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  For further details, please contact Paloma Repullo Conde (prepullo@housingfinance.org)

International Union for Housing Finance
Avenue de Cortenbergh 71, B-1000 Brussels - Belgium
Tel: +32 2 285 40 36
Fax: +32 2 285 40 31
www.housingfinance.org
Secretary General - Annik Lambert

Editor's Introduction

↳ **By Andrew Heywood**

Summer in the Northern Hemisphere has not been a series of carefree days and balmy nights. The past months have been punctuated by unfolding stages in two major debt crises.

The first was the crisis over the US national debt and the unheard of possibility that default might occur. Default was averted at the eleventh hour but the consequences for the dollar and for confidence in the US economy are still unfolding. Meanwhile the outlook for US house prices and for the mortgage market remains poor.

The Euro area debt crisis was the other large cloud on the horizon as Spain and Italy both struggled to avoid being sucked into the vortex that has already engulfed Portugal, Ireland, and Greece. Against this ongoing backdrop it is not surprising that data from the European Mortgage Federation suggests that gross mortgage lending across Europe has been "cooling off" with Denmark, Spain Portugal and Ireland among those posting negative gross mortgage lending figures for Quarter 1 2011. European house prices are levelling off too, significant falls in Greece, Spain and Ireland, are perhaps unsurprising but even France saw the rate of price increases slowing. In the UK house prices continue to edge downwards and gross lending has continued at record lows as transaction levels remain at depressed levels.

This issue of HFI inevitably reflects some of the gloom in certain markets with articles on the failure of GSEs during the US banking and mortgage crisis and an analysis of the depressed housing market in Northern Ireland. Nevertheless there are articles that focus on success stories and on practical issues also.

The Dutch social housing sector has long been held up as an example of a model worth following in terms of its development and funding. In our first article Peter Boelhouwer looks at the post-war development of social housing in the Netherlands. He examines the guarantee and funding mechanisms that have emerged since the 1980's that have led to a major role for private finance and looks at recent changes in the sector.

Thailand is the focus of our second article. K.I. Woo offers a fascinating account of the co-ordinated action that has enabled Thailand to continue to generate an adequate supply of housing overall, while facilitating access to those on lower and middles incomes. He traces the developing strategies of the main government agencies over several decades.

While it is inevitable that the majority of HFI articles involve analysis of a particular market or jurisdiction by a commentator resident in that market or jurisdiction, there can be a more distanced approach with the possibility to gain fresh insights through selecting an author who can take a view on an issue from the outside. Belgin Akcay uses her perspective as a Turkish academic and government adviser to examine the reasons for the failure of the US Government Sponsored Enterprises (GSEs); Freddie Mac, Fannie Mae et al, during the banking crisis. Their problems followed some 40 years of success in intervening in the US mortgage market to increase market efficiency and promote access to home ownership. Ms Akcay points to a major failure by the authorities and the GSEs themselves to act in a timely way on risks that had already been identified and discussed.

Uganda is the subject of an article by William Kalema and Duncan Kayiira. They focus on the housing finance sector in Uganda and on its capacity to serve the needs of the country in terms of individual access to loans and funding for new development. Uganda has a population of 31 million, which is growing by over 3% a year. At an individual level over 60% of the population have insufficient income to gain access to housing finance. There is also a significant shortfall in new housing development. Development is constrained by a range of factors including lack of infrastructure, high land costs and constraints on the supply of housing finance.

Though Northern Ireland is part of the United Kingdom, its culture and history have set it apart and its distinct status has been re-enforced by devolution of significant power to the Northern Ireland Assembly. Northern Ireland is also the only part of the UK with a land border with a euro zone country; Ireland. Stanley Mcgreal and colleagues analyse the housing market in Northern Ireland and assess the degree to which it is shaped by the UK and by Ireland respectively. Given the dramatic and continuing downturn in the housing markets of both Northern Ireland and Ireland this article is both relevant and timely.

Our final article deals with technical issues relating to mortgage amortisation in Brazil, which nevertheless have real relevance to ensuring access to mortgage finance for those on lower incomes. The article shows how legal action in relation to the avoidance of usury and the abuse of compound interest can have the no doubt unintended result of creating heavy payment burdens for those on low incomes in the early years of their mortgage.

The next issue of HFI (Winter 2011) will be as wide ranging as the present one, with articles of relevance to professionals, academics and policy makers. Subjects will include an analysis of mortgage market volatility in China, the Icelandic housing and mortgage markets since the onset of the banking crisis, the impact of that crisis on the mortgage market in Ireland and comparative trends in the Mortgage Backed Securities (MBS) and Covered bond markets. Watch this space.

Contributors' Biographies

Professor Peter Boelhouwer graduated in 1983 as a human geographer at Utrecht University. After his graduation he conducted a dissertation on the effects of the sale of social rented housing. After the publication of this thesis, Boelhouwer moved to OTB Research Institute for the Built Environment of the Delft University of Technology (TUD). In December 2001, Boelhouwer received a personal professorship in the field of Housing Systems at the Faculty of Architecture. By September 2003, he succeeded Professor Priemus as scientific director of the OTB and as director of the Research Centre for Sustainable Urban Areas at TU Delft. Since 2008 Boelhouwer is chair of the European Network for Housing research. Boelhouwer is also the editor in chief of the Journal of Housing and the Built Environment.

Mr K I Woo is an advisor to the Government Housing Bank of Thailand and is an editor of the Asia Pacific Housing Journal. He has been a financial journalist and writer in South East Asia for the past two decades and services clients through the region.

Prof.Dr. Belgin Akçay holds a BA degree in Economics from 9 Eylul University and received a MBA degree in Economics from Ankara University. Also, she, who got the technical scholarship from British Council, received a MBA degree in Economics Development from Leicester University, United Kingdom. She obtained Ph.D from Gazi University. She, who was a Post-Doctoral Research fellow at Pennsylvania State University, U.S.A during 2000-2002, was a visiting scholar in the same university in 2009. She has been working at Ankara University since 2002. In addition to her academic experience, she has worked in different positions at government including; adviser to the president of Housing Development Administration, Prime Minister's Office (2002), head of finance department in Housing Development Administration, Prime Minister's Office (1998-2000), adviser to Minister of State (1997-1998), adviser to National Real Estate and Land Development Project, Prime Minister's Office (1996-1997), Adviser to Minister of State (1992). She is the author of many articles about housing finance and mortgage markets.

Mr Duncan Kayiira holds a Certificate of Housing Finance from Wharton School, University of Pennsylvania, USA. He has up-to-date knowledge of Uganda's housing finance sector and has led and coordinated several studies on how the sector has functioned/failed to function among low income earners. Duncan has also advised on technical issues related to improving and expanding the country's housing industry.

Dr. William S. Kalema is a Private Sector Development Consultant with substantial knowledge of Uganda's housing finance sector. He has advised governments and donors and conducted a number of studies on enhancing access to housing finance in Uganda. In 2006, he authored a paper on state of private sector lending for housing, and the role of financial intermediaries like housing cooperatives and micro-finance institutions in advancing affordable housing in Uganda.

Professor Stanley McGreal has researched widely into issues relating to housing, urban development and regeneration, planning, globalisation, property market performance, and investment. Professor McGreal has been involved in major research contracts funded by government departments and agencies, research councils, charities and the private sector. Analysis of housing, urban renewal strategies and regeneration outputs in the property sector and the investment market have been a central theme of this research with particular implications for policy. Professor McGreal has over 300 published works and has been an invited speaker at several conferences, he holds membership of several editorial boards and serves on various international committees. He is Past-President of the International Real Estate Society, managing editor of the Journal of European Real Estate Research and is currently Director of the Built Environment Research Institute at the University of Ulster and Adjunct Professor, Division of Business, University of South Australia. Professor McGreal is a Fellow of the Royal Institution of Chartered Surveyors.

Dr David McIlhatton graduated with a PhD in Spatial Planning and GIS from the University of Ulster,having completed both undergraduate and post-graduate courses also at Ulster. His research interests include the harmonisation between property, planning and GIS and how spatial linkages can inform the understanding of the built environment. He is currently co-author of the Northern Ireland House Price Index and other housing market related publications in Northern Ireland.

Dr Michael McCord is a lecturer in property market research employed in the School of the Built Environment at the University of Ulster. His main professional and academic interests are in the fields of real estate finance, economics and market analysis. His current role involves the delivery of teaching across valuation and finance courses in the School and he is also involved in research involving both real estate markets and affordability.

Ms Claudia Magalhães Eloy, currently a PHD student in Urban Planning/Housing at the University of São Paulo (USP), is developing research about the National Housing Finance System. She holds a Master in City Planning at the University of Pennsylvania, a Master in Public Administration at Bahia's Federal University (UFBA), a specialization in Real Estate Finance at the Brazilian Economists Order (OEB) and a BA in Urban Planning (UFBA). Has also attended Wharton's International Housing Finance Program. She has been working as a consultant in housing policy, finance and subsidy. Recent works include World Bank's Technical Assistance for the Brazilian Ministry of Cities (2009/2010) on Minha Casa Minha Vida Program; the remodeling of the subsidy policy for the state of São Paulo as part of FIPE's (Fundação Instituto de Pesquisas Econômicas) team (2009); elaboration of the National Housing Plan as part of the University of São Paulo's team (2007 e 2008). She won 1st place in 2010 Abecip's call for papers with a joint research about the use of the French Amortization System in Brazil.

Mr Henrique Bottura Paiva is a Master student in international and development economics at the Hochschule für Technik und Wirtschaft Berlin. He graduated in economics at the University of São Paulo in 2008 and has worked with Foundation Institute of Economic Research (FIPE) in different research projects concerning housing policy for state and federal government. In 2010 Henrique won the 1st place in Abecip's call for papers with a joint research with Cláudia Magalhães Eloy about the use of the French System in Brazil.

The Dutch Social Housing Model: The Success of Guaranties and Revolving Funds

↳ **By Peter Boelhouwer**[1]

1. Introduction

The housing system of the Netherlands has acquired an international reputation because of its special nature and the way it has evolved. Over the past few years, the Dutch housing system has been a source of inspiration for policy-makers far and wide, including scholars and officials from some of the former socialist states in Eastern Europe and several Asian nations. Researchers and policy-makers in those countries have shown keen interest in the way social rented housing is operated in the Netherlands. In particular, they are intrigued by the strong position of social housing in this country: 44% of the total housing stock of the Netherlands was accounted for by this sector at the beginning of the 1990s (33% in 2011). In absolute terms however, the total amount of social rented dwellings stabilized. Because the construction of private properties could not keep in pace with household growth, there's still a housing shortage in The Netherlands of about 1.8%. A social rented sector of 33% in The Netherlands clearly stands out in this sense; the share of this sector in most other West European countries rarely reaches 20 %. The strong position of Dutch social housing has its roots in the long period during which housing was influenced by the national government (Boelhouwer and Van der Heijden, 1992). In recent years however, the sector has become financially almost independent from the government. Almost without state subsidies, the housing associations in the Netherlands managed to increase their housing production during the economic crisis substantially. In section 2, we consider the direction in which the Dutch housing policy has developed and the role the social rented sector has played in the general housing policy. Section 3 gives more insight nto the financing mechanisms of the social rented sector. We end this contribution with some conclusions.

2. Developments in Dutch Social Housing Policy

The constant tension between government intervention and market influences becomes apparent when we study the development of the social rented sector in the Netherlands. Immediately after World War II the Netherlands had to deal with serious housing shortage, in common with most Western European countries. The situation soon deteriorated, because of the rapid growth in the number of households and low production levels in residential construction in the early post-war period. The shortages that became apparent soon after 1945 made an exceptionally high level of government intervention in homebuilding programs broadly acceptable. Policymakers were faced with escalating costs, ranging from the cost of living to construction costs and interest rates. Thus, substantial object (bricks and mortar) subsidies were needed to contend with the massive housing shortage. A high level of government intervention was called for; this was entirely fitting in a period when the welfare state was gaining ground. In comparison with the rest of Europe, housing production in the Netherlands rose after the 1960s to an unprecedented level. This rapid rate of construction was necessary; during this period, the number of households in the Netherlands increased much more rapidly than in the rest of Europe. The decline in the birth rate came to the Netherlands very late; there was also a postponed, but nevertheless intense decline in average household size. In contrast with the period before 1940, the need to build cheaply and quickly led to an emphasis on the social rented sector. These driving forces helped the sector to expand. The sector's share grew from 12% in 1945 to 41% in 1975 and to no less than 44% of the total stock by the early 1990s. No other Western European country attained such a high share. The eventual turning point in Dutch housing policy was reached in 1989.

The remainder of the new policy is strongly geared to the promotion of the market (Heerma, 1989). The Memorandum on Housing for the 1990s [*Nota Volkshuisvesting in de jaren negentig*] puts particular emphasis on deregulation, decentralization, and self-sufficiency. This new policy line includes the decentralization of authority. The transfer of responsibilities and risks from the State to the local authorities and provinces and the independence of housing associations and (organizations of) housing consumers are featured. For the housing associations, this shift meant that the existing regulations operating in advance were replaced by retrospective accountability (Heerma, 1989). Financial freedom was also markedly increased in addition to freedom in terms of policy. The government decided to phase out the object subsidies for new construction as rapidly as possible. Rents in the period 1990-1994 were raised annually by 5.5%, a far greater margin than the general level of inflation, and this

[1] OTB Research Institute for the Built Environment, Delft University of Technology

increase in revenue strengthened the financial position of the associations. The Grossing and Balancing Operation constituted a second important episode marking the move towards financial independence. The State wanted at one and the same time to redeem the long-standing subsidy commitments (15.9 billion euro) and simultaneously call in early the loans that the associations still had outstanding (18,6 billion euro). In this way, the continuous pumping of money round the social housing circuit could be brought to an end. After intensive consultations with the sector, agreement was reached that the Grossing and Balancing Act would take effect in 1995. The advantages for the State were evident: savings were made on the object subsidies, the administrative bureaucracy could be substantially reduced, and the housing budget could be subjected to a stringent cleanout operation. Moreover, the State could take an independent position with respect to the housing association sector in the discussions concerning the annual rent increase. The Act also brought certain advantages for the associations. They traded in supposed savings at one and the same time, became capable through their greater independence of carrying out a more flexible and thus market oriented rental policy, and assumed new responsibilities for the management of their property. The increased rents and the Grossing and Balancing Operation have ensured that the associations have sufficient financial resources at their disposal to be able to carry out the housing task quite independently. In the Netherlands this is referred to by the term *revolving fund*.

The government considers the social rented sector in its entirety as a revolving fund that should be capable of functioning without government subsidies. The idea of a revolving fund implies that current and future reserves generated in the social rented sector are put to use within that sector; in this manner, the housing associations subsidize themselves. The revolving fund applies both to the sector as a whole and to the individual associations. Each of them has to use the yields of their operations in the current stock to pay for (non cost-effective) new investments in the quality of the stock, new construction, and improvements in liveability. For the sector as a whole, the yields of the prosperous and the poor associations can be balanced. Prosperous associations could, for instance, support their poor relations by lending them the funds they need at below-market interest rates.

When we look at the situation of the social rented sector in the Netherlands around the second half of the last decennium, the following observations could be made (Boelhouwer and Hoekstra, 2009).

- The pressure on the housing market puts associations in a strong position. The rentability of their housing is excellent. A few years ago they worried about empty accommodation, whereas now demand exceeds supply by far right across the board.
- Towards the end of the nineteen-nineties, national Government stated that new housing production should concentrate on the market sector. As a result, the associations have built very little social rented housing during the period 2002-2007.
- The financial position is robust. More capital has been accrued than the minimum amount needed, creating room for investment. The composition of the housing supply (age, quality), the development of demand on the housing market and the shift in the attitude of national Government all lead towards a substantial investment programme (2007-2011). There are huge differences in the financial positions of the various associations.
- The image of the sector is decidedly poor. Much of the publicity is negative in tone (high salaries, arrogance, fraud, low housing production in the past).
- The European Union asked for attention to be paid to a fair competitive position in relation to commercial landlords and project developers, and to the size of the target group of the social rented sector.

On the basis of these characteristics, one can conclude that the housing associations had become used to not being held accountable for their actions. The organisations had become distanced from their 'natural owners', the tenants and the Government, and they are neither 'disciplined by the market' nor 'disciplined by the Government'. There was no structural incentive for the associations to make socially acceptable investments. It's important to realise that in practice, housing associations were making a lot of socially acceptable investments. The amount of the investments and the direction are however not controlled or steered by government bodies. On the other hand, most associations felt stifled by the State-dictated policy framework and the legislation and regulations. They found themselves trapped in a bureaucratic web and would like more room for enterprise. In order to face up to the problems described above, a deluge of reports and recommendations appeared in the Netherlands in the period 2004-2006. Alongside all these reports and recommendations, the stance adopted by the European Commission was just as significant in terms of the future positioning of the housing associations. Within the context of the European regulations on market efficiency and competition, all forms of State assistance that cannot be termed a service of general interest must in principle be reported to the European Commission. In this respect the European Commission's decision of 13 July 2005 to grant the housing sector a general exemption from the obligation to report State assistance is an important one. This 'exemption from notification' can be given because, according to the European Commission, there is only a very limited risk of causing disruption to the internal European market. This means that associations do not have to report every project they undertake involving State assistance to the European Commission. Another condition specified in the decision is that associations must make an administrative distinction for any activities undertaken that do not benefit the public interest. The decision applies to all Member States. One day later, on 14 July 2005, Minister Dekker received a supplementary letter from the European Commission. In this letter, the European Commission indicated that it considers the financing of housing associations in the Netherlands to be a form of existing support. In other words, it is seen as support that was in place prior to 1957 and which is therefore not subject to debate with retrospective effect. All forms of existing support will however be subject to continued scrutiny in respect of developments on the common market. The European Commission can advise Member States of the measures they should take to preserve the qualification 'existing support' for the future.

The European Commission then assessed the support given to the associations in terms of compatibility with the European regulations on the common market. The Commission was of the opinion that the Dutch Government should introduce the following three measures:

- Housing associations activities with State assistance should not only be directly linked to the maximum value of houses, but also to socially deprived households;
- Any commercial operations undertaken by the housing associations should be subject to market conditions, and profits made from commercial activities must be reinvested in the social house building sector;
- Excessive and structural over-capacity of social housing should be prevented by selling these houses, and the over-capacity should be restricted to a small percentage of the total housing supply.

The Brussels rules were formally introduced in the Netherlands in January first of the year 2011. In June 2011, Minster Donner also sent a first draft of a new Housing Act to the parliament. This document was based on six years discussion and several letters and policy documents of three former ministers. The housing associations have been given two concrete tasks: the primary allocation of regulated rented housing to targeted income groups and investment in house building and restructuring. The primary allocation to targeted income groups is based on an income of 33.614 euros per year (1 jan. 2011 and indexed every year; approximately 39% of all Dutch households have an income below this threshold and approximately 76% of the current allocations is beneath this ceiling). 10% of the yearly allocations of the housing associations may be directed to households with a higher income (especially meant for households with an urgent request, with specific needs and from restructuring areas). Households in social rented accommodation that receive an increase in their income are not directly obliged to move. New housing should provide a sufficiently attractive alternative for these people, according to the Minister.

Another important proposal is to change the role of the Central Fund into a Housing Authority (for an elaboration of the Central fund see section 3). In the case of a badly functioning housing association, the Authority will have the power to give instructions to the management board of the housing association. The financial monitoring and control role of the current Central Fund will not be changed. A new task for the Authority is to control the regulations on state support (the Brussels rules). On the basis of this last aspect, housing associations have to make a division in their book keeping in commercial activities and activities under state control (organising housing for the target group and real estate for the use of societal organisations like schools en community centres). It is important also that housing associations still have the opportunity to be active in commercial activities like building housing for the middle income groups and in developing more expensive rented and owner occupied houses. The only conditions are that there will be no state support involved and that these activities are organised on the same conditions as conducted by commercial firms. The Minister of Housing will keep supervision of the integrity, the governance and the performance of the housing associations. Also the position of the internal supervisory board is strengthened. They have to give permission for important decisions like the selling of houses and big investment proposals. The board is also responsible for the functioning of the management board of the housing association. When the internal supervisory board is not functioning well, the Minister has the opportunity to fire the board.

The draft of the new Housing Act is more or less in line with the government agreement “Freedom and responsibility”, as it was published by the centre-right wing government in October 2010. It’s remarkable that the reforms and proposed budget cuts are mostly focussed on the (social) rented sector. The home ownership sector is almost not mentioned in the agreement and the huge fiscal subsidies to home owners are not discussed at all (tax deduction of mortgage interest). In the rented sector, the policy of the yearly rent adjustment for inflation is continued. The most important reason for the government to not introduce a more market oriented rent adjustment system is that such a policy would lead to negative effects on the purchasing power of tenants. Only renters with an income of above 43.000 euros per year will be confronted with a rent increase of 5% plus inflation (at this moment almost 2% in the Netherlands). This strong rent increase will, however, only effect about 15% of the total households in the rented sector. There is also still a question whether this proposal can be implemented. Tax authorities are the only institutions who can check income data. They are already complaining about an overload of commitments. Checking the incomes of 2.4 million households in social housing is costly, time consuming and susceptible to fraud.

The coalition agreement has most far reaching consequences for the social rented sector in the Netherlands. First of all tenants in the social rented sector, after a similar policy in Great Britain since 1980 receive a right to buy. This proposal is introduced to stimulate home ownership furthermore and to compensate the landlords for a big property tax which will be introduced in 2014 and has to raise 760 million euros every year (620 million euros for housing associations; 140 million euros for commercial real estate investors). Government wants landlords to pay part of the costs of housing allowances. The idea to introduce a right to buy is quite new and was not discussed before the election. By now the government is hesitating about this firm statement. It is obvious that housing associations in the Netherlands are private organisations which cannot be expropriated without compensation (Boelhouwer, 2007).

3. Financing in the Social Rented Sector

Until the beginning of the 1980s, the financing needs of the Dutch housing associations were covered via loans granted by the State. These loans exerted a direct pressure on the national budget. In the 1980s, the government came into serious financial problems, saw the national debt rising rapidly, and so decided in 1984 to abolish the provision of loans to associations and also the counter-guarantees provided by the State for loans borrowed on the capital market. In 1983, the Social House-building Guarantee Fund (WSW) [*Waarborgfonds Sociale Woningbouw*] (WSW) was set up as a private law institute to enable the financing needs of associations to be covered. At first, only guarantees for housing improvement were concerned. Five years later, it also became possible to obtain guarantees for the financing of the construction of new dwellings. The WSW endeavours to provide the participating associations with access to the capital market at the lowest costs. Since that time, the WSW has granted guarantees to moneylenders for loans for new construction, housing improvement, the acquisition of dwellings and nursing and retirement homes. The WSW is not, however, the only institute that makes guarantees available. Local authorities also grant guarantees for housing associations’ loans, albeit on a limited scale.

If housing associations borrow with loan guarantees provided by the WSW, there is a triple guarantee. The primary security is formed by the financial resilience of the association itself and of the entire sector through the participation of the Central Fund (see below). The secondary security consists of the capital assets of the WSW, which are created by a single capital contribution from the State and the fees the associations pay to obtain guarantees. The tertiary security is formed by the ultimate responsibility of the State and the local authorities that share this task equally (Van der Schaar, 1991, p.404). The attractive interest rates on loans secured by the WSW demonstrate the great confidence that lenders have in the fund. Their confidence is largely due to the ultimate security provided by the State (Priemus, 1995).

A housing association wishing to use the facilities of the WSW must first register with the fund. Before the WSW approves an application, it tests the creditworthiness of the applicant. Before 2007, the evaluation of the financial position of an association is based on its assets. Since 2007 however, the yearly cash flow of the housing association must be positive. This means that even associations with a high solvency (but where the money is mainly tied up in the stones) could have problems in attracting loans.

The WSW has been awarded two ratings. The world’s leading rating agencies, Standard & Poor and Moody's Investors Service, have awarded WSW with their highest possible ratings of AAA and Aaa, respectively (WSW, 2011).

At the end of 2010, most of the social landlords were registered with the WSW. The total secured capital of the WSW had risen by the end of 2010 to around 85,3 billion euro. For the near future, the Dutch housing associations expect to invest a total of around 40,4 billion euro between 2011 and 2016, most of which will be funded externally (WSW, 2011).

WSW has also an important monitoring function and is keeping in sight all developments that effect social housing. Therefore WSW:

- assesses its participants' financial positions as well as their overall quality;
- devotes attention to its participants' cash flows
- analyses the market on an on-going basis;
- requires participating housing associations to provide information twice a year and asks for both actual and forecast figures;
- advises participants on the range of products available in the market;
- is actively involved in developing new financial products for the sector (WSW, 2011).

As mentioned in section 2, in addition to the WSW, the Netherlands has a second important institute: the Central Housing Fund [*Centraal Fonds voor de Volkshuisvesting*] (CFV). This fund is responsible for two important tasks: financial supervision (since 1998), and financial reconstruction (since 1988). Associations in a poor financial position can appeal to the CFV for assistance. According to the draft Housing Act, the Central fund will be transformed into a new Housing Authority.

The CFV is a mutual fund established by and for the associations. Its purpose is to support financially weak associations and, where necessary, help them restructure their operations. To this end, each association contributes annually to the fund. The size of the contribution required from an association is calculated on the basis of its financial situation and, since 2001, whether it has given financial assistance to another association that does not have enough capital to finance some specific projects. An association that fails to qualify for (further) participation or guarantees from the WSW can appeal to the CFV for help. The CFV will provide an interest-free loan to an impoverished association on condition that it becomes self-supporting within three years. Sometimes, this condition requires the restructuring of an association. In many cases, its management is taken over by a member of the CFV. In principle, the CFV contributes half the cost of such an operation. The other half is usually borne by the local authority that is also ultimately responsible for housing. The conditions imposed by the CFV for support closely reflect those operated by the WSW in assessing an association's creditworthiness (Gruis, 1997, p.18). Since its existence, financial support amounting to over 500 million euro has been granted to eighteen housing associations.

In addition to its financial reconstruction task, since 1998 the CFV has also undertaken a supervisory task that features early-warning monitoring. Through the fund's timely signalling of an association's financial weakness to the national government, it can intervene as a formal supervisor. As a result, as far as possible any financial problem affecting an association can be avoided. In this context, the CFV has been given a number of specific new tasks. In the first place comes the signalling task related to the assessment of the likelihood of future cases needing financial reconstruction. For this purpose, the CFV compiles reports on the financial position of individual associations. These reports are based on the associations' annual reports and supplementary information they may provide. Furthermore, the CFV advises the State over the financial aspects of new admissions, mergers, and any changes in the statutes. The CFV also reports each year on the financial situation of all the housing associations taken as a whole. It was announced that the financial position of the sector in the 2010 financial year could be considered to be healthy. The solvency position of only four housing associations is in jeopardy; the value of their assets is too low for their investment plans. The operation costs are another point of attendance for the CFV. These have been far above inflation in the last few years, and differ between 5% and 10%. On the basis of these figures one could wonder if the housing associations do operate efficiently. After a lot of criticism from the CFV and the central government, the operation costs went finally down to 'only' 3% in 2009 (much less than the years before, but still more than the inflation rate of 1,2%). Also the umbrella organisation AEDES is aware of this problem. They ordered that the operation costs of the housing associations should go down by 20% in the years to come. The yearly report from the CFV also stated that the housing associations were quite successful in combating the economic crisis and were able to invest on a counter--cyclical basis. The years 2008 and 2009 were in many ways excellent years: the production of owner occupied and rented accommodation, renewal activities, and the spending on liveability all boomed. The year 2010 can be seen as a turning point. After 2010, mainly because of less income and taxation by the government, the activities of the housing associations will probably go down substantially (Central Fund, 2011, p.7.)

4. Conclusions

This contribution has shown the uniqueness of the maturation of the Netherlands social rented sector in an international perspective. Not only does the Netherlands have, with 33% of the total housing stock, far and away the largest social rented sector in Europe, but also independence and substantial accumulated capital in the existing stock. Thanks to the opportunities for rent pooling, the input of the accumulated capital, and the freedom to dispose of real estate so that capital invested in bricks and mortar can be put towards other objectives, the housing associations are able to rent out newly constructed social rented dwellings at well below cost price. The usual unprofitable part of 70,000 euro for the construction of a social rented dwelling is currently substantially higher than the object subsidies that the State government granted at the beginning of the 1990s. Financing needs can also be met entirely via the WSW so that, in addition to being able to obtain sufficient capital, borrowing on the international capital market is against keen tariffs. This unique situation has been brought about through mutual cooperation and solidarity, and not least through the safety net function of the State. Impoverished associations are also restructured via the CVF through the sector itself. For the future, however, the strong financial position of the associations may also constitute a danger. Now that the national government is being threatened by financial heavy going because of the economic crisis, politicians in particular are looking covetously at the associations' accumulated capital. A first attack on their financial position is the 620 million euros the housing associations have to pay from 2014 onwards on the basis of a new property tax for landlords. Also municipalities are in financial bad weather, and are trying more and more to transfer costly activities to the housing associations.

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Synergy Through Policies: Thailand's Decades of Successful Low and Middle Income Housing Delivery

By K I Woo

Thailand has successfully delivered housing to its 65 million citizens during the past several decades even though each newly elected government implements its own new housing policies and priorities.

Despite this seemingly unsettling environment, the country has effectively provided housing to most of its citizens through excellent execution of policies among different organizations that have been developed to deliver housing and housing finance and through co-operation.

Thailand has no significant housing backlog and few people are squatting. About 73% of Thais own their own homes.[1]

1. Three Main Units Implement Housing Policies

In Thailand, three main government units have traditionally implemented government housing initiatives, especially for lower and middle income citizens.

The National Housing Authority (NHA), Government Housing Bank (GH Bank) and Community Organizations Development Institute (CODI) are the government units charged with ensuring that the government's middle and low income policies are successfully executed.

The secret of Thailand's successful middle and low income housing delivery has been the synergies developed not only between the government and the NHA, GH Bank and CODI but also by the government-controlled unit's decades of close cooperation.[2]

2. Government as Enabler

Thailand's overall housing industry has regularly delivered quality housing at the right prices to all sectors of society. Government housing policies during the past four or five decades have resulted in the development of a vibrant private-sector-led housing industry.

The private sector annually delivers housing from the middle-income sector to high-income individuals. This success has primarily been supported by benign government policies that recognize the real industry's importance to the development of vibrant economies.

3. Roles of Three Government Units

3.1 GH Bank

The Government Housing Bank (GH Bank) was established in 1953 and is a Specialized Finance Institution (SFI) under the Ministry of Finance.

Initially, GH Bank acted both as a developer and a bank. However, its development role was transferred to the National Housing Authority when it was established in 1973.

As a housing SFI, GH Bank's major role was financing middle and low income home purchases that were shunned by the commercial banking sector. Despite the commercial banking sector's rising role in home mortgage financing, GH Bank still has a more than a 30% share of outstanding housing loans in Thailand.

The bank's mortgage servicing infrastructure is the most extensive in Thailand and it currently services more than 1.5 million mortgage loans. The Bank had total assets of Bt679 billion ($US24 billion) at the end of December 31, 2010 and outstanding loans of Bt659 billion ($US23 billion). Its net profit for the year ending December 31, 2010 was Bt6.354 billion ($US212 million).[3]

GH Bank is also a major participant in financing special government housing programs aimed at middle and low income groups. These include the NHA's 600,000 home Ban Eur-athorn program to deliver homes to lower-income citizens.

To finance lower-income sector home buyers (many with unstable and irregular incomes) and yet still maintain its prudent lending policies, GH Bank worked with NHA's senior managers to develop a unique hire-purchase program that achieved both organization's overall objectives.

3.1.1 Baan Eur Athorn – Innovative Hire-Purchase Financing Program

GH Bank and NHA developed an innovative hire-purchase program to finance individual low income Ban Eur-Athorn home purchases.

To ensure that as many low-income people as possible could purchase subsidized Baan Eur-Athorn homes despite GH Bank's strict lending qualification requirements, the bank and the NHA developed an interim step for the home buyers.

These buyers would purchase the units on a hire-purchase basis from the NHA. GH Bank would pay NHA for the units and service the loan collections for five years. If after five years, the

[1] Regional Project on Pro Poor Housing Finance in Seven Countries, "A Compendium of Seven Countries", December 16, 2009

[2] Prachuabmoh, Khan, Sustainable and affordable housing – synergy and cooperation needed, Asia-Pacific Housing Journal, Volume 4, no. 10, April to March 2010.

[3] 2010 Government Housing Bank Annual Report

purchasers made timely regular payments, GH Bank would then issue them a new mortgage and title would pass to them subject to GH Bank's new mortgage.

However, at the same time, if the hire-purchase buyers were in default for more than four months, NHA agreed to repurchase these loans from GH Bank.

Without this innovative structure, GH Bank which is 100% owned by Thailand's Ministry of Finance and is subject to Bank of Thailand (Central Bank) rules and regulations would not have been able to finance the Baan Eur-Athorn loans.

As a result of the agreement, NHA a government state enterprise acts as each individual buyer's guarantor. Perhaps more importantly, the property's title remains with the NHA for the five year period, saving the bank or the NHA from having to foreclose on a defaulting low-income buyer, an action that may have severe political implications.

3.1.2 Government Pension Member Loans

In the past, many government employees in Thailand lived in subsidized housing and could only afford new homes when they received their lump-sum pension payments at retirement. About a decade ago, GH Bank worked with the government to create a viable mechanism that would allow these government employees to obtain loans for new homes.

Working with the government, the bank developed an automatic payment mechanism wherein the employee's loan payments are automatically deducted each month from his or her salary payments. More than 100,000 borrowers have successfully purchased homes under this program.

GH Bank's pay-roll deduction program for home-loan mortgages has now been emulated by most financial institutions in Thailand.

3.1.3 GH Bank's Dual Housing and Policy Roles

Several years ago at Wharton School's International Housing Finance Program's 25th Anniversary, Khan Prachuabmoh, GH Bank's former president said that throughout its history, GH Bank as a 100% Ministry of Finance-owned Specialized Financial Institution has had a dual role of helping as many Thai people as possible acquire their dream homes and secondly as an important government policy arm to drive economic recovery during down business-cycles.

To help drive economic recovery after the 1997 Asian financial crisis, GH Bank played a leading role by implementing several government-led programs to promote housing developments.

Special housing-loan programs were targeted directly at state enterprise and government civil servants that previously had to wait until retirement to acquire new homes.

These special programs benefited more than 100,000 beneficiaries, revived a then moribund housing development industry and ultimately drove economic recovery.

3.1.4 Government Stimulus Packages 2008 and 2009

During the recent US sub-prime crisis and economic crisis, the Thai government asked GH Bank to actively implement its housing stimulus policies that became key factors in driving economic recovery.

To ensure the Thai economy would not be adversely affected by the sub-prime induced global crisis, the Thai government undertook various stimulus measures to drive economic growth.

Many of these tax and other incentives were directed specifically at stimulating the housing industry, especially for middle and low-income purchasers.

GH Bank as a key government policy driver was asked to increase its targeted housing loans in 2009 from Bt73.5 billion ($US2.23 billion) to Bt100 billion ($US3.03 billion). The bank's IT systems pushed to meet this new target and by year end we had issued more than Bt102 billion ($US3.09 billion) mainly to middle and low income home buyers

Although Thailand's housing development industry is highly-efficient and the country does not have any housing backlog, many low-income people that operate in the informal sector with undocumented or irregular incomes still cannot obtain home-loan financing. GH Bank and other government policy markets continuously work diligently on creating housing-financing solutions for them.

3.2. Development of National Housing Authority

Prior to World War II, housing was considered an individual rather than a government responsibility. However in the early 1950s, the Thai government began intervening by providing housing for middle-and- low income families.

Initially, the government established the Government Housing Bank (GH Bank) in 1953 as both a housing developer and housing finance institution. Later on in 1973, the government created the National Housing Authority (NHA) as a state enterprise under the Ministry of Interior to take over the G H Bank's development role.

At that time, four government agencies that serviced lower-income individuals were combined to form the NHA: Housing Welfare Division, Public Welfare Department, Bangkok Metropolitan Administration's slum improvement office and GH Bank's construction division.

Over time the NHA became the principal organization to ensure available shelter for all residents of Thailand in particular to assist households with low and middle incomes living in urban areas, either by developing rental units or sales through hire-purchase programs.

During the past three-and-a-half decades, NHA has introduced many different types of dwelling units and services to the public.

Rental apartments, condominiums, rental shophouses[4], government employee housing, sites and services projects, subdivision residential projects, new towns, emergency housing and standard housing projects are examples of housing developments undertaken by the NHA.

As a state enterprise, NHA operates in a semi-official capacity allowing it to conduct business with greater flexibility than as a government department under a national ministry but it is also expected to be self-supporting. It is also ultimately answerable to the Ministry that administers its operations.[5]

From its inception, the NHA has tried to adhere to these sometimes conflicting and difficult roles:

[4] Three or four storey narrow buildings that are included in a single structure - either four or five separate units side-by-side. Some people use the bottom floor for retail space and live in the upper floors.

[5] National Housing Authority Annual Report 2010

being financially self-sufficient while delivering low-income housing to the public.

During the past 38 years, various governments have mandated the NHA to resolve Thailand's "housing problem" (a concept that has varied over time). To reach this objective, it has developed many different plans, strategies, programs, solutions, and projects. Some ideas such as building new homes for low-income citizens periodically appear as government policy.

3.2.1 How Government Policy Implemented

During 1975, the NHA worked with the World Bank to reconsider housing policy alternatives and decided to utilize different approaches, such as, community improvement (slum upgrading), and sites and service projects. At the same time, NHA also utilized a mixed-approach that included constructing apartments, residential subdivisions, and special projects such as government employee housing.

Slum improvement was a significant part of NHA budgets until 1997 when these activities were transferred to local administrations. At least a million people were served in some way by this comprehensive, nation-wide plan program for individuals, households, and communities and via coordinated existing government services for these areas: a comprehensive approach seldom seen in social and economic programs targeting lower income individuals. This program also initiated a small business loan program in 1976 that was the first micro-financing program ever.

In 1992, the government established the Urban Community Development Organization (UCDO) under the National Housing Authority. At that time, the view was that there was a need to address urban poverty by developing some participatory models of support for low-income groups through community-based savings and credit groups. Housing for low-income individuals could be improved by working with the low-income communities and developing a network of communities.

In 2000, UCDO merged with the Rural Development Fund, to become a new public autonomous organization called the Community Organizations Development Institute (CODI). CODI continues to support the UCDO program to reduce poverty both in urban and rural areas.

The government has also encouraged the private sector to build housing for lower middle income groups. Since 1993, the Board of Investment (BOI) has offered privileges for private housing projects, at a price not more than Bt600,000, in specific industrial zones. Recently, the Government of Prime Minister Abhisit Vejjajiva agreed to adjust certain conditions of these BOI promoted housing projects and lift the price ceiling to Bt1.2 million in some zones as an economic stimulus package.

Currently, NHA continues to be a major housing provider for middle and low income households. The Government of Prime Minister Thaksin Shinawatra in late 2003 launched a "One Million House Program" (2003-2008). Under this program, the government instructed the NHA to build 600,000 units (BEA Program) and CODI to upgrade another 300,000 units in the existing communities (Baan Mankong or BMK Program). GH Bank was asked to finance an additional 100,000 units. These policies help stimulate the economy, increase job opportunities, and increase home ownership, especially among lower and middle income people.

Without a comprehensive national housing policy or unified governmental approach towards housing, problems may continue to persist, especially pertaining to NHA's role. NHA was under pressure to build 600,000 housing units; even the program's scope was beyond the NHA's organizational capacities and its attempt to achieve the program's housing target tremendously strained its financial capabilities. For several years, the NHA suffered operating losses that were primarily related to executing the 600,000 home project.

3.2.2 National Housing Strategy Roadmap

In 2007, NHA collaborated with other stakeholders, public and private professionals, interested citizens and with Government of the Netherlands support prepared a roadmap for a National Housing Strategy which was proposed to the Cabinet for approval.

The Cabinet approved the National Housing Strategy roadmap along with establishing the National Housing Policy Committee as prescribed in the Royal Gazette dated 29 May 2008. One of the major responsibilities of the National Housing Policy Board is to oversee the formulation of long-term national comprehensive housing policy rather than relying on individual government policies.

The new housing development approach is to: 1) place housing on the national agenda; 2) promote land and infrastructure development that is conducive to housing development; 3) make housing finance available for all income levels; 4) strengthen the capability and participation of all stakeholders in the development and management of housing; 5) provide housing information to all citizens; 6) improve housing quality and the livelihood of Thai citizens; and 7) institute appropriate housing standards.

However, despite its far-reaching objectives, members of the National Housing Policy Board said that the board had only met once in the past four years.

3.2.3 Delivered More Than 730,000 Homes

Since its inceptions, the NHA has delivered around 730,000 homes to low and middle incomes Thais (as of September 2010) through the following projects:

1. Baan Eur Arthorn	*239,175 units*
2. Real estate crisis mitigation	*258*
3. Congested communities improvement	*291,458*
4. K-ha communities	*141,192*
5. Southern disaster victims assistance	*845*
6. Special/ Community Services	*3,980*
7. Government Officer Housing	*49,766*
8. Rachapat	*2,374*
Total	***730,951 Units***

3.3 CODI's Development

Despite its housing industry's ability to deliver quality housing to all societal sectors, Thailand's main cities still have areas where squatters have occupied for generations. Many of these families cannot obtain title to their properties and have no incentive to make improvements even though their incomes have risen commensurately with the country's overall economic growth.

The Community Organizations Development Institute (CODI) is a very successful organization that was established in 2000 under the Ministry of Social Development and Human Security's supervision.

It's initial capital was Bt2,899 million ($US83 million) and it receive annual funding for implementing government projects such as Community Welfare, Poverty Alleviation and for Community Organizations Strengthening Programs.

Thailand and other parts of South East Asia have long experimented successfully with community-based savings groups and loans to individuals wherein everyone is jointly liable.

Savings cooperatives have been used by CODI develop individual community savings groups. The communities are usually voluntary groups in slum areas that receive infrastructure and home improvement grants from CODI, which receives government funding. The borrowers must augment these loans with their own savings.

By 2010, CODI had helped 88,000 families by channeling more than Bt3.8 billion ($US115 million) to 1,457 targeted communities.

Historically, these community-based savings groups have reported very low default rates, especially since they are group guaranteed loans.

CODI's funds are used to encourage the formation of community-based savings and loans groups and providing financial support by lending capital to community organizations especially in slum areas. The organization's community-based programs such as it's Baan Mankong (BMK) program are widely recognized globally.

3.3.1 Baan Mankong

CODI's Baan Mankong program has been widely recognized as a successful solution for redeveloping slums resulting from rapid industrialization and urbanization in the past several decades.

By some accounts, Thailand has about 480,000 families living in urban slums in Bangkok and other cities throughout the country. These slums house laborers and their families that have migrated from the countryside to pursue employment opportunities.

Thipparat Noppaladarom, CODI's director said the BMK program recognizes that while the poor may be weak financially, they are particularly strong socially. "In Thailand's poor communities, a social force is able to deal with most of the economic disadvantages people experience individually," she said.[6]

3.3.2 Upgrading on a Countrywide Scale

Since commencing in 2003, the Baan Mankong program has helped more than 88,000 households all over Thailand improve their livelihoods.

CODI which came out of NHA's slum communities improvement program has helped developed unique programs that have helped unleash the energy and creativity of Thailand's poor communities including the following.[7]

- **Flexible Financing**

One of the most important tools of CODI's people driven upgrading process is flexible, accessible financing, in the form of housing and land loans and infrastructure subsidies. The communities don't have to immediately decide what is appropriate housing.

The lesson from BMK is that if resources can flow flexibly and people can see that these resources are accessible, they will plan for what they really need and what is right.

Once other people understand that financing is available, they can see possibilities, organize savings groups, search together for land and begin negotiating purchases.

They learn how to plan and develop projects from friends in other communities, and are free to develop their own unique land and housing solutions with the help of community architects.

Everyone in Thailand's urban poor communities country-wide now understands they also can improve their housing conditions.

- **Community Savings Groups**

In order to qualify for BMK loan programs, communities must have fairly well-established savings groups. These savings groups act as a crucial force when the upgrading projects begin.

The people's collective financial base can link with the accessible flexible financing and to the money management skills they've developed through their internal community savings and credit activities.

These combined collective resources have given people in poor communities the power to change things.

- **Collective Everything**

The communities must find ways to do things together if they want to participate in the BMK upgrading programs. To create and strengthen the organization, everyone in the community, even the poorest member must be included in the process.

Collectivity is a tool to pull people together and create new strength within the group. Working together as a group is never easy. However, it gives the poor, who usually have no power, the strength and confidence to do all kinds of things they could never do individually.

Doing things collectively creates important balancing and proactive mechanisms between community members and various outside forces: collective land, finance, management and welfare.

- **Horizontal Support**

As more upgrading projects begin, and as more community members visit other projects, conduct exchanges, workshops and inaugurations, the BMK program has made the whole country a great university of housing and land options for the poor.

When people see their peers doing something, they have the inspiration to do things themselves. The BMK national upgrading process is also balanced and braced in many ways through these horizontal links.

- **Technical Support**

The BMK program supports a growing number of community architects, planners, architectural faculties and design students that assist communities as they develop their settlement layout plans and housing designs.

These professionals play an important role in the upgrading process. In a program of physical change, their abilities help communities visualize new possibilities and their professional presentations are essential ingredients in the upgrading program's success.

3.3.3 Cooperation and Synergies

Although CODI initially received most of their funding from government budgets, it has begun working with the GH Bank and other financial institutions to refinance some of their receivables during the past several years.

As more Baan Mankong collective loans are being repaid, they are gradually being seen by financial institutions as possible investments. During the past several years, GH Bank has agreed to refinance some of CODI loans with conditions attached. These include asking CODI to deposit compensating cash deposits as additional collateral for the loans.

However, to expand lending to this critical area, everyone realizes that further cooperation is required so that more innovative new instruments and processes can be developed to formalize these loans on a massive scale and develop strategies that will allow the development of participation by capital market investors.

[6] CODI – Thailand's successful slum upgrading program, GH Bank Housing Journal, Vol 3, no 7, April to June 2009

[7] ibid

Why did the GSE Model Fail in the U.S. Residential Mortgage Markets during 2007-2008 Crisis?

By Belgin Akçay[1]

Efforts to expand access to mortgage credit and to increase homeownership have dominated U.S. federal housing policy. To support of those objectives, one of practices in the residential mortgage markets was to create "the government sponsored enterprise model (GSE Model)", that consists of some organizations falling between the categories of private sector and governmental entities- quasi-governmental organizations. In this paper, the importance of the GSE model is first examined in the residendial mortgage markets and secondly, it is evaluated why these giant firms failed in the sub-prime mortgage crisis.

1. Introduction

Efforts to expand access to mortgage credit and to increase homeownership have dominated U.S. federal housing policy. To support those objectives, many programs were implemented and many regulations were put into effect over about 60 years. One of these practices was to establish a number of organizations falling between the categories of private sector and governmental entities. One type of these are the "government–sponsored enterprises" (GSEs)- quasi-governmental organizations. GSEs are instrumentalities, not agencies, of the United States. Today, GSEs primarily act as financial intermediaries to assist borrowers in housing and agriculture. There are seven GSEs in the U.S. financial markets.[2] Three of the GSEs- the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Federal Home Loan Banks System (FHLbanks) are called housing GSEs. Fannie Mae and Freddie Mac are investor owned, while FHLbank is owned cooperatively by their borrowers. In this paper, it is accepted that the GSE Model in the residential mortgage markets consists of Fannie Mae and Freddie Mac, since FHLbank was established for a different objective.

Fannie Mae and Freddie Mac were created by the Congress in the U.S. The objective was to improve the efficiency of mortgage markets and to overcome statutory and other market imperfections which otherwise prevent funds from moving easily from suppliers of funds to areas of high loan demand. These GSEs are the giant secondary-market institutions. In terms of meeting their original congressional objective — to provide liquidity to credit markets on a national, rather than regional or state, basis — these GSEs have been remarkably successful and become the dominant role in the U.S. mortgage markets. However, since the end of July, 2007, Fannie Mae and Freddie Mac have been dramatically affected by the experiencing subprime mortgage-related troubles in the U.S. mortgage markets. They have increasingly reported large loan losses throughout 2008. As a result, Fannie Mae and Freddie Mac were placed into conservatorship on September 2008, and also, the conservatorship has no specified termination date.

This paper will first examine the GSE model in the residential mortgage markets and secondly, evaluate why these giant firms failed in the subprime mortgage crisis.

2. GSE Model

Government-sponsored enterprise (GSE) model is the unique model, which operates with one type of quasi-governmental organization. Firstly, such kind of organization was seen in the U.S financial markets and then, was taken as an example by other countries, such as S.Korea, Mexico, Canada, because GSE model was the well-functioning model in the U.S. financial markets, especially residential mortgage markets. This model in the U.S. residential mortgage markets, that was first established at the end of 1960's, became very successful until the latest crisis. It consists of some firms, called GSEs that fall between the categories of private sector and governmental entities. Congress established GSEs "to improve the efficiency of capital markets" and to overcome "statutory and other market imperfections which otherwise prevent funds from moving easily from suppliers of funds to areas of high loan demand." (Kosar, 2007). The economic rationale for GSEs is the belief that, without such government-sponsored institutions, a critical area of necessary debt financing would be underserved or served inefficiently. Government, according to this rationale, should use some of its sovereign powers (e.g. full faith and credit of the U.S. Treasury) to encourage the development of private financial intermediaries to serve selected markets. GSEs are part of a tradition of mercantilist financial institutions. Government assigns them benefits and privileges in their charters that are not available to fully private corporations.

Fannie Mae, one of the secondary mortgage markets covered by the GSE Model, was established in 1938 to help stabilize the market for newly authorized Federal Housing Administration (FHA) mortgage loans of twenty-five years' duration. This government agency operated on a small scale, purchasing FHA mortgages and later (after 1948) Veterans' Administration mortgages, and

[1] Prof.Dr. Law Faculty, Ankara University, Turkey.

[2] Other GSEs are the Federal Agricultural Mortgage Corporation (Farmer Mac), the Farm Credit, Financing Corporation and Resolution Funding Coorperation. See. Kooppell, 2003. Stanton, 1989.

exchanging seasoned mortgages from its portfolio for unseasoned mortgages at par. The agency helped make a national market in federally underwritten loans, and, on balance it added mortgage assets to its portfolio over time. Changes to public accounting procedures were adopted by the federal government in 1968. Under the new regime, any net additions to portfolio of Fannie Mae would be considered necessarily as federal government expenditures (Wallison and Ely, 2000). To avoid apparent increases in federal expenditures, the functions of the Fannie Mae were divided. Any subsidized portfolio activities were transferred to the Ginnie Mae, instituted contemporaneously, and the bulk of the secondary market operations were spun off to a corporation owned by private shareholders. Two years later, Freddie Mac was established as a private corporation to buy mortgages originated by thrift institutions. Purchases of mortgages made by this private corporation were not classified as federal expenditures even though all the stock in the firm was owned by the FHLBanks. The stock has been publicly traded since 1989, and a majority of its directors have been private citizens.

The principal federal laws pertaining to Fannie Mae and Freddie Mac are the Enterprises' statutory charters and the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 and the Housing and National Housing Recovery Act (HERA) of 2008 (CBO, 2008). The charter acts give the Enterprises several broad public policy purposes. Specifically, the charters state that it is the purpose of Fannie Mae and Freddie Mac to (OFHEO, 2003);

- Provide stability in the secondary market for residential mortgages;
- Respond appropriately to private capital markets;
- Provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages on housing for low- and moderate income families involving a reasonable economic return that may be less than the return earned on other activities) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing; and
- Promote access to mortgage credit nationwide by increasing mortgage investment liquidity and improving the distribution of capital available for residential mortgage financing.

The charter acts also specify the corporate form and statutory powers of both GSE. Each GSE is privately owned, issues stock traded on the New York Stock Exchange, and operates as a unitary firm on a nationwide basis. The activities of GSEs are restricted to supporting the residential mortgage market and their charter acts grant them special benefits under federal law. Those benefits include (CBO, 2001. OFHEO, 2003.);

- Exemptions from state and local corporate income taxes and from requirements to register securities with the Securities and Exchange Commission (SEC),
- The Secretary of the Treasury has discretionary authority to purchase up to $2.25 billion in obligations issued by an Enterprise[3],
- The securities of Fannie Mae and Freddie Mac are eligible for Federal Reserve open-market purchases,
- GSEs securities are collateral for most state and local institutions,
- These securities are used as collateral for loans from Federal Reserve and Federal Home Loan Banks by the financial institutions,
- Further, federally chartered depository institutions may invest in the GSEs' securities in unlimited amounts,
- Another important legal benefit is the access of Fannie Mae and Freddie Mac to the Federal Reserve's Fedwire Funds Transfer and Fedwire Securities Transfer Systems, which are electronic transfer systems operated by the Federal Reserve System that enable financial institutions to transfer funds and use book-entry securities.

The legal benefits conveyed by the federal government save Fannie Mae and Freddie Mac billions of dollars each year (Green and Wachter, 2005). The most important source of savings, however, is the market's perception that the government implicitly guarantees the Enterprises' obligations. That perception arises from the legal benefits the GSEs enjoy, their ability to borrow in the federal agency credit market, the volume of their outstanding obligations, and strong Congressional support for their public purposes. The perception lowers the yields that investors require on debt issued and mortgage-backed securities (MBSs) guaranteed by the GSEs and leads investors and other counterparties to set less stringent limits on their credit exposures to each Enterprise.

As a result, Fannie Mae and Freddie Mac can issue much larger volumes of securities (without obtaining private credit ratings on an issue-by-issue basis), sell a much larger proportion of callable debt than private firms with comparable capital, and avoid the need to post collateral on derivatives transactions. Further, because of the perception, materially higher risk is unlikely to raise the borrowing costs of either Fannie Mae or Freddie Mac to the same extent as it would in the absence of that perception. Another economic benefit of government sponsorship is that the Fannie Mae and Freddie Mac are the only GSEs specifically chartered to support the secondary mortgage market. The presence of only two such GSEs and the lower operating and funding costs of the GSEs limit the competition faced by each Enterprise in that market.

3. The Functioning of GSEs

Fannie Mae and Freddie Mac purchase and guarantee mortgages through the secondary mortgage markets. They do not originate or service mortgages. Mortgage originators sell mortgages directly to Fannie Mae and Freddie Mac, or exchange mortgage pools with them in return for a mortgage backed security (MBS) backed by those same mortgages but which carry the added guarantee of the timely payment of principal and interest to the security holder. When mortgage originators sell mortgages to Fannie Mae or Freddie Mac, or buy the MBSs that have been issued back to them, it in turn frees up the funds used to originate those mortgages so that the originators can then create even more mortgages. Fannie Mae and Freddie Mac also invest heavily in their own MBSs in what is known as their retained portfolios. Their charters include the following (Van Order, 2007);

- Their singular focus is the residential mortgage market. They may not enter into unrelated lines of business or discontinue support for the residential mortgage market.
- The mortgages that they purchase and guarantee must be below an amount specified by Federal Housing Agency (FHA).
- They are barred from entering the business of other housing finance companies - mortgage origination, for example.
- They are subject to risk-based and minimum capital requirements and annual examinations by FHA.[4]

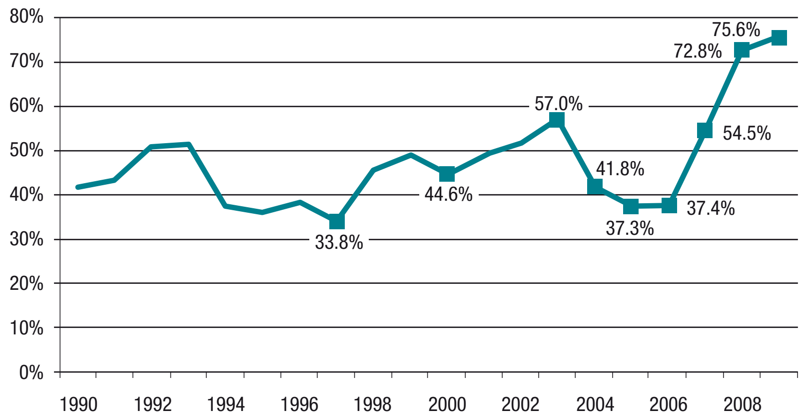
[3] With the subprime morgage crisis, this amount was changed as an unlimited until the end of 2009.

[4] From 1992 to 2008, these goals were established by the Department of Housing and Urban Development (HUD), after being implemented the Federal Housing Enterprises Financial Safety and Soundness Act of 1992.

The activities of Fannie Mae and Freddie Mac benefit housing finance markets and the housing sector as a whole. Local and regional markets for conforming fixed-rate mortgages have been integrated with the capital markets, and the interest rates on those loans have been reduced. Lending practices in the primary market have become more standardized, competition among lenders that originate conventional mortgages has increased, the up-front costs of financing a home purchase or refinancing a mortgage have been reduced, and households have a broader menu of financing options from which to choose. Those effects have contributed to greater housing activity and homeownership (OFHEO, 2003).

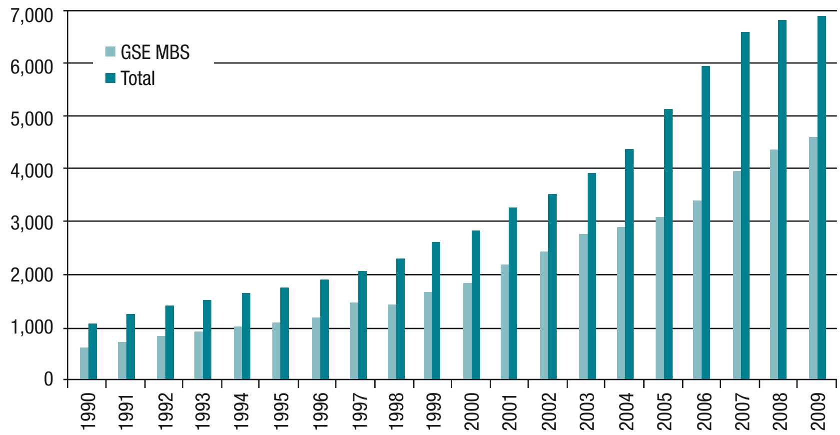
Since the mid-1980s, securitization by Fannie Mae and Freddie Mac has integrated local and regional markets for conforming fixed-rate mortgages with the national and international capital markets. The integration of conventional mortgage markets with the capital markets provides a linkage between the housing sector and financial markets, one based on speed, efficiency, and instantaneous pricing. That linkage effectively frees local and regional housing markets from potential volatility associated with a local credit supply dependent on depository institutions. As a result, illiquidity at local financial institutions is less likely to exacerbate a local economic downturn by limiting the supply of mortgage credit. Further, the linkage minimizes regional differences in the interest rates for conforming fixed-rate loans. In addition, investors' perception of an implicit guarantee of the debt of Fannie Mae and Freddie Mac limits the spreads between the yields on Enterprise and Treasury obligations, thereby providing considerable protection to the primary market for conforming mortgages and the housing sector from flights to quality in the capital markets.

Figure 1 Purchases of the GSEs in the Total Mortgage Loans (%)



Kaynak: FCIC, 2010.

Figure 2 GSEs and Total Outstanding MBS (Billion Dollar)



It coveres1-4 family mortgages.
Source: Insider Mortgage Finance, 2010b, Vo.2.

4. The Importance of the GSEs in the U.S. Mortgage Markets

In the 1980s and 1990s, while the role of the savings and loans associations (S&Ls) in house financing in the US mortgage markets was augmented, Fannie Mae and Freddie Mac strengthened their roles with their ever-increasing activities. Thus, "…GSEs have been playing a central role in the US mortgage markets for many years..." (Greenspan, 2005).

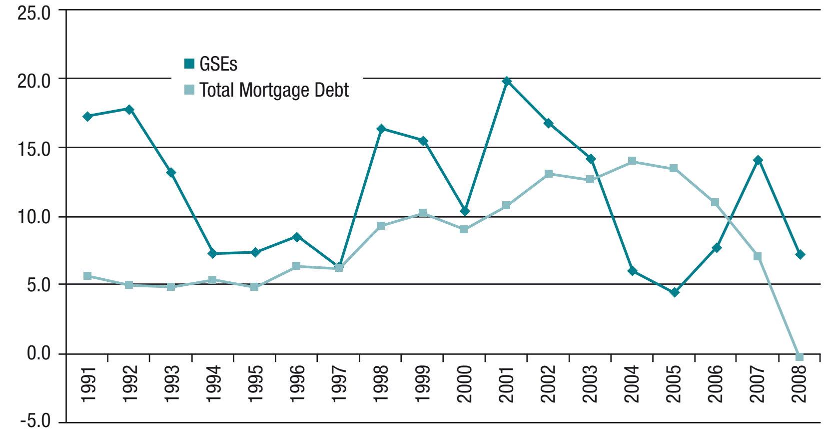
Today, the GSEs are the biggest buyers of the mortgage loans in residential mortgage markets (Figure 1). The share of the purchases in the total mortgage loans by Fannie Mae and Freddie Mac amounts up to 75.6% as of the end of 2009.

On the other hand, the two thirds of outstanding MSBs have been created by the GSEs. In 1990-2009, the share of GSE MBSs in the total outstanding MBS generally is above 60% (Figure 2).

Today, the GSEs, ever-growing corporations since their establishments, are the biggest participants of the US mortgage markets. Until the subprime mortgage crisis experienced, they were regarded amongst the biggest finance corporations of the US finance markets and the international finance markets alike. When the total GSE mortgage debt is compared to the total US mortgage debt within the years, the annual growth tendency of the GSEs was generally above the level of that of the US mortgage debts, except for the years during which certain accounting problems were experienced (Figure 3).[5]

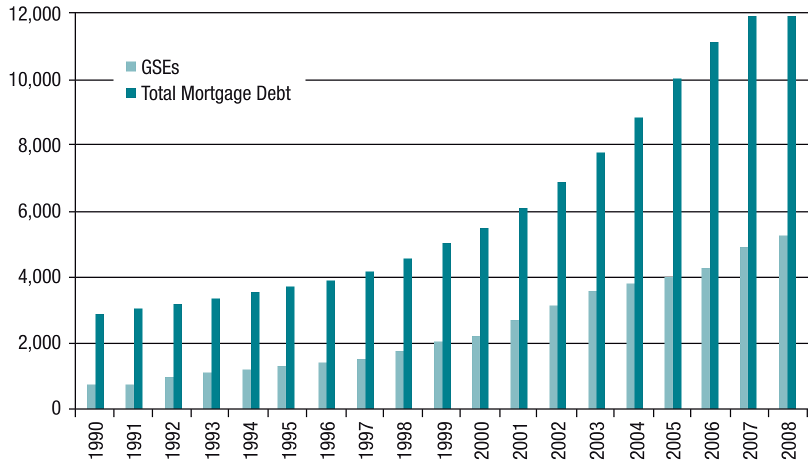
[5] Certain accounting problems experienced by Freddie Mac and Fannie Mae were published in the media in 2003 and 2004. See. Poole, 2007;2.

Figure 3 Growth of GSEs Debt and Total Mortgage Debt in the U.S. (%)



* The mortgage debt of GSEs covers mortgage portfolio retained and the net issues of MBSs.
** Data includes single family debt.
Source: Kaynak:http://www.fhfa.gov/webfiles/1151/mortgagemarket1990to2004.pdf (30.03.2011)
Inside Mortgage Finance, 2010b.

Figure 4 Total Mortgage Debt of the U.S and GSEs



* The mortgage debt of GSEs covers mortgage portfolio retained and the net issues of MBSs.
** Data includes single family debt.
Source: http://www.fhfa.gov/webfiles/1151/mortgagemarket1990to2004.pdf (30.03.2011);
Inside Mortgage Finance, 2010b.

Table 1: Major Components of U.S. Debt Markets (Year-end 2008)

	Billions of dollars
All Treasury Debt	6,338.2
Total guarantees of GSEs	6,938.2
All Corporate Bonds	1,599.5
All Municipal Bonds	2,690.0
All Commercial Loans	2,729.9
All Consumer Loans	2,596.2

* Total guarantees of GSEs covers retained portfolio and net MBSs.
Source: FED, 2009, Table 4. ; Fannie Mae, 2010. Freddie Mac. 2010.

Consequently, the total share of these two GSEs in the total mortgage debt has reached about 50% (Figure 4).

GSEs have an important place not only in the US mortgage markets but also in the wider finance system. In addition to the fact the total debt liabilities of GSEs have exceeded those of private companies and of local administrations today, they have also gone beyond the liabilities of the US Treasury. As of 2008, with their liabilities reaching 6.9 trillion dollars, they have liabilities more than twice as much as those of the local administrations and consumer credits (Table 1).

5. Subprime Mortgage Crisis and the GSE Model

The GSEs, though very successful for about 40 years, failed in the latest financial crisis. The root cause of this crisis is the real estate market. "...This by itself does not differentiate this crisis from other relatively recent crisis events, including the U.S. credit crunch of 1990-1992 and the Japanese banking crisis of 1990-1999, and the Asian crisis 1997-1998. As with the current crisis, these involved real estate bubbles that ultimately burst. However, there is one big difference this time: securitized pools of mortgages and, particularly, 'subprime' securitized pools." (Udell, 2009).

At the beginning of this decade, the fraction of originated mortgages that were subprime was relatively small. Of the $2.1 trillion of mortgages originated in 2001, only $190 billion were subprime (Table 2). Another $60 billion were 'Alt-A mortgage'[6] On the other hand, another important feature of the incipient subprime and Alt-A markets was the fact that most of these mortgages in were not securitized and also, mostly securities were composed of 'agency' issues securities by Ginnie Mae and the GSEs instead of non-agency issues.[7] The situation changed dramatically. The share of non-agency securities in total MBS issuance skyrocketed, and the biggest chunk of this growth was in the subprime and Alt-A components (Table 3). By 2007, 105% of subprime and 91% of Alt-A mortgages were securitized, as compared to 46% and 18% (respectively) in 2001. The total

[6] Alt-A mortgage (Alternative A-mortgage) is mortgage that arae between prime and subprime in terms of credit quality, and are generally underwritten with less than the complete dozumentation required of prime mortgages.

[7] Non-agency securities are securities by private finance institutions, that do not have GSE statute.

Table 2: Origination and Issue of Non-agency loans (billions of dollars)

	NON-AGENCY						AGENCY*	
	Subrpime loan		Alt-A Loan		Jumbo Loan			
	Origination	MBS issue	Origination	MBS issue	Origination	MBS issue	Origination	MBS issue
2001	190.00	87.10	60.00	11.40	430.00	142.20	1,433.00	1,087.60
2002	231.00	122.70	68.00	53.50	576.00	171.50	1,898.00	1,422.60
2003	335.00	195.00	85.00	74.10	655.00	237.50	2,690.00	2,130.90
2004	540.00	362.63	2,000.00	158.60	515.00	233.40	1,345.00	1,018.60
2005	625.00	465.00	380.00	332.30	570.00	280.70	1,180.00	964.70
2006	600.00	448.60	400.00	365.00	480.00	219.00	1,070.00	899.80
2007	191.00	201.00	275.00	249.00	347.00	180.00	1,263.00	1,160.66

* Agency includes Ginnie Mae and the GSEs-Fannie Mae and Freddie Mac.

** Jumbo loan include the exceeding loan of the limits of GSE mortgage purchases.

Source: Insider Mortgage Finance, 2010a, Vol.2.

securitization rate of subprime (105%) and Alt-A mortgage (91%) reached about 196% in 2007 as compared to 64% (respectively) in 2001. Non-agency loans (jumbo, Alt-A and subprime) that do not conform to underwriting standards set by GSEs have increased over the years, indicating the dominance of non-agency origination ($1,480 trillion) and issuance ($1,033 trillion) of securities over agency (Ginnie Mae and GSEs) origination ($1,070 trillion) and issuance ($899.8 trillion) of securities.

Table 3: Securitization of Residential Mortgages (%)

	Subprime	Alt-A	Jumbo	GSEs ve Ginnie Mae
2001	45.84	19.00	33.07	75.90
2002	53.12	76.68	29.77	74.95
2003	58.21	87.18	36.26	79.22
2004	67.15	7.93	45.32	75.73
2005	74.40	87.45	49.25	81.75
2006	74.77	91.25	45.63	84.09
2007	105.24	90.55	51.87	91.90
2008	0.001	2.90	6.80	93.80
2009	0	0.01	0.01	96.40

Source: Insider Mortgage Finance, 2010a, Vol.2.

In the U.S, as the crisis gradually spilled over into the whole credit system, prospects for the broader economy, particularly through the impact on credit availability to household and business, have been affected. Initially played out as a crisis targeting subprime ARMs only, the crisis spilled over into other debt instruments (Alt-A and prime loans, jumbo mortage rates, collateralized debt obligations-CDOs, asset-backed securities –ABSs, structured investment vehicles-SIVs, interbank market, commercial paper, asset-backed commercial paper, money market funds and hedge funds).

Table 4: Equity Prices of GSEs ($)

	FANNIE MAE		FREDDIE MAC	
	High	Low	High	Low
2008				
31 December 2008	1.83	0.30	2.03	0.40
30 September 2008	19.96	0.35	16.59	0.25
30 June 2008	32.31	19.23	29.74	16.20
31 March 2008	40.20	18.25	34.63	16.59
2007				
31 December 2007	68.60	26.38		22.90
30 September 2007	70.57	56.19		54.97
30 June 2007	69.94	53.30	68.12	58.62
31 March 2007	60.44	51.88	68.55	58.88

Source: Fannie Mae, 2010. Freddie Mac,2010.

"...GSEs also securitized some of these riskier mortgages, but they were relative late-comers in this segment of the market." (Udell, 2009). That is why, they have the small share of subprime mortgages in their portfolio. However, the GSEs were affected as many financial institutions, while the negative effects of the subprime mortgage crisis spread to all financial markets. As it known, at the centre of most crisis are crashes, failures of financial institutions, or both. In the subprime mortgage crisis, there were both.

In fact, Fannie Mae and Freddie Mac were not weak companies. They were among the top financial institutions in both the U.S. and international financial markets. However, there was a sudden, large drop in the prices of assets, such as stocks and real estate related securities. People started selling the assets, pushing prices down. In 2007 and 2008, the prices of all equities dramatically dropped. For example, while the GSEs' equities were trading with about $70 in 2007, they dropped by almost $30 at the end of June, 2008 and about 60 cents at the end of June, 2009 (Table 4). Falling prices shook the confidence in the financial markets, especially mortgage markets, and started a vicious cycle of selling and panic-and crash. The net worth of many financial institutions, such as investment banks and hedge funds, became negative, since price of their assets declined. Most of these institutions (for example, America's second largest subprime lender New Financial Corporation in 2007, investment bank and brokerage firm Bear Stearns and Federal Mortgage Bank Indy Mac in 2008) failed because they lacked liquidity. They were initially solvent, but most of their assets were illiquid; they could not be sold quickly for what they were worth.

Like other big financial institutions, the net worth of Fannie Mae and Freddie Mac became negative during the crisis. Beginning in late 2007 and accelerating during 2008, they reported significant losses from both mortgage defaults and interest rate changes. As a result of this it became very difficult for GSEs to roll over their maturing debt, because these institutions raised funds through short-term loans and by issuing short-term debt securities. To stay in business, they must raise new funds continuously to pay off maturing debts. But, investors and creditors lost confidence and cut off funding. The GSEs firms had to systematically issue close to half of their debt with an initial maturity of one year or less. At the end of 2008, for example about 50% of their debt had a maturity of one year or less. (Fannie Mae, 2010. Freddie Mac, 2010) In addition, they had their low capital requirements for many years. Consequently, reduced confidence in the financial markets affected the GSEs and they started to have difficulty in rolling over their maturing debts.

By late of Spring 2008, there was serious concern that the GSEs would be unable to roll over their maturing debt. This would have forced them into bankruptcy and most likely would have created a systemic crisis in U.S. mortgage and financial markets. As a result, the Secretary of the Treasury proposed a temporary backup line of credit to eliminate any uncertainty about the ability of the GSEs to roll over their maturing debt. This action made an explicit government guarantee of the senior debt of the GSEs. (Of course, this guarantee had been implicit since the establishment of the GSEs.)

This action was codified in the HERA. In addition, the act created a new Federal Housing Finance Agency (FHFA) to oversee and regulate the GSEs, particularly in the areas of capital requirements, approved activities, and enforcement. The Act required that the GSEs were placed into conservatorship on September, 2008, and changed the regulation of the GSEs in two significant ways;

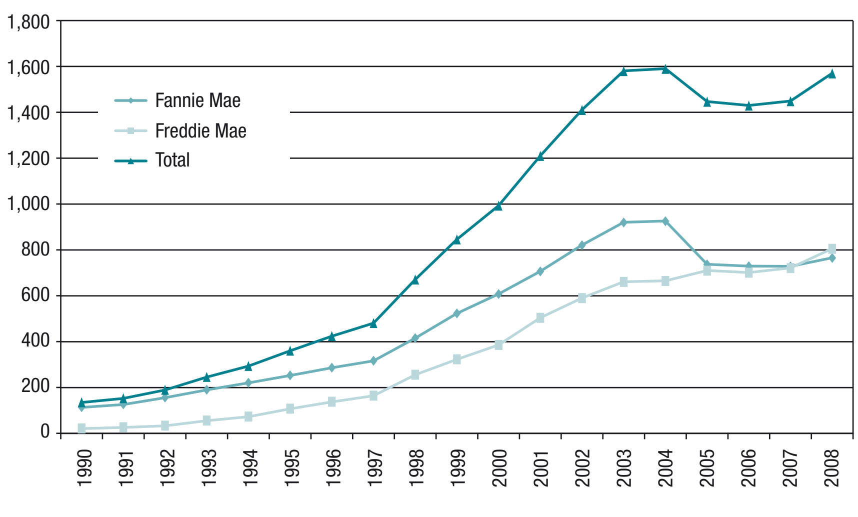
- The GSEs are required to pay an annual fee of 4.2 basis point per dollar of new business mortgage purchases, beginning with fiscal year 2009, with the fee dedicated to help lower-income homeowners and renters.
- The conforming limits which determine the maximum loan size for loans purchased by the GSEs are permanently raised to 115% of the median house price in each region, subject to a $625,000 maximum, effective January 1, 2009.[8]

The most contested issue concerns the GSEs' retained mortgage portfolios, through which they hold approximately $1.5 trillion in mortgages on their balance sheets. These portfolios have been the primary source of the firms' recent losses, from both interest rate risk, and credit losses. The firms also underwrite MBSs, currently with about $3.5 trillion outstanding. These MBS create no interest-rate risk because they are held by third-party investors, and the underlying mortgages appear to be of substantially higher quality than those in the retained portfolios. "..It seems clear that the mission of the GSEs could be carried out with MBS underwriting alone. It is thus important for the new regulator to eliminate the risk created by the retained portfolios, by imposing high capital and safety standards, reducing their size, or possibly eliminating them entirely." (Jaffe, 2010). As a result, HERA has created a new and stronger regulator for the GSEs and has provided a Treasury backstop to allow investors to continue to hold their debt without risk. The legislation also includes a continuing role for the GSEs in supporting mortgages for lower-income borrowers.

6. Why Did the GSE Model Fail?

It has been generally agreed that GSEs were not the source of the crisis. However, they were two of the most affected institutions in the U.S. financial markets, because there were risks embedded in GSEs. Although these risks have been discussed for many years, no measures were taken by policy makers to prevent them. Major risks are the big size of their retained mortgage portfolio, the expansion of the GSE mortgage portfolios into riskier mortgages, and their low capital requirements. Also many studies for controlling these risks of the GSEs have been prepared and alternative proposals have been developed. Generally, major proposals included limiting the size of the GSEs retained mortgage portfolios; requiring complete hedging of all the GSEs interest rate risk; raising the GSEs capital requirements; enhancing the stress test

Figure 5 GSEs Retained Portfolio (Billion Dollar)



* Retained portfolio includes mortgage loans and MBSs.

Source: FHFA, 2007 (until 2007). Fannie Mae, 2009. Freddie Mac, 2009.

[8] In comparision, it will take the EU-15.

to measure accurately the their risks; introducing a user fee on their debt, and privatization of the GSEs.

The rapid of expansion of the GSEs while retaining a large mortgage portfolio for a long time is an important factor in the failure of the GSEs (Figure 5). The rapid expansion of the GSEs retained mortgage portfolio was limited only by the onset of their accounting crises in 2004 and 2005 since 1990's. Such a big portfolio has an interest rate risk. Interest rate risk embedded in the GSEs retained mortgage portfolios is the result of two special features of the standard U.S. long-term, fixed-rate, freely prepayable mortgage. First, in a rising interest rate environment, long-term, fixed rate mortgages can lose substantial value. Second, in a falling interest rate environment, the mortgages may prepaid by the borrowers, forcing Fannie Mae and Freddie Mac to replace the mortgages in a lower interest rate market. Together, these features mean that fixed-rate mortgage portfolios may lose significant value, whichever direction interest rates change. The degree of losses was illustrated and calculated as an example by Jaffe (2006a), which assumed that interest rate changes of 2 percentage points within 12-month period.[9] To put those potential losses in context, the GSEs retained portfolio capital requirement is only 2.5%, so capital would not provide significant protection if the firms were actually to suffer losses to the degree illustrated here. It should also be recognized that that interest rate changes of 2 percentage points or more within a 12-month period have occurred during at least nine distinct episodes since 1953 for 10-year Treasury rates, and even more often for shorter-term Treasury securities in the U.S (Jaffe and Quigley, 2008). The same case was seen in the last crisis.

Why are they retaining such a large mortgage portfolio? The retained portfolio business is substantially more profitable than MBS line because of the unhedged interest rate risk embedded in the former. For the MBS line, these GSEs only earn an annual guarantee fee about 20 basis points (0.20 percentage points) as compensation for bearing the credit risk; in 2003, total MBS guarantee fee income for Fannie Mae and Freddie Mac was $4 billion. For the retained portfolios, the firms earn the spread between the interest yield on the mortgage securities and the interest cost of funding the portfolios, less any hedging cots; for 2003, the net interest income earned was $23.1 billion (Jaffe, 2006b).

It is apparent that GSEs' aggregate income is dominated by the retained portfolio component, because of the large size of the retained portfolios and the large spread (in excess of 100 basis points) earned (Jaffe, 2006b). This profit has provided Fannie Mae and Freddie Mac a strong incentive to expand their retained portfolios relative to their MBS issue business.

The expansion of the GSE mortgage portfolios into riskier mortgages is because of the GSE expansion partly profit-motivated, since the GSEs require new markets if they are to expand beyond their traditional domain of prime conforming mortgages. However, it is also regulatory-based, since the GSEs face "affordable housing goals"[10] which require that they allocate specified shares of their lending activity to various classes of lower-income borrowers. The annual housing reports by the GSEs to HUD have systematically confirmed that the firms were meeting their obligations for affordable housing goals by September, 2008, when FHA was created. A substantial literature has now developed analyzing the efficacy of the HUD housing goals for promoting homeownership among lower-income families. The consensus is that the affordable housing goals have not substantially increased homeownership among low-income families (Ambrose and Thibodeu, 2004. An and Bostic, 2006. Jaffee and Quigly, 2007).

Another factor in the GSEs' failure is the federal relations of Fannie Mae and Freddie Mac. Both GSE have a board of directors made up of 18 members, five of which are appointed by the president of the U.S. This close relationship of the GSEs with federal government prevented the enforcement of regulation in some respects to reduce and to control the interest rate risk of Fannie Mae and Freddie Mac (See. Nader, 2000. Stanton, 2001. Jaffe, 2006a). Thus, GSEs continued to operate both profit-motivated and risk-motivated activities until the subprime mortgage crisis started. The result is that they failed, since the necessary measures were not taken by federal government in time, although the discussions on these risks of the GSEs started at the end of 1980.

7. Conclusion

The GSE model has contributed very much to developing the U.S. mortgage markets, by increasing the sources of mortgage funding, reducing interest rates on mortgage loans, standardizing lending practices, raising competition among lenders in the primary mortgage markets, and reducing the up-front costs of financing a mortgage etc. However, they faced serious financial difficulties during the latest crisis and could not roll over their maturing debts in the crisis environment.

In fact, it has been generally agreed that GSEs were not the source of the sub-prime mortgage crisis. Although they had had the small share of subprime mortgages in their portfolio, they were two of the most affected institutions in the US financial markets, because they have some risks embedded. But, it was known for many years that Fannie Mae and Freddie Mac have some risks embedded. Amongst the major risks are the big size of their retained mortgage portfolios, the expansion of the GSE mortgage portfolios into riskier mortgages, their low capital requirements, and their profit-motivated expansion. Consequently, these risks have been the source of failure of the GSEs.

On the other hand, these risks to the GSEs were not unknown problems. Their embedded risks had been discussed for many years. Many studies for controlling these risks of the GSEs had been prepared. Alternative proposals to control these risks had been developed, such as, limiting the size of the GSEs retained mortgage portfolios; requiring complete hedging of all the GSEs interest rate risk; raising the GSEs capital requirements; enhancing the stress test to measure accurately their risks; introducing a user fee on their debt, and privatization of the GSEs (See. HUD, 1996, Jaffe 2006a, Van Order, 2007). However, these measures were not taken by policy makers to control these risks.

Hence, much responsibility for the failure of the GSEs lies with policy makers and the authorities, who did not take any measures to control the risks of the GSEs and allowed the GSEs to maintain their risky activities. In fact, the GSEs case resembles the case of the S & Ls during 1980s. Only the methods and instruments leading to their failure are different and more complex than that of the S & Ls.

[9] IAccording to the study of Jaffe (2006), for example, if market interest rates were to change by two percentage points, the mortgage portfolio could lose more than 18% of its initial value if market interest rates rise (and the firm short-funded) and more than 25% of its value if interest rates fall (and the mortgage borrowers' prepayment option is not hedged). See. Jaffee, 2006a. Jaffe, 2006b.

[10] This goals were adapted with the Federal Housing Enterprises Financial Safety and Soundness Act of 1992.

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Overview of the Housing Industry and Housing Finance Sector in Uganda

By Dr. William S. Kalema and Mr. Duncan Kayiira

1. Uganda's Housing Finance Market - Overview

Uganda's housing finance sector has registered commendable growth rates and transformation during the last two decades. By the end of December 2010, the total mortgage portfolio was estimated at UGX 1.65 trillion or USD 660 million (4.8% of GDP), compared to UGX 771 billion (USD 308.4 million) in 2009 (3.3% of GDP) and UGX 32.4 billion (USD 12.9 million) in 2002 (0.3% of GDP).

Presently, there are four major types of mortgages issued (residential, commercial, land purchase, and construction finance to property developers), compared to only one (residential) in 2002.

Between January 2009 and December 2010, the largest increase in loans was to property developers (construction finance) at UGX 130.6 billion (Table 1). Residential mortgages also registered a substantial increase of UGX 124.1 billion during the same period. Commercial mortgages on the other hand registered negative growth, with a decrease of UGX 9.2 billion (Bank of Uganda; 2010).

By June 2011, there were nine out of twenty two commercial banks that offered mortgages, compared to one government owned institute and one commercial bank by 2002 (See Table 2).

Five banks dominate the housing finance market, and by December 2009, the banks had a total mortgage portfolio of UGX 274 billion. The banks are;

(i) Housing Finance Bank

(ii) DFCU Bank

(iii) Stanbic Bank

(iv) Standard Chartered Bank and

(v) Barclays Bank

However, during that period, the banks' mortgage portfolio was just 5.9% of the value of their total assets (UGX 4,659 billion), indicating that the housing finance market plays a very small role in the overall banking sector.

Housing Finance Bank, which holds only 4% of banking sector assets; accounts for approximately 55% of the housing finance book value (See Figure 1).

By December 2009, there were approximately 16,600 housing finance loans issued by the five major players in the market, and they literally catered for the high end of the market as discussed in the next section.

Table 1: Major Components of U.S. Debt Markets (Year-end 2008)

Mortgage Type	Jan-2009	Dec-10
Residential mortgages	313.7	435.1
Commercial mortgages	174.2	165.0
Land purchase	27.5	32.6
Construction Finance to Property developers	141.3	271.9
Others	114.3	160.4
Total	**771.0**	**1,065.0**

Source: Bank of Uganda; 2011

Table 2: Banks providing Mortgage Finance in Uganda

No	Bank	Year stared providing mortgage finance
1.	Housing Finance Bank	Since the 1980s
2.	DFCU Bank	Since 2002
3.	Stanbic Bank	Since 2004
4.	Barclays Bank	Since 2004
5.	Equity Bank	Since 2004
6.	Standard Chartered Bank	Since 2004
7.	Centenary Bank	Since 2007
8.	Kenya Commercial Bank	2011
9.	Bank of Africa	2011

Source: Compiled by Consultant from various sources

[1] Kenya Commercial Bank and Bank of Africa are the latest entrants in the market. In 2011, KCB Uganda, through S&L, its mortgage financing arm launched is mortgage portal, staking about $15 million, to, among others, address the increasing need for mortgage facilities in the country (allafrica.com; June 2011). Bank of Africa (BOA) too, has announced plans to venture into low cost mortgage financing to consolidate its presence in Uganda and the East Africa.

Some of the products offered by the five banks include: (i) house construction, (ii) house completion, (iii) home improvement, and (iv) purchasing of houses, among others.

Granting of loans is negotiable depending on the credit rating of the mortgagee and the quality and value of the houses to be built or purchased. All banks offer secured loans ranging from UGX 5 million to UGX 200 million, depending on the size the of the bank.

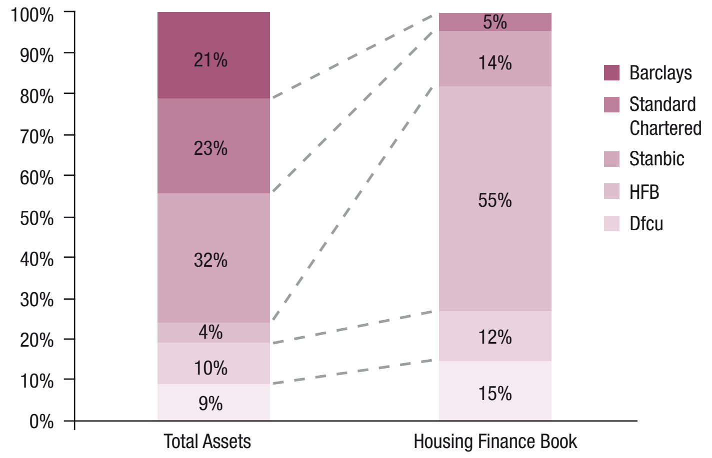
With regard to interest rates, from Figure 2, it is clear that the rates charged by all the five banks are above 15%, and higher than the deposit, inflation and Treasury Bill rates.

i) The large and increasing size of government's fiscal deficit which allows commercial banks the option of investing in low-risk government securities rather than lend to the private sector. For example, there was an increase in the value of government securities held by banks in 2010, estimated at UGX 694.2 billion, compared to UGX 299.7 billion in 2009. The increase in government securities was in response to the pick-up in interest rates during 2010, which in turn followed increased government borrowing

ii) The perceived high risk of lending to the private sector. From the illustration above, it is clear that with the mortgage market offering only a small margin above shorter term low-risk rated government bonds and adequate supply of government paper there is little incentive to lend

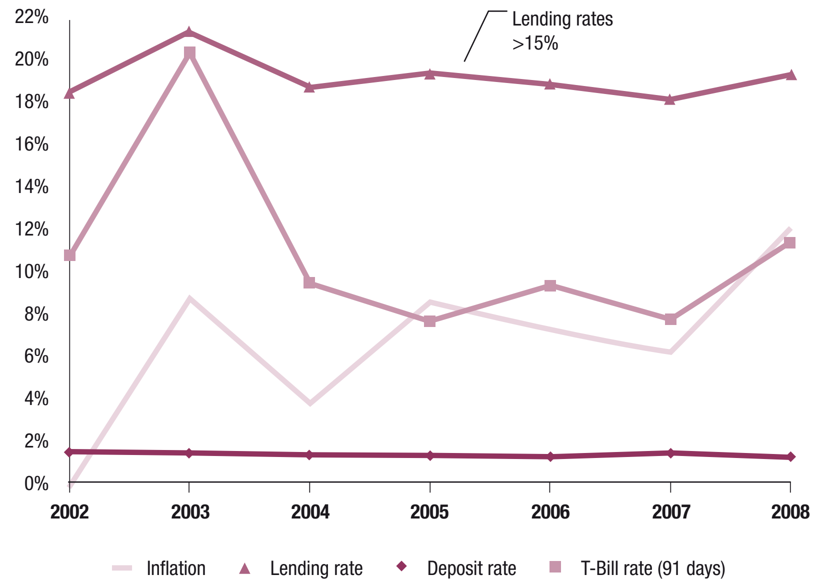
iii) Lack of competition and dynamism among commercial banks since they are satisfied with serving stable and well positioned market segments

Figure 1 Total assets versus housing finance book (2009)



Source: Bank of Uganda; 2009 and Genesis Analytics; 2009

Figure 2 Lending Rates, Inflation Rates, Deposit Rates and T-Bill Rates



Source: Bank of Uganda, 2009 and Genesis Analytics; 2009

2. Housing Demand

Uganda has a population of approximately 31 million, and an annual population growth rate of 3.3%. A major concern however is that the population is increasingly becoming young and urbanised. In 2007 alone, the urban population grew at 13.5%, almost tripple the overall rate of 5% (Genesis Analytics; 2009).

Presently, the annual national housing requirements are estimated at 233,000 units with a housing deficit of about 560,000 units. 160,000 of this backlog is in urban areas with Kampala alone having a deficit of 100,000 units. Kampala's annual housing requirement is estimated at 22,000 units (Kalema W and Kayiira D; 2008).

If each house costs an average of $10,000 to build, the financing requirement for Kampala annually is $ 220 million. This figure is higher than the total amount that the local banking sector, as it exists today, is permitted to lend.

It is also a measure of the size of the opportunity available for real estate developers and mortgage lenders in Uganda. However, it is unlikely that a substantial portion of the population will be able to participate in the formal market given the low levels of income.

From Figure 3, the following key facts can be deduced about Ugandan household income and access to housing finance/housing microfinance;

- Only 0.68% (out of 5.2 million) households have high enough incomes (above UGX 1 million) to access mortgage finance from commercial banks.
- 26.72% earn modestly (between UGX 200,000 and 1 million), and can only access housing microfinance loans from Micro Deposit

Institutions (MDIs) and Micro Finance Institutions (MFIs)

- The income of 10.3% of the households is good enough to only allow access loans from Savings and Credit Cooperatives (SACCOS).
- 62.3% of the households do not have access to housing financial services.

3. Housing Supply

From the above overview it is clear that very few Ugandans rely on mortgage financing to purchase their homes. They are deterred by the high required down payment (at least 30% of the property value), high interest rates, and the high prices for the few well-built houses in planned neighbourhoods that mortgage providers prefer (See Table 3).

Generally, Uganda's housing developments are not based on what Ugandans necessarily want or can afford, but are largely driven by market forces.

With home prices remaining high, more people are being priced out of the real-estate market and are instead looking to rent. From Table 4 below, by 2007, 30% of the population in urban areas owned a house, increasing by about 2% from 2002, while 57% of the population in urban areas rented.

For prospective home owners, they opt for the incremental building method – for both home ownership and rental housing – with owner savings, being supplemented by relatively small, short term (under 3 years) loans from either commercial banks or micro-finance institutions (See Box 1 on the incremental building approach).

This approach appeals to lenders as well as borrowers, and is seen as reducing underwriting risk. Most of the homes built by the young and growing modest and lower-middle classes, who constitute about 35% of the labour force, have been built this way.

4. Barriers to Housing Development and Affordability

In this section we discuss selected issues that have constrained the development of Uganda's Housing Industry.

4.1. Lack of Long-term Funds

Uganda's financial system still lacks sufficient long-term liabilities, owing to an undeveloped pension industry and limited life insurance funds.

Figure 3 Households Access to Financial Services in Uganda

Monthly Income Ushs	Total in range '000s	Households Percentage	Financial services
1 million & above	35.621	0.68%	Access to mortgage loans from commercial banks
200,000 - 1 million	1,014.8	19.52%	Access to housing micro-finance loans from MDIs
150,000 - 200,000	374.4	7.2%	Access to loans from MFIs and SACCOS
100,000 - 150,000	535.6	10.3%	Access to loans from SACCOS
50,000 - 100,000	1,118	21.5%	No Access
0 - 50,000	2,121.6	40.8%	No Access

Source: Kalema W and Kayiira D; 2008

Table 3: Well Established Real Estate Developers in the Kampala Area

Developer	Houses built to date & sold	Types of houses offered	Price ranges (UShs)	Population targeted
Pearl Estates	88 Apartments built and sold	2 – 3 bedroom apartments	167 – 200m	0.05%
Nationwide Properties	1,336 houses built by end of 2010	3 – 4 bedroom bungalows	148 – 289m	
Blue Ocean Group	53 houses built and sold	2 – 4 bedroom single houses	126 – 470m	
Kensington Group	150 houses built and sold	2 – 5 bedroom apartments	200 – 530m	
Akright Projects	1480 houses sold. Plan to build 1500 houses by 2012	2 – 4 bedroom houses	45 – 250m	0.23%
National Housing and Construction Company	5500 houses built and sold. Plan to build 2000 houses by 2015	Apartments of 1 – 3 bedrooms and single houses of 2 – 4 bedrooms	30 – 350m	Between 0.09 and 0.27%

Source: Kalema W and Kayiira D; 2008

Table 4: Housing Tenure Types

Housing Tenure Types	Year 2002	Year 2007
1. Owner-occupied	Urban:28.8% Rural:85.9%	Urban:30% Rural: 86%
2. Rent	Urban:57% Rural:8%	Urban:57% Rural:8%
3. Others including Squatters	Urban:13% Rural: 6%	Urban:13% Rural:6%

Source: Ministry of Land, Housing & Urban Development, 2008 and UNHABITAT; 2008

Box 1: The Incremental Building Approach - The 80m² House

1. **Stage One:** At this stage, prospective homeowners will buy land at UGX 4.5 million ($ 2,000), including the cost of infrastructure and titling fees, pay for the house design at UGX 0.2 million ($ 100), pay administrative costs of UGX 4.5 million ($ 2,250) and undertake the initial stages of construction; building the foundation, priced at UGX 0.8 million ($ 400).

2. **Stage Two:** This stage will involve building up to wall plate level, priced at UGX 3.6 million ($ 1,800), roofing the house, priced at UGX 3.2 million ($ 1,600), and constructing the floor slab and plastering walls, all priced at UGX 3.2 million ($ 1,600).

3. **Stage Three:** This stage will involve constructing the ceiling using ceiling boards, priced at UGX 1.6 million ($ 800), fitting windows and doors, priced at UGX 1.2 million ($ 600), plumbing works (fitting the kitchen and the toilet), priced at UGX 0.9 million ($ 450), fitting electricity wires and applying and installing an electricity meter, priced at UGX 0.6 million ($ 300), and applying and installing a water meter, priced at UGX 0.2 million ($ 100), finishing the outside of the house (plastering and building the verandah), priced at UGX 1.1 million ($ 550), and painting the inside and outside of the house, priced at UGX 1.2 million ($ 600).

Box 2: Delivering Infrastructure in a Housing Estate

Infrastructural delivery starts off with the demarcating of plots and opening access, which involves the removal of vegetation and topsoil, leveling of the soil, and the construction of access roads. This is followed by making a connection to the main water grid, (usually one stand pipe) that supplies water for construction. It is from this connection that individual houses are later connected. For areas that are not connected to the water grid, as was the case with Mukono District, water is ferried from nearby wells or supplied by water tanks. Electricity connections are made during the furnishing of houses. In the case of sewerage, septic tanks are built, given the limited sewerage network. Developers meet the full connection costs for every utility, which are later passed on to the end buyer.

Source: Merrill S; Kalema W; Kayiira D. 2009"

The commercial banks, which play the dominant role, have mostly short-term deposits and are therefore inclined to provide loans only for periods not exceeding two years.

Longer term lending, when provided, is mainly drawn down from lines of credit provided by institutions such as the Apex IV credit (provided by the European Investment Bank), FMO, IFC, Proparco, and other IFIs. As development institutions, these lenders provide longer tenures, at below market rates of interest. Table 5 below provides a summary of typical costs for these lines of credit.

When lending to customers, the banks will add a margin of between 2% and 6 %, depending on the risk assessment of the project and the borrower. The term will be typically 3-7 years, with a grace period of up to one year.

In assessing the risk of a housing construction project, a bank will consider the likelihood of securing buyers for the finished houses, through pre-construction sales, either for cash or through mortgage financing. Thus, availability of mortgage financing makes a housing development more bankable (Source: Merrill S; Kalema W; Kayiira D. 2009).

In the current Ugandan market, only a few banks are even interested in lending for property development. Among them, East African Development Bank (EADB) funds only large projects, of over US$ 5 million, providing housing for the upper and middle income groups. Stanbic Bank is interested in similar projects. DFCU is willing to finance construction of more modest housing, subject to risk assessment.

4.2. Infrastructure Provision and Costs

The Local Government Act (1997) empowers local authorities to control development and provide urban services. However, **delivery of the vast bulk of infrastructural services (access roads, water, sewerage and electricity connections) has been pioneered by developers and individual builders**, to make their housing estates more attractive to end buyers (See box 2 for more details). Infrastructural investments are estimated at between 15 and 25% of the price of the house depending on the location of the site on top of the existing infrastructure services.

Ways have been sought in the past on how to form a partnership between utility suppliers the National Water and Sewerage Corporation (NWSC) and the electricity distributor UMEME) and developers, to reduce on the cost of the delivery of these services. Unfortunately, this move was unsuccessful; hence infrastructure costs are still high.

The central government has recently shown interest in establishing how much some developers have incurred[2] in the delivery of infrastructure. In line with the national housing policy that is due in 2009, government plans to direct NWSC and UMEME to meet connection costs, rather than play an investigative role!

4.3. Land Provision and Cost

Uganda's land tenure systems have presented a major hurdle to the supply of decent housing stock, especially in urban areas.

Table 5: Lines of Credit: Cost to Banks

Lender	UGX Interest rate	Fixed/ Variable	USD Interest rate	Fixed/ Variable
EIB Apex			5.11	Fixed
EIB Apex	8.25	Fixed		
IFC			5.38	Variable
FMO			5.21	Variable
FMO	10.58	Variable		
NSSF	12.50	Fixed		

Source: Merrill S; Kalema W; Kayiira D. 2009

[1] In November 2008, the MLHUD officially requested Tirupati Developments (U) Ltd to submit costs it had incurred and those it intends to on infrastructural delivery for all its developments

The Land Act provides that land is held under four tenures; mailo[3], customary[4], freehold and leasehold. However, terms set on how they are exercised (other than leasehold) do not adequately respond to changes in urbanization[5]. For example, in the case of the mailo tenure, the Act separates ownership of land (title holder) from occupancy or ownership of development by 'lawful' occupants.

This system has over the years made it difficult for title holders to make direct improvements on their land, as they cannot easily sell it off (since it is tenanted), nor can they easily mortgage it. It has also has locked up large areas from development in the Kampala area, which has physical planning and infrastructure development challenges. Nevertheless, a National Land Policy has been drafted to guide the country on land issues, although some of its clauses on customary land have been bitterly challenged by cultural groups.

The land registration process has on the other hand started to shape up. With assistance from the Private Sector Competitiveness Project II (PSCP II), the streamlining of land registry activities (which included rehabilitation, computerization and the recruitment of additional land registrars), has improved the provision of the mailo land registry services.

It now takes 30 minutes from 12 days to complete a search for the sorted and vetted files, while transfers and mortgages take up to 3 days. In line with this, the Ministry of Lands Housing and Urban Development (MLHUD) with support from the World Bank has constructed 20 land offices to curb the forgery of land titles[6].

In terms of pricing, the high cost of land has significantly slowed down the provision of affordable housing. Land costs have more than doubled over the last decade. This increase in prices is partly attributed to the lack of finance available to land owners to expeditiously develop their land.

In the Kampala prime area, a 25 decimal-plot goes for about UGX 75 million (USD 30,000), while in peri-urban areas like Namugongo (12 km from Kampala City), the cost of same plot ranges between UGX 25 million (USD 10,000) and UGX 15 million (USD 6,000). Overall, land acquisition and registration constitute about 20% of the cost of a housing unit. Table 6 outlines prices of land in selected major towns in Uganda.

Table 6: Cost of a 500m^2 Plot in selected urban areas near Kampala City

Town	Distance from City Centre (km)	Cost of a 500m^2 (UGX, millions)	Cost per m^2 (UGX, 000)
Namugongo, along Jinja Road	12	13	26
Bweyogerere, along Jinja Road	9	16	32
Luzira	7	50	100
Bwebajje, along Entebbe Road (near Akright's Kakungulu Estate)	18	12	24
Mukono, along Jinja Road	15	4	8
Kasangati, along Gayaza Road	15	4.5	9
Nansana, along Hoima Road	13	8.5	17
Seeta, along Jinja Road	13	10	20
Abaita Ababiri, along Entebbe Road	30	7.5	15
Bulenga, along Mityana Road	17	3.5	7

Source: Compiled by Consultant from various publications, including newspapers

5. Conclusion

The housing finance sector in Uganda continues to expand, with high-end mortgage borrowing showing particular growth, however, at high interest rates, largely attributed to the increasing size of government fiscal deficit.

Commercial banks have increased their exposure to the sector, numbering 9 out of 22 by June 2011, though, with a preference for well-built houses in planned neighbourhoods.

With the urban population growing at a rate of about 5% annually, and in the absence of proper urban planning and development controls, most houses constructed have not been of sufficient quality to attract bank financing.

The housing finance sector is constrained by a lack of sufficient long-term liabilities, owing to an undeveloped pension industry and limited life insurance funds.

Further, the high cost of land and the delivery of infrastructure (access roads, water, and sewerage, among others) has slowed the provision of affordable housing in the country.

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[3] Land held under mailo tenure system is mainly in Buganda (Central region) and some parts of Western Uganda. The system confers freehold granted by the colonial government in exchange for political co-operation under the 1900 Buganda Agreement. Essentially feudal in character, the mailo tenure system recognizes occupancy by tenants (locally known as bibanja holders), whose relationship with their overlords is governed and guided by the provisions of the 1998 Land Act. The holder of a mailo land title has absolute ownership of that land. One only loses such ownership when such land is needed for national interests but still amicable compensations have to be done for a peaceful relocation.

[4] Under the Customary tenure, land is communally owned by a particular group of people in a particular area. Its utilization is usually controlled by elders, clan heads or a group in its own well-defined administrative structures. In Uganda, this land tenure is usually in the north, eastern, north east, North West and some parts of western Uganda. Over 70% of land in Uganda is held on customary tenure system.

[5] Source: Ministry of Housing, Lands and Urban Development; Drafting the National Land Policy 2008.

[6] Source: The New Vision; 28th December, 2008

The Northern Ireland Housing Market and Interconnections with the UK and Irish Housing Markets

By Michael McCord, David McIlhatton and Stanley McGreal[1]

1. Context

Northern Ireland (NI) politically is part of the United Kingdom, however it is distinct in many ways from the rest of Great Britain (England, Scotland and Wales). Northern Ireland enjoys devolved status, along with Scotland and Wales, hence matters relating to housing and housing policy rests with the NI Assembly, the relevant government department (the Department of Social Development) and the Northern Ireland Housing Executive (NIHE) which is the strategic body for housing in NI. Northern Ireland is the smallest region of the UK, with a population of circa 1.8 million in mid 2009 but which had risen significantly by 4.6% since 2004. It also has been historically the most deprived region of the UK with higher levels of unemployment, lower levels of GDP and productivity: the NI GDP is commonly well below the UK benchmark. The province has relied heavily upon the public sector as a major employer and benefits from a significant subvention from the UK exchequer. Geographical separation from Great Britain and the weaker regional economy in NI has meant that there is relatively little population movement between NI and the rest of the UK in terms of employment opportunities and labour market mobility. Thus the housing market in Northern Ireland has tended to operate differently from that in rest of the UK and indeed there is often a divergence of housing market trends.

As part of the island of Ireland, the six most north-easterly counties, NI, constitutes a relatively small part of the island and is the only part of the UK to share a land border with another member state in the EU. Ireland (sometimes referred to as the Republic of Ireland) is an independent nation state which has developed socially, politically and economically in different ways to NI. Hence on the matter of housing, whether it is from a policy perspective or the operation of the market, there are significant institutional differences from those in NI. While there is certain movement of population between NI and Ireland, this is on limited scale thus there has been little synergy between the markets in the respective parts of the island. For example the Dublin housing market would have little or no bearing on that in Belfast and vice versa though within the border areas such as the Newry (NI) - Dundalk (Ireland) corridor and in the northwest (Derry-Londonderry and Donegal) there has been some interesting submarkets with people living in one jurisdiction and working in the other. The dynamics of these local cross-border markets in the island of Ireland has been an under-researched area (Gibb et al, 2007).

In terms of the UK perspective, NI as a constituent component of the latter operates within the same institutional framework as the rest of the UK whereas Ireland has different institutional structures, a different planning system, different taxation regimes and currency. Hence in NI, lending institutions, including banks and building societies, are governed by UK regulations and the Financial Services Authority. However, apart from this common regulatory framework and housing finance environment, there is little impact on the NI market from that in the rest of the UK. This paper seeks to explore some of these issues in more detail by analysing trends in the NI housing market and drawing comparisons as appropriate to the markets in the rest of the UK and Ireland.

2. Historic Perspective on the Performance of the Northern Ireland housing market

The Northern Ireland housing market has seen rapid change since the signing of the Belfast Agreement in 1998. Prior to this, housing in NI was considered low cost in comparison to other areas of the United Kingdom and Ireland and as a consequence, generally avoided the market downturn experienced by other regions in the late 1980s and early 1990s. Despite the relative inertia evident in the housing market during that period, changes in the political infrastructure in NI in 1998 gave rise to significant increases in investment activity, particularly within the buy-to-let market. Indeed, the NI market further accelerated as a result of growth in regional income levels, declining unemployment levels and spill-over effects of the Celtic Tiger.

An illustration of how profound this growth was can be demonstrated by the fact that up in the mid 1990s NI was considered the weakest performing region in the entire UK on the basis of average house price. Analysis provided by the University of Ulster's price index showed over the 10 year period from 1985-1995 that for the NI market average house prices barely kept pace with the rate of inflation in the UK economy as measured by the Retail Price Index. This was a prolonged period of nominal but no real growth in house prices in NI with the province missing the boom experienced elsewhere in the UK in the mid to late 1980s. On the positive side, NI also avoided the down-cycle of the early 1990s and the high rates of repossessions and arrears suffered in most other parts of the UK. In

[1] Built Environment Research Institute, University of Ulster, Newtownabbey BT 370QB

some respects, housing in NI at this stage was under-priced and under-valued. However, from 1995 onwards the NI market started to pick-up momentum, possibly stimulated by the greater confidence on the part of the population in the political process and the cease-fires by paramilitary groups. This marked a 12 year period of continually rising house prices in the province due to a variety of stimuli notably the growing macro-economy in the UK, growth in the local NI economy, declining rates of unemployment, low interest rates, a competitive mortgage market and the ready availability of housing finance. In many respects this mirrored growth in other regions of the UK and Ireland, with the burgeoning Irish economy providing the impetus for cross-border investment activity.

Population growth was also a significant factor, boosted by migrant workers the increased demand for housing in the early to mid 2000s pushed house prices up significantly. Indeed a market which was traditionally dominated by owner-occupiers had become investment driven by 2005 with such sales taking at least one-third of all transactions. Public sector policies focusing on regeneration saw a growing emphasis on smaller units notably apartments in the new-built sector and housing benefit payments stimulated further the private rental sector (Gibb et al, 2007). Recent statistics from the NIHE show that out of a housing stock of 740,000 units, the private rental sector accounts for 124,600 units or 16.8% of the total compared to 49,400 (7.6% of the total stock at that stage) in 2001 (NIHE, 2011) whereas the social rented sector has reduced to 110,200 units (14.9%) of the stock. There has also been a reduction in the percentage of the stock in home ownership from 67% in 2001 to 62.4% in 2009 though the number of units in the home ownership category has increased from 432,000 in 2001 to 461,800 in 2009. The vacant stock is estimated at 43,400 or 5.9% of the total.

By 2007, NI average house prices were the third highest in the UK and even exceeded those in the Outer-southeast of England (Nationwide, 2010). Unfortunately, this buoyancy was short-lived and average prices depreciated considerably and by 2010, NI was once again considered the worst performing region. A further indication of how significant this re-adjustment has been is the large reduction in monetary value of the NI housing stock. In 2007, the value of the private residential housing stock in NI was estimated at £123 billion, by 2010, this value had receded to approximately £93 billion (Halifax, 2010).

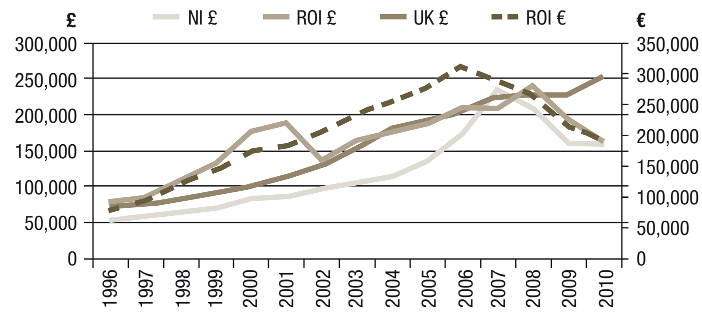
3. Changes in Average Price: 2005 to 2010

The period from 2005 to 2010 arguably was one of the most volatile recorded for the UK market, NI was no exception to this and indeed was probably the most volatile regional market within the UK over this period, in contrast to the more steady state conditions that had characterised the NI market over the long term. The behaviour of the NI market over this period clearly represents a shock and resulted in a classic spike in the house price index. In examining this trend further, the NI market gathered pace around 2005 with significant growth in house prices experienced. Indeed, the average price of a residential property rose by approximately £100,000 over a two year period between 2005 and 2007- growth rates not experienced anywhere else in the UK and Ireland[2]. In comparison, average house prices in Ireland were subject to greater volatility with acute growth rates experienced in the late 1990's and early 2000's. However, this growth was short lived and followed rapidly by significant depreciation. Improvements in the Irish economy in 2002 saw the Irish property market rollercoaster, with gradual rises in average prices experienced, although less profound than that experienced previously.

What happened post-2007 has however been the main focal point of attention in the UK and Irish housing markets, despite the unsustainable growth that preceded the global financial crisis. In recent times, much of the housing market attention in NI has been focused on the relative crash in nominal and real terms of property prices. This attention has not been surprising, given the sudden drop in residential property values that peaked in Q3 2007 but is something that is considered more important than why the market grew as significantly as it did between 2005 and 2007. In a similar vein, the Irish residential property market has also experienced significant depreciation since the inception of the global financial crisis with approximately €90,000 wiped off the average price between 2008 and 2010. The UK market on the other hand has shown greater resilience notably in the London and south-east of England markets but with distinct differences regionally.

Currency fluctuations in the exchange rate between the euro and pound sterling appear to have masked certain aspects of the underlying performance of the market in Ireland. Figure 1 highlights that when comparing the average house price in its home currency, the Irish market grew exponentially over a longer period of time with less fluctuation experienced. It also highlights that decline in the market actually started to occur in 2006, when examining the average house price in euro, and not in 2008.

Figure 1 Average House Prices- UK and Ireland



Source: Department of Environment, Community and Local Government (Ireland); University of Ulster; Department of Communities and Local Government (UK)

[2] Source the Northern Ireland Quarterly House Price Index published by the University of Ulster

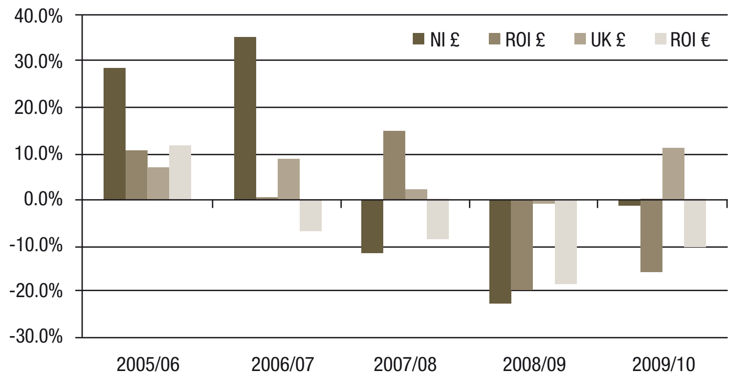
4. Percentage Change in the Housing Market: 2005 to 2010

Perhaps a more holistic representation of the UK, Irish and Northern Irish housing market performance is the level of percentage change that occurred. Whilst change has been evident throughout the last decade, the NI market has seen its greatest volatility between 2005 and 2010. For example, Figure 2 illustrates that NI experienced the highest level of growth (74%) in the UK and Ireland between 2005 and 2007. In real terms, the level of change experience in NI was unsustainable, as affordability (Frey and Grey, 2010) was rapidly reducing as changes in median incomes were not aligned with the performance of the NI housing market.

The spectacular rates of growth and the high average price levels achieved during 2006 and the first half of 2007 apart from resulting in unsustainable levels of average house price had other detrimental effects in virtually destroying the first-time buyer market. The effect was to produce an imbalanced market in which arguably the mainstay of the NI market was dissipated, this skewed market still continued to impact on the NI market into 2011. Although there has been a partial return of first-time buyers to the NI market, this is only a fraction of that at the start of the 2000s. Statistics from the Council of Mortgage Lenders show that the number of FTB loans approved for NI decreased from over 17,300 in 2000 to approximately 5200 by 2007. Further shrinkage in the FTB mortgage market was experienced in 2008 when the number of FTB loans approved totalled 2800, illustrating the largely unaffordable market that NI had developed in to during the property boom. Some positive signs have emerged in the FTB market in recent years with the number of loans increasing to 4500 and 4200 for 2009 and 2010 respectively. Although 2010 had a smaller number of approved FTB loans than that recorded for 2009, it must be remembered that 2010 was a much more difficult market to operate in. Firstly, in the UK the new coalition government set about a process of economic and social reform. Secondly, the UK and NI were subject to an emergency budget within six weeks of the new government being formed and thirdly, the Comprehensive Spending Review in the autumn of 2010 heralded extensive cut backs in the public sector which with NI's heavily reliance on the latter had a significant impact on the province's housing market.

Research into affordability by the NIHE and the University of Ulster showed that by 2007, major affordability gaps existed in all housing market areas throughout NI and indeed was probably greatest in the more rural markets in the west of the province rather than in NI's largest market, the Belfast Metropolitan Area. The extent of the affordability gap was apparent from the price distribution of transactions, with 9% of properties transacting for at or below £150,000 at the peak of the cycle in 2007 whereas by the second quarter of 2011 this percentage had totally changed with 68% of transactions at or below this threshold.

Figure 2 Average House Prices- Percentage Change



Source: Department of Environment, Community and Local Government (Ireland); University of Ulster; Department of Communities and Local Government (UK)

Table 1: Average House Prices- Percentage Change

Year	NI (£)	RoI (£)	UK (£)	RoI (€)
2005/06	28.33%	10.72%	7.37%	11.79%
2006/07	35.40%	0.12%	9.08%	-6.92%
2007/08	-11.51%	14.70%	1.95%	-8.79%
2008/09	-22.73%	-19.30%	-0.75%	-18.49%

Source: Department of Environment, Community and Local Government (Ireland); University of Ulster Department of Communities and Local Government (UK)

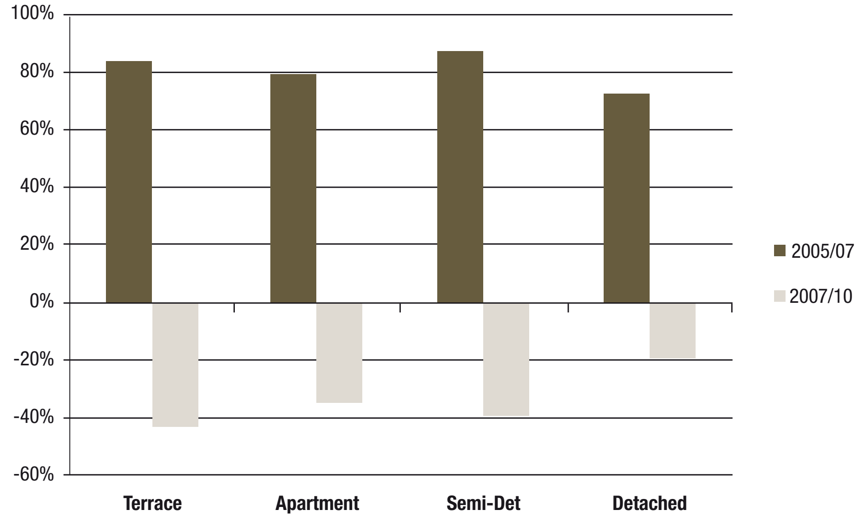
Table 1 highlights the extent of volatility that existed in both the NI and Irish housing markets and the evident stabilisation of the UK market post-2007. In NI, the average residential property price reduced significantly between the peak in 2007 and 2010 and represented a peak (£250,586) to trough (£148,243) decline of approximately 41%. Indeed more recent evidence from the first half of 2011 indicates further falls in the average price for NI. This rate of decline may come as a bit of a shock to those outside NI - warning signs were issued when the market was rising at such a rapid rate, but they were largely disregarded by those looking to capitalise from the strong market performance. In the University of Ulster published Northern Ireland Quarterly House Price Index in Q3 2006, commentary from the Northern Ireland Housing Executive stated that "Northern Ireland's housing market is overheating. Annual average price increases of more than 30 per cent are simply unsustainable, even in the medium term. The big question only remains when the downturn will come, and how sudden and severe it will be".

These questions were answered a year later when Northern Ireland was plunged in to recession and access to finance, demand and confidence reduced drastically as the realisation of an unsustainable market began to emerge. An analysis of price levels over the cycle by McGreal et al (2010) indicated that on the rising limb, sale prices were exceeding asking prices by 12% on average, whereas on the down-side this relationship flipped quickly, within two quarters, and sale prices lagged asking prices on average by 9% in 2008.

The Irish market on the other hand experienced a similar level of decline although over a longer period of time and has been subject to extensive over supply in recent years. Indeed, wider macro-economic factors have added further complexities to an already troubled market. This is evident through the relative lack of stabilisation of average house prices post-2007 fuelled mainly by socio-economic uncertainty and large-scale oversupply. Whilst the stabilisation process north of the border has been more prominent on the island of Ireland, areas contiguous to the border have shown poorer performance in comparison to areas within the Belfast Metropolitan Area.

In comparison to the high rates of decline experienced in both NI and Ireland, the overall UK residential housing market was performing relatively well, particularly between 2009 and 2010 when average property prices grew by approximately 11%.

Figure 3 Comparative rates of house price growth and decline in NI by sector



Source: Northern Ireland Quarterly House Price Index (University of Ulster)

5. Performance by Type: 2005 to 2010

A clear indicator of how significant the adjustment and re-adjustment of the NI housing market has been in recent years is best characterised by the change in average price of the main property types. The strong performance of the market between 2005 and 2007 saw average prices nearly double in some property types, particularly within the terrace/townhouse and semi-detached sectors. The apartment and detached sector also illustrated major growth. Figure 3 illustrates the percentage change in the average price of the different property types between 2005 and 2010. From this, it is clear that the average price rise (84%) and decline (-43%) show that the market in this sector was significantly overheated during the boom and that the acuteness of the growth was simply unsustainable - testament to this is the rate of decline that has been experienced since the peak of the market in Q3 2007.

The semi-detached sector was also a strong performer in the boom years between 2005 and 2007 as evidenced by an 87% increase. This rate of change saw the average price rise from approximately £123,500 in 2005 to £231,000 by 2007- a huge increase in such a short period of time. The rate of depreciation between 2007 and 2010 has not been as significant as experienced in the terrace/townhouse sector, but has nevertheless seen around £90,000 taken of the peak value- a reduction of 35%.

The levels of change demonstrated in the apartment and detached house sectors are not as high as what occurred in the terrace/townhouse and semi-detached sectors. Despite this, the degree of change is still very significant in comparison to growth experienced previously and characterises the very difficult environment in which the NI housing market has operated. In the case of the apartment market, the average price rose from £114,700 in 2005 to just over £205,000 by 2007- a growth rate of approximately 79%. The rate of decline in this sector has also been less than that experienced in the terrace/townhouse and semi-detached typologies at around -35%, a rate which has seen the average price drop to over £133,000 in 2010.

Detached property performed relatively strongly despite the decline experienced in the rest of the NI housing market. Whilst depreciation was recorded for the detached sector, it has been comparatively low. Figure 4 illustrates the growth (72%) in this sector between 2005 and 2007 and the softening of the market between 2008 and 2010. Indeed, the depreciation in average price has seen approximately £70,000 knocked off of the peak price - a figure much less than that demonstrated by the other property types. This decline has meant that the average price has changed from approximately £343,000 in 2007 to £275,555 in 2010.

6. Housing Finance in NI: A Change in Direction

The structure of housing finance in Northern Ireland has changed considerably during the past ten years with a different mentality now existing amongst purchasers and lenders. In setting the context, it is important to remember that Northern Ireland has not avoided the global financial crisis that started to occur in late 2007, but instead has fallen victim to it, particularly in the residential property market and the lending environment in which it operates. The purpose of this section is to track the degree of change that has occurred in housing finance in NI and to draw comparisons, where appropriate, with the Irish market.

FTB Loans: Value and Number- NI and Ireland

Northern Ireland

The first time buyer (FTB) lending environment was highly active and volatile in Northern Ireland during the recent property boom and also in the years attributed to the global financial crisis. Figure 4 illustrates the number and value of loans secured for the purchasing of residential property in NI and highlights that the number of FTB loans being approved were falling long before the depreciation of the NI housing market. This further indicates the reduction in affordability for FTB's that occurred as the property market began to expand significantly prior to the downturn in late 2007. It also indicates that whilst the number of FTB loans has been on the decrease, the total monetary value of the loans has been increasing reflecting the growth in average prices experienced in the market during the boom and the increased amount of borrowing required. Nevertheless, the total value of loans approved has not reached the levels experienced in 2001, but this can be attributed to the fact that the total number of FTB loans approved have been much reduced and not aligned with previous lending patterns.

Ireland

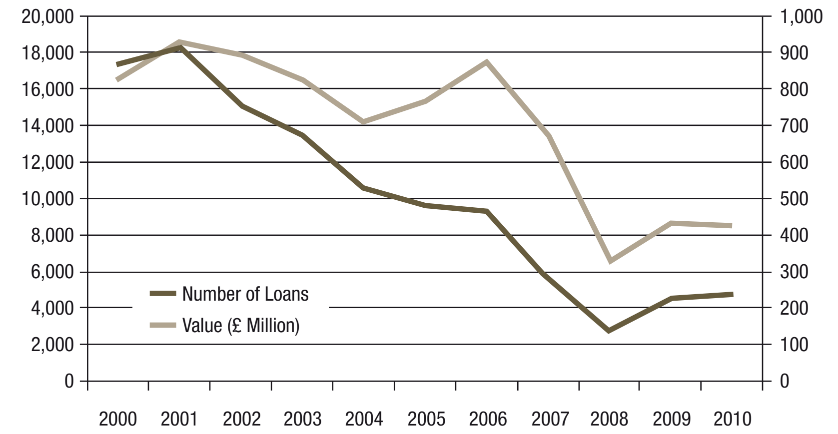
Movement in the FTB market in Ireland has also been much reduced since the start of the global financial crisis and the problems affecting the Irish banking sector. In this instance, the number of FTB loans approved for the financing of residential property has declined steadily from 2005 when approximately 38,000 FTB loans were approved totaling €7.72billion worth of investment. Following on from this, the number of FTB loans plummeted in alignment with average prices and by 2007 the total number of FTB loans was 30,469- a decline of 19.6%. Further decreases were experienced as the complexities surrounding the Irish debt crisis worsened and the wider macro-economic environment became much more difficult to operate within - by 2009, the total number of FTB loans for residential property was down to just over 12,500 with a total value of €2.7billion.

Total Loans: Value and Number- NI and Ireland

Northern Ireland

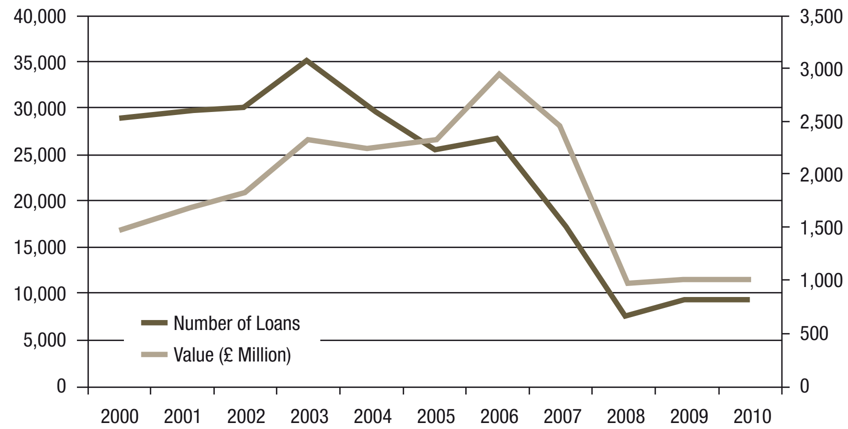
The lending environment which was present prior to the correction of the market in 2008 was well developed and had experienced significant growth. At its peak (2006), the number of mortgages approved in NI stood at approximately 26,000 with a total monetary value of £2.97billion (Figure 5). However, as the global financial crisis took a grip on UK and Irish financial lending institutions, accessibility and availability of finance reduced dramatically. This is evidenced by the fact that in the period of a year from its peak, mortgage lending dwindled to 18,100 by the end of 2007- a decline of 32%. Indeed, the mortgage market fell considerably further in 2007 with only 7,700 mortgages approved with the total monetary value of the loans now standing at £988million. This reduction has represented a peak to trough decline of 71% in the number of loans approved and signifies the difficulty that existed in the Northern Ireland residential property market. In more recent years, mortgage lending rates have improved, albeit at much constrained levels. In 2009, data suggests that approximately 9,500 loans were approved with a value of £1.02billion and in 2010, a moderate increase was also experienced.

Figure 4 Total Number and Value of FTB Loans in Northern Ireland



Source: Council of Mortgage Lenders (CML)

Figure 5 Total Number of Loans and Value in Northern Ireland



Source: Council of Mortgage Lenders (CML)

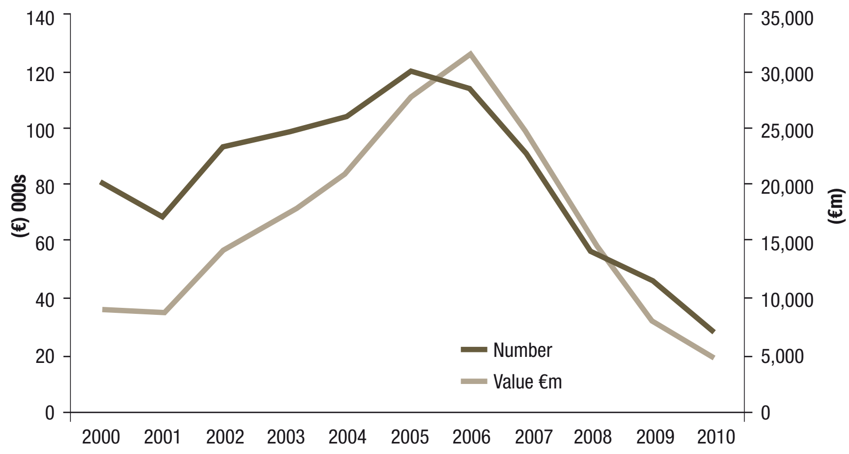
Ireland

In a similar vein, the Irish lending environment has also experienced significant volatility in recent years with levels of decline similar to those experienced in Northern Ireland. However, unlike Northern Ireland, the peak in lending rates occurred in 2005 with just over 120,000 loans approved for the purchasing of residential property in Ireland with a total monetary value of €21.02billion (Figure 6). When the property bubble burst in late 2006, lending rates were already subdued in comparison to previous years and by 2007, there were approximately 26% less loans approved. Indeed, the lending environment became more constrained in Ireland in the years after this with only 46,000 loans for the purchase of residential property approved in 2009 and approximately 28,000 approved in 2010. This demonstrates a peak to trough decline of around 77% and provides evidence of the particularly difficulty financial operating environment that Ireland has been faced with.

7. Cross border activity

In terms of housing markets north and south of the Irish border while some parallel trends

Figure 6 **Total Number and Value of Loans in Ireland**



Source: Department of Environment, Community and Local Government (Ireland)

exist, both markets have operated every much within their own boundaries with limited cross-border activity in the housing market. However Paris et al (2003) considered that it was highly unlikely that the growth in house prices and the new house building programme boom in Ireland had not impacted upon prices in NI, especially as it "sucked in capital, builders and labour". The same authors also pointed to the potential for households in border areas to opt for the less restrictive planning regime on the Irish side, also lower interest rates, no domestic rates and an attractive exchange rate at that time. Paris and Robson (2001) pointed to signs of extensive cross-border investment activity, especially in the apartment, second home and resort markets. The case study of Derry/Londonderry expanding into its 'natural' hinterland in Donegal was cited as was growth in the Dublin-Belfast corridor and commuting zones that are coalescing and moving westwards along either side of the border. Paris and Robson (2001) however did recognise that the border remains significant as a political and administrative barrier notably difference in tax regimes, different administrative systems for financing and allocating social housing, the natural inclination in both jurisdictions of public officials to operate within an organisational framework, differences in policies and practices and different roles of local and central government.

However, in the later study by Gibb et al (2007) evidence was cited of householders who had moved to Donegal were now looking to return to the Derry/Londonderry market due to equalisation of house prices, potential currency/exchange gains, differences in stamp duty, the importance of living in school catchment areas and taxation on motor vehicles which was much higher in Ireland compared to NI. The same study reported at that stage a similar effect in the Newry (NI) area with a degree of cross-border movement based on the cheaper cost of living, the perception of better education and health care in NI. The effect of the political settlement in NI and improvements in cross-border infrastructure were also cited as contributory factors.

Thus, the picture is one of varying cross-border activity in sub-markets but not widespread population movement with limited impact on the operation of the respective housing markets north and south of the border. Perhaps of greater significance has been the role of cross-border investment. At the height of the Celtic tiger and the rising housing market in NI in the early to mid part of the 2000s, significant investment in land, housing and the wider property market took place in NI by Irish investors on the back of the political settlement and the prospects for abnormal returns based on rising capital values and a growing rental market. This was essentially a short-lived boom that helped to inflate prices in the residential market in NI as discussed earlier in this paper but which collapsed dramatically in the wake of the global financial crisis, the level of debt in the Irish economy, the bail-out of the Irish banking system and the wider bail-out of Ireland through the EU and IMF. The impact of this on the NI market is still being felt with the National Asset Management Agency (NAMA), established by the Irish government to acquire assets from participating financial institutions (so-called toxic assets), now effectively responsible for significant land and property holdings in NI worth in many cases a fraction of the original price paid.

8. Conclusions

The Northern Ireland housing market is largely internalised and in many respects functions as a separate entity to the market in the rest of the UK and that in Ireland. The main UK influence lies in terms of housing finance, with the principal UK lending institutions active in the NI market in addition to local banks, and in terms of financial and fiscal regulation. However, from a housing policy perspective, NI as a devolved region of the UK is responsible for matters pertaining to housing and planning.

From an Irish perspective, there are significant institutional, regulatory, currency, taxation and housing policy differences between NI and Ireland hence both markets operate separately with little impact upon each other though as highlighted in the paper more local cross-border markets operate with flows both ways at different times depending on fluctuating fiscal and currency issues and other matters such as access to school catchment areas and medical facilities. There has also been activity in the second/holiday home market with NI purchasers having second properties notably in Donegal (northwest of Ireland). Arguably the main area of market influence between the two jurisdictions in Ireland has been in the investment sector with significant cross-border investment from Ireland to NI during the rising cycle and the ensuing property market boom. This served to escalate house prices in NI creating affordability problems for first-time buyers resulting in a highly exposed market with price levels being achieved in 2006 and early 2007 that greatly exceeded valuations. The unsustainability of this resulted in a market which has seen the severest price correction of any UK region. It also has resulted in the agency established by the Irish government, NAMA, effectively controlling significant property and land holdings in NI (and also in other regions of the UK). Whilst NAMA is committed to an orderly solution/disposal of assets, it nevertheless will be a potentially significant player in the Northern Ireland market over the coming years.

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Paving the Way to Extend Mortgage Lending to Lower Income Groups in Brazil: The Case of the French System

↪ By Claudia Magalhães Eloy & Henrique Bottura Paiva

1. Introduction

The Brazilian housing market has expanded significantly in the last few years, especially due to macroeconomic stability, sustained economic and income growth, expansion of credit, and advances in the regulatory framework, as well as specific housing policy including subsidies for low income families. Yet, much room is left for improvement, as we intend to demonstrate here. In this article, we focus on the impact of legal battles concerning anatocism, that have dramatically reduced the use of the constant installment amortization system, thus limiting access to housing loans among low and moderate income families.

The expansion of housing finance to lower income groups requires an array of instruments that may include subsidies, insurance, public-private partnerships, regulatory framework, information systems and so on, not to mention the prerequisite of macroeconomic stability. It is not an easy task, especially in a country like Brazil, with the world's 3rd worst Gini[1] coefficient of 0.54[2].

Such an expansion has been promoted in Brazil in very recent years, with the establishment of a new housing subsidy program named "My Home, My Life" (Minha Casa, Minha Vida - MCMV) that encompassed, from 2009 to 2010, over 729 thousand subsidized loans for families with monthly incomes up to 6 minimum wages (BRL 2,790.00, around U$1,875.00). The second phase of this program has set a goal of 1.8 million more from 2011 to 2014.

Designed firstly as an early response to the international financial crisis, its continuity found support in the revitalization of the housing finance system and housing construction industry boom that have been taking place over the last decade, fostered by the already mentioned important macroeconomic improvements, including real income growth for moderate and low income families. According to Neri[3], from 2003 to 2009, 35.7 million people ascended economically to the middle and upper classes A, B and C.

Also, improvements in the regulatory framework, particularly new regulation regarding enforceable lien on property that has significantly speeded up foreclosuring procedures and reduced default rates, have stimulated new loans as well as down market families.

Yet, despite all recent efforts to increase housing finance as well as to expand it to low and moderate income groups, there still remains work to be done, as this article intends to reveal, highlighting the need for improvements in our regulatory framework.

2. A brief overview of the Brazilian Housing Finance System

The Brazilian Housing Finance System (SFH) was established in 1964, with the creation of the National Housing Bank (BNH) and two types of funding, both from deposits – a voluntary savings and loans scheme, named SBPE (but generally known as "poupança") and a provident fund (Fundo de Garantia por Tempo de Serviço - FGTS) that comprises compulsory deposits equivalent to 8% of a worker's monthly salary. Both pay interest on deposits and offer housing finance loans at below market rates. Loans are provided for any family that qualifies, regardless of being savers with any of the schemes.

In 1997 the country passed regulation (Law 9.514) that allowed the issuance of Mortgage Backed Securities (named "Certificados de Recebíveis Imobiliários" or just CRIs), normalized Real Estate Investment Trusts (FII), and regulated the trade of mortgage bonds (LH and LCI). Nevertheless, up to today, housing finance in Brazil still depends almost entirely on funds raised by deposits from the original SFH funds, SBPE and FGTS.

From 1964 to 1986 – the first period, when the National Housing Bank (BNH) existed – SFH encompassed the financing of approximately 4.8[4] million units, with its peak on 1980 and

[1] The Gini coefficient is a measure of the inequality of a distribution, generally used for income or wealth, a value of 0 expressing total equality and a value of 1 maximal inequality.

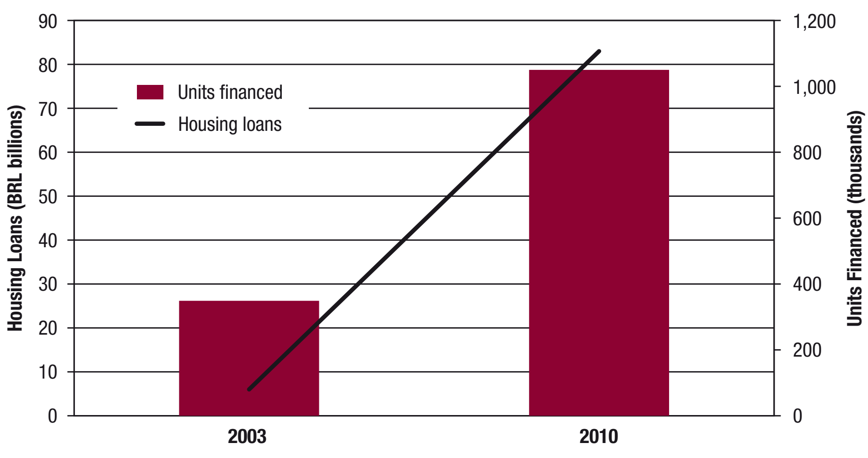
[2] IPEA based on PNAD 2009. According to PNUD 2010, GINI would be 0.56 and to Marcelo Neri, from Fundação Getúlio Vargas (FGV) 0.53 for 2010, which equals to Brazil's 1960's GINI.[3] This article is second of a pair of articles. For the first article, see Coşkun (2011a).

[3] Marcelo Neri, FGV, 2010. view of the Turkish real estate market.

[4] ARAGÃO:, José. Sistema Financeiro da Habitação: Uma análise sociojurídica da gênese, desenvolvimento e crise do Sistema. Curitiba: Juruá Editora, 2007.

again on 1982, when it reached over 550 thousand housing loans each year. However, although the system was meant (according to its regulation) to prioritize lower and moderate income groups, at least over 60% of mortgages were taken by upper middle income families (over 10 times the minimum wage). The work by Ferreira (2003)[5] indicates that subsidies were also regressive – higher as the loan amount increased and so did the family's income. After 1986, when BNH was extinguished, housing policy wandered from one ministry to another and SFH loans severely dropped – SBPE that had an annual average of 95 thousand units[6] up to 1986, decreased to an average of 61 thousand units from 1987 to 1990. While SFH lingered, developers provided financing for their own upper middle income developments, most families figured out their own alternatives and slums grew.

Figure 1 SFH's (FGTS and SBPE) Housing Finance – units and global amounts – in Brazil in 2003 and 2010



In 1994, a new monetary policy succeeded in controlling inflation and Brazil started a period of growth and monetary stability that has lasted now for 17 years in a row. A first time for Brazil! That started paving the way for the revitalization of SFH.

Later, in 2004, the Ministry of Cities was created and soon established a new National Housing Policy (2005), setting the challenging goal of universal housing access. From 2003 to 2010, housing loans performed by SBPE and FGTS reached over BRL230 billion (US$144 billion), growing from around BRL 6 billion (U$3.8 billion) in 2003 to over BRL 83 billion (US$52 billion) in 2010, while the number of units financed grew from 349 thousand (208 thousand from FGTS and 141 thousand from SBPE) in 2003 to 1.05 million in 2010 (631 thousand from FGTS and 421 thousand from SBPE[7]).

Moreover, from 2005 to 2009, construction investments went from BRL 167.7 billion (U$ 105 billion), to BRL 244.4 billion (U$ 153 billion) and over 1 million new jobs were created in these 4 years, indicating the economic impact of the housing industry revival for the country[8].

As mentioned earlier, there are several reasons for the current recovery of the SFH. First and foremost, continuous economic growth led to an increase in employment and income, which contributed to the formation of effective demand for housing as well as the availability of credit in the Brazilian deposits scheme.

Macroeconomic stability led to lower interest rates. That was coupled with important advances at the institutional level and in the legal framework. The most important one is certainly the introduction of Trust Deed[9] in place of traditional mortgages - that conveys title to the lender until the entire mortgage is paid off, when title is automatically transferred to the borrower. Since it has moved the foreclosure process out of the courts, the average foreclosure time was reduced from 6 or 7 years to around 10 months. In addition to that and the already mentioned uncontroversial value, the requirement that financing agents and contracts make explicit the CET – Total Effective Cost, which sums interest rate and other costs involved in the transaction[10] – has provided more transparency and consumer protection. More recently, the positive cadastre was regulated by law[11] and is expected to contribute with the assertiveness of the underwriting process. All that together has made the interest of Brazil's few lenders towards mortgage financing grow.

Finally, the large amounts of housing subsidies supplied through the "Minha Casa Minha Vida" Program and its mandatory goals set upon CAIXA, Brazil's national housing bank, unleashed repressed demand for housing and encouraged supply to go down market.

The Brazilian housing shortage is currently at 5.5 million units[12] and the yearly new demand for housing is estimated at 1.3 million units[13] during the next decade. The perspective for the coming years is of continuity of credit growth. In the first semester of 2011, financing from FGTS and SBPE already reached BRL 50 billion (U$ 31 billion) and early predictions estimated that they would reach over BRL 85 billion (U$ 53 billion) at the end of the year. Yet, internal impacts of the international financial crisis may reduce the projected growth.

Can all the families that compose the housing deficit and newly formed households all go from potential demand to effective demand for housing?

[5] FERREIRA, Thaís. *A Concessão de Subsídios por meio do Sistema Financeiro de Habitação.* 2003. 122 f.. Dissertação (Mestrado em Economia) – Fac. de Economia, Pontifica Univ. Católica do Rio de Janeiro, RJ, 2003.

[6] Excluding 1966, its 1st year of operation.

[7] SBPE numbers include an overlap in the number of units, since construction and acquisition financing are counted separately even when the same unit is involved.

[8] Construbusiness, 2010 (http://www.fiesp.com.br/construbusiness/pdf/apresentacoes/ConstBusiness2010English.pdf)

[9] In Brazil called Alienação Fiduciária, created by MP 2221/2011 and regulated later by Law 10931/2004.

[10] Similar to Portugal's TAEG, Global Efective Annual Rate.

[11] Law 12.414/2011, regulates the operation of full file positive cadastre of debts and punctuality of payments. Consumers/mortgagees need to authorize inclusion of their information in the system.

[12] According to Fundação João Pinheiro (FJP), based on IBGE's PNAD 2008.

[13] Construbusiness, 2010.

The affordability issue is tough to handle. Families with income below 2 times the Minimum Wage will hardly qualify for a loan or, even if they do, it is unlikely that they can handle a significant installment commitment for long terms. Some families above 2 times the Minimum Wage, and certainly those above three times the Minimum Wage can afford a moderate housing loan commitment and that ability should not be wasted. Yet, interest rates are still high – starting at 7.16% (without subsidies) plus indexation. Housing prices, especially in metropolitan areas, keep going up as urban land becomes scarcer and municipalities fail to use the land control instruments provided by the Cities Statute[14]. Thus, their access still definitely depends on subsidy policy. Hence, all reasonable instruments that can increase, in a sound and coherent manner, the chances of those families to participate in the mortgage market must be put in place. Here we discuss one – making the constant payment amortization system a viable option in mortgage lending.

3. The case of the French System

The Constant Installment System, or French System, establishes a constant payment that combines the interest charged with some amortization of the balance. In Brazil, it is generally known as Price Table[15] in reference to Richard Price who used these tables in 1771, in a book called "Observations on Reversionary Payments and Annuities"[16].

Legal disputes aroused by regulation's ambiguity and misconceptions regarding amortization systems that have been going on in our courts for long enough now, allege that the French System implies anatocism – the charge of interest upon interest - which is not accepted under our laws:

"*It is forbidden to charge interest upon interest; this veto does not encompass interest due but not paid, added to the balance yearly.*" (Article IV, Decret #22.626, April 7th 1933).[17]

First there is a dispute as to whether the above article applies or not to real estate financing, and yet, it allows ambiguity as to how to proceed when computing owed interest. Moreover, many argue that the Price Table is embedded with compound interest, thus configuring anatocism. As a result, a significant number of lawsuits have argued the validity of housing finance contracts under the constant installment amortization system, giving rise to what Rezende (2003)[18] calls the "injunction industry". The confusions surrounding the interpretation of the law and the misapprehension of how this particular amortization system works, in many instances, have favored borrowers, hurting mortgagees.

Although SFH's legislation – since its origin (law 4.830/1964) up to MCMV (law 11.977/2009) – explicitly includes the French System as a valid amortization scheme, it has not been enough to prevent those legal battles. Therefore, the use of this type of amortization system has been greatly diminished on housing loans in Brazil. Banks try to avoid the possible legal risks by using the constant amortization system, known as SAC, as the standard system.

The legal establishment of the uncontroversial value – while the case is not settled, values that are not argued against in the judicial battles must be paid[19] – has reduced losses. However the uncertainties around the French System remain unresolved, thus dramatically reducing its use in housing finance. Yet, affordability is increased when this system is used, since it allows for a reduced first installment and therefore, for a lower required income, given a defined loan amount and percentage of income commitment. Besides, the French System provides a slower pace of repayment of the principal, therefore smoothing the squeeze on families' incomes. Precisely for that reason, the constant installment is the prevailing amortization system in most countries – France, Spain, Portugal, Mexico, Canada – just to mention a few.

Furthermore, the lower installments in the first period of the loan term leave room in a family's budget for purchases that come together with a new home, such as furniture and appliances.

This article intends to compare these two amortization systems in regards to affordability, showing the significant impact of the avoidance of the French System on the accessibility for Brazilian families with incomes between 2 and 5 times the Minimum Wage.[20] Families with incomes up to 5 times the Minimum Wage represent approximately 98% of our housing deficit estimated at 5.57 million units[21]. Its purpose is to emphasize the importance of an adequate regulatory framework that does not allow for extra and avoidable risks in a sensitive business environment such as housing finance.

4. Amortization Systems – SAC and the French System

The main distinction between those systems lies with the velocity of repayment of the principal, and that difference has a significant impact on the ability of low and moderate income families to access credit. In the French System, installments are calculated to be constant (except for inflation recovery adjustments) for the entire loan term, whereas in the Constant Amortization System, a fixed constant fraction of the principal is repaid every month. Interest accrued on the balance of the loan is then added to this constant amortization fraction to compose the final value of the installment.

For both systems, as the remaining balance diminishes every month, the amount of interest

[14] Estatuto das Cidades, Law 10.257/2011.

[15] While some authors – SIMONSEN & EWALD (1990); KASSAI (1996); REZENDE (2003) – establish differences in those systems, we consider them equivalent, therefore synonyms, in a sense that they all establish constant installments for the entire loan term, composed of interest due on the balance plus some amortization of the principal.

[16] Yet, the origin of this amortization system seems to be credited to Simon Stevin, a Belgium mathematician that published such tables in "Tafelen van Interest", back in 1582.

[17] "É proibido contar juros dos juros; esta proibição não compreende a acumulação de juros vencidos aos saldos líquidos em conta corrente de ano a ano". (Translated by the authors.)

[18] REZENDE, Teotônio. *Os Sistemas de Amortização nas Operações de Crédito Imobiliário: A Falácia da Capitalização de Juros e da Inversão do Momento de Deduzir a Quota de Amortização.* (Dissertação de Mestrado). Instituto de Ciências Humanas e Sociais, UFRRJ. 2003. 151p.

[19] Before that, borrowers could stop paying the entire due installment, even if only the interest part, not amortization, was being questioned.

[20] Families with incomes below 2 times the Minimum Wage rarely qualify for housing finance.

[21] There is an annual study that calculates the housing shortage in Brazil based on the Sample Household Survey – PNAD, by IBGE (Instituto Brasileiro de Geografia e Estatística). The methodology, developed by Fundação João Pinheiro (www.fjp.gov.br), estimates the number of precarious and improvised units, plus those that are inhabited by more than one family unwillingly (since 2008, they exclude families that choose to live together), those up to 3 times the minimum wage that have an excessive rent expenditure (over 30% of gross income) and the highly dense units (this last variable was not included in the calculations shown here, and it is not a very significant one). The study also investigates inadequate dwellings (lack of sewage and or/water supply, no bathroom, etc.), but those units are not considered deficit. The estimative mentioned here was calculated by the authors, based on PNAD 2009 and using FJP criteria, since the official numbers for 2009 have not been published so far.

to be added to the amortization parcel decreases. Yet, since in the SAC the principal is repaid as a constant rate and in the French system at a growing pace – at smaller fractions than SAC at first – installments show a decreasing curve in SAC and a constant one at the French, as will be shown in the next graph.

This explains why a loan starts with a higher installment if it is amortized by the SAC System than by the French, as will be demonstrated in the following tables 1 and 2.

Lenders tend to prefer the SAC System, since it allows for better LTVs during the term of the loan thus improving collateral, than when the French System is used. In Brazil, as mentioned before, the argument raised by borrowers against mortgagees that their amortization schedule under the French System is charging interest upon interest that give rise to judicial battles is, in many instances, with the help of lawyers and accountants, accepted by the courts. Again, the ambiguity of regulation provides fertile soil for those disputes, even though this system has widespread use worldwide as well as in other types of finance schemes in Brazil.

As a consequence of the uncertainty, risks increase, driving up costs and making lenders avoid the French System.

Nevertheless, exclusion of the French System reduces affordability. For those families whose incomes are narrow and roughly allows them to qualify for a mortgage, the difference in the value of the first installment, higher on SAC, is crucial as will be detailed in the next section of this article.

5. The Affordability Issue

For loan terms of 30 years and under the current interest rates applied in Brazil, the average value of the first installment under the SAC System is generally around 30% higher than when the French System is used. As a result, for a given percentage of maximal income commitment and a defined loan amount, higher incomes are required to qualify when SAC is used. Therefore, a given loan is more affordable when the French System is used.

The impact of this difference is estimated here by taking the universe of families in the National Sample Household Research (PNAD, IBGE, 2008) that earn gross incomes between 2 and 5 times the Minimum Wage. This is the income range where mortgage finance needs most to be expanded for the already mentioned

Figure 2 Amortization curves for SAC and the French Systems

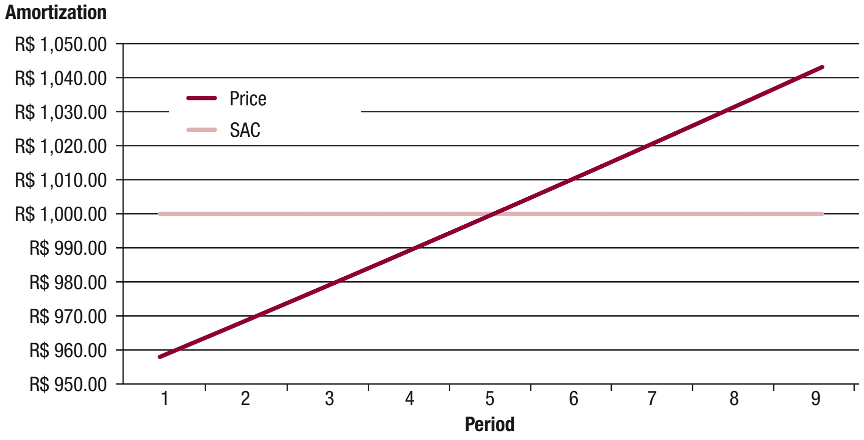


Table 1: An example of a Constant Amortization System Schedule

1) SAC Loan: $10,000.00 I Monthly interest rate: 0.9489%

Period	Balance	Interest	Amortization	Installment	Present Value
0	$10,000.00				
1	$9,000.00	$94.89	$1,000.00	$1,094.89	$1,084.60
2	$8,000.00	$85.40	$1,000.00	$1,085.40	$1,065.09
3	$7,000.00	$75.91	$1,000.00	$1,075.91	$1,045.86
4	$6,000.00	$66.42	$1,000.00	$1,066.42	$1,026.89
5	$5,000.00	$56.93	$1,000.00	$1,056.93	$1,008.18
6	$4,000.00	$47.44	$1,000.00	$1,047.44	$989.74
7	$3,000.00	$37.96	$1,000.00	$1,037.96	$971.56
8	$2,000.00	$28.47	$1,000.00	$1,028.47	$953.63
9	$1,000.00	$18.98	$1,000.00	$1,018.98	$935.95
10	$-	$9.49	$1,000.00	$1,009.49	$918.52
				Total	$10,000.00

Table 2: An example of a French System Schedule

2) Price Loan: $10,000.00 I Monthly interest rate: 0.9489%

Period	Balance	Interest	Amortization	Installment	Present Value
0	$10,000.00				
1	$9,041.96	$94.89	$958.04	$1,052.93	$1,043.03
2	$8,074.83	$85.80	$967.13	$1,052.93	$1,033.23
3	$7,098.52	$76.62	$976.31	$1,052.93	$1,023.51
4	$6,112.95	$67.36	$985.57	$1,052.93	$1,013.89
5	$5,118.03	$58.00	$994.92	$1,052.93	$1,004.36
6	$4,113.67	$48.56	$1,004.36	$1,052.93	$994.92
7	$3,099.77	$39.03	$1,013.89	$1,052.93	$985.57
8	$2,076.26	$29.41	$1,023.51	$1,052.93	$976.31
9	$1,043.03	$19.70	$1,033.23	$1,052.93	$967.13
10	$0.00	$9.90	$1,043.03	$1,052.93	$958.04
				Total	$10.000.00

reasons. It is also the range for which MCMV offers both upfront and indirect subsidies, for families that qualify for loans to purchase units produced by the market[22].

This analysis is limited to the 9 greater Metropolitan Regions plus Brasília (the Federal District), the country's capital. Those areas concentrate 35% of the housing shortage in the income range between 2 and 5 times the Minimum Wage. Average 2009 MCMV loan values[23] for each Region are used to simulate amortization schedules under both SAC and the French Systems for 30 year loam terms at 5% (subsidized MCMV rate) and 7.16% interest rates, to determine the first installment values in each system[24]. Then, at a 30% maximum gross income commitment, it is estimated how many families would qualify for the average loan under each amortization system. Differences in per capita income and in cost of living among the selected regions will not be considered, although they are certainly taken into account in risk assessments by financing agents.

Tables 3 and 4 show the percentage of families that would qualify if SAC or the French System were used.

This analysis clearly demonstrates that there are significant differences in low income families' accessibility to housing if different amortizations systems are used. For instance, considering MCMV's subsidized 5% FGTS interest rate, the majority of the metropolitan regions (6 out of 10) – Belo Horizonte, Fortaleza, Porto Alegre, Recife, Rio de Janeiro and Salvador – would reach 100% of accessibility by using the French System, but only an average of 53% if SAC were used. São Paulo and Brasilia, that exhibit the lowest percentages due to higher house prices, respectively 24,7% and 11% for SAC, may be able to include 72,6% and 51% of families when the French System is available. Overall, results for the 9 metropolitan regions and Brasilia show that approximately 85% of families would qualify if the French System were available, and just 36% if SAC. That means, in a scenario where only SAC may be available, 198.5 thousand families out of 406.5 thousand would be excluded.

The next Table shows the percentages of families that may qualify for a loan in the above mentioned conditions but with a 7.16% interest

Table 3: Qualifying Rates of 2 to 5 MW families at selected Brazilian Metropolitan Regions under SAC and the French Amortization Systems at a 5% annual interest rate

Metropolitan area	Property Value	Size of Housing Deficit*	Families Included under Price	Families Included under SAC	% of Inclusion - Price	% of Inclusion - SAC	Difference
Belém	R$ 54,571.56	16,347	14,771	6,500	90.4%	39.8%	44.0%
Belo Horizonte	R$ 49,961.77	36,885	36,885	19,647	100.0%	53.3%	53.3%
Curitiba	R$ 56,839.92	26,841	20,429	8,009	76.1%	29.8%	39.2%
Fortaleza	R$ 47,005.65	17,113	17,113	8,665	100.0%	50.6%	50.6%
Porto Alegre	R$ 50,354.65	29,255	29,255	16,557	100.0%	56.6%	56.6%
Recife	R$ 43,580.86	21,951	21,951	14,633	100.0%	66.7%	66.7%
Rio de Janeiro	R$ 52,083.87	69,182	69,182	24,710	100.0%	35.7%	35.7%
Salvador	R$ 48,665.55	18,252	18,252	10,088	100.0%	55.3%	55.3%
São Paulo	R$ 59,237.99	140,418	101,948	34,626	72.6%	24.7%	34.0%
Brasília	R$ 65,797.35	30,295	15,487	3,368	51.1%	11.1%	21.7%
	Total	406,539	345,273	146,803	84.9%	36.1%	42.5%

Interest Rate: 5%

Table 4: Qualifying Rates of 2 to 5 MW families at selected Brazilian Metropolitan Regions under SAC and the French Amortization Systems at a 7.16% annual interest rate

Metropolitan area	Property Value	Size of Housing Deficit*	Families Included under Price	Families Included under SAC	% of Inclusion - Price	% of Inclusion - SAC	Difference
Belém	$54,571.56	16,347	7,484	3,348	45.8%	20.5%	44.7%
Belo Horizonte	$49,961.77	36,885	21,250	8,019	57.6%	21.7%	37.7%
Curitiba	$56,839.92	26,841	9,609	3,603	35.8%	13.4%	37.5%
Fortaleza	$47,005.65	17,113	10,444	3,333	61.0%	19.5%	31.9%
Porto Alegre	$50,354.65	29,255	17,918	6,578	61.2%	22.5%	36.7%
Recife	$43,580.86	21,951	17,072	6,098	77.8%	27.8%	35.7%
Rio de Janeiro	$52,083.87	69,182	35,827	5,560	51.8%	8.0%	15.5%
Salvador	$48,665.55	18,252	10,328	3,124	56.6%	17.1%	30.2%
São Paulo	$59,237.99	140,418	39,435	19,237	28.1%	13.7%	48.8%
Brasília	$65,797.35	30,295	5,162	1,123	17.0%	3.7%	21.8%
	Total	406,539	174,529	60,023	42.9%	14.8%	34.4%

Interest Rate: 7.16%

* The housing deficit shown on the tables corresponds only to the families included in the housing deficit in each metropolitan area with monthly income between 2 and 5 minimum wages. The "Difference" corresponds to the ratio of the percentage of families included under SAC over the percentage of families included under Price.

[22] Under MCMV, families bellow 3MWs can apply in municipalities managed lists and if/when selected can purchase a housing unit (produced by construction companies hired by the government) in the following condition: payment equivalent to 10% of their monthly income, during a 10 year term, regardless of the cost of the unit.

[23] Actual price of unit, minus up front subsidy and any downpayment provided by the borrower.

[24] All other taxes and costs, generally present at mortgage loans such as insurance premiums are excluded to make calculations simpler, since they would not alter the conclusion, everything else held constant.

rate, thus excluding MCMV's indirect subsidy. Affordability under the Price Table reaches 77.8% of Recife's housing deficit, but falls to an average of 58% for the remainder 5 metropolitan regions that reached 100% when ir dropped to 5%, emphasizing also the impact of lower interest rates.

In Recife, that exhibits the highest affordability scores, when SAC is used, only 27.8% of families qualify. It is interesting to point out, that because of income distribution patterns, Rio de Janeiro that reaches a 51.8% inclusion when the French System is used drops to a meager 8% under SAC. The most severe case is Brasilia, due to the higher house prices, only 17% of families qualify when the French System is used, but when SAC is the chosen amortization system, inclusion drops to less than 4%.

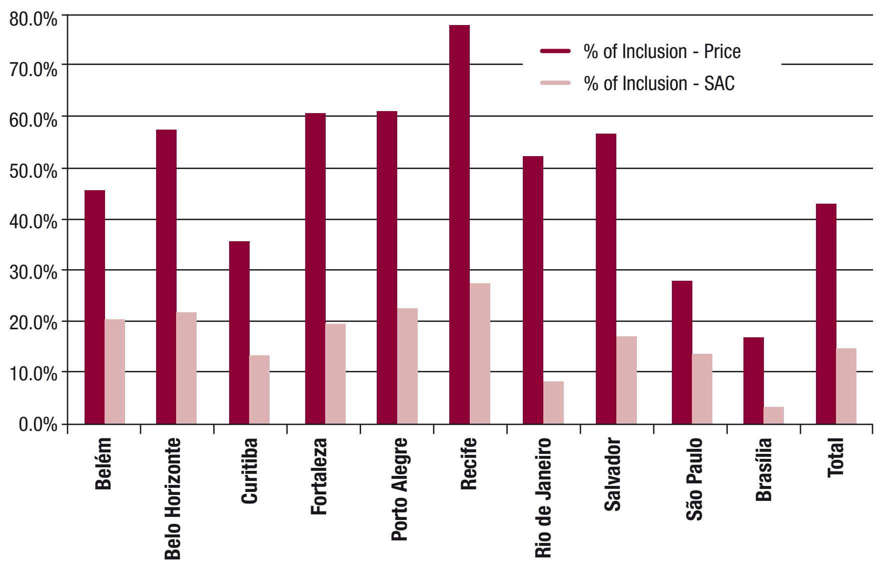
The above table (see table 4) proves that the French System continues to increase affordability when compared to SAC, even when higher rates are used, but more importantly, when compared to the previous table, it shows the importance of lower interest rates to expand accessibility to lower income families.

The analysis performed here demonstrates the magnitude of the negative impact towards affordability by avoiding the use of the French System. That result will be better visualized in the following figure.

At last, there is a common belief that the decreasing installment provided by the SAC schedule would make default, caused by insufficient income, less likely than the constant installment of the French System, especially among low and moderate income families. This frequently raised argument may also be briefly investigated.

FGTS financing uses a fixed interest rate for the entire term of the loan that ranges from 7.16% to 8.16%, depending on borrower's family income at the time of contract. That is made possible by the funding, comprised by compulsory deposits that earn a fixed 3% annual interest rate. Both loans and deposits are indexed by the TR (Taxa Referencial) – a rate derived from SELIC, the Brazilian basic interest rate – and although TR was meant to serve as an indexation rate, it has been set systematically below inflation. On average, from July, 2000 to June, 2010, the TR was 0.172 % per month, while inflation, measured by INPC[25] for the same period was 0.565% per month.

Figure 3 Inclusion of 2 to 5 MW families in housing mortgages under SAC and the French Amortization Systems at a 7.16% annual interest rate



Yet, the addition of TR does turn a constant installment into a crescent one, nominally. In a stable economic environment, with low TRs, the increase in installments tends to be moderate. However, in real terms, if TR does not reflect inflation, as has been the case in Brazil, installments will not be crescent but will actually decrease in real value, even when the French System is used.

As to the ability of borrowers to keep up with the mortgage payments, it is sufficient that their incomes rise at least at the same pace as the TR, thus maintaining the installments constant in real terms, as well as their initial income commitment. If incomes rise, on average, above the TR or even above inflation – as has been the case in Brazil – installments under the French System schedule will then decrease in real terms.

6. Final Remarks

It has been stated here that the ambiguity of the Brazilian law regarding anatocism has fostered the growth of an injunction industry. The fact that the courts do, in many instances, even without any mathematical consistency, accept the allegations that the French System implies the charge of interest upon interest, has made the SAC vastly predominant in our housing finance system.

The analysis performed has demonstrated that the avoidance of the French System significantly reduces the accessibility of families with incomes between 2 and 5 times the Minimum Wage – that represent around 95% of our housing deficit – to formal financing and housing units.

Such an analysis should call for immediate action among Brazil's legislators and policy makers, to promote the necessary legal changes in order to stop those claims and reduce such avoidable risks in the Housing Finance System. That seems to be a relevant contribution to the existing efforts to improve housing affordability and alleviate the deficit.

The Brazilian case should also serve as an alert to other countries – especially those struggling with inclusionary policies – regarding the importance of a proper regulatory framework in the design and implementation of housing policies.

The existence of clear and transparent rules, established in a comprehensive legal framework that guarantees the execution of laws and contracts are of fundamental importance for the operation of any market, but especially real estate finance. The amounts involved, collateral requirements and the length of terms call for measurable risks, otherwise costs will escalate and agents will be discouraged from operating.

[25] Indice Nacional de Preços ao Consumidor (Consumer Price Index), Brazil's official inflation index calculated by IBGE.