, 9 October 2007 [draft]. "Over the past five years, high loan-to-value borrowers increasingly became high-risk borrowers, in terms of elevated delinquency and foreclosure rates. Lenders were aware of this and adjusted mortgage rates accordingly over time. Second, the below-average house price appreciation in 2006-2007 further contributed to the crisis."

pressing systemic challenge facing the US market is how to manage loss mitigations and avoid foreclosures as much as possible, preferably on a mass basis rather than through the current slow and costly case by case process The social benefits for the households and the financial savings for lenders will be very large: current industry estimates are that 40% to 50% of the unpaid mortgage balance is lost in a foreclosure. The spillover effects for some housing markets could be large and in turn affect the US economy.

Financial innovation, global securitization and the US subprime market

While the US Savings and Loans crisis of the 1980s was about interest rate risk faced by various types of banks, the 2007 financial crisis is about credit risk diffused throughout the global securities markets. It is not limited to a sub-sector of the banking industry. Bad subprime loans have been the catalyst revealing much broader systemic problems with risk evaluation, risk pricing and ratings of structured finance products (Mason and Rosner, 2007b). Central banks and regulators are not well equipped to address present liquidity and solvency problems because these problems arise mostly outside regulated banks in unregulated and poorly documented private capital market institutions. The magnitude of problems has been even harder to estimate than in earlier financial crises. In his Congressional testimony of 8 November 2007, FRB Chairman Bernanke ventured that "a ballpark estimate" of the losses was $150 billion. If the history of past financial crises is any guide, this early figure is an underestimate.

Securitization had made the funding of US subprime loans possible because in the low interest environment prior to 2007, capital market investors were willing to assume much greater risk in their search for yield. To maximize their return on capital in a low-margin loan environment, banks moved forcefully to fee-based activities and derivatives trading. An explosive growth of derivatives markets and the creation of increasingly complex credit risk transfer (CRT) instruments took place during the last five years.

What has surprised some observers is "how toxic the securitization of [US] subprime mortgages has turned out to be for the [global] financial markets".[14] Indeed, how could credit problems in such a small segment of the global securities markets have such a disruptive and widespread impact on the global financial system? In its Financial Stability Report of October 2007, the Bank of England has put the subprime securities markets in perspective (Bank of England, 2007, Figure A). The BoE estimates that subprime securities outstanding amounted to $ 0.7 trillion in total global securities markets of $149.1 trillion at the end of 2006, which is less than 0.5% of the global securities markets. [15]

What the US subprime crisis has done is to reveal systemic flaws in the way global structured debt markets currently operate ie how these securities are structured, priced, rated and traded. This market had grown at an exponential rate since 2004. In an interesting image, Gillian Tett, Capital Markets Editor of the Financial Times, has compared the explosive growth of mortgage credit derivatives to candy floss: "mortgages are being reused to create vast volumes of securities removed from the core original asset." The global derivatives markets grew with the slicing and dicing of mortgage loan risks first through RMBS whose tranches were then further restructured into complex, opaque, hard-to-price CDOs (Collateralized Debt Obligations) often to be purchased by SIVs (Special Investment Vehicles) sponsored by banks but kept off their balance sheet (Mason and Rosner, 2007a). Banks were pleased to collect structuring fees through the entire process. So were rating agencies. In parallel to CDOs, banks created CLOs (Collateralized Loan Obligations) to fund corporate loans and IPOs. It is estimated that by the end of 2006 the gross notional value of outstanding derivatives contracts of all types had reached $453 trillion (*Financial Times*, derivatives markets review, February 2007). [16]

The subprime crisis has had a freezing effect on global capital markets much beyond the volume of subprime loans outstanding in August 2007. The reason was that nobody could tell exactly where subprime risks were held. These subprime risks had been diffused in such a complex and opaque way that investors were unable to determine which CRT instruments had been contaminated by these loans. The large impact on global credit markets in August 2007 was due to the way the highly leveraged SIVs had been funding themselves on the short-term asset-based commercial paper (ABCP) markets that various conservative institutions use to manage their short-term liquidities. These investors refused to invest in any security involving private US mortgages. The only US mortgage-related securities that the global markets will consider are those issued and guaranteed by the three US GSEs (Fannie Mae, Freddie Mac, and the Federal Home Loan Banks). Because the crisis has reached directly and indirectly into so many segments of the structured debt markets and involves assets on a large scale, its resolution may not be quick and easy. Once again, traditional behavioral dimensions of past financial crises are present: bad lending, risk mispricing, excessive leverage, agency problems and euphoria.

[14] Martin Wolf, "Securitization: life after death", weekly column, Financial Times, 2 October 2007.
[15] If we add to the $0.7 trillion of subprime RMBS securities, Alt-A securities RMBS of $0.6 trillion, jumbo loans RMBS of $0.5 trillion and non-mortgage backed ABS securities of $3.5 trillion we reach only 3.5% of the total global securities markets, (Bank of England, 2007, Figure A).
[16] The notional value of a derivative is the total value of the underlying assets. The notional size of the highly leveraged derivatives sector should not be confused with the size of the global securities markets itself of $149.1 trillion as already noted.

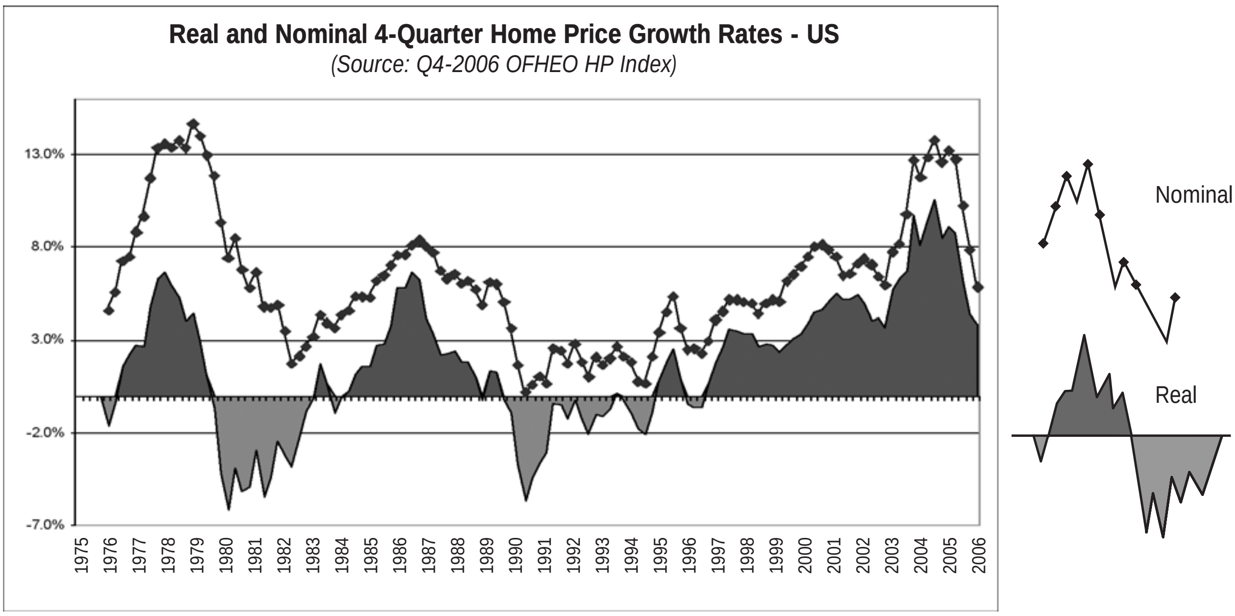
Housing and the macroeconomy as housing booms unwind

How will the various national housing booms unwind? Where will there be soft landings? Where might there be hard landings? Where are the shock absorbers in each country? How could a country's macroeconomic imbalances come into play? Could this first global housing boom now be followed by a global recession or merely some degree of global slowdown? How soon and at what price will the current financial storm dissipate? These are challenging times for central bankers and governments given the lead time of 18 months to two years that a housing downturn may take to slow down the economy while other conflicting issues such as exchange rates and commodity price inflation will also shape the proper monetary policy response (Mishkin, 2007a).

A study by FitchRatings released in July 2007 attempted to compare the risk prospects of 16 OECD countries along two main dimensions: the relative likelihood of a housing correction occurring; and, how severe the effects of lower prices and higher interest rates would be on households and on the wider economy. It finds that Italy, Japan and Germany are at the low risk end while Denmark, New Zealand and the UK are the most vulnerable to shocks. In general, it finds that Nordic and "Anglo-Saxon" economies have a higher vulnerability score. It also finds that Canada and the US score relatively favorably in the analysis. Yet it warns that "housing overvaluation and increased household vulnerability are prevalent in almost all the advanced economies". An important gap that this study acknowledges is the impact of the construction sector and the degree of balance in housing supply conditions.

Actually, the first economy to be exposed to a major shock is the US housing market through the dual impact of the subprime crisis and the pro-cyclical mortgage credit crunch in progress. The US housing sector attracts global attention not merely because of its subprime market problems and the financial crisis it has triggered, but because the US economy has so far been the leading engine of global economic growth this decade – with China playing that leading role for the first time in 2007. With a GDP of $13.2 trillion, the US economy represents 27.4 percent of global GDP in 2006. The US financial system itself with $50 trillion in assets represents 36% of the $140 trillion global financial system in 2005 (McKinsey Global Institute 2007). The odds of a hard lending in the US are rising fast with potential negative consequences for the global economy. Comparing the unwinding of the two US housing booms of the 1970s and the 1980s, the current housing price downturn could become quite severe, see Figure 5.

FIGURE 5: Current US housing price boom compared to 1970 and 1980 booms



Source: Man CHO, April 2007

Among the channels of transmission of a housing downturn to the macroeconomy the most important is new housing construction. Edward Leamer in his extensive research on US business cycles found that a decline in housing construction has been a precursor to 8 out of the 10 past recessions. The two exceptions were when the Korean and Vietnam wars provided an offsetting stimulus to demand (Leamer, 2007). So far, US housing starts have fallen from an annual rate of 2.27 million units in January 2006 to 1.33 million in August 2007, a very large drop of 41.5% (Case and Quigley, 2007). The likelihood that housing construction also plays a major role in the business cycles of other OECD countries is rather high as the multiplier effects of new construction are large everywhere. Another channel of transmission of somewhat lesser magnitude than new construction is the new income generated by sales of existing housing units for brokers, mortgage lenders, appliance companies and others (Case and Quigley, 2007). In spite of the withdrawal of some units, the inventory of unsold houses has risen sharply since 2006.

There is a significant debate about the impact of the wealth effect of rising housing values on consumption (Case, Quigley and Shiller, 2005; Muellbauer 2007; Feldstein 2007). This effect also depends on the structure of mortgage markets. The possibility of extracting housing capital gains through mortgage instruments or "mortgage equity withdrawals" (MEW) has been high during the boom in Australia, Canada, the Netherlands, the UK and the US, but not in France, Germany, Italy, Japan or Spain (Girouard et al, 2006a). Because of the very high rates of appreciation of housing since 2000 combined with the very low cost of mortgage equity withdrawals it seems very likely that the present boom has induced additional consumption, especially in the US where net MEW funds rose steadily and significantly during the second phase of the boom reaching $914 billion and 10.1% of disposable income in 2005 while the personal savings rate became negative (Greenspan and Kennedy, 2005 and 2007). The disappearance of this wealth effect in the US now can only dampen consumption significantly. The additional impact on consumer confidence also needs to be considered.

The third important factor affecting the US economy is the feedback from the financial sector on housing through the significant tightening of mortgage lending by all banks and the suspension of net new lending to the subprime sector. The mortgage credit crunch adds to the probability of a US hard lending and a recession, unless effective policies can be identified and implemented in a timely manner.

What are the prospects regarding the unwinding of this first global housing price boom? In the US, new construction peaked in 2005 and the housing price downturn that started in 2006 is expected by some officials to reach bottom only by the end of 2009. The intensity of the price correction will differ across cities and segments of the housing market. Regarding the broader prospects of a housing-led US recession, the jury is still out. In spite of recent Federal Reserve actions, the odds of a US recession rather than a soft landing have increased very significantly due to the financial crunch triggered by the subprime crisis and the difficulties in containing financial institution losses and restoring liquidity in the financial markets. At the global level, the housing downturn has already begun in most countries. The data also suggests that some countries are in better position than others to experience a much preferred soft landing.

Another major dimension of the unwinding of the global housing price boom comes from the damage inflicted upon global structured debt markets by the US subprime crisis, which is real but of unknown scope yet. There is a growing risk that the impact of this financial crisis will be felt on the real economy side of the US and also other advanced economies through a credit crunch of unknown intensity combined with higher interest rates. Given the important role of expectations, rapid currency shifts and volatile commodity prices, much will depend on the skills and ability of central banks and governments to cooperate as well non-financial external events. A failure of these corrective policies could be quite costly for the long-term growth of the countries involved, and for the global economy (Cerra and Saxena, 2007).

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Mortgage Liquidity Facilities

By Olivier Hassler and Simon Walley [1]

1. Introduction

This note brings together some of the policy lessons learnt in the creation of mortgage liquidity facilities around the world. It looks at the main benefits which can be derived from the creation of a mortgage liquidity facility and the conditions under which they can operate most effectively. The note details some of the pre-conditions necessary for the creation of a liquidity facility. There is summary of some of the key techniques used in obtaining security over the mortgage collateral. Lastly two important aspects which are crucial to building confidence in mortgage liquidity facilities are how they are regulated and their corporate governance. The note brings in relevant examples from liquidity facilities which have been set up as far back as 1987 (Malaysia), from developed countries (France) and from facilities still under discussion (West Africa). Overall the note points to the valuable developmental role that mortgage liquidity facilities can play in nascent mortgage markets as an intermediary between capital markets in the primary mortgage markets. This is especially the case in markets where the mortgage lending infra-structure and environment have not developed sufficiently to allow for other more sophisticated alternatives such as securitization or covered bonds.

2. Main function and purpose

A Mortgage Liquidity Facility (MLF) is a financial institution designed to support long tem lending activities by Primary Mortgage Lenders (PML). The core function of a MLF is to act as an intermediary between PMLs and the bond market, with the objective of providing long term funds at better rates and under better terms and conditions than PMLs might be able to obtain if acting alone. In addition, a MLF can provide temporary liquidity support to lenders through collateralized short term operations such as repurchase agreements.

The need for such an institution arises because of the maturity mismatch between the liabilities and assets of PMLs. Capital market funding is an important way to overcome such mismatches and in some cases it can be the only route for institutions with small or no deposit bases (non-bank specialized lenders, small banks).

Instruments to raise funds directly from the capital markets are not always available, or might be too costly or complex given the stage of market development. For instance mortgage securitization requires a detailed legal and accounting framework, as well as a substantial mortgage portfolio in order to make the operation economically viable. In addition investors will require detailed portfolio information on the valuation of the credits and on pre-payment risks. This requires large portfolios to obtain meaningful data, otherwise the issuer would have to pay a premium to the market where there is insufficient information.

Large commercial banks may not need an external source of cash, but they still have to be able to manage their liquidity if they extend long term loans using their deposits. Holding marketable bonds or being able to pledge loan portfolios for short term advances are ways to address this requirement.

3. Why create a Mortgage Liquidity Facility?

The impact of MLFs can be critical for the development of mortgage lending. In situations where lenders are reluctant to engage in large scale maturity transformation - because of macro-economic instability or fear of deposit runs for instance - or if the limits set for such transformation have been reached[2] , these institutions can have a significant catalytic effect on the growth of mortgage lending. This was for instance clearly the case in Malaysia or in Jordan.

Overall the key benefits of MLFs can be summarized as:

- The provision of secure long term funding at attractive rates thus lowering the cost of funds, which can lead to a lowering of mortgage rates, thereby improving affordability and extending the range of potential borrowers.
- In emerging markets where interest rates and inflation can still be relatively volatile and dampen confidence in the markets, the availability of long term fixed rates can help provide a degree of certainty which can help the markets develop with confidence.

[1] Housing Finance Unit, Financial & Private Sector Development, World Bank, Washington DC.
[2] Such limits can stem from regulatory provisions – as was the case in Pakistan recently with the capping of banks' mortgage portfolios – or from internal policy

Box 1 – Catalyst for Market Development

Jordan Mortgage Refinancing Company (JMRC)

JMRC played a significant role in the development of the Jordan's mortgage market. It was established in 1996 with the help of a World Bank loan. It was set up at a time when the state housing bank had withdrawn from mortgage lending to focus exclusively on commercial banking. It has 16 shareholders from both the public and private sector. In a few years, the number of lenders active in mortgage lending increased from two to ten, and the stock of mortgage loans increased from JD 100 million in 1997 to JD 336 million at end 2001 (USD 470 million), reaching 7% of bank advances overall. Down payments required from borrowers declined steadily (as low as 20% or 10% compared to 50% or more before), while loan maturities more than doubled and are now generally between 12 and 15 years, with some lenders offering up to 20 years. JMRC's impact has been substantial with the total of refinanced loans amounting to $215 million by end of 2005.

- Allowing greater competition in the mortgage market. The introduction of a MLF means new institutions can enter a market which was previously restricted to those with either a good credit rating or to those who had invested in a branch network and had significant deposit collection capabilities. MLFs therefore enable a more diversified set of lenders to develop than just large commercial banks, and can be a driving force for competition on the primary market, another factor promoting efficiency and affordability.

- Leveraging of existing funding sources. Typically a PML will also be a deposit taker, often carrying a large supply of short term liabilities. Whether it is for regulatory reasons, economic instability, inflationary environment or general risk averseness, the short term liabilities are not always easily converted into longer term assets. A MLF provides a back up and allows for better management of the balance sheet. The short term deposits can therefore be used for long term lending, safe in the knowledge that the MLF will be there as a lender of last resort .

- By acting as a central refinancing platform, they are able to act as a force for standardization in the market, pushing PMLs to adhere to best practice. The MLF is able to set criteria for the types of loans it will refinance, including standardized documentation, processes, risk characteristics, etc. Standardizing market practices allows for greater transparency, allows the creation of market information systems, which in turn can lead to better risk management better market and consumer regulations and an overall lowering of the risks associated with mortgage lending.

- Acts as an intermediate step on the path to a full secondary mortgage market. Whether it is the lack of adequate legislation, the absence of credit bureaus or the absence of rating agencies, many countries are not able to directly make the leap from funding mortgages through short term deposits to refinancing them on secondary mortgage markets using covered bonds or securitization. MLFs provide an interim step which connects capital markets to the mortgage markets but with limited complexity or transfers of risks. It provides the long term funds necessary for the market to grow and evolve, and allows time for the growth of the infra-structure necessary for risk transfers to take place.

- Act to deepen the financial market more generally by providing a long term investment to institutions with long term liabilities. Institutions such as pension funds, social security funds or insurance companies which have long dated liabilities are not always able to match these adequately solely using public debt issuance. So often they engage directly in the mortgage market or real estate markets (both commercial and residential) often with poor results.
The MLF acts as an efficient way of connecting long term investors with the institutions generating long term assets.

- MLFs can be used as tool for delivering policy objectives such as the promotion of affordable housing or the promotion of local currency lending. If managed fully a MLF can be used to pursue affordable housing objectives without necessarily distorting the objectives of market based pricing. The MLF may be able to set specific criteria for the refinancing of loans to particular groups of society such as low income groups or slum dwellers. Balancing these objectives in a way that does not cause market distortion and that does not require large fiscal resources can be very challenging however.

[3] This is dependent on the loans having been originated meeting certain eligibility criteria for refinancing. Riskier loans are therefore less easily refinanced and present greater liquidity risks.

Box 2 – MLF force for innovation

Cagamas Berhad (Malaysia)

Cagamas is one of the earliest and most successful examples of a MLF. It was created in 1987 as a public/private partnership in which the Central Bank of Malaysia has a 20% stake, and financial institutions, its potential users, 80%. The objectives for the new entity were a) to promote home ownership by providing liquidity to the financial institutions, to enable them to give out more housing loans, particularly to low and middle income groups; and b), to develop the local bond market.

One of the key features of Cagamas has been its willingness to change, adapt and innovate as the market has grown. For a long time, Cagamas offered only one product: the purchase of floating rate mortgages with recourse against the sellers. Starting in 1994 it diversified its services, to include the refinancing of leasing agreements, fixed rate loans and Shariah compliant instruments like Bai Bithaman[4] Ajil or Ijara[5]. It funds itself through the issuance of unsecured bonds, among them Mudharabah and Bithman Ajil bonds. More recently, in 2004, Cagamas entered the securitization market for the first time.

Cagamas had a clear impact on the development of Malaysia's mortgage market. Mortgage loans outstanding grew from RM 20 Billion to RM 183 Billion (about $51bn) between 1987 and 2005, and the Malaysian market experienced the 1997-1998 South Asia liquidity crisis to a much lesser degree than neighboring countries. Cagamas' market share, which peaked at 41% in 1997, progressively decreased afterwards. Its balance sheet amounted to RM 24Billion in 2005 (about $7bn), half of which is leasing finance.

This relative decline in its market share is a testimony to the role it has played in building the market. Its role now is mostly a back up function, which was clearly evidenced by its activity surge during the Asian financial crisis.

4. When to create a MLF?

The two main pre-conditions for the creation of a MLF are that effective mortgage legislation is in place which allows for repossession of a property on a defaulted loan and secondly that a fixed income market exists even if in its initial phase.

Ideally the mortgage market would already benefit from the presence of a credit bureau, efficient mortgage and land registration systems, efficient judiciary, appraisal industry and the other institutions which help lower transactions costs and lower risk. However the reality is that many of these market features only develop once mortgage lending is underway. The MLF therefore fulfills a critical catalytic role of providing the long term funds which allows loans to be made which in turn acts as an inducement for the creation of the risk management infrastructure.

A MLF will invariably rely on the issuance of bonds as its source of long term funds. It therefore requires a minimum infrastructure in place covering securities regulation, settlement systems and pricing. The larger and more liquid the market, the lower the spreads on the bonds. In addition, the longer the maturity that can be issued the easier it will be for the MLF to fulfill its Asset/Liability Management obligations. However, the government debt market can sometimes be under-developed or very short term. In particular, unless there is regular issuance of key benchmark bonds of different maturities, it is very difficult to build a yield curve and when pricing new issuances a higher spread is likely to be required.

It is worth noting that MLFs are not necessarily constrained by the size of the market or the need for specific enabling legislation. Unlike securitization or covered bonds which require a reasonably active market which has reached a critical mass, a mortgage liquidity facility can serve a useful purpose in markets which are just developing. This is because the bonds issued by the facility are not directly linked to the mortgages, which means that a bond issuance can go ahead at any time without the need for a warehoused portfolio of mortgages ready to be funded. This does entail the management of liquidity and interest rate risk on the part of the MLF. [6]

5. How do MLFs operate?

On the asset side, MLFs normally do not engage in any other activities besides providing funds to primary lenders, which is done in such a way as to minimize any possible risks in order to achieve the lowest spread to Government bonds as possible. Being seen as a secure low risk institution is a crucial in gaining a good rating for the bonds which they issue.

(a) Taking loans as security

First, they take the underlying mortgage portfolios as security. This is done either (i) by extending wholesale loans to the mortgage lenders collateralized by the lenders' mortgage portfolios – e.g. Jordan, Algeria -, or (ii) by directly buying mortgage portfolios "with recourse" from the originator. This means that the originator is bound to replace any loans which go into

[4] Deferred Payment Sale, with single bullet payment made at maturity which is calculated using a discount rate to build in a profit margin.
[5] Leasing product which can be structured in different ways to allow for hire-purchase agreements.
[6] MLF may require market standing or a rating. Since rating agencies are often not present in the markets where MLFs are developing, some government backing (eg central bank shareholder participation) in the initial phase can be necessary to get bond issues off the ground.

default with performing credits (Cagamas system)[7]. Therefore MLFs' primary exposure is to the mortgage lenders themselves, and it is only in the case of the mortgage lenders default that the loan portfolio would be required as an additional security.

Second, MLFs typically have strict lending requirements: (i) for the refinanced originators, that must meet safety and soundness criteria to be eligible to the facility, and are subject to concentration limits; (ii) for the quality of underlying assets – typically mortgage rank, Loan-to-Value ratio, credit scores, residential purposes etc. It is worth noting that MLF's can be customized to the profile of Islamic Housing Finance Products, as demonstrated by Cagamas. These lending requirements imply a series of due diligence checks, reporting obligations and portfolio audits on both the mortgage originators and on the underlying mortgage portfolio – generally done through samples.

The MLF can obtain security over the mortgage collateral in a number of ways; the easiest and cheapest is for the assets to be pledged or listed. This is effectively a promise by the primary mortgage lender that it has wholly allocated certain assets as collateral against the loan advances form the MLF. This method does carry some risk: in the case of bankruptcy it may not be clear who would have the rights to the mortgage assets. Therefore, earmarking and ringfencing underlying mortgages is preferable. Also, a full pledge is safer than a preferred lien in case of insolvency. In the French system, a higher degree of security is conferred to CRH by law. The mortgages are assigned to the CRH liquidity facility using promissory notes which automatically transfer ownership rights of the mortgages to the MLF in case of the originator's default. This system is completely immune to third party claims on the assigned assets.

The delivery method - purchasing the mortgage loans - is typically the most secure. As the legal owner of the mortgages the MLF would have the rights to dispose of them if necessary. In the case of disposal it is usual, however, to give the originating institution the right of first refusal to repurchase the assets, which in any case it would still be servicing. Full recourse means that, if the mortgages used as collateral go bad, the primary mortgage lender has to replace them with an equivalent asset; if this proves difficult it may be able to use a substitution asset with an appropriate discount.
In addition, MLFs must be protected against a fall in the value of the collateral. This can happen either because of market fluctuations, or because the replacement of defaulting loans in the cover pool does not happen continuously. MLFs address this issue by requiring the over-collateralization of refinance loans by underlying mortgages. Typical over-collateralization levels would be of the order of around 120% of the level of advances

(b) Issuance of bonds

On the liability side, MLFs only have one activity: issuing general debt obligations, typically on the bond market. Because of the entities' extreme specialization, their

Box 3 – Achieving Operational Efficiency

Caisse de Refinancement de l'Habitat (France)

CRH was created in 1985 following the passing of a law which aimed to facilitate the refinancing of loans through the use of bonds. CRH is entirely owned by the institutions which make use of the facility, which currently number 18. CRH's refinanced portfolio amounts to around $25bn (2005) equivalent to around 4% of the French market.

The business model of CRH is a simple one based on minimizing financial risks. This is achieved in a number of ways:

i) The assets and liabilities are matched as closely as possible on a marked to market basis. CRH issues bonds matching the composition of its assets.

ii) Pre-payment risk is eliminated through a requirement that the pass-through of pre-payments be done at their market value

iii) Repossession is facilitated by the 1985 law which gives CRH a privileged security interest in the underlying housing loan

iv) Over-collateralization is set at a minimum of 25%. There is no requirement to remove bad loans but the over-collateralization is monitored on an ongoing basis and cannot drop below 25% level.

v) Each of the members of the facility are committed to providing CRH with liquidity support within certain limits should it be required

Given the simple model and its low risk profile CRH is able to operate with very low overheads, the organization counts just 9 staff, and is able to run its business model without charging a margin to its borrowers. Its profits stem solely from the return it makes on its capital which is then paid out as dividends to its members.
CRH represents a good example of efficient intermediation between lenders and the capital markets. The bonds it issues are highly liquid and benefit from a favorable risk weighting of just 10%.

[7] These sales are therefore not "true sale" in the securitization sense

bonds need not be collateralized. Typically when they are rated, the bonds would receive the highest grade available. This reflects the low risk nature of the MLF, which benefits from a number of safeguards to protect it against the main risks it faces. The two key risks for an MLF are a default by the refinancing institution and secondly a deterioration of the portfolio of loans it is holding as collateral against its loan to the primary mortgage lenders (PML). The safeguards take the form of over-collateralization, ability to call for more capital on its shareholders, recourse requirements on the collateral it receives and in some cases government backing in the form of guarantees for the MLF itself or its bond issuance.

Unlike covered bonds or securitization, they do not need a specific legal and tax framework – like exemptions to the general bankruptcy law for the former, or design of a true sale mechanism for the second. Furthermore, contrarily to securitization, they do not require a large volume of seasoned loans, which is a necessary requirement to value the risks (default, prepayment) which are transferred to investors. Nor do MLFs require the credit enhancement structures which can be expensive, or the equally expensive transaction and deal structuring costs which are characteristic of securitization. Assessing the credit risk of the mortgage portfolio is a major function of MLFs, which can focus on it better than non-specialized investors. MLFs can therefore be seen as ideally suited to the relatively early stages of market development[8]. Later on, they can help the market achieve a higher level of sophistication and be used to promote mortgage securitization once the proper conditions are fulfilled. The two instruments can however co-exist, leaving users and investors free to choose between different combinations of features, risks and prices. Cagamas has started doing just this in 2004.

(c) Balance Sheet Management

Another critical operational feature of an MLF is the way assets and liabilities are matched. Generally, in emerging markets, the duration of the bonds is shorter than the mortgages they refinance. A frequent approach (Jordan, Palestine, Malaysia) is for the MLF to turn over its debt by extending medium term refinance loans. In this case, the PMLs would typically reset the interest rates on their mortgages in line with the new funding rate following each change. This means PMLs do not incur interest risks in this situation. They would face only a minimal liquidity risk in the case of the MLF being unable to refinance the loans if it was unable to roll over its debt. In Malaysia, the rate resetting on the mortgage loans is disconnected from the refinancing, which creates at the minimum a basis risk for the lenders. But the gap between bonds - generally with a bullet repayment profile - and mortgage loans - amortizable on long periods - can stay open. This results in balance sheet mismatches for the lenders or the MLF, and a need to manage the mismatches, in particular the interest rate risk. Therefore, this situation is only viable in mature markets where hedging instruments are available. The two possible solutions are to either keep the mismatch at the originators' level - this is the case of the French CRH [9] - or to transfer it onto the MLF's balance sheet. This is the option used by the US Federal Home Loan Bank system, the two oldest examples of such facilities. Finally, an important concern can be the "pipeline" risk stemming from the time discrepancy between bond issues and the disbursement of advances. MLFs must be reactive issuers, and need to have access to the bond markets on tap.

(d) Pricing

The intermediation role carries a price which varies from one country to another, depending on the size of the balance sheet, the risks transferred to the MLF, and its corporate structure. In the case of the CRH in France, a small organization based on the principles of mutuality, which manages large assets and does not incur financial risks, there is no fee on the loans, so the banks receive the funds at the same rate that the bonds are issued at. The only profit it makes is from the investment income derived from its capital, to which users must subscribe. Younger facilities without large scale benefits charge up to 1% over their cost of fund. In between, American Federal Home Loan Banks' interest spreads amount to 25 basis points on average, and Cagamas' intermediation cost is about 70bps.

6. Governance and Public Support

The "public good" function of MLFs translates in two frequent components of their ownership structure: a cooperative approach, and government participation.

(a) Cooperative Approach

The joint ownership, spreading of risk and stronger capitalization allow MLFs to attract more favorable credit rating than individual PML lenders could attain on a standalone basis. This enables small lenders to tap into funding sources at rates not otherwise accessible to them.

In many cases, given the extensive state involvement in the creation of a MLF, and the initial start up risk, the main equity holder in the initial phase of a MLF is often the State or a State related institution. This can change over time with users taking greater private equity participation, as the market grows and the refinancing needs of the sector require equity injections into the MLF. Although the government could continue supporting it, once the operation is underway, private equity provides greater flexibility. A good level of capitalization is especially important in order to maintain a good credit rating.

[8] However, the infrastructure for mortgage lending must meet some basic requirements in terms of property and security rights administration, and efficiency of mortgage collaterals. Obviously, a functioning bond market must also exist.

[9] The CRH provides refinance loans that mirror its debt on a marked-to-market basis. Mortgage prepayments can be passed on to the Facility advances, but also on a marked-to-market basis – for instance by buying CRH's bonds in the market and delivering them as in-kind payments.

Box 4 – Giving smaller lenders access to the capital markets

Federal Home Loans Banks

The FHLBs were created in 1932 by Congress in an effort to fill a dire need for long term funding for mortgage loans. The Great Depression had undermined the existing banking system and with it the possibility of buying a home. The mission of the FHLB is to provide cost-effective funding to members for use in housing, community and economic development; to provide regional affordable housing programs, which create opportunities for low and moderate income families.

One of the key characteristics of the FHLB is the way it allows even relatively small savings banks access to the capital markets on terms which are close to those available to much larger institutions. Membership is open to a broad range of institutions including commercial banks, savings institutions, credit unions and insurance companies. The only requirement is that they purchase a capital stake in the FHLB which is proportional in value to the size of their assets and mortgage portfolios. In return, they may borrow, on a secured basis, at generally attractive rates from its FHLB. Beside long term advances, FHLBs provide short term loans secured by mortgage portfolios.

In fulfilling this mission, the FHLBs' primary business is to make advances to their members. Members - more than 8,000 overall - are savings institutions and, since l989, a growing number of commercial banks. Other financial institutions that are eligible to membership include credit unions and insurance companies, but few of these have chosen to join. Mortgage banks are not eligible for membership. The twelve exisiting FHLBs refinance around $1,000bn or 11% of the US residential mortgage market; however given the small average size of their members, they in fact cover approximately 80% of US financial institutions.

Box 5 – Using MLFs as a tool for achieving policy objectives

Example 1: Federal Home Loans Banks – Promoting affordable housing

The FHLB banks deliver on their commitment to promote community development through two housing programs: the Affordable Housing Program (AHP)[10] and the Community Investment Program (CIP)[11].

Since their inception in 1989, AHP has provided over $2.9 billion dollars in grants to help create 575,000 housing units, and there have been over $47 billion of CIP-funded loans, which have financed nearly 600,000 housing units and thousands of economic development projects.

Each year, the FHLB’s must pay 20% of their profits to REFCORP which is the Resolution Funding Corp, an entity established to contribute funds for support of the savings and loan deposit insurance fund. An additional 10% is then paid to support the AHP program. This represents an implied tax on the cost of the funds, but it is in part compensated for by exemption from income tax. However to maintain low rates and good levels of return for shareholders, the FHLBs are much more engaged in investment activities in MBS which also increases their risk profile.

Example 2 State Mortgage Institution – Promoting local currency lending

Ukraine’s State Mortgage Institution (SMI) was created in 2004 with the dual aims of providing long term funds, and to promote local currency lending.

As with many other transition economies, mortgage lending in Ukraine is dominated by foreign exchange loans, notably dollar lending. This carries a high risk for lenders but also for the borrowers who open themselves up to foreign exchange risk. The SMI therefore will provide PMLs with an affordable source of long term funds in local currency which will offer competitive rates compared to the dollar ones. This needs to be supplemented by regulation to effectively put a price on the foreign exchange risk to level the playing field between the loans. At present almost 95% of mortgage lending in Ukraine is denominated in foreign currency, so there is a clear need for such an institution. Its role will not only be to provide long term funds, but through its issuance of bonds, provide a long term Hryvnia asset which pension funds, banks and insurance companies can invest in. Through its bond issuance it will also provide greater long term liquidity which will allow for the extension of pricing points on the Hryvnia yield curve.

2007 marked the start of SMI’s refinancing operations, together with its first bond issuance. Its operations are expected to scale up during 2008 and beyond.

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[10] AHP provides subsidies for low income owner occupied or rental housing for individuals or families with income at or below 80% of the median income in that area.

[11] CIP provides funds at below market rates for lending to low and medium income families whose income should be at or below 115% of median in that area. Loans can be sued for purchase, renovation or development of units to benefit low and medium income groups.

(b) Government Support

Even when it does not participate as a shareholder, the government usually takes a lead role in the creation of the MLF. The objectives that a government might have in setting up a MLF would usually aim to complement its overall housing policy. Typical objectives might include: improving affordability through lowering of mortgage interest rates; increasing the level of home-ownership, with all of the associated externalities; and implementing a social agenda for housing, which may include special conditions for refinancing of subsidized loans or loans to specific population segments. Therefore, generally government provides support at least during a ramp-up phase of MLFs independently of holding a stake in their capital. A typical enhancement provided by government during the initial phase of a MLF is to guarantee the bond issuance of the MLF. This provides added security for the bond investors and allows the MLF to begin operations and have some initial working funds which it can lend out. In some cases, MLFs enjoy special regulatory or tax treatments.

It is important that the initial support ceases once the facility has reached a level of self-sufficiency. Making special privileges a permanent feature will generally result in market distortions, but additionally it is the market which generally requires the MLF to be viable on a long term stand-alone basis which creates confidence in its bond issuances. Therefore, special status should be used only during the initial 'setting-up' phase of a MLF, and the removal of any State backing should be planned from the outset through the inclusion of a "sunset" clause when creating the MLF. In France, the law that established CRH provided for a government guarantee, but stipulated that it would apply only for the first 3 years of the company. In Malaysia, Cagamas' most significant tax and prudential advantages were abolished in 2004.

(c) Corporate Governance

MLFs often fall in the slightly ambiguous position of being quasi-governmental institutions but with a clear market objective to fulfill. The State, as the largest shareholder and equity provider, can be tempted to assume control of the management of the MLF. A further difficulty facing MLFs is the fact that its customers are also often its main shareholders, which can create conflicts with competition rules and business confidentiality requirements.

Good governance rules must therefore be cautiously designed to ensure the efficiency of a MLF. MLFs must be seen as entities that address a gap in the mortgage and bond market or correct a "market failure", rather than as government tools exerting undue influence over corporate decisions which may distort an MLF's mandate [12]. The risks are more limited if the public sector is represented by the central bank – as is the case for Cagamas and JMRC in Jordan, which have both their national central banks as significant shareholders. This may however generate conflict of interests with the supervision function. The best solution is typically for the MLF to be treated as a temporary public-private partnership with a commercial mandate, and to limit the control that the public sector can exercise. This can be achieved (i) by capping its voting power, and (ii) use of a two tier management system, with a strategic/supervisory board with government officials, and an operational board to run the company.

7. Regulation of Liquidity Facilities

Transparent and effective regulation of MLFs is key to building confidence in the bonds they issue. A strong regulator is important in instilling the confidence in the MLF which is required by investors. However, given the unique nature of the institution it is often difficult to decide by whom and how the MLF should be regulated. Given that it is not a depositary institution (FHLB is an exception) or a banking institution as such, the general banking regulatory framework may be inappropriate. Nevertheless strong capital ratios are necessary for maintaining investor confidence. The role of the regulator would include powers to review financial information, monitor capital adequacy, to review risk management procedures, to assess the quality of management. Even if regulated by the Capital Market Authorities, MLFs should be subject to capital adequacy standards: whilst not depositary institutions, they do carry an important level of systemic risk and moreover they should not present opportunities for regulatory arbitrage.

[12] A counter example is provided by the Ukrainian MLF, whose Board comprises mainly representatives of ministries, of the National Bank and the Financial Services regulator, with just one representative from the industry in the form of the President of the Ukrainian Mortgage Association (UNIA).

Securitization of mortgage loans as a housing finance system. To be or not to be.

By Victor Mints [1]

Introduction

The period of fast development in the mortgage lending system in several transitional countries including Russia during the first years of the 21st century coincided with the period when securitization of mortgage loans was the most fashionable method of housing finance. The method was based on converting loans into securities which included: bundling mortgage loans into pools, selling these pools to SPVs (Special Purpose Vehicles), issuing securities based on the mortgage loans, making them rated by rating agencies and selling the securities to investors. This method of housing finance has become extremely popular among Russian bankers because securitization enabled them to tap cheap resources from abroad and provide mortgage loans at attractive terms competing with mortgage programs of state - owned institutions (banks and a secondary mortgage market agency).

Through the first years of the century securitization was extremely popular among mortgage lenders, not only in Russia but all over the world. In developed countries numerous well-established financial institutions gradually started to substitute other methods of finance by the securitization method. The share of the mortgages financed by issuance of securities has grown in many banks in developed countries. For example in the notorious Northern Rock, the share of mortgages financed by issuing securities was close to 50%.

One of the specifics of Russia was that in that country rather a big number of banks used securitization as the only method of housing finance. So nearly 100% of their mortgage portfolios were financed by securitization. Even among the top 10 Russian mortgage lenders, there were banks that relied exclusively on securitization (for example Moskommertsbank or City Mortgage Bank).

More than that. These banks were initiated as specialized mortgage institutions whose business model was based on securitization. They had no other sources of finance and never planned to have any. The whole business process of these banks was dedicated to the goal of preparing securities that would satisfy the requirements of potential investors. Since it was clear that the investors in their turn would rely on rating agencies' assessments of the loans, the methodology of assessment developed by the agencies became the major driver for the mortgage lending business process (underwriting, processing, and servicing) for these banks. The banks tried to create a portfolio that would satisfy the rating agencies rather than their own risk management.

It is clear that when investors shunned from securities based on mortgage loans, these specialized banks suffered even more than such banks as Northern Rock whose financial sources were diversified. (Only from one point of view they suffered less. There was no run on these banks because they had no deposits). The most prudent specialized banks have secured in time credit lines from foreign financial institutions (mostly from shareholders of these banks). Others were forced to radically reduce their mortgage lending activities. In most cases they achieved thise result by increasing mortgage interest rates to a level above the average on the market. For example, in September 2007 Moskommertsbank increased its mortgage interest rate by 1% while Ursa Bank increased its by 2% in spite of the fact that all the major players kept their rates intact.[2]

Currently several of these banks are in a dangling position. They should as soon as possible clarify for themselves why the business model they have selected turned out to be so vulnerable to liquidity risk and whether the model can be amended and used in the future or whether it should be substituted by another financial model. The same problem concerns regulators.

This paper will argue that a housing finance system based on securitization of mortgage loans has imminent shortcomings, which inevitably make the system vulnerable to liquidity risk.[3] The

[1] Housing Finance Expert, at Financial Corporation Uralsib, Russian Federation.
[2] See Interfacs news agency report http://www.rusipoteka.ru/research/interfax-1.htm.

shortcomings are associated with the way the fundamental risks of mortgage lending are distributed between participants of the mortgage lending process if securitization is chosen as a housing finance system.

It is well known that fundamental risks of mortgage lending cannot be made to disappear but can only be distributed and redistributed between various participants involved. For every risk, a participant can be identified that is better equipped than others equipped to manage the risk. We will call the participant a "risk-relevant" participant. Different housing finance systems are characterized by different schemes of distribution of risks between participants and (unfortunately) by the risks they appoint to various non-risk-relevant participants.

It is very important (but unfortunately rarely noticed) that under various housing finance systems some of the risks are allocated to non-risk-relevant participants with the following negative effects:

- the risk margin added by the participant to hedge the risk tends to be higher than it would be if the risk were managed by a risk-relevant participant. So mortgage interest rates for final borrowers will increase.
- the value of other risks often increases dramatically so that mortgage lending becomes a riskier business.

The purpose of this paper is to demonstrate that the unprecedented growth of liquidity risk under the housing finance system based on securitization of mortgage loans is just one of the examples when one of the risks (liquidity risk) has grown because another risk (credit risk) was transferred under the system to the non-risk-relevant participants.

Major housing finance risks

There are several fundamental risks inof a housing finance system. The most important of them are credit risk, interest rate risk and liquidity risk.

Credit risk in housing finance systems usually means the risk that the borrower will default and the loan owner (or lender) will not be able to cover its losses by means of foreclosure. Below we will refer to thise risk as to the borrower credit risk.

Intermediary credit risk is the risk of default of the financial intermediary that attracts financing for mortgage loans from the market (capital market or deposits markets) financing for mortgage loans. Since in our case the intermediary attracting investments is the mortgage lender we will name the risk – the lender credit risk.

Interest rate risk is the risk that interest rates will rise. Liquidity risk refers to inability to get access to the cash when necessary.

Before turning to the analyses of the system based on mortgage loans securitization we will have a brief look at the traditional housing finance system Particularly we will have a look at how under this system allocation of one of the risks to non -– risk-relevant participants causes increase of another risk.

Traditional housing finance system

Within a traditional housing finance system, a lender (bank, building society, credit union, thrift, etc.) is typically responsible for origination, servicing, funding and portfolio management of mortgage loans The sources of funds for the mortgage loans under the system are debt obligations of the lender. These obligations are in most cases deposits but also may be in the form of mortgage (or non mortgage) bonds, dedicated savings, loans from other financial institutions or from special liquidity facilities, etc.

If the mortgage loans provided by the lender are fixed rate loans, the risk distribution under the system is the following:

- borrower credit risk – the lender,
- interest rate risk – the lender,
- liquidity risk – the lender,

If we start analyzing the risks from the point of view of whether they are managed by risk-relevant or non-risk-relevant participants we will see that the borrower credit risk is managed by a risk-relevant participant – the lender. The lender is the best equipped among all the actors to bear the risk since it knows the borrower, the property and in many cases the specifics of the local market and local community.

On the contrary the interest rate risk is borne by the lender, which is poorly equipped to mange the risk (it is a non-risk-relevant participant). The lender borrows short (mostly deposits) and lends long (long-term mortgage loans). It means that each mortgage loan through its life is financed by a chain of several short-term deposits. Each of the deposits is attracted by the bank on a particular day at a market interest rate for deposits of that day. Often, the loan on another hand was issued by the bank at the market interest rate for mortgage loans of the day of the issuance at a rate fixed for whole life time of the loan.

If, through the period of the mortgage loan, life the market interest rate for deposits rises, the margin of the bank (the difference between the mortgage interest rate and deposits interest rate) decreases and may even become negative, causing instability or even the bankruptcy of the bank.

By changing the form of lending from fixed rate loans into ARMs (adjustable rate loans) interest rate risk is transferred from lenders to borrowers. But since the borrowers are also not equipped to mange the risk, the transfer causes another misplacement of the risk from one non-risk-relevant

[3] Liquidity risk will be defined below.

participant to another. This misplacement can also result in growth of another risk and another risk's growth actually happens. In this case, the growing risk is not a liquidity risk but the borrower credit risk.

Even with stable macroeconomic environment, delinquency rates of ARMs are approximately three times higher than for fixed rate mortgages. In periods of fast growth of interest rates borrower credit risk grows to a level unbearable for lenders. The most notorious samples are mass defaults in South Africa and less dramatic events that took place several years ago in Great Britain.

In South Africa where ARMs dominate the mortgage market, the growth of interest rates during the late 1980s caused numerous defaults. As a result, most financial institutions withdrew from mortgage loan originations at many territories initiating practice of geographic discrimination – the so called redlining .[4]

In order to attract banks back into the mortgage market, the government established (on parity terms with the Banking Council) a special company named Servcon, the mandate of which was to purchase more than 30,000 thousand defaulted loans from the banks. Nevertheless the redlining – the major negative effect of the burst of the credit risk caused by the interest rate risk misplacement – has not been completely eliminated till now.

The sample demonstrates how interest rate risk can result in negative effects both on pricing and on availability of mortgage loans. The rise of credit risk was due to a shift of interest rate risk to a non-risk-relevant participant (the borrower).

Securitization as a housing finance system

If we talk about plain vanilla securitization[5], the risk distribution under the securitisation system is the following:

- borrower credit risk – investors,
- interest rate risk – investors (a portion of the risk always remains with the lenders as a pipe-line risk),
- liquidity risk – lenders,

The situation is totally different from the traditional system. While under the traditional system practically all risks are borne by lenders and / or borrowers, the bulk of the risks under the securitization system are transferred to investors. Lenders keep only the liquidity risk and this risk, as we all know now, becomes their Achilles' heel.

Why does it happen? The major reason is in transferring of borrower credit risk to investors. Investors cannot measure borrower credit risk. Their risk management branches (if there are any) have neither knowledge nor ability to measure the final borrowers' credit risk. They do not know the specifics of local borrowers, cannot assess the quality of underwriting, the reliability of independent appraisers, etc. It means that for that risk investors are non-risk-relevant participants.

Being non-risk-relevant participants investors have no choice but to rely on the assessment of borrower credit risk conducted by a third party. The only third party they can rely on is a rating agency hired by the lender.

As soon as investors come to the conclusion that they cannot rely completely on the assessment of these particular third parties (there may be plenty of reasons for that) they have two opportunities: either to rely on the assessment of another third party or to avoid the investments bearing the credit risk of the final mortgage borrowers altogether.

If the reason for losing trust in a rating agency is just misbehavior (fraud) or a mistake conducted by one employee of the institution the investors will probably just refrain from buying securities assessed by this particular agency. But if the reason is different and investors have a reason to mistrust all the assessments of the final borrowers' credit risk conducted by all the agencies they will refuse to buy any securities bearing the risk.

For example when it was discovered that all the rating agencies were a bit too optimistic in assessing securities based on sub-prime mortgage loans the investors preferred to avoid buying securities based on any types of mortgage loans. They did it because they had a reason to believe that the assessment of these securities was also too optimistic.

Since the borrowers' credit risk was transferred to non-risk-relevant participants the liquidity risk borne by lenders turned out to be extremely high. When the non-risk-relevant participants (investors) lost trust in rating agencies they refused to acquire securities altogether because being non-risk-relevant participants they had no means to manage the risk themselves. If they were risk-relevant participants at their place (having the ability to measure and manage the risk themselves), they would probably just have reduced their purchasing activity or added an additional risk margin.

Since all investors refused to buy securities completely, all the institutions (mostly primary lenders) that bear liquidity risk, were hit much stronger than they would have been hit if the borrowers' credit risk were met by risk-relevant participants.

What can be done to revive securitization as a housing finance system?

It is clear from the above that securitization as a housing finance method could be improved if the opportunity is found to transfer borrower credit risk from non-risk-relevant participants (investors). There are several ways to do it. The one most fully tested is the US secondary mortgage system.

[4] See Mary R/ Tomlinson, "South Africa's Financial Sector Charter: Where From, Where To?" Housing Finance International, December 2005
[5] Most of securitization deals include special mechanisms actually transferring some of the major risks (very often interest rate risk) to lenders

The system is based on two Government Sponsored Enterprises (GSE): such as Fannie May (FNMA – Federal National Mortgage Association) and Freddie Mac (FHLMC – Federal Home Loan Mortgage Corporation). Under the system, lenders underwrite mortgage loans in accordance with GSEs' standards, issue the loans, sell the loans to GSEs and service them (sometimes transferring servicing functions to specialized servicing institutions).

The GSEs, in their turn, bundle mortgages into pools and issue securities backed by the underlying collateral of these loans. The securities are sold to investors together with a full GSE guarantee against borrower credit risk.

The major risks are distributed in the following way:

- borrower credit risk – GSEs,
- interest rate risk – investors,
- liquidity risk – GSEs.

If we consider the system as an improved securitization system (historically it is not so because the secondary mortgage market system was developed earlier) we can see that the major difference between the systems is that under the secondary mortgage system the borrower credit risk is transferred from one non-risk-relevant participant of the process (investor) to another non-risk-relevant participant (the state). At first glance, it does not seem reasonable because the state is not better equipped to meet the borrower credit risk than the investors.

Nevertheless the secondary mortgage market system works much more smoothly than the securitization one. It happens because the liquidity risk under the system turns out to be very low. Since investors under the secondary mortgage system do not bear credit risk they cannot change their perception of it and hence are unlikely to shun from purchasing mortgage-based securities.

Another advantage of the system is low cost mortgage loans for the final borrowers. GSEs do not add a credit risk margin because they have implicit and explicit state support and can rely on it even under adverse economic conditions. Other participants add a minimum risk margin because they are risk-relevant participants for the risks they bear. The mortgage interest rate for the final borrowers turns out to be the lowest possible.

At the same time the system has one serious shortcoming that hinders its development. If the system is used and borrowers credit risk is transferred to the GSE (actually to the state) the state exposure becomes extremely high.

Experience shows that that there are practically no countries besides the US that can afford and are willing to reduce the liquidity risk of mortgage lenders at the expense of making the government responsible for the credibility of vast number of mortgage borrowers.

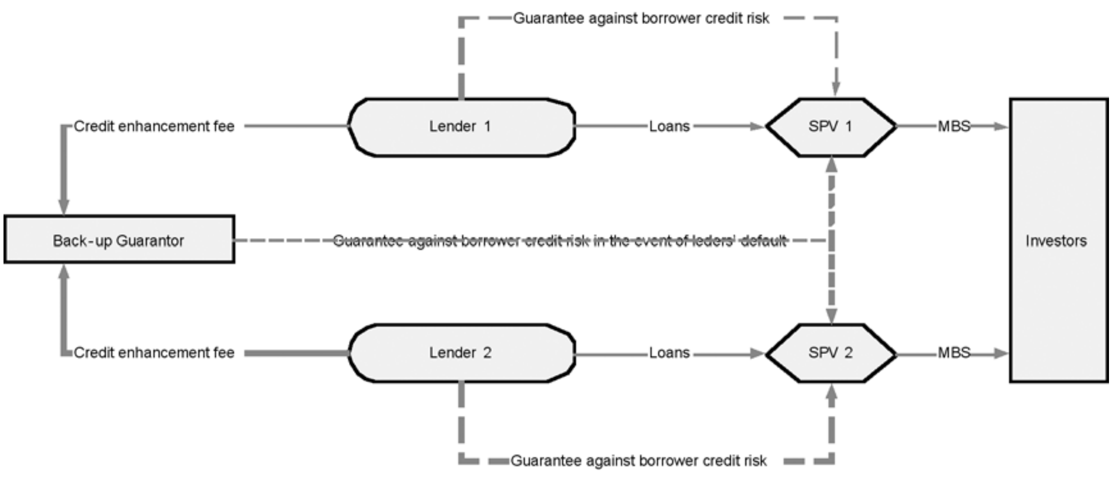
From here it follows that if the securitization system were transformed so the way that the borrower credit risk is kept by the lender (risk-relevant participant) rather than investors or government (non-risk-relevant participants) and at the same time state exposure is not increased too much, the risk distribution would become close to the ideal one.

The result could be achieved in various alternative ways.

Alternative 1. The lender sells the loans to an SPV. In addition the following is done:

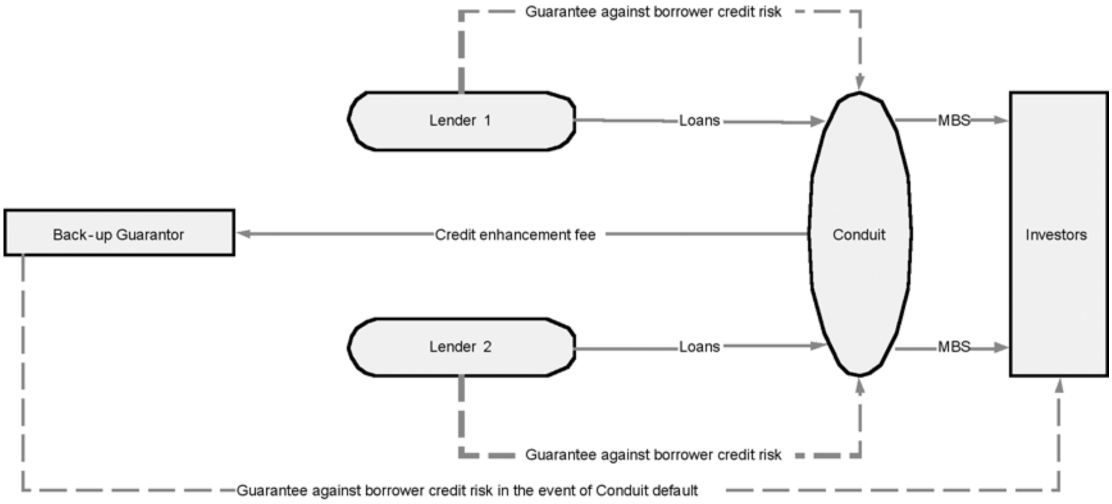
- the lender provides a guarantee to the SPV against the borrowers' credit risk (for example a guarantee to repurchase delinquent loans),

- a back-up guarantor becomes a participant of the housing finance system. The back-up guarantor makes a pledge that it will substitute the lender as a guarantor in case of default of the lender.



Alternative 2. The lender sells the loans to a conduit which is (or is related to) a strong institution (we will also name the institution a back-up guarantor). In this case the following is done:

- the lender provides a guarantee to the conduit against the borrower credit risk (for example a guarantee to repurchase delinquent loans),
- in case of default of the lender the back-up guarantor takes the responsibility as an owner of the loans (or as a guarantor of the Conduit).



Bearers of major risks under the system (under both alternatives) will be:

- borrower credit risk – lender,
- interest rate risk – investors,
- liquidity risk – lender,
- lender credit risk (default of the lender) – back-up guarantor,
- Guarantor risk (default of the back-up guarantor) – investors.

The major difference between two alternatives is that under Alternative 2 investors in the case of the default of the conduit and the back-up guarantor will inevitably lose money while under Alternative 1 if the lender and the borrowers remain solvent the investors will not encounter any problems.

Major characteristics of the system (both alternatives):

- both borrower credit risk and interest rate risks are met by risk-relevant participants – the institutions best equipped to manage the risk (relative risk margins are minimal),
- a new risk – the risk of the back-up guarantor failing – emerges and is met by investors (the relative risk margin depends on the creditworthiness of the back-up guarantor),
- liquidity risk becomes dependent on the probability of changes in investors' assessment of the back-up guarantor's creditworthiness (the relative risk margin depends on the creditworthiness of the back-up guarantor).

From here it follows that lower interest rates (a reduction of risk margins to the lowest possible level) could be achieved by the proper selection of the back-up guarantor. The role of the back-up guarantor may be played by:

1. The state (in developed countries with a high credit rating of the country).

Positive impact of the selection:
- the state is well equipped to meet the lender's credit risk since the level of the risk is managed by the banking regulations and by banking supervision conducted by the respective Central Bank or another specialized state entity.
- for investors the credit risk of back-up guarantor will become equal to the risk on government debt,

Negative impact of the selection:
- the state exposure will grow (though to a lesser extent than under the system based on the Secondary mortgage market).

2. International organizations such as World Bank, UN Habitat, OPIC, etc (for transitional or developing countries).

Positive impact of the selection:
- corresponds with the mission of the international organization (promotes private investments into transitional countries, supports development of financial markets in the countries, increases housing affordability, stimulates housing construction, reduces poverty, etc) .
- from the investor's perspective, the credit risk of back-up guarantor will become equal to zero,

Negative impact of the selection:

- international organizations' support can be provided only for a limited period of time. Substitution of the international organizations back-up guarantee for another type of back-up guarantee may cause a shock for the finance system of the country.

3. Association (partnership) of lenders (in countries with a strong banking system). Lenders can create a back-up guarantor in the form of a mutual guarantee-fund, a co-owned specialized insurance company, etc.

Positive impacts of the selection:
- there is no state exposure,
- association of lenders is well equipped to meet the lender credit risk of the members of the association (provided that it has the knowledge necessary to measure the risk level),

Negative impacts of the selection:
- back-up guarantor risk and hence liquidity risk are not eliminated (in the case of systemic problems in the financial sector the fund may become unable to fulfill its obligations).

The problem of liquidity risk could be solved in the case by the limited state involvement. The state may be involved either as a co-founder of the back-up guarantor or as a liquidity provider to the back-up guarantor.

If any of the above described amendments to the securitization system are made the lenders will not be able to obtain capital relief while transferring credit risk to investors. The credit risk will be kept with the lenders. As a result, they will face a worse credit risk vs. capital ratio. Probably it is paradoxical but in spite of that the financial system as a whole will be more stable. It is explained by the fact that credit risk (which cannot be made to disappear) will be kept by the risk-relevant participants.

It seems that very close to the described above system is the MPF (Mortgage Partnership Finance) system developed several years ago in Chicago[6]. The system is based on the scheme as outlined in Alternative 2. Lenders sell their mortgage loans on a recourse base to a strong institution that fulfills conduit functions – the Federal Home Loan Bank (FHLB) of Chicago. FHLB is a state-backed institution so the functions of a back-up guarantor are fulfilled by the government. The securities issued by the FHLB are considered by the market as credit risk free which helps both to reduce mortgage interest rates and to eliminate liquidity risk.

Unfortunately in the US where the Government willingly accepts the borrowers' default risk under the secondary mortgage system the MPF system could not demonstrate its advantages. Other countries also have not been interested to promote the system since the securitization system has been developed rapidly. Nowadays the situation has changed and it seems a right time to revive and promote the system for the usage in various countries.

[3] Liquidity risk will be defined below.

Increasing Affordability Problems - A Role for Shared Equity Products? Experience in Australia and the UK – An Update

By Christine Whitehead and Judith Yates [1]

Since writing the paper that appeared in the HFI September 2007 issue (with the same title) there have been some activities particularly with respect to the three Australian products.

The Greenway Equity Mortgage (GEM), an interest-free loan for up to half of the value of the property, has been marketed most aggressively at asset-rich retired people (as an alternative to a reverse mortgage), intending retirees (who could use their housing equity to boost their superannuation contributions), to those wishing to upgrade to a bigger home and to those wanting to extract equity for other purposes, including providing support for family. Borrowers must agree to repay the original amount of the loan and a set percentage of any increase in the value of the property. On the upside, examples provided in a media report indicated the share of capital gain increases as the size of the initial loan increases. The examples given in one media report were a 20 per cent loan would be available for a Greenway share of capital gain of 30 per cent. For a 50 per cent loan, Greenway's share would be as much as 75 or 80 per cent. The treatment of downside house price risk is not clear although loan principal is to be repaid. Media reports suggest there is a no negative equity guarantee built into the mortgage so that the most that can be owed is the full market value of the home. Greenway aims to raise $1 billion to begin funding equity mortgages. In the first instance, this will be collected in an "originating trust". When sufficient equity mortgages are written, the plan is to securitise the mortgages and on-sell to a "term trust" (at which point the original investors will earn a return on their investment). Greenway describe their product as providing "synthetic equity" in residential property for institutional investors.

Rismark have been equally pro-active in developing a shared equity product. They announced their intention in late 2005 and, after tentative partnerships with a number of different financial institutions, finally launched their 'equity finance mortgage' (EFM) in 2007 through the Adelaide Bank. The product, developed by the key contributors to the Prime Minister's Taskforce is true to the principles articulated in that report. It is based on a zero interest equity share loan of up to 20% of the property value in return for up to 40% of any capital gain, repayable within 25 years. In the case of negative capital gains when the property is sold, the EFM lender will share up to 20% of the realised losses on the property (with a 20% EFM). The lender will not share in any losses if they are not fully realised when the EFM is repaid. In order to fund these EFMs, Rismark plans to launch a new unit trust, the Rismark Active Property Trust (RAPT), which will give investors the opportunity to invest in residential property although when the EFM product was launched, the company was still working on what the trust would look like. The intent is to have a unit trust with returns linked to the future capital values of the [residential] properties (specific house price indices are in place). Towards the end of 2007, Rismark International took out patents over the shared equity home loan it invented to stop its larger rivals breaking into the market.

An EFM is available only in conjunction with a traditional home loan which is provided by the Adelaide Bank. Borrowers are responsible for all costs and fees associated with home ownership. Dwelling improvements require a property valuation before and after being undertaken, can be undertaken only with the funder's permission and significant improvements are taken into account in determining liability when the EFM is repaid. In principle, the product is targeted at first time buyers as well as other aspirational purchasers facing cash constraints. In

[1] Christine Whitehead is with London School of Economics and Judith Yates with University of Sydney. For any queries about the article, please contact Christine Whitehead (c.m.e.whitehead@lse.ac.uk)

practice, press reports suggest that the wealthier end of the market, focused on houses in the $1 million to $2 million bracket (2-4 times median values), is turning out to be one of the biggest users of the product.

Progress on the third product, from Firstfolio/Residex, a shared appreciation mortgage (iSAM), originally proposed in early 2005 has been particularly slow. Towards the end of 2006 an executive involved in the financing side of the initiative was reported as saying that the group's strategy was to establish a niche position in the high value end of the residential market. In early 2007 there was, however, still no information available about progress on the initiative and a search on both the Firstfolio and Residex websites provided no information on iSAM.

In the UK the government announced in their intention of examining ways of supporting the development of market based shared equity products as part of a package to address issues of Treasury management and affordability through changes to the regulatory framework. As yet there has been no further announcement. There are however a growing number of small private and non-profit sector initiatives to provide shared equity products to alleviate problems of affordability. It will be interesting to monitor their progress in the face of growing market uncertainties.

Egyptian Consumers' Knowledge of Mortgage Finance and Property Registration

By Raymond J. Struyk [1]

Introduction

Both mortgage finance and mass title registration are novel in Egypt. In 2005 there was scarcely any home purchase mortgage loans issued and only 10 percent of urban residential property was formally registered. [2] The two areas are closely related because difficulties in registering properties and mortgage liens raise the transactions cost of mortgage lending and increase risks to lenders of engaging in such lending that the pledged collateral may not in fact be available to it should the borrower default on his loan. The reformist Government under Prime Minister Ahmed Nazif that took office in 2004 has taken a series of actions to jump start mortgage lending and to improve the efficiency of the registration process and dramatically cut registration fees. These measures have been accompanied by various advertising campaigns by lenders and the government to expose would be borrowers and current home owners to the "new products" of home mortgages and comparatively cheap registration.

The question addressed in this paper concerns consumer knowledge levels and attitudes about home purchase mortgages and title registration by February 2007 after these campaigns. Importantly, those interviewed were either recent home purchasers or those who expected to purchase a unit in the next three years, ie, those with greatest interest in following the development under examination here.

The analytical results are important from a policy perspective because they inform policymakers and lenders of the effectiveness of such broad educational campaigns.

As detailed below, there are modest differences among the sample population between their understanding of the basic idea of mortgage loans (modest) and of property registration (high); but specific knowledge was greater for mortgages than for registration, perhaps because mortgages are so new in Egypt and are receiving a good deal of attention. Half of the respondents who have purchased a property in the past five years say they have registered them, and a large majority of respondents report being motivated to register a property purchased in the future, despite misgivings about the registration process. The findings taken as a whole indicate that a substantial educational job remains to motivate consumers to use mortgage loans in home purchases, particularly given the present high interest rates. On the other hand, the task for registration is to improve the actual registration process and then to inform consumers about the improvements.

We were unable to identify a literature on knowledge and attitudes about mortgages and property registration for home purchasers in developing countries. There is a rich literature on the attitude of rural residents on registering their plots, in terms of the security gains achieved. [3] Also, a solid literature exists on the effects of urban dwelling title registration on owners' decisions to invest in their properties [4] and the effect of secure titles on housing values. [5] For developed countries literatures are present for consumer knowledge of financial products (often from a consumer protection perspective) and attitudes (often from a marketing perspective), [6] but not for registration presumably because it is essentially universal. Thus, it appears that this study offers initial findings for developing countries on knowledge and attitudes.

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[1] Mr. Struyk is a Senior Fellow at the National Opinion Research Corporation.. (Suite 500; 1350 Connecticut Avenue, NW; Washington, DC 20036; Tel: +1-202-6020; Email: Struyk-ray@norc.org.) At the time he prepared this article, he directed the Egypt Financial Services Project that being implemented by Chemonics International under contract with the US Agency for International Development. The author wishes to thank Ireny Roman for excellent research assistance in the preparation of this paper. Manal Shalaby, Ms Roman and Aser F Obeid provided critical quality control for the survey conducted for this analysis. Mr Obeid had numerous suggestions for improvement of the questionnaire employed. Noel Taylor and Ms Roman provided valuable comments on a draft of the report. The survey was conducted by AMRB Egypt under contract to the Egypt Financial Services project. The views expressed are those of the author and not necessarily those of USAID or Chemonics International

[2] Everhart at al. (2006), Egypt Financial Services Project (2005).

[3] See, for example, Barrows and Roth (1990), Besley (1995), Migot-Adholla et al. (1991), Pinckney and Kimuyu (1994), Place and Hazel (1993), and Sjaastad and Bromley (1997).

[4] See, for example, Baharoglu (2002), Razzaz (1993), DeSouza (1999), Jemenez (1982), and Struyk and Lynn (1983).

[5] Mendez (2006), Friedman et al. (1988).

[6] Examples include Mandell (1973), Buch et al. (2002), Lee and Hogarth (2000), Hilgert et al. (2003), Albaum (1979), El Anshasy et al. (2005), Woodward (2004), and Weiss (1989).

Because it is a single country study, financial depth and access to services are held constant in the analysis.[7] As such it contributes to the first of the two tracks in the emerging literature on financial services in developing countries: single country studies of measuring and analyzing access to financial services at the household or firm level (eg, Claessens, 2006), rather than cross country studies analyzing barriers to access (eg, Beck et al., 2006).

The presentation is organized as follows. The first section provides information on the Egyptian context for the analysis, including recent developments in mortgage lending and property registration and related information campaigns. The second section discusses how the survey was conducted, sample sizes, types of questions asked and the sub-populations of interest. The third section briefly outlines the analysis done. The fourth presents the results of the descriptive analysis of changes over the period and the fifth summarizes the results of descriptive regression models employed to identify significant covariates of knowledge and attitudes. The final section concludes.

Context

This section provides background on three topics: the first two cover, respectively, the status of property registration and home purchase mortgage lending in 2005 and government initiatives since then in each area; and, the related marketing and education campaigns conducted, beginning in late 2005.

Property registration. Despite laws viewed as essentially sufficient to support a functional title registration system, in 2005 an expert analysis described the system as:

…Egypt's real property registration system can best be described as onerous and expensive for applicants, vastly underutilized, excessively bureaucratic and complex, misunderstood and unpopular with the public, and incapable in current for of promoting a real estate mortgage finance market. (Egypt Financial Services, p xi)

The World Bank reports that the average time to register a property was 193 days, compared with 49 days in the Middle East region and 32 days in OECD countries (World Bank, 2006).

The Government of Egypt (GOE), after several years of planning, in 2006 launched a high profile program to completely reform and modernize the property registration system. The responsibility for registration is divided between the Ministry of Justice, that oversees the actual recordation that is administered by the Real Estate Publicity Department, and the Egyptian Survey Authority, that handles cadastre function. Nevertheless, responsibility for modernization was assigned to the Ministry of State for Administrative Development (MSAD) which is viewed as energetic and more competent for systems development. MSAD has started with nine districts in Cairo, and its efforts are being complemented by a USAID project that is working in an additional district that is also pioneering critical design and training components. By early 2007 design work was well-advanced and actual recordation is anticipated to begin in late 2007.

Because formal registration had been so little used, there was general agreement that consumer education would be a key strategic ingredient, but it was also believed that an education campaign should wait until registration processes improvements were closer to realization.

Home purchase mortgage lending. In recent years home purchase finance was limited to installment sales by developers for the purchase of new dwellings; aside from these loans, purchases were financed by savings and borrowings from members of the extended family and friends. The installment sales are wholly unregulated and have been subject to significant abuses. Developers require large downpayments, themselves often paid in installments, and then further payments. Title remains with the developer until all installments are paid, placing the purchaser at a distinct disadvantage. Purchasers are not permitted to occupy their units until a large share of the total purchase price, sometimes 100 percent, is paid off. Actual interest charges are hard to determine since the unit sales price typically includes both the cost of the unit and financing.

The Mortgage Finance Authority (MFA) was created in 2001 by Presidential Decree to stimulate and regulate mortgage lending by lenders other than commercial banks. It started operations in 2004. Two mortgage finance companies (MFCs), non depository specialized housing lenders, became operational in 2005 and have briskly expanded their lending. Two government-owned commercial banks are quite active and make loans in conjunction with downpayment subsidies extended to moderate income first-time purchasers. By fall 2006 additional commercial banks were becoming interested and setting up home purchase lending operations in part because they were searching for new loan products to absorb their high liquidity (Struyk and Brown, 2006).

Education and advertising campaigns. In the mortgage sphere, the MFA and early lenders have had a common view of the marketing strategy that is consistent with the classic 3-phase communication model: cognitive stage (exposure, reception, cognitive response) => affective stage (attitude, intention) => behavior stage (action) (Kotler, 2000). In such a new market the focus was on the cognitive and affective stages, ie, in exposing the target population to the concepts on the advantages of home purchase mortgages and the value of property registration, and then affecting their attitudes towards both.

Outreach to consumers has been

[7] According to the 2004 World Development Indicators on financial depth and efficiency, Egypt's depth and efficiency is about average for Low and Middle Income Countries; its depth is rather greater than that of most Middle East and North African countries.

extensive. Broadly, the campaigns of 2005-2006 had two elements - providing information through broad media distribution (complemented by materials available in lenders' offices) and the operation of call centers where interested consumers could call and obtain additional information. The broad distribution ads included contact information for the call centers. The centers' primary task was education. If a caller requested information on a lender, the MFA-operated center would provide it for multiple lenders. Those operated by the lenders naturally directed potential clients to their own loan officers.

In terms of campaigns, the MFA in 2006 aired 50 radio spots in late summer, ran an ad in the largest daily newspaper for seven days, listed its call center in the Yellow Pages web site in English and Arabic, and, with the MFCs, mounted a concentrated TV and radio public education campaign during Ramadan, the peak TV viewing season. Additionally, high exposure press events were arranged for the MFA Chairman that brought additional coverage.[8] The effectiveness of these events was strengthened by workshops for the media. These efforts were complemented by campaigns by the two active mortgage finance companies.

The MFA call center became operational in spring 2006 and has handled about 150 calls per day, with surges following promotional campaigns, particularly the Ramadan campaign. The Egypt Arab Land Bank initiated its own call center in 2006, and it averages around 200 calls per day according to senior management, with calls stimulated by advertising in print media and on radio.

In contrast with the mortgage sector's explicit campaigns, publicity on registration has come from news stories about pending simplifications in the registration process and especially about the sharp fee reductions implemented in summer 2006. Registration fees a few years ago were as high as 12 percent of the property value. Reduced in several steps over the years, in summer 2006 they were finally set at a minimum of LE 500 (about USD 87 at then current exchange rates) to a maximum of LE 2,000, with the actual fee depending on dwelling size (in square meters). This attracted a great deal of press attention and these stories often cited the plans of radical simplification and modernization of the registration process. Because the new procedures are not yet in place, campaigns would be premature.

Information Employed in the Analysis

This section covers three topics: the structure of the sample, the subpopulations of interest and the nature of the information gathered on knowledge and attitude about mortgages and property registration.

Sample structure. Recall that the goal was to interview recent home purchasers (within the past five years) and those who stated that they were likely or very likely to purchase a unit in the next three years. [9] In other words, the idea was to speak to those who had the greatest incentive to be informed about these matters, it being believed that a broader approach would yield too many respondents with no knowledge.

The design for the sample used in this analysis followed that for a similar survey conducted in 2005. The initial design called for household interviews for a random sample drawn in specific neighborhoods. This turned out to be infeasible because so few respondents qualified as recent or probable near-term dwelling purchasers and met other screening criteria (Abbott, 2005). Instead, respondents were recruited at 11 shopping malls frequented by middle and upper-middle income Egyptian families. In 2005 the sample size was 505 - 309 potential home purchasers aged 25-55 with monthly incomes of at least LE 1,000, and 196 recent dwelling purchasers. Potential respondents were screened on income because it was thought that those with lower incomes are unlikely to afford to purchase a dwelling in the formal market. For reference, a January 2007 representative survey of 9,000 households in Greater Cairo concluded that 61 percent of households had income of under LE 1,000 per year (TAPR-II, 2007, Table 2.4)[10]. Unfortunately, detailed analysis of the procedures used in 2005 and the resulting data raised grave reliability issues and these data are not used here.

The "shopping mall method" was repeated in 2007, and the final sample sizes were 204 and 300, respectively, for current owners and potential purchasers. About 2,500 mall visitors were approached to find the 504 respondents who both qualified to participate and were willing to be interviewed.

Clearly, this is not a representative sample, but it nevertheless provides some insight into the knowledge levels and attitudes of dwelling purchasers and those who may be able to purchase one. It is important in assessing the sample to understand that malls serve purposes beyond a shopping venue in Cairo; they are a place to pass time in air conditioned comfort and socialize with one's friends at a coffee bar and otherwise socialize (Abaza, 2006). So the idea of many mall visitors being willing to participate in an extended interview is not far-fetched.

Sub-populations of interest. Beyond the basic dichotomy between current and potential owners, significant variation in knowledge levels and attitudes are expected to exist among different income and social groups. For the analysis respondents were divided into three social classes that were determined not only by

[8] In some ways this campaign was similar to that executed in the US in 1918 by the Department of Labor for the nationwide "Own Your Own Home" campaign. As reported by Weiss (1989, p 109) a key objective was to stimulate the flow of mortgage lending.
[9] The respondent also had to say he was the main decision maker in deciding on the past or potential future purchase. Furthermore, any person who said that anyone in his or her family was employed in market research, journalism/ advertising, public relations or financial services was excluded as a respondent.
[10] By comparison, households with an income below LE 1,500 per month are eligible for a downpayment grant to assist with dwelling purchase.

monthly income but also by the type of position the respondent held, frequency of international travel, car ownership, club memberships, and appliance ownership. Club membership is common among the well-to-do and considerable prestige is associated with membership in the elite clubs; but there is a quite wide range of clubs. The points system routinely used in Egypt was employed: higher values go to more elite categories for each variable, with the sum of points across all attributes used in the assigning respondents to social classes.

In the interview income information was solicited with a single question. Even with responses being requested to name an income category from a card showing eight income intervals, rather than announcing a specific amount, it is very likely that income is substantially understated. For this reason using the additional information in determining social classes very probably yields a better indicator of economic status than the income measure alone.

Table 1 provides information on selected characteristics of the respondents. In the panel on social class, Class A is the most elite and broadly includes respondents in the top two income groups shown in the first table panel. Class B is in an in-between position, and broadly (75 percent of those in the group) includes those with monthly incomes in the LE 1,500 to 4,000 range. Class C is the relatively low social group. As shown in the last table panel, about 15 percent of the sample was from Class A group and 25 percent from Class B, with the majority being in Class C.

Table 1. Respondent Characteristics

Characteristic	Recent owners	Potential owners
Monthly household income-LE (% distribution)		
1,000-1,500	28	28
1,501-2,000	20	26
2,001-4,000	33	30
4,001-6,000	8	8
>6,000	11	8
Education (% distribution)		
Less than secondary	0.5	2
Secondary	7	8
Bachelor's degree	80	77
Advanced degree	13	13
Social class[a] (% distribution)		
A – elite	16	15
B – middle position	25	25
C – relatively low	59	60
N=	204	300

a. Social class defined on the basis of household income, occupation/position of the respondent, frequency of international travel, club memberships, car ownership, and appliance ownership. Source: 2007 survey data.

Information on knowledge and attitudes. Respondents were asked three types of questions. First, at the beginning of each of the registration and mortgage sections of the interview, they were asked to describe these concepts in their own words. For example, the question on registration was: "What does the term "registration" of real estate property mean to you?" The answers that were given were analyzed and coded into non mutually exclusive categories with short statements characterizing the response.

Second, there were questions that probed their specific knowledge. In the case of mortgages, the questions focused on terms and conditions of such loans, eg, with a mortgage loan what happens when the borrower is unable to make payments for several months? Three answers were possible. For registration, these questions focused on the lower fee schedule for property registration introduced in summer 2006, eg, whether the new fees are computed as a flat fee or as a percentage of unit value.

The third type of question was designed to capture information on the respondent's attitude or views about registration and taking out a mortgage. These queries used a 1-to-10 scale (1= strongly disagree and 10 = strongly agree) with a respondent giving his score after each statement read by the interviewer. One example from the registration block was: "registration of property is too expensive".

Lastly, the survey inquired explicitly about whether the respondent had heard or read something about taking out a mortgage or property registration in the past year. If they responded positively, they were asked how close attention was paid, with a choice of four levels of increasing intensity. Separate sets of questions were asked for registration and mortgage.

Methodology

The analysis proceeded in two steps. In the first, descriptive statistics were computed for the various measures and tests were computed to identify significant differences between current owners and would-be owners.

In the second part of the analysis, descriptive regression models were estimated to determine if there are significant differences in knowledge and attitudes among respondent sub-populations. Three types of explanatory variables are included in these models. One is the respondent's characteristics, in particular, his social class and age, the hypothesis being that the higher the social class and younger the respondent the more knowledgeable they will be and the more positive their attitude toward borrowing with a mortgage for home purchase and the need for registration. In short, we test for information asymmetries associated with these factors. The second is whether the respondent reported having heard information about mortgages or registration in the past 12 months and the degree of attention he paid to it. Separate questions were asked about exposure to information on the two topics. We hypothesize that the greater the attention paid, the greater the knowledge level and the more positive the attitudes toward borrowing with a mortgage and registering the property.

The third consists of separate dummy variables for models with registration-related and mortgage-related dependent variables to account for those recent purchasers who, respectively, registered their unit (50 percent) or took out a mortgage to finance their purchase (3 percent). The hypothesis is that because of their actual experience, they will be particularly knowledgeable respondents. In models estimated using the combined samples of recent purchasers and would-be purchasers, a dummy variable is included for recent purchasers.

Findings: Knowledge and Attitudes, Descriptive Results

The basic information is presented in Table 2 (pages 40-41), which is divided into three main parts: indicators of the respondent's exposure and acceptance of information in the past year on mortgage lending; responses about mortgages; and, those about property registration. Table 2 is presented at the end of the article. Data are presented separately for recent dwelling purchasers and potential purchasers. A "+" next to the entry for potential purchasers indicates that the value differs at the .05 level of significance or higher from the value for recent purchasers. As shown, there are only two instances of significant differences in the responses of the two populations (These are: (a) in the "Exposure to information" panel, "Percent who paid close attention to it and carefully considered whether it would be a good thing "; and, in the "Registration" panel, "Registration is too expensive".) Hence, the results are generally discussed for the sample as a whole.

Exposure to and receipt of information. The first panel of the table shows that about 36 percent of respondents reported having heard or read something about buying an apartment or taking out a mortgage in the past year. As noted, we have no similar studies against which to compare this result. Our sense is that this is a fairly high simple penetration rate and suggests that the marketing campaigns were reasonably successful, although much remains to be done. Of those who had heard something on the topic, close to half stated that they had paid close attention to the information or had carefully considered whether a mortgage would be a good thing. Such a high rate of paying close attention indicates that many in the sample population have a real interest in the subject. Among those who had carefully considered whether a mortgage would be a good thing for them, the share of potential owners is about double that for current owners, ie, 16 vs 30 percent of respondents, and the difference is statistically significant. This is consistent with the potential owners being close to making an actual decision on this point. The penetration rate for information on registration is only about one-half of that for mortgages - 19 percent vs 36 percent, statistically different at the .01 level. This again indicates that the purposeful education campaigns about mortgages are having an effect. That said, the share of respondents who reported having heard something that said they paid close attention to the information was the same. Unlike the case for mortgages, there is no difference between recent owners and would-be owners in their respective penetration rates.

Mortgages. We start with information on the share of respondents who had a grasp of the key elements involved. Around 24 percent of respondents were unable to articulate a response to the open-ended question. In fact, however, knowledge was greater than this indicates: when asked the specific questions about mortgage loan characteristics in the bloc of questions on knowledge, only about 7 percent of respondents said "don't know" to each question; ie, over 90 percent had sufficient confidence of their knowledge to answer. The three most common elements in the answers to the open-ended question are shown in the table; about two-thirds of those who offered an answer made at least one of these statements.

Among the responses, the single most common is to "borrow from a bank." In Egypt, where most new dwellings are purchased from developers under an installment contract, the fact that a mortgage loan is obtained from a bank or mortgage finance company is an important point. "Borrowing with interest," another of the responses is likely also to be associated with bank loans since installment sales do not explicitly define financial terms, rather just an all-in price. Offsetting these indicators of knowledge about mortgage loans is the fact that 21 percent of those who provided responses said a mortgage involved installments, which is true for both mortgages and installment sales. With only about 6 percent of respondents giving both responses ("from a bank" and "installments"), one is led to think that "installments" may refer to developer finance. Based on the observations in the last two paragraphs, including making an allowance for some misunderstanding on installments, one could indicate a penetration level in the 55-60 percent range.

With respect to knowledge of specific mortgage characteristics, the two of the three questions listed in the table required the respondent to know provisions of the Egyptian mortgage law. The third, on the result of failing to make payments, is more general. The correct response to each question is in brackets after the question. The pattern shows respondents possessing surprisingly high levels of knowledge about the inability to have multiple mortgages on the same property (85 percent) and the requirement for a mortgage to be registered (90 percent). It is a bit puzzling that only about half this share knew that the likely consequence of failing to make the required payments would be to lose the property.

Combined, the results for the open-ended question and the specific knowledge questions indicate that a substantial share - perhaps half - possess basic information about the home purchase mortgage.

Regarding respondents' attitudes about taking out a mortgage, it is useful to consider these in two groups - one for three positive statements about taking out a mortgage (listed first in this panel of Table 2) and one for the two statements calling into question the desirability of taking out a mortgage. [11]

The two of the positive statements assert that a mortgage loan would permit one to: acquire a larger unit and to move into the unit as soon as it is finished. A mortgagor being able to immediately occupy the dwelling being purchased once the loan is secured is especially important in Egypt because under installment sales the purchaser is generally not permitted to occupy his unit until payments equivalent to at least 70 percent of the total charges have been made. This often is several years after the unit has been completed. Hence, immediate occupancy is a considerable advantage for mortgage lenders in competing for clients. The third point is more attitudinal with a positive statement about adapting to new practices. Importantly, support for all three statements is quite strong—mean values of about 8 on the 1-to-10 scale.

The results for one of the negative statements - the one disapproving of a daughter marrying someone who had to borrow to secure the family's dwelling - is quite weak (value of about 4). In Egypt a suitable groom should have his own (fully paid) dwelling to contribute to the marriage. So this question is in part asking about the social acceptability of incomplete ownership. On the other hand, the aversion to long-term debt is strong (value over 8). In practice, however, this may manifest itself in high mortgage loan prepayment rates rather than a refusal to take out a mortgage loan.

Registration. At the outset it is important to note that 50 percent of those in the recent dwelling purchasers sample stated they had registered their units. One anticipates that this would make them particularly informed about the process and make them particularly strong advocates of the benefits of registration. In reality, there is only one significant difference between the mean responses of recent purchasers and would-be purchasers in the tabulations presented in Table 2. Hence, it appears there is something of a broad "conventional wisdom" about property registration.

Respondents showed a stronger grasp of the basic concept of registration than with financing home purchase with a mortgage. In response to the open-ended question, two-thirds of respondents expressed that registration protects or guarantees property rights. On the other hand, knowledge of registration is much lower than of mortgage loans. The specific question asked was if the respondent knew about the change in registration fees made effective in 2006. Only 15 percent said they did. The low knowledge rate was unexpected given the wide coverage given to the story in the media and government agencies' heavy promotion of the change's importance. Those who responded positively generally (65 percent) knew that the new system is a flat-fee, rather than an ad valorem, system.

The questionnaire included seven questions designed to understand respondents' attitudes toward registration - three positive statements and four negative statements (Table 2, third bloc of information in the registration section).

A general pattern is that respondents were in stronger agreement with the positive questions (average scores over 9) than to the negative statements (average scores from about 3 to 6). Strong positive convictions were expressed regarding improving the ability to sell the unit in the future and increasing the owner's protection of legal rights.

Among the negative attitude questions, the weakest support was for the statement that registration was something not very important to do when buying a unit, with a mean score of only 3.3. This combined with the findings on respondents' basic understanding of the registration concept argue that the broad importance of registration has been successfully communicated.

Two other negative attitude questions, however, highlight the traditional problems with the registration system. There is considerable support for ideas that registration is too expensive and a complicated process that takes a long time (mean values of 6.2 in both cases). Recent purchasers felt significantly more strongly about the high fees than would-be purchasers, likely because they registered before the lower fee schedule was introduced. Finally, there is also moderate support for the idea that ownership can be proven without formal registration - something that has been true in urban Egypt for many years. Interestingly, responses are distributed bi-modally for recent owners, with few responses in the 4-7 categories. For would-be owners the answers are quite evenly distributed over all 10 response categories.

The last entry in the registration bloc is on the respondent's intention to register a newly purchased unit, should he purchase one. The conviction has very high a mean score greater than 9. This suggests that the target group for future campaigns should be current owner-occupiers.

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[11] These attitude questions and those about registration were ordered randomly in the questionnaire to avoid establishing positive or negative response patterns that the respondent might unconsciously follow.

Findings: Knowledge and Attitudes, Regression Results

We estimated a series of descriptive regressions to explore how respondent's responses vary with certain characteristics. Table 3 provides definitions for both the dependent and independent variables employed. Most of the independent variables are in continuous form. We also experimented with dummy variables for categories, eg, socio-economic class defined into three categories; but the results were not materially different. Models were estimated for recent owners, possible owners, and all respondents combined. Because so few variables were significant and the number of models is large, the estimated models are not presented. These are available from the author upon request.

Table 3. Variables Used in Multivariate Analysis

Variable name	Definition
Dependent variables – registration	
Protect	Var=1, if respondent expressed that registration protects the property rights or guarantees them
New_sys	Var=1, if aware of the new registration fee system
Flat_fee	Var=1 if those aware of new system, knew it is a flat fee system
Fee_amnt	Var=1, if those knowing it is a flat fee system knew the maximum and minimum fee charged
Imp_reg	Score 1 to 10, agree with: Registration of real estate property generally is not something very important to do when buying an apartment or house.
Legal	Score 1 to 10, agree with: Registration is a process that would give me the clearest possible legal title to my real estate property
Other_reg	Score 1 to 10, agree with: There are other ways to prove ownership other than registration that are just as good for example utility bills
Reg_expnsv	Score 1 to 10, agree with: Registration of property is too expensive
Complicated	Score 1 to 10, agree with: Registration of real estate is a complicated process that takes a long time.
Sell_future	Score 1 to 10, agree with: Registration of real estate property would make it easy to sell it in the future.
Rights_dispute	Score 1 to 10, agree with: Registration of real estate property would help me protect my rights in the event of a dispute
Will_register	Var=1, if respondent reported he would register a newly purchased property
Dependent variables – mortgage	
Concept_mortg	No of key mortgage attributes cited in open-ended response; maximum number is 3
Know_mortg	No of correct responses to three mortgage knowledge questions (0,1,2,3)
Daughter_marr	Score 1 to 10, agree with: Most parents would not approve a marriage of their daughter to a man who has a mortgage on the apartment or house they will live in.
Move_in	Score 1 to 10, agree with: Buying a home with a mortgage will allow me to move in once the loan is approved.
Larg_aptmnt	Score 1 to 10, agree with: A mortgage would enable me to buy a much larger apartment or house than I otherwise could with my current income.
Long_debt	Score 1 to 10, agree with: It is very important to me not to have a lot of debt over a long time.
Accpt_mortg	Score 1 to 10, agree with: Traditional ways of doing things are changing, and new ideas such as buying a house by taking out a mortgage are becoming more accepted here in Egypt.
Independent variables	
SEC	Socio Economic Class Points, range between 24 and 45
Age	Respondent's age, using mid-points of age intervals
Expose	The level of exposure to information (0,1,2,3,4), where '0' indicates that the respondent heard nothing about mortgage—or, in a separate question, registration
	'1' indicates that the respondent heard about mortgage but he did not pay any attention to it And so on till '4' that means that the respondent heard about mortgage, paid close attention to it and carefully considered whether it would be a good thing.
Reg	Var=1 if recent home buyer registered his property
Mortg	Var=1, if a recent home buyer obtained a mortgage

Registration. The results for the logit models of respondents' knowledge in this area can be summarized succinctly: generally, the relationships are very weak. (Here and elsewhere results are treated as statistically significant if they meet a 5 percent-level significance test.)

- No correlation was established between having a basic understanding of the registration concept (Protect) and the socio-economic class, age, extent of exposure to information, or having registered a recently purchased dwelling. The later may result from owners commonly hiring a lawyer to handle this complex transaction.

- A positive association was identified between knowing about the new registration fee schedule (New_sys) and the respondent paying greater attention to information about registration (Expose). For all three populations, the mean odds of knowing something about the new schedule was 0.18, and these are increased by a factor of 2.7 with a unit increase on the five-point scale in the degree of attention paid to the information.

- Among would-be unit purchasers, those with higher socio-economic class scores were significantly more likely to know about the new fee schedule, with the odds increasing by a factor of 5.25 for a 5 point SEC score (or 25 percent) increase.

The results for the estimated regression models on respondents' attitude toward registration as indicated by reactions to six statements mirror those for knowledge in that few significant patterns between attitudes, on the one hand, and socio-economic status, age, extent of exposure to information, or having registered a recently purchased dwelling, on the other. One clear finding is that those who stated that they paid more attention to information received on registration in the past year gave lower agreement scores to two negative statements about registration: there are other ways to prove ownership (Other-reg) and the process is too expensive (Reg-expnsv). The mean values for these two variables are 5.4 and 6.2, respectively (on the 1-to-10 scale, Table 2). Going up two levels in the "attention rating," for example from "I glanced at it" to "I paid close attention to it and carefully considered whether it would be a good thing," reduces the ratings by 0.75 and 0.84 points, respectively, or about 14 percent of the mean scores. As expected, potential owners were significantly more likely to give a lower agreement score to the statement that registration is too expensive, a reduction of 0.55 on average from a mean of 6.2.

Finally, regarding intentions to register a newly purchased unit in the future, no significant relations were identified that met the 5 percent significance-level criterion.

Mortgages. Broadly, the results for knowledge of and attitudes about home purchase mortgages parallel those for registration. The results reported below are based on multiple regression models of continuous but limited dependent variables. Beginning with understanding mortgage concept and knowledge of specific attributes, we found:

- The extent of exposure to information and the attention paid to it was the only factor significantly associated positively with greater understanding of the concept (Concept_mortg). Age and socio-economic status do not pay such a role. The finding holds both for recent purchasers and potential purchasers and the magnitude of the effects are the similar. But the impact is quite modest: the elasticity, evaluated at the means, of understanding with respect to exposure is only 0.14, so that a 10 percent increase in the exposure score is only associated with a 1.4 percent increase in conceptual grasp.

- Higher socio-economic class is associated with higher knowledge levels (Know_mortg), for owners alone and for the combined sample (neither is significant in the potential owners model). The impact again is modest, with an elasticity at the means of knowledge with respect to SEC of 0.3. The other variable significant in the same two knowledge models is exposure to information. But in this case the sign is negative and we have no ready explanation for why this is the case.

- Almost no significant relationships were identified in the five attitude models. Only the exposure to information was significant in explaining the variance in the responses for statements on: parents not approving of a husband having to borrow to buy a home for their daughter (Daughter_marr) and it being important not to have long-term debt (Long-debt).

The results for the multivariate analysis of registration and home purchase mortgage make two strong points: (a) the information that consumers have obtained through organized educational campaigns or through press coverage has been important in educating them, and (b) little informal education has occurred on these topics that is associated with socio-economic position, age, or even experience in the housing market - these apparently are not topics discussed among friends and families.

Conclusions

The use of home purchase mortgages for dwelling purchase and implementation of mass urban property registration are both in nascent stages in Egypt. Clearly, the first step in activating consumers to take out mortgages and register their properties is for them to understand these instruments. The results reported here are from a February 2007 survey of 504 Cairo consumers from better socio-economic groups designed to determine their understanding and knowledge of these instruments and their attitude towards them. This is not a representative sample; the findings likely give the upper limit on knowledge levels.

About 35 percent of respondents reported having heard or read something about buying an apartment or taking out a mortgage in the past year. Of those who had heard something on the topic, close to half stated that they had paid close attention to the information or had carefully considered whether a mortgage would be a good thing. Such a high rate of paying close attention indicates that many in the sample population have a real interest in the subject.

The penetration rate for information on registration is only about one-half of that for mortgages - 19 percent vs 36 percent. The difference is statistically significant. This difference suggests that the purposeful education campaigns about mortgages are having an effect compared with no campaigns on registration. (Recall that the only media coverage was for the cut in registration fees.) That said, the share of respondents who reported having heard something that said they paid close attention to the information was the same for mortgages and registration. Unlike the case for mortgages, there is no difference between recent owners and would-be owners in their respective penetration rates.

There are modest differences among the sample population between their understanding of the basic idea of mortgage loans (modest) and of property registration (high). But specific knowledge was greater for mortgages than for registration, perhaps because mortgages are so new in Egypt and are receiving a good deal of attention. Half of the respondents who have purchased a property in the past five years reported having registered it, and a large majority of respondents report being motivated to register a property purchased in the future, despite misgivings about the registration process.

The results of the multivariate analysis indicate that exposure to information on registration and home purchase mortgages and the amount of attention consumers pay to it have been key in shaping knowledge and attitudes. The respondent's socio-economic class and age, or even participation in a registration, on the other hand, have had a bearing. These findings highlight the important role that education campaigns and media coverage have played in informing the population. They also indicate that experience with home purchase mortgages and property registration is so limited that even among higher SEC households, understanding and knowledge of these instruments are not common. Both points argue for the continuation of campaigns to inform the public.

The results indicating no impact of registering a property on knowledge about the registration system is puzzling. Two explanations suggest themselves. First, because the process is complex, many households engage an attorney to handle the task. Second, it may be that they did not actually go through the official registration process but rather used a court procedure under which a sales transaction is authenticated. Many purchasers rely on this procedure. The specific question in the survey was not tightly enough drawn to distinguish between these two cases.
The findings taken as a whole indicate that the education campaigns and media coverage have had significant impact on knowledge levels and attitudes in that the penetration rates are fairly high, but a substantial educational job remains to motivate consumers to use mortgage loans in home purchases. The lack of significance of the socio-economic variables in the analysis points to a very low general knowledge level that campaigns -and greater use of mortgage loans and property registration - will be key in overcoming.

With respect to specific features, would be borrowers have particularly negative reactions to the present high interest rates and carrying long-term debt. On the other hand, the task for registration is to improve the actual registration process and then to inform consumers about the improvements. The findings may have implications for other countries that are just introducing mortgage lending or mass title registration. The dominance in the multivariate analysis of the "exposure" variable indicates the importance of informing the public about such innovations. Promotion of mortgage lending may well require lender as well as government campaigns to educate the public, with the campaigns targeted at least initially to the middle class. The results further suggest that such campaigns need to be multi-dimensional and sustained.

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Table 2. Knowledge and Attitudes about Taking a Mortgage for Dwelling Purchase and Dwelling Registration in 2005 and 2007 (figures are percentages)

	Recent Purchaser	Potential Purchaser	Total
Exposure to information			
Mortgages			
In the last 12 months heard or read something about buying an apartment or house with a mortgage	33.8	38.0	36.3
Of those who did hear something			
--percent who paid close attention to at least some of it	29.0	21.9	24.6
--percent who paid close attention to it and carefully considered whether it would be a good thing	15.9	29.8+	24.6
Registration			
In the last 12 months heard or read something about buying an apartment or house with a mortgage	17.2	19.7	18.7
Of those who did hear something			
--percent who paid close attention to at least some of it	25.7	23.7	24.5
--percent who paid close attention to it and carefully considered whether it would be a good thing	22.9	23.7	23.4
Mortgages			
Understanding of concept			
Could not answer	20.1	26.3	23.8
To borrow with interest[a]	16.2	18.3	17.5
To take loan from a bank to buy a flat	26.0	24.0	24.8
To pay in installments	24.5	18.3	20.8
Knowledge[d]			
Is it possible to take out multiple mortgages on the same property? [no]	84.3	85.7	85.1
What is the likely outcome of not making the required mortgage payments? [lose the property]	41.7	41.7	41.7
Is it possible to get a mortgage without officially registering it? [no]	91.7	90.0	90.7

Table 2. Cont

	Recent Purchaser	Potential Purchaser	Total
Attitudes[b]			
Positive statements			
A mortgage would enable me to buy a much bigger apartment or house than I could otherwise	8.2	8.6	8.4
Buying with a mortgage will allow me to move-in once the loan is made	8.0	7.9	7.9
Traditional ways of doing things are changing, and new ideas such a buying a house by taking out a loan are becoming more accepted in Egypt	7.8	8.0	7.9
Negative statements			
It is very important for me not to have long-term debt	8.4	8.5	8.5
Most parents would not approve a marriage of their daughter to a man who has a mortgage on the apartment where they will live	4.1	3.9	4
Top 3 of 19 statements ranked 1st as the most important points in deciding to take out a mortgagec			
Interest rate would be low enough to be acceptable	48.5	44.3	46.0
The length of the loan period	5.4	5.0	5.2
The monthly payments would be affordable	8.3	9.3	8.9
Registration			
Understanding of concept			
Expressed that registration protects property rights or guarantees them	66.7	65.7	66.1
Knowledge			
Aware of registration fee system introduced in 2006	14.7	16.0	15.5
Knew that the new system is flat fees (rather than percentage of value) as basis	73.3	58.3	64.1
Correctly named the maximum or minimum fee in system	6.9	4.7	5.6
Attitude[sb]			
Positive			
Registration of my dwelling would make it easier to sell in the future	9.2	9.3	9.3
Registration is a process that would give me the clearest possible legal right to my real estate property	9.2	9.2	9.2
Registration of real property would help me protect my rights in the event of a dispute	9.4	9.6	9.5
Negative			
Registration of real estate generally is not something very important to do when buying an apartment or house	3.4	3.2	3.2
Registration is too expensive	6.5+	6.0	6.2
Registration is a complicated process that takes a long time	6.4	6.1	6.2
There are other ways to prove ownership other than registration that are just as good, for example, utility bills	5.6	5.2	5.4
Intention			
How likely are you to register your property if you bought a new dwelling in the next year? (1=definitely not, 10=definitely will)	9.1	9.4	9.3

+ 2007 value for owners is significantly different from the value for potential owners at the .05 level or higher.

a. Percentage of those responding; multiple responses possible.

b. Mean value on a scale from 1 (strongly disagree) to 10 (strongly agree) for those responding to the question.

c. Percent of those who did not answer that they (a) could not answer or (b) they would never take out a mortgage under any circumstances.

d. Percent of respondents answering correctly. The correct answer according to the law is in brackets after each question.

The role of housing microfinance in supporting sustainable livelihoods

By Kecia Rust, Housing Finance Theme Champion

INTRODUCTION

Housing finance debates in the developing world, and specifically in Africa, have at their heart two issues: first, access to housing finance is about access to shelter, and second, access to housing finance is about access to a housing asset. The former is seen as a key strategy in the fight against homelessness; while the latter is expected, over time, to enhance the wealth base of otherwise low income households, leading them out of poverty. Of course, these two are both very large areas of debate, and the focus varies depending on the target market. In providing access to shelter, the housing finance debate includes a consideration of the role of government in housing the poor while also exploring innovation in financial mechanisms and their effect on housing affordability. The debate around assets includes a focus on property markets and how they function, and the role of lenders as well as governments in enhancing asset worth. Invariably, both debates end up focusing on the mortgage instrument – arguably the most efficient instrument for large scale capital investments in property – and how this might be made to work for low income households.

This poses a problem for the majority of the population in the developing world. In Africa, 75% of the population earns less than two dollars per day and 41% earns less than one dollar per day[1]. The affordability of mortgage finance to purchase an entire house for this population is clearly limited. Their capacity to sustain such a debt over its long term is also questionable – for most, their incomes and their lives are inherently precarious. An obvious option, therefore, must be the incremental housing approach which sees the development of housing in short, separately financed phases, "one room at a time". [2]

The literature on housing microfinance, which supports an incremental housing process, is certainly growing. Defined as a subset of microfinance (Merrill, 2006), housing microfinance is the "micro financing of housing needs: the application of a micro-finance based approach to housing finance" (Daphnis and Ferguson, 2004). This literature has been limited, however, to the first issue in the housing finance debate: access to shelter. The second issue, access to housing assets, seems to have been lost in the effort to win the argument for a new financial instrument. And yet, the two are intertwined: access to shelter (which is helped or hindered by a market in which there is demand and supply) is dependent on the realisation of assets (which are defined by a market in which there is demand and supply) and vice versa. The relationship of housing microfinance as a finance tool appropriate for the majority, and the development of housing assets in support of sustainable livelihoods, which are critical for the majority, is relatively unexplored. This is the focus of this paper. After considering the innovation of housing microfinance in Africa where levels of affordability among the majority make mortgage finance an unrealistic housing finance option, the paper explores the notion of housing as an asset and the dynamics of housing as an economic asset. The role of housing microfinance in growing the housing asset and supporting sustainable livelihoods is then explored.

THE INNOVATION OF HOUSING MICRO FINANCE IN AFRICA

It is perhaps a bit of a misnomer to write of the 'innovation' of housing microfinance. Unable to access mortgage finance either because it did not exist or because it was inaccessible, the majority of households in Africa have been financing their housing needs incrementally, with small amounts of money progressively applied towards their larger housing vision, for centuries. Tomlinson (2007) highlights that even today, throughout Africa, while high income earners generally use their own resources to house themselves, buying formal housing outright; the middle class and low income earners finance their own construction over time, often in unplanned areas. The innovation is that this practice is finally being noticed and is now being supported with more formal mechanisms. At an IUHF meeting in Brussels in June 2004, Ferguson made the point succinctly:

[1] Global Report on Human Settlements 2005 - Financing Urban Shelter. See also The Economist, "African banks: On the frontier of finance" 15 November 2007, and The Economist, "Poverty in Africa" 22 November 2007.

[2] See Malhotra, M (2003) Financing her home, one wall at a time. Environment and Urbanisation, available on http://eau.sagepub.com/cgi/content/abstract/15/2/217

"Less than 30% of households in most emerging countries can afford a mortgage to purchase the least expensive, developer-built unit because:
- House prices are high
- High real interest rates of 10%+, amortised over few years creates high monthly repayments that low income earners often cannot afford
- Unavailability of long term funding, which creates interest-rate risk and limits the supply of mortgage credit
- Costly formal-sector systems for property rights, land use development, property transfer taxes, etc. push families into the informal sector and contribute to limit the demand for mortgage money
- Instability of household income makes long-term debt risky to lenders and unattractive for many families.

So, most households build step-by-step, room-by-room."

Indeed, research commissioned by the FinMark Trust into housing finance sectors in various African countries has found that at best, 17% of local populations are eligible for mortgage finance – and this is before housing affordability is considered. In this environment, housing microfinance becomes a critical tool to enhance access to housing.

Unfortunately, very little is known about housing microfinance institutions (HMFIs) – the literature is very thin (Tomlinson, 2007). HMFIs operate as either first, second or third tier organisations, defined in this way by how they are regulated. Formal institutions (first tier) are regulated as banks; semi-formal institutions (second tier) are regulated as non-bank institutions; informal institutions (third tier) are un-regulated. Merrill (2006) clarifies further that a distinction can be made between those institutions for which housing microfinance is an additional product (micro finance institutions, banks and non-bank financial institutions) and those institutions whose focus on access to shelter has drawn them into offering housing microfinance. The following table offers an initial approach to understanding their diversity.

Category	Description	Examples in Africa (not a comprehensive list)
Third Tier (generally unregulated)		
Informal, locally established (susu, umpato)	Savings based, locally defined. Approach and use of funds defined by group: individual or collective loans	All countries
Community based shelter funds	Usually donor supported (ie Slum Dwellers International) largely collective loans, targeted at most poor	Trust Fund of the Housing People of Zimbabwe ; WAT Human Settlements Trust in Tanzania; and other examples in Angola, Namibia, Kenya
Second Tier (regulated as non-banks)		
Cooperatives and credit unions (Saccos)	Individual loans for housing often a coincidental focus	NACHU in Kenya; WAT SACCOs in Tanzania; other examples in Namibia, Zambia
Non-bank micro lenders (credit-only)	Origins in housing delivery / shelter NGOs that saw housing microfinance as the next progression	Kuyasa Fund in South Africa; Zambia Low Cost Housing Development Fund
	Origins in micro credit for SMMEs; housing the next progression. Individual loans for those with secure tenure.	Uganda Microfinance Limited; Jamii bora in Kenya; PRIDE in Tanzania; Blue in various countries; and other examples in Angola, Ghana, Namibia, Tanzania, Zambia
First Tier (regulated as banks)		
Microfinance banks (deposit taking and lending to members and sometimes non-members)	Usually, when micro lenders convert to banks to access capital – a focus on housing loans usually comes later	K-Rep in Kenya; Zambia National Building Society; Pulse Holdings in Zambia; and other examples in Ghana, Tanzania
State owned banks offering micro loans	Trend is now moving away from these as many sustained losses.	Examples in Ghana, Tanzania, Guinea, Uganda
Commercial banks offering micro loans	SA banks have offered unsecured loans for some time. The National Credit Regulator in SA, for example, estimates that 10-30% of these are used for housing.	African Bank, ABSA , Standard Bank and Capitec in South Africa; Indo-Zambia Bank; and examples in Namibia, Tanzania

[3] Due to the economic and political crisis in Zimbabwe, HPZ no longer operates the Trust Fund and is not able to operate housing loan program.

Whether these organisations have come into housing micro lending from a micro-enterprise finance base or from housing NGO origins, the housing micro loans they provide enable borrowers to incrementally develop and improve upon their housing. Daphnis and Ferguson (2004) explain that their loans are for relatively small amounts, based on the clients' capacity to repay. Repayment periods are relatively short, and loan pricing is expected to cover the real, long-run costs (operational and financial) of providing the service. Generally, these loans are unsecured, or secured with collateral substitutes: the property is not offered as collateral for the loan as in the case of the mortgage. This makes it possible for loans to be offered even when tenure is not legally secured, where there is not yet a property market (for example, in rural areas), or in cases where borrowers are reticent about putting their property at risk. Credit services can be linked to prior participation in savings or micro-enterprise loan services, which establish for the lender the client's willingness and ability to repay the loan.

For some lenders, the only relationship of the loan to housing is that it is used, ostensibly, for housing purposes. For other lenders, especially those which have housing NGO origins, or those which are supported by donors or other agencies with a housing focus, technical support to assist in the home building process is also included in the loan product or offered as an additional benefit.

Still, in all cases, the housing loan offered is time bound – limited to its own term, defined by its immediate use, whether this be the building of a new room, the installation of a geyser, the tiling of a kitchen floor, and so on. In this way, the housing micro loan satisfies the first issue in the housing finance debate: by providing access to adequate shelter. The second issue, the housing asset, does not feature. This is fundamentally different to the delivery of a mortgage loan which by its nature responds to both housing as shelter and housing as an asset – a mortgage is only possible if an asset value of the housing unit is assumed. With a housing micro loan, the asset value of the unit is irrelevant to the product. Or is it?

UNDERSTANDING THE HOUSING ASSET

The notion of housing as an asset was perhaps most popularly highlighted by Peruvian economist Hernando de Soto. In what many cite as a ground-breaking book, *The Mystery of Capital*, de Soto (2000) provides an explanation for poverty:

"Poor people save… but they hold these resources in defective forms: houses built on land whose ownership rights are not adequately recorded and unincorporated businesses with undefined liability… Because the rights to these possessions are not adequately documented, these assets cannot readily be turned into capital, cannot be traded outside of narrow, local circles where people know and trust each other, cannot be used as collateral for a loan, and cannot be used as a share against an investment." (Mystery of Capital, 2000)

This statement is based on an acceptance of the reality of a housing 'ladder' for households. The housing ladder assumes that a house grows in value over time through the normal appreciation of the property market. As the owner continues to pay their loan, their equity in the asset increases. This means that when they sell their house, they are likely to realise a profit from the sale that they can then use to fund a more expensive house that better suits their needs. This process can continue for the entire life of the homeowner, so that by the time they retire, seeking finally a smaller or simpler home, they can use the equity realised from the sale of their last home to fund their retirement.

The de Soto thesis relies, however, on the capacity of households to sustain regular and long-term repayments on the debt that their housing helps them leverage. And this, we understand, is not an option for the vast majority of households in Africa. There are other problems with the de Soto thesis: research undertaken in South Africa in 2003 and 2004[4], found evidence that this idealized housing 'ladder' does not function equally well for all segments of the population. The focus of the Township Residential Property Markets (TRPM) research was to investigate performance of township residential property, with a view to interrogate the de Soto thesis: do title deeds necessarily create wealth? The short answer provided by the study[5] was "no". Following a large scale titling process that has seen upwards of two million properties provided to low income families[6], residents in South Africa's former black townships were finding that their properties were not the financial asset that policy hoped they would be, that the market was significantly depressed compared with other non-township areas, and that values being realised were significantly less than would be for the same house elsewhere.

Critically, the de Soto thesis depends on (at least) four factors additional to title deeds which are not uniformly evident in the South African housing market, and which are largely absent in low income housing markets throughout Africa:

- A functioning secondary property market: The TRPM study found a dysfunctional property market in South African townships with limited churn and depressed property values. Home owners were unable to realise the asset value of their housing because there was

[4] The Workings of Township Residential Property Markets. Reports available on www.finmark.org.za
[5] This is extensively documented in a series of reports available on the FinMark Trust's website.
[6] South Africa's housing subsidy programme has been documented extensively (see, for instance, Zack and Charlton, 2003). Essentially the programme involves the delivery of subsidised housing with freehold tenure to qualifying beneficiaries, as well as the transfer of about 846,000 units built in the previous, apartheid regime in former black townships, to their occupants.

not an effective market in which to trade. While this is now changing in a few key townships in South Africa, the market remains challenged.

- Sufficient, affordable housing stock for the target market. Research commissioned by the Banking Association[7] estimates a shortage of over 600,000 affordable housing units in the sub-R200,000 range. Only 17,339 units costing less than R200,000 were delivered nationally in 2005.

- Housing affordability for mortgage finance. About 86% of South African households cannot afford the mortgage repayments that a R200,000 loan would require. Meanwhile, the shortage of affordable stock has increased the price of that stock which is available. ABSA estimates that the average affordable house in South Africa (defined as a property of 40-79m² and costing less than R370,000) was R249,000 in the second quarter of 2007. At current interest rates, a household would need to earn at least R10,000 per month to afford a loan of this amount.[8] Less than 10% of South Africa's population earns this much.

- Access to mortgage finance: Notwithstanding the Financial Sector Charter (FSC), through which lenders have committed to provide housing finance to low income earners, a review of lending by the FinMark Trust in 2006 determined that 53% of households in the FSC target market are ineligible for mortgage finance and a further 20% are too poor. Currently, only 5% of FSC target market households have a mortgage, and only a further 20% would be eligible if they were to apply.

Hernando de Soto's views have limited application if the market is not working. This is simply because the financial value of housing is only relevant if it is realisable. And yet, the notion of a housing "asset" is compelling. Clearly it requires a broader interpretation. This broader interpretation of the housing asset recognises that it involves three components: the social asset, the financial asset, and the economic or productive asset.

The social asset responds to the 'housing as shelter' debate and in South Africa, has been the focus of policy since the introduction of the housing subsidy programme in 1994. As a social asset, a dwelling provides the household with a family safety net and a sense of citizenship or belonging in the city. In the provision of subsidised housing, government is providing a valuable social asset that will enhance households in their efforts to sustain themselves and to grow, thereby reducing their vulnerability. Where subsidies do not exist, governments still recognise that the delivery of affordable housing is critical to the stability of low income populations.

The *financial asset* becomes important when the household wishes to improve their housing conditions and climb the housing ladder, selling their current home and then buying a better home, more suited to their needs. The more the household can sell their original home for (and this is a factor of current property market conditions, the quality of their home and the neighbourhood, and the existence of a buyer with affordability), the more they can afford to buy the next home for. Households wishing to downsize their housing can buy a less expensive house and treat the balance equity as income. Housing can also be leveraged to access finance for other purposes, such as the establishment of a business or to pay university fees. In this, the financial asset is expected to offer households an opportunity to move out of their current situation into one of greater wealth and growth. However, as noted earlier, the performance of the house as a financial asset depends upon prevailing market forces including a functioning secondary

and so on) that make an area "investment grade" and contribute to property price appreciation. In the absence of a functioning market, de Soto suggests that property becomes "dead capital". The TRPM research estimated that in 2004, there was at least R68.3 billion worth of "dead capital" in South Africa's former black townships.

But is the housing asset really dead? This is where the third corner of the triangle comes in. The economic asset is about the income earning potential of the house and the extent to which it can contribute towards sustainable livelihoods. In the context of high unemployment, income that can be earned from housing becomes extremely important. It can be either through the establishment of home based enterprises or the offering of accommodation for rent. However, in many instances the quality of the structure supporting the income earning opportunity is poor. This suggests an opportunity for investment in the improvement of the structures concerned (and therefore an opportunity for incremental, non-mortgage housing finance).

[7] Settlement Dynamics, Matthew Nell and Associates (2005) Research into Housing Supply and Functioning Markets. Final Report: Research Findings and Conclusions. Prepared for the Banking Association of South Africa, unpublished report available on www.banking.org.za

[8] The prime interest rate is currently 14% in South Africa. Loans offered to low income clients are generally prime plus 50 basis points. Loan affordability is calculated on the assumption of a 20-year mortgage at 14.5% with 30% installment to income.

Recent research into the dynamics of housing as an economic asset

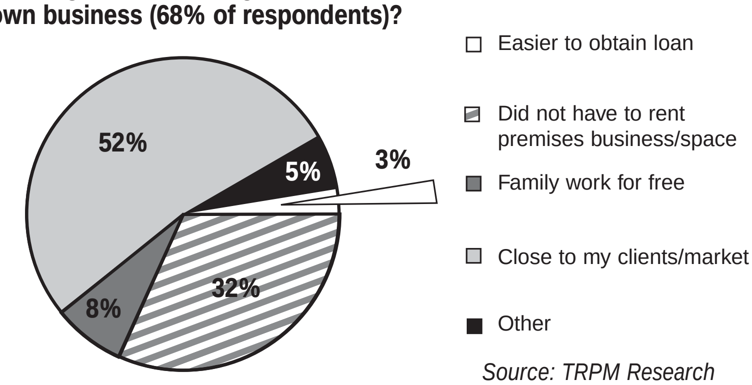
The TRPM study touched on the role of housing in entrepreneurs' business strategies, as another way of interrogating the de Soto thesis. The study surveyed 400 entrepreneurs in the townships of Cape Town, Johannesburg, Ekurhuleni and Ethekweni, and asked them to speak about how their homes contributed towards their businesses.

The research found that the most common use of housing was as a venue for the business. The majority of respondents who used their dwelling for business purposes ran their shop, crèche or office from their home, or used their home as the base for the production or storage of goods. The use of housing as collateral, against which finance could be raised to grow the business, was virtually nil. While about 68% of respondents said that their dwelling made it easier to start their own business, only three percent of these (about 8 respondents) said it made it easier to obtain a loan.

Whether or not they used their home as security, few entrepreneurs accessed loan finance to start their businesses. Only 15% (58 respondents) of the entire sample said they had accessed a loan of some sort – and of this, only 36% (21 respondents) said the loan had been from a bank. Only three of the 400 respondents included in the sample had a current mortgage loan and none of these said they had used the mortgage to start their business. The majority (87%) had used own funds – savings, pension payouts, retrenchment packages and so on, to fund their businesses.

The TRPM research suggested that the role of the housing asset in wealth creation was not as straightforward as the de Soto thesis implied. Housing for the entrepreneurs surveyed represented a significant asset not because of its collateralized worth, but rather because of the income that could be earned through its physical reality.

Q33. How did living in this dwelling make it easier to STAR your own business (68% of respondents)?



Source: TRPM Research

In 2005, a further study looked explicitly at the activities of "housing entrepreneurs" – people who use their housing as an economically productive asset – in the inner cities and townships in Gauteng, one of South Africa's nine provinces.[9] The study considered the activities of small scale landlords who offered accommodation for rent in their homes, backyards, or in inner city flats; and home based enterprises that ran businesses from their homes.

Small scale landlordism is not an unfamiliar concept in the developing world. In an early book on the subject, the United Nations Centre for Human Settlements and the International Labour Office (UNCHS/ILO) (1995) argue that "the renting of rooms appears to be the most common income-generating use to which dwellings are put." Scanning the literature of housing in the developing world, UNCHS/ILO provide multiple examples, noting that the "symbiotic relationship" between owners and tenants is broadly understood to be the primary motivator for most of the housing construction and upgrading in the developing world. The report quotes Woodfield (1989)[10] in arguing that the possibility to rent out space has in fact made home ownership a reality for many poor households, who otherwise might not be able to afford repayments, and therefore be renters themselves.

Similarly, home based enterprises are commonly found. Whether retail oriented (offering food, clothing or other items for sale), production oriented (such as welders, food manufacturing, etc.), or service oriented (hair salons, mechanics, traditional healers, bed and breakfast operators), home based enterprises evolve organically in settlements especially where unemployment figures are high.

[9] The study was carried out in Gauteng in 2005 and 2006, by Shisaka Development Management Services. The research team conducted interviews and focus groups with small scale landlords and their tenants in two inner city areas (Hillbrow and Berea in Johannesburg, and Sunnyside and Pretoria Central in Tshwane) and two townships (Katlehong and Orlando East) in Gauteng. For more information, visit www.finmark.org.za

[10] Woodfield, A 1989. Housing and Economic Adjustment. London: Taylor and Francis; for and on behalf of the United Nations.

The findings of the housing entrepreneurs study in South Africa are set out in the table below.

Small scale landlords	Home based enterprises
• **Small scale landlords are delivering at scale.** Across South Africa, they offer between at least as much accommodation than what has been delivered by the national housing subsidy scheme since 1994. An estimated 1.85 million households (or 15% of South African households) rent accommodation provided by small scale landlords. Sixty percent of this (1.1 million households) is provided on the property of the landlord, in either formal or informal backyard dwellings. [11] • **Small scale landlords are offering well located, affordable rental housing for low income people.** The average income of their tenants is only R1800 per month. This is much lower than the income levels targeted by the government's state subsidised social housing programme (generally R2500 - R7500 per month), which as of December 2005 had delivered only 34,208 social (rental) housing units. • **Small scale landlords are small scale enterprises and are earning an income.** It is estimated that the sector is currently generating a rental income of approximately R421 million per month, or just over R5 billion annually. The majority of landlords are otherwise unemployed. In the townships, many are elderly women with little or no other income. • **There is potential for growth.** Demand for stock is high and over 62% of landlords in both inner cities and townships said that it was easy to find tenants. Township landlords report that vacancy is effectively zero. However, this potential for growth is not being realised. The overall rental sector decreased from 31% of the total housing sector in 1999 to 27% in 2005.	• **Home based enterprises (HBEs) are significant contributors to local economies.** An estimated 355,000 HBEs are active in townships and inner cities across South Africa, comprising about 13% of the total population of these areas, and generating approximately R476 million per month. By definition, they operate in residential areas, enhancing access to services and products by low income households throughout South Africa and contributing to the development of sustainable human settlements. While most of these businesses can be classified as micro or small, for many of the entrepreneurs who own them, they represent their sole income. • **The home is an important asset for entrepreneurs.** Most of the entrepreneurs identified in the survey (70%) operate from the home. This is higher in township areas (83- 89%) than in inner city areas (39 -63%). The house has an important impact on reducing the costs of entrepreneurial activity and is therefore a useful incubator in the initial phases of the business. Few entrepreneurs (6-7%) however, use their home as collateral for a business loan. • **Many HBEs are entrepreneurial.** Over one third (33%) of HBEs in Inner Cities and just under half (42%) in Townships show entrepreneurial characteristics, having been the first to undertake the business in their area. Only one third (32-33%) of HBEs surveyed in both Inner Cities and Townships said they would take permanent employment if it was offered to them. • **There is potential for growth:** The majority of HBEs in the Townships (90%) and Inner Cities (95%) want to expand. Many (about 55%) feel that their businesses are growing. Given the low prevalence levels (only 13-22% of the population in the neighbourhoods surveyed were found to operate as entrepreneurs – lower than most other countries), but significant income generated, this suggests that HBEs represent an untapped opportunity for unemployed South Africans.

The findings of these two studies were substantiated by the FinScope Small Business Survey, undertaken in 2006 also in Gauteng. With a sample of 2001 small businesses in Gauteng, the survey was statistically representative of all small businesses in the province.[12] The survey estimated a total of 1,053,818 small businesses in Gauteng, two thirds of which were trading businesses. The survey found that 69% of small businesses were home based – operating either from in the home, in the back yard, or in a garage. Even among the more formalized entrepreneurial (as opposed to survivalist) businesses, close to the majority were home-based. Across the board, however, the use of loan finance to start the business was limited – only 2% took out a loan whereas 63% used their own personal savings.

In the housing entrepreneurs study, the findings regarding finance use were similar. One of the main reasons why so few small scale landlords used loan finance to develop the accommodation they were

[11] Just under one third of all South African (3.5 million) households live in rental accommodation. Of this, 57% rent their accommodation from small scale landlords – about 60% of this (comprising 1.1 million households) is formal accommodation, while 40% (about 740,000 households) is informal.

[12] For more information on FinScope Small Business, visit www.finscope.co.za. The survey will soon be replicated with a nationally representative sample.

offering for rent was their reluctance to use their homes as collateral. The vast majority used their own personal savings. This practice was echoed by home based entrepreneurs who used savings, loans from families or informal micro credit to start up their businesses. Their explanation was that there were not loan products available that responded to their particular situation: service providers did not explicitly recognise home based enterprises and the high levels of informality by which they operated.

HOUSING MICROFINANCE SUPPORTING SUSTAINABLE LIVELIHOODS

The activities of housing entrepreneurs generally fall below the radar of policy makers, government officials, and even lenders. Their operations are considered informal, small scale, and insignificant. Indeed, it is possible that with support and access to more appropriate forms of finance, their activities could grow. And yet, even at the relatively small scale at which they are operating, they are earning significant sums for their operators. In the South Africa study, it was estimated that small scale landlords in South Africa's former black townships and inner cities are earning R421 million (US$ 62 million[13]) per month, or just over R5 billion (US$735 million) annually. Home based enterprises in such areas earn an estimated R476 million (US$ 70 million) per month or just under R6 billion (US$ 840 million) annually. These incomes are not recorded on formal pay slips and are rarely held in formal bank accounts. And yet, they offer micro lenders a solid income stream against which to lend.

If housing micro lenders were to incorporate a sustainable livelihoods awareness in the loan products they offered they would be responding not only to the shelter demands of their clients, but also to the broader potential performance of their house as an asset. By using housing microfinance to support the economic asset potential of the borrower's house, the strength of the financial asset would also be mobilised over time. And in this process, ongoing demand for repeat loans would be sustained, further strengthening the lender's own performance. So, for example:

- The household uses savings or family loans to purchase a plot of land or to build on land already secured.

- With a plot of land and a rudimentary structure, the household borrows a micro loan to make basic improvements: an extension in size or improvement of fittings;

- A second micro loan builds a backyard room which the household rents out. Rental received contributes towards loan repayments.

- A third micro loan improves the house further. Perhaps a geyser is installed or a ceiling is added. Rental received on the backyard room continues to contribute towards loan repayments.

- A fourth micro loan improves the house further still; or possibly a second backyard room is built which the household rents out. Rental received contributes towards loan repayments.

- The original plot of land now has significant improvements – an improved house plus two income-earning rental rooms. The financial value of the house is significantly more than the household originally paid, and yet also much less than the cheapest developer-built house available on the market. The household opts to sell this and use the equity earned to purchase another house that is better suited to their new situation. The buyer accesses a small mortgage loan, moves in, and with their main income and the rental earned from the two backyard rooms, repays the mortgage instalments.

- And so on…

Repeat loans ameliorate the risk profile of the micro lender's loan book while also developing the borrower's experience with formal credit. This experience will come in handy if they ever realise sufficient affordability to access a mortgage loan. Whether this process happens within a lifetime of one client or over generations, the lender becomes aware of two things: the borrower's performance and the performance of the house. Both of these pieces of information improve the lender's capacity to manage the risk of the loan.

De Soto's thesis hinges upon housing becoming mortgageable, and home owners collateralizing their homes in order to access finance. While this may be true for "why capitalism triumphs in the West", it is premature in Africa for a number of reasons. First, it requires a level of affordability that is limited to at most, a quarter of the population. Second, it expects that home owners will want to take the risk of losing their home by offering it as collateral: an unreasonable expectation given the relative volatility of the economy and labour market in South Africa as well as in other African countries. And third, it requires a thick property sector with ample buyers and sellers to enhance choice and opportunity. Numerous studies regarding the housing sector in Africa have proven that this currently does not exist.[14]

Rather, a more appropriate approach would be to support incremental forms of finance – housing micro loans – which can be structured to meet the affordability of particular clients and which better suit the home improvements process of home owners. Beyond enhancing access to shelter, however, housing micro lending should seek to support the development of income-earning activities within the home, both to improve the borrower's loan repayment capacity as well as to enhance their potential to realise a sustainable livelihood. Over time, the progressive improvements made to the housing unit

[13] Calculated at US$1 = R6.8 rate of exchange.
[14] See Tomlinson (2007) for a useful literature review on the subject.

will no doubt enhance the asset value of the house and bring it to mortgageable quality. This will fill in the gaps in the housing ladder and lead to the availability of affordable housing that mortgage-eligible borrowers will be more likely to afford.

If the entirety of the housing asset is realised and supported by lenders and their housing finance products – if the housing unit's performance as a social, economic, and then financial asset are equally promoted and if both secured and unsecured housing loans are targeted at these outputs – then housing can indeed alleviate poverty. This requires recognition and support of the home-based SME sector, settlement planning to accommodate small scale business activity in residential neighbourhoods, and the promotion of backyard and small scale rental. Africa's real housing challenge is this: allowing low income households to use the homes flexibly to provide shelter, enhance income generation opportunities, and create wealth over time. Housing micro finance is a critical instrument for making this a reality for low income households.

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Ghana Primary Mortgage Market Initiative

By Agatha Quayson [1]

INTRODUCTION

With a population of about 22 million, Ghana currently has a labor force of 10.8 million; and its economic fortunes are looking brighter with a per capita income of US$540 as at 2006. Economic performance has improved in recent years. Annual GDP growth rate has increased from 3.7% in 2000, to 5.8% in 2004 and 6.2% in 2006. Average annual inflation has declined from 25.2% to 14% and 11% during the same period.

Urbanization is seen to have a major impact on the housing situation in Ghana. The explosion of the urban population has created a sizable demand for housing finance that cannot be ignored if the basic housing needs of burgeoning cities are to be satisfied. The need for more and better housing is not restricted to urban areas. Poor people living in rural areas have similar concerns, which also need to be addressed. Ghana like many other developing countries is faced with a high population growth rate, high urban migration and low incomes for the majority of the population.

The Ghana Real Estate Developers Association (GREDA) (1998) notes that only 5% of those who want to own a house can do so from their own resources. Another 60% would need some form of financial assistance while the remaining 35% are not capable of owning and building a house in their lifetime.

Home ownership is considered to be very important in the Ghanaian society because of its dual purpose of providing shelter, and also because it is an indicator of one's social status and prestige. Between 1990 and 1998, the Social Security and National Insurance Trust (SSNIT) has provided over 30,000 blocks of flats in the country, principally in regional capitals like Accra, Cape Coast and Takoradi. However, as recent studies by GREDA indicate, about 500,000 houses are needed annually to meet the growing demand for housing. The cost of houses on the market – ranging from $35,000 to $350,000 - is out of range for most households in Ghana.

The limited availability of finance and the stringent repayment procedures of lenders make it impossible for many people to redeem a loan within a short period of time. In a tight money market, housing is the first area to suffer, since neither the builder nor the consumer can readily obtain finance for housing. Indeed, many housing developers have difficulty in obtaining funding for their projects even in normal times.

The financial sector also plays a pivotal role in the success of a vibrant and buoyant housing finance industry. The sector's role in the mobilization and distribution of financial resources to various market participants and sectors in the industry cannot be underestimated. The financial sector in Ghana has helped in the transformation of illiquid assets into liquid assets for increased capital formation, and also in the pooling and allocation of risks inherent in the industry.

The Financial Sector Adjustment Program (FINSAP), initiated in the early eighties, formed the building block for the restructuring of the Ghanaian financial system. FINSAP set out major stabilization and structural adjustment policies that were aimed at restructuring distressed banks, improving savings mobilization as well as increasing efficiency in credit allocation. The banking sector in Ghana has grown substantially in the last few years with six banks entering the Ghana market since 2002. The first five are of Nigerian origin, and noted for their very aggressive and predatory approaches to business:

- Zenith Bank Limited
- United Bank of Africa (UBA)
- Standard Trust Bank Limited
- Guaranty Bank Limited
- Intercontinental Bank Limited
- Fidelity Bank Limited.

The influx of new banks increased the number of banks in Ghana from 16 to 22. This increase occurred after the Bank of Ghana (BOG) increased the minimum stated capital requirements from GHC 200 million to GHC 70 billion (Ghanaian currency). [2] This compares to the Central Bank of Nigeria's requirement of an equivalent of over GHC 195 billion.

The development of housing finance in Ghana can be attributed to a multiplicity of factors. Key among these is the macroeconomic environment. Macroeconomic instability, reflected by high and intractable inflation, high interest rates with huge spreads and a weak and volatile local currency, has characterized the economy over the past two decades. Since these facets of instability are inter-related, they created disincentives for investments in long term instruments, required to finance long term projects like mortgages for houses.

[2] One US Dollar is equivalent to 9,670 Ghanaian Cedis (GHC).

Ghana has long battled with high inflation rates, with single-digit inflation remaining elusive. The early part of the 1990s was characterized by rising inflation; the year-end inflation rate peaked at 59.5% in 1995. The government's aim of halting the rising trend in inflation, both to restore macroeconomic stability and stay within the limits agreed with the International Monetary Fund (IMF), compelled the Central Bank to tighten monetary policy. This helped inflation to fall to an annual average of 12.4% in 1999. However, between 2000 and 2003 the average inflation rate soared to 25%, following the collapse of the cedi in 2000 and rising international oil prices. Although tighter fiscal and monetary policies did help to prevent inflation from moving higher over this period, the impact of higher fuel and other import prices proved difficult to control. In 2004, Government subsidies helped to keep domestic fuel prices low, which ensured considerably lower inflation, but rising food prices and increased government spending ahead of the elections meant that single-digit inflation remained elusive, and the inflation rate averaged 12.6% for the year. The high level of inflation coupled with cumbersome foreclosure, land titling problems and non availability of long term funding, deterred most banks from entering into the mortgage lending business.

In view of the economic circumstances, the International Finance Corporation (IFC) proposed a three year program to tackle some of the outstanding housing finance issues in Ghana. The program was unique in design as it coupled systemic legal and regulatory reform with key investments in mortgage origination and construction finance.

The program is aimed at reducing the implied risks in mortgage financing. By providing support to a mortgage law reform to be adopted by the Government of Ghana (GOG), time and delays to foreclose on defaulted borrowers should be reduced substantially from up to five years down to 12 months.

By standardizing mortgage products through a Mortgage Toolkit, which provides guidance on how to establish modern mortgage lending operations, with many financial institutions, the investment climate of local and international lenders will improve. This will allow a reduction of interest rates, since the implied risks related to mortgage financing will be reduced by a better legal environment, better underwriting procedures and most of all a rising confidence that a mortgage is worthy in a sense of a good marketable security.

SUMMARY OF THE PROGRAM

As proposed, IFC has established a three year Advisory Services (AS) program known as the "Ghana Primary Mortgage Market Initiative (GPMMI)" to foster the large scale opening of the primary mortgage market in Ghana. The program is funded by the Swiss Secretariat for Economic Affairs (SECO). Alongside the advisory services, IFC is providing lines of credit in local currency directly to participating banks of the Program.

The adoption of a market-oriented mortgage system was to assist in improving the lives of the many families who live in unsafe, substandard, or severely cramped housing conditions. Additionally, the creation of an active and organized residential mortgage market would stimulate the growth of several supporting industries including construction, building materials, architecture and design and real estate agencies. Many downstream industries, such as small and medium sized enterprises (SMEs) in furniture making, would benefit from the expansion of housing markets.

The Program was established with a three-pronged approach:

- Improving supportive processes. This involves working with institutions such as the Land Title Registry through its Land Administration Program being supported by the World Bank to ensure efficient registration processes. The program will also work with supporting institutions, such as appraisal firms to ensure standardization in the appraisal methods, and real estate builders and agents to build a data base of real estate listings to create a strong mortgage market.
- Working with government officials to improve the legal, tax and regulatory framework for mortgage finance. The component includes work with legal consultants on foreclosure and eviction rules, mortgage provisioning rules, promotion of a secondary mortgage market, and incentives in the tax code to promote home ownership.
- Working with financial institutions to develop and launch mortgage products. The program, through its advisory services, will provide capacity building programs to lenders to enhance their mortgage lending skills and create and develop innovative mortgage products and services.

The Importance of Housing Finance

The development of housing finance is inextricably linked to overall country-wide economic development, including the strengthening of financial institutions, reducing poverty, promoting social stability, and improving people's lives. The housing finance market is amongst the most important sectors in an economy because it accounts for a sizeable portion of a country's productive activity, through backward linkages to land markets, building materials/tools, durable goods, non-durable goods in terms of home furnishings, and labor markets.

Housing markets have significant forward linkages with financial markets. Mortgage debt accounts for a large proportion of household debt and, through secondary markets and alternative sources of finance; mortgage debt supports the efficient functioning of domestic and international financial markets.

Housing is often viewed as a leading indicator of overall macroeconomic activity. Therefore, the development of the housing finance sector would have a tremendous developmental impact, both in terms of providing social stability and promoting economic growth in Ghana and, by extension, to other countries in the region.

The Current Situation in the Ghana Housing Market

Fourteen years ago, the World Bank Group worked with the Government of Ghana to create the Home Finance Company (HFC). HFC was started with the vision to become a secondary market company. Banks, such as Barclays, Standard Chartered and Ghana Commercial Bank, amongst others, would originate and sell their mortgages to HFC.

Unfortunately, the market did not develop in this way. The banks did not enter the mortgage lending business due to high interest rates, a lack of bankable properties and alternative lending opportunities. In order to stay competitive, HFC became a primary mortgage issuer and the only significant mortgage lender in the housing market for more than a decade until recently when the GPMMI was launched.

Following the program launch in November 2006, the housing market in Ghana has evolved with the Ghana Primary Mortgage Market Initiative (GPMMI) working with five financial institutions namely Ecobank, Merchant Bank, Fidelity Bank, HFC Bank and Ghana Home Loans.

IFC has so far committed US$25 million as lines of credit to three out of the five participatory Financial Institutions to jump start the mortgage market in Ghana. As a demonstrative effect, two banks, Guaranty Trust (GT) Bank and Amalgamated Bank, have indicated their interest to participate in the program.

LEGAL AND REGULATORY

The legal foreclosure procedures for mortgages in Ghana did not guarantee a lender's ability to realize their collateral in case of a borrower's default; hence the banks were reluctant to operate in the mortgage market on a large scale.

To address this issue IFC, in collaboration with SECO and the Financial Sector Strategic Plan (FINSSP) of the Ghanaian Government, commissioned a review of the current legal framework to enable housing finance and mortgage finance providers to enforce mortgages in a cost-effective manner. It was expected that the review would result in the promulgation of a Collateral Security Act to provide a best-practice legal framework for the creation, registration, perfection, and enforcement of collateral in Ghana.

Bentsi-Enchill, Letsa & Ankomah (BEL&A), a Ghanaian law firm, together with Nixon Peabody, an international law firm, as a result were contracted as the legal consultants on the project to undertake thorough legal research on the collateral security law as regards to immovable property in Ghana, suggest reforms and draft a Mortgages Amendment Bill and related rules for its implementation. Through the hard work of both legal consultants and the stakeholders, the Mortgage Reform Law has been introduced to governmental authorities through the Ministry of Finance. It is expected to have been introduced to parliament by the beginning of 2008.

EXPECTED LONG TERM IMPACT OF THE PROGRAM

The Program is expected to help to address and overcome many of the key obstacles to primary mortgage market development in Ghana and also deliver the following long-term benefits:

- Create long term high quality mortgage lending operations at a number of banking firms;
- Foster the offering of local currency denominated mortgage loans, thus eliminating foreign exchange risk for both lenders and the homeowners;
- Foster the development of affordable housing by making mortgage financing available. As a result, developers and builders will be more willing to design and build large scale and high quality housing projects knowing that there will be a final takeout of the completed home;
- Foster the development of competitive forces operating in an open and unfettered market place;
- Introduce risk-mitigating vehicles and tools for the banking system and for the investing community of institutions in Ghana;
- Introduce a securitization model, in a basic format, as an efficient and cost effective way to bring long-term funds to the banking system and as a way for the banking system to manage and off-load credit risks that can be efficiently priced and absorbed by the capital markets. There is no indication so far that the subprime crisis in the USA will affect the perception of mortgage lending in Ghana. The market is not developed to enter into subprime lending. Investors are willing to invest in mortgage bonds but the market is still in its infancy stage.

DEVELOPMENT IMPACTS OF THE PROGRAM

Macro-economic Aspects

The housing industry of any country is the single most powerful engine for economic growth and productivity due to the significant multiplier effects of investment in housing. Housing finance mechanisms are the key drivers of the housing industry. In the absence of housing finance mechanisms, homeowners are left to their own means to buy their own homes, and the market does not develop. This severely limits the level of home ownership to the few wealthy individuals without enfranchising the great majority.

The high multiplier effects of housing activity stem from the wide variety of inputs to residential construction. To name only a few, they range from such high-level professional jobs like engineering, architecture, and urban planning, to skilled labor jobs such as electricians, plumbers, and masons, to semi-skilled and unskilled labor. Many different classes of work are involved both in the production of the hard asset – the home, and in the production of the financing which allows most families to actually own or rent a suitable living space.

Many direct and indirect industries feed the production processes. These range from all types of construction materials (cement, brick block, wall board, plaster, wood), to manufactured products (windows, heating and cooling devices, electrical and plumbing fixtures, cabinetry, ceramic tile), and furnishings (carpets, window coverings, furniture, dishes, etc). The list goes on and on.

Social Aspects

The provision of clean and safe housing is the primary responsibility of national governments. Many countries take this role seriously and view home ownership as a right. Some go to the extremes of providing subsidy systems, ensuring abolition of foreclosure, and eviction. It is positive when governments take this responsibility so seriously. However, extreme measures could distort market mechanisms and stop market-based financing from flourishing.

This program encourages open and free market forces and demonstrates to government policy makers that subsidies are not the only way to bring the cost of home ownership within reach of lower income strata. Furthermore, it demonstrates that the extension of home ownership benefits is only possible when the contractual obligations of the mortgage agreement are fairly enforced through the ultimate use of foreclosure and eviction.

Pride of Ownership

Most people want to own their homes. When they can, they fight hard to pay their mortgages in order to keep their homes and lavish significant amounts of disposable income to maintain and beautify their homes. High home ownership has an important impact on national psyche and a general feeling of well-being.

Store of Wealth

A family's home typically becomes the single largest store of family wealth. This is increasingly true as you move down the economic ladder. When mortgage debt has been reduced or paid off, this wealth can be tapped for later stage family needs, including retirement.

Lessons learnt and conclusion

- A stable macro economic condition is key to a sustainable and vibrant housing finance market in any economy. Until 2006, Ghana had only one significant mortgage lender. However, due to the fairly stable macro economic conditions, Ghana now has three banks actively participating in mortgage lending and another two intending to start mortgage lending in the near future.
- The Government's commitment to the delivery of housing cannot be underestimated in a sustainable housing finance market.
- The legal and regulatory framework must be favorable for the housing market. The awareness about the introduction of the new foreclosure law has brought some confidence and comfort to lenders to offer mortgages.

This Program as presented has so far proven successful and has started promoting broad-based and market-oriented investments. The direct beneficiaries are a wide variety of firms (banking, investment companies and construction companies), and ultimately individual homeowners.