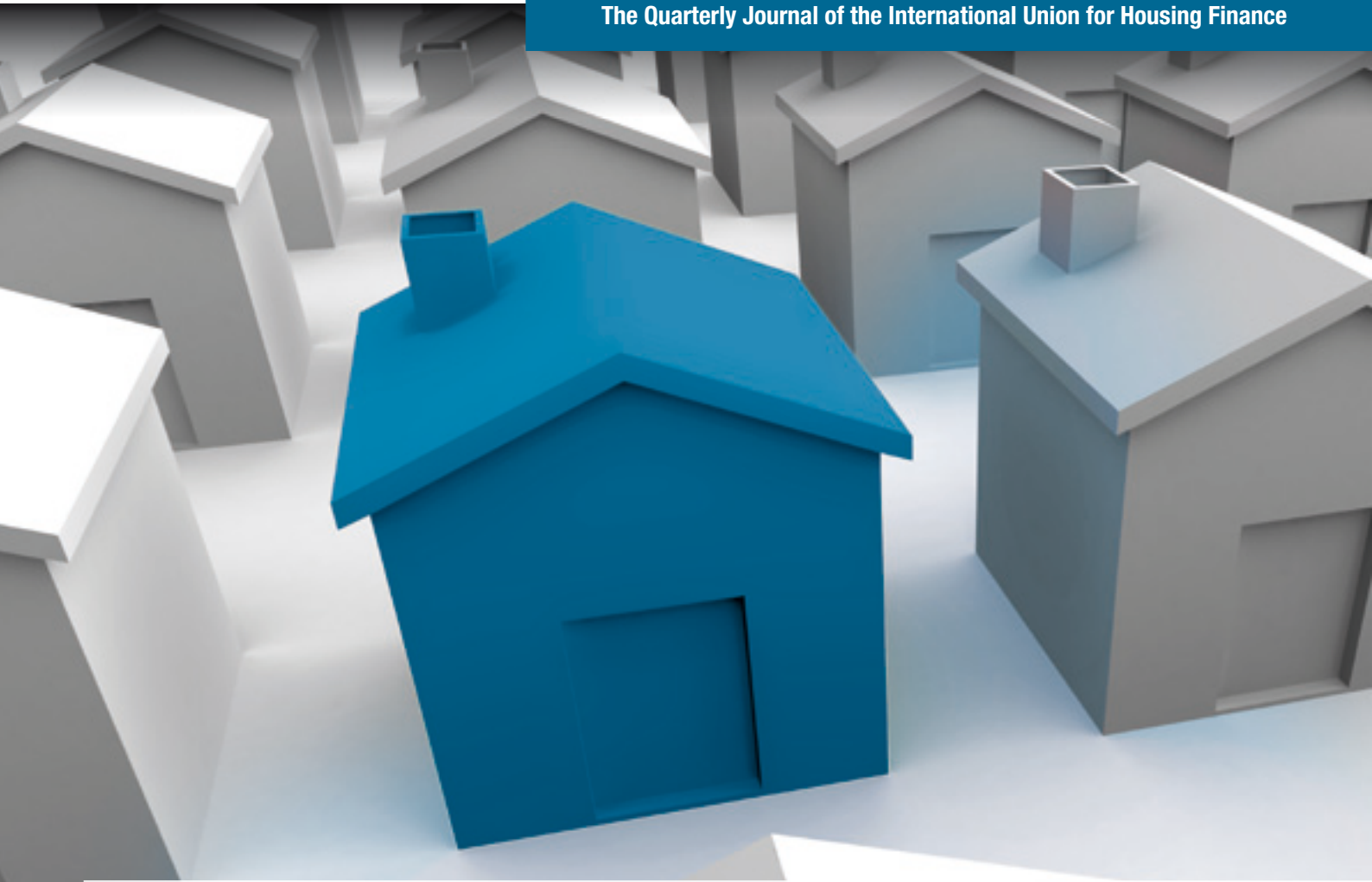


HOUSING FINANCE INTERNATIONAL

The Quarterly Journal of the International Union for Housing Finance



- Explaining Australia's trends in home ownership
- Changing Patterns in Housing Policy in the Republic of Benin
- The Japan housing finance agency and its programmes to promote the acquisition of energy saving homes
- How mortgage availability affects home price dynamics in China: a case study of Shanghai during the global financial crisis
- Covered bond models in Europe - fundamentals on legal structures
- The Icelandic housing market: recovering after turbulent times

International Union for Housing Finance

Housing Finance International

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Editor's Introduction

↳ By Andrew Heywood

Change is in the air at HFI. As many readers will be aware, HFI is the journal of the International Union for Housing Finance (IUHF). The IUHF and the journal received administrative services until recently from the European Mortgage Federation in Brussels. Following protracted discussions to secure an expanding future for the IUHF, it and the journal have moved home and will be administered by the European Federation of Building Societies based in Berlin. The move will offer HFI the opportunity to make real improvements in the design and content of the journal while maintaining the same high editorial standards that we have always achieved. Watch this space as our new ideas unfold over the next few editions!

As a journal with an interest in housing and mortgage markets around the globe, HFI has covered the apparently inexorable rise in home ownership across a range of diverse markets.

At an intellectual level, promotion home ownership has been seen as part of a broader move away from strongly interventionist states that took on responsibility for meeting individual housing needs through direct initiatives that by-passed or sought to control local housing markets and which frequently resulted the provision of public rented housing. Such intervention characterised countries such as the UK and Holland in Europe. Both these countries built up substantial stocks of publicly funded homes during the post-War period.

Since the 1980's however there have been moves to pull back the role of the state and to shift housing priority in many countries from the provision of social rented housing towards owner occupation. Home ownership was seen as the most appropriate tenure for an increasing proportion of households and was seen as very much part of what is now characterised as a neo-liberal economic and political agenda under which individuals take more responsibility for their personal needs with the state withdrawing in terms of welfare and service provision. Such moves were widely seen as part of the necessary preparations for a de-regulated globalised future.

The UK was very much in the forefront of the shift in housing priorities and of moves in the direction of an "enabling" state. The public funding of new-build housing for social rent was dramatically cut

back in the early 1980's with the expectation that the slack in supply would be taken up by an energised private sector. Home ownership was promoted for all but the neediest.

Nearly 30 years on and the tenure picture in the UK and in a number of other states is complex. In the UK at least the level home ownership is now falling and there has been a chronic shortage of new-build supply. Were it not for direct sales from the social rented sector home ownership levels would now be little higher than in the early 80's. The tenure that is now growing is the private rented sector that is about to overtake social renting as the second largest tenure.

The UK is not alone in seeing levels of home ownership fall. There are now a number of countries where this is the case, including the US, Austria, Finland and Ireland. There are now real questions as to the extent to which home ownership, with its high transaction costs, and its requirement that individuals make large long-term individual investments in a single asset is really best suited to serve the needs of a mobile, flexible and less secure work force.

Another country where home ownership may have peaked is Australia, the subject of our first article in this edition of HFI. Judith Yates examines the drop in the levels of home ownership amongst younger age cohorts in Australia since at least the 1980's and analyses a range of contributory factors including social and demographic changes such as an increase in single person households, economic factors such as increasing inequality of incomes and Government policies imposing higher costs on individuals.

In stark contrast to Australia our next article focuses on the Republic of Benin. Benin has one of the lowest per-capita incomes in the world and has been subject to major regime change since independence in 1960 though the past 20 years have seen democracy take root. Joachim Boko provides a valuable overview of housing policy in Benin since independence, focussing on the efforts to build affordable homes for a population for whom slums and informal settlements are a significant problem.

It is some time since Japan has been featured in HFI and we are therefore very pleased to include an article from Masashi Niimura focussing on

energy efficiency measures in Japan. The article discusses the work of the Japan Housing Finance Agency, showing how the Agency offers mortgage finance products that promote energy efficiency measures amongst home owners. The article shows how access to certain products is conditional on specific energy efficiency standards being met.

In the second of two articles Jie Chen returns to the housing and mortgage market of Shanghai to analyse the relationship between mortgage availability and house price movements during the recent period of volatility in China's economy and real estate markets.

With European bond markets in turmoil as a consequence of the Eurozone sovereign debt crisis covered bonds have been seen as relatively important due to the reassurance they offer to investors, and have been a prominent feature of recent bank issuance. We are pleased therefore to have an article from Otmar Stoecker, a well-known international expert on covered bonds. His article discusses the new and revised covered bond legislation that has been introduced across most of Europe since 1995 and the economic importance of covered bonds. The article then identifies 5 distinct models for European covered bonds and examines their key features. This is a valuable piece of work for anyone wishing to gain an up to date overview of a complex but topical area.

Iceland figured spectacularly on the international stage during the banking crisis when its banking system collapsed and was nationalised. The Icelandic housing and mortgage markets have a long and interesting history however and demonstrate some unusual features such as index-linked mortgage loans. We are pleased to be able to include a very useful article setting out the key features of the Icelandic markets, the developments that contributed to the serious events at the time of the banking crisis and the aftermath of that crisis.

We have an excellent issue of HFI, which offers some fascinating and relevant analysis. I hope you find it helpful and look forward to receiving any reader feedback. Finally may I take this opportunity to offer best wishes to all our readers at a time when many will be celebrating the Christmas season. Here's to 2012!

Contributors' Biographies

Judith Yates is currently an Honorary Associate in the School of Economics at the University of Sydney after a long career in academia. She has served on numerous government advisory committees and boards and is currently a member of the Australian government's National Housing Supply Council.

Joachim Boko is a public policy analyst and independent consultant. He holds a Bachelor degree in Regional Development and Planning from the National University of Benin and a Master of Public Administration (with major Policy Research and Analysis) from the University of Pittsburgh, Pennsylvania. Mr. Boko has worked as advisor and consultant in local governance and planning and urban development over the past 10 years in Benin republic, in Central African Republic and remotely in several other African countries including Togo, Republic of Congo, Sierra Leone, and Democratic Republic of Congo. He also worked for the Ministry of Prospective and Development as a consultant on macroeconomic modeling for many years.

Masashi Niimura is a senior economist at Research and Survey Department of Japan Housing Finance Agency (JHF) since July 2010. Previously, he has worked at JHF divisions including Securities Operation Department, Finance and Accounting Department, Yokohama Center of Metropolitan Branch, and Business Planning Department.

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Otmar M. Stöcker is Managing Director and Head of the "Public Finance" Department in the Association of German Pfandbrief Banks in Berlin. He is responsible for German Pfandbrief law, public finance, comparison of covered bond legislation and mortgage finance in Europe, US, Canada and Japan. He chairs the expert group "Round Table on Security Rights over Real Property in Europe". Furthermore he initiated and chairs a new research group, called "Round Table Covered Bond Legislation".

Sveinn Agnarsson holds undergraduate degrees in history and economics from the University of Iceland and a PhD in economics (Gothenburg University, Sweden). He is currently director of the Institute of Economic Studies, University of Iceland.

Sigurdur Johannesson holds a masters degree in economics (Copenhagen University, Denmark) and PhD in international business (Kent State University). He has worked as a senior researcher at the Institute of Economic Studies, University of Iceland, since 2002, where he has taken part in several projects on the Icelandic housing market.

Explaining Australia's trends in home ownership

↳ By Judith Yates

1. Introduction

A recent report by Phillips (2011), which asks whether the Great Australian Dream (of home ownership) is now just a dream, has re-raised a question that has been raised on a number of occasions in Australia over the last few decades. This question relates to the implications of the decline in home ownership rates among younger households for the future stability of Australia's home ownership rate.¹ Although this has remained relatively stable at around 70 per cent for half a century, much of this stability has arisen because of demographic change with an increase in the proportion of older households with a high incidence of home ownership offsetting a decline in the incidence of home ownership among households who have a head or reference person less than 35 years old or, increasingly, less than 45 years old. The possibility that home ownership rates amongst younger households might be in decline began to be raised in Australia some time ago. Yates (2000) provides a review of studies dating back to the late 1980s that pointed to declines in home ownership rates amongst households aged from 25 to 44 years old and to significant declines amongst households in the critical household formation period of 24 to 34 years old. These trends and explanations of them are the focus of this paper.

The following section provides an overview of the trends in home ownership have been

observed over the past fifty years in Australia, with a specific focus on the decline in the home ownership rate for younger households. This is followed by an examination of the factors that are likely to have contributed to these outcomes. The final section suggests that the observed trends are unlikely to be substantively reversed in the future and provides a brief summary assessment of the implications of this.

2. Trends in home ownership

Home ownership in Australia expanded rapidly in the 1950s from a post-war level of 47 per cent to reach its current level of around 70 per cent by 1961. Bourassa et al (1995) provide data from 1911 when the first census was undertaken and provide an excellent account of the early history of home ownership in Australia, attributing its post war growth to the significant economic and demographic drivers of the time. Home ownership was promoted as a means of solving housing shortages and substandard rental accommodation prior to the Second World War (for example, ABS, 1996: 13) and has been underpinned by both explicit and implicit government policies in the post war period. These have included direct subsidies (such as grants to first time home purchasers and subsidized mortgage interest rates) and indirect subsidies (such as exemptions from federal capital gains tax and tax on owner occupiers' imputed rental income and

concessions on state government stamp duties or transfer taxes) (Yates, 2003). A long standing ideological commitment to home ownership (Badcock and Beer, 2000; Baum and Wulff, 2003, Merlo and McDonald, 2002 and Wulff, 1993) added to these drivers.

Table 1 provides census data on the home-ownership rates achieved by different age groups in Australia over the past 50 years.² The final row of this table shows the relative stability of Australia's aggregate home ownership rate since reaching its current level of around 70 per cent. The first three rows show the decline in age specific home ownership rates for younger households.

Figure 1 highlights the key trends reported in Table 1. Data for the youngest age group (with a reference person aged less than 25 years) are reported for completeness but are not commented upon because of the relatively small proportion of households involved.³ Figure 1 shows that, over the time period covered, home ownership rates for those in the 25-34 year old group peaked in the mid 1970s and have declined more or less steadily since then. The decline for those in the 35-44 year old group followed as the earlier cohort aged. Between 1976 and 2001, the home ownership rate for households in the 25-34 year old age group decline by 9 percentage points from 60 per cent to 51 per cent. In the past decade, it has declined by a further 6 percentage points to

¹ Home ownership here is taken to include owners with and without a mortgage.

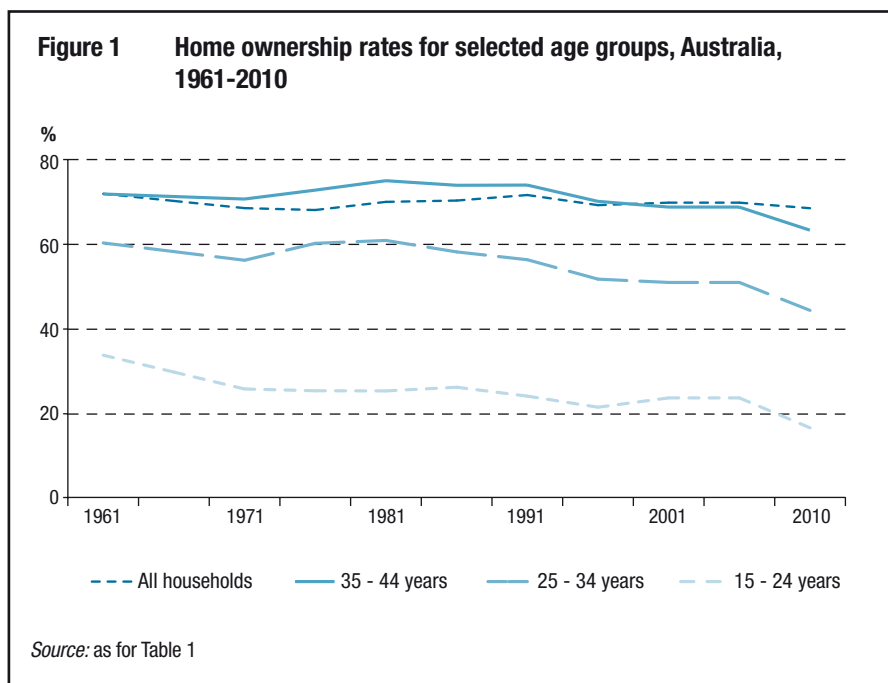
² Mudd et al (2001) discuss some of the issues associated with census data (primarily associated with adjustments that need to be made to take into account data where tenure was not stated but also with changes in scope and with definitional changes about how households are classified) and with survey data (primarily associated with sampling variability). These issues can explain the relatively small variations from one census to the next but none are likely to affect the broad patterns discussed in this paper.

³ By 2010, less than 4 per cent of Australia's 8.4 million households had a reference person aged less than 25 years old. This contrasts with 17 and 21 per cent, respectively, in the 25-34 and 35-44 year age groups, and 21 per cent were in the top age group reported in Table 1. Fifty years earlier, when there were only 3.7 million households, the proportion of younger households (aged less than 35) was 5 percentage points higher than in 2010 and the proportion of older households in the 65 years plus age group was 5 percentage points lower.

Table 1: Home ownership rates by age of household reference person, Australia 1961-2010

Age	1961	1966	1971	1976	1981	1986	1991	1996	2001	2006	2010
15 - 24 years	34	30	26	25	25	26	24	22	24	24	17
25 - 34 years	60	58	56	60	61	58	56	52	51	51	45
35 - 44 years	72	71	71	73	75	74	74	70	69	69	64
45 - 54 years	75	76	76	76	79	79	81	79	78	78	76
55 - 64 years	78	78	79	78	81	82	84	83	82	82	82
65 years and over	81	80	80	75	78	80	84	82	82	82	84
All households	72	70	69	68	70	70	72	69	70	70	69

Source: 1961-2006: from special request tabulations from Census data; data for 1966 interpolated; 2010: from ABS Survey of Income and Housing costs 2009-2010, data cube 41300do001_200910.xls



Source: as for Table 1

45 per cent. The decline for the 35-44 year old group followed a decade later, with the rate falling from 74 per cent in 1986 to a current value of 64 per cent.

Numerous analyses of tenure choice have shown that, at an individual level, age is a key demographic determinant of home ownership, but that home ownership also is influenced by other key socio-demographic factors, such as marital status (including both partnering as well as separation and divorce), family composition and presence of dependent children. Other potentially relevant factors are race, gender or immigrant status. Australian analyses of the role of socio-demographic drivers in relation to life-cycle events in the 1980s and 1990s can be found in Winter and

Stone (1999) and McDonald and Baxter (2005). Updates can be found in Beer and Faulkner (2011) and Flood and Baker (2010).

Tenure choice studies have also shown that home ownership is significantly constrained by economic factors, such as household income (both current and permanent) and wealth and affected by economic factors (such as housing subsidies and taxation) that affect the relative cost of owning vis a vis renting. Current events have reinforced earlier studies that suggested uncertainty about, and volatility in, income, asset prices and interest rates also affect both the willingness to enter into mortgaged home ownership and the ability to remain in home ownership. Where there are

strong spatial variations in key drivers such as asset prices and incomes, these factors are likely to have significantly different regional effects. Key Australian studies of the impact of these economic factors on tenure choice in the 1980s and 1990s are those undertaken by Bourassa and his colleagues (Bourassa 1994, 1995a, 1995b; Bourassa et al, 1994). A more recent analysis covering the 2000s can be found in Hendershott et al (2009). This also provides a brief review of some of the international literature on tenure choice that has focused specifically on economic drivers.

In broad terms, these studies show that, for the past 50 years or so, home ownership rates in Australia have been higher for older households than for younger households, higher for couple households than for single person households and, for each of these household types in each age group, higher for households with children than for households without children. For couple households, this largely reflects a greater purchasing power compared with single adult households. On an age specific basis, home ownership rates are higher for higher income and higher wealth households. For households with children, higher home ownership is likely to reflect a relatively higher desire for stability and security while children are in their formative years. Home ownership rates in Australia also tend to be lower in more urbanised regions.

Changes in the socio-demographic and economic drivers over time provide the basis for explanations of the relative trends of aggregate home ownership rate in light of declining age specific rates illustrated in Figure 1. A number of studies undertaken a decade or so ago decomposed the aggregate home ownership rate in Australia to take into account the impact of changing socio-economic and demographic structure of households (Mudd et al, 20001; Yates 2000, 2002). These showed that the impact of the decline in the incidence of home ownership amongst younger households on the aggregate home ownership rate was ameliorated by a decline in the proportion of households in the 25-44 year age group and offset by the growth in the proportion of older households who have higher home ownership rates. The Flood and Baker (2010) update of these decompositions for data from the mid 1990s to mid 2000s reinforces results from the earlier analyses and highlights the role of the ageing of the population as being the dominant factor that has kept Australia's aggregate home ownership rate stable at around 70 per cent. Both Yates (2002) and Flood and Baker (2010) added a spatial dimension to these decompositions that highlighted the impact

of regional differences in economic endowments and socio-demographic outcomes on home ownership outcomes.

3. Explaining the decline in home ownership rates amongst younger households in Australia

Explanations of why home ownership rates have declined for younger households explanations can be attributed to a number of factors. These can be broadly categorised into social and demographic or institutional and economic factors although, in all likelihood, they should not be so categorically separated because of some interdependence between them. This interdependence and the effect each has on housing markets limits precise assessment of which factors have dominated over time but the research identified above could be taken to suggest that socio-demographic factors were the primary drivers of decline that began in the mid 1970s and carried through into the 1980s and economic factors have been the primary drivers that have contributed to this decline being sustained through the 1990s and 2000s. The (changing) structure of Australia's housing markets and various policy interventions are also likely to have been relevant as contributing factors. Each of these factors affecting declining home ownership rates among younger households is expanded upon below. Berry (1999) discusses their impact in a broader theoretical framework.

3.1 Social and demographic factors

Key socio-economic drivers that affected the home ownership rates of younger households from the 1970s arise through changes in household composition of these households. These include:

- An increase in the proportion of two income households
- A decline in marriage rates
- A decline in fertility rates
- An increase in divorce and separation
- An increasing share of migrants in population growth.

Many of these changes contributed to the emergence of the single person and single parent household. Much followed legislative changes affecting the role of women in Australian society. Strachan, Burgess and Henderson (2007: 2) identify the following as being relevant.

- "Equal pay for work of equal value" in 1969⁴;
- Anti-discrimination legislation (intended, inter alia, to promote equality between men and women eliminate discrimination on the basis of sex, marital status or pregnancy and, with respect to dismissals, family responsibilities) from 1975;
- Affirmative action legislation from the mid 1980s,
- Work and family policies in the early 1990s; and
- Managing diversity from the late 1990s.

Other critical legislation that contributed to the rise in sole parent households was the 1975 Family Law Act which introduced a "no fault" approach to divorce.

In 1974, the median age at first marriage was 23 for males and 21 for females. In less than two decades later, each of these had increased by at least 4 years. By 2006, 40 per cent of those in the 25-44 year age group had never partnered. Between 1986 and 1996 the proportion of single person households in the 25-44 year age group increased from 11 to 16 per cent (with similar proportions and increases for sole parents). More readily available and accessible forms of contraception also contributed to the steady decline in fertility which continued for several decades until the end of the 1990s.⁵ The combined effect of these changes contributed to a relative increase in the proportion of single person and childless couple households amongst those in the 25-44 year age group. These household types have lower home ownership propensities than households consisting of a married couple with children with the effect that the social changes resulted in a changing composition of household type among younger households contributed to a decline in the overall home ownership rate for this age group.

These social changes also had two significant but offsetting economic effects. In the first place, the increased incentives and increased ability for women to stay in the workforce resulted in a

move away from the traditional model of a single (male) breadwinner family household as the number of two earner households increased. This increased the number of higher income households who were potential first home buyers. At the same time, however, changes in social attitudes and an increased ability to be economically independent meant that many younger people (and particularly women) deferred partnering for the first time, and many, who had been partnered, divorced or separated. This increased the number of single adult households, many of whom had relatively low incomes. The combined effect of these changes contributed to changes in income distribution and to market pressures that impeded access for lower income households (covered further below).

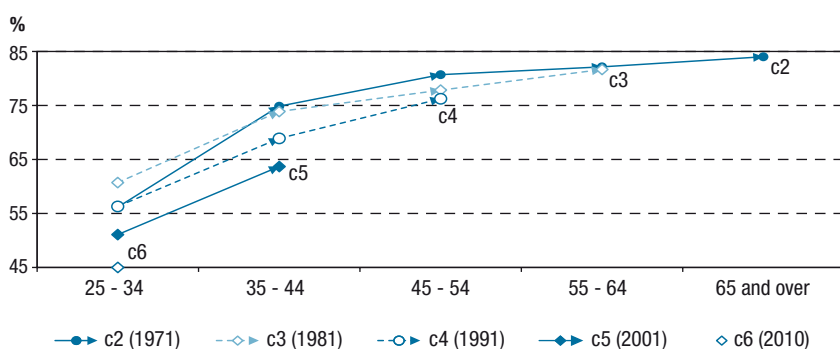
Because of the changes in household structure that were occurring, there was some disagreement over whether the decline in home ownership observed from the mid 1970s until the 1990s was a temporary deferral that would be reversed as households aged (Mudd et al, 2001 and McDonald and Baxter, 2005) or whether it was due to a change in affordability as a result of economic factors that constrained access and that the decline would more likely be permanent (Yates, 2000, 2002). McDonald and Baxter (2005) claim the issue of deferral as opposed to lifetime achievement is a common problem in demography. They use a cohort analysis based on retrospective data on the first time an individual purchased a dwelling to conclude "*falls [in home ownership rates at young ages] have been associated with delays of relationship formation, especially delay of marriage. To the extent that delay of marriage leads in the future to people never marrying during their lifetime, home ownership rates may fall, but there is little indication that this is a significant factor to the year 2000. Of more concern, perhaps, is the finding ... that, all else being equal, having children delays home purchase, and the more children you have, the longer is the delay.*" McDonald and Baxter (2005: 472)

A cohort analysis of the data in Table 1 can be used to test whether there is support for the claims that there was some deferral of home ownership for cohorts in the 25-34 year age group. This is done in Figure 2 which shows the cumulative home ownership rate for 25-34 year old cohorts from 1971, the start of the decade

⁴ A consultant's report commissioned in 2009 by Department of Families and Community Services (FACS) for the Minister for Women showed that, despite gains in participation rates over time, women's earnings remain persistently lower than men's due largely to occupational segregation (FACS, 2009).

⁵ Detailed data on these trends can be found from various Australian Bureau of Statistics publications (www.abs.edu.au). Those reported here are taken from Australian Social Trends, Cat. No. 4102.0 (various issues from 1994 to 2010). An overview of more recent trends can be found in the report of the Australia Futures Task Force (AFTF, 2007: 19).

Figure 2 Cohort analysis of home ownership rates by year in which household was 25-34



Source: as for Table 1

when the decline was first observed.⁶ Cohort 1, consisting of those in the 25-34 year age group in 1961, has not been charted since this group pre-dates the observed decline. Cohort 2 represents households in the 25-34 year age group in 1971 (and in the 35-44 year age group in 1981 and so on). Cohort 6 represents the most recent (2010) cohort of households in the 25-34 year old age group.

The results in Figure 2 charted suggest there was limited 'catch up' as younger households age (and, enter into more stable relationships), at least for cohort 3 who had reached late middle age by 2010. However, it is not clear that this applies to later cohorts. In 2010, as they are about to move into late middle age, the home ownership rate of cohort 4 households currently in the 45-54 year age group, is still some 6 percentage points lower than that achieved at the same age by cohort 2 households born 20 years earlier. Whether or not they can catch up will depend on the economic environment over the next 20 years.⁷ This economic (and institutional) environment also affects the access for later cohorts who also have yet to achieve home ownership.

3.2 Economic and institutional factors

Changes in the underlying economic and institutional arrangements over the period being

considered provide an explanation for the decline in home ownership rates not explained by social and demographic change. Among the drivers that have contributed to declining affordability and declining access to home ownership are:

- Changes in the distribution of income;
- Changes in inflation, interest rates and house prices;
- Changes relative access and user costs of renting vis a vis owning; and
- Institutional changes in relation to lending practices

Growing earnings inequality from the 1970s to the 1990s in response to structural changes that were occurring in the economy at the time led to the phenomenon of 'the disappearing middle' (Gregory, 1993). At a household level, this increase in income inequality was reinforced by the changes in household structure that had begun to emerge in the 1970s and was only partly offset by changes in the tax transfer system. Both Harding (1997) and Johnson et al (1995) report increased household inequality on a range of income measures from the mid 1980s to mid 1990s with Harding, in particular, shows a persistence of a 'disappearing middle' hypothesis amongst households even after household size and the tax transfer system are taken into account. Harding argues the net effect of these

changes has resulted in "real income gains at the top and bottom of the income spectrum and losses for the middle 50 per cent of Australians" (Harding 1997, piii). After adjusting for tax and transfers and household size, household income inequality in Australia increased by more than 5 per cent between the mid-1980s and the mid-1990s (Saunders, 2001). Recent data released by the Australian Bureau of Statistics indicate this trend to increasing inequality has continued through from the mid 1990s until the late 2000s (ABS, 2009).

Disproportionate growth in incomes at the top end of the income distribution meant increased borrowing capacities for households with high home ownership propensities. Post financial deregulation liberalization of lending practices (to take into account the income of a second earner in the household) added to the borrowing capacity of these high income households. The exemption of owner-occupied housing from the capital gains tax introduced in 1986 provided a new economic incentive to become an owner-occupier.

Increased willingness to borrow and increased borrowing capacity put upward pressures on house prices and added to access constraints for lower income households who were more likely to need to borrow to the maximum allowed by the lending institutions. In the mid 1970s to mid 1980s borrowing capacity was already significantly constrained by the front loading problem created by interaction of high nominal interest rates and high inflation with standard mortgage instruments. A result of these economic trends was that low and moderate income households faced both income and wealth constraints in gaining access to first home ownership. Prior to the 1970s, a household on average weekly earnings had a borrowing capacity that was more than adequate to fund purchase of a median price dwelling. By the mid 1980s, however, when average house prices began to diverge from average incomes, a significant deposit gap emerged between what a household on average weekly earnings could afford to borrow (based on a 30 per cent repayment to income ratio) and median house prices.

The 1990s brought a temporary respite to this growing wealth constraint as a result of declining nominal interest rates associated with declin-

⁶ The data in Figure 2 suggest that the low home ownership rate for 25-34 year old households recorded in the 1971 census might have been something of an anomaly. This might be associated with the form and number of new questions about housing that were introduced in that year.

⁷ As with any cohort analysis, the incremental increase between age groups at any one particular point of time does not necessarily imply that the same increment will hold as each cohort moves through its life-cycle because of the different factors that affect access to home ownership at

different points of time. A good discussion of the use of cross section data for time series analysis when longitudinal data are not available can be found in Pitkin and Myers (1994). The census data used here measures home ownership rates at the time the census was undertaken. As such, it allows for the fact that some persons will have fallen out of home ownership as a result of household dissolution. In this, it differs from the McDonald and Baxter data that are based on whether an individual had been a home owner at any point in the past.

ing inflation but re-emerged in the mid 1990s and carried through until the mid 2000s with a credit boom driven more by established owners and investors than by first home buyers. Figure 3 shows the steadily emerging gap between house prices and average weekly earnings (which roughly equate to median household incomes in Australia) in the fifty years from the 1960s. Figure 4 illustrates the increasing wealth constraint that became increasingly severe in the last decade.

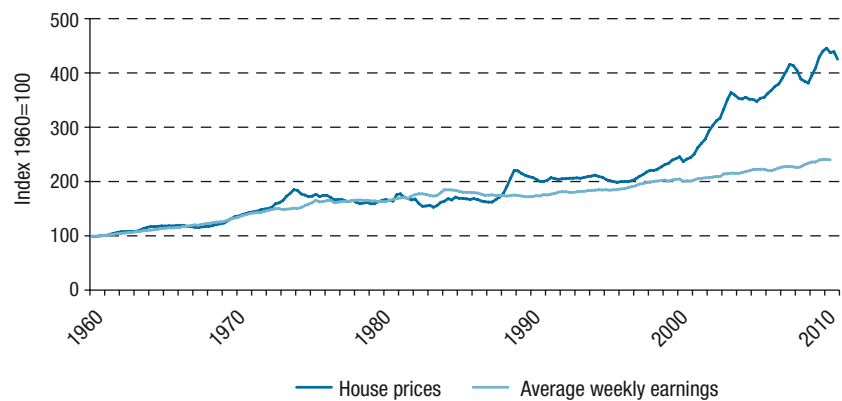
Yates (2011) argues that access constraints for lower income households are exacerbated by the pressures on the housing market imposed by increasing demand from established owners. This is encouraged by tax concessions to owner-occupiers (primarily associated with the exemption of income from housing from the income tax base) that are significantly biased towards high income households with considerable equity in housing and by tax concessions to investors in housing (primarily associated with an asymmetric tax treatment of income and costs) that are significantly biased towards high income investors who debt finance their acquisitions. The institutional environment in which mortgage finance is provided has always provided larger loans for higher income households simply because of their higher incomes. Financial innovations in the 1990s and 2000s added to these biases by a greater relaxation of restrictions on borrowing for higher income households than for lower income households. An example of a financial innovation that contributed to increased availability of finance for some households was the shift away from a simple 'rule of thumb' 30 per cent ratio measure to use of a residual income measure effectively based on a net income surplus measure (which allows for costs of children and other dependents). In 2007, just prior to the global financial crisis, higher income earners (on double average weekly earnings) and modest income households with no children were permitted repayment ratios of up to 40 or 50 per cent of gross household income. A 30 per cent ratio, however, remains for a single earner household with 2 children on the equivalent of average weekly earnings.

Looking towards the future, a final factor that is likely to add to constraints on both the ability and the willingness to access mortgage finance for younger households is the uncertainty created by the impact of post 2007 credit and debt crises on housing and housing finance markets.

3.3 Housing markets

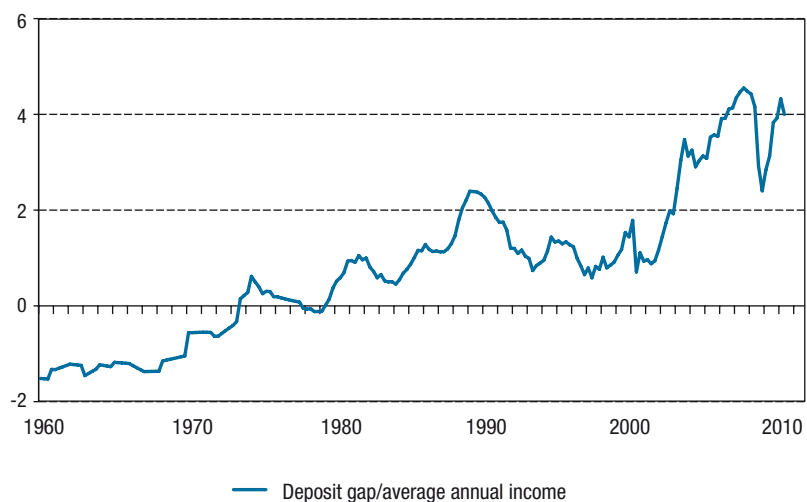
Constraints on access for new households created by the impact of demographic and economic changes on Australia's housing markets have

Figure 3 Real house prices and incomes in Australia, 1960-2010



Source: Yates (2011: Figure 1)

Figure 4 Deposit gap for moderate income households. 1960-2010



Source: Yates (2011: Figure 9)

been reinforced by the structure of these markets. Relevant structural characteristics include:

- Increasing urbanization; and
- General housing shortages.

In the past 40 years, population in Australia has grown at an average rate of 1.4 per cent per year. Declining household size has meant that household growth has been higher (at around 2.2 per cent per year). A disproportionate share of population has been in Australia's urban areas. The share of Australia's population in major cities increased from 54 per cent in the immediate post war period to 70 per cent by 1971.

Currently 67 per cent of the population lives in one of Australia's 6 state capitals and 40 per cent live in just one of 2 capital cities (Sydney and Melbourne) (Infrastructure Australia, 2010). Increasing urbanisation has contributed both to an increase in, and a steepening of, house price gradients in the major capital cities in the two decades to the late 2000s (Yates, 2011: Figure 5, based on data reported in Kulish et al. 2011). This has resulted from a limited supply of new land in existing suburbs and state and local government strategic policies encouraging infill development (NHSC, 2010: 111). It has contributed to a trend towards higher density living and to changing preferences for smaller

dwellings in more central locations (Kelly, 2011).

In the past decade, the supply of housing has failed to keep pace with the growth in the number of households in Australia with the results there is currently a general shortage of housing, estimated by the National Housing Supply Council (NHSC) to be around 180,000 dwellings at the end of the decade (NHSC, 2010: 71). Factors that have contributed to supply shortages include: barriers to adding to housing supply through infill development as a result of higher construction costs for medium- and high-density dwellings than for detached dwellings; difficulties in aggregating and preparing land for construction; problems in securing development finance; lengthy and sometimes uncertain planning and development assessment processes; delays in securing legal title for flats, units or apartments; and community opposition to infill and to medium- to high-density dwellings (NHSC, 2010: 110)

The combined effect of increasing urbanisation and housing supply shortages has added to the constraints faced by lower income potential first home buyers. The Council of Australian Governments (COAG) Reform Council reported that, by the end of the 2000s, only 27.5 per cent of dwellings were affordable for households at the 60 percentile of the income distribution (which puts them above the average weekly income benchmark used in Figure 4) (COAG, 2010: 59).⁸ These estimates are likely to overestimate the size of the stock affordable for lower income households as they ignore the possibility that the limited stock of affordable dwellings could be purchased by households with greater repayment capacities (such as higher income owners or investors).

Recent research by Phillips (2011: 17-20) and Wood et al (2008: 287-288) show the retreat of affordable housing to the metropolitan periphery where employment opportunities are relatively weak, and access to public transport and other key urban services relatively poor. These constraints are often used to explain why many younger households are "choosing" to rent in more desirable locations. Because gross rental yields have been systematically lower than nominal mortgage rates in the past 50 years or so (in part because of tax breaks in investment housing and in part because of expectations of significant real capital gains on such investment), rented

housing requires considerably lower outlays for younger households who need to borrow at high loan to valuation ratios in the short run are lower than does access to owner-occupied housing. This adds to incentives to rent rather than own for households with little accumulated wealth.

3.4 Housing and other policies

The final factor that contributes to the explanations of declines in access to home ownership for younger households are government policies, including both those intended to improve access and those intended for entirely different purposes. These can be categorized broadly as:

- Housing assistance for first home buyers; and
- Education and superannuation policies.

From the mid 1960s, the Australian government has implemented a range of direct subsidies, primarily in the form of deposit assistance, that were intended to facilitate access to housing finance for first home buyers. Bourassa et al (1995) and Yates (2003) provide overviews of early schemes. The most generous of these was implemented in 2008 as a short term response to the global financial crisis. When combined with generous State based supplements, this provided a grant of up to 10 per cent of the value of a modest price starter home.⁹ Critics of both past and current schemes have suggested that the main effect of this form of assistance has been to bring forward home purchase for those who would ultimately have entered home ownership without any form of direct subsidy (see, for example, Wood, Watson and Flatau, 2006). To a large extent, their value has been offset by state based transactions taxes (in the form of stamp duties) that have added to up-front cash requirements and reinforced the impact of wealth constraints on would-be first home buyers (see, for example, Wood et al., 2006). A further critique of Australia's system of direct subsidies (which have been provided without any targeting to all first home buyers regardless of need and, until the 2008 initiative, were equally available for purchase of new or established dwellings) is that, like the indirect subsidies provided to all home owners through tax concessions, they have simply added to housing demand and to pressures on housing prices. As such, they have had perverse effects in terms of providing access to home ownership for younger households.

A number of non housing specific policies introduced from the 1980s also have had perverse effects on access to home ownership for younger households through the significant impact they have had in reducing capacity to save for a deposit. One of these was the introduction of the Higher Education Contribution Scheme (HECS) in 1989 which morphed into the Higher Education Loan Program (HELP) in 2005. Under this scheme, tertiary students are required to pay a contribution towards their higher education. No interest is charged on outstanding debt, but the debt is indexed to inflation and loan repayments are compulsory once income exceeds a (relatively low) threshold. Currently accumulated debt can range from about \$15,000 to \$50,000, depending on what course was undertaken, and is to be repaid as a part of the tax system at a tax rate of 4 per cent once income reaches about 75 per cent of average earnings to 8 per cent when income is about 140 per cent of average earnings (which are currently around \$60,000 per year). Pearse (2003) argues that this has contributed to reduced access to home ownership for younger households.

The introduction of the Superannuation Guarantee Scheme in 1992 also is likely to have had an indirect impact on home ownership rates for younger households. This requires employers to make a minimum (currently 9 per cent) contribution of an employee's ordinary time earnings into a complying super fund or retirement savings account. Saving through this compulsory superannuation scheme receives significant tax concessions and presents households with a vehicle for long term savings that is almost as beneficial as saving through home ownership. As such, it reduces the incentive to invest in home ownership. To the extent that employer contributions have been at the cost of wage increases (as was explicit in its 1985 precursor), it also has reduced take home income and reduced the ability to save.

4. Conclusions

This overview of some of the factors that have, or may have, contributed to the observed decline in home ownership rates among younger households in Australia has highlighted their origins in social, demographic and economic change that dates back at least to the 1970s. It has highlighted the possibility that social change can

⁸ They also suggest that less than 5 per cent were accessible for households at the 30th percentile of the income distribution in 2007-08. Richards (2008) quotes a slightly greater figure of 30-35 per cent of transacted dwellings being affordable for the median household in the 25-39 year age group in four of the major capitals.

⁹ Along with stimulatory monetary policy, this fiscal response ensured that, in stark contrast with outcomes in a number of countries, first home buyer activity in Australia supported the housing and housing finance markets in the post 2007 period.

bring with it unintended consequences in terms of housing market outcomes both as a result of the change itself and as a result of the impact that such change can have on housing markets. These unintended changes can be magnified by the economic environment and both related and unrelated policy responses that follow.

The social change of the 1970s that resulted in an increase in the number of single adult households and, simultaneously, an increase in the number of dual income households in the critical households formation age group contributed to a process by which the housing demand from higher income households has put pressures on housing markets to squeeze out lower income households. During the 1980s, this process was exacerbated by the high inflation and high nominal interest rates that prevailed at the time and added a wealth constraint on access to housing for households already facing an income constraint. Younger households were additionally constrained by the burden of education debt and deterred by the implementation of compulsory superannuation which provided a replacement long-term savings scheme. During the 1990s, inflation and nominal interest rates fell and financial deregulation and liberalisation contributed to an increase in the availability and reduction in the cost of housing finance. Relaxation of lending restrictions on dual income households significantly increased the borrowing capacity of higher income households. The willingness to invest in both owner-occupied housing and investor housing by well-off established households was encouraged by tax induced incentives.

The rapid growth in house prices during the 2000s that arose from increased borrowing (largely by established households) added further constraints on access to home ownership by lower income households – including many new, younger households but also older households excluded from home ownership by preference or choice at an earlier life-stage. One factor that may add to these constraints beyond 2010 is the impact of uncertainty about incomes and housing markets brought about by post 2007 events. Berry and Dalton (2000) provide an excellent early insight into the implications of a 'risk society' categories by uncertainty, flexibility and change.

Over the 50 years covered by this overview, Australia's urban settlement pattern, with its increasing concentration of population in a small number of capital cities has added to spatial differentiation of housing prices within these cities and created further incentives for an increasing number of single person and dual income households to make 'life-style' choices that favoured higher cost locations providing

flexibility in relation to employment opportunities. For lower income households with limited wealth, the lower up-front costs associated with rental over owner-occupied housing expand their choices (both in relation to household structure and to housing location) and encourage a move towards renting. Therefore, whether a decline in home ownership rates amongst younger households reflects choice or constraint may be regarded as ambiguous. Whether the declines currently observed represent decline or deferral, on the other hand, however, seems less ambiguous given the economic factors that currently constrain access for lower income households. Existing trends might be reversed if there is a reversal of the social trends of the 1970s (signs of which are already present in Australia with a decline in household formation as young adults who have the option to do so defer the move to independent living and remain for much longer in the family home). They might be reversed if the economic pressures that have contributed to rising real housing prices and to rising inequality in household incomes are reversed.

If the decline in home ownership among younger households is not reversed, then, ultimately, Australia's aggregate home ownership rate will fall. Whether this matters is an entirely different question. However, it does suggest that policies that support home ownership might need to be reconsidered in light of which households are benefitting from them.

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Changing Patterns in Housing Policy in the Republic of Benin¹

↳ By Joachim Boko

1. Introduction

The Republic of Benin, a West African country located between Nigeria (to the East) and Togo (to the West), has a total population of 8.8 million, growing at an annual rate of 3 percent. Of this, 38.6 percent live in urban areas, defined as communities of more than 10,000 people. The country covers a total of 115,763 square kilometres. The Republic of Benin is renowned for being one of the most stable and vibrant democracies in Africa since its historical National Conference of February 1990. A former French colony, the Republic of Benin became independent in 1960. For the next 12 years, the country experienced political instability, which ended with the 1972 coup and the rise of President Mathieu Kerekou's Marxist Leninist regime for the next 17 years. With the economic crisis of the 1980s and its social consequences, the Benin people reached consensus during the well-known National Conference of February 1990 to open up to a market economy and democracy along with other major political and economic reforms. A new constitution has been voted upon and regular elections have been held since 1990.

Thus, since 1990 democracy and a stable environment for development have been re-established in the country and a sustainable path to economic growth has been taken. Even so, Benin is still one of the poorest countries in the world. According to the UNDP's Human Development Index, it was ranked 134 out of 182 countries in 2009. Life expectancy at birth is 62 years. Gross domestic product (in purchase power parity) was USD 1,500 per capita in 2009; again among the lowest in the world. In 2007,

51.6 percent of Beninese were living below the poverty line.

2. Macroeconomic overview

For a long time the Benin economy has been dependent on the primary sector (agriculture, forestry, fishing and breeding) as the main contributor to its GDP. While the secondary sector (extractive industries and mining, manufacturing, construction and public works) has kept a stable contribution to GDP over the period 1960-2010, the tertiary (trade, transport and telecommunications, banking and insurance, other services) has

developed significantly, and is now the highest contributor to GDP. In the decade 1960-1969 the contribution of the tertiary sector was 46.2 percent. In 2000-2005 this contribution went up 6.4 points from its level four decades before. The tertiary sector currently contributes more than 50 percent to GDP since year 2000.

With a nominal GDP estimated at CFA francs 3,219 billion (USD 6.5 billion) in 2010, the Benin economy is the fifth economy of the West African Economic and Monetary Union (WAEMU) and has the third highest per capita GDP in the Union. Over the period 1960 to 2010 the real GDP has increased five-fold.

Table 1: Contributions to GDP of the primary, secondary and tertiary sectors (1960-2005)

	1960-1969	1970-1979	1980-1989	1990-1999	2000-2005
Primary sector	43,3	33,5	33,8	36,1	33,7
Secondary sector	10,5	13,9	14	13,7	13,7
Tertiary sector	46,2	52,5	52,2	50,2	52,6

Source: AFD (2011)

Table 2: Annual GDP growth and per capita GDP growth between 1960 and 2009

	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2005-2009
Annual GDP growth (%)	3,1	2,3	3,1	4,5	4,2	4,0
Annual per capita GDP growth (%)	1,1	-0,2	0,2	1,1	0,9	0,7

Source: AFD (2011)

¹ The study from which this article has been drawn was funded by FinMark Trust and the African Union for Housing Finance (AUHF) to which the author is very grateful.

Ineffective economic policies implemented, especially during the revolutionary Marxist-Leninist period (1972 to 1990), exacerbated by international crises and international raw material price shocks have constrained the country to negotiate several structural adjustment programmes with the International Monetary Fund (IMF). Since 1990 and the establishment of democracy and a market economy, Benin has returned to growth.

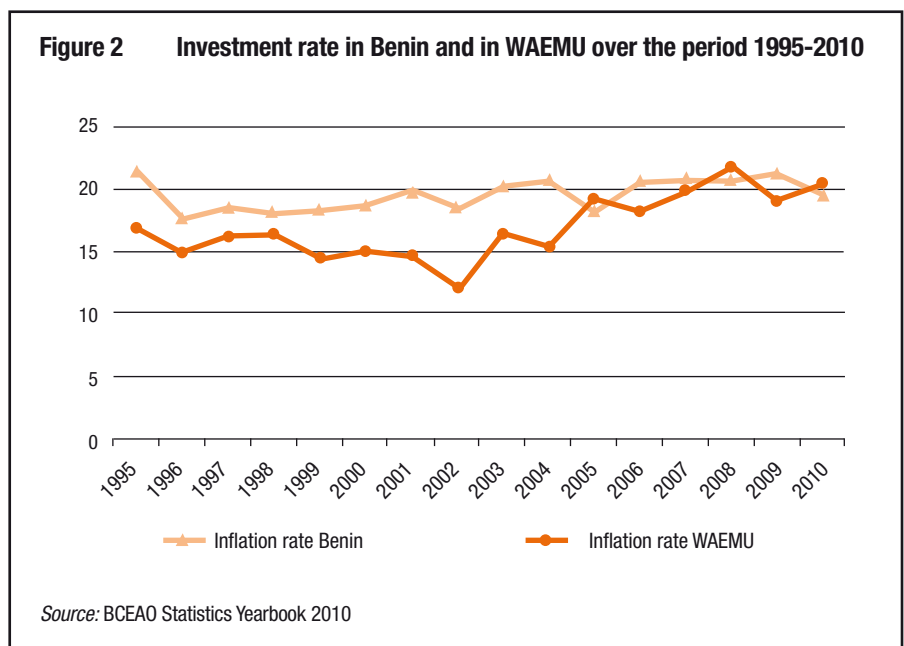
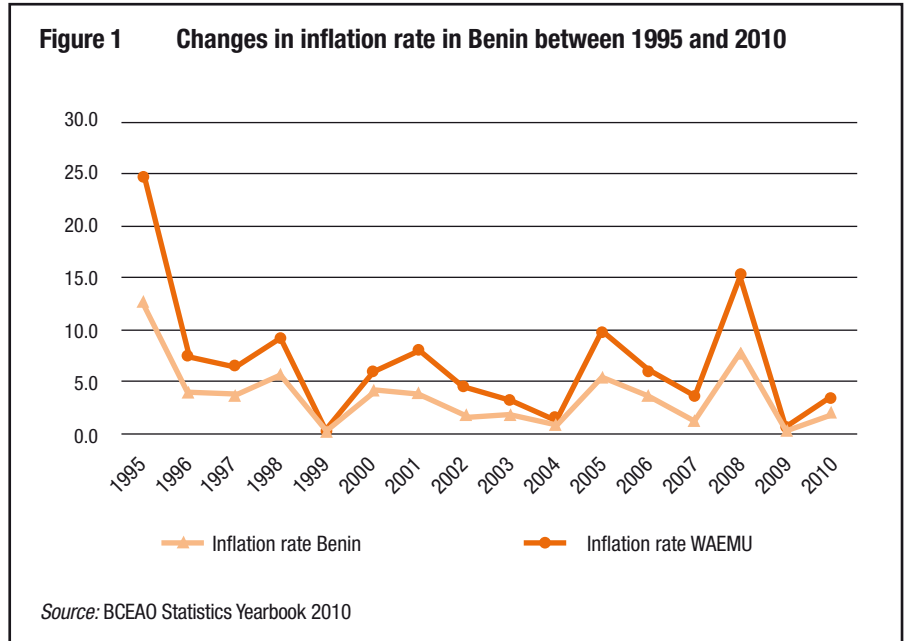
Benin's economy is becoming a "warehouse economy" because of the growing importance of re-exportation² to Nigeria and hinterland countries (Niger, Burkina-Faso, Chad, Mali). Re-exportation contributes to the increase in the contribution of the tertiary sector to GDP.

Per capita GDP growth has been positive for all of the five decades, except for the decade 1970-1979 characterized by international crises and internal difficulties, specifically the famine that struck the country during that decade. Real GDP growth has been strong over the period 1995-2001 with a peak at 6.2 percent in 2001. However, it has been lower than the average for the WAEMU zone and too low to significantly reduce poverty.

The inflation rate has been under control over the past 15 years, after the explosion (as high as 40 percent in 1994, before dropping to 12 percent in 1995) that followed the devaluation of the CFA in 1994. Since 1996, except for the years 1998 and 2009, inflation has been kept under 3 per cent in compliance with the convergence criteria of the WAEMU zone.

Benin's investment rate has been on average below 20 per cent over the period 1995-2010 and has remained somewhat constant over that period. While the investment rate in Benin was higher than in the WAEMU zone during the first 10 years of the period, the average increase in the WAEMU zone combined with the stagnation of the Benin investment rate resulted in an overlap at the end of the period.

Statistics over the period 1995-2010 show that on average savings rates have steadily decreased in Benin. Compared to the average of the WAEMU zone, savings rates in Benin have kept pace with the regional average for the first 6 years of the period. During the second part of the period, while savings rates have gone up on average in the WAEMU region, they have



significantly decreased in Benin, thus limiting the amount of money available in banks for lending.

Interest rates have significantly gone down over the past two decades. The Central Bank (BCEAO) lending rate has dropped from an average of 11 per cent in 1993 to 4.25 per cent in 2009, mostly due to the stability of the macroeconomic framework in the country. As a

consequence, commercial banks lending rates have also dropped.

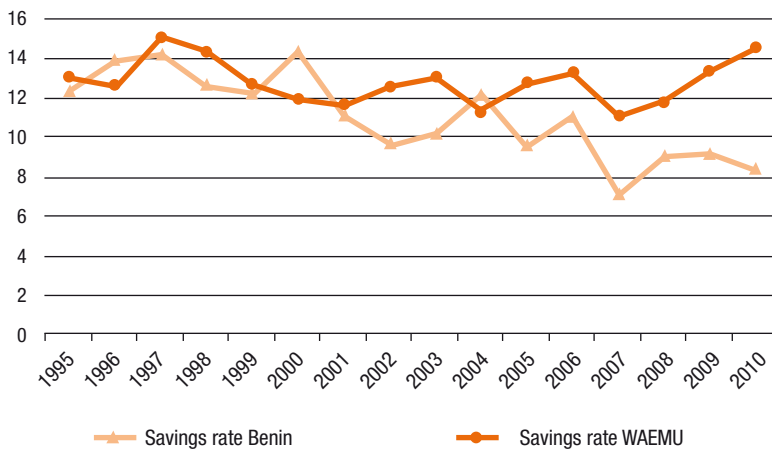
3. Housing policy in Benin

Even though owning a house is known to be an important concern for Benin households, it is only in 2005 that a housing policy was adopted by the Government. Former public interventions

² Re-exportation is defined as the exporting to their final destination of goods that have been previously imported and warehoused in Benin by other countries (those that do not have direct access to the sea such as Niger, Chad, Mali, and Burkina Faso, but also the neighboring Nigeria.) Re-exportation to Nigeria is explained by disparities in economic (high taxes/tariffs on a number of

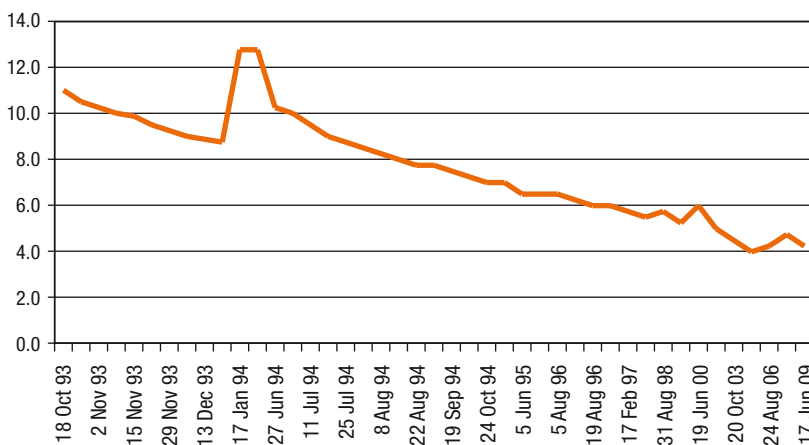
imported products to Nigeria and other protectionist policies, etc.) and monetary policies between the two countries. Re-exportation contributes substantially to government revenues (up to CFA francs 160 billion or US\$ 323 million or 56 percent of customs revenue in 2010.)

Figure 3 Savings rate in Benin and the WAEMU region (1995-2010)



Source: BCEAO Statistics Yearbook 2010

Figure 4 Changes in Central Bank (BCEAO) lending rates



Source: BCEAO Statistics Yearbook 2010

in the housing sector were implemented without a real policy framework. Under the former Marxist-Leninist regime, massive amounts of public resources were injected into the housing sector, especially in the production of land for housing and the direct supply of housing units via public companies. However, these investments fell short of resources to meet the needs of households.

3.1 Direct supply by the government agencies

Since its independence in 1960 the commitment to supply housing to its citizens has been present

in Government policies. This might explain why there has always been a ministry in charge of housing issues in the successive governments. In order to achieve the aim of the government to provide each household with adequate and affordable housing, housing supply by the Government took two different approaches: supply through government agencies and supply through public private partnerships.

3.1.1 Supply by Government agencies

Historically and probably because of the socialist system in place, the Benin Government created the "Société Nationale de Gestion Immobilière

– SONAGIM" (National Property Management Company) in 1978 (under the Ministry of Public Works), with the main duty of producing housing land and providing affordable housing units for low income households. Until the 1990's, SONAGIM has been at the forefront of implementing land use interventions in Benin. SONAGIM and the National Geographic Institute (IGN) conducted most of the government-led land subdivisions in Benin before the involvement of the private sector in the 1990s.

The most important housing supply project undertaken by SONAGIM was the planned construction of 1,000 housing units in Cite Houeyiho on the north-west side of Cotonou in 1992. While the government provided the entire basic infrastructure needed, however, only 149 units were built before the project was abandoned. The units built as well as the remaining land were sold out mostly to Beninese from the Diaspora.

As has been the case for many government run companies, mismanagement and other structural problems led to the dismantlement of the SONAGIM in 1998 and its replacement by the "Société de Construction et de Gestion Immobilière - SOCOGIM". In 1995 another company, the General Immobilier took over the Cité Houeyiho project (phase II) and planned 300 units on the occasion of the organization of the 1995 Francophonie Summit in Cotonou. Unfortunately, the company didn't deliver more than 82 housing units, all sold out with the remaining land.

In the late 1970s and early 1980s, the Government conducted via the Benin Development Bank (BDD) two important housing projects which led to the creation of the Cite Vie Nouvelle in Akpakpa (on the south west side of Cotonou) and the Habitat Economique neighborhood in Porto-Novo (the capital city of Benin). In total 388 housing units were built in Cite Vie Nouvelle, of which 316 were rented out on simple leases while the remaining 72 units were on hire-purchase leases. In total CFA francs 750 million (US\$ 1.5 million) were invested in the two projects, on a loan from the Caisse Centrale de Cooperation Economique (CCCE), a French Government agency (Ministry in charge of Prospective and Development, 2009).

Another government agency that contributed to the supply of housing units is the Benin Social Security Office (CNSS, formerly Office Beninoise de Securite Sociale or OBSS). The CNSS has been active in the supply of housing units to affiliated government employees. Thus, housing supply projects have been implemented in almost all the big cities of the country (in Cotonou, in Abomey-Calavi, in Lokossa and Natitingou for both rental and sale). Unfortunately, housing supply by the

CNSS has not been coordinated with other government interventions in the sector. In fact some studies (see for example MEHU/Imoteph/Planurba (1997)) found that housing supply by the CNSS was not profitable to the office. This information has been confirmed in an interview, by the office's Director of Budget and Assets.

3.1.2 Housing supply through public-private partnerships

Since the return to a market economy in the 1990s, a constant in housing intervention in Benin has been the development and implementation of housing projects and programs in partnership with private real estate developers. Thus, between 1993 and 2008, eight important housing projects and programmes have been launched by the Government. Table 3 summarizes affordable housing supply efforts by the Benin government and their actual achievements.

Except for the 10,000 affordable housing unit programme, all the other projects or programmes have been abandoned. The Servax-Group programme never started for lack of funding.

In total, excluding the housing units supplied by the CNSS, the Benin Government has provided a total of 2,183 housing units for a total of 6,268 units planned or a rate of delivery of only 35 percent. These figures show how inefficient the Government has been in supplying housing units. This will be further discussed in subsequent sections. Poor performance in delivery can mostly be explained by poor performance of private partners which is due to lack of enforcement of public-private partnership contracts for housing delivery. This is briefly discussed in the section on challenges for the housing sector in the Benin republic.

In addition to these projects, other partnerships have been initiated for the supply of high end residential accommodation. A first type of this kind of project was the Fadoul Villas along the Airport Boulevard in Cotonou. These villas were built in 1994-1995 on the occasion of the 1995 International Francophonie Summit to host distinguished guests. Some of these were sold out after the summit while others are rented. The second type of high end residential project is more recent. Thus, on the occasion of the 2008 Community of Sahel-Saharan States (CEN-SAD) conference in Benin, a 240 villas project was developed and implemented through a public private partnership along the Cotonou beach in the municipality of Cotonou and the neighboring municipality of Sèmè-Kpodji. The villas built were supposed to house distinguished guests during the conference and then be sold out. Three years after the conference the villas have not all been built. As for most of the other housing projects, this project used a public private partnership in which the private developers were granted tax exemptions on building materials and a lump sum for the land on all of the project sites.

3.2 The specific case of the 10,000 Affordable Housing Units Programme

In 2008, the Government launched an ambitious housing programme to build 10,000 affordable housing units. The main objective of this programme is to provide housing at reasonable prices to employees of the public and private sector. The programme is intended to cover the whole country, but is focused in priority urban areas. Indeed, 5,000 housing units are planned for Cotonou (the economic capital) and

its peripheries, 3,000 units for Porto-Novo (the administrative capital) and its surroundings and finally the remaining 2,000 units will be built in Parakou in the northern part of the country. The programme is a typical subsidized housing programme using a public private partnership scheme. Besides private developers, commercial banks and the Benin Housing Bank are partners of the programme. A pilot phase of 2,100 housing units has started in 2008 and was expected to be completed in 2009. By August of 2011, only 930 units of this phase had been built and subsequent phases have not yet been initiated.

The implementation of the programme is based on the creation of the Housing Land Agency whose missions include (i) the search and development of land for housing, (ii) the selection of private developers, (iii) the control and supervision of construction, and (iv) the marketing of housing units produced by the programme. The AFH has been operational since 2009. The other instrument of the programme is the National Housing Fund (FNH). The FNH was created in 1985 but has never properly functioned. The Government has planned to take the opportunity of the 10,000 Affordable Housing Unit Programme to rehabilitate it. Until today, however, the FNH remains non-functional.

An initial financing of about CFA francs 26 billion (US\$ 52.2 million) was put in place for a pilot phase of 2,100 housing units project in Cotonou, Lokossa and Parakou by the government (via a Treasury bond) and involving direct contributions of two banks: the Benin Housing Bank (BHB) and the Atlantique Bank, a commercial bank.

Posted prices for each type of housing unit include significant direct Government subsidies of CFA francs 2 million (or US\$ 4,040) for

Table 3: Housing supply projects (after 1990) and their achievements

Date started	Project / Program	Number of housing units planned	Number of housing units built	Rate of delivery
1992	The SOBEPRIM middle standing housing project	500	78	16%
1992	The Initial Cité Houéyiho housing project	1000	149	15%
1995	The Cité Houéyiho housing project (Phase II)	300	82	27%
1999	The Gase Immobilier housing project	80	23	29%
2001	The Betsaleel Building Group affordable housing program	1042	253	24%
2001	The Benin Kasher housing program	600	16	3%
2001	The Arconville project	10,000	210	
2006	The Servax-Group affordable housing program	13,500	NA	NA
2008	The 10,000 affordable housing units program (1 st Phase)	2100	930 expected in August 2011	44%

Source: Ministry of Environment, Housing and Urban Development (MEHU) and author's calculations

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the F2 types of housing units, and 1.5 million (or US\$3,030) for the F3 and F4 types. Besides these, servicing costs and the market price of the land on the different sites are not accounted for in the price of the different types; thus adding significant subsidies - estimated at 25 per cent to 30 per cent of the price of the housing units. It is expected that home buyers will borrow money from partner commercial banks and the Benin Housing Bank (BHB) over a maximum period of 15 years at a subsidized rate of 8.5 per cent a year.

Table 5 shows the set up of down payment, subsidies and borrowing for each type of housing unit of the programme.

The 10,000 Affordable Housing Unit programme has not reached the expected level of scale, and there have been a number of challenges:

- Delays in making available the promised housing units: all the 2100 units were expected to be delivered in 2009, but to date less than half of the units are ready.
- The units that have already been built have not been officially received by the government, and this has led to additional maintenance costs because of theft and vandalism. It is not yet clear who (developers or the Government) should bear these additional costs.
- A number of “developers” did not understand the role they were expected to play. Most of “developers” put themselves in the position of service providers to the government and expected the government to buy the houses from them and then sell them to future homeowners. Some of them complained that they built the housing units with their own financial

resources; while the idea of partnering with developers for the programme was to have them pre-invest and then recover their money once the housing units are sold.

- Many “developers” complained about not having a formal contract with the government. The legal collaboration basis for the production of the housing units is not clear.
- Difficulties in the marketing of built units: despite the substantial level of subsidy, the affordability of built units is becoming a problem; indeed from the information available at the AFH, the demand for F2 houses is much lower than anticipated. While this type was targeted at low income households, many of the applicants are still complaining about their high prices.

Table 4: Pricing scheme³ for the 2100 units of the pilot phase of the program in 2010

	F2 (1-bedroom)	F3 (2-bedroom)	F4 (3-bedroom)	Total
Number by type of housing	420	1,050	630	2,100
Unit cost (CFA francs)	8,900,000	11,000,000	12,800,000	
Cost of studies and servicing of sites (million CFA francs)				5,000
Unit cost in US\$	17,980	22,222	25,859	
Cost of studies and servicing of sites in million US\$				10.1
Livable unit area (in m ²)	44	64	82	
Plot size (in m ²)	250	300	350	

Source: MEHU and author's calculation

Table 5: Set up of payment for each type of housing unit of the programme

	F2 (1-bedroom)	F3 (2-bedroom)	F4 (3-bedroom)
Unit cost (CFA francs)	8,900,000	11,000,000	12,800,000
Direct Government subsidy (CFA francs)	2,000,000	1,500,000	1,500,000
25% Down payment (CFA francs)	2,225,000	2,750,000	3,200,000
Amount to borrow from banks (CFA francs)	4,675,000	6,750,000	8,100,000
Unit cost in US\$	17,980	22,222	25,859
Direct Government subsidy in US\$	4,040	3,030	3,030
25% Down payment in US\$	4,495	5,556	6,465
Amount to borrow from banks in US\$	9,444	13,636	16,364

Source: MEHU and author's calculation

³ The original pricing scheme in 2008 was as follows: CFA francs 6,500,000 (US\$13,131) for an F2; CFA francs 8,100,000 (US\$16,364) for an F3 and 9,600,000 (US\$19,394) for an F4 on all sites. The 2010 pricing scheme has set special prices for the ZOPAH (one of the most expensive residential estates in the municipality) site in the municipality of Abomey-Calavi. On the ZOPAH site, the pricing

scheme is as follows: CFA francs 11.5 million (US\$ 23,232) for an F2; CFA francs 13.5 million (US\$ 27,273) for an F3 and CFA francs 15.9 million (US\$ 32,121) for an F4. Consequently, the down payment has been revised up to 25 percent of the cost of the housing unit.

3.3 Supply by households through self-promotion

Self-build is the most wide-spread means by which housing is supplied. This is mainly due to low access to formal housing finance by most households because of weak property rights on land. However, there is almost no data on how much this represents in terms of the proportion of housing supply in Benin. Most low and middle income households who can afford it, start in rental housing. Then they save (through tontines⁴ and other means) until they can afford to buy a plot of land, usually at the periphery of urban areas. The growing price of land pushes people to buy their land farther from urban centres. This movement creates and in some cases accelerates informal settlements and urban sprawl. Most of the time households build with precarious materials until the municipality decides to conduct a land subdivision in their settlement area. Once the subdivision operation is completed and each household has been resettled they start to build with concrete (brick by brick) for those who can afford to. After the land subdivision it can take a long time before the area is serviced with basic infrastructure such as water and electricity and telephone. For example, a lot of neighbourhoods in the municipality of Abomey-Calavi (a fast-growing city) are not serviced with water and proper electricity lines. Also, because the land subdivision can take a long time before happening, most of the households live in informal settlements for many years, sometimes decades. All this make self-built housing slow to complete (on average it takes between 2 and 15 years) and inefficient as a housing strategy. However, because of the relatively high cost of housing units in the (small) formal housing market, most households do not have any other choice than to use this strategy.

4. Challenges for access to housing and housing finance in Benin

Despite significant improvements and a clear political will in the housing sector, many challenges

remain for achieving the vision and goals of housing policy and creating conditions for the smooth functioning of a housing finance market in Benin.

4.1 Land security is still weak, calling for significant legislative and regulatory work and enforcement

One of the most important regulatory factors in the housing sector in Benin is the question of land security. Indeed, access to secured land is often the first step toward access to housing. However, as in many African countries, the housing context in the Republic of Benin is characterized by the existence of a dual tenure system, the mixture of the traditional and modern tenure systems.

On the modern side, two laws govern the property rights system for land: Law 60-20 of July 13th, 1960 on occupancy permits system, and Law 65-25 of August 14th, 1965 on the organization of the system of property rights on lands.⁵ Most of the land available in Benin is not registered, however, making it very difficult for people to feel secure in their homes. Of these two laws, it is the second that offers the most security to property rights in Benin as it allows the land owner to acquire unassailable rights (a land

title) on their land. Only the occupancy permits and land titles are explicitly mentioned in law. Other “property titles” such as sale agreements or other documents evidencing a transaction are not recognized as secure property title.

Even though a land title is the most secure property right and the most requested collateral to apply for a mortgage in Benin, obtaining it is a cumbersome and expensive process. A study by the Millennium Challenge Account (MCA) Program in Benin showed that depending on the procedure, it cost on average between CFA francs 421,000 (US\$ 851) to CFA francs 585,000 (US\$ 1,182) and took on average 13 to 23 months to obtain a land title in 2006 and 2007 (MCA Benin, 2009). Besides this, the complexity of the land registration procedure discourages many land owners from registering their land. According to a study by the MCA Programme in Benin on land policy and administration, it takes 13 steps, after obtaining a land sale agreement and an occupancy permit, to register one’s property. A case study on Benin (Mattingly, 2004) estimated the backlog of land title in Benin in 2002 at more than 2,000 properties per year.⁶

The table below presents the distribution of households according to their housing occupancy status,

Table 6: Distribution of households by housing occupancy status

	Urban (%)	Rural (%)	Benin (%)
Land title	4,1	2,7	3,2
Long-term lease	1,1	2,8	2,1
Short-term lease	0,2	1,5	1,0
Occupancy permit	10,6	1,1	5,0
Official land sale agreement	49,8	30,7	38,5
Other administrative document	6,1	7,2	6,7
Non official land sale agreement	12,6	25,7	20,3
Other document evidencing a transaction	15,7	28,4	23,2

Source: INSAE, EMICOV⁷ (2010)

⁴ A tontine is an informal (group) savings and loan system in which people trusting each other gather to help each other save and sometimes lend money to members of the group. There are actually several types of tontines but the guiding principles underlying each type are the same: mutual trust, group solidarity, random choice of the beneficiary of a loan. The tontine can be in cash or in kind. When the tontine is in cash, an agreed amount of money is gathered at regular intervals (whether every month or every two weeks or so, etc.) by all members. The sum of all contributions is then lent to a member chosen at random. This continues until every member has received a loan. The tontine can then continue on a new basis or stop. Certain tontines are based on in-kind loans: for example at regular intervals, members deposit the equivalent of the value of a ton of cement each. The total contribution of all members is allocated to a member chosen at random in the equivalent of cement for the construction of his/her house – so the chosen member does not receive the cash, but rather cement. In these two cases, the principle of group solidarity dominates and no compensation is paid to the tontine initiator. Another type of cash tontine consists in a depositor depositing at regular period of time a certain amount of savings with the tontinier (in this case a “professional”) over an agreed period of time. At the end of this period, the saver withdraws all his/her savings, while leaving as compensation for the tontinier the equivalent of one regular savings deposit.

⁵ Other regulations relating to land and land ownership that complete these two laws, but are less referred to are: the Decree 64-276/PC/MFAEP-EDT of December 2nd, 1964 on building permits; and the Law 2007-284 of June 6th, 2007 and its Order of Application 0022 of June 16th, 2007 on dwelling permits.

⁶ According to data from the Department of Estates, Registrations and Stamps (*Direction des Domaines, des Enregistrements et des Timbres* –DDET) of the Ministry of Finance and Economy on mortgages, 218 land titles enabled to make mortgages in 2006. The same figure stood at 214 in 2007. Mortgages amount to F.CFA 37.4 billion (US\$ 75.6 million) in 2006 and CFA francs 35.5 billion (US\$71.7 million) in 2007. In total, as of end 2006, there were 22,820 land titles available in Benin; of which about 7,256 (or 31.8%) were used as collateral for a mortgage (MCA Benin, 2008). About two third of the land titles were issued in Cotonou and Abomey-Calavi (a neighbouring municipality of Cotonou).

⁷ The EMICOV (Enquêtes Modulaire Intégrée sur les conditions de vie des ménages) surveys are periodic surveys conducted by National Institute for Statistics and Economic Analysis (INSAE) to measure the living conditions of households and assess poverty all over the country. EMICOV surveys use a representative large sample of more than 20,000 households.

based on data from the 2010 Households Living Conditions Survey (EMICOV 2010). The data in the table shows the low proportion of households holding a land title on their property in Benin.

According to the 2011 World Bank Doing Business Indicators, Benin ranked 125th out of 183 countries on the “*Dealing with construction permit regulations*” indicator; making it one of the lowest ranking countries in the world. Indeed, it took on average 320 days, 15 procedures and cost 249.6 per cent of the average per capita income to obtain a construction permit. Likewise, registering a property took an average of 120 days, 4 procedures and cost 11.6 per cent of the cost of the property, making Benin rank 129th of 183 countries.

Beside these issues, the land registration administration is centralized in Cotonou thus adding to the cost and complexity of the procedure for people living in other urban areas or the countryside.

The current situation of land property rights in Benin makes it difficult to apply the OHADA (Organization for the Harmonization of Business Law in Africa) Uniform Law organizing securities, as this recognizes only the land title as a legal title to be used as collateral for mortgages. Indeed the Law 60-20 cannot apply in the OHADA Law context since the Occupancy Permit is a precarious and revocable right.

A key challenge is that most of the land regulations are old and thus will need to be updated and adapted to current realities (including the regional context.) As they currently are, land regulations do not really secure land properties. Property rights conferred by a land title are strong; however, because of its prohibitive cost and the complexity of the acquisition procedure, most land owners prefer to settle for unstable titles such as housing permits, administrative certificates, certificates of resettlement, land sale agreements, etc. This makes banks and credit institutions reluctant to accept the documents these generate (except for the land title) as collaterals against loans.

A separate challenge is that land administration in Benin is fragmented, with too many government branches involved. This makes it confusing and costly for land owners to sort out where to complete each step of the land registration process to register their property.

For these reasons, it becomes important to reform the current land legislation as well as the institutional framework. That's why in 2009, a draft White Book on Land Policy was developed

with the support of MCA Benin to help solve most of the challenges relating to land and property security in Benin. The overall objective of the land policy is to “*ensure equitable access to land, security of investments and efficient management of land conflicts, thus contributing to poverty reduction, the consolidation of social peace and the achievement of integrated and sustainable development.*” However, the White Book is yet to be adopted by the Parliament and enacted by the Government.

4.2 Public-private partnership as a policy instrument lacks enforcement and seems poorly set up

Public private partnerships contracted by the Government over the past 20 years have shown their limits. All of them have failed so far and the biggest cost is being paid by the public sector. If it is clear that the public sector alone cannot reasonably be able to face the housing finance costs, there is also a clear need for developing more effective public private partnerships. To that end the capacities of the Ministries of Environment, Housing and Urban Development and Economy and Finance should be strengthened to enable them to negotiate and set up well-rounded and more effective PPP contracts in the future. Enforcement of PPP contracts will also be an important challenge to overcome. Previous PPP experiences show that poor enforcement of contracts let developers take advantage of Government incentives (tax exemptions, serviced lands, etc.) without fulfilling their counterpart duties and delivering results.

4.3 Overcoming the disconnection between central government housing policies and strategies and local government land management practices

Despite significant power devolved to local administrations (through the Decentralization Laws), especially on land administration, in practice this power is selectively used, mostly in land subdivision operations.

The Decentralization Laws have devolved significant powers to local authorities in planning and housing. Yet, currently no local government has taken initiative to develop the housing sector at the local level. It is only in a few communal development plans that land security questions have been raised. The city of Cotonou (the biggest municipality in Benin) has identified land security as a development priority, but has no clear housing policy. The most active municipali-

ties in the housing sector are just providing some sort of support to Central Government interventions (Abomey-Calavi, Seme-Kpodji, Porto-Novo, Parakou, Lokossa, Natitingou) with completely different if not conflicting strategies. For example, the municipality of Abomey-Calavi has sold housing lands to the Government's 10,000 Affordable Housing Units Project; while the municipality of Lokossa has donated these lands.

Almost all the municipalities and local governments in Benin have launched land subdivisions projects without a clear urban development framework (such as a master plan or a land use plan). These operations are thus scattered and fragmented leading in the long run to inefficient land use. This calls for more synergy and complementarities between the central government and local governments.

Finally, local governments lack real capacity to properly process building permit applications. This is creating more problems than solutions to housing challenges at local level. Indeed, local administrations lack human, financial and material resources to play their role in securing land in their jurisdiction. The Access to Land project of the Benin Millennium Challenge Account programme has contributed to solve this issue, but a lot of work lies ahead. Only 24 out of 77 municipalities have been supported with the required equipment for land administration at local level.

4.4 Rampant land speculation, which further reduces the chances for the poorest to access decent housing

Land prices have increased dramatically over the past two decades, especially after the devaluation of the CFA. To be able to access housing, poor and even middle income households are pushed outside of the inner ring of big cities such as Cotonou, Porto-Novo and Abomey-Calavi, etc. These low and middle income households settle in areas lacking the minimum infrastructure for a decent house. Most of them also spend a significant share of their revenues on transportation to go to work. Relevant regulatory instruments should be enacted and enforced to reduce and stop land speculation. Without this housing affordability will continue to be a major challenge.

5. Conclusion

It is obvious today that changes in housing policy in Benin have closely followed patterns imposed by different economic and political regimes. Between 1972 and 1990 during the Marxist-Leninist regime, there was a strong

involvement of the state in housing delivery with a number of programmes conducted via public corporations. A few separate programmes have been undertaken beside interventions through public corporations. Since 1990 and the return to a market economy, a constant in housing policy in Benin has been the involvement of the private sector. All of the housing programmes undertaken since then have seen a strong involvement of the private sector. The paradox however is that the expected efficiency gain from the involvement of the private sector seems to have not occurred. Most, if not all the public private partnerships for housing supply, have failed. With delivery rates of less than 35 percent, housing programmes undertaken through PPPs have proven less effective than direct interventions of the government under the Marxist-Leninist regime. There appears a need for thorough assessment of former PPP contracts enforcement in order for the Government to learn from past mistakes and make a more effective use of this unavoidable housing finance strategy in a context of market economy.

Even though Benin's economy has grown a lot over recent years and the country is back on the path of economic growth, it is still vulnerable to external economic shocks, especially relating to raw materials and oil prices. Economic growth in Benin has been insufficient to significantly reduce poverty. Thus revenues are still very low and precarious; most of Benin households are dependent on the informal sector for their economic activities. In these conditions, it is difficult for households to access the formal financial market, especially in a context where property rights and land tenure security is still a serious issue. Access to affordable and decent housing for the majority as envisioned by the national housing policy is out of reach, despite a clear political will and a growing financial sector.

The Republic of Benin has been experimenting with decentralization since 2003, with important powers devolved to local governments in terms of local development and land administration. However, the disconnect between central government policies and local land management practices are today obvious due to low capacity in local governments. Thus, improving the synergy between central government housing policies and local government practices is another important challenge to address in order for housing policy in Benin republic to reach its goal of access to affordable housing for all households.

Finally, land speculation is another important challenge to deal with if the Government wishes to achieve its housing policy goals.

Further research paths in Benin in the housing sector could focus on the demand side of the housing market. Indeed, the demand side is the big unknown of the housing market. While there are clear indications that housing demand is high, the characteristics of this demand are not known, making it difficult to expect any success from current housing interventions.

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The Japan Housing Finance Agency and its programmes to promote the acquisition of energy saving homes

↳ By Masashi Niimura

1. Introduction

When CO₂ emissions in Japan in Financial Year [FY] 2009 are compared to that of the base year (FY 1990) of the Kyoto Protocol, there was a 19.5 per cent decrease in the industrial sector, which is in contrast with a 26.9 per cent increase in the household sector (see Table 1). In addition, according to the Ministry of the Environment (MOE), household CO₂ emissions in FY2009 (mainly from the use of heating/cooling, water heating, and home appliances, but not from the use of cars and the disposal of waste) is 14 per cent of the total CO₂ emissions (MOE, April 2011). The reduction of CO₂ emission in households is considered to affect overall reduction in CO₂ emissions in Japan to a large extent.

Against the backdrop of this situation in Japan, this article¹ introduces Japan Housing Finance Agency (JHF), its mortgage products intended to promote the energy efficient homes, and background information. The first part (2. About JHF) provides an overview of JHF and its mechanism of supplying housing finance, and the second part (3. The overview of energy saving measures in the field of housing) describes briefly the energy saving measures in the housing sector (mainly on the energy saving standards) and housing loan programmes related to energy saving. The third part (4. Promotion of energy saving homes with JHF programmes) describes JHF programmes in the system of national measures relating to energy saving homes and their effect on energy saving.

2. About JHF

2.1 An overview of JHF

The predecessor of the JHF, the former Government Housing Loan Corporation (GHLC), was founded with capital from the government of Japan in 1950. Since its inception, before transition to current JHF in April 2007, it made long-term fixed-rate direct loans to finance 19.41 million units of housing, which are about 30 per cent of homes built after the Second World War. Meanwhile, the standards had been established to improve housing quality such as disability/elderly friendly environment (better accessibility for the elderly and the handicapped), energy efficiency and durability. In October 2003, "Securitization Business (Purchase Programme)²" (hereinafter referred to as the Purchase Programme) to purchase mortgages from private financial institutions was started.

In April 2007, GHLC was abolished, and JHF, a new incorporated administrative agency was established with capital from the government. The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and Ministry of Finance (MOF) supervise JHF. JHF's main business is currently securitization business, and its main part, the Purchase Programme, has purchased 333 thousand mortgages since the beginning of the program in FY2003 to FY 2010.³

2.2 How JHF assists the provision of private mortgages

JHF purchases mortgages executed by private financial institutions if the mortgages meet JHF criteria. Then, JHF issues bonds backed by these mortgages monthly. The product name of the purchased mortgages is Flat 35, and the bonds are often called JHF MBS⁴. The main characteristics of Flat 35 are fixed interest rate for the whole repayment period, which can extend up

Table 1: The recent change of CO₂ emission in comparison with the Kyoto base year (FY 1990)

Total	Industrial sector	Transportation sector	Commerce, services, offices	Household sector
+0.04%	-19.5%	+5.8%	+31.2%	+26.9%

Source: MOE, April 2011

¹ In this article, opinions expressed are based on responsibility of the writer and not of JHF, and the source of the information about JHF is "Disclosure Booklet 2011" (JHF, 2011) except for those otherwise noted.

² Securitization business has the Purchase Programme and Guarantee Programme. The Guarantee Programme insures mortgages originated by private institutions and guarantees the payment from mortgage-backed securities backed by these mortgages if the mortgages meet the criteria set by JHF. The criteria for mortgages are basically the same as those of the Purchase Program. The business volume of the Guarantee Programme has been marginal.

³ The number of purchased mortgages in FY2010 is 114 thousand (¥ 2.8 trillion in purchased amount). This compares with housing starts of 819 thousand units in FY 2010 (MLIT, April 2011).

⁴ The principal and interest of JHF MBS are paid directly by JHF like ordinary bonds until certain conditions are met, and mortgages (Flat 35) as collateral are in a trust account, but recorded on the balance sheet of JHF. If certain conditions such as delinquency by JHF should materialize, MBS as bonds will disappear, and investors will be paid back from the principal and interest of Flat 35 through trust beneficiary rights. At this stage, Flat 35 is completely transferred to the trust's balance sheet. In this respect, JHF MBS, so called usually, is different from MBS as commonly seen.

to 35 years, and an option to prepay without a penalty. In order to match the repayment cash flow from Flat 35 and the repayment cash flow to investors, JHF MBS takes the form similar to those of pass-through securities in that the principal from the backing mortgages, including prepayment, is used to repay the investors. For the same reason, the coupon of JHF MBS is fixed rate.

Interest rates of Flat 35 are set by each financial institution by adding their own level of servicing fees to the base rate set by JHF. As a result, with competition among financial institutions participating in Purchase Program, the offering of relatively low interest rates is thought to be realized.

JHF base rate + Servicing fee of a financial institution = Flat 35 rate

JHF MBS, being issued monthly in the same product characteristics, have formed its market, and fairly stable funding and relatively low financing costs are achieved. In addition, the fact that JHF MBS are regarded as a government-related organization bond and a 10 per cent risk weight is applied based on BIS standard is considered to be among the factors for a stable investor base.

2.3 Standards required of homes to be financed with JHF mortgages

The main criteria for purchase of Flat 35 include those for the mortgage itself (interest rate, repayment period, repayment method, etc.) and those for the home to be purchased or built using the mortgage (Flat 35). There are two sets of criteria for the home. One is the basic set (floor space, purpose of use, structure, etc.), and the other is the advanced set for the quality homes that meet one of four criteria: a) Energy efficiency, b) earthquake-resistance, c) easy access for the elderly and handicapped, or d) variability and durability). If the home satisfies the basic set of criteria, the mortgage will be qualified for Flat 35. If the home satisfies the basic one and also one of the four advanced criteria, the mortgage qualifies for a reduced interest rate, and the mortgage will be referred to as "Flat 35 S" (for more information, refer to the section, 4. Promotion of energy saving homes with JHF programmes.). The reduced interest rate offered for Flat 35 S at financial institutions is achieved through government subsidy as part of housing policy to lower the aforementioned JHF base

rate. Confirmation that homes meet the criteria has been carried out by inspection bodies that are in business agreements with JHF.

3. The overview of energy saving measures in the field of housing

3.1 "Act on the Rational Use of Energy" and the energy saving standards for homes

Next, the energy saving policy in the field of housing in Japan will be reviewed through the perspective of the energy saving standards and their uses. Currently, in Japan, a set of major energy saving standards relating to housing construction or purchase by individuals are, if simply put, the "Housing Performance Indication System" for rating qualities of homes, the criteria for homes to be financed with Flat 35, and the "Top Runner Standard" in relation to "Housing Eco Point"⁵.

These systems have, as a common ground, the energy saving standards based on "Act on the Rational Use of Energy (Act No. 49 of June 22, 1979)" (hereinafter, the Energy Saving Act), which was passed against the backdrop of the two oil crises in the 1970s. Energy-saving standards for housing are guidelines set by the government, which are not compulsory, and since the enactment of the Energy Saving Act in 1979, the original 1980 standard has been revised and raised mainly, in 1992 and 1999. Its main criteria concern the thermal insulation performance of walls, ceilings, floors, and openings like windows (refer to Table 2 for the level of performance required.).

Table 2: Examples of energy saving performance required by the Housing Performance Indication System (for a single-family home in Tokyo)

Energy Saving Grade	The energy saving standards based on the Energy Saving Act	Heating and cooling burden (Mega Joule per square meter and per year)
4	1999 standard	460
3	1992 standard	800
2	1980 standard	1,030
1	Below above standards	-

Source: Evaluation methods standard (The public notice of MLIT with No. 1347 of the year 2001, the last revision by the public notice of MLIT with No. 354 of the year 2009)

3.2 Policy implementation tools to promote the energy saving standards

However, because it was only required to make the effort to meet the standards, there was a need to disseminate the standards by utilizing implementation tools for homes to be built according to the standard. Some of the efforts were reduced interest rates and increased loan amounts offered by the former GHLC. For example, in FY2002, one year before the Purchase Programme started, reduced interest rates had been applied to GHLC loans for homes meeting 1992 energy saving standards and durability standards. In addition, the 1980 energy saving standards are required for homes qualified for Flat 35, and the 1999 energy saving standards are required for homes with excellent energy saving performance to qualify for Flat 35 S.

Also, in 2000, the Housing Performance Indication System was introduced by MLIT for consumers to be able to compare the performance of homes when they acquire homes. Energy saving is among ten fields⁶ evaluated. The Housing Performance Indication System has adopted the energy saving grades that go up as its energy saving requirements become higher, which reflects advances in the energy saving standard over years as shown in Table 2.

3.3 "Top Runner Standard" and "Housing Eco Point"

When the "Kyoto Protocol Target Achievement Plan" (Cabinet decision in 2005), which had been formulated by the government to achieve the goals of the Kyoto Protocol, was revised in March 2008, the Energy Saving Act was revised in May

⁵ As described later in "5. Recent developments," the eligible period for the Housing Eco Point ended at the end of July 2011, but Housing Eco Point has been again included in the third supplementary budget for FY2011.

⁶ The ten fields are structural stability, safety in case of fire reduced degradation, preparation for maintenance and updating, thermal environment, air environment, light and visual environment, sound environment, care for the elderly etc., and security measures.

2008 in order to strongly promote the reduction of CO₂ emission in the household sector to achieve the goal. In the revised act, it was decided the best performance ("Top Runner Standard") for both thermal insulation and equipment including those for heating/cooling shall be formulated to induce construction of homes according to this standard. This energy standard is equivalent to the position that the energy consumption is reduced by approximately 10 per cent on a house that meets the 1999 energy saving standard with equipment commonly used in the year 2008 (MLIT, METI, & MOE, December 2009). This standard has been applied from April 2009.

Then, under "the Emergency Economic Counter-measures for the Future Growth and Security" (the second supplementary budget for FY 2009), "Housing Eco Point" was started. Under this program, the government grants Eco Point to the customers who have acquired homes built in accordance with the Top Runner Standard⁷, and the customers can exchange Eco Point for a variety of merchandises and additional work for their homes. The eligible period for acquiring homes for Eco Point was from December 2009 to July 2011, when the eligible period ended. The number of new homes that received Eco Point reached 479 thousand units from the start of the program until September 2011 (MLIT, October 2011).

JHF offered Flat 35 S with a reduced interest rate for the first twenty years as an additional promotion if a home to be financed is a single family home that meets the Top Runner Standard while the ordinary Flat 35 S offers a reduced rate for only the first ten years⁸.

4.2 The energy saving standards of JHF programs and their effect

The energy saving standard for Flat 35 and Flat 35 S is achieved by making sure the specifications for roof, exterior walls, floors, and openings meet the criteria specified in the standard such as the double glazing of windows and thermal insulation layer thickness. The estimate using figures in Table 4 shows the effect of energy saving has been significant for homes qualified for Flat 35 or Flat 35 S as follows:

- Consumption of energy for heating/cooling is reduced by 30% when a home not qualified for Flat 35 is replaced by a home qualified for Flat 35 (1980 standard).

Table 3: The main requirements for new and existing homes to qualify for Flat 35 (as of October 2011)

	Main requirement for homes	Interest rate reduction (as of October 2011)
Flat 35	<ul style="list-style-type: none"> ■ Floor area: 70m² or larger for a single family home, 30m² or larger for an apartment ■ Structure: fire-resistant structure, Semi-fire-resistant structure, etc. ■ The Energy Saving Grade 2 (1980 standard) for a new home ■ The criteria concerning deterioration and earthquake resistance for an existing home. 	—
Flat 35 S (Interest Reduction for initial 10 years)	<p>In addition to the above requirement for Flat 35, the home is required to meet one of the following four requirements:</p> <ul style="list-style-type: none"> ■ Energy saving grade 4 (1999 standard)* <i>* For existing homes, thermal insulation for openings (pair glasses) etc. are also acceptable.</i> ■ Earthquake Resistance grade 2 or higher, or seismic isolation system ■ Measure for the elderly, etc. grade 3 or higher ■ Anti-degradation grade 3, etc. 	Interest rate reduction of 0.3% for initial 10 years
Flat 35 S (Interest rate reduction for initial 20 years)	<p>In addition to the above requirement for Flat 35, the home is required to meet one of the following four requirements:</p> <ul style="list-style-type: none"> ■ Top Runner Standard ■ Earthquake Resistance grade 3, ■ Measure for the elderly, etc. grade 4 or higher* <i>* For the exclusively occupied area of an apartment, grade 3 is acceptable.</i> ■ Long Life Quality Housing* <i>* A home approved based on "The Law For The Promotion Of Dissemination Of Long Life Quality Housing"</i> 	Interest rate reduction of 0.3% for initial 20 years

The grades in the above table are those of the Evaluation Methods Standard for Housing Performance Indication System

- Consumption of energy for heating/cooling is reduced by more than 50% when a home not qualified for Flat 35 is replaced by a home qualified for Flat 35 S (1999 standard, initial ten-year interest rate reduction).

On the other hand, homes not meeting 1980 standard are estimated to account for 61 per cent of housing stock in 2005 as shown in Table 4. That is the majority of the housing stock. The proportion of energy saving homes in the housing stock is being and will be raised by new construction and reconstruction using Flat 35

S and Flat 35. In addition, to improve energy efficiency of the existing homes to a certain extent, criteria for existing homes qualified for Flat 35 S accept the case that thermal insulation for openings is improved with double glazing.⁹

4.3 The energy saving measures for rental homes

In addition to loan programs for the acquisition of owner-occupied homes, JHF also has a loan program for the construction of rental housing for parenting families, but, its requirement

⁷ For apartments, the criteria equivalent to the Top Runner Standard for a single-family home was applied, and a wooden single-family home that met the 1999 energy saving standard was also eligible. Additionally, energy saving renovation meeting the separate standard was also eligible. The example of points granted for acquisition of a new home was 300,000 points (1 point = ¥1).

⁸ The periods for interest reduction are as of October 2011.

⁹ The improvement of thermal insulation of openings of homes not qualified for Energy Saving grade 2 alone do not achieve grade 2 or higher, but the energy efficiency does increase to some extent.

Table 4: Energy consumption and the share of homes meeting different energy saving standards in housing stock

Energy saving standard	Estimates of energy consumption per unit for heating /cooling (*1)	The estimated share of homes with respective energy saving standard in housing stock in 2005 (*2)	Corresponding programs of Flat 35 (as of October 2011)
Top Runner Standard	*3	–	Flat 35 S (Interest rate reduction for initial 20 years)
1999 Standard	22 Giga Joule	4%	Flat 35 S (Interest rate reduction for initial 10 years)
1992 Standard	32 Giga Joule	14%	Flat 35
1980 Standard	39 Giga Joule	21%	
–	56 Giga Joule	61%	Not eligible for Flat 35

1 Source: MLIT, METI, and MOE; June 2010

2 Source: MOE, December 2010

3 This energy standard is equivalent to the case where the energy consumption is reduced by approximately 10% on a house that meets the 1999 energy saving standard with common facilities in the year 2008 (MLIT, METI, & MOE, December 2009).

for energy saving performance was grade 2 or so. In response to the policy determined by the government last year, the loan program for rental housing for parenting families has been abolished, and JHF now offers loans for rental housing that meets a higher energy saving standard than before.

5. Recent developments

As to recent developments, the resumption of Housing Eco Point and the further interest rate reduction for Flat 35 S was included in the FY 2011 third supplementary budget bill, and the bill was passed in the Diet in November 21st. Housing Eco Point has resumed as “Housing Eco Point for Recovery Support,” and the Eco Point to be granted for acquisition of new homes is 300,000 points in the areas affected by the Great East Japan Earthquake (hereinafter, the Earthquake) and 150,000 points in other areas. As to Flat 35 S, the interest rate is now additionally reduced for the first five years, and total reduction for the first five years is 1 per cent point for areas affected by the Earthquake and 0.7% points for other areas¹⁰. Therefore for both Housing Eco Point and Flat 35 S, the supports for the areas affected by the Earthquake are now prioritized (MLIT, October 2011).

As to a mid-to-long term prospect, a committee administered by MLIT, METI, and MOE has been discussing the introduction of obligatory standards for energy efficiency for all new homes.

The committee has considered, as the possible elements of the standard, items including the thermal insulation of outer walls and windows, the use of renewable energy, and the consumption level of appliances including heating/cooling. Also, the committee has considered the year 2020 as the possible time frame by which the introduction will be implemented (MLIT, METI & MOE, October 2011). From now on, it is thought the discussions will further develop in the future in light of the wide spectrum of opinions.

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¹⁰ As to the applications until September 30, 2011, Flat 35 S (initial 10-year rate reduction) was eligible for 1.0 per cent rate reduction for first 10 years, and Flat 35 S (initial 20-year rate reduction) was eligible for 1.0 per cent rate reduction first 10 years and 0.3 per cent rate reduction for the next 10 years.

How mortgage availability affects home price dynamics in China: a case study of Shanghai during the global financial crisis

↳ By Jie Chen

1. Introduction

Notably, for the past few years there have been persistent vehement controversies in China regarding whether a rapidly growing speculative bubble is emerging in the real estate market (Eddie et al. 2006; Chen et al. 2010, 2011a). Amid fears of a devastating real estate crash, in early January 2010 the State Council—China's cabinet attempted to cool down the real estate market by instructing banks that the down-payment ratio of a second home mortgage should be in no case less than 40 percent (General Office of the State Council [GOSC] 2010a). Nonetheless, this policy had little impact on the market and property prices continued to race upward at a furious pace. Under great pressures from both the populace and the need for economic stability, in early April 2010 the State Council issued a new series of radical policy measures to curb speculation in the scorching property market. A central element of this policy package was to raise the down payment ratio for people buying their second homes from a minimum of 40 percent to at least 50 percent (GOSC 2010b). Moreover, in areas with soaring property prices, the government instructed banks to reject mortgage loan application for people buying their third houses and also demanded that banks halt issuing mortgages to those who could prove they had lived and paid taxes for at least one year in the city. Judging by these observations, it looks as though easy money from mortgage finance sources is blamed for the surge of property prices in the average policymaker's view. However, little is known about the effect of the availability of mortgage credit on the pace of appreciation of home prices in China.

Theoretical and empirical studies of house price dynamics typically emphasize the importance of income and interest rates; however, there is little

evidence that house prices can be explained by fluctuations in these two variables alone. For example, Muellbauer and Murphy (1997) stress that credit constraints should enter the home price function with similar importance as income, the housing stock, and real user cost of housing. Further, using the home price-to-rent approach to model home prices, Kim (2007) shows theoretically that down-payment constraints can significantly affect home prices.

Empirically, the coincidence of cycles in bank credit and property prices has been widely documented in policy-oriented literature (IMF 2000; BIS 2001). Thus, the inclusion of a measure of mortgage credit as a fundamental determinant of fluctuations in house prices has become a common approach in international studies. For example, Egert and Mihaljek (2007) include credit growth as a potential determinant of house prices alongside the typical fundamentals to explain the differences of housing price dynamics patterns between central and eastern European countries with OECD countries. Tsatsaronis and Zhu (2004) examine the importance of mortgage credit for house price fluctuations in 17 countries and find that fundamentals relating to mortgage finance, including bank credit and the real interest rate, could explain approximately one-third of the long-run variation in house prices. Gerlach and Peng (2005) suggest that there exists a long-run relationship between house prices, bank credit, and GDP in Hong Kong. In the short run, they believe that the relationship is a one-way street; a change in house price causes changes in bank credit. Collyns and Senhadji (2002) find that credit growth has a significant contemporaneous effect on residential property prices in a number of Asian economies. Using the U.S. national data, McGibany and Nourzad (2004) find that mortgage credit affects the demand for

houses through the transmission mechanism of interest rates. However, Berlinghieri (2008) used inflation-adjusted U.S. national data and found that house price growth responds immediately to a change in mortgage credit and mortgage credit responds contemporaneously to the change in house prices, suggesting the relationship is bi-directional.

It is widely admitted that there exists a positive statistical relationship between house price and mortgage credit. Same as in other countries, mortgage lending in China is assessed on market-based collateral values. Therefore, the amount of mortgage credit available to borrowers is likely to increase in response to escalating house prices. But lenders' willingness to provide mortgage credit is dependent on their liquidity, the gap of mortgage interest rate in relative to other loan services, and their own assessment of financial risks of the home market. Rising prices, by sending positive signals about asset values, is likely to promote the supply of mortgage credit. Therefore, an increase in the amount of credit available, either exogenous or endogenous, has the potential to spur the demand for home, causing house prices to further increase. Therefore, the causal relationship between home mortgage credit and house price is something like a "chicken and the egg" puzzle, in which it is very difficult to determine which comes first (Gerlach and Peng 2005).

In addition, there is evidence that the relationship reinforces itself in the short run. The discovery of a two-way relationship between mortgage credit and house prices in the United States parallels what Fitzpatrick and McQuinn (2007) suggested for Ireland.

In summary, the existing literature indicates that housing prices and mortgage credit are linked

in the long run. In addition, there is also some evidence of a short-run relationship between housing price changes and credit growth, although the direction of the relationship is not completely clear.

However, during the global financial crisis the Chinese government introduced a series of emergency attempts to bolster housing demand through the relaxing of mortgage regulations. The result can be regarded as a social experiment and thus provides us with a good opportunity to identify the causal relationship between mortgage and housing prices in the short run. With a population of more than 20 million, Shanghai is the biggest city and leading industrial hub in China. The historical development of the real estate market and home mortgage business and how they are correlated with each other during the past decade has been investigated in a companion paper recently published in *Housing Finance International Summer 2011* issue (Chen, 2011b). Thus, this paper will largely skip the background introduction of Shanghai real estate market. It focus on utilizing monthly data of mortgage loans and property sales in Shanghai during 2008–2009 to explore how the property market was affected by mortgage supply during the global financial turmoil period.

2. The impacts of the global downturn on the real estate market in Shanghai

In the year 2009, with FDI as low as 22.3 percent and exports tumbling by -17.4 percent, Shanghai's GDP grew at a speed of only 8.2 percent. Although such growth performance may be regarded as outstanding in any other country at any time, for Shanghai it is a record low in 20 years and it is lower than the national average level for the first time since 1991, the year the development of Pudong New Area was initiated. As officially admitted by the Shanghai municipal government in the gazette of 2009 (a social-economic statistical report), "2009 was the hardest year since 1991."

As shown in Example 1, it is clear that the industrial outputs of both China and Shanghai were performing very well in 2007 but suddenly experienced severe difficulties in the second half of 2008 and the first half of 2009. They both experienced gradual recoveries in the second half of 2009. Their trends coincide with the evolution of the global financial turmoil.

In accordance with the aggregate economic trend, after the zeal in the second half of 2007 the real estate market in Shanghai was plunged into a

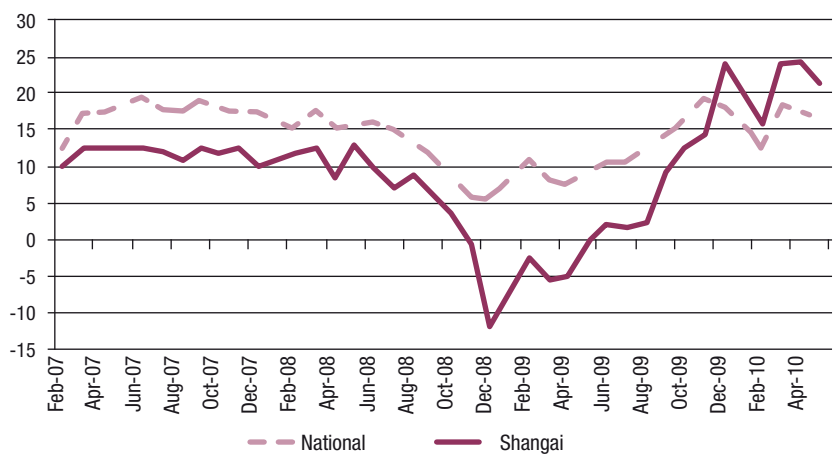
deep recession in 2008 (see Exhibits 2 and 3). The latter half of 2008 saw a deep dampening in the sales of property as well as housing investment across all major cities in China. In Shanghai, the trading value of firsthand residential property in the third quarter of 2008 slumped to only one third of that one year earlier, a record low since 2005(see Exhibit 2). A highly influential household questionnaire survey that was regularly conducted by the People's Bank of China hinted that housing demand was bleak and the real estate market would continue to be sluggish for a certain long period. This survey suggested that only 3 percent of the polled intended to purchase houses in the last quarter of 2008, a record low since 1999. Further, several experts insisted that, in this

round of macro-control measures, the government should still stick to its previous policy of containing the rocketing of housing prices until the returned to reasonable levels. Until early October 2008, the market outlook still looked very gloomy (see Exhibit 2 and 3).

3. The Chinese Government's policy to boost housing demand

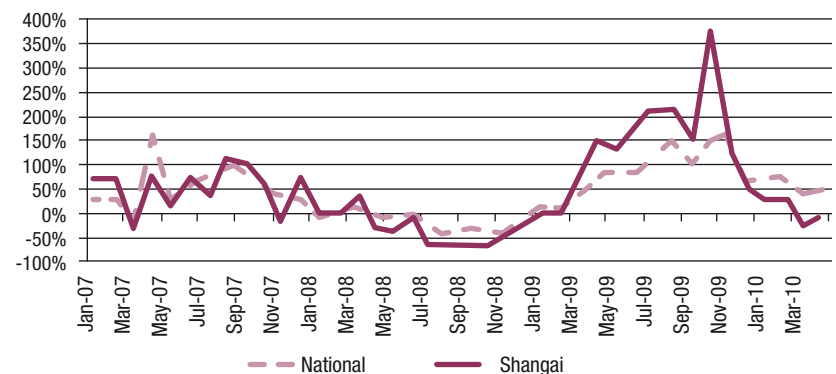
Under the immense pressure of massive job losses, the Chinese central government chose to accept that the revival of real estate sales and quick recovery of housing investment were central to shoring up the national economy amidst

Figure 1 The Growth Rate of Industrial Output in China and Shanghai, February 2007—May 2010 (% Change Year-on-Year)



Source: Online Database of National Bureau of Statistics of China.

Figure 2 The Growth Rate of Trading Value of Firsthand Housing in China and Shanghai, February 2007—April 2010 (% Change Year-on-Year)



Source: Online Database of National Bureau of Statistics of China.

the global and domestic economic slowdowns. To combat the economic crisis and to stoke domestic demand, the central government reversed the housing policies it implemented in late 2007. In October 2008, the State Council stepped in to bolster the sagging real estate market by lowering transaction taxes, reducing requirements for down payments, and lowering mortgage rates (GOSC 2008).

In October 2008, the State Council stepped in to bolster the sagging real estate market by lowering transaction taxes, reducing requirements for down payments, and lowering mortgage rates (GOSC 2008).

First, beginning November 1, 2008, property purchase tax would be lowered to 1 percent for people buying their first home if the housing was smaller than 90 square meters. The previous rate was 3 percent, with those buying houses smaller than 140 square meters paying 1.5 percent.

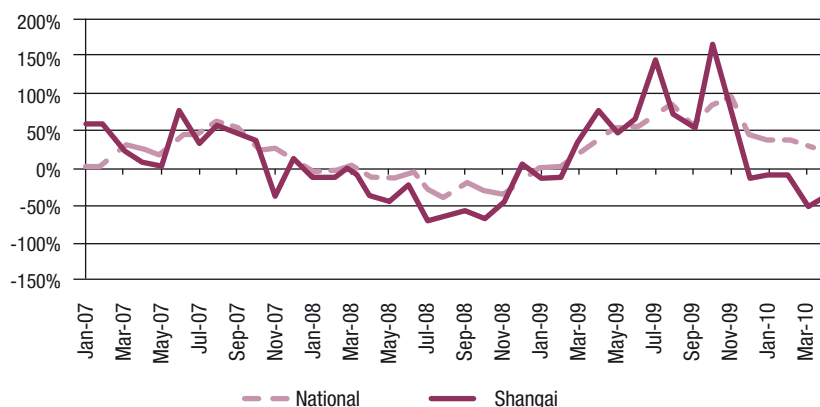
Second, for people buying their first home, the down payment ratio would be lowered to 20 percent, and banks would be allowed to charge as low as 70 percent of benchmark lending rates for such mortgages.

The Shanghai municipal government promptly enforced this series of policies. In addition, the HPF center in Shanghai increased the cap of HPF home loans from RMB 400,000 to RMB 600,000. Following the government's instructions, Chinese banks loosened their purse strings for mortgage financing and prepared to create ample liquidity. The growth of real estate sales measured over four quarters turned positive in January 2009, for the first time since January 2008 (see Exhibit 2 and 3). But with the looming uncertainty regarding further economic downturns, the property market in Shanghai was still sluggish in the spring of 2009 (see Exhibit 2 and 3).

Since April 2009, housing prices in Shanghai started to climb unabated and the real estate sector began attracting buyers at a frenetic pace (see Exhibit 2). The second quarter of 2009 observed a moderate increase of 5 percent in the housing prices but the third quarter witnessed an unprecedented surge of 18 percent in three months, followed with another spectacular soar of 17 percent in the fourth quarter (See Chen, 2011b).

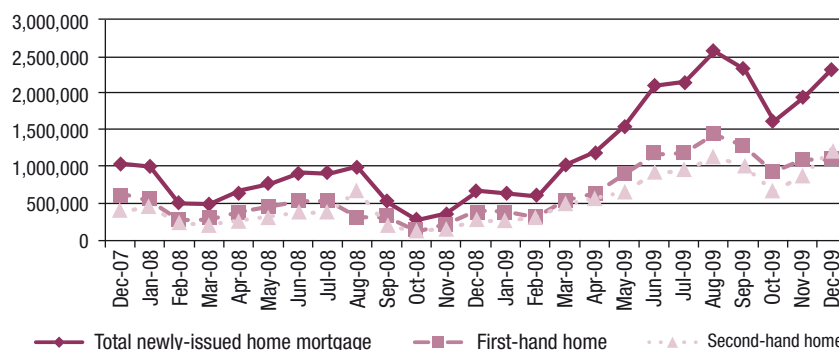
Meanwhile, the rapid rush of property prices spurred the demand amidst fears of further increases. It also clearly incurred renewed speculation: According to the PBC's Shanghai headquarters, in the latter half of 2009, about 35 percent of new mortgages in Shanghai were issued to non-local home buyers and another 10

Figure 3 The Growth Rate of Trading Space of Firsthand Housing in China and Shanghai, February 2007—April 2010 (% Change Year-on-Year)



Source: Online Database of National Bureau of Statistics of China.

Figure 4 The Newly Issued Mortgage in Shanghai, December 2007—December 2009



Source: The People's Bank of China, Shanghai Head Office.

percent was used by foreign buyers. Thus, the trading volume of housing soared in line with the surge of prices; the selling value and trading space of new housing in the latter half of 2009 were RMB 240 billion and 18.03 million square meters, respectively. These figures were about 2.69 times and 1.65 times those of one year earlier, respectively (see Exhibit 2 and 3). The fever spread to the secondhand housing market, too. There are no data on the transaction values of second-hand housing in Shanghai available yet. But according to the mortgage data, for the whole year of 2009, new mortgages used to finance the purchase of secondhand housing increased at the same speed as mortgages for firsthand housing (see Chen, 2011b). Within a few months, the downturn trend of real estate sector was completely reversed.

The quick recovery and new boom of the real estate market in Shanghai and other major cities in mainland China surprised all observers. How much of the unexpected resurgence of the real estate market in 2009 could be attributed to the government rescue in the late 2008, particularly, the changes in regulations of mortgage supply? This is the key issue to be investigated in this chapter.

4. Gauging the importance of mortgage credit to the real estate revival

Given the short span of the intervention event and the limited available data, it is not yet possible to perform rigorous econometric regressions on the impacts of mortgage credit

on real estate prices in Shanghai. Instead, we attempt to explore the statistical association between the two series.

Example 5 suggests that households in Shanghai are conservative with borrowing and rely moderately on mortgages when buying homes. For new-build housing, the leverage ratio (defined by the share of new mortgage in relative to home purchase) was on average 29 percent during 2008–2009. Interestingly, the exhibit also shows the leverage ratio for newly-build housing was considerably higher in 2009 than 2008: 30 percent versus 27 percent. Particularly, the average leverage ratio in the latter half of 2009 reached as high as 37 percent, compared to 27 percent one year earlier.

For the whole year of 2009, the total of new mortgages issued for all types of home buyers in Shanghai amounted to RMB 200 billion, which was 2.5 times the amount in 2008 (see Example 4). If comparing the numbers in only the second halves of the years, the expansion of home credit is more remarkable: New mortgages issued in the latter half of 2009 were 3.4 times greater than one year earlier (see Example 20). Further, the mortgages issued in the latter half of 2009 comprised 64 percent of the total for that year (see Example 4). Evidently, the evolution patterns of new mortgage credit perfectly mirrored the trading trends of residential housing between 2008 and 2009 (see Examples 2 and 4).

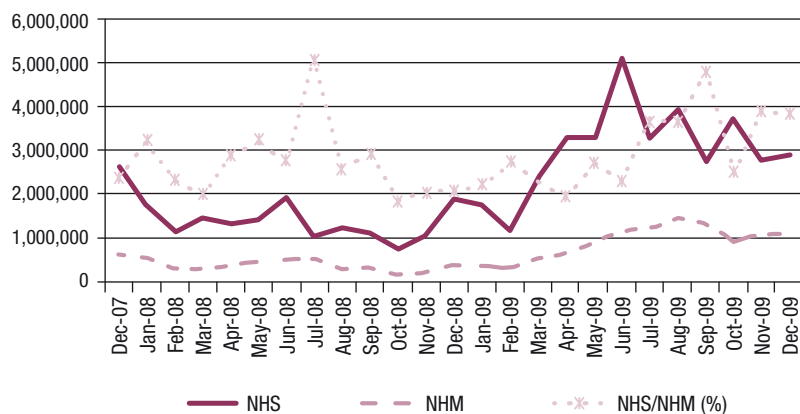
As an attempt to investigate the causality between newly issued mortgages and property prices, the time-series movements of the two series (for firsthand residential housing) between 2008 and 2009 are plotted in Exhibit 22. It can be seen that the two series are tied to each other very closely and both turned from negative to positive sharply in March 2009; thus, it appears that the two series are moving simultaneously even in the short run.

Interestingly, the data also suggest that an increase of 1 percentage in housing prices over a previous month is, on average, associated with a 2 percent rise in new mortgages over the earlier month (see Example 6); this appears to imply that the elasticity of mortgage with respect to housing price is around 2 in Shanghai. However, as our data is drawn from a short and very special period, this observation that strong market recovery is associated with ample liquidity is, of course, only for inspiration. Also note that the mortgage rate was reduced heavily and the minimum down-payment requirement was cut from 30 percent to 20 percent in late 2008 (see Chen 2011b). They may contribute to the

outburst of mortgage credit too. But how much the proportion of mortgage growth is attributed to the price growth and how much is due to relaxing mortgage terms is not easy to assess.

A robust estimate of the elasticity of new mortgage with respect to home price growth in China requires sufficiently long intervals of data and is left for further research.

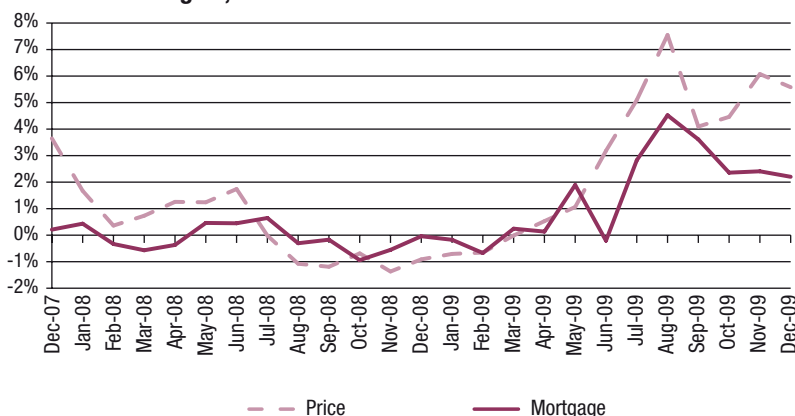
Figure 5 The New Mortgage and Housing Sales in Shanghai, December 2007—December 2009



Source: The People's Bank of China, Shanghai Head Office.

Note: NHS: Selling value of first-hand housing; NHM: Newly-issued mortgage for first-hand home. Due to the lack of monthly-level data, the newly issued HPF home loan is not included in this measure of mortgages. But considering that HPF home loans constitute only 20 percent of total home credit in Shanghai, this omission should not be significant. Both NHS and NHM are measured in RMB 10,000 (left y-axis).

Figure 6 The Month-to-Month Growth Rates of Mortgage and Housing Prices in Shanghai, December 2007—December 2009



Source: The People's Bank of China, Shanghai Head Office.

Note: In order to avoid the seasonal bias, the monthly mortgage data was converted to its 12-month moving average before obtaining the month-on-month growth rate. Both series are referred to only firsthand residential housing. To control for the measurement error, the monthly price series is using the CREI Shanghai Housing Price Index rather than the average sale price computed from dividing the selling value by selling space (a little more explanation of "selling space" needed here-Editor).

5. Discussions and policy implications

From a theoretical point of view, a finding of simultaneous short-run movement between new mortgages and home prices makes sense. Increases in home prices positively affect mortgage borrowing via various wealth effects (Hofmann 2004; Gerlach and Peng 2005). First, due to asymmetric information in credit markets, both the borrowing capacity and credit demand of households are positively affected by changes in home prices. Second, upward-trending home prices may induce households to change their perceptions of their lifetime wealth and expand their borrowing with the aim of evening out their consumption patterns over the life cycle. Third, rising home prices will cause more optimistic expectations about future economic prospects and then induce a higher level of borrowing.

On the other hand, rising prices positively affect banks' capital positions, risk-taking capacity, and credit availability, and induce them to be more willing to lend. Therefore, additional mortgages from banks will be used to buy more homes, pushing home prices even further, which then creates more demand for mortgages among households and at the same time more supply of credit from banks. Thus, the mutually reinforcing cycles in banking loans and the home market may evolve in the long run due to the two-way causality between mortgage credit and home prices.

The connection between mortgage credit and house prices that we have observed in Shanghai during 2008–2009 seems to provide a new piece of empirical support to the theoretical discussion earlier. The short-run causality between mortgage credit and home prices appears at best to be a two-way street. There is no clear evidence that the unexpected property recovery in 2009 is due primarily to the government's fine-tuning of mortgage policy.

However, until now a key question in this chapter remains unanswered: If mortgage policy has a limited role in explaining the recovery of the property market in Shanghai since early 2009 or in other places in China, what else can explain the performance of the real estate market?

In our perspective, the Chinese government's overall massive economic stimulus package, by bringing up the economic outlook and upholding household confidence, appears to be a significant factor in the property boom. One may note that both home prices and mortgage issuance in Shanghai were continuing to decline several

months after the government's announcement of a new mortgage policy in October 2008 (see Exhibit 6). Month-on-month changes of home prices turned positive in April 2009 and this happened until one month after Shanghai's industrial output reversed its downtrend to an uptrend for the first time since July 2008 (see Exhibit 1 and 5). Further, the surge of money supply in China during the global financial crisis period, by triggering households' widespread worry of high inflation, has been pointed to as the main driving force of the property price surge. Data suggests that M2, the widely used indicator of money supply, soared 28 percent in China during 2009. Although the Chinese government's officially published CPI data was still negative in 2009 (–0.6 percent), it is evident that many Chinese households hold different views.

The experiences from other countries during the global financial crisis may provide support for our analysis. China is not the only country to lower interest rates and relax mortgage terms during this period. The United States passed several bills to stimulate homebuyers' confidence and most were enacted through changes of mortgage policy, but the effect was at best marginal. The same experiences were observed in most EU countries and other nations. The property market generally did not show signs of recovery when mortgages became more available. It usually turned positive only after the aggregate economy had sent out clear signals of climbing out of the recession.

Therefore, there are reasons to believe that the recovery or the boom of the property market is often a by-product of a government's economic stimulus policies, where lower interest rates and looser money supply are usually the central elements of such a stimulus package. Nonetheless, it is tempting to recall U.S. history between that nation's 2001 recession and 2006 subprime crisis. Alan Greenspan has now publicly regretted relying on the self-interest of investors; nevertheless, while a loose monetary policy can solve some urgent problems in the short run, it is destined to nurture a long-building asset bubble. Once an asset bubble is formed, ultimately it will force the whole economy to pay a huge cost to resolve it. China is on such a path now. Many prominent Chinese economists have called for immediate correction of the previous loose monetary policy, but it is difficult to judge whether it is too late to rectify the economic situation.

6. Conclusions

This analysis uses monthly data of mortgage and housing sales during 2008–2009 to examine

how mortgage credit affects the real estate market in Shanghai. It is found that the availability of mortgage credit plays a significant role in explaining fluctuations of housing prices in this city. The availability of mortgage credit should be considered as a critical factor for understanding housing prices in China. Further, there is clear evidence that, in the short run, the causality between mortgage credit and home prices runs in both directions. This finding has important policy implications. Loosening the terms of mortgage credit will bolster housing demand only when the market trend turns from downturn to upturn. On the other hand, without major changes in the market fundamentals, one should not expect that tightening the mortgage supply could effectively curtail the pace of home prices. Government's fine-tuning of mortgage policy in general has only limited effect in either boosting or dampening the housing market.

We also briefly discuss other potential driving forces behind the surge of property prices in China since 2009 and conclude that the economic stimulus policy, with a loose monetary policy at its core, is the main reason. Warning of a possible long-building bubble under loose monetary policy is given. Of course, further analysis is needed to shed more light on the relationship between monetary policy, mortgage credit, and home prices in China.

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Covered bond models in Europe: fundamentals on legal structures

↳ By Otmar Stöcker

1. New covered bond legislation in many countries

Since 1995 most European countries have introduced new laws on covered bonds or fundamentally amended the existing ones. Keeping in mind that covered bonds have a long history of more than 230 years, it is surprising that many countries have only begun to develop this capital market instrument¹ within the last few years. Nowadays there are 32 European countries, where legislation on covered bonds exists – out of them 27 are member countries of the European Union.

Outside of Europe, in several countries work has been or is being done to introduce covered bonds, notably in Australia, Canada, Japan, New Zealand, South Korea and the USA.

In US history, between 1870 and 1935, mortgage covered bond systems were introduced several times, but with very limited success due to “bad timing, poor implementation and ineffective regulation”.² A few years before the last financial crisis covered bonds were reintroduced in the US on a contractual basis and therefore were called structured covered bonds. Since then several attempts have been made to create

a legislative foundation for them, drawing on comments from academics and practitioners.³ The initiatives of Scott Garrett in 2010 resulted in a concrete draft of March 4, 2011⁴, which was followed by a lot of testimonies and commentaries.⁵ The House Financial Services Committee passed H.R. 940. But the legislative procedure is not yet finalised, due to fundamental dispute on issues, which are being discussed in all countries mentioned above; some of these issues will be presented in this article. Furthermore, during the discussions in these countries, European covered bond experience is mentioned often. This article describes a few key characteristics of covered bond models in Europe.

2. Economic importance of mortgage covered bonds in Europe

At the end of 2010, the volume of outstanding covered bonds totalled 2.5 trillion Euros.⁶

There is a huge variety of real estate finance systems in Europe due to different cultural, legal⁷ and economic fundamentals. The differences are related to the owner occupation

rate in housing compared to the rental sector, interest rate structures (fixed vs. variable), prepayment conditions and callability and mortgage collateral enforcement procedures.⁸ The role of covered bonds as funding instruments for housing mortgages in Europe therefore differs, too, from country to country.

Initially, covered bonds were invented for agriculture finance and then step by step developed to include housing finance, commercial real estate, ships, aircrafts and public sector loans – all long lasting, high quality assets. Issuers were mostly specialized institutions, which fully or largely relied on capital market funding via covered bonds. A conflict between covered bonds and deposits was rarely seen. This changed, when deposit funding increased and retail banking dominated more and more housing finance. Today, deposits are by far the largest funding source of housing loans in Europe. The fluctuation of deposit volumes is the main reason that since the 90s more and more credit institutions use covered bonds as an additional instrument to diversify their funding bases. The consequence is that the legal conflict between covered bonds and deposits in a crisis situation of the covered bond issuer becomes more and more significant.⁹

¹ About the reasons in the nineties see Stöcker, Renaissance of covered bonds in Europe, Housing Finance International June 2001, p. 30 – 36.

² *Snowdon*, Covered Bonds: Potential Uses and Regulatory Issues, Testimony before the Senate Committee on Banking, Housing and Urban Affairs, Washington D.C., September 15, 2010, p. 2.

³ See *Schwarcz*, The Conundrum of Covered Bonds; *Surti*, Can Covered Bonds Resuscitate Residential Mortgage Finance in the United States? IMF Working Paper WP/10/277.

⁴ H.R. 940 - U.S. Covered Bonds Act of 2011.

⁵ See especially the following Testimonies and Statements to the Subcommittee on capital markets and government-sponsored enterprises, Committee on Financial Services, U.S. House of Representatives, March 11, 2011 on Legislative proposals to create a covered bond market in the United States:

- Statement of the *Federal Deposit Insurance Corporation (FDIC)*

- Testimony of *Scott A. Stengel*

- Testimony by *Bert Ely*

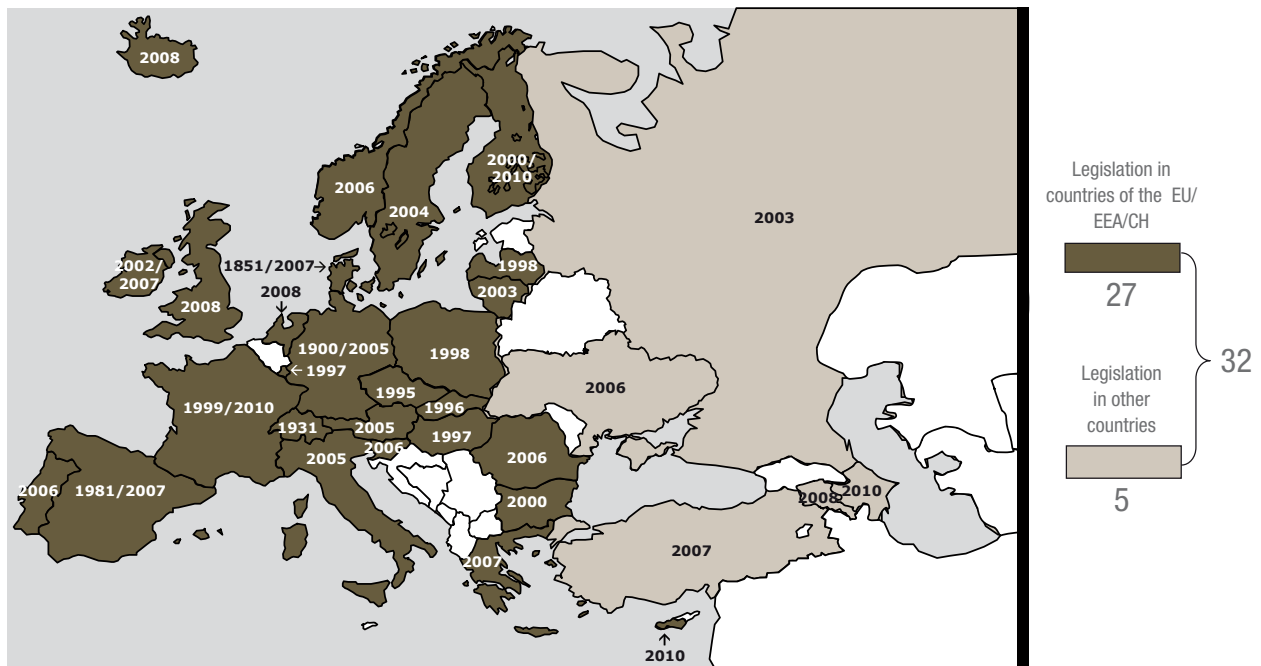
⁶ ECBC Covered Bond Fact Book 2011, p. 97.

⁷ See *Stöcker/Stürmer*, Flexibility, Security and Efficiency of Security Rights over Real Property in Europe, Berlin 2010.

⁸ In private housing finance non-recourse loans are not a common practice in Continental Europe.

⁹ This conflict was addressed several times in the Central European Covered Bond Conferences. See the programs of the conferences number 12 and 14 in the years 2008 and 2010 on http://www.pfandbrief.de/cms/_internet.nsf/tindex/de_19.htm.

Figure 1 Geographical overview Covered Bond Legislation in Europe (year of introduction / latest substantial amendment)



Although covered bonds do not dominate the funding of housing loans any more in many countries, their framework nevertheless can positively influence market development. In countries like Germany, the strict mortgage lending value criteria, the low LTV for cover pool eligibility¹⁰ and long term fixed interest rates in real estate loans funded via Pfandbriefe have been stabilizing factors for real estate markets, esp. in crisis situations.

Often it is emphasized that covered bonds offer a safe haven for investors. But this is not an automatic effect of having covered bond legislation. Furthermore, in this respect there should be a more realistic view. It is often said that investors “never” lost money with covered bonds. This is not accurate. There were insolvencies and therefore also losses in the 19th century; furthermore, insolvency procedures in those times were only partially prevented by large payment stays.¹¹ Bad experiences from these times were the reasons for the long struggle to create covered bond legislation in Germany;

the Mortgage Bank Act, which came in force in 1900 and which focused a lot on prudent real estate valuation procedures.

Last, but not least, the economic role of covered bonds for investors is tremendous. Reliable and deep covered bond markets offer secure and liquid assets to investors and instruments for liquidity management of banks. Therefore, a large share of covered bonds is held by credit institutions today.

How these above mentioned roles of covered bonds will be affected by upcoming EU-provisions will be seen in the near future. Basel III resp. EU-CRD IV: Liquidity provisions could encourage banks to use covered bonds, capital requirements and leverage ratios may make them think otherwise. EU-Solvency II: Future EU-rules for insurance companies might lead to new strategies regarding investments in real estate, mortgage finance, covered bonds and senior unsecured bank bonds.

3. Covered Bond Models in Europe¹²

There is no uniform European covered bond model, but there are several covered bond models in Europe. Nearly all of them have undergone (sometimes fundamental) changes during the last 15 years.

They differ both in historical development and existing legal structure. In some countries, the practical use even looks different from the concept, which is regulated by statutory (parliamentary) law. Many differences can be found regarding eligible cover assets and special public supervision.

Here, the focus is on the legal structure only, which is decisive for the classification of the covered bond models. The main differences in these models are due to historical developments, different economic and legal frameworks and specific priorities within political decision making and banks’ strategies.

¹⁰ 60 % of mortgage lending value only.

¹¹ Such measures on payment stays since 1807 because of the Napoleonic Wars are described in *Schiereck/Rauch, Pfandbrief-Design – Anpassungen in Zeiten der Schlesi-schen Landschaft, Immobilien & Finanzierung 2011*, p. 91-93.

¹² This article classifies covered bonds in 5 models. A more detailed classification was published by *Lassen, Housing Finance International*, December 2005, pp. 3.

3.1 Model 1

The covered bond issuer is a completely specialized funding institution. This means that on its balance sheet there are only cover assets and covered bonds. This model exists particularly in France (obligations foncières), Ireland, Norway – and in practice in Finland and Sweden, too.¹³

3.1.1 Characteristics

The origination and the servicing of the eligible assets and the management of the covered bond issuing institution is done by the parent bank. This means that the activities of the covered bond issuer are largely outsourced to its parent bank. Therefore the issuer has no or almost no staff.

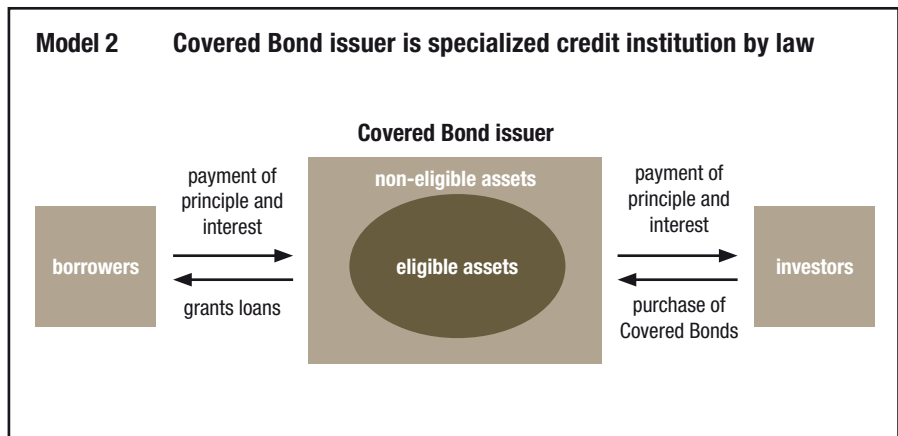
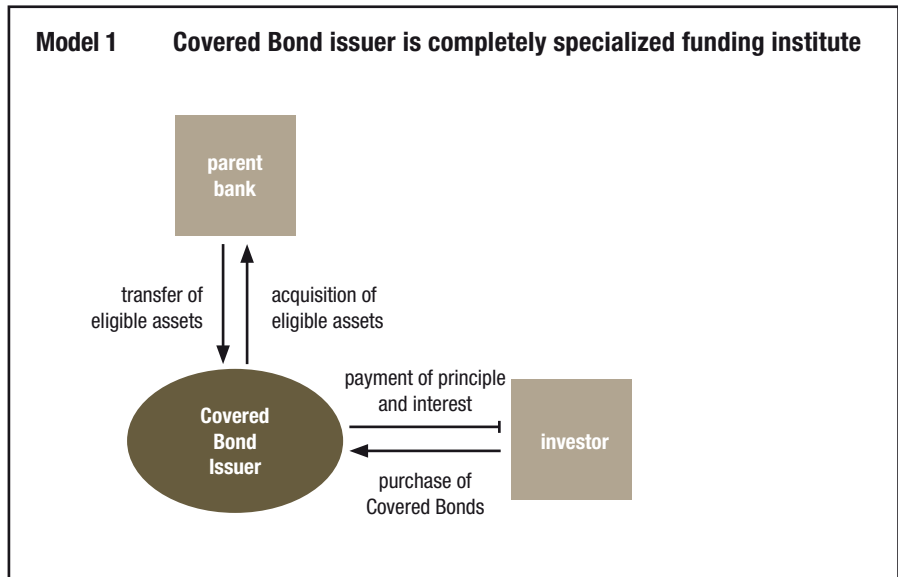
The funding institution has no other function than to legally hold the eligible assets and to be a debtor of the covered bonds. The issuer has the legal status of a credit institution. The issuance of covered bonds is governed by a special legal framework.

3.1.2 Fundamental issues

In this model, the insolvency segregation of the covered bond issuer from the parent bank is fundamental. This means that ring fencing of the cover assets within the covered bond issuer is less (or even not at all) important, since the issuer has only the cover assets and covered bonds on his balance sheet. This ring fencing is at the core of every covered bond model, because it delivers the main security of the covered bonds.

Nevertheless, the question arises whether the issuer would be capable of acting despite of the parent bank's insolvency. The extensive outsourcing could cause trouble for the covered bond issuing subsidiary, which then would have a real challenge to ensure a timely payment on the covered bonds, if the covered bonds had a hard bullet structure.

Furthermore, it is important to analyze how much of the cover pool consists of claims against the mother bank or other group members, especially as regards derivatives and cash management.



Last, but not least, it must be considered how the assets are transferred from the parent bank to the covered bond issuer. Some countries (such as France) use techniques that allow a cost-efficient transfer of assets via specific legislation, which prevents the burden of registration of the mortgage assignment in the land register, but which then has the disadvantage that this technique is only applicable to assets subject to domestic law.

3.2 Model 2

The covered bond issuer is a specialized credit institution by law. This traditional covered

bond model was the concept in Germany until 2005 and still exists for example in Hungary, Luxemburg, Poland and partially in Denmark.¹⁴

3.2.1 Characteristics

Here the issuer originates services and funds eligible business. The loan origination is restricted by law to a very limited number of assets (usually mortgages and public-sector loans). Other assets than eligible ones are limited in volume.

The issuer has the legal status of a credit institution and is fully equipped with staff. The issuance is governed by a special legal framework.

¹³ Sweden has this model for many years, already. In 2004 a legislation was created following in its draft law the special bank principle, looking like Model 1, but then in the end changed to Model 3. Nevertheless several issuers kept their structure in practice – Model 1. So far only 2 issuers were merged with their parent banks, therefore now being Model 3. Similar it looks in Finland, where the special bank principle was abolished recently in covered bond legislation.

¹⁴ In all those countries, now and then there are discussions, whether and how to switch to model 3. Denmark already did this step via a legislation allowing model 3, parallel to the traditional one of model 2. In Luxemburg, concrete legislation work is going on to abolish the special bank principle, what then will switch Luxemburg to Model 3

3.2.2 Fundamental issues

In this model the fundamental issue is the insolvency segregation of the cover assets within the bank. If there is an insolvency procedure on the issuer, it must be very clear that the cover assets will be ring fenced or encumbered so that they will be reserved to secure the covered bonds.

Historically, over many years this was achieved via pledge structures.¹⁵ It was only in 1900 that the German Mortgage Bank Act regulated an insolvency priority for Pfandbrief holders. But this meant that covered bonds and cover assets would have been part of the insolvency estate and the insolvency procedure. Luckily, there has been no insolvency procedure over a German Pfandbrief issuer since 1900. In 1998 this insolvency privilege was changed into a legal segregation¹⁶, enlarged with a lot of details in 2004 (and 2010) – a lot of them were adopted likewise by other countries in the following years.

3.3 Model 3

The covered bond issuer is a universal credit institution, either with a qualified covered bond license (e.g. Austria, Denmark, Finland, Germany since mid 2005, Iceland, Latvia, Slovenia, Sweden) or without the need of a qualified license (e.g. Bulgaria, Czech Republic, Greece, Lithuania, Portugal, Spain, Slovakia).

3.3.1 Characteristics

The issuer originates, services and funds eligible and non-eligible business, eligibility criteria apply to cover assets and the covered bond issuance is governed by a special legal framework.

3.3.2 Fundamental issues

The core of this model is the insolvency segregation of cover assets from the insolvency estate of the same legal entity, the credit institution - even to a higher extent than in model 2.

This can be shown on the German example. The detailed regulations enacted in 2004 were

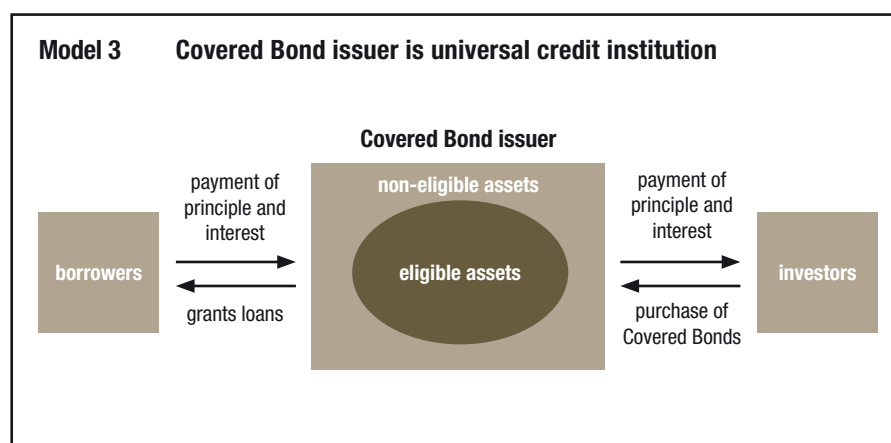
regarded as being a new milestone in the development of covered bond legislation. On this basis, even the special bank principle that lasted for such a long time could be abolished, switching Germany from model 2 to model 3.

But this was not the end of the legislative story. The financial crisis (especially since September 2008) encouraged many market participants to ask more and more questions regarding a theoretical insolvency situation. Therefore, further clarifications were introduced in Germany in 2010 to achieve a clear understanding in the Pfandbrief Act on the legal nature of cover pools in the event of a Pfandbrief bank's insolvency and on the access of a cover pool administrator¹⁷ to liquid funds during difficult times. The cover pool was given the status of a non-insolvent part of the insolvent Pfandbrief bank – with the rest of the bank as the insolvency estate. Thus, the cover pool administrator would be able to act as head of a bank in respect of transactions with the Deutsche Bundesbank; he would also be entitled to issue Pfandbriefe. More precisely, § 2 IV PfandBG stipulates that the banking license will be maintained with respect to the cover pools and the liabilities covered there from until the Pfandbrief liabilities have been fulfilled in their entirety and on time. A revised version of § 30 PfandBG addressing the ring-fencing

of the cover assets from the insolvency estate confirms this new approach by introducing the new heading 'segregation principle'¹⁸ and by referring to the cover assets as 'insolvency-free estates'¹⁹. Consistently, the amended PfandBG incorporates the term 'Pfandbrief bank with limited business activities'²⁰.

Thus, the amendments of 2010 ensure that the cover pool administrator acts on behalf of a solvent Pfandbrief bank that is in possession of a license to engage in banking business in general and in Pfandbrief business more specifically, even if the bank itself is insolvent and the general banking license withdrawn. Hence, the Pfandbrief bank with limited business activities is treated as a solvent bank in order to comply with the counterparty eligibility criteria for central bank open market operation with the objective to satisfy its liquidity needs.²¹

This short update shows that it is not realistic to assume that a "perfect" solution could be created within a short time. Many pros and cons have to be taken into consideration. More than 200 years were needed in Germany to develop the necessary ideas and to regulate in detail by parliamentary law the insolvency protection of Pfandbriefe. The more and more detailed questions asked by investors, analysts and rating agencies are pushing legislation forward.



¹⁵ The lack of a clear legal basis of an insolvency privilege of Pfandbrief holders (called the "Pfandbrieffrage") was the reason that the board members of most German mortgage banks met in 1876 for the first time. This in the end led to the creation of the Mortgage Bank Act and furthermore to the founding of the predecessor of the vdp. See Verband privater Hypothekenbanken, 75 Jahre Verbandsgeschichte deutscher Hypothekenbanken, Frankfurt a.M. 1978, p. 13.

¹⁶ With this amendment, for the first time a covered bond legislation regulated clearly that the covered bonds would not accelerate despite the insolvency of the issuer.

¹⁷ According to §§ 30 – 36a Pfandbrief Act the cover pool administrator would be appointed by court in order to manage the cover pool and to ensure the timely payment of the Pfandbriefe. He must be a different person than the insolvency administrator.

¹⁸ Trennungsprinzip bei Insolvenz der Pfandbriefbank.

¹⁹ Insolvenzfrie Vermögen.

²⁰ Pfandbriefbank mit beschränkter Geschäftstätigkeit.

²¹ For more details see Stöcker, 2010 Amendment of the Pfandbrief Act, vdp, The Pfandbrief 2010/2011, pp. 20.

3.4 Model 4

The covered bond issuer is using a Special Purpose Vehicle (SPV) to achieve insolvency segregation of the cover assets. This structure is used for example in Italy, Netherlands and UK.

3.4.1 Characteristics

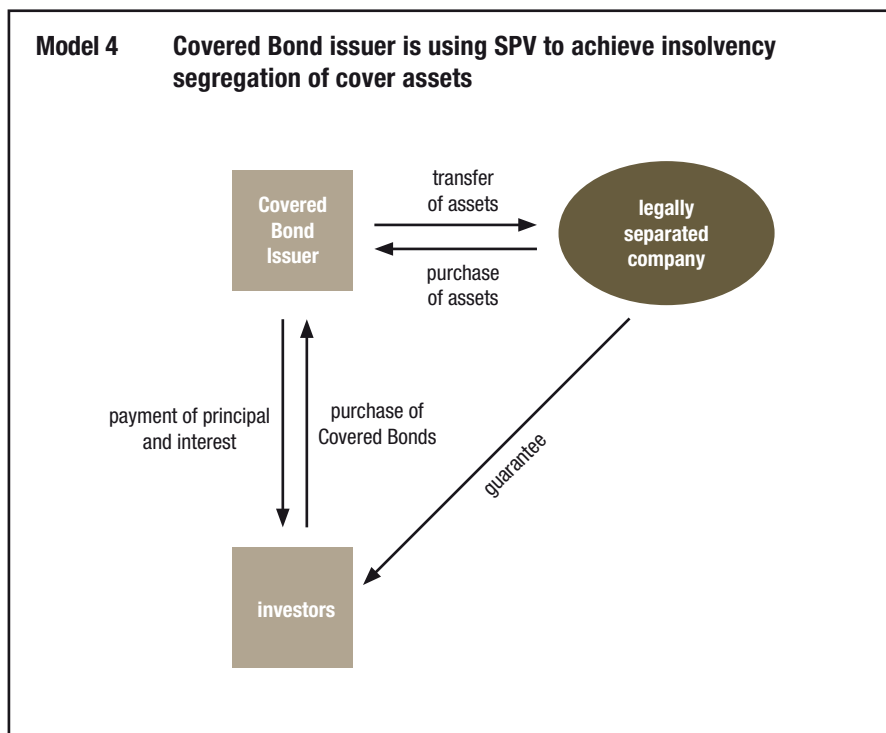
The covered bond issuer is a credit institution and originates, services and funds eligible and non-eligible business. Eligibility criteria apply to the cover assets and the issuance is governed by a special legal framework.

The cover assets are transferred (or sometimes pledged) to a legally separated entity, which is a SPV without the legal status of a credit institution. This SPV guarantees the payment of the principal and interest of the covered bonds.

3.4.2 Fundamental issues

The core of the legal structure of model 4 is the use of a SPV, which holds the cover assets. This is similar to securitization techniques; but different to them in that the issuer of the bonds is not the SPV, but the credit institution directly.²²

If the insolvency segregation transfer technique to the SPV is not governed in detail by a special legal framework²³, but based on general law only²⁴, investors have to make up their mind, whether this “transfer”²⁵ is fully valid and would survive the insolvency of the issuer.²⁶ Therefore, investors will have to rely on ratings, study the documentation²⁷ or ask to what extend the relevant national supervision authority checks this documentation.²⁸ Furthermore, investors may require that the legal opinions confirming the validity of the concrete contracts should be published, if the overall legal structure is transparent to the public it makes it accessible to serious and neutral analysis by both market participants and academics.²⁹



3.5 Model 5 – Pooling models³⁰

Originator and covered bond issuers are different legal entities. Pooling models on covered bonds exist in legislation and/or in practical use in several countries, especially in Austria, Denmark, France, Germany, Hungary, Spain and Switzerland.

Some of them have very large market shares, while others do not (yet) have big economic importance. The economic importance on a national level of pooling models depends on the possibility of the originating bank issuing covered bonds themselves directly. This is shown clearly by a comparison between Austria, where the pooling model was not used for new issues

during the last 30 years, and Switzerland, where the both pooling institutes are the only bodies allowed to issue covered bonds.

3.5.1 Characteristics

The covered bond issuer in most cases is a credit institution cooperating with several or even many originators, who keep on servicing the cover assets. Eligibility criteria apply to the cover assets and the issuance is governed by a special legal framework.

Covered bond pooling models may be regulated fully as such or consist of a combination of a covered bond model and contractual cooperation with partner banks.

²² The issuer must be a credit institution in order to comply with Art. 52 IV EU-UCITS-Directive and other EU-provisions. The other way round – the SPV issues the bonds, which are guaranteed by the credit institution – is not sufficient therefore.

²³ In Italy, the statutory transfer regulations, which were created for securitization purposes once, are also applicable for the transfer of cover assets to the SPV for Italian covered bonds.

²⁴ In the Netherlands and UK, covered bond law only says that such a transfer has to be done, but the transfer techniques are contractual ones.

²⁵ This might be a full assignment, a pledge or a trust structure.

²⁶ One issue here is, whether it is clear enough that the cover assets would not be part of the insolvency estate of the covered bond issuer; another issue, whether the “transfer” (true sale) would not be re-qualified of being a secured loan only, which would have a negative impact on the insolvency segregation.

²⁷ In this respect, the workload for investors is similar to the one in securitization.

²⁸ If banking supervision authority takes this role in order to compensate the lack of detailed statutory provisions on insolvency segregation, it would be interesting to know more about the qualification and number of staff dealing with these complex surveys.

²⁹ The more detailed the statutory provisions are and the more easily accessible to the public they are, the more likely it is that somebody raises concerns of deficiencies, which then will be noticed by investors. If legal provisions are low level in this respect, legal documentation huge, legal opinions not published – then investors have to take on much more work - or just hope that all contract work was done well.

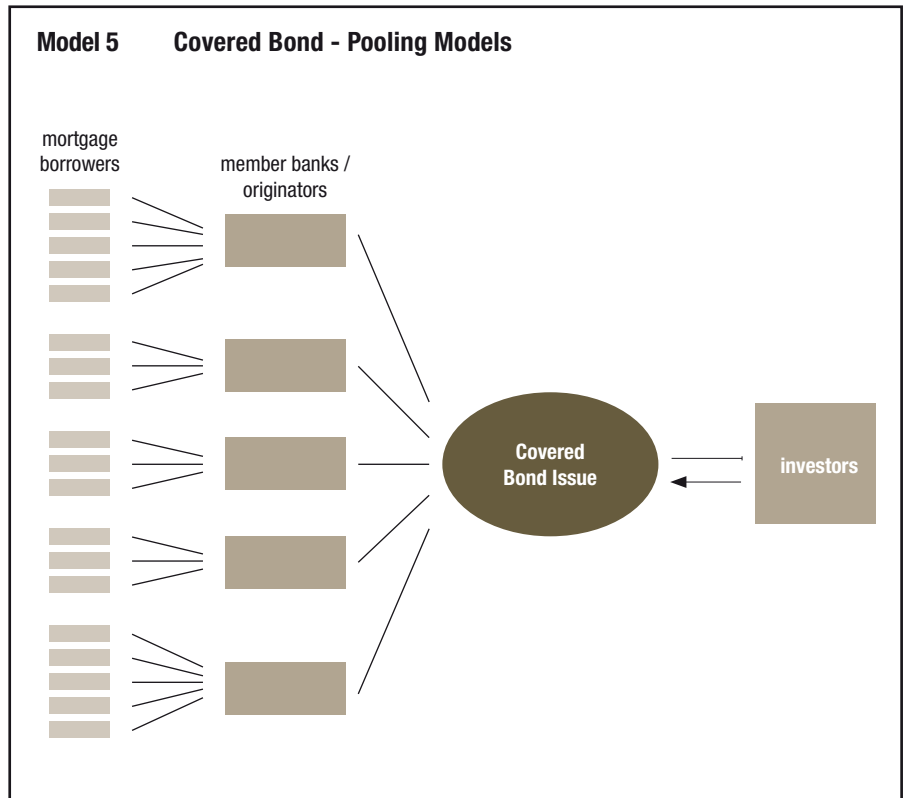
³⁰ For more details about covered bond pooling models in Europe see *Stöcker*, Pooling models in Europe, in: ECBC, European Covered Bond Fact Book 2008, pp. 40.

3.5.2 Fundamental issues

The sourcing of cover pool assets from other banks requires both sound cooperation to ensure high quality assets³¹ and a clear legal mechanism to transfer the assets to the covered bond issuer.

It is interesting to see that pooling models in Europe differ, largely regarding the transfer techniques: full legal transfer from the beginning (Denmark, Hungary), automatic legal transfer in the case of insolvency of the originator (France), legal pledge with trust status in insolvency (Switzerland), insolvency-proof claim against insolvent estate (Germany). All these structures are based on assets, which are transferred somehow and sometime from the originator to the issuer of covered bonds. Only the Spanish pooling models use covered bonds as assets for the issue of ABS according to securitization techniques.³²

Other import issues are the risk weighting of the cover assets for capital requirements and the accounting of them. This is complex where the transfer is not completed at the beginning, but postponed to a later stress or insolvency scenario.



4. Assessment

There is no single legal definition of covered bonds in EU law in the sense that the law would say what covered bonds are and what is not allowed to be called a covered bond. However, there are several provisions on risk weighting³³ and investments, which are all based on Art. 52 IV UCITS-directive³⁴, where regarding insolvency segregation it is only said that the specially treated bond, the covered bond, must get a preferential treatment in the case of insolvency of the issuer insofar as the cover assets would be used on a priority basis for the reimbursement of the bond's principal and the payment of the accrued interest. This leaves it fully to the national legislator or supervision authority whether and what to specify in detail regarding

covered bonds, which is done with many differences all over in Europe.

The covered bond industry does not have a clear common understanding as to what should or should not be considered a covered bond, and so accepts nearly any kind of legal bond structure as part of the covered bond family.³⁵

Looking at these differences, it is obvious that there is no European covered bond model, but a huge variety across the financial sector. By contrast, the question has to be asked what "covered" bond means. At first view, many concentrate on the quality of the cover assets. But this approach tells only half the story, if there remain doubts that the cover assets could

maybe become part of the issuer's insolvency estate without a clear priority in favor of the covered bond holders.

In general, there is no "perfect" covered bond model or system. All the models have advantages and disadvantages. It is important to find out, what these are and to make up one's mind about one's priorities, and which are best served by the different models and regulations. There are different views on whether only housing mortgages should be allowed as cover assets or whether commercial mortgages should be eligible, too – or whether an even wider range of asset classes should be eligible. Prudent mortgage lending value with a low LTV may limit the volume of cover assets tremendously, making it difficult to

³¹ In pooling models usually there are two kinds of assets: the funding loans of the partner banks and their loans to the clients, which are used to secure the funding loans. This has to be taken into account when issues regarding asset quality and asset liability management are analysed and discussed.

³² Furthermore, it can even be questioned, whether the Spanish version should be called a covered bond pooling model, because the relevant issued bond legally is not a covered bond (due to the lack of not being issued by a credit institution, but a SPV), but an ABS based on covered bonds. This has been disputed sometimes, but is regularly confirmed by Spanish lawyers. See Stöcker, Pooling models in Europe, p. 45.

³³ The EU-CRD-regulation on risk weighting of covered bonds is explained in Engelhard/Eichert, Covered Bonds and EU Banking Regulations, in: ECBC, Covered Bond Fact Book 2011, pp. 33.

³⁴ Before 1st of July 2011, this was Art. 22 IV UCITS-directive with the same wording like the new number Art. 52.

³⁵ See the far reaching "essential features of covered bonds", published in ECBC, European Covered Bond Fact Book 2009, pp. 96. Furthermore see the press release of the ECBC on a covered bond label: "ECBC announces its Label Initiative", Brussels, 7th Oct 2011 – <http://intranet.hypo.org/docs/1/AJBGDHIBJEJFHFNINGBMCADAAPD-WY9DYBKTE4Q/EMF/Docs/DLS/2011-00104.pdf>.

provide large over-collateralization on one hand and making it less necessary on the other hand, reducing the conflict between covered bonds and senior unsecured debt – and vice-versa. Rules regarding asset liability management (ALM) and the role of cover pool monitors and supervision authorities may be seen in different ways. Last, but not least, various views exist on the question of how detailed covered bond legislation should be in regulating all issues involved. These items may be discussed and disagreed upon, and nevertheless an agreement may be achieved that all these products belong to the covered bond family.

Instead, one matter cannot be disputed in general but only in its details, this is the insolvency segregation of the cover assets and the insolvency remoteness of the covered bonds, which are both on the balance sheet of the issuer in most models – therefore this is the core feature of a covered bond system.³⁶

On first view, it seems that this is easily achieved in the models 1, 4 and 5. Model 1, the specialized funding institute within the banking group with a banking license, depends on large outsourcing to the mother bank to be cost-efficient, thus making it difficult to assume that the insolvency of the mother bank would not cause any problems for her bank vehicle. According to the standards of German law on banking supervision, model 1 would not be allowed.³⁷ From the German supervisor's point of view it is essential that every bank has its own management and staff with sufficient know how to do all necessary work for controlling risk, credit decisions and real estate valuation (or at least checking of valuations of external experts) including the management of the cover pool.

Model 4 has its weakness in the fact that the SPV does not have a banking license. Therefore it cannot be treated as a credit institution by market participants including central banks, which could have very negative effects in the insolvency of the issuer.

If in model 5 the centralized issuer is fully equipped with relevant staff in order to comply with all needs of risk and liquidity management, it looks very solid regarding insolvency segregation and remoteness. The question remains, why there are used only a very few such models, having most success in Switzerland, where by statutory law only this model is allowed.

In models 2 and 3, it is important to clarify the legal nature and the technical ring-fencing of the cover pool. Related to this, it is necessary to answer the question of who is acting on behalf of the cover assets and covered bonds once the insolvency procedure over the issuer has started.

Considering the different models or the differences within the models, it is obvious that the less specialized the covered bond issuer is, the more detailed and complex provisions that are needed to clarify insolvency segregation and remoteness – and the more crucial is the potential conflict between covered bonds and senior unsecured creditors including depositors.

Weaknesses of a covered bond model or of its relevant regulations can be compensated for, at least partially, by additional features, for example the issuing conditions. This can be seen in the sector of timely payment of covered bonds in issuer's insolvency.

- In all models, in principle it is possible to regulate strict minimum requirements on ALM, a high level liquidity buffer, legal instruments to provide liquidity via the sale of single assets or portfolios, via facilitating liquidity loans from other banks or even from the central bank and the issue of new covered bonds. So far, a few only have used the possibility of regulating several or even all of these liquidity instruments.
- But it is possible, too, to stipulate in the issuing conditions a deviation from the usual hard bullet³⁸ structure in favor of a soft bullet³⁹ structure,

allowing the institution, which should ensure the timely payment of the covered bonds, to postpone the payment, if there is a crisis situation.⁴⁰ This means that the notion “timely” is changed in the issuing conditions from one point, which is agreed as applying in a normal situation, to a later point, which could be even 2 years later. Such stipulation allows a much lower liquidity buffer and less over-collateralization in order to get a high credit rating. In Germany, such soft bullet clauses are not used for Pfandbriefe, all of them have hard bullet.

5. How to further develop covered bond models?

One of the most important conflicts in any covered bond model or legislation discussion is the one confronting quality and reliability of the covered bond system with its profitability and efficiency. The stricter the regulations and limits of the cover assets are – making the cover pool more solid, the less volume of covered bonds can be issued – making this financial instrument less profitable. Costs of staff lead to outsourcing structures, reducing the internal know-how of the issuer. Capital requirements encourage a tendency to off-balance structures and bring the covered bond closer to securitization, whereas the old dispute, whether on-balance products are “better” than off-balance ones is out of date, because both instruments are no longer adversaries, but used in a complementary way.

Out of the vast list of fundamental issues, several issues that have been the target of recent discussion should be focused on here.

5.1 Covered bonds versus unsecured funding

The priority given to covered bonds in a crisis situation of their issuer often raises doubts if this leads to an unfair treatment of any unsecured creditor. This is even more disputed regarding

³⁶ As it is in the case of securitization. And therefore it is even more difficult to make a clear distinction between covered bonds and securitization. It seems that it is more precise to differentiate between “on-balance-securitization” (covered bonds) and off-balance-one (ABS, MBS).

³⁷ Cf. the remarks of the member of the Directorate of the Deutsche Bundesbank, Edgar Meister, repeated verbatim or in summary form (Handelsblatt dated 6.11.2000) on the announced Outsourcing Circular: “Although new communication technologies offer almost limitless possibilities for this, a purely virtual bank, which has handed over almost all functions to other companies, would not be reconcilable with our Supervisory law... Central management tasks and decisions as a result of which banking risks could arise cannot be outsourced... The Authority considers the complete

outsourcing of an institution not to be permissible. It places tight restrictions on the outsourcing of control and audit functions.” This is confirmed in the outsourcing rules of the so-called MaRisk (minimum requirements on risk management), issued by the German financial supervision authority BaFin.

³⁸ Hard bullet means that the bond will be paid back at the day, which is mentioned in the bond conditions.

³⁹ Soft bullet means that the payment day could be postponed to a later day – according to a more or less detailed specified trigger event.

⁴⁰ Experience shows that these clauses should be phrased in a way, which avoids uncertainty regarding the trigger event.

deposits – and here including the legal position of the institution guaranteeing deposits.⁴¹

Notwithstanding that the priority is a fundamental principle of any covered bond system and a bond not having it should not be called covered, there are techniques which can contribute to reduce this priority to a fair level.

5.1.1 The covered bond issuer can be structured – legally or by business structure – in a way that the (more or less) only funding source is covered bonds so that a conflict between them and unsecured funding (especially not specifically secured bonds or deposits) cannot arise. This can be seen with the covered bond models 1 and 5 and partially model 2.

5.1.2 The volume of covered bonds of an issuer may be directly limited in relation to its balance sheet. With this, indirectly the volume of encumbered assets will be limited, too. Another possibility is to limit the volume of encumbered assets in relation to all assets on the balance sheet.

But these solutions risk hindering the efficient use of covered bonds and discourage banks from investing much energy in this product.

5.1.3 Strict eligibility criteria for cover assets automatically limit the volume of covered bonds of the respective issuer. These criteria may regard the classes of assets and their quality, including LTVs. The stricter the criteria, the more secure the covered bonds are, the less volume can be produced - leaving more assets for the unsecured creditors.

Regarding asset classes it should be clear that long term funding instruments have more stability, if their underlying assets have a similar lifetime like themselves. Therefore, the cover assets of long term covered bonds should consist of long lasting assets making maturity matching easier to be achieved.

5.1.4 The core of the legal conflict between covered bonds and unsecured creditors lies in over-collateralization (OC). Similar to off-balance securitization, there is no chance to get a prime rating for covered bonds, if there is not a remarkable OC in place.

Even the most strict eligibility criteria for cover assets are not sufficient for rating agencies. But the level of OC can be kept low, if the eligibility criteria and the asset liability management measures are strict – leaving more un-encumbered assets for the unsecured creditors. To limit the OC directly by law is discussed sometimes, but would hamper efforts to get a top rating or even exclude this possibility totally.

Furthermore, the political legal priority regarding OC can be partially reduced, if the insolvency estate (and with it the unsecured creditors) gets an explicit right to demand that a totally excessive part of the OC to be transferred from the cover pool to the insolvency estate.⁴²

5.2 Implicit state guarantee

A developed covered bond system can play an important role in the capital market of a country. Therefore, many governments want to support this market sector.

This support may consist in setting regulations by statutory law and supervising the covered bond issuers. This is welcome and it is even a condition, if covered bonds want to enjoy the preferential treatment, which is foreseen in several EU-directives, especially the fundamental rule: Art. 52 IV UCITS-directive.⁴³

The question often is discussed under what circumstances the role of the regulator or the central bank could be regarded as providing an implicit state guarantee for covered bonds, which would create a financial risk for this state and cause concerns about unfairness towards other financial products.

All European countries give some role to the supervisory authority in order to make sure that the covered bond issuer is following all covered bond regulations. The level of this supervision varies greatly. Some focus on statistical data only, others check fundamentally in order to make sure that all cover assets fulfill the eligibility criteria.⁴⁴

So far, no European regulator or central bank grants a liquidity guarantee, which would facilitate the timely payment of the covered bonds a lot, thus reducing the need for over-collateralization. A liquidity guarantee by a central bank or other public institution beforehand would give a clear sign to the market that the state would interfere to support the covered bond and this would mean an implicit state guarantee.

The German Pfandbrief Act shows how the conflict between not giving an implicit state guarantee and solving the liquidity issue can be solved. The above mentioned⁴⁵ amendments 2010 ensure that the unit, consisting of covered bonds and cover assets, called “Pfandbriefbank with limited business activities”, will be able to fulfill the conditions of being a counterparty of the central bank - and this would support timely payment, without any beforehand decision of the central bank system, whether any such concrete unit would get a liquidity loan, because this depends on more conditions, which then would have to be fulfilled as with any other bank.⁴⁶

5.3 Fair competition

Somewhat surprisingly, in the discussion about new covered bond legislation it is sometimes mentioned that a covered bond system would produce unfair competition between banks, which could issue covered bonds and others not having this ability.

The special treatment granted to covered bonds is the compensation for all the restrictions, which are connected with setting up the covered bond

⁴¹ Also see Kiff/Surt/Jobst, Covered Bonds and Asset Encumbrance, in: ECBC, Covered Bond Fact Book 2011, pp. 79.

⁴² Therefore the German Pfandbrief Act regulates in § 30 (4) that cover assets, which “will obviously never be necessary” for the Pfandbriefe (German covered bonds), will have to be given to the insolvency estate. Here, the burden of proof is on the side of the insolvency administrator.

⁴³ This provision is explained in Engelhard/Eichert, Covered Bonds and EU Banking Regulations, in: ECBC, Covered Bond Fact Book 2011, pp. 33.

⁴⁴ So far, there is no detailed comparison published how covered bond issuers are supervised in practice.

⁴⁵ See above III.3.

⁴⁶ Comparing the covered bond models in this respect shows that the model 4 is not able to get any central bank support in an insolvency of the issuer, because the insolvency generally ends the counterparty eligibility – and the SPV never gets it, because it is not a bank and therefore never had this counterparty eligibility. If a country would like to achieve this eligibility nevertheless for this model, it would have to regulate either that an insolvent bank stays an eligible partner for open market activities or that a non-bank (here the SPV) may become one. With the ECB statutes both solutions are not allowed in the Euro-Zone.

program. These restrictions relate to the lending policy, the quality of assets, the reliability and the responsibility to safeguard the quality standards.

In principle, any bank could become a covered bond issuer. Practical experience shows that not only large banks can be successful issuers of covered bonds. This can be seen with cooperative banks and saving banks in Germany.

Furthermore, the pooling models show that it is not absolutely necessary that every bank issues covered bonds in order to get access to this special funding base, but that there are several possibilities for cooperation.

Regarding the over-collateralization issue, again: the stricter the eligibility standards the lower the necessary OC.

If fairness is looked upon from the perspective of investors, it is necessary to check the issuing conditions of other outstanding bonds of a bank, when a covered bond is scheduled to be issued for the first time. Pari-passu clauses and negative pledge clauses already postponed the issue of covered bonds in several countries making it necessary to wait until the end of maturities or to buy back from the market such bonds, whose conditions would have caused a legal conflict with covered bonds.

5.4 Timely payment in issuer's insolvency

When looking at a covered bond system, investors, analysts and rating agencies raise a lot of questions regarding the probability of timely payment of covered bonds in a crisis situation of their issuer.

Before autumn 2008 this was an issue for a few specialists only, because the insolvency of banks and the collapse of the interbank liquidity market seemed to be not a realistic possibility. Meanwhile, such scenarios are stress frameworks of analyses of covered bond models.

There are several techniques that can be applied in order to comply with the conflicting interests, which are involved in this issue:

One solution is to find regulations, which allow the cover pool manager to take up liquidity loans from banks and even the central bank system.⁴⁷

Some issuers use soft bullet structures for their covered bonds, which allow postponement of the payment of the covered bonds when the issuer is in trouble.⁴⁸ Here, of course, it is important that the investors are informed about this clearly before investing in these covered bonds, so as not to be surprised later.

Over-collateralization and liquidity buffers help to minimize liquidity risks, likewise any regulation encouraging maturities' matching of cover assets and covered bonds.

It has been mentioned already⁴⁹ that any liquidity guarantee by the central bank or other public institution beforehand would be regarded as being an implicit state guarantee and therefore cause fundamental questions and concerns.

6. Outlook

The success of covered bonds is not the automatic consequence of having a statutory law on covered bonds. Sound legislation on covered bonds, sound high level lending practices and careful issuing behaviour are the fundamentals of any long-lasting covered bond story.

There is no "European" covered bond system, but several models with a lot of differences, if analysed in detail. Uniformity of covered bond legislation never existed in Europe and probably never will arise – and it is not necessary. Transparency of the different legal structures is vital so as to show their advantages and inconveniences so that investors are able to make their investment decisions on the basis of facts instead of assumptions. But it is worthwhile to note that covered bonds have a very long history in Continental Europe, a main driver of their success being the fact that for a long time only real estate and (later) public sector loans were accepted as cover assets.

Many countries have the potential in terms of both knowhow and market volumes to create a successful covered bond market. Whenever and wherever legislative work is done to achieve sound covered bond legislation, fundamental research on chances and risks of the different covered bond models is required to achieve a balanced decision on how to regulate the national one.

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⁴⁷ See above III.3. and IV.2.

⁴⁸ See III.6.

⁴⁹ See IV.2.

The Icelandic housing market: recovering after turbulent times

↳ By Seveinn Agnarsson and Sigurdur Johannesson

1. Introduction

The Icelandic housing market is characterised by a heavy emphasis on home-ownership, with few people renting their homes. For the past 30 years most mortgages have taken the form of 25 or 40 year inflation indexed loans with a fixed real rate of interest. This has made it possible for property buyers to spread the cost of financing over a long period, and in many cases encouraged consumers to buy larger apartments or houses than they would otherwise have been able to afford. In the years leading up to the crisis of 2008, Icelandic banks began offering foreign exchange mortgage loans with a relative low interest rate. The banks entry into the loan market broke the virtual monopoly of the government Housing Financing Fund, which was forced to adapt to his new competition. In this article we discuss these developments and describe the developments of property prices in the last decade.

2. Policy of home-ownership

The Icelandic housing market differs from housing markets in most neighbouring countries in many ways. Two peculiarities give reason for further explanation: The overwhelming majority of residential housing in Iceland is owner-occupied; and most housing loans are indexed for inflation.

For most of the time since the 1930's the policy of ruling political parties and most stakeholders

has been based on the principle of home-ownership. State supported loans have been given to people buying or building apartments to live in, the first social housing (*Verkamannabústaðir*) was built by state-supported housing cooperatives that then sold the apartments to their members. Although the apartments were thus privately owned, they could only be sold subject to certain restrictions.¹

Similar support has not been given to rental housing until recently. The proportion of families living in rental housing reached a low point of 17 per cent in the beginning of the 21st century, but since then – and especially after the financial crisis which began in 2008 – the proportion has increased. Before the crisis around a half of those renting rented from family, friends and institutions, such as the social services and student housing authorities. In this part of the rental housing market the rent is usually below “market” rate. However, the “real” rental market has grown considerably in recent years. After the collapse of the Icelandic banks in 2008 many apartments have been offered for rent by banks that have acquired them after the building firms that owned them went bankrupt. Since general purchasing power has decreased and there is uncertainty about future prices many potential buyers have chosen to rent apartments rather than buying one. This has coincided with the interests of the banks who prefer to rent out their properties rather than sell them at low prices. At present, the proportion of rental housing is probably somewhere around 25 per cent.

The high proportion of owner occupied residential housing in Iceland means that most people invest most of their worth in their homes. A financial crisis where, for instance, real income falls by 10 per cent means that a considerable group of people experiences difficulties in paying off their loans, as homeowners often cannot simply solve their financial problems by renting a smaller apartment. Housing prices in the capital have fallen by a third in real terms from the end of 2007 to mid 2011. This means that those that owned less than 30 per cent of their apartments in 2007 own less than they owe in 2011. Selling their homes would therefore still leave them in debt.

Historically, inflation has been high in Iceland, and although prices have been more stable in the last two decades than earlier, inflation has remained higher than in most neighbouring countries. To cope with the problems of ever increasing prices and wages, Iceland set up an elaborate index system. Although wages are no longer indexed, the country has since 1979 persisted with indexing most medium and long-term financial obligations. Indeed until quite recently it has been hard to get non-indexed housing loans in Icelandic krona.

Indexed loans have some features that are different from ordinary loans. In the first place repayments are much more stable in real terms than those of ordinary loans. Repayments of an indexed loan are lower in the beginning while they do not fade out in real terms till maturity.

¹ Sveinsson, J. R., 2010. *Kreppa, hugmyndafræði og félagslegt húsnæði*. Íslenska þjóðfélagið:1, pp. 49-68.

This fact gives the average individual the opportunity to buy a bigger apartment at an earlier age than he could with non-indexed loans. Another advantage from the viewpoint of the borrower is that a temporary rise in inflation does not alter real payments. On an ordinary loan with variable interest rates an increase in inflation usually leads to higher interest payments. This can cause liquidity problems for the borrower, if new loans are unavailable. On the other hand, individuals experiencing a temporary income shock can not adjust to the changed situation by pushing payments further into the future as would have been possible with an ordinary non-index loan; if it is difficult to handle payments now they will probably be even harder to manage later with an indexed loan.

3. Primary lenders

The first Icelandic mortgage lending institution that actively served the urban housing market was set up in the year 1900 when the Mortgage Department of the National Bank (Veðdeild Landsbanka Íslands) was introduced. However, the working capital of the Mortgage Department was eroded during the First World War and subsequent inflation, although the fund was revitalized during the 1920s.² The State Housing Board (Húsnæðisstofnun ríkisins) was established in 1955, but had a rather limited lending capacity until the 1980s when a massive build-up of the fund's financial capability was undertaken. The current Housing Financing Fund (Íbúðalánasjóður) was formed in 1999 with a merger of the State Housing Board, the State Building Fund and the Workers' Building Fund.³ The HFF is wholly owned by the state and is the central cornerstone of the government's housing policy which aims to provide affordable and equitable access to housing for all, in particular individuals living in remote regions and low-income households. The fund arranges mortgaged loans to individuals, as well as to local authorities, companies, and non-governmental organizations for the construction and acquisition of rental housing. Loans from the HFF are backed with a state guarantee. The finances of potential borrowers are examined after which they get a pass/fail status. As the HFF does not differentiate between clients, all those that pass are offered the same maximum

loan and the same interest rate, regardless of their finances.

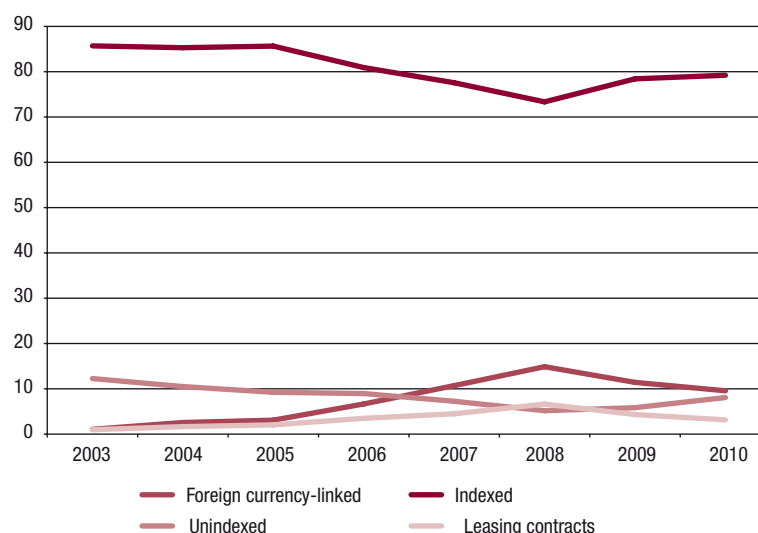
Prior to 2004, the HFF enjoyed a virtual monopoly in the housing markets, with the various pension funds only playing a minor role. In the autumn of that year, however, the banks finally entered the mortgage market. Iceland's three largest banks – Glitnir, Kaupping and Landsbanki Íslands – all began offering mortgage loans, either indexed loans with fixed or variable interest rates or loans denominated in foreign currencies, usually euros, dollars, Swiss francs or yens. The banks offered far more favourable interest rates than HFF. At first, in September 2004, the banks offered 4.2 per cent fixed real interest rates on 25-40 year loans, while the real rate of HFF-loans amounted to

4.5 per cent. HFF replied by reducing the real rate in the next few weeks, and by November both HFF and the banks were offering indexed loans with a fixed 4.15 per cent interest. Most of these loans were annuities, i.e. the real value of monthly payments was set the same for the

whole loan period. However, the real novelty was the foreign exchange rate loans offered by the banks. These were either exchange-rate linked or denominated in foreign currency. The difference may appear trivial but became important in June 2010 and June 2011 when the Icelandic High Court ruled that foreign exchange indexation clauses in domestic currency loans were illegal.⁴ The foreign exchange loans offered by the banks in 2004 carried much lower nominal interest rates than corresponded to the real interest of indexed loans, but were subject to fluctuations in the value of the Icelandic krona (ISK).

In addition, the banks offered at first up to 80 per cent mortgages on houses in the area of the capital and the town of Akureyri in northern Iceland, while HFF offered at most loans representing 65-70 per cent of the purchasing price or a maximum of ISK 10 million. The banks though did not have any such ISK ceiling. By the end of 2004, HFF had raised its loan maximum to ISK 15 million or 90 per cent of the purchasing price. The loans could however in no case exceed the insurance value of the property. The

Figure 1 Composition of loans to individuals in Iceland 2003-2010, %.



Source: Central Bank of Iceland.⁵

² Sveinsson, J.R., 2006. *The formation of urban homeownership in Iceland*, paper presented at ENHR Conference July 2nd – 6th, Cambridge, UK.
See: <https://borg.hi.is/TheFormationofUrbanHousingPolicyinIceland.pdf>.

³ HFF homepage. See: <http://www.ils.is/english/about-hff/>.

⁴ Court decisions nr. 92/2010 and 155/2011

⁵ Financial accounts for financial corporations.

See: <http://sedlabanki.is/?pageid=552&itemid=198dfc1c-a027-4abf-b95f-c51fda8bc5f5&nextday=20&nextmonth=12>.

banks, on the other hand, raised the maximum loan to 100 per cent, with some of them also introducing a loan ceiling.

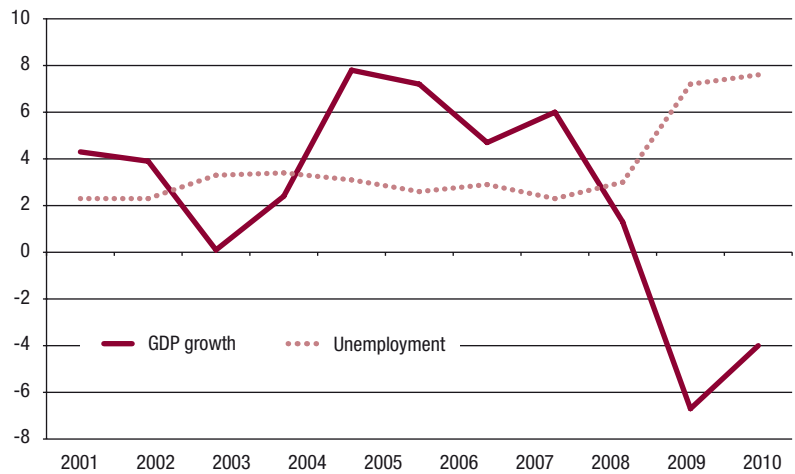
In Iceland, mortgaged loans have had a maturity of either 25 or 40 years. As indexed annuity loans spread the financial burden automatically over the whole loan period, consumers sometimes feel they can afford more expensive properties than in the case of non-indexed loans. The relative stability of the Icelandic krona in the years leading up to the crisis and the low interest rates on the foreign exchange loans had a similarly stimulating effect on housing demand. Big and expensive apartments grew more in price than other kinds of housing. As the bank loans were most generous in the capital area, the banks took over most of the market for housing loans there, while the HFF mainly lent to regions outside of the capital. This fact also ensured that house prices grew the most in the capital.

Icelandic consumers took warmly to this novelty in the loan market and by the end of 2004, the percentage share of foreign currency loans had risen from 1.1 to 2.6 per cent. However, in the next few years there was an explosion in the demand for these loans, and by the end of 2008, almost 15 per cent of all outstanding loans to individuals were in foreign currency. The share of indexed loans had at the same time fallen to 73 per cent.

4. Changes in a new century

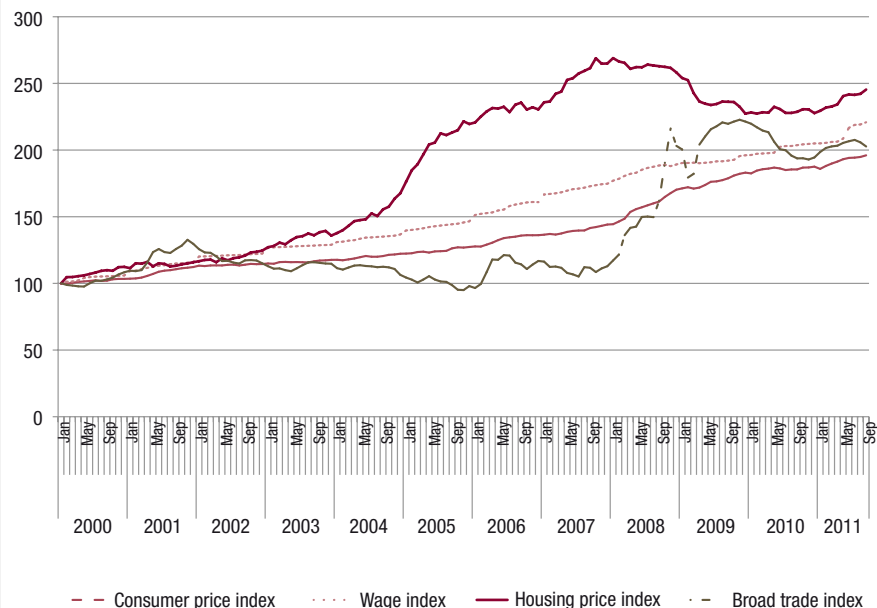
Like most other countries, Iceland experienced turbulent times in the first decade of the new millennium. After the dot.com bubble burst, the Icelandic economy cooled somewhat, not least because of a tremendous fall in the value of the Icelandic krona when the Central Bank abandoned the principle of maintaining a fixed exchange rate in March 2001 and embraced instead the idea of inflation targeting. As Iceland is an open economy, the depreciation affected both private consumption and investment which slumped in 2001 and 2002. A stronger krona in 2003 boosted domestic demand, and easy access to funds in international markets fuelled a tremendous increase in investment and consumption in the next years. During the period 2004-2007, annual GDP growth averaged 6.4 per cent, and by 2008 domestic production was 38.5 per cent higher than it had been in 2000. Real wages rose by

Figure 2 Economic growth and unemployment in Iceland 2000-2010, %.



Source: Statistics Iceland.⁶

Figure 3 Development of consumer prices, wages, housing prices and the Icelandic krona as measured by the broad trade index.



Source: Statistics Iceland, Central Bank of Iceland and Registers Iceland.⁷

23 per cent in 2000-2007 and unemployment which has traditionally been very low in Iceland remained in the 2-3 per cent range.

For Icelandic households the boom manifested itself in rising equity prices and increased debt. During the period January 2000 to October 2007,

⁶ National accounts and public finance statistics. See: <http://www.statice.is/Statistics/National-accounts-and-public-fin/National-accounts-overview> and labour market statistics. See: <http://www.statice.is/Statistics/Wages,-income-and-labour-market/Labour-market>.

⁷ Consumer price index (see: <http://www.statice.is/Statistics/Prices-and-consumption/Consumer-price-index>), exchange rate statistics (see: <http://sedlabanki.is/?PageID=286>) and housing prices (see: <http://skra.is/Markadurinn/Visitala-ibudaverds>).

nominal house prices in the area of the capital rose by 170 per cent while real prices increased by 90 per cent. However, the price increases were mostly limited to the area of the capital and the eastern part of the country, where a big hydroelectric power station and an aluminium plant were being built. While the equity bubble in Iceland was much larger than in most other countries, the rise in housing prices was very similar to the bubble in Denmark and New Zealand. House prices rose faster in real terms than in the United Kingdom and Norway and the Euro-zone in 2004-2007, but when one looks at the period from 2000 to 2007 the price rise is similar.

Icelandic households became increasingly burdened with debt in the years leading up to the crisis. Already in year 2000 Icelandic families owed a bigger part of their income than was the norm in other Western countries. Household debt had grown quite substantially in the previous two decades, but in the pre-crisis years the growth became ever faster. In 2007, mortgage loans in Iceland amounted to 120 per cent of GDP, which was the highest private debt level of any country in Europe and the US. The debt ratio was then close to 100 per cent in the Netherlands and above 80 per cent in Denmark, the US and UK.⁸ Two years later, the ratio of debt to GDP had risen to almost 130 per cent in Iceland and above 100 per cent in the Netherlands and Denmark. The level of indebtedness in Iceland can probably mostly be blamed on the aggressive lending of the Icelandic banks in the boom years, and the low initial financial burden of indexed loans in Iceland, which spurred consumers on.

5. Collapse

The housing bubble began to burst in early 2008, a half year later than the equity bubble. In autumn 2008 the roof fell in and the three big Icelandic banks collapsed. In the next two years GDP declined by a total of 10.4 per cent. Unemployment trebled from 2.3 per cent in 2007 to 7.2 per cent in 2009 and is now expected to remain at 5-6 per cent in the medium term. By the first quarter of 2011, house prices in Reykjavik had fallen by a third in real terms from the last quarter of 2007. What now happened seemed to reverse what had taken place before.

The banks ceased lending out new housing loans. The prices that had increased the most also took the hardest hit, with prices declining most in the capital area and eastern Iceland where building activity was almost double the amount needed for the new aluminium plant⁹. House prices also fell much more than prices of apartments, and more for large apartments than small ones. In the capital area, however, prices have fallen much more at the periphery than in the centre of Reykjavik. Rising prices of gasoline, leading to higher costs of transport may have had an influence here.

6. Rising arrears

Since 2008 the proportion of homes that have loans in arrears or owe rent is up from 5.5 per cent to 10 per cent. The problem is most severe among single parents, with one in five behind in payments of housing loans or rent in 2010 (Statistics Iceland). It is interesting, though, that a similar proportion of people had problems paying off their debt in 2004, at the beginning of the economic boom, when 9.5 per cent of all homes were behind in payments.¹⁰ During the golden years, loans for almost anything could easily be had from the banks and individuals in precarious financial situations could thus finance mortgage payments with new loans.

7. Government actions to assist those facing financial problems

Shortly after the financial crisis took hold in October 2008, the government introduced several measures aimed primarily at households with liquidity problems. These included:

- Deferred payments for 1-3 years.
- Transformation of payments due into new loans with 5-30 years maturity with the same interest rates as the original loan.
- Extraction of the maturity of loans from up to 40-70 years.
- Consumers with index loans could change the indexation from the general price level to the wage index, with the difference being added to the loan.

In 2009 a law was passed offering “special debt adjustment”, a milder form of bankruptcy, but bankruptcy-laws have also been changed.¹¹ Earlier claims never expired, but needed to be kept alive, but now they expire when 2 years have passed from declared bankruptcy. Some maintain that this amendment to the laws has made bankruptcy a much better option than special debt adjustment.

In December 2010, all those who owed housing loans were offered a chance of writing down their debt to 110 per cent of the worth of their houses, provided some conditions were met.¹² The haircut was “usually” limited to 4 million krona for individuals and 7 millions for couples or single parents. However, additional write downs are possible in cases where payments of loans exceed 20 per cent of income after the initial debt reduction.

It should be noted, that foreign exchange loans that were ruled illegal have since in most cases been converted into indexed loans with a fixed or variable interest rate.

8. Changes in the market after the crisis

After the collapse of the three banks in 2008, the HFF regained for some time its virtual monopoly in the lending market. All consumers were thus again facing the same interest rate and the same maximum loan. However, the new banks that were established out of the financial debris have slowly begun offering housing loans again. In the autumn of 2011 one of the banks introduced non-indexed housing loans with 25 and 40 years maturity with semi-fixed fixed interest rates. The rates will remain the same for the next five years, but will then be changed in view of the development of market rates. Borrowers will then also have the opportunity to take other options and either pay up the loan or switch to an indexed loan. Other banks have since followed suit. Non-indexed housing loans are new in Iceland. There has been a popular movement against the use of indexed loans and it will be interesting to follow how these innovations will be received.

⁸ European Mortgage Federation 2008.: *Hypostat 2007 – A Review of European Mortgage and Housing Markets*. European Mortgage Federation, 2010. *Hypostat 2009 – A Review of European Mortgage and Housing Markets*.

⁹ Byggingarannsóknastofnun, 2010. *Rannsókn á samfélagsáhrifum álvers- og virkjunarframkvæmda á Austurlandi*. Rannsóknarrit nr. 9. Lokaskýrsla: Stöðulýsing í árslok 2008 og samantekt yfir helstu áhrif 2002-2008.

¹⁰ Statistics Iceland (2010), *Household finances 2004-2010*, Wages income and labour market, Statistical series 2010:12. See: <http://www.statice.is/lisalib/getfile.aspx?itemID=11925>.

¹¹ Acts nr. 107/2009 and 142/2010.

¹² Act nr. 107/2009 and declaration from December 3rd 2010 on actions to solve the household debt problem. See: <http://www.forsaetisraduneyti.is/media/frettir/1/Viljayfirlýsing-um-adgerdir-v-skuldavanda-heimilanna.pdf>

9. Market prospects

At the start of the year 2011 real house prices in Reykjavik had fallen by a third since the fourth quarter of 2007. Past history indicates that there exists a long-term relationship between the real price of apartments (square meters) in Reykjavik and real wages. As this ratio is at present above its long term average, real prices could fall by a further 10-15 per cent in the next two or three years. However, investment possibilities are limited in Iceland right now. The market for equities has not found its feet again after the collapse in 2007-2008 and foreign investments are unauthorized because of capital controls. That leaves few possibilities for investors except for the housing market. House prices rose by a few percent in real terms from January to September 2011. Real wages are rising slowly and that supports rising house prices. However, hopefully capital controls will soon be lifted and new firms are soon to be registered on the stock market. Thus investors will soon find more varied investment possibilities. One should therefore not be surprised if house prices dropped somewhat again before recovering.

10. Conclusions

Many Icelandic households find themselves in dire straits after being hit by both rising loans and falling property prices. Housing prices have fallen by 30-35 per cent in real terms since their peak in 2007, and could conceivably decline by another 10-15 per cent. With inflation rising in the aftermath of the crisis, many homeowners who took on indexed loans have lost most – if not all – of their equity. To alleviate the situation, the government has introduced various measures aimed at reducing household debt. As many blame the indexation for their plights, the banks have started offering long-term non-index loans, and the HFF will doubtlessly follow suit in the near future. How well these new loans meet the expectations of the consumers remains to be seen. Inflation in Iceland has historically been much higher than in the neighbouring countries, and it is therefore unlikely that financial institutions will in the long-term be able – and willing – to offer non-indexed loans on better terms than the indexed-loans have carried.



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