FOREIGN MORTGAGE STRUCTURES:

descriptions of selected countries' housing lending markets

The publication became possible due to support of the European Union.

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Ukrainian National Mortgage Association (UNIA) was founded on 5 June 2002 in Kyiv. It unites around 30 commercial organisations – nearly 20 leading commercial banks, as well as legal, insurance and real estate companies.

UNIA, being a professional and credible mortgage think tank, provides a uniquely well-placed platform for dialogue between major mortgage market players in order to develop a transparent, well-regulated and efficient mortgage market structure in Ukraine. Together with the Ministry of Finance, the Association is the Project's main official beneficiary and partner.

CONTENTS

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Foreign Mortgage Structures –
inspiration for the development of the Ukrainian mortgage market.

INTRODUCTION

The Ukrainian mortgage market volume is developing rapidly, and is expected to continue to do so in the future. As the market grows, the market structure is deemed to change dramatically as well.

A large number of UNIA's members have expressed the need to acquire fairly detailed knowledge of other countries' market structures for residential mortgages, not for replication but to get inspiration and ideas for further development of the Ukrainian mortgage structure.

The Project has tried to accommodate the requirements by publishing this handbook. Although mortgage structures in various countries have several common denominators, they are on the other hand also often very different due to various reasons, such as due to different historical and socioeconomic background, size of the market, housing market dynamics, and the macroeconomic stage and development, just to mention some of them.

Ten different countries have been chosen for description to present a catalogue for inspiration. These countries have been carefully selected in order to provide as many useful nuances as possible, for instance neighbouring, developing countries close to Ukraine have been selected as well as those of western European countries and the USA.

It is our hope that the handbook will facilitate the needs.
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Chapter 1.

Czech Republic

This paper is based on the following sources:

a. FitchRatings: «CEE Housing Finance: Rapid Growth, but at what Risk?» Special report, November 2005.
a. Dubel: «Contract savings for housing in the Czech and Slovak republics». Consulting work prepared for the World Bank. 2003.
b. Dubel: «Wohnbauforderung in Mitteleuropa (Housing policy in Central Europe)» Wien/Graz. 2004.
c. Websites of the Czech National Bank, the Ministry of Regional Development and of Czech lenders.

1. HISTORICAL OVERVIEW

As a part of the Austrian-Hungarian empire until 1918, the Bohemian banking sector developed the same classes of financial institutions. A dual banking system of savings banks and commercial banks emerged.

The roots of the largest savings bank, Ceska Sporitelna, reach back to 1825, when a predecessor began operating. Savings banks were the depositaries for low-income households and did initially mostly short-term lending. After the 1848 uprisings with ethnic backgrounds, German and Czech financial institutions began to be set up and operated separately. National commercial banks operating in Czech language emerged from this process in the 1860s – the predecessors of today's commercial banks.

Remarkably, Bohemia had already in the 19th century a well-developed secondary mortgage market. The first national mortgage bank (Landeshypothekenanstalt) specialized on issuing covered bonds against mortgage loans was created in 1865, a year before the first such bank in Germany. Other mortgage specialists followed in the coming three decades. Identically chartered – in different languages – were the two, German and Czech, apex institutions of the savings bank system founded in 1901 and 1903. The savings banks were allowed to transfer their mortgage loans by way of cession to these institutions, which in turn funded them through issuing covered bonds.

The creation of a special bank was not mandatory for covered bond issuance. For instance, the Moravian Pfandbriefanstalt of 1891 started as a department of the Erste Mahrische Sparkasse, a savings bank. Austria-Hungary also did not follow Germany's move in 1900 to impose the special bank principle on new covered bond issuers.

The aforementioned institutions survived the first World War and existed until 1948, when a government decree dissolved all banks and the ethnic German element disappeared. The State Bank of Czechoslovakia was created as the central bank, the government's financial agent and the country's commercial bank. It also supervised the other banks in the country and formulated the financial plan for Czechoslovakia. The other banks, also state owned, were subordinate to the State Bank and relegated to special functions. Three additional banks – two of which were savings banks, one for each of the republics, providing credit to individuals – completed the banking system before 1989. Unlike for instance in Hungary, the savings banks did not lend to private homeowners; however, there was lending activity to housing co-operatives.

The post-transition situation saw the dissolution of the state bank and the re-admittance of private banks. Foreign lenders entered early; already in 1992, new legislation enabled Building Societies offering Bauspar contracts after the German model, which lead to the entry of German and Austrian Bausparkassen. In 1995, comprehensive mortgage market legislation was passed that reintroduced mortgage bonds as well as enacted deep mortgage finance subsidies.

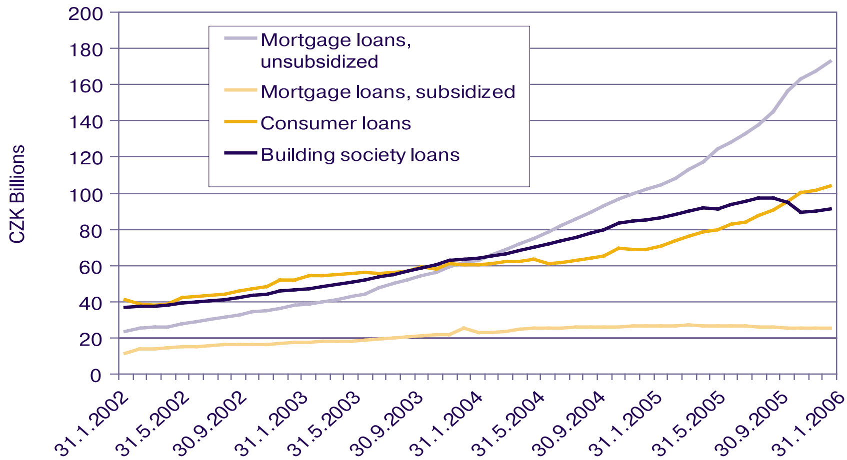
In the further course of the decade, the inefficient management of the remaining state banks, which had excessively focused on corporate lending, and failures of inexperienced new private banks lead to waves of banking crises. Out of the 48 commercial banks operating in 1994 and another six licensed later on, 21 banks had failed by 2003, and except for 2001 and 2002 no year passed without at least one bank failure. This situation favored foreign entrants, who were seen as the remaining credible deposit-takers. In particular, the Building societies experienced a deposit boom. The same was repeated in the early 2000s as their deposit subsidies became deepened, to the point that in 2004 in a country of 10.3 million inhabitants there were 6.3 million outstanding Bauspar contracts.

Between 1998, the date of the last banking crisis, and 2001, finally all state-owned banks became privatized. The savings bank Ceska Sporitelna was sold to Erste Bank of Austria in March 2000 – a savings bank sharing the same historical roots. Other privatizations were made to second-tier foreign banks. International first-tier banks, for instance Citibank, also entered the market on a Greenfield investment basis. Today, the Czech Republic has a foreign-owner dominated banking system, which however is highly competitive providing loans at low interest rates to consumers.

2. SIZE OF THE MARKET

The Czech mortgage market started in the 1990s with a long phase of inertia, despite the fact that the country had the lowest and arguably most subsidized mortgage rates of all transition countries (see section below). Almost 8 years into the inception of reforms, the outstanding housing loans in proportion to Gross Domestic Product (GDP) reached only 3% in 2000. More than half of the outstandings then were loans issued by Building societies; of these, again, a large proportion were not mortgages, but smaller loans taken out for the purpose of topping up a mortgage loan for house purchase or for providing modernization finance.

Figure 1. Outstanding retail mortgages and building society (Bauspar) loans in the Czech Republic, 2002-2005



Source: CNB.

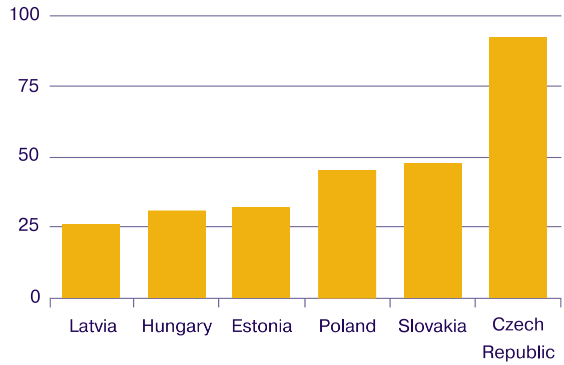
Since approx. 2000, supported by falling interest rates and a new management focus on mortgage lending the market has entered a phase of accelerated growth with mortgages provided by commercial banks as the main driver. Building societies were not able to grow their loan book as strongly as commercial banks due to the limitations of the Bauspar product (see discussion below). In a phase of fiscal stress the Czech state withdrew partially from subsidized lending.

As figure 1 shows, commercial mortgages have been the fastest growing consumer finance item, outpacing loans provided by Building Societies and the segment of publicly subsidized mortgages. In total, outstanding mortgages at of the end of 2005 reached 11.7% of GDP (CNB data), with the entire housing loan market approx. being in the range 14-15% of GDP (author's estimate). These figures are rivaled in transition countries only by Hungary, Estonia and Lithuania.

A part of the growth story in recent years has been that individual mortgage loans are becoming increasingly larger: the number of new loans in 2005 rose 'only' by 24 percent while their volume increased by 39 percent. A part of this trend is related to house price growth – officially only approx. 4% p.a., however, with lending being concentrated in the large cities where house price levels are higher and stronger growing. In connection, borrower leverage has been growing.

Still, the number of households obtaining a Bauspar or mortgage loan is relatively limited. For instance, there are 570,000 borrowers from Building societies standing against close to 6 million savers. One factor frequently quoted is strong debt aversion, with individuals traditionally resorting to their family for assistance in the acquisition of new homes. The current strong growth of mortgage lending could indicate a gradual change of this attitude.

Figure 2. Housing loan growth in Central Europe and the Baltics, 2004-2005 in %



Source: Fitch (2005)

Most housing loans serve for house purchase (70% of lending), only in the case of Building society loans a larger share (approx. 50%) are modernization loans. Refinancings start to gain relevance only very slowly, due to impediments against lender switching and the short terms of interest rate fixings.

3. HOUSING AND MORTGAGE MARKET LINKAGE

Despite the recently strong mortgage market growth, house prices in the Czech Republic have shown relative moderation compared to many other transition countries. Official statistics, which are lagging for two years (see table 1), indicate growth in the range of 15-22% p.a. in the earlier part of the decade. Real estate agents suggest price growth of 7-9% in Prague for 2005, which is just slightly above the growth rate of nominal GDP and disposable incomes.

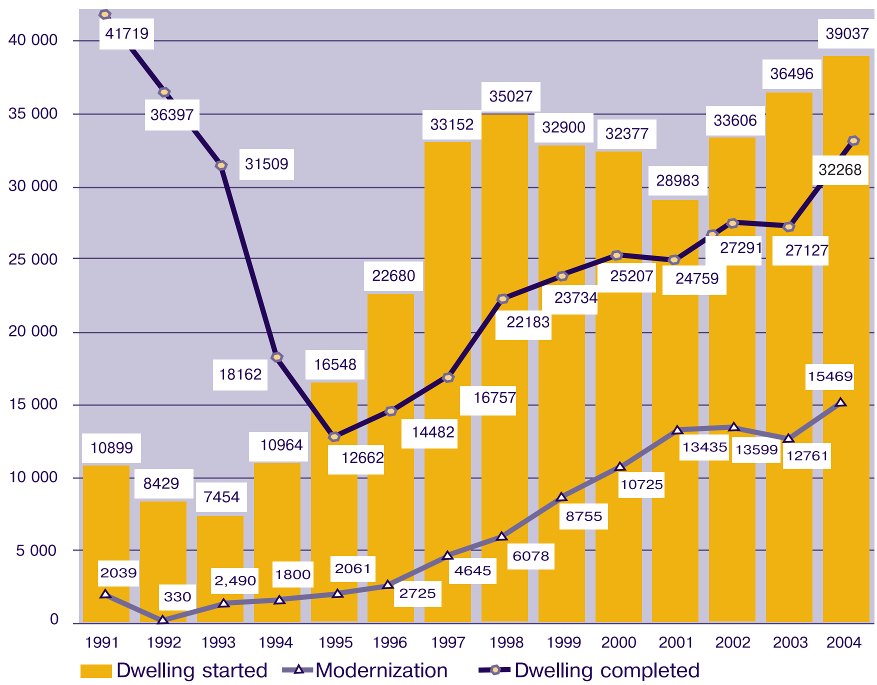
Table 1. Prague house price development 1998-2003

Year	1998	1999	2000	2001	2002	2003
Prague house prices Q IV	100	102,2	117,4	143,6	167,6	196,4
Growth, per annum		2,2%	14,9%	22,3%	16,7%	17,2%

Source: Ministry of Regional Development. Note: transactions-based survey.

The demand-enhancing impact of the rising mortgage market activity was, however, felt during the first years of the current decade as it met a sluggish housing supply side. For completion data, see figure 3. New construction, however, then picked up strongly in 2004 as the strong housing start pipeline that developed since 2002 with the help of the lending boom materialized. This new supply apparently has moderated house price growth considerably. Despite the obvious time lags, the data situation indicates a relatively elastic land and housing supply. The growth of both mortgage demand and new construction activity are relatively equally distributed between family homes and urban apartments.

Figure 3. Construction and modernization activity levels in the Czech Republic, 1991-2004



Source: Ministry of Regional Development.

A significant moderating factor for prices in the long-term is that housing demand pressure is less pronounced in the Czech Republic than in many other transition countries. According to analysis by Dubel (2003), relative to Poland and per inhabitant there was only half the demand coming to the market from sources such as reduction in overcrowding (households doubling up in single units), demographic trends and the decline in household size. For instance, the average household size in the Czech Republic in 2001 was already as low as 2.59, lower than in many Southern European countries. Because of the absence of permanent demand pressure, the extreme scarcity motives driving prices in the early 1990s almost disappeared. As of 2005, housing is mostly seen as a long-term investment; however, surveys report that interest in this investment is strong, with 55% of the adult population planning a house purchase, modernization or reconstruction.

Thus, a steady house price growth trend is likely, in particular in the urban centers, which are in high demand by young households leaving the countryside, opting for better job opportunities while accepting higher housing costs. Vacancy levels in the country as a whole are in the range of 10-15%, most of this however in the countryside.

The losers in this process are the inhabitants of the 2.1 million apartments built between 1945 and 1990 with industrial methods, often far from city centers, into which little investment is made. These buildings, approximately 58% of housing stock as of 1991, are deteriorating at a rapid pace; social segregation and stigmatization is strong, and prices for the few sales from this stock are very low.

4. MARKET STRUCTURE

Commercial banks and Building Societies are the two main housing loan institution groups on the Czech market.

As figure 1 shows, commercial mortgage lending is a latecomer. A trigger event for the market was the decision of the new management of Ceska Sporitelna after its privatization to start undercutting competitors' mortgage rates in order to capture market size. CS is by far the largest Czech retail bank by deposits with almost 12 million accounts, but is only the second largest mortgage lender.

The largest is still CSOB, the largest commercial bank, which in turn is owned by the KBC group of Belgium. CSOB owns CMHB, the Bohemian-Moravian Mortgage Bank, a real estate specialist that became the first covered bond issuer in 1996 and a pioneer in the mortgage business. CSOB also is an active lender to housing co-operatives.

Komercni Banka, the second largest bank, Raiffeisenbank, GE Money Bank and HVB follow the leaders CS and CSOB/CMHB. An interesting emerging player is Hipotecni Banka, whose balance sum rose by 50% in 2005, boosted by an increase in mortgage loans provided and mortgage bonds issued. The bank co-operates closely with Citibank, in a similar model as in Germany, which brought together Citibank and specialist BHW.

The Czech commercial mortgage market also has seen the emergence of 'direct' banks, such as Ebanka, which originate loans primarily via telephone or online.

Building societies are required to be special banks under Czech law, as their counterparts, the German Bausparkassen. All six Czech societies are subsidiaries of commercial banks, sometimes as joint ventures of several of them; as in the commercial mortgage market, the subsidiaries of CSOB/CMHB and CS are here the market leaders. As figure 1 demonstrates, however, the lending market share of the societies as a whole has declined from 50% in 2002 to under 30% in 2005.

The main product of Building societies is the Bauspar contract. Investors in such a contract typically save below market deposit rates in order to eventually receive a below-market loan from savings pool – however, in the Czech case, following the Austrian subsidy approach to Bausparen, the subsidies extended to the savers were so large that no losses are incurred during the savings phase. In phases of rate declines, the already high premia turned into huge subsidies attracting masses of savers. Virtually every Czech adult now has closed such a contract, and deposit growth has been dramatic – as table 2 reports.

Table 2. Building society loans and deposits in the Czech Republic, 1995-2005

Year	1995	1997	1998	1999	2000	2001	2002	2003	2004	Jun-05
In million CZK										
Loans	95	7523	18368	26606	31007	38692	51583	63597	84184	93721
Of which: Interim loans		5200	14900	17900	16800	18500	24400	38498	55449	64137
of which: Bauspar Loans		700	2700	8400	14200	18500	21900	25099	28735	29584
Loan growth		7819%	144%	45%	17%	25%	33%	23%	32%	11%
Bauspar deposits	17154	59600	81700	93600	110400	133300	180200	236815	287077	304742
Loan-to-deposit ratio	0,69%	12,62%	22,48%	28,43%	28,09%	29,03%	28,63%	26,86%	29,32%	30,75%
Interim loans to total loans		69,12%	81,12%	67,28%	54,18%	47,81%	47,30%	60,53%	65,87%	68,43%

Source: Czech National Bank, author's calculations. Note: interim loans are loans provided at market rates with the purpose to bridge the phase between investment and eligibility for a Bauspar loans (minimum savings period for subsidy and loan eligibility).

The Building Societies on the other hand are constrained in investing their funds in loans to savers, which are proportional to the (small) savings volume and hence can only top up a first mortgage or fund smaller investments such as in land or modernizations. This leads to extremely low loan-to-deposit ratios. Faced with a huge liquidity surplus created by the savings subsidies, the institutions recycle the excess into the mortgage market (see also discussion below).

A third lender category with a market share now under 10% is the public sector, with loan programs financed by the state and occasionally co-financed by municipalities (see section on subsidies). A State Housing Development Fund created in the mid-1990s with an endowment from property privatization proceeds was closed down under pressure from the IMF in 2002 amidst allegations of generating extra-budgetary commitments that could threaten fiscal stability. The State Development Bank continues to run the mortgage loan programs intended to be given through the Fund.

5. DISTRIBUTION AND PURCHASE PROCESS

Competition in the Czech Republic has strongly increased, leading to widely differing lending criteria and rates – so using an independent loan broker has become a popular distribution channel for consumers.

The first and largest broker in the market, Hyposervis started in 1998, one of the first clients being mortgage specialist CMHB. The company can be held to have promoted market development as it made mortgage rates and conditions better comparable between lenders. It claims that 65-80% of loan conditions of Czech lenders are identical, forcing borrowers to focus on the remainder in order to identify the right product and lender. Lenders also react to greater transparency by starting to differentiate their products and prices. Hyposervis claims to have been involved in 50% of Prague new construction sales in 2004; while the arrival of other brokers should have reduced that share, the relevance of the broker channel as a whole in originations is probably about that size.

The large retail lenders such as CSOB and CS are trying to find a balance between using brokers and e-banking channels on the one hand and networks of its traditional branches on the other. Parallel to branches they use tied agents: a subsidiary of CS, for instance, is Realitni spolecnost Ceske sporitelny, is a residential real estate agency present in all regional cities.

In every mortgage application, Czech lenders looks for suitable collateral and borrower creditworthiness. Suitable collateral is a privately owned property (versus cooperative or state owned or a share in an existing company), free of third-party rights, with a bank valuation supporting the size of the mortgage. The maximum value of a mortgage loan is limited by the 1995 legislation to 70 percent of the market value of the property; larger loans are available, but then split between below and above (non-mortgage) 70% portions funded and classified differently.

Borrower creditworthiness is documented by proof of income and wealth situation and a track record on loan or rent payments. Loan repayment data are double-checked with the Czech Banking Client Information Register, which contains both positive and negative information on consumer payment morale. Usual documentation requirements then include a letter from the employer confirming position, duration and income, bank statements showing income being paid in as well as deposit monies, confirmation of other income if applicable (e.g. from letting other property), and details of the property to be purchased. Loans for borrowers with missing documentation are available now, though.

The loan amount is in principle only released against registration of mortgage with the relevant land registry. The Czech land registry (Cadastre) assumed that responsibility for real estate transactions registered after 1st January 1993. Although the system has been fully computerised since the late 1990s and registration time has considerably shortened, indications of the register are generally double-checked by the lender.

Some banks, but not all, require life insurance to be assigned to them to secure repayment of the mortgage in case of death of the borrower. Cross-selling of life insurance through an insurance company linked to the originating bank is very popular, as are the related kick-backs for the originating bank.

5.1. Product range

5.1.1. Credit curve/target group

The first ten years of the Czech mortgage market development were characterized by a strict prime quality lending focus of both banks and Building Societies. The loan-to-value limit of 70% was strictly adhered to. Debt service to income ratios were handled conservatively, with 30% being a typical limit. In case of rental properties, rental income had to cover 120% of the monthly installments. Any deviation from the typical underwriting limits required additional sureties or income proof to be provided by the borrower.

Building societies were equally conservative in underwriting as banks, since the value of prior savings as a signal for creditworthiness was close to zero in an economy where practically every household held a Bauspar contract.

However, the market became relatively early used to lend to borrowers with stretched income conditions. Three-quarters of loan clients are between the ages of 26 and 45, with young first-time buyers playing a significant role in an environment with very limited rental housing availability due to harsh rent controls. While government programs were made available for those young households, commercial lenders in parallel started addressing them – especially after 1998 when the decline in interest rates provided greater room for affordability.

Around the same time, specialized banks such as CMHB and HB started to provide a larger range of products, payment options, and generally a more individualized approach to clients compared to universal banks.

The non-standard lending market initially focused on providing higher LTVs. Hypotecni banka (HB) was first to offer to Czech customers a hundred percent mortgage in 2002. Since then a wider range of subprime mortgages have become available, including insufficient documentation mortgages (targeted to free-lancers etc.), home equity loans (called 'American' mortgage) and loans for elderly borrowers.

Introduced by several Czech banks in 2004, the 'American mortgage' is a loan that can be used to finance consumption or non-housing investment, as long as the client is willing to pledge his house or another property. The interest on this home equity loan is lower than that on a consumer loan – most banks currently offer a rate of around 7 or 8 percent, however it is also almost double the rate for a standard mortgage loan.

In 2005 some banks started target older clients, pushing the maximum age at full repayment beyond the previous standard of 65 years. Clients older than 50 years for instance make up now for 15 percent of GE Money Bank's portfolio, which is especially targeting this market. Lenders are particularly interested in older buy-to-let investors aiming at generating an additional source of retirement income.

5.1.2. Amortization

The Czech market started with full repayment mortgages with maturities ranging between 5 and 15 years. As of 2006, 20 year mortgages are common and 30 year mortgages are available.

Interest-only loans that are repaid only at final maturity have not played a greater role so far, despite the gracious levels of mortgage interest deductibility. However, the Dutch lender ING since February 2006 offers a mortgage loan combined with Unit Linked Insurance, a repayment vehicle designed to repay the loan at final maturity. Such combinations are very popular in the Netherlands, where mortgage interest is tax-deductible as well. The product is offered in cooperation with Raiffeisenbank under the name Orange Mortgage Investor.

Flexible repayment mortgages are also now available for up to 100% of the property value, e.g. from Citibank via Hipotecni Banka. The repayment schedules here can be freely changed within the limits provided by the lender.

5.1.3. Interest rate adjustment

Contrasting strongly with neighbouring high-inflation Poland, or Russia, low-inflation Czech Republic started with a primarily local currency denominated mortgage market. As of 2005, the foreign-exchange denominated loan market share is approx. 10-15% – most of the clients are expatriates or foreign-exchange earners.

The overwhelming rate adjustment schedule is by fixing interest rates to term, for 1, 3 or 5 years. The loan conditions then are rolled over by the bank, with the consumer having the right to prepay and switch the lender. Abandoning lenders that try to overcharge on renewing the fixed-rate term is difficult however, because of the relatively high transactions costs (esp. re-underwriting costs with new lender) and banks being less than helpful to support a switching borrower. Roll-over arrangements with rates fixed over a benchmark, e.g. the widely traded 5-year mortgage bonds, do not exist.

On the long end of the interest rate curve, fixed-rate offers up to 30 years have been recorded. The most typical interest-rate binding period, however, is 5 years. As interest rates are gradually increasing from their 2003-2004 trough, demand for shorter fixing terms has been strengthened. However, the yield curve – the difference between short-term and long-term rates – has remained relatively flat, limiting this trend so far.

Prepayment of a mortgage in full or in part is possible without indemnities when the interest rate reprices (after 1, 3, 5 years). Borrowers prepaying within the interest fixing period (e.g. after 3 of 5 years) are charged a yield maintenance indemnity, which can be as high as the loss incurred by the bank when reinvesting the funds.

6. PRICING

6.1. Transactions costs

Czech banks usually charge an origination fee about 0.8% of the loan up to a maximum of 25,000- 30,000 Czech Crowns (approx. 1,000 Euros). Most lenders, however, offer an origination fee discount to consumers holding other products with the company, such as credit cards.

Building societies charge origination fees of usually 1%, payable however at the beginning of the savings phase, which precedes the lending phase by between 2 and 5 years.

Notary fees for handling mortgage contracts are in the region of about 12,000 to 15,000 Crowns. The Czech lien registration system is slow and the banks normally require a separate notarial deed to be signed to accompany the mortgage. This document gives the banks the right to repossess the property in the event of default.

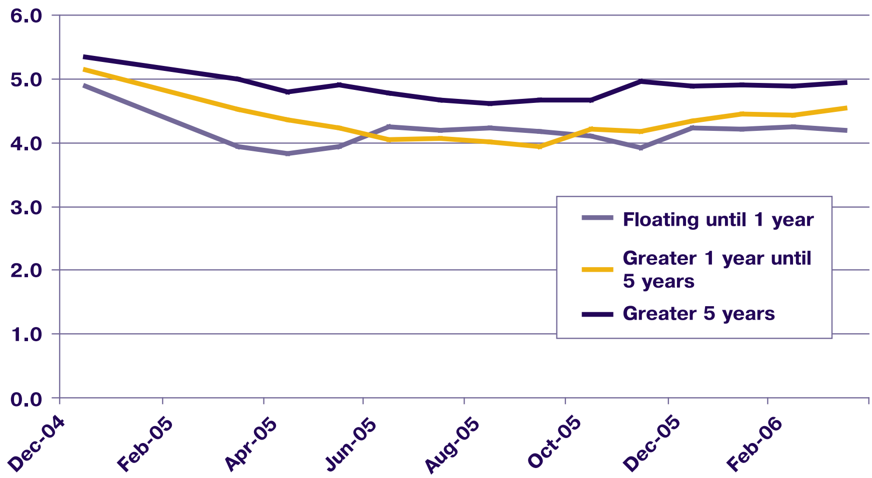
The competition between banks at present is focused mainly on acquiring new clients. Competition over clients switching between banks is practically absent and made difficult by high fees. Because of the assumption of collusion against clients behind this fee structure, Czech banks come under scrutiny by the State Monopoly Commission.

6.2 Interest rates and spreads

The combination of large subsidies, strong capital inflows and currency appreciation, as well as conservative monetary policies has brought to the Czech market one of the lowest interest rate levels in Europe.

After the end of the last banking crisis in 1998, interest rates declined precipitously. 5-year fixed mortgage rates had dropped to levels of below 4% in 2004 and are still currently only around 5%-5.5%. 1-year interest fixings are still 80 -100 bp more inexpensive. Short-term deposit rates have not increased above 2% since 2002, the 3-month interbank rate PRIBOR stood at 2.08% in March 2006.

Figure 4. Mortgage interest rates in the Czech Republic around 2005, by rate fixing term



Source: CNB

7. FUNDING

7.1. Funding instruments

Deposits

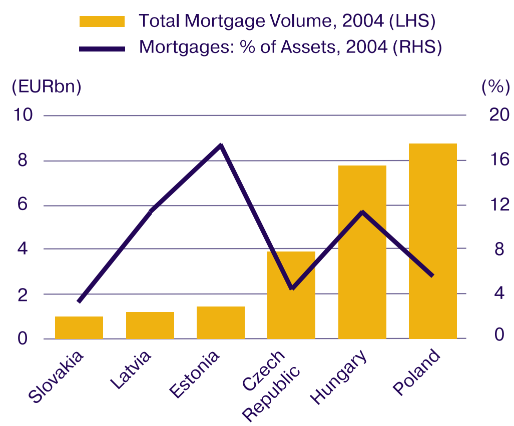
As in other transition countries, the Czech banking system continues to be overliquid and thus deposits are the main funding instruments for mortgages, even if a large proportion of deposits only indirectly fund mortgages through investments in mortgage bonds. Figure 5 gives an indication of the room for maneuver with 2004 data, although mortgage market growth has absorbed some of the excess liquidity in 2005.

An evident driver of the situation is the massive excess liquidity accumulated by the Bauspar system – especially in the years between 1998 and 2003, when a Bauspar deposit would yield 12-14% while bank deposit rates dropped to 2%. The Building societies were unable to invest these deposits in loans if the goal was to halfway meet their own lending eligibility criteria and manage credit risk.

Major distortions of the funding structure were the result: in a first round effect, the subsidies generated excess deposits, which were recycled by the Building societies into holding securities or interbank loans issued by mortgage lenders. In a second round effect, the resulting declining mortgage rates, in developments paralleling those in neighbouring Germany and Austria, discouraged Bauspar savers to take the Bauspar loans for which had become eligible. This further aggravated the liquidity situation. At the end of 2005, the excess liquidity held by Building societies in securities and interbank loans amounted to approx. 8% of the Czech GDP. Due to much stricter subsidy rules and more active lending policies the problem did not occur in neighbouring Slovakia, which inherited the same legislation from Czechoslovakia before the split on 1.1.1993.

Other factors that usually encourage deposit over bond funding are less present, as the Czech Republic also strongly subsidizes covered bond issuance.

Figure 5. Mortgages to total bank assets and total mortgage volume 2004 in Central Europe and the Baltics



Source: Fitch. Note: LHS – left hand side, RHS – right hand side.

Covered bonds

The law of 1.July 1995 created a name protection for the new Czech covered bonds (Zastavni List). Connecting with historical precedence, no special bank principle was imposed on issuers; rather, their number was limited through a licensing process. While a special bankruptcy preference for covered bond holders was established in the law, in another deviation from practice elsewhere in Europe (except Spain), initially no specific asset cover for the bonds had to be created. This requirement was added, however, in a 2003 reform. Other peculiarities persist, such as the absence of special valuation requirements and the relatively lenient maximum LTV ratio of 70% of the market price.

The accommodating legal framework of the bond combined with generous income tax exemptions for both issuers and investors created demand by issuers for using covered bonds from the start. So far, bonds were issued by 7 banks; activity is today limited to CMHB, CS, Raiffeisenbank and Wuestenrot. The pioneering issuer HVB dropped out of the system in 2001 in protest against tax disadvantages for foreign investors. The last available statistics for the end of 2004 show € 1,95 million in outstanding mortgage bonds, which compares to over € 10 billion in outstanding Bauspar deposits alone. In 2005, at another nadir of the interest rate cycle, issuance activity experienced some increase. Typical covered bond terms are currently 3-5 year, fixed rate, coupon rates are generally below 5%.

Other funding instruments

Mortgage-backed securities have not been enabled so far legally in the Czech Republic. Agency bonds were planned to fund mortgages provided by the State Housing Development fund, which was closed however, before implementation. The State Development Bank partially funds itself through agency bond issues.

7.2. Investor structure

Due to the absence of income taxation for mortgage bond investors, foreign investors are discouraged from buying Czech mortgage bonds. Low mortgage bond yields reflect the tax exemption, but are however insufficient to compensate for taxation in the home countries of foreign investors.

Mortgage bonds have been partially auctioned and partially placed to institutional investors in the Czech republic, pension funds and insurance companies. Placements appear closely linked to the needs of the Building societies to invest their excess liquidity.

8. RISK MANAGEMENT

8.1. Credit risk

High corporate defaults in the 1990s encouraged Czech banks to move into consumer finance – this development reduced their non-performing loan levels from more than 20% in the 1990s to around 5%. Within consumer finance, anecdotal evidence suggests that mortgage finance features by far the lowest default levels.

Defaults at Building societies are separately recorded by the CNB and have oscillated between 1.5-2% in recent years. Those years were characterized by attempts by some societies to improve their loan-to-deposit ratios by relaxing loan standards – which reportedly in one case lead to default levels around 4-5%. Still, considering the wide range of eligible savers and the associated borrower screening problem, Bauspar loans must be considered as low-risk.

The picture becomes less clear as far as loss-given-default levels are concerned, on which there is no data available due to low default caseload and lender intransparency. The risk of a strong fall in prices in the real estate market seems smaller than in other transition countries due to relatively fair valuations; however, a cyclical downturn caused by rising interest rates is not unlikely. In this case, the relatively lenient loan-to-value ratios and the predominant use of market prices as valuation proxies may cause problems for lenders that aim at recovering their outstanding loans.

Lenders seem to be more acutely aware of the deficiencies of the legal system, which makes foreclosure a problematic issue. While notarial deeds demanded by lenders at closing usually give them the right to repossess the property in the event of default, rather than going through an unpredictable and extremely slow foreclosure process, a property with a sitting tenant may be of little worth in a country where rents even in the most prestigious quarters of Prague are limited to approx. € 1/sqm and tenants are comprehensively protected against eviction. Testing these legal conditions might become a painful process for lenders going forward.

8.2. Interest rate risk/prepayment risk

The availability of long-term Bauspar deposits and mortgage bonds provides long-term finance up to 5 years to Building societies and mortgage lenders. The funding shares of both instruments combined render the presence of large amounts of interest rate risk on the balance sheets of lenders unlikely, even with a fast growing market present. This is probably the greatest upside of the massive subsidies provided by government.

In the case of Building societies, interest rate risk could become a problem in a scenario of strongly rising interest rates. Higher rates could provoke many of the close to 6 m savers to draw down the loans, for which they are eligible. Such lending volumes would meet a situation where – after the recent subsidy cutbacks and with rising deposit rates – significantly less new liquidity is available while other matured Bauspar contracts have to be paid back. In that situation – of positive transformation risk – building societies could be forced even to issue, rather than buy, long-term bonds on the market.

The indemnities charged usually for the early redemption of mortgage loans (within the interest rate fixing period) defend matched-funded lenders issuing mortgage bonds against interest rate risk. Level and justification of prepayment indemnities is hotly debated between consumer groups and lenders.

9. PROCESS EFFICIENCY

Czech banks were notorious for their operating inefficiency in the 1990s, which was a major factor provoking the banking crises. With the privatizations of the current decade, foreign owners started the slow turnaround of state bureaucracies to client-oriented banks with modern back-office functions. Increased reliance on third-party origination and call center banking have resulted from the process already. Outsourcing of loan servicing functions has not yet occurred but seems only a question of time, given the margin pressure.

Margins in the Czech mortgage sector are now as thin as in the more advanced Western European markets, rarely exceeding 100 bp. Moreover, Czech banks rarely mismatch their mortgage portfolio, which deprives them of another source of intermediation profit.

Building societies in contrast are able to reap somewhat higher margins. As table 2 above shows, 2/3 of their loans are interim loans, which carry market interest rates, and not below-market Bauspar loans. However, their entire deposit base is made up by below-market Bauspar deposits. Yet, there is pressure to adjust the terms of new Bauspar contracts, and therefore margins are also declining here.

10. SUBSIDIES

Despite overall moderate public housing subsidy levels of approx. 1% of GDP, mortgage market subsidies in the first 15 years of transition in the Czech Republic were among the highest recorded worldwide. Much of these subsidies were channeled through non-budgeted instruments such as tax support and guarantees. This policy brought the country repeatedly into conflict with the European Union and the IMF.

Although the Czech Republic started with the lowest capital market interest rates of any transition country, policy makers were strongly motivated from the start to subsidize interest rates further down to what was perceived as 'affordable' levels. This was problematic, however, since the presence of the most severe rent controls of any transition country kept even the most affluent households for years in their deteriorating apartments – whatever mortgage market rate levels would be, their housing costs would have multiplied. Policy makers reacted to this dilemma by adding to mortgage subsidies, rather than lifting rent controls.

Mortgage interest deductibility was introduced in 1991 and continues to exist today, both for commercial mortgages and the already subsidized Bauspar loans and interim credits. Under specific conditions the borrower's tax base can be reduced by the annual amount of mortgage interest paid – up to a high CZK 300 000 per year (€12,000). According to MoF analysis of 2004, more than 80% of these subsidies accrued only to the top 10% of income earners.

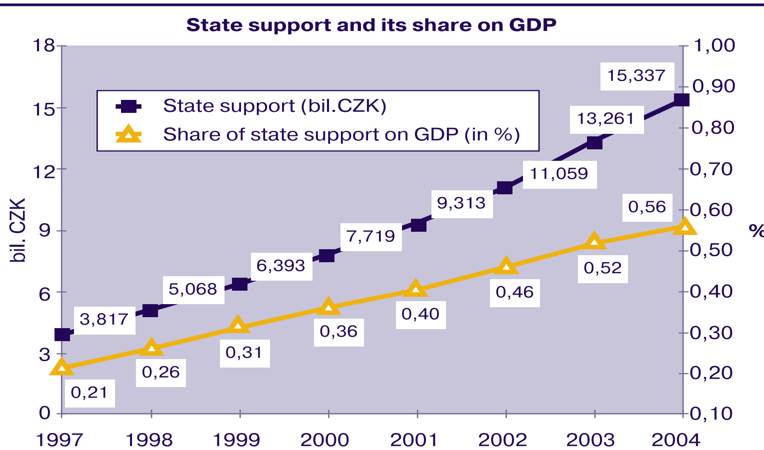
In the mid-1990s, at market interest rates around 10%, a program was launched that paid mortgage lenders the difference to an interest rate deemed affordable for borrowers – that rate level was chosen arbitrarily at 7%. The plan was to eliminate the program once market interest rates reached 7%, and in fact the program was terminated in 2004 when this happened. Discussions continued, however, whether to revive it, at a still lower target rate level.

The use of mortgage bonds as funding instrument became in addition subsidized. Issuers were exempt from paying corporate income tax on their mortgage portfolio if they used bonds to fund it. Also, investors were exempt from income taxation on the interest revenue received. This had a negative impact on the investor structure, however, as described above.

The largest subsidy was a budgeted grant. Figure 6 gives an overview over the ballooning state expenditures on savings premia for Bauspar contracts. A premium level of 25% was enshrined into the 1992 enabling law, rather than into annual budget law – as in Slovakia, which inherited the same law but immediately changed the subsidy structure. The maximum after-tax-after-subsidy yield of the 5-year savings contract with a typical 3% savings rate thus became equivalent to a 12 – 14% market investment. Initially, such rates were only 20-30% higher than deposit rates. However, after the 1998 banking crisis was resolved, deposit interest rates fell precipitously to around 2% (subject to 15% withholding tax), which induced an sheer explosion of new Bauspar contracts. By 2004 in a country with a population of 10.3 million, 6.3 million contracts were issued. Of these, only a fraction were held by households with plans to invest in housing. Subsidies in the meantime rose to almost 0.6% of GDP – more than half of all budgeted housing subsidies.

Against significant parliamentary pressure – taking the subsidy had become

Figure 6. State support for Bauspar contracts in the Czech Republic



Source: Ministry of Housing and Regional Development of the Czech Republic.

the second Czech national sport after soccer – the MoF finally managed to introduce a cut of the Bauspar premia to 10% for contracts closed from 2004 on. Predictably, demand collapsed, from 2.1 million new contracts in 2003 alone – of which at least 1 million closed in anticipation of the subsidy change – to 315,000 in 2004 and probably not more -figures are as yet not released – in 2005.

In the medium term, while subsidies for conventional mortgages are under threat, some level of subsidies for Bauspar contracts is likely to survive as borrowers from Building societies tend to have lower incomes and the loans are perceived as fulfilling social objectives.

The State Housing Development Fund and after its closure the State Development Bank, as well as co-financing municipalities, also extend various subsidized mortgage programs to certain target group. For example, homebuyers under 36 years of age received a low-rate second mortgage. In 2004, when new housing costs increased more strongly, the eligibility criteria of the program were extended to the purchases of older flats or houses. Other low-interest programs often co-financed by municipalities target housing modernizations of old houses or the industrialized housing stock.

List of Acronyms

ARM . . . . .Adjustable-rate mortgage
BHW . . . . .Beamtenheimstattenwerk
CMHB . . . . .Cesko-Moravska Hipotecni Banka (Bohemian-Moravian Mortgage Bank)
CNB . . . . .Czech National Bank
CS .Ceska Sporitelna
CSH . . . . .Contract savings for housing
CSOB . . . . .Ceskoslovensko Obchodni Banka
CZK . . . . .Czech Crowns
FRM . . . . .Fixed-rate mortgage
GE .General Electric
HB .Hipotecni Banka
HVB . . . . .HypoVereinsbank
IMF . . . . .International Monetary Fund
GDP . . . . .Gross Domestic Product
KB .Komercni Banka
MoF . . . . .Ministry of Finance
MBS . . . . .Mortgage-backed securities
PRIBOR . . . . .Prague interbank offer rate
RMBS . . . . .Residential mortgage-backed securities

Chapter 2.
Denmark

This paper is based on the following sources:

a. Association of Danish Mortgage Banks: «Annual Report», 2004
b. Association of Danish Mortgage Banks: «Danish Mortgage Bonds», May 2005
c. Association of Danish Mortgage Banks: «Mortgage Financing in Denmark», May 2005
d. Association of Danish Mortgage Banks: Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006
e. BRFkredit Denmark: Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006
f. Danish FSA: Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006
g. European Mortgage Federation/Mercer Oliver Wyman: «Study on the Financial Integration of European Mortgage Markets», October 2003
h. RealKredit Denmark: Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006
i. Totalkredit Denmark: Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

1. HISTORICAL OVERVIEW

The first Danish mortgage bank was funded in 1797 as a consequence of the great fire of Copenhagen in 1795, when 900 properties burned to the ground and many others were damaged. The first Danish Mortgage Credit Act was passed in 1850, and the banks of that time were associations of borrowers with joint and several liability. The institutions were allowed to grant first-mortgage loans up to 60% of the value. At the end of the 19th century a number of second-mortgage institutions were set up with the purpose of supplementing the lending up to 75% of the value. After WW 2, both the first-mortgage and second-mortgage institutions were very reluctant to grant loans. In 1959 a number of special, third-mortgage institutions were therefore se up, which were different from the other institutions in that the borrowers did not have joint and several liability.

The introduction of the Danish Mortgage Credit Act in June 1970 resulted in massive changes. But the biggest change was that the Act stipulated that Denmark was to introduce standard mortgage finance so that a borrower would not be required to take out loans with more than one mortgage bank. At the same time the 25 mortgage banks were reduced to 7 institutions. A major change in legislation took place in 2003 when the Danish Financial Services Act was passed. After the introduction of the new act, the Danish Act on Mortgage Bonds and Mortgage Loans and the Danish Financial Services Act constitute the legal framework behind the Danish mortgage banks. The Mortgage Credit Act contains together with executive orders issued pursuant to the Act the central and detailed regulations of the mortgage banks' activities. The regulations have been drawn up with the prime consideration of the security of the bond holders in mind. In this respect the Danish Financial Supervisory Authority plays an important role. Among other things, the main task is to supervise that the financial legislation is observed, and this is based on information reported by the financial institutions or from inspections on site. The Authority has designed a rating system for each type of financial institutions, and a low rating can trigger increased supervision.

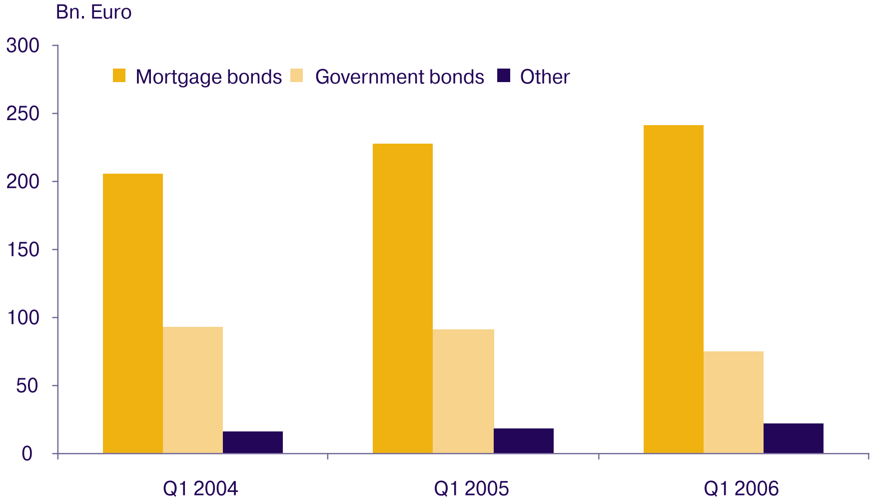
Today all mortgage banks are organized as limited liability companies.

According to the credit act, mortgage activities are defined as follows: «The granting of loan against a registered mortgage on real property where the provision of capital takes place through the issuing of bonds». Loans granted without issuing of bonds are therefore not a mortgage activity from a legal perspective. This definition is very different from other countries'.

2. SIZE OF THE MARKET

The Danish mortgage bond market is one of the largest in the world:

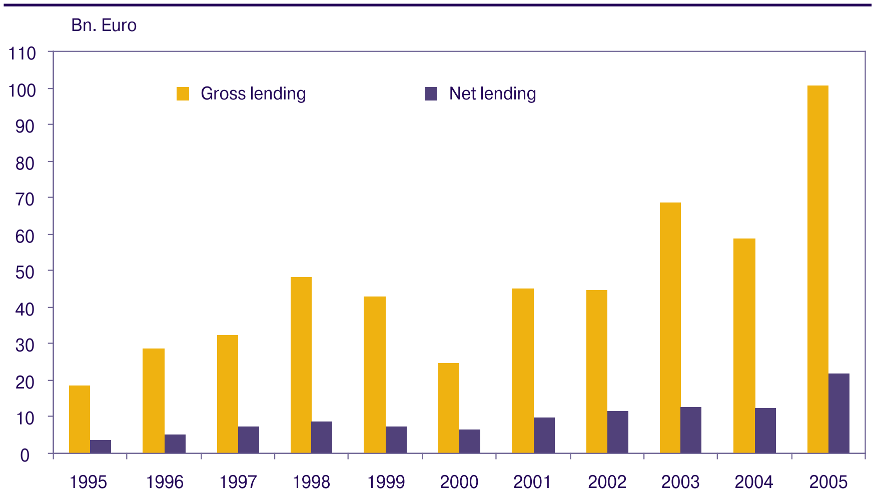
Figure 1. Bonds in circulation



Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

Below is depicted gross and net lending, where the difference is due to remortgaging due to falling interest, see section 7 for further explanation.

Figure 2. Gross and net lending



Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

The distribution of loans outstanding by property categories are as follows:

Table 1. Volume of loans outstanding (outstanding bond debt) by property categories 2001-2003

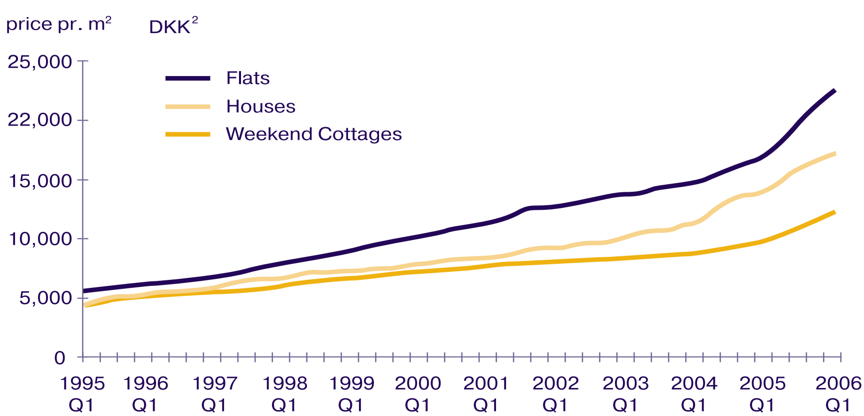
	2001	2002	2003
	Percent	Percent	Per cent
Residential properties weekend cottages included	57.8	58.2	58.4
Farms etc.	11.0	11.4	11.4
Private rental	6.4	6.7	7.2
Commercial	11.8	11.5	11.4
Subsidized housing	13.0	12.2	11.6
Total	100.0	100.0	100.0

Source: Realkreditradet (The Association of Danish Mortgage Banks)

3. HOUSING AND MORTGAGE MARKET

The development in housing prices is an important background to understand the large increase in mortgage lending over the last decade:

Figure 3. Development in housing prices[2]



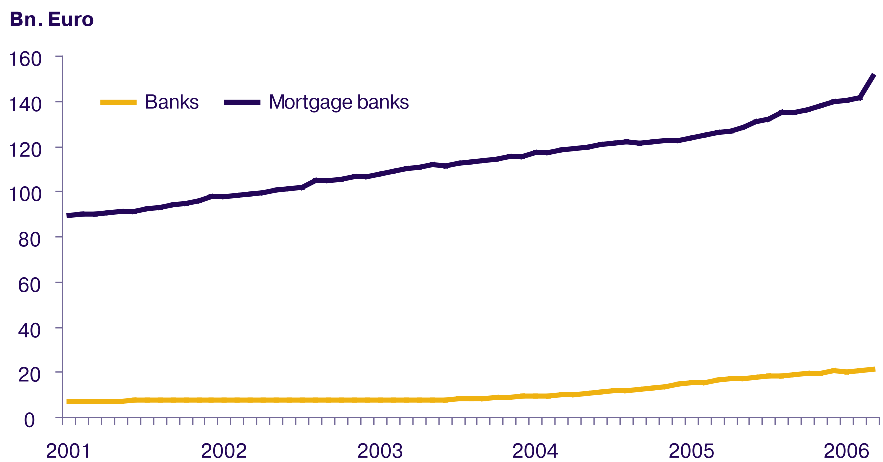
Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

The Danish market for property financing is effectively two-tiered: the tier-one mortgage market operated by registered mortgage institutions is governed by strict lending restrictions including a restriction to finance a maximum of 80% of the value of residential property. The second tier, operated by banks, provides top-up financing above a loan to value ratio of 80%.

[2] 1 €: 7,50 DKK

The split of financing of private housing on mortgage banks and commercial banks is depicted below:

Figure 4. Financing of private housing



Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

The chart illustrates that the market for loans exceeding 80% LTV is increasing, cf. later.

Our discussion here focuses on the first of these tiers. Mortgage lending volumes have increased in line with increases in house prices over the past 10 years with some volatility caused by high volumes of re-mortgaging activity (section 7) in periods of low interest rates such as in 2003.

4. MARKET STRUCTURE

The Danish residential mortgage market is dominated by five mortgage banks, which all are limited companies, namely Nykredit, Realkredit Danmark, Nordea Kredit, Totalkredit and BRFkredit. Nykredit and BRFkredit are mutually owned, Nordea Kredit and RealkreditDanmark are owned by banks and Totalkredit is owned by Nykredit.

The market share of the market players are depicted below:

Table 2. Danish Mortgage Banks

	Market share in per cent Q1 2006
BRFkredit	9.6
DLR Kredit	4.9
LR Realkredit	0.1
FIH Realkredit	0.4
Nordea Kredit	11.5
Nykredit (Incl. Totalkredit)	40.5
Realkredit Danmark	33.1
Total volume of loans, € in bn.	**232.3**

Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

DLR Kredit A/S, FIH Realkredit A/S, and LR Realkredit A/S have not been mentioned as market players for residential mortgages above as they specialize in agricultural lending, industrial lending, and large, publicly subsidized construction projects respectively. The other players provide loans for a large number of activities except Totalkredit, which grants loans to owner-occupied homes and weekend cottages only.

Totalkredit deserves to be explained in some more details as it may be an appropriate funding mechanism in some emerging countries including in Ukraine.

Totalkredit was established in 1990 with small and medium sized banks, savings banks and cooperatives as shareholders, and provides today finance through the financial institutions' branch network, i.e. 1,100 branches throughout Denmark, to the final customer. The customers always contact the partner financial institutions directly and are served by staff that they know and who know them and the local area. Customers do not communicate directly with Totalkredit, but Totalkredit is responsible for central distribution of notices of mortgage payment and yearly statements. Totalkredit provide long term mortgage finance for the shareholders' customers through issuance of covered bonds, and provides IT solutions for the shareholders.

The Danish mortgage market is governed by the Mortgage Credit Act, which sets out a number of provisions aimed at protecting bondholders including:

- A balance principle (section 10)
- Regulation on loan-to-value limits, maturities and repayment profiles (section 7)
- A privileged position of bondholders in case of bankruptcy
- Minimum solvency requirements for mortgage lenders

This main regulation is supplemented by other important legislation:

- A title number system
- A land registration system
- An efficient compulsory sale system

5. MORTGAGE PURCHASE PROCESS

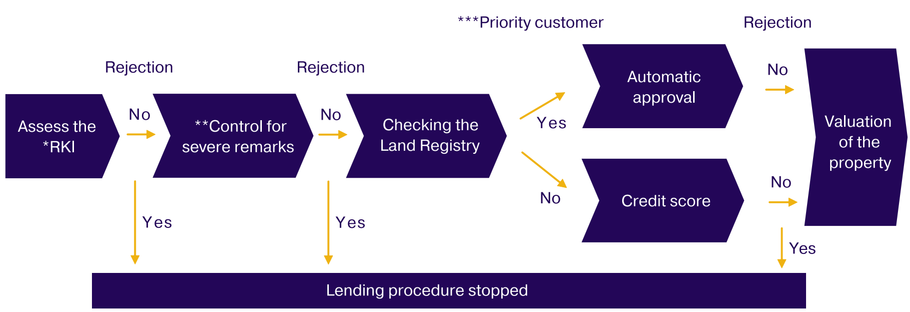
The mortgage purchase process is relatively straight forward in Denmark. The borrower is assessed for creditworthiness by the lender and must provide proof of income.

In all cases, the mortgage bank must survey and asses the property. The survey is made by the mortgage bank itself, or it may – if the maximum value of the property is less than Euro 560,000 – appoint an external expert to survey the property on the basis of guidelines laid down by the mortgage bank. The assessed value will then form the basis of the loan offer made by the mortgage bank.

Box 1 and 2 illustrates how one of the major mortgage banks performs credit worthiness analysis and evaluation of the property:

Box 1: Extract of Lending Criteria
Lending Criteria – Client Credit Worthiness

- The credit score is an application score aimed at new customers applying for residential loans. In relation to a loan application customers are urged to answer questions concerning their household, (marital status, children, cars, etc), questions on their financial situation (income, assets and liabilities), unemployment insurance and questions on the property. Based on this information the customer is classified according to a scale (C1-C6 and D1-D4, where C1 is the highest and D4 is the lowest possible classification). This credit score serves as a preliminary assessment of a customer in addition to the debt/income ratio and determines the next steps in the credit assessment of the particular customer.
- The full risk assessment covers the customer's creditworthiness – Priority Customer/application score – together with the loan-to-value and the marketability.



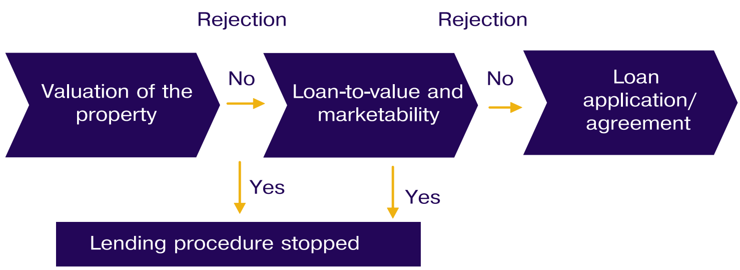
*Centralized Credit Bureau
**Internal system in the bank
*** Existing, Credit worthy customers

Source: RealKredit Danmark. Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006

Box 2: Extract of Lending Criteria

Lending Criteria — Valuation of Property

- In the valuation of the property the following sources of information are applied first:
- BBR (public register on property data)
- The latest public valuation and valuation from real estate agent if traded
- An assessment on the registered/non-registered easements and burdens on the property at the Land Register
- Zone values
- Special mortgages e.g. poison/pollution in the soil, property registered on rented land etc.
- Insurance in general and fire insurance
- Inspections and valuation is in most cases conducted by an RealKredit Denmark employee
- A number of authorized estate agents carry out some of the valuation of residential properties in accordance to the executive order on property valuation and calculation of loans
- RealKredit Denmark has instruction rights and can stop the cooperation immediately if the real estate agent does not fulfill the obligations
- RealKredit Denmark performs check spot on approx. 5 per cent of all valuation conducted by real estate agent

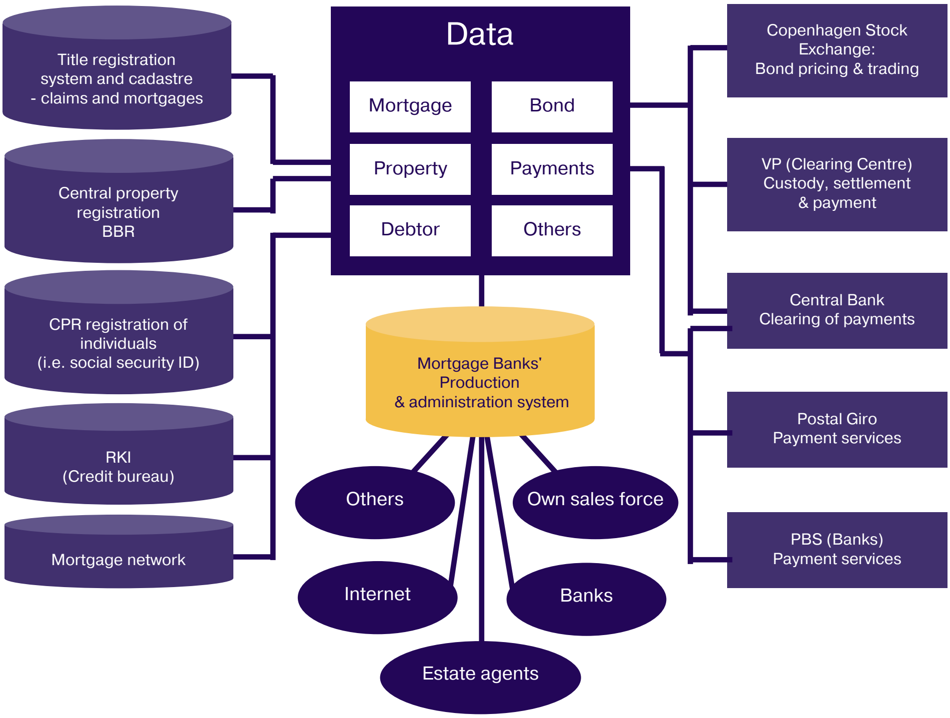


Source: RealKredit Danmark. Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006

It is also possible to transfer the existing debt on the purchased property to the new owner, if desired and accepted by the mortgage lender.

One reason for a straight forward system is a well developed production infrastructure, cf. below illustration 1.

Illustration 1. The Infrastructure



Source: BRFkredit Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006

The mortgage banks have on-line access to title and cadastre systems all over the country, and can at any time check ownership, mortgages and other claims. A central property register is in place containing any property in Denmark with information of the size of the house, number of rooms, location, number of bathrooms, roof construction, etc.

In order to identify the potential borrowers correctly, each individual citizen has a registration number and card, and finally information from a centralized credit bureau is also accessible on line. All registrations regarding defaulted borrowers are recorded, relating not only to financial institutions but also department stores, public authorities, etc.

Through a joint network system, the mortgage banks have access to all relevant information of loans in other mortgage banks, see section 11.

In other words most required data is feeded automatically into the mortgage banks' systems in the origination process. In relation to funding and payments of the loans, the system is automated as well. Bonds are electronically traded at the Copenhagen Stock Exchange directly through the phone market, deals are settled through the Clearing Centre, transfers are automatically taken place, and final cash clearing takes places through the Central Bank's clearing system. More than 80% of loan amortization payments take place through the Postal Giro system or through the banks' joint payment system.

According to the rules for mortgage banks the customer shall in connection with a loan, redemption and refinancing offer receive further information. The objective is to give the customer a good chance to estimate and choose the -for the customer – most favorable mortgage credit product. The customer shall in this connection be informed about the various relevant loan types and their characteristics.

6. DISTRIBUTION

A wide range of channels is available to the mortgage consumer including call centers, internet, branches and real estate agents. Independent lenders have been aligning themselves with banks to increase the reach of their physical channels. In contrast to many other countries, independent mortgage advisors do not play a large role in the Danish system. This may be due to the standardization of the mortgage product, which reduces the need for and the value of advice. The capping of mortgages at 80% loan to value means that most buyers take out additional bank loans. It is generally thought that bank ownership of mortgage lenders give increased scope for cross selling of 'integrated' financing packages to consumers. Several market participants also expect increased cross sell of insurance products, both to sellers and buyers, of properties.

The Internet as a distribution channel is quite well developed compared to most other countries. The Internet is not only used to collect and compare prices from various mortgage providers. In this respect, BRFkredit which has no local branches distribute loans and close deals with customers through the net. It is among other things possible due to the automatic retrieval of data as described in section 5.

7. PRODUCT RANGE

Loan types

Mortgage credit loans may be granted either as bond loans or as cash loans. Both types have several variations, e.g. fixed-interest loans, adjustable-interest loans or index-linked loans. Irrespective of the loan type, the mortgage bank will provide the loan amount by issuing mortgage bonds.

Except for adjustable-interest loans and index-linked loans that are always non-callable, the loans may be granted as either callable or non-callable loans, cf. the below section on Prepayment.

In a *bond loan*, the principal sum of the loan matches the volume of bonds that the mortgage bank will issue and sell in order to fund the loan. The amount (less costs) that is paid to the borrower thus corresponds to the market value of the bonds and is therefore not known until the loan is being paid to the borrower or until the loan is hedged[3]. Consequently, a change in the bond price from the time the loan offer is made and until the loan is paid to the borrower will affect the amount paid to the borrower. The repayment amounts are known, once the mortgage bank puts forward a loan offer.

A characteristic feature of the *cash loan* is that the principal sum of the loan corresponds to the market value of the bonds underlying the loan. The principal sum in cash (less costs) is paid to the borrower and is thus fixed when the mortgage bank puts forward its loan offer. On the other hand, the volume of bonds that will have to be issued and sold to fund the loan will vary with market prices. The investment loss that will usually arise when the bonds are sold is calculated into the cash interest on the loan, and that way the borrower can deduct the investment loss via his interest payments, as the interest payments are – with certain limitations – deductible against the tax return, see section 13. Therefore the borrower's repayments after tax will be lower than in connection with a corresponding bond loan.

Until the mid-1990s, it was characteristic of mortgage loans that the maturity of the mortgage credit bonds was the same as that of the loan and that the bonds were repaid at the same rate as the loans were repaid or prepaid. At the same time this means that the interest on the loan – also for cash loans – is fixed for the entire life of the loan. These loans continue to be important, but in recent years adjustable-interest loans have increasingly been gaining ground, and now exceed the fixed rate loans.

Adjustable-interest loans are almost solely granted as cash loans. The bonds in an adjustable interest loan have a shorter maturity than the loan itself. In addition, they are granted as loans where the entire remaining debt on the loan is being re-financed at regular intervals or as loans with annual re-financing of a specified fraction of the remaining debt on the loan. At the time of the re-financing, the interest on the loan is adjusted to the market rate. If the market rate is up compared with the time when the loan was granted or the previous re-financing took place, it will thus result in a higher repayment amount or a longer lifetime for the loan in the period until the next re-financing. The reverse is the case if the market rate is down. This loan type utilizes the fact that the short yields are usually lower than the long yields.

As of 1 October 2003 installment free loans, i.e. interest only, have been introduced in Denmark and it will thus be possible to choose not to pay installment in part of the loan's lifetime. The purpose of the loan type is to increase the borrower's private, financial flexibility. The installment free period can last up to 10 years and it is possible to disperse the installment freedom on several periods during the loan's lifetime. When the installment free period ends the borrower can in principle freely

[3] Financial technique to offset the risk of loss from price fluctuations in the market.

choose the installment size in the remaining part of the loan's lifetime. The only claim is that the installment is not lower than if it had been an ordinary loan. The borrower may choose installment free periods in connection with the following loan types: adjustable interest loans and traditional bond loans and 10 year standing loans.

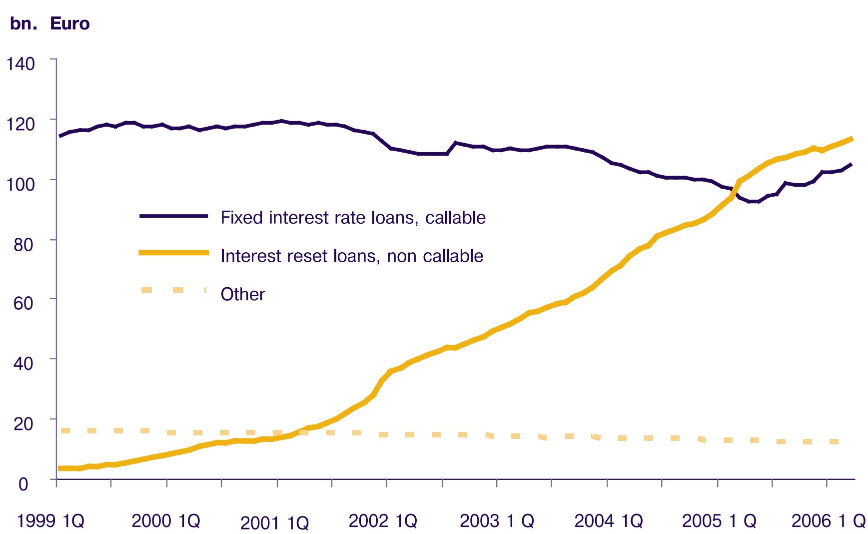
In the autumn 2004 the mortgage banks introduced capped variable interest loans. The loan type is a combination of fixed interest loans and adjustable-interest loans, where the cap means that the interest only can increase to an in advance fixed cap. If this cap is reached the interest is fixed as maximum on this level during the remaining part of the loan's lifetime.

Adjustable-interest loans are also offered as bond loans with a fixed maturity. These loans are based on variable-interest bonds where the interest is adjusted to the money market rate (CIBOR[4]) every six months. The lifetime of the underlying bonds is five years, and the life of the loans may be up to 30 years. When the bond matures, the entire loan is re-financed.

A number of mortgage banks also grant loans denominated in euro. Both fixed-interest and adjustable-interest loans are granted in euro and the adjustable-interest loans have by far the biggest share for this type of loans.

Danish mortgage banks will also grant index-linked loans, however, index-linked loans are now being granted to a very moderate extent.

Figure 5. Mortgage credit products, outstanding

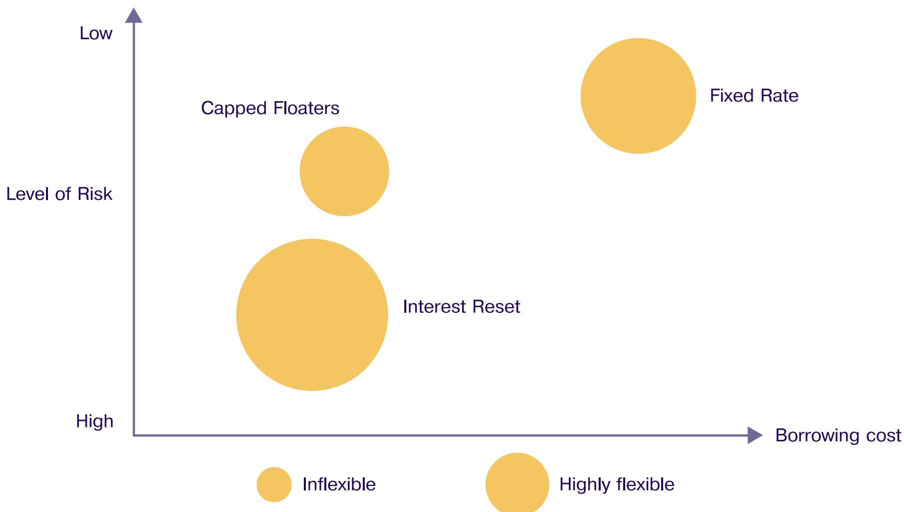


Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

[4] Copenhagen Interbank Offered Rate.

The below graph illustrates the most popular products currently sold in Realkredit Denmark, based on product flexibility, customer risk and funding cost perspective.

Figure 6. Three lines of Products



Source: Based on: Realkredit Danmark. Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006

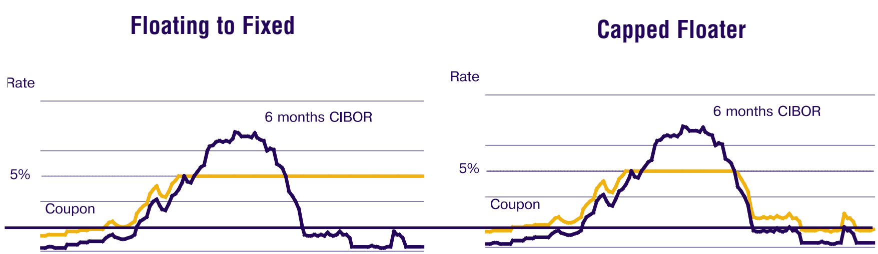
The fixed rate loan is the least risky, however, is also the most expensive for the borrower due to the mechanism of the yield curve. The Interest Reset Loan is currently the most popular loan with interest reset every 1-10 years or a fraction of the debt every year. The option which is illustrated is the Capped Floaters with interest rate fixing every 6 months, and with a 5-6% cap. This product is less risky than the Interest Reset loan, however, is also slightly more expensive. The cap structures are illustrated below:

Capped Floaters

Interest rate fixing	Every 6 months 5-6% cap
Base rate	6 months Cibor
Repayment method	Interest Only or Annuity
Prepayment options	Call option and delivery option
Term to maturity	1-30 years
Payments per annum	4 or 12
Currency	DKK
Portfolio share	Approx. 7 per cent

Source: Realkredit Danmark. Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006

Figure 7. Cap Structures



Source: Realkredit Danmark. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

- ❑ Floating to fixed
  - If the cap is triggered the loan will resemble a fixed rate loan until maturity
- ❑ Capped floater
  - If the cap is triggered the loan interest rate is fixed, however, if the base rate falls below the cap rate, the loan interest rate is once again floating

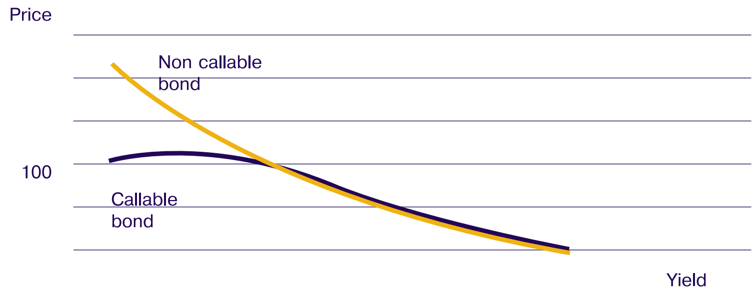
Prepayment

As mentioned above, loans may be granted as callable or non-callable. Callable loans may be prepaid before maturity if the borrower buys and pass over to the mortgage bank the underlying bonds or if he gives notice of prepayment (up to five months) at par and pays the amount in cash. Non-callable loans may only be prepaid if the borrower buys and pass over the underlying bonds.

The possibility of giving notice of prepayment at par and prepay before maturity is characteristic of Danish mortgage credit, which is different from the housing finance systems of other countries in this respect. In periods of falling yields, this possibility enables borrowers to prepay their loans at par and to take out new loans at a lower interest rate. In Denmark, borrowers are highly focused on the possibility of prepaying their mortgage loans.

The pricing of call options is illustrated below:

Figure 8. Pricing Call Options



- Call options are priced implicitly
- Borrower prepayment is modelled to price call options precisely
- Current marked pricing indicates option premiums of 25bp to 75bp

Source: Realkredit Danmark. Presentation to a Ukrainian Banking Delegation in Copenhagen, 23 May 2006

As yields decrease and bond prices go up and exceed par, many/most borrowers will decide to prepay by paying at par. This behavior is anticipated by the investors, and through the demand/supply mechanism the option is priced. The gap illustrated above between the price of the non callable bond and the callable bond thus reflects the price of the option. When the prices of the bonds are well below par, the risk of pre-payment for the investors are deemed minimal, and the price of the non callable bond and the callable bond is thus almost identical.

Repayment profiles:

It is only for loans to owner-occupied homes and weekend cottages that the legislation specifies how the respective mortgage loans are to be repaid. Loans may be issued with an interest-only period of up to 10 years. For the remaining part of the lifetime of the loan (typically 20 years), it must be repaid like an annuity loan (equal repayments per term).

The limits and lending periods are as follows:

Table 3. Maximum lending Limits and lending periods for the different property categoris

Property category	Lending limit/Per cent	Lending period/Years
Owner-occupied homes for all-year habitation	80	30
Weekend cottages	60	30

Source: Association of Danish Mortgage banks.

Remortgaging

If the borrower obtains the cash amount required for a prepayment by taking out a new mortgage loan, this is called remortgaging.

A *downwards remortgaging* describes the situation when a loan is taken out, which is based on bonds with a lower coupon rate than the underlying bonds of the previous loan. In periods of decreasing yields, the existing loan based on bonds with a higher coupon rate may be prepaid at par, and at the same time a new loan may be taken out based on callable bonds with a lower coupon rate than the previous bond rate. That way the borrower obtains a lower interest rate on the loan and hence also a reduction in the repayment amounts.

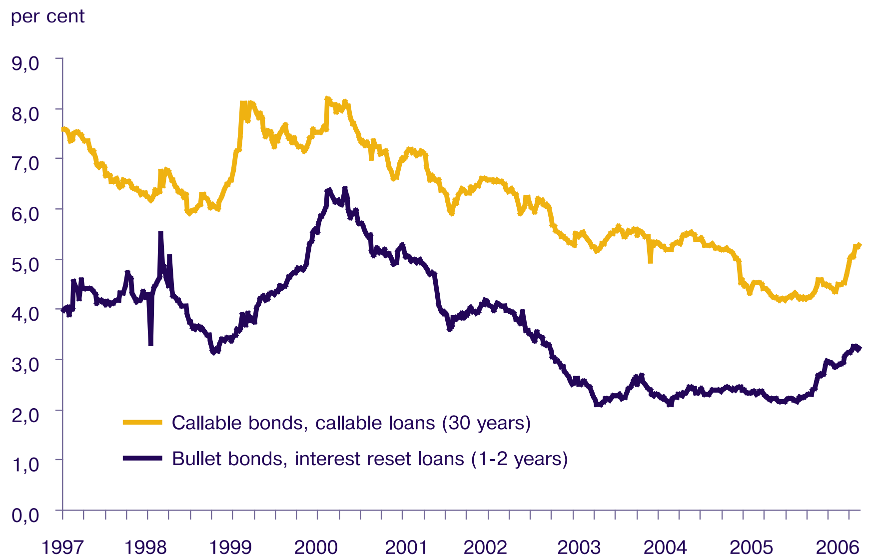
Upwards remortgaging means that a loan is taken out based on bonds with a higher coupon rate than the underlying bonds of the present loan. In periods of increasing yields, the existing loan may be prepaid by handing over bonds that can be bought at a price considerably below par. The necessary cash amount is procured by taking out a new loan based on bonds with a nominal interest rate, which is higher than the rate of the underlying bonds of the existing loan. The effect of an upwards remortgaging is that the remaining debt of the loan is reduced, while the repayment amounts of the new loan will often be slightly higher than the amounts of the previous loan. The intention of the borrower with an upwards remortgaging is therefore often to put himself in a good position for a subsequent downwards remortgaging.

8. PRICING

Effective interest rates are fully determined by the bond market. Mortgage bonds trade at a slight premium to Danish government bonds, mainly determined by the prepayment option and only to a small extent determined by credit spreads. The optionality feature means that spreads vary according to interest rates and expectations of prepayment. In addition consumers pay an annual service charge to the issuer (usually around 55 bp), which acts as an add-on to the nominal interest rate and up-front fees in the region of Euro 1,000 for a mortgage or remortgage.

The below chart illustrates the interest rate on Danish mortgage bonds, and thus the same picture for mortgage loans if taken into account the above mentioned service charge of around 55 bp.:

Figure 9. Interest rates on Danish mortgage bonds



Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

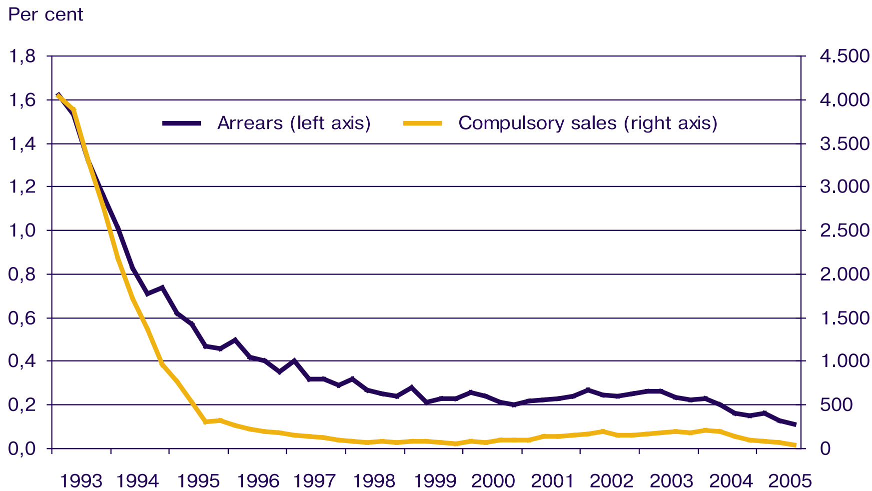
9. FUNDING

All mortgage loans granted by Danish mortgage institutions are funded by mortgage bonds. In fact, Danish mortgage credit institutions are restricted by law (the balance principle, section 10) to funding their lending activities by issuing mortgage bonds with a profile matching the repayment profile of the loan portfolio.

10. RISK MANAGEMENT

In recent years, arrears and compulsory sales have gone down dramatically as is illustrated figure 10.

Figure 10. Arrears & compulsory sales



Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

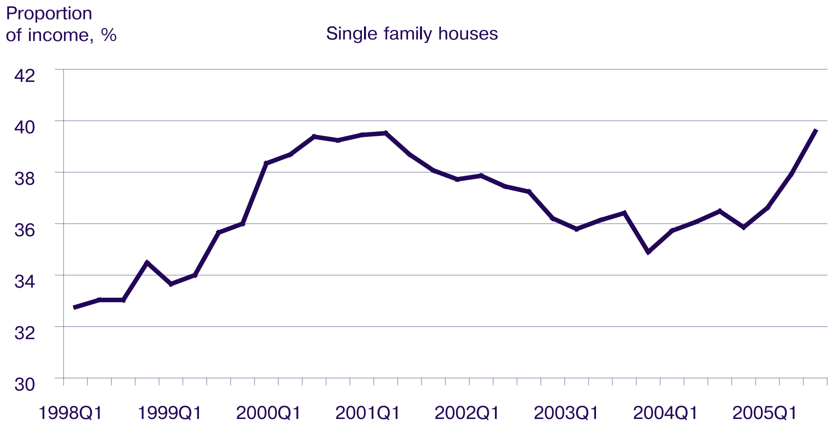
One of the key factors in appropriate risk management in mortgage lending is a prudent assessment of the real estate value. In Denmark, the criteria for valuation are not the *market value* of the property but the *mortgage lending value*, which is defined as follows:

«The value of the property as determined by a valuer making a prudent assessment of the future marketability of the property by taking into account the long term sustainable aspects of the property, the normal and local market conditions, as well as the current use and permitted alternative appropriate uses of the property. Speculative elements should not be taken into account in the assessment of the mortgage lending value. The mortgage lending value should be documented in a clear and transparent way».

The above definition indicates that any temporarily overheated high market prices can not be used as the foundation for loan determination.

The expenses to housing has increased recently, cf. illustration below, which is partly a function of the development in housing prices. Danish mortgage banks thus encounter increased credit risk, although it is probably not prohibitive high with a ratio close to 40.

Figure 11. Expenses to housing

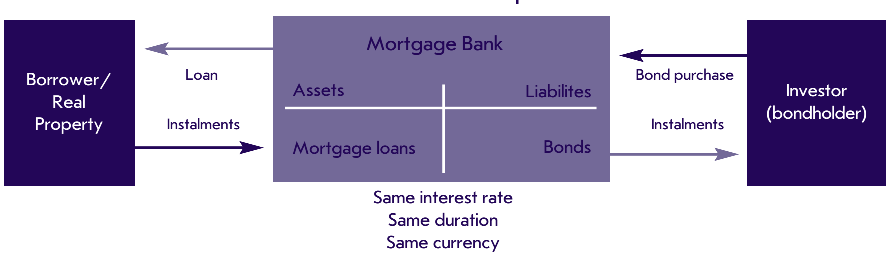


Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

The Balance Principle

The principle can be illustrated as follows:

The Balance Principle



Source: Association of Danish Mortgage Banks

The balance principle regulates the financial risk of the mortgage bank resulting from differences in payments between loans and funding, and fluctuations in interest and exchange rates. Thus the balance principle is part of the investor protection in the Act on mortgage loans and mortgage bonds as it limits the financial risks of the mortgage banks. In that connection it should be mentioned that the balance principle is regulated via a detailed executive order issued by the Danish Financial Supervisory Authority. The balance principle states that the payments on the debtor side and the creditor side of a mortgage bank must balance as a whole within some very strict limits. This balance is achieved by issuing a bond or a portfolio of bonds each time a loan is granted. In principle, the risk of the mortgage banks is thereby limited to the actual credit risk, i.e. the risk that the borrower fails to meet his obligations. The main provisions of the balance principle are as follows: Issued mortgage bonds shall be secured on lending against mortgages on real property. However, up to 2 pct. of the bonds may be issued against security in particularly secure substitute assets like for instance government bonds. Mortgage banks' interest rate risk related to lending and funding may not exceed an amount equal to 1 pct. of the capital base upon an interest rate adjustment of 1 percentage point. The principle contains tight requirements of computation and management of interest rate risks. The definition of interest rate risk is measured given a number of different interest rate scenarios. Liquidity deficits following different payment flows in relation to loans and funding are limited to a proportion of the capital base of a mortgage bank. The size of such proportion varies depending on how long liquidity deficits continue to exist.

In short, the balance principle is based on that each new loan is funded by issuance of mortgage bonds. The proceeds from the sale are passed directly to the borrower, and the borrowers' interest rate depends directly on market rates.

Payments of interest and amortization are passed directly to the investor. Prepayment by a borrower causes a proportionate amount of bonds to be redeemed.

11. MORTGAGE SERVICES

Danish mortgage lenders typically service mortgages in-house and there is no third party servicing market in Denmark. The practice of combining mortgage and bank loans for high LTV borrowing means that mortgage insurance is not commonly used in Denmark.

The Danish mortgage banks have a tradition of close co-operation about electronic communication. The development and operation of technological solutions for greater efficiency in the internal and external interfaces in the trade have been tasks the mortgage business has been working together about in various ways for many years. Since 1998 these activities have been handled by the jointly owned company, Realkreditnettet A/S.

12. PRODUCT PROFITABILITY

Mortgages are low-margin products due to the commoditization of mortgage issuance. Economies of scale exist in distribution, processing, and bond issuance. The economics across the main mortgage issuers are very similar, except for distribution, leading distribution-disadvantaged lenders to seek partnerships with banks and real estate agents to distribute loans.

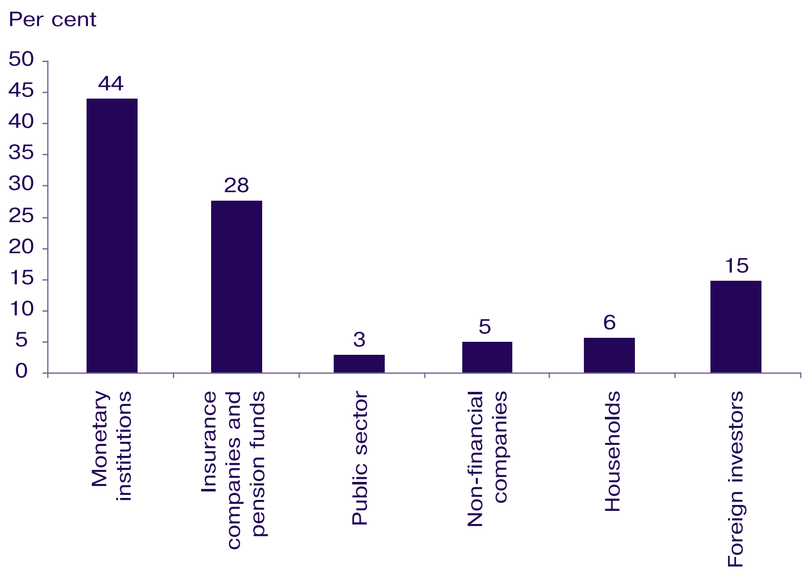
13. SUBSIDIES

Interest expenses on residential houses are subject to 32% tax mortgage interest deduction in taxable income.

14. INVESTORS

The below diagram illustrates the various investors:

Figure 12. Placing of mortgage bonds, Q1 2006



Source: Association of Danish Mortgage Banks. Presentation to a Ukrainian Banking Delegation in Copenhagen, 22 May 2006

The bond investors are fully aware of the security for the bonds, which is based on:

- Mortgage on real property;
- The legislative framework; and
- The solvency of the mortgage bank

In the more than 200 year history of mortgage credit no bond holders have suffered losses due to the default of a mortgage bank.

List of Acronyms

BBR	Bygnings- og Boligregisteret (Register of buildings and homes)
CPR	Central Person Registeret (Register of all citizens)
ID	Identifikationsnummer (Individual number for all citizens)
PBS	Pengeinstitutternes Betalings Service (Name of the company, which undertakes all payment services for financial institutions)
RKI	Ribers Kredit Information (Name of the Danish credit bureau)
VP	Vaerdipapircentralen (Name of the body responsible for clearing, custody, settlement and payments of securities)

Chapter 3.
France

This paper is based on the following sources:

a. Commission Bancaire: annual report, 2004.
b. Caisse de Refinancement de l'Habitat: annual report, 2004.
c. Eurocatalyst 2003: regional market sessions on France.
d. Merrill Lynch Guide to International Mortgage Markets and Mortgage Backed Securities, 2003
e. European Mortgage Federation/Mercer Oliver Wyman: «Study on the Financial Integration of European Mortgage Markets», October 2003

1. HISTORICAL OVERVIEW

Modern French mortgage finance originated in the mid of the 19th century, following decades of growing real estate finance needs meeting a weak legal system and high interest rates due to funding constraints. For the first 140 years of its existence, the system was characterized by strong government intervention.

In stark contrast to Germany's autonomous system, but following similar British developments of the time, the deposits collected by French savings banks were directed to public finance purposes as early as the 1820s. Directed credit policies, over time expanded to all credit institutions, remained an important theme of French public sector and infrastructure finance. Still today, the social housing finance system is funded via the direction of *Livret A* deposits through the central government agency *Caisse des Depots et Consignations* (CDC).

After 20 years of discussion, France's policy makers reacted to the neglect of private sector finance in February 1852 with a decree on mortgage credit companies that authorised long-term lending funded by means of issuing bonds along the model of German Pfandbriefe. The first company was set up in March of the same year under the name *Banque Fonciere de Paris*. By December it was declared the only recognized mortgage credit institution in the country, under the name of *Credit Foncier de France* (CFF), a name indicating a monopoly position. Only *Credit Foncier et Communal d'Alsace et de Lorraine* (CFCAL), founded in 1872, joined the company with its own, regional monopoly.

CFF, the first European public housing finance agency, remained a central element of French real estate finance until the mid-1990s. After the Second World War, with the aim at resolving the postwar real estate crisis, the company had vested with the distribution monopoly for regulated mortgage loans and subsidies. CFF nearly went bankrupt in 1995 following severe credit losses in the real estate market crisis of the early 1990s[2] and the removal of the above privileges. After restructuring today, CFF is a special mortgage finance subsidiary of the savings bank group Caisses d'Epargne.

Developing private sector mortgage finance became a political priority in the mid-1960s, which saw the introduction of a contract savings for housing system with fixed savings and loan rates parallel to Germany's Bausparen (Epargne Logement, EL, 1965) and of fixed-rate mortgages funded by the issuance of long-term promissory notes (Marche Hypothecaire, 1966). Both new funding vehicles became accessible to all credit institutions.

[2] See Figure 2 for house price developments. CFF at the time also had become an important lender in commercial real estate.

Due to higher inflation than in Germany, the Epargne Logement system already in 1970 was converted into a variable-rate system for both savings and loans; however, strong subsidy incentives for the savings were kept in place until 2004. The Marche Hypothecaire did not survive the high inflation phase: in 1979, consumer protection legislation had capped prepayment indemnities for fixed-rate mortgages in France severely, and with massive prepayments hitting in the first half of the 1980s characterized by declining rates lenders funded by high interest-rate promissory notes ran into severe losses. To stabilize the fixed-rate mortgage market, in 1985 a new, centralized bond issuer was created, the *Caisse de Refinancement de l'Habitat* (CRH). It is partly due to the prepayment risk generated by the consumer protection legislation that French credit institutions until today overwhelmingly rely on deposits as funding source for mortgage finance.

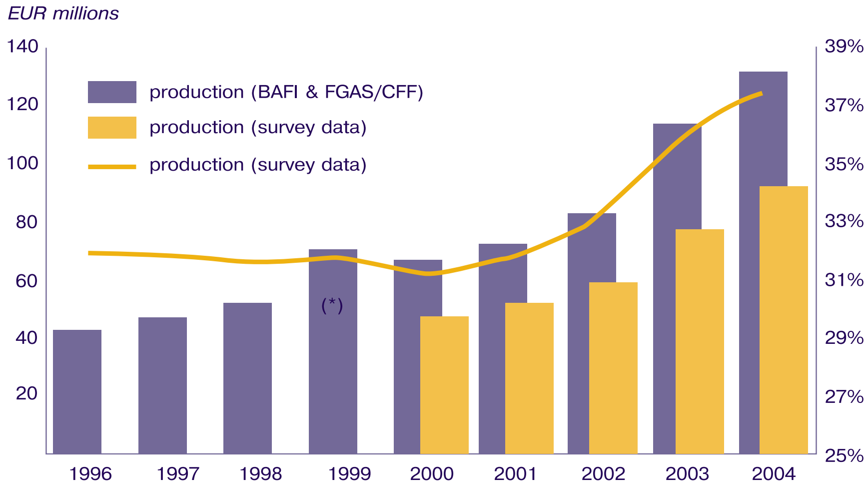
The final point of development was set in the past 15 years with two major capital markets reforms: the development of the MBS market (*Fonds Communs de Creances, FCC, 1988*) and the introduction of Pfandbrief-style legislation (*Obligations Foncieres, OF, 1998*). With these steps, the French mortgage industry established the first complete market in mortgage-related securities in Europe. Substantial restructuring of the banking industry since the mid-1990s – dealing with the bankruptcies of CFF and Credit Lyonais, the charter reform of the savings bank system and the reduction of state subsidies, especially to the Epargne Logement system, has further strengthened the foundations for a private-sector dominated mortgage finance system.

2. SIZE OF THE MARKET

In European comparison, France's home loan market is still relatively shallow. The €300 bn outstandings at the end of 2004 correspond to 18.2% of gross domestic product (GDP)[3]. However, this figure conceals the strong dynamics of a market which has strongly benefited from the reforms and a steady trend of disinflation and grows at an annualized rate of over 10% p.a.

[3] This figure combines Commission Bancaire (outstanding home loans) and Eurostat (GDP) sources. Other sources speak of approx. 25% of GDP. There is no uniform definition of mortgage/home loans in European banking sector statistics.

Figure 1. Origination of home loans in France and share in lending to the private sector, 1996 – 2004



(*) The peak in 1999 is associated with the end of the "Perissol" tax incentives.

Source: Commission Bancaire. Notes : 'production' means loan origination ; BAFI – Banque de France, FGAS – Fonds de Garanties de l'Accession Sociale.

The market has in fact completely rebounded from the property market crisis of the early 1990s. According to a Commission Bancaire report, lenders increased their loan origination from €43 billion in 1996 to €132 billion in 2004, or at an annualised rate of 15% over the period, accelerating in the past four years. Activity has been such that home loans have risen from 31% to 38% of the banking sector's lending to the private sector within 5 years from 1999 to 2004. The new origination level alone has reached 8.1% of GDP in 2004, giving rise to the expectation that the mortgage market can reach typical European penetration levels of 40% of GDP during the remainder of the decade.

3. HOUSING AND MORTGAGE MARKET LINKAGE

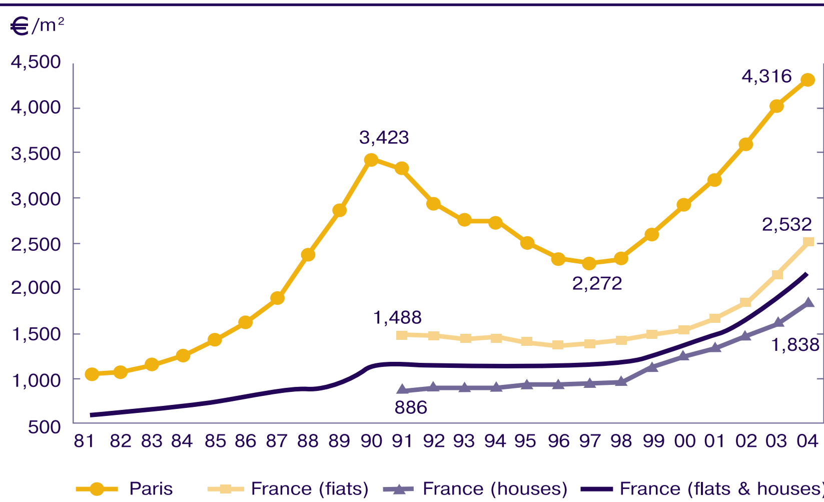
The main link between both housing and mortgage markets in France has been the secular decline in interest rates. This trend was driven by the convergence process in the course of access to the European Monetary Union that eliminated the inflation and country risk premium components in the interest rates that French borrowers had to pay. Both components had put a severe burden on market development in the 1970s and 1980s.

Interest rates for the non-subsidized fixed-rate mortgage loans in France have dropped from 18.4% in September 1981 to 3.5% in August 2005, i.e. have been cut back to a fifth since the inflation peak. In contrast, German mortgage rates in the same period, despite drastic declines, only slightly more than halved.

The improvement in financing conditions pushed French house prices up even as major changes in real demand conditions remained absent in the past years. In conjunction with mortgage market liberalizations, the first disinflation phase in the second half of the 1980s had triggered a property market boom that repeated itself – in an even more liberal market environment – between 1996 and 2004. In 2004 alone, house prices grew by 15.5% – growth is expected to slightly slow down to 10% in 2005.

In the early 1990s, in contrast, the mortgage market had stagnated in the wake of the Europe-wide interest rate increases following German reunification and a default wave that had lead to tightening credit conditions. Speculative building and lending, especially present in the capital Paris, had increased the amplitude of the 1990 house price cycle.

Figure 2. Nominal prices of existing housing stock in France, 1981 – 2004



Source: Federation Nationale de l'Immobilier, in Commission Bancaire (2005).

Structural demand shifts have added to mortgage demand in recent years, especially the much improved investment conditions in rental housing following the reforms of the Loi Besson in 2003 (see below). In 2004, more than 15% of new mortgage originations financed rental housing investments, the share of rental housing mortgages in new production has risen to over 17% in 2004. Second home financings for foreign buyers are also developing dynamically as a niche, with an estimated new origination volume of € 1 billion in 2004.

4. MARKET STRUCTURE

French mortgage lenders can be divided into three groups: mutual institutions (including, after their 1998 charter conversion, the savings banks), commercial banks and specialised lenders.

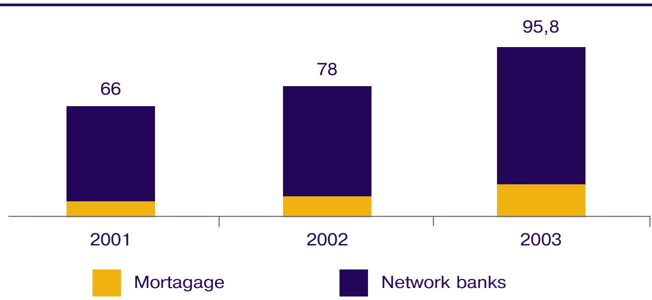
The mutual institutions – among which *Credit Agricole*, the largest mutual institution in Europe – benefit from their dense branch networks and capture approx. 55% of the mortgage market. Commercial banks follow with 30% of the market and the specialised lenders with 15%.

The French mortgage market is highly concentrated, with the largest lender – Credit Agricole – alone holding 24% market share. Together with Credit Lyonnais (now acquired by Credit Agricole), Credit Mutuel, Banque Nationale de Paris and Societe Generale – the largest 5 banks capture 80% of the market.

However, there is also considerable dynamics. *La Poste*, the banking subsidiary of the postal network, has entered the mortgage market in 2003, creating France's largest mortgage market distribution system in a direct attack on the co-operative network banks. *La Poste* plans to more than double market share from currently 4% to 9% in a decade.

Specialised lenders, in contrast, have faced increased competition from other retail lenders that use mortgages as a teaser product to establish banking relationships with individuals and consequently cross-subsidize them. Over time, due to margin pressure specialists have become takeover targets for commercial banks that seek diversification and expansion of funding sources (*UCB, for BNP Paribas, Credit Foncier, for Groupe Caisses d'Epargne) or foreign lenders that seek access to the French market (Credit Immobilier de France, for Halifax Bank of Scotland*).

Figure 3. Structure of French residential mortgage origination by type of lender, in billion Euros 2001 – 2003



Source: Investor presentation by Credit Immobilier de France on CIF Euromortgage, January 2005. Notes: 'Network banks' denote commercial and co-operative universal banks; 'mortgage banks' denote a variety of mortgage specialists.

As specialists increasingly move into the wholesale markets with new funding instruments, the influence of state wholesale institutions, such as CDC, which remains active in the social housing sector, and *Comptoir des Entrepreneurs* has become reduced.

The French regulatory framework for mortgage lenders used to be one of the most segmented in Europe only 20 years ago. This is no longer the case. Mutual institutions, commercial banks and specialized mortgage lenders are regulated through the Banking Act of 1984, amended in 1996, as credit institutions. The 1984 Banking Act created the Banking Commission (Commission Bancaire) to supervise the credit institutions and verifies their financial condition. Only investment firms that do not issue deposits enjoy certain exemptions from banking regulation.

However, the Credit Institutions and Investment Firms Committee (*Comite des Etablissements de Credit et des Entreprises d'Investissement*, CECEI) is responsible for the approval and listing of both types of entities. Also, the Banking and Financial Regulations Committee (Comite de la Reglementation Bancaire et Financiere, CRBF) determines the operational regulations (accounting, minimum capital requirements, information disclosure, etc.) of both, credit institutions and investment firms.

5. DISTRIBUTION AND PURCHASE PROCESS

Approx. 70-75% of France's mortgage distribution is still made through branch networks. Dense branch networks have traditionally been supported by the government with subsidies in order to raise deposits for public finance purposes and to support banking market penetration in the thinly populated regions. The EU Commission, in a ruling of 2004, has broadly cleared this support while imposing certain limits.

However, distribution through new channels is rapidly increasing. BNP Paribas estimates that intermediaries have quadrupled their market shares in only 4 years from 5% in 2000 to 20% in 2004. All specialists lenders and most commercial banks now work with tied advisors, such as real estate agents and loan brokers. Also, independent loan brokerage platforms using the internet are entering the intermediary market.

Mortgage purchasing is becoming increasingly commoditized in France, although it is still hampered by high legal transactions costs (see below). The borrower is assessed for creditworthiness by the lender with proprietary scoring models of the banking groups. Valuation of the property, traditionally on-site and individual, is being partly automatised and cross-checked through nationwide price (regression) models. After concluding the loan agreement, borrowers enjoy a rescission period of two weeks, which is unusually long for Europe.

6. PRODUCT RANGE

Rate adjustment types

According to Commission Bancaire, the most common French mortgage product, fixed-rate loans, in 2004 accounted for approx. 70% of the market, while variable rate loans represented 30%.

Fixed rate mortgages (*Pret a Taux Fixe*) in France carry the same mortgage rate over the full term of the loan. This stands in contrast to other European countries, such as Britain or Germany, where rates are usually only fixed to term (e.g. 2, 5 or 10 years), a product that exists in France as a niche. A risk-mitigating factor is that the contractual maturity of mortgages in France rarely exceeds 20 years, the current average is 17 years.

The popularity of fixed-rate mortgages seems paradoxical against the background of the Scrivener Law of 1979 which limits prepayment indemnities to six monthly interest payments or 3 % of the outstanding balance, whichever is lower. In the past, French lenders tried to stem the resulting prepayment waves through various means, including by delaying the reform process of transactions costs of mortgage finance, which are among the highest in Europe, and refusing to take switching borrowers. For the last mentioned tactics, heavy fines were handed out to top French lenders by the national competition authority in 2000. Despite those efforts, options costs for prepayment in the range of 30-45 bp p.a. are charged from borrowers, adding to the costs of fixed-rate mortgages.

Variable rate mortgage (*Pret a Taux Revisable*) are by law required to be linked to an underlying variable index determined in the contract (e.g., three-month Euribor). Mortgages whose rates are unilaterally reviewable by the lender are thus not permitted. Variable rate mortgages in France also usually carry the option to switch to a fixed rate agreement at any time during contract maturity.

Increasingly popular – also in the light of the discussed prepayment options costs for fixed-rate loans – are capped variable rate mortgages (*Pret a Taux Revisable Cape*). This loan type provides the borrower with interest rate risk protection while allowing him to participate in an interest decline. Among variable rate loans, capped variable rate loans in 2004 accounted for 26.4% of new loan originations, while the share of non-capped variable rate loans was only 1.4%.

In France the usual practice is to formulate interest rate caps as a mark-up over the initial interest rate (e.g. initial rate + 2%). If the cap interest rate is hit, excess interest is still due and capitalized into the outstanding balance, with the loan amortization period automatically extended. This renders the French cap products distinctly different from those practiced in Germany or Denmark, where excess interest is cancelled by the lender and neither outstanding balance nor amortization period changes. However, the practice also renders them cheaper.

The French practice of interest capitalization and flexible amortization periods goes back to history of double-indexed mortgages (*Pret a Taux Revisable a Double Indexation*), a child of the inflation phase that is still available on the market. In this type of mortgage, the outstanding principal, and by implication interest due, adjusts with a reference index such as consumer prices or construction prices while monthly payments are linked to wages or other indices reflecting affordability.

In the same logic flexible loans are becoming increasingly popular in which the interest rate is fixed while the borrower can adjust his monthly payment amount within the limits defined in the contract. The result are varying amortization periods.

Credit/target group

The most important remaining targeted and subsidized credit type is the zero interest rate loan (*Pret a taux zero*) created in 1995. These are interest-free loans for new housing that are advanced by all financial institutions to borrowers whose income does not exceed a legally set limit. Until a reform in 2005, this ceiling had not been changed and the instrument had declined in relevance. Since 2005, it can be used also for the purchase of existing housing rather than new housing only.

Other regulated loan types are also in decline: the *prets conventionnes* (PC, loans with a state-regulated interest rate) and *the prets a l'accession sociale* (PAS, state-guaranteed loans via the *Fonds de garantie a l'accession sociale* (FGAS) guarantee fund) are facing increased competition from nonsubsidised loans, which have benefited from the low interest rate environment in recent years. FGAS is considered as not having pushed sufficiently for extending credit to lower-income groups and is currently being restructured.

Contract savings for housing (Compte d'Epargne Logement, CEL, and Plan d'Epargne au Logement, PEL) continue to benefit from fiscal savings premium subsidies. However, since the reform in 2004 the premium is linked to the actual loan takeout rather than the savings effort alone. This closes the previously intensively used option for lenders to use the subsidized funds for other mortgage finance purposes. The minimum savings period is now 18 months (CEL) and 4 years (PEL) respectively. To compete in a low-rate environment, CEL and PEL lending rates are now very low – typically 1.5-2.5%.

The decline of subsidized lending also becomes clear from their overall market share: non-subsidised loans now represent the bulk of lending – 80% in 2003 according to the Banque de France.

7. PRICING

Transactions costs

France features relatively high transaction costs for closing a mortgage loan and/or changing loan conditions; according to a 2003 survey of the European mortgage federation between 2 and 3% of the loan volume.

The main cost driver are legal costs that go back to the character of the French mortgage as accessory. An accessory mortgage is one in which the security arrangement (mortgage collateral) is tied to the loan contract. Changes in loan contract conditions, such as a refinancing to a lower interest rate, require thus for most purposes a re-registration of the security arrangement in the land register. The land register in France is neither centralized nor converted to electronic form as yet. The costly registration process is moreover managed exclusively by public notaries, which charge administratively fixed and high prices. Mortgage loan closing costs charged by lenders, in contrast, have become very modest as a result of competition.

Spreads

French lenders become increasingly competitive and aggressive in terms of interest rate spreads over funding costs. In the Mercer Oliver Wyman study (2003), average French adjusted prices (spreads adjusted for credit and prepayment risk costs) were estimated at 90 bp: this value is close to, but not quite on the efficiency frontier between efficiency and market completeness as determined in the study for an eight-country sample of European markets.

Still, impressed by the solvency impact of the property market crisis of the early 90s, Banque de France has repeatedly voiced concerns about declining and low spreads. Such a concern is indeed justified by the increased use of mortgage lending as a cross-selling product for other – more profitable – financial services such as insurance services or credit cards. Yet, in property market boom times, credit losses in France are very low – according to Commission Bancaire at 6 bp p.a (0.06%).

As indicated before, a major spread component in France are prepayment options costs. A change in the consumer protection regulation that would allow lenders to recover their reinvestment losses from consumers exercising the prepayment option and eliminate those costs is being discussed.

Lenders try to escape low spreads through greater product innovation that has the potential to add to margins in parts of the portfolio.

8. FUNDING AND INVESTOR STRUCTURE

Funding

According to Commission Bancaire at the end of 2004 capital market funding vehicles, cf. below, accounted for just under 10% of outstanding home loans. This differs somewhat from the 11.5% share reported by a group of French industry representatives for 2002 (see Figure 4), likely due to varying definition.

Figure 4. French industry estimates on the decomposition of funding instruments for home loans, 2002

As of 31 December 2002:

- **French Housing Loans:** **€ 457.5 billion**
  - French mortgage loans € 300 billion (estimate)
- **Deposits** **€ 413.0 billion**
  - PEL € 239.4 billion
  - Livret A / Livret Bleu € 125.4 billion
  - PEP € 48.2 billion
- **CRH** **€ 13.1 billion**
- **Obligations Foncières** **€ 30.6 billion**
  - CFF € 27.9 billion
  - CIF Euromortgage € 2.7 billion
- **RMBS** **€ 8.7 billion**
  - Vauban Mobilisations Garanties

Source: France session during Eurocatalyst (2003), joint presentation made by CFF, CRH and Moody's France.

As of 2004, according to Commission Bancaire, bonds issued by the CRH accounted for 4% of outstanding loans, bonds issued by Societes de Credit Foncier (Obligations Foncieres) for 3%, and different securitisation vehicles for 2%.

The predominance of deposit funding for mortgages in France has historical and policy reasons, as already sketched above: the public incentives provided for the large depositary branch networks, the prevalence of deposit subsidy schemes such as Epargne Logement, and special deposit-funded circuits for housing finance. In 2002, the contractual savings system of Epargne Logement alone was estimated to account for over 50% of home loan funding.

However, the development of capital markets so far and especially the outlook are positive. France is increasingly under pressure by the EU to close its special deposit circuits, fiscal pressure adds to this momentum. Low-interest funding through massive issuance of Epargne Logement is no longer an option since the 2004 reforms that tied subsidies to loan takeout, for which there is low demand. At the same time, French savers increasingly diversify their portfolios from deposits into mutual funds and other capital market vehicles, increasing the rate pressure on deposits.

Residential mortgage-backed securities issued by Fonds Communs de Creances (FCC)

To enable RMBS securitisation in France, special purpose mutual funds invested in loans (*Fonds Communs de Creances, FCC*) were created in 1988. By law, the FCC's only assets are the acquired receivables and the cash flows they generate. The FCC's liabilities are investment units, backed by the receivables generated from the loans.

FCC's are listed in an organized market on the Paris stock exchange. The group of issuers on this market have hitherto been dominated by specialised lenders (UCB, Credit Foncier, Entenial. CIF), which lack access to deposits and are more sensitive to the cost of funding than retail banks. After strong issuance volumes reached already in the early 1990s, which were closely related to the desire of lenders to transfer prepayment risk to investors, the RMBS market became later in the same decade partly cannibalized by the new and more liquid Pfandbrief-style instrument Obligations Foncieres.

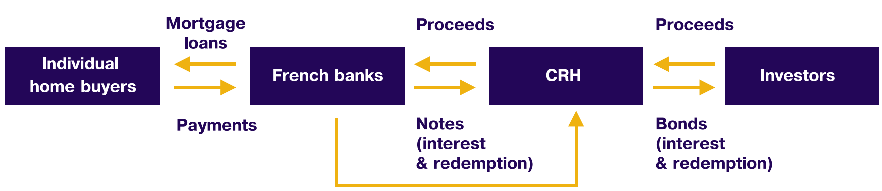
Covered bonds issued by Caisse de Refinancement Hypotecaire (CRH)

The purpose of the refinancing facility CRH is to fund the residential mortgage loans of its member-owners. The simple business model leans on the Swiss Pfandbriefzentralen that existed since the 1920s.

CRH issues mortgage bonds with essentially the same characteristics as those of the loans on the books of its members that are funded by them. Symmetrically, the lenders borrows from the CRH against pledging their loan portfolios.

The eligibility criteria for mortgage loans to be refinanced in this way have been aligned recently with those applied to the Obligations Foncieres, so that CRH bonds form an integral part of the covered bond market. Despite a small capital disadvantage created by its two-stage issuance process and broad funding alternatives available to its large shareholders – currently Credit Agricole-Credit Lyonnais and Credit Mutuel – CRH remains the largest covered bond issuer in France.

Figure 5. CRH liquidity facility structure



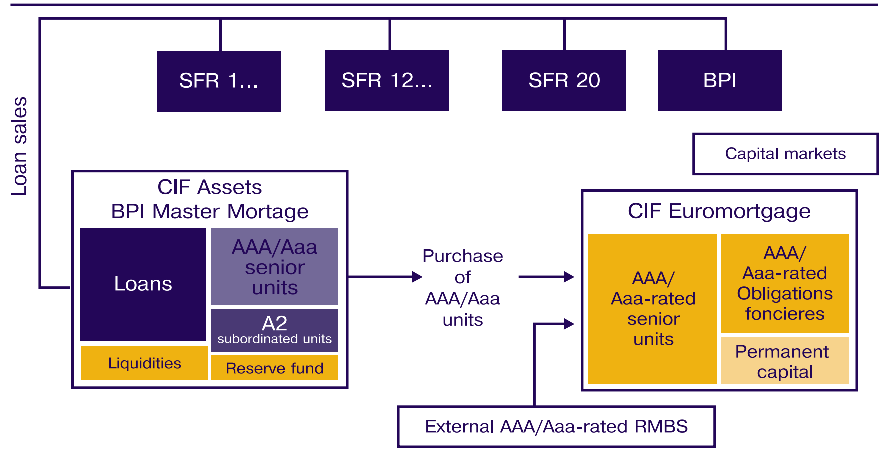
Source: France session during Eurocatalyst (2003), joint presentation made by CFF, CRH and Moody's.

Covered bonds issued by societes de credits foncieres (SCF)

The search of Credit Foncier de France for a new business model after its demise as a powerful public lending agency is widely held to have accelerated the development of the French law on covered bonds (Obligations Foncieres, OF) that was passed in 1998. A special purpose issuer construction was developed for to this end, the Societe de Credit Foncier (SCF), in order to ensure bankruptcy remoteness and in close analogy to the investment fund model used for RMBS. A secondary motivation for this strategy were problems with the French insolvency legislation that give statutory priority to employee salaries over senior bonds; hence SCFs were constructed as having no employees while remaining under the full control, with regard to issuance, cover register creation and asset-liability management, of its parent.

Apart from the specific issuance structure, the French covered bond concept contains important changes over the German Pfandbrief model with the purpose to boost liquidity, flexibility and ultimately profitability: for instance, eligible for cover are not only mortgage loans but also RMBS and loans guaranteed by mortgage insurance schemes. This option for a dual issuance structure, with MBS being 'packaged' into Obligations Foncieres, was immediately used as the example of a widely publicized deal made by Credit Immobilier de France (CIF), CIF Euromortgage, in Figure 6 shows.

Figure 6. Credit Immobilier de France Euromortgage deal structure (2003)



Source: Credit Immobilier de France, deal details available from company website. Notes: CIF – Credit Immobilier de France, BPI is the central bank of the system who establishes the master investment fund, SFR denote individual regional lenders selling loans into the master trust. CIF Euromortgage is a Societe de Credit Foncier issuing the covered bonds.

In the deal, local originators in the Credit Immobilier de France organization – regional banks – sell loans into a master investment fund structure, BPI Master Mortgage, created by the central bank of the organization, BPI.

The master investment fund issues structured RMBS, with AAA-rated senior and lower rated junior tranches. The AAA-rated tranches are bought by a covered bond issuer, CIF Euromortgage, a Societe de Credit Foncier, in order to ensure the highest quality assets. The junior tranches are purchased by the regional banks or sold. CIF Euromortgage finally issues AAA-rated covered bonds backed by AAA-rated RMBS tranches. In this way, the system achieves maximum liquidity (through covered bond issuance) and asset quality (through junior tranches being retained by the originators, who also manage the credit risk of the portfolio).

Investor structure

The three main varieties of French mortgage-related securities described above tap different investor bases and thus in their sum considerably broaden the liquidity available for housing finance.

Banks are still the main investors in RMBS, which come with a small spread over covered bonds. Covered bonds, in contrast, are bought mainly by institutional investors (insurance companies, pension funds). Within the covered bond segment, CRH bonds sell mainly to French domestic investors while Obligations Foncieres have been able to tap the significant and global foreign investor base that is used to buy Pfandbriefe. The low spreads of Obligations Foncieres today reflect this success.

9. RISK MANAGEMENT

Credit risk

Mortgage (*Hypotheque*) and equivalent *Privilege Preteur de Denier* are the main instruments providing the lender with a security on the property backing the loan. They secure the loan principal, interest and additional costs. Due to the high registration costs, however, mortgages back only about 75% of housing loans to private individuals in France.

The main alternative instrument is the «Caution», an unsecured guarantee that can be obtained from the Caisse des Depots et Consignations (CDC), from a bank, from an insurance company or from a mutual guarantor (caution mutuelle). Another alternative, a promise of mortgage (Promesse d'Affectation Hypothecaire) is a contractual obligation whereby the debtor undertakes to sign a deed of mortgage at the lender's request. A Promesse allows the lender to avoid the cost of registering the mortgage deed since it is only registered once the lender executes the deed.

The latter two options are seen as inferior to mortgages because of risks involved for the lender through the absence of registration. As of 2005, France is considering reforms with the goal to raise the efficiency of the mortgage as the main security instrument.

The process of foreclosure in France is very lengthy. Approximately one third of foreclosure procedures take more than two years and around 50% take more than one year. The Law on Over-indebtedness (*Loi Neiertz*) implemented in 1989 is intended to prevent private individuals from becoming over-indebted and to solve existing cases of over-indebtedness through so-called pre-foreclosure solutions. These include third-party arranged 'amicable' solutions – mostly debt restructurings associated with prepayments, debt waivers etc. As a result of the prevalence of the approach, under 5% of French foreclosed mortgages go to public auction.

A positive register (*Fichier National des Incidents de Remboursement des Credits aux Particuliers FICP*) exists in which French financial institutions report all incidents of delinquencies and default.

Due to a history of high interest rates and availability of – often subsidized – second mortgage loans, underwriting standards in France have been conservative in the past. The average LTV ratio was only 67% as late as 2001; however, it has recently risen in conjunction with declining interest rates and increasing house prices. LTVs still do typically not exceed 100% in France, although some specialised lenders do go beyond this level with specific products. Moreover, the borrower's debt service to income burden does usually not exceed 33% of taxable income.

Certain household groups can obtain better underwriting conditions through mortgage insurance schemes such as *Credit Logement* guarantees, public guarantees for civil servants, and FGAS guarantees (in the case of PAS low-income housing loans). The proportion of guaranteed loans has increased over recent years, accounting for circa 30% of the total value of mortgage loans advanced.

Available loss statistics indicate currently low credit risk in the French market, which is characterized by growing house prices. Commission Bancaire reports doubtful loans of approx.1.2% of outstandings and losses of only 0.06% for 2004. This contrasts with high credit losses during the property market crisis of the early 1990s.

Interest rate risk/prepayment risk

See discussion under product range. Despite the historical attempts to block prepayments, due to stronger competition and record-low rates their level has recently increased – to between € 5 and 10 billion in 2004. Prepayment risk is managed by charging options costs. Lenders increasingly shift focus to easier refinance and price capped adjustable-rate loans.

10. PROCESS EFFICIENCY

Due to the intense margin pressure, French mortgage lenders increasingly cut their costs by servicing mortgages in centralized administration units (servicers). There is also a third-party servicing market for mortgages which originated in the consumer credit market, where it was one of the first in Europe. Economies of scale are also exploited through centralized service units in distribution (IT-based), property management, insurance and bond issuance.

11. SUBSIDIES

The French state has often used tax incentives to stimulate home ownership. Tax-relief systems are thus available and allow the borrower to offset part of their investment against their taxable income.

The *Loi Besson* of 2003 aims at stimulating the rental sector in France by allowing lessors to accelerate depreciation for up to 65% of the house price. As a result, new property sales in France (excluding Ile-de-France) rose by an average of 26.4% for apartments and 7.4% for houses in 2003. About 40% of that year's new apartment purchases in France were for tax-relief purposes (50% in Lyon, 70% for Montpellier and 80% in Toulouse).

Chapter 4.
Germany

This paper is based on the following sources:

a. Verband deutscher Pfandbriefbanken: «Pfandbrief Factbook», 2005

b. European Mortgage Federation/Mercer Oliver Wyman: «Study on the Financial Integration of European Mortgage Markets», October 2003

c. Hans-Joachim Dubel: «Fixed-rate mortgages and prepayment Europe», study commissioned by Verband deutscher Hypothekenbanken, March 2006.

a. Merrill Lynch Guide to International Mortgage Markets and Mortgage Backed Securities, 2003

d. Finanztest (consumer finance journal), March 2006

e. Websites of Deutsche Bundesbank, Statistisches Bundesamt, Verband deutscher Pfandbriefbanken, Hypoport AG.

1. HISTORICAL OVERVIEW

Germany's housing finance system is probably the oldest in Europe. While Italy pioneered the bank bond concept, Germany can be seen to have inspired the mortgage-backed bond (Pfandbrief). The first such bonds, backed by land, were issued as early as 1769 in Prussia to help raise funds for the reconstruction of villages and towns devastated by the Seven Years' War in Silesia. The issuers of the bonds were mutuals composed of aristocrats and wealthy citizens, called 'landscapes' to underline their regional investment and development objectives.

From 1857 onwards, after the creation of the Credit Foncier de France, shareholder-owned credit institutions started replacing the mutuals. The first pure mortgage bank was the Frankfurter Hypothekenbank, founded in 1862. Private mortgage banks played a pivotal role in financing the rapid urbanization of the late 19th century, while private commercial banks focussed on financing industry (e.g. Deutsche Bank in the Ruhrgebiet). In 1900, in response to a property market crisis, the Mortgage Bank Act came into force as the first piece of bank regulation in Germany. The mortgage bank system survived two wars and hyperinflations in the 20th century.

A second strand of early development was the emergence of Sparkassen in the late 18th century for depository banking with the urban low-income population. Initially, savings banks were sponsored by private philanthropists following their medieval antecedents in Italy and Spain. However, in a deviation from developments in Western Europe, almost all savings banks set up in the early 19th century became sponsored by local governments, which sought means to promote local commerce, industry and construction after the Napoleonic wars. This idiosyncratic approach on the one hand laid the foundation for the strong role of public banking in Germany still present today; on the other hand, the local government ownership saved Germany from the fate of savings banks in France and the trust savings banks in Britain of the time, which saw their resources directed to public finance purposes by central governments and today are rather insignificant.

In the second half of the 19th century co-operative banks, which had arisen from the Raiffeisen movement of agricultural finance, complemented the system as the third 'pillar' of banking. Germany's three-pillar banking system structure of today – private, public and mutual – was born. By contrast, the 20th century, with its devastating wars and social turmoil, brought surprisingly gradual structural change.

Perhaps most remarkably, the hyperinflation after the First World War gave rise to the closed Bausparkassen financing system. At the time the new system was simply a copy of the British building societies and American savings & loan associations, where prospective borrowers also had to pre-save to qualify for a loan. When inflation subsided the discussion was whether to close the system of Bausparen down or subsidize it and keep it alive for the purpose of providing second mortgages. In 1934 – a striking parallel to the U.S. president's housing commission – Germany introduced the tax subsidy for Bausparen, and in 1938, the Reichsbank decided to re-engineer the German housing finance system into designating mortgage banks to provide first mortgages and Bausparkassen to provide second. This senior-subordinate structure survived until today. Bausparkassen saw their heydays immediately after World War II, when mortgage banks had difficulties placing bonds. Closed savings conduits were the most widely used funding instrument for housing, apart from government sources. During the inflation and disinflation phases (1970-80, 1980-95), the system saw huge demand fluctuations – but survived thanks to political support.

A second 20th century trend was the victory of the American agency model of the New Deal era, exported to the German ruins immediately in 1945 as an explicit counterweight to private banks which were seen by the Americans as having supported the Nazi regime. A first child of the era, sponsored by Marshall plan funds, was Kreditanstalt fur Wiederaufbau that provided long-term finance for the urban reconstruction in the 1950s. A second child was the Landesbanken which, after the reorganization of the states, were rechartered out of their 1920s predecessors, the Girozentralen, to provide Apex institutions for the public savings bank system. In essence, the American agency model extended the life of the public banking system in Germany, which explains many of the structural differences between the German and neighbouring European banking systems.

In particular, the private banking system remained small. Commercial private banks came to the mortgage market only in the 1970s, bringing adjustable-rate loans, previously unknown. Until very recently, however, they tended to channel the bulk of their housing finance through mortgage bank and Bausparkassen subsidiaries, both fixed-rate mortgage providers.

The housing finance system is undergoing fundamental changes at the beginning of the new century with the backwind of sweeping change in information technologies and the European internal market for financial services,. While the three-pillar system remains intact nominally, horizontal specialists such as financial advisors, brokers and 'direct' telephone or online banks have started to break up the rigid borders from the distribution side. After failing for decades to gain access, foreign mortgage lenders and insurers have entered the market successfully.

The lending split between mortgage banks doing first mortgages and Bausparkassen doing seconds seems obsolete. In July 2005, the limitation of Pfandbrief (mortgage bond) issuance to special banks, which had been in place since the Mortgage Bank Act of 1900, was lifted. The move was related to the loss of state guarantees for bonds issued by savings banks – those banks became interested in the Pfandbrief market, but were not ready to create new banks.

A similar lifting of the special bank requirement for Bausparkassen is under discussion. High-LTV lending by universal banks has arrived, and also mortgage insurance, which creates a new competition environment for the Bausparkassen.

2. SIZE OF THE MARKET

Germany is Europe's second largest residential market with outstanding mortgages of € 896 billion and housing loans of € 1.09 trillion (December 2005), i.e. 39.5% and 48.2% of gross domestic product (GDP) in 2005 respectively.

Due to the low homeownership rate of only approx. 40% a large proportion of housing loans traditionally has been channelled through corporations, such as public and private housing companies, housing co-operatives and individuals investing in properties for income-generation purposes.

With the decline in rental housing construction in recent years the corporate lending share has dropped from a 33% in 2000 to 28% in 2005, but is still significant. Also, a significant proportion of lending to private individuals is for rental investment purposes, so that lending for owner-occupied housing purposes – matching the definition of most other European countries and the U.S. – must be estimated to lie in the range of only approx. 55-60% of total lending.

Turnover in the mortgage market has significantly declined recently, with gross advances of approx. € 120 Billion per annum in 2004 and 2005. This reflects inter alia the factual absence of prepayments, which dominate new originations inter alia in Britain, Denmark, and the U.S., and a decline in housing market activity in recent years that will be discussed below.

Table 1. Outstanding mortgage and housing loans, billion Euro

	2000	2001	2002	2003	2004	2005
Outstanding residential mortgage loans	737,6	757,7	776,3	867,1	869,7	895,9
% of GDP	36,3%	35,5%	36,2%	40,1%	39,3%	39,5%
Other outstanding housing loans	293,2	296,2	292,4	216,2	216,3	197,4
Total outstanding housing loans	**1,030,8**	**1,053,9**	**1,068,7**	**1,083,3**	**1,086,0**	**1,093,3**
% of GDP	50,7%	49,9%	49,8%	50,1%	49,0%	48,2%
… of which to private individ.	683,0	704,3	725,1	744,7	762,4	782,0
% of GDP	33,6%	33,3%	33,8%	34,4%	34,4%	34,5%

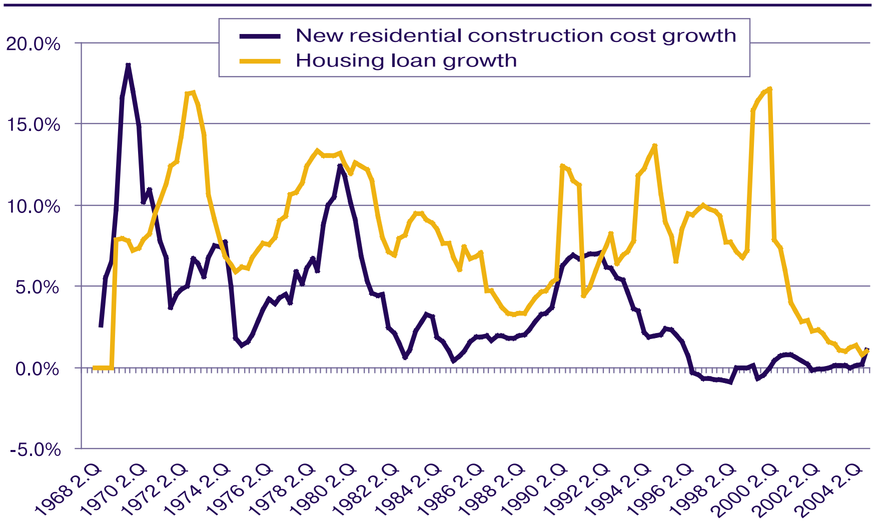
Source: Bundesbank, calculations by Dubel/Finpolconsult.de. Note: official statistics on new lending activity are unavailable. Housing loans that are not mortgages include inter alia many Bauspar loans.

3. HOUSING AND MORTGAGE MARKET

After a moderate construction revival following reunification, in particular in the Eastern part of the country, the German housing construction has been stagnating in recent years. Between 2001 and 2005, new constructions have been between 250,000 and 300,000 units, which is approx 40% less than in the period of 1991 to 1995 and less than half of the construction activity in the 1970s boom years. In recent years, new building permit and completion figures have become increasingly erratic as political uncertainty about subsidy programs – esp. the depreciation allowances for rental housing and the homeownership support scheme – has increased.

As a result of real sector factors, house prices in Germany have broadly stagnated in the past 10 years while they rose in most other European countries. According to data published by Deutsche Bundesbank prices continued to decline slightly in 2004 (resales: -0.8%, new dwellings: -1.7%, Source VdP). This is in broadly in line with the construction costs index for new dwellings as reported in figure 1.

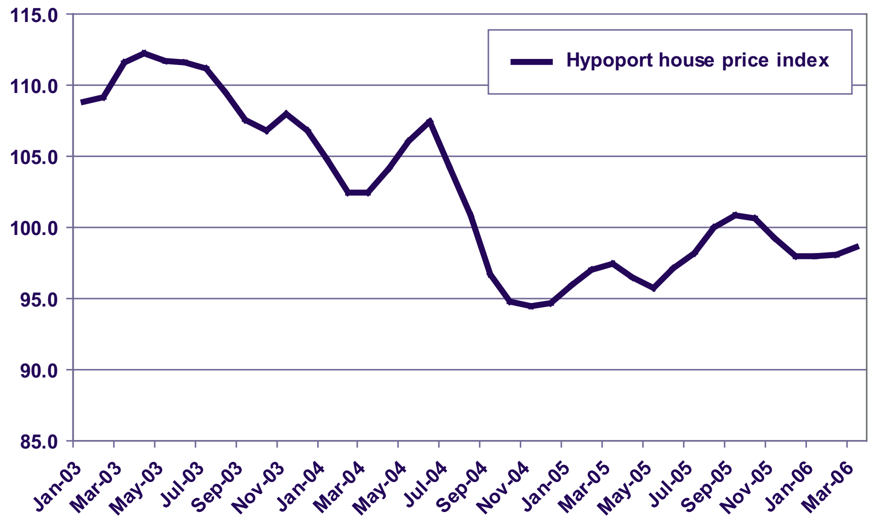
Figure 1. Dynamics of German construction costs and growth of outstanding housing loans, 1968-2004



Source : Deutsche Bundesbank, author's calculations. Note: 1999 loan growth spike due to loan reclassifications during the introduction of the Euro.

It should be added though that German house price statistics are notoriously unreliable, with the Federal Statistical Office abstaining from surveying the market (land prices only) and private sector surveys, which are also used by Bundesbank, suffering from small sample sizes. Figure 2 suggests with actual mortgage transaction-based data that German house prices were more likely to be in much stronger decline during 2003 and 2004 until showing timid signs of stabilization since mid-2005.

Figure 2. German house price index, 2003-2006



Source : Hypoport AG. Note: Index August 2005 = 100; transactions referring to new mortgage loan originations on the Europace brokerage platform (~10% of German new originations).

International organizations such as the BIS or the IMF blame the German housing finance system with its predominant non-prepayable fixed-rate mortgage product for limiting the affordability impact of falling interest rates and thus deterring house price growth. The lack of options to prepay could partly explain why loan growth declined so dramatically during the recent recession in Germany while staying high in the U.S., with broader economic implications such as the stabilization of consumer demand. Indeed, while American, British and French consumers released equity in their houses through greater leverage for consumption purposes with the new rate decline phase since 2001, German consumers can be shown to have added to their equity positions rather than unlocking their savings.

The abrupt reductions of housing subsidies and the uncertainty related to the future of the pension system and the economy as a whole also are likely to have contributed to Germany's house price stagnation. Supporting the pessimism are the echo effects of the reunification boom in the early 1990s, which have lead to a decline in economic and housing market growth rates since about 1995 – interrupted only by a small boom in 1998-2000.

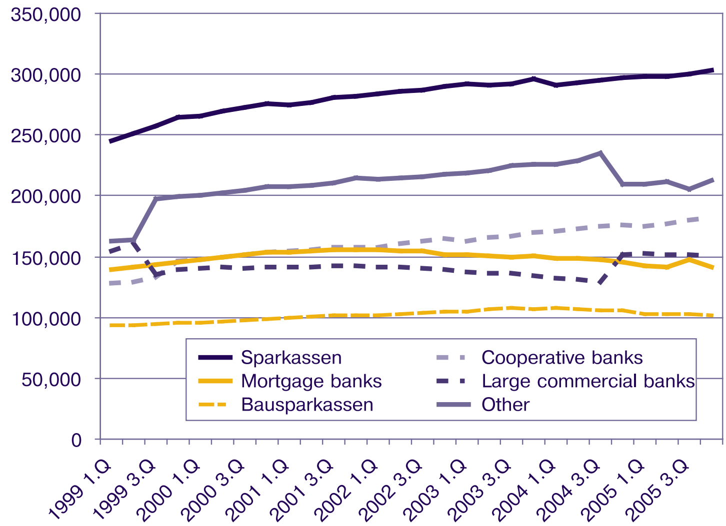
Despite the negative dynamics, the German mortgage market faces also significant structural and cyclical growth potential. On the demand side, most structural factors are positive: the household population is expected to continue to grow until at least 2020, with per capita housing consumption continuing to rise steadily. Inter-regional mobility in Germany is likely to increase. The upside of the perceived public pension crisis is the need for individuals to invest personally for retirement purposes, where housing is an interesting option.

From the supply-side perspective, the traditionally high house-price to income ratios have created broad opportunities for low-cost developers with modern fabrication techniques that are being increasingly used (in particular in East Germany). The upcoming inheritance wave benefiting the babyboomer generation born in the 1960s will support liquidity on the secondary housing market. Housing privatizations are booming both on federal and local government levels. These factors should support higher levels of transactions in the mortgage market.

4. MARKET STRUCTURE

As figure 3 demonstrates, the German market in terms of *outstanding mortgages* continues to be dominated by the dominant savings bank ('Sparkassen') and co-operative bank ('Volks- und Raiffeisenbanken') retail networks that are each divided into local area banks that do rarely compete across borders. These two institutions account for nearly 50% of the market and indeed in some areas form a duopoly. Commercial banks, in contrast, have experienced falling market shares, as have the specialist mortgage banks and more recently also Bausparkassen. When interpreting figure 3 it should be noted that the 'other' category includes numerous active, but very heterogeneous, players – examples would be public or semi-public banks such as KfW or Postbank, or insurance companies. Frequent reclassifications distort the comparisons.

Figure 3: Outstanding housing loans of main German lender groups in million Euros, 1999 – 2005



Source: Deutsche Bundesbank.

A completely different picture emerges if looking at market shares in *new originations* the past 3-5 years, which saw unprecedented changes. As of 2006, the two most dynamic mortgage market players are Postbank – a bank that only started mortgage lending actively in 2002 and has recently bought BHW, the second largest Bausparkasse, and ING – a Dutch financial group, which decided to aggressively target the German market through its long dormant subsidiary. Both firms have grown at the expense of other private sector groups, in particular commercial and regional banks as well as mortgage banks. Postbank with its large distribution network inherited from Deutsche Post and extensive use of brokers (see below) is aiming at becoming the largest retail lender, in a direct attack on the savings banks.

In addition, new foreign players have entered the market to expand lending in the high-LTV segment (see below), inter alia GMAC-RFC and Bouwcentrum from the Netherlands and U.S. mortgage insurers. This is likely to put Bausparkassen, savings banks and co-operatives under additional stress.

In these trends traditional specialist lenders, mortgage banks and Bausparkassen, have significantly lost market share. With few exceptions, the specialists are no longer independent and now parts of universal bank groups.

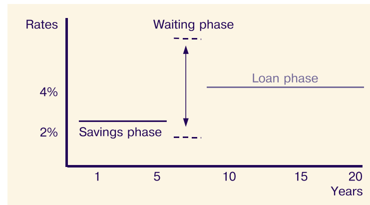
Both specialists work on the principle of protecting a long-term funding instrument, in the case of mortgage banks the covered bond (Pfandbrief), in the case of Bausparkassen a long-term savings instrument. The principal functioning of Bausparkassen is displayed in box 1.

In the case of mortgage banks, the special bank principle was removed in 2005. Most are now the wholesale arms of universal banks – e.g. DSL for Postbank, DG Hyp and Muenchener Hypothekenbank for the co-operative system, or Eurohypo for Commerzbank. Savings banks have acquired Pfandbrief issuance licenses to tap the system recently, e.g. via HSH Nordbank, they also have started to acquire the new mortgage bond issuance licenses which have replaced the special bank requirement (e.g. Stadtsparkasse Koln).

In the case of Bausparkassen, the largest firms – Schwaebisch Hall as part of the co-operative system and BHW as part of Postbank as well as the Landesbausparkassen as part of the Sparkassen-Finanzgruppe, are also no longer independent. This is despite the fact that the special bank principle here remains because of more complex asset-liability management issues involved. Observers consider the fall of the special bank principle here as a matter of time.

Box 1 Bausparkassen

The figure shows the main principle of a Bauspar contract in Germany. The saver provides funds to a collective pool, the Bausparkasse, for typically 5 years in order to become eligible for a loan from the pool of typically 10 to 15 years.



Savings rates and loan rates are fixed and set independently from the capital market conditions. As a result, demand fluctuates and – in order to steer the liquidity in the pool – the Bausparkasse has the right to determine a waiting period between the eligibility and actual payout of the loan.

The long-term savings commitment is secured by a) the promise of a low interest rate loan, and b) public savings subsidies in the form of grants.

5. DISTRIBUTION AND PURCHASE PROCESS

Bank branches remain the dominant channel for distribution of mortgages in Germany. However, broker-based origination is strongly catching up; for 2010, academic studies predict that 40% of originations will be through such channels. Brokers often take the form of personal finance advisors (PFA), such as MLP and AWD. These are providing financial wealth planning services, targeting mostly academics. Tied distribution, i.e. banks operating through exclusive relationship with developers or real estate agents, is rather rare in Germany.

Particularly relevant is technological progress. Several commercial banks in Germany pioneered the European low-cost call centre bank market ('Direktbanken') already in the 1990s, which gained so far approx. 15% market share. Newcomers such as ING use this approach to grow their deposit base swiftly without incurring much distribution costs. Online distribution is mostly relevant as far as search for offers is concerned; brokers use online distribution significantly, but also have started to set up own branches for closing purposes.

Following the distribution approach, closing processes differ. Online platforms such as Europace offer extensive services when matching originators and investors, including pre-screening of borrowers, application processing and matching with credit databases. Property valuation and closing decision is still usually undertaken by investors.

In branch-based distribution, most of these processes are executed by the individual bank, which may drive up origination costs if there is insufficient scale. However, some large bank networks, e.g. co-operative banks, have standardized and partly centralized their procedures. Many co-operative banks originate loans for the three group-owned mortgage banks – Munchener Hypothekenbank, Westfalische Landschaft, and Deutsche Genossenschafts-Hypothekenbank – as points of sale.

Due to strong legal culture, mortgage borrowers in Germany need to provide relatively comprehensive documentation including proof of income, sales contract, cadastral and property plans, land register excerpts, lease agreements for rental properties, etc. Documentation requirements are not standardized throughout the market. Loan closing typically takes one to four weeks. Loan commitment fees are charged if the consumer after signing the contract delays the drawdown of the funds.

6. PRODUCT RANGE

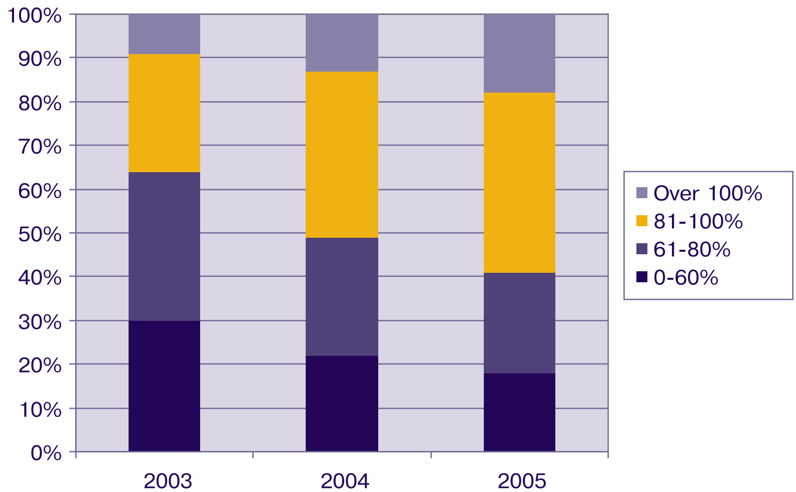
6.1. Credit curve/target group

The German mortgage market is highly standardized in both credit and interest rate risk dimensions. The market has yet to fully address the potential demand from groups with lower credit scores and imperfect documentation ('subprime') and consumers demanding higher loan-to-value ratios ('LTV'). Mercer Oliver Wyman (2003) characterize Germany as a highly margin-efficient but at the same time highly incomplete market.

A key historic reason for this situation is that, in essence, German bank regulations continue to be benchmarked since their inception in 1900 over the Pfandbrief asset standard, which requires extremely high quality levels. For example, the market-wide definition of a mortgage loan ('Realkredite') is unusually conservative, with LTVs not to exceed 60%. While lenders can and do lend beyond those levels, any additional LTV exposure will be classified by the regulator as 'personal' loan. Capital requirements for banks holding mortgage loans on balance jump for any portion exceeding 60% from 50% to 100% (Basel I). Other constraints include an 80% absolute LTV limit for Bausparkassen and strict documentation requirements imposed by the banking act for lending beyond that limit. Finally, in the past banks were generally discouraged by the regulator to accept incomplete documentation, which excluded often free lancers and other 'atypical' credits, or charge punitive equity requirements for those groups.

However, despite continued restrictive regulations, the market is in swift change at the time of writing of this report. As figure 4 with data originated by the largest German broker suggests, the high LTV market has strongly grown, with in 2005 60% of loans exceeding 80% LTV and 15% even exceeding 100% LTV. While the caveat applies that broker-originated loans tend to be higher-risk, the trend seems to be general.

Figure 4. Market shares of mortgage loans according to loan-to-value ratio



Source: Europace/Hypoport, covering by the end of 2005 approx. 10% of new originations in Germany.

According to estimates made by the author for the year 2002, in contrast, out of total new originations of approx. € 135 billion only approx. € 35 billion fell into the 60-80% LTV category, and approx. € 18 billion into the above 80% category. By that time, Bausparkassen – the traditional high-LTV lenders, had a market share of over 50% in the 60-80% category. The public agency KfW had a market share of approx. 7% in either category. Retail lenders lending above 60% held the rest of little over 40%, however, that share has likely in the meantime significantly expanded. It is worth to review the different products offered by these three lender types:

- *Second mortgage Bauspar loans.* Bausparkassen provide subordinated (second) mortgage loans in new and existing housing transactions, as well as for modernizations. See box 1 for detail. The disbursements amount to between 15 and 25% of the typical house prices.

Bausparkassen are constrained in their lending by a statutory maximum LTV of 80%.

- *Public second mortgage loans.* The *KfW* homeownership program ('KfW Wohneigentums-programm') provides for the lesser of € 100,000 loan and 30% of the 'appropriate' total costs Loans are typically second mortgages as in the case of Bausparen, however without the LTV restrictions that Bausparkassen are subjected to. Since 1999 the program is no longer targeted to young families and now freely available to all first-time homeowners.
- *Bank high LTV loans:* High-LTV loans are provided for higher interest rates according to an LTV pricing 'ladder' quoted by the retail lender. See figure 8 below for average prices in recent years.

For consumers, the three different offers are hard to compare. For Bausparen, which require pre-savings below market rates, there is no generally accepted effective interest rate concept. Even if taken in isolation, loan rates for second mortgages such as Bausparen reflect prices at the margin (e.g. funding the portion from 65%-80%) while high-LTV loans from banks are typically quoted as average prices (e.g. funding the entire loan from 0-80%). Distorting is also the fact that Bauspar savings receive subsidies, and a large proportion of households start saving very early (partly induced by parents), at low rates and with Bauspar premium subsidies: as a result, it could be wasteful for households to not take a Bauspar loan, even if the comparable bank loan is cheaper.

The German subprime market is just starting to develop. According to Finanztest, a monthly consumer finance journal, approx. 70% of lenders now offer loans for free-lancers, however many of them still under prohibitive conditions. Loans for elderly such as reverse mortgages and second home equity mortgage loans are being discussed but not yet offered. It is possible to vary the loan-to-value ratio of the first mortgage whenever interest rate conditions are adjusted, thus effectively raising LTVs for elderly, but rarely practiced.

6.2. Amortization

In Germany's predominantly fixed-rate market, loans typically carry constant (level) payments. The payment level is determined usually by adding an initial amortization level of 1% to the interest rate. I.e., if the interest rate is 5%, the initial payment is 6%. Other initial amortization levels are offered, e.g. 2%.

As a result of fixing the initial amortization level, amortization periods may vary, depending on the relation of interest rates and amortization. For a typical 10 year fixed-rate loan the amortization period is currently approx. 35 years.

So called 'Volltilger', loans fully amortizing within a specific amortization period, are available against an additional margin.

In the adjustable-rate market a similar method is applied. This leads to highly volatile amortization periods, since the varying levels of interest payments and the level of periodic payments may differ substantially – with the difference going to amortization. A partial explanation for those – internationally increasingly unusual – amortization standards could be the insufficient use of computer technology by the large numbers of small lenders.

Bauspar loans in contrast to fixed-rate mortgage loans are generally fully amortizing and shorter term (10 or 15 years), to better manage the liquidity of the closed system.

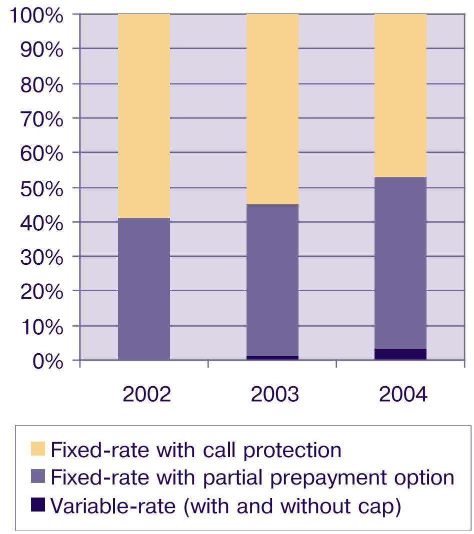
Zero amortization loans are available from private banks; foreign entrants such as GMAC-RFC offer them to attract new, marginal customers.

6.3. Interest rate adjustment

The central feature of the German market is the extensive standardization of the mortgage product in the interest rate dimension. Loans with interest rates fixed to term rather than maturity dominate. Approx. 98 % of the market volume are fixed payment loans with a fixed interest rate of typically 1-10, in low-interest phases up to 20, years, and amortization periods in the range of 30-40 years. The limited fixed rate binding period ('Zinsbindungsfrist') implies that loan conditions are adjusted repeatedly during the life of the loan by the lender ('Konditionenanpassung') – alternatively the borrower may prepay or switch the lender or renegotiate a new loan.

To ensure that funding of the fixed-rate period can be efficiently made through covered bonds (Pfandbriefe, see discussion below), for all loans with a fixed rate binding of up to 10 years lenders may legally exclude prepayment, or – in the legally defined case where the borrower wishes to sell the house – charge a yield maintenance prepayment indemnity ('Vorfalligkeitsentschadigung'). The indemnity ensures that a lender who is matched-funded does not incur losses through reinvesting at a lower interest rate. However, this structure conveys some interest rate risk to the borrower – should rates drop during the interest fixing period, he is sitting on an expensive loan. This leads many borrowers to adjust the interest rate fixing period cyclically, with the level of interest rates, assuming the future interest rates will either fall or rise.

Figure 5. Market shares of fixed-rate loans with call protection and with partial prepayment option in Germany



Source: Europace/Hypoport. Note: Sample of 8,600 mortgage loans extended between 1/2002 and 11/2004.

The system of limited periods of fixed interest rates is called 'term financing' ('Abschnitts-finanzierung'). It was introduced in the 1970s as a reaction to the emergence of high inflation. In the prior two low-inflation decades of the 1950s and 1960s, interest rates had generally been fixed to final maturity and loans were also prepayable without the mentioned indemnities.

Because interest rates are adjusted rather frequently within the loan maturity, banks offer protection in the form of forward rate agreements. For instance, with two years remaining from a 10 year fixed rate, the borrower might want to lock in the new 10 year rate already in advance. Prices vary according to standard derivative market prices.

As figure 5 shows, partially prepayable mortgages have gained in relevance in recent years due to an increased demand for financial flexibility. Typical is a 5% p.a. partial prepayment option, less frequent are 10% p.a. Fully prepayable mortgage loans without indemnities are not available as a product, except after personal negotiation with lenders. The Bauspar product is in essence the only prepayable long-term fixed-rate product, as both rates for savings and loan periods are generally fixed to maturity.

Variable-rate products in Germany exist, but have low market shares of currently not more than 2% (see figure 5). They were introduced in the 1970s by commercial lenders reacting to the introduction of term financing. Today only few lenders offer variable-rate loans, usually indexed to Euribor and capped. However, there is no legal requirement to either index or cap – in principle lenders are allowed to adjust the rates according to their funding situation.

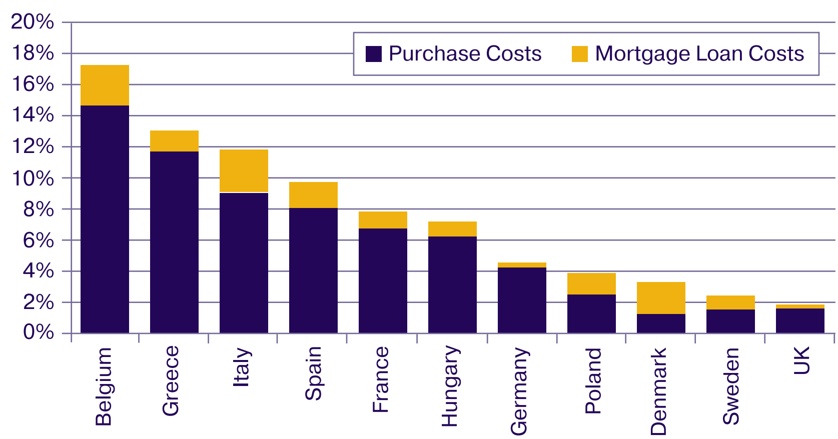
7. PRICING

7.1. Transactions costs

As figure 6 reveals, Germany has relatively low transactions costs for both home purchase and mortgage loan takeout in Europe. Mortgage loan transactions costs fall into two components: legal and bank fees.

Legal fees are standardized by the cost ordinance, a regulation of notary and lawyer's fees with particular relevance for real estate transactions. The notary typically advises on the property sales contract, manages the relevant entries into the land register (transfer of ownership, mortgage), and opens an escrow accounts for the financial transaction.

Figure 6 Transactions costs for home purchase and mortgage loan takeout in Europe, ca 2004



Source: European Mortgage Federation.

Bank closing costs are usually very low, given that borrowers rarely prepay, which allows banks to amortize the costs over the loan. Property appraisal fees tend to be charged separately and capitalized into the loan amount, but are frequently also waived.

7.2. Interest rates and spreads

Current mortgage interest rates in Germany are among the lowest in Europe. In March 2006, according to Finanztest the effective rate on prime 10 year fixed-rate loans with 60% LTV varied among main suppliers between 3.6 and 4%. In contrast to many other European countries, e.g. France, these loans are fully call protected through yield maintenance indemnities, which 'saves' potential options costs of 25-40bp.

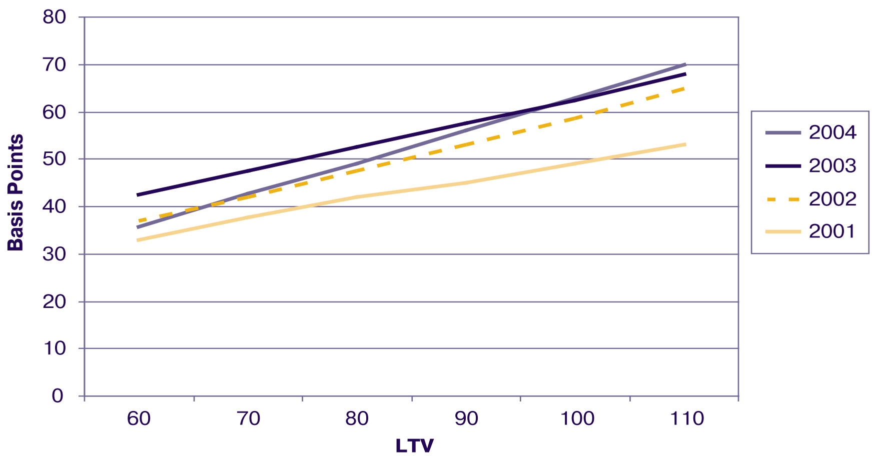
Any deviation from the standard loan into the direction of specific credit and interest rate features fetches a mark-up: for instance, prime 10 year loans with 80% LTV fetch a premium of 15bp (see figure 7) while prime 100% loans – without equity or only transactions costs financed by the borrower – are available for approx. 30 bp.

In the dimension of interest rate risk, a partial prepayment option of 10% p.a. fetches a small additional margin of approx. 10bp, 5% partial prepayments p.a. are often not priced separately; however, not all lenders offer 10% partial prepayment options and more comprehensive prepayment options, e.g. full prepayment option, are subject to negotiations.

Interest spreads on German mortgages over funding costs – the usual benchmark is the Pfandbrief curve – are extremely low, rendering the mortgage for many producers a loss maker – and often loss leader for cross-selling of other products. Margins for prime 60% LTV 10 year fixed-rate loans have been compressed from values around 80bp in the early 1990s to 35-45 bp in the current decade. Spreads of deposit-funded institutions are somewhat higher than those of mortgage banks, due to low remunerations of deposits.

Major reasons for the low margins include a high degree of loan standardization, large numbers of lenders, high transparency through consumer journals and brokers, and a high willingness to cross-subsidize by universal banks, often now organized as bankassurance concerns with other products to cross-sell to the consumer.

Figure 7: Margins of German mortgage lenders by loan-to-value ratio, 2001-2004



Source: Europace/Hypoport, sample with 8600 mortgage loans. Note: Margin defined as spread over Pfandbrief refinancing costs.

8. FUNDING

8.1. Funding instruments

Deposits

The main funding mechanism in German mortgage lending is through bank deposits. About three quarter of mortgages are directly funded through customer deposits, inter-bank deposits and unsecured borrowing. Deposits with Bauparkassen, while usually being held to longer term, are also in principle daily callable (however, the saver faces the loss of the subsidy). Aggressive banks such as ING or Postbank have amassed large deposit bases, which are at least partially invested in mortgages. As a result of the predominance of deposit funding, most German lenders are mismatched with regard to interest rate risk – especially problematic at times where the typical rate fixing period has exceeded 10 years and short-term interest rates are expected to rise. It is unclear to what extent the deposit-funded lenders use swaps to reduce the interest rate risk.

Covered bonds (Pfandbriefe)

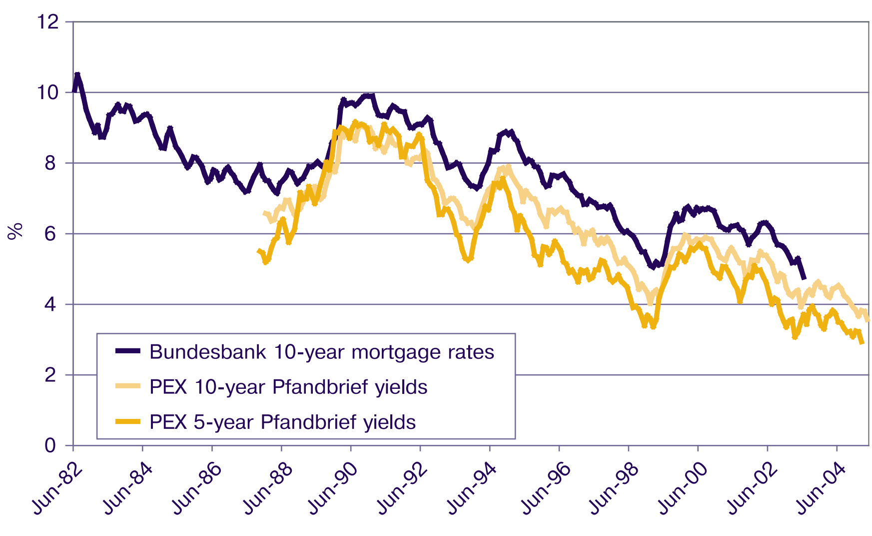
Pfandbriefe are an extremely cost efficient funding tool for banks in Germany, due to their high level of standardization and liquidity as well as numerous preferences for investors. Since the abolition of the special bank requirement in July 2005, banks no longer need to found mortgage banks for the issuance but rather acquire a license. With savings banks and other lenders becoming issuers, their number is consequently expected to increase from the current 25 in 2005 significantly.

The Pfandbrief market, after decades of limited relevance for mortgage finance, was given a new life in the mid-1990s through the issuance of «Jumbo Pfandbriefe» with minimum ticket sizes of initially 1 billion DM, now 1 billion Euro. The first issue was made in 1995 by Frankfurter Hypothekenbank Centralboden, a predecessor of today's Eurohypo. In October 2005 Eurohypo launched a € 2 bn 10-year jumbo global mortgage Pfandbrief.

While Jumbo Pfandbriefe were mostly backed by public sector collateral in the past decade, KfW through an intensively used program called PROVIDE has helped Pfandbrief issuers to swap approx. € 40 billion in mortgage collateral into publicly guaranteed assets that are typically funded by Jumbos. As of 2005, the Jumbo market has reached € 410 billion outstandings.

The spreads of Jumbo Pfandbriefe are currently close or even below the generally used European capital market benchmark, the Euro swap curve. Figure 8 shows that mortgage interest rates very closely follow Pfandbrief interest rates.

Figure 8. Mortgage interest rates and covered bond yields in Germany, 1982-2004



Source: Deutsche Bundesbank, Association of German Pfandbrief Banks. Notes: PEX – deutscher Pfandbrief-Index; Bundesbank mortgage rate time series were discontinued in June 2003, ECB data not fully comparable.

However, Pfandbriefe – because of their standardization which mismatches with certain properties of residential loans, and still higher cost levels compared to holding deposits – have lost in relevance for retail mortgage financing recently. Their funding share of approx. 25% for ca 2002 (EMF estimates) with the loss of market share of mortgage banks has likely significantly declined. A key disadvantage is the absence of capital requirements for interest rate mismatch, which would force banks to make greater use of the instrument for residential loans.

Residential Mortgage Backed Securities (RMBS)

There have been 37 publicized German RMBS closed between 1998 and 2004, aggregating EUR 62 billion of risk transfer. Of these 37 transactions, only two were true sales of mortgage loan portfolios into special purpose vehicles. The rest was 'synthetic', i.e. the securitization made only reference to a loan portfolio held on balance sheet of the lender and transferred the credit risk of that portfolio – e.g. through a credit default swap. The reason are high historic costs of loan transfers, including consumer protection impediments and land registration cost issues, which the so-called True Sale Initiative – a legal reform initiative launched 2002-2004 has partially addressed.

Most German users of MBS also regard the instrument as complementary in terms of securitizing specific risks that do not match the Pfandbrief's standardized asset quality requirement. Early securitizations, e.g Rheinhyp's 1998 deal, securitized second mortgages that are not eligible for Pfandbrief refinancing. Full funding securitization has only recently gained in relevance, with GMAC-RFC – the Dutch finance company – coming to the market in 2005. Again, in this transaction GMAC, as a newcomer to the market, securitizes particularly risky portfolio with inter alia a weighted average LTV of 112.5%.

The outlook for RMBS in Germany is still positive. The Basel II capital standards will lead to a greater acceptance with bank investors, whose capital requirements depends on the rating of the transaction, which – given the high quality of German assets – is often very high. Moreover, as the GMAC transaction has shown, there is appetite by investors for higher loan-to-value loans, especially as long as house prices remain low. This appetite matches increasing borrower demand for low-equity loans, which often comes from young families.

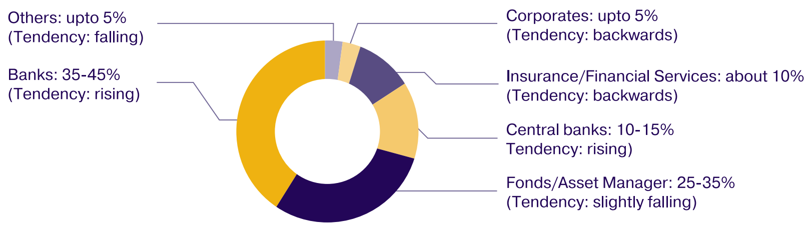
8.2. Investor structure

Reliable investor structure figures are only available for the Pfandbrief. The Jumbo program, as its counterpart in the United States (Fannie Mae and Freddie Mac agency bonds) in particular targeted non-German investors seeking a small yield pick-up over government bonds.

Figure 9 reveals that the main investors in Jumbo Pfandbriefe are banks, central banks, mutual funds, and financial institutions/insurance companies. The share of banks and central banks has recently strongly risen, supported inter alia by improved repo eligibility of Pfandbriefe for banks and new trading platforms.

Non-Jumbo Pfandbriefe are often held by the issuers or placed to investors in long-term relationship to the issuer.

Figure 9: Jumbo Pfandbrief volumes and investor structure



Source: Verband deutscher Pfandbriefbanken. Notes: Banken – banks, Zentralbanken – central banks, Versicherungen – insurance companies, Unternehmen – corporates, andere – others.

9. RISK MANAGEMENT

9.1. Credit risk

In general and with the exception of the initial lending operations in East Germany, credit risk in retail mortgage finance to homeowners is low in Germany. A typical credit loss figure for first mortgage positions would be 3-5 bp, for second mortgage positions including Bauspar loans around 10 bp (authors' estimates). Credit risk is higher, though, in lending to individuals for rental housing purposes, where investment decisions are often made for tax reasons with little regard to the market situation.

In the homeowner markets, several conflicting factors determine the probability of default: on the one hand, house-price-to-income levels are high (despite the low price dynamics in recent years) and prepayment is managed inflexibly, which renders financings more risky. On the other hand house purchase in Germany is still a lifetime decision, default is highly socially stigmatized, and clients are sharply rationed through high implicit equity requirements. Also, as in other European countries preforeclosure activities such as free-handed sales of properties and loan restructurings by far dominate the delinquency management process leading to low loss-given-default ratios. In rental housing finance, credit risk has been higher recently as investors after the elapse of the tax advantages in many regional markets face negative cash flows due to high vacancies or sluggish rental growth.

Credit risk management techniques were improved in Germany in recent years with the preparation to Basel II and enhanced minimum requirements for the credit business imposed by regulators ('Mindestanforderungen fuer das Kreditgeschaft'). Pfandbrief issuers since 2005 have to demonstrate for the licensing to the regulator that they can handle the risk management of mortgage assets.

As mentioned above, conservative regulatory loan-to-value constraints and capital requirements contribute a strong credit risk mitigation approach. An additional factor are 'sustainable' property valuation techniques ('nachhaltiger Beleihungswert'), initially designed for mortgage banks only, which have permeated to the entire financial system. For instance, banks financing a rental property need to apply minimum discount factors and assume conservative rent developments in the future.

9.2. Interest rate risk/prepayment risk

German lenders issue covered bonds (mortgage banks), promissory notes (savings banks), unsecured bonds (commercial banks), long-term savings deposits (Bausparkassen) and use hedging instruments such as swaps (all groups) to reduce the interest rate mismatch from their predominantly fixed-rate mortgage lending.

However, regulatory incentives even under Basel II are not strong enough to truly enforce the use of such techniques. Consequently, the bank regulator BAFIN has recently stepped up its efforts to analyze and if necessary sanction lender's interest rate risk taking behaviour. A particular problem in that regard has been that with the current low interest rate levels average interest rate fixing periods have extended to beyond ten years, which increases mismatch risk for a deposit-funded lender strongly.

Prepayment risk is usually fully covered by the yield maintenance indemnity charged upon an early repayment, if it is possible at all. Lenders even can charge for losses of future servicing income, which also stabilizes the profit situation.

10. PROCESS EFFICIENCY

The high degree of standardization of German mortgage loans and the fierce competition forces mortgage lenders to focus strongly on improving their operating cost efficiency. This has been a trend for the last two decades, which still has not lost momentum.

For example, according to industry sources, operating costs divided by the asset and liabilities are 1.6% in the case of savings banks while the best performing competitors may achieve 0.65-0.9%. This gap explains the different returns on capital achieved by lenders, in the case of savings banks around 10%; in the case of the better performing private banks 15% and more. At the same time many banks cross-subsidise the mortgage product through cross-selling of other products to make up for higher operating costs.

The two main strategies adopted to reduce costs are to lower distribution costs and servicing costs. As discussed above, fee origination through brokers is starting to dominate distribution, with banks often reducing their activity to loan underwriting and investment. This gives them the potential to reduce branch networks or thin out the staffing of branches.

The majority of lenders still undertake mortgage servicing in house, with cost levels up to 40 bp, not far below the average gross margin that can be obtained (see figure 7). The use of third party servicers is becoming more popular, but still accounts for less than 10% of outstanding mortgage loans. Firms such as Prompter and Kreditwerk have been set up by private and co-operative banks respectively to take advantage of superior servicing efficiency and Stater, the Dutch mortgage servicer has a German subsidiary. The savings bank group plans to start an own servicing firm, the East German group of savings banks already uses a centralised servicer.

Further consolidation of the German banking market is widely expected, and needed, given the need to realise cost savings and to improve on the very low margins driven by the best performers.

11. SUBSIDIES

The German home market used to be strongly subsidized way until the mid 1990s. The main instrument were fictive depreciation allowances that worked similar to mortgage interest deductions, and features similar problems as for example supporting mainly high-income clients.

The depreciation allowances were replaced by a lump-sum homeownership support scheme ('Eigenheimzulage') where buyers would receive a flat subsidy over the first 8 years into the investment.

Both schemes were principally delinked from the amount of debt funding, which created less bias in favor of indebtedness in Germany than elsewhere in Europe (e.g. Netherlands) or the United States.

As of January 1, 2006, however, the Eigenheimzulage has been abolished for fiscal reasons. It is being discussed to support homeownership in the future through the tax credit system for retirement provision, which is already in place for financial savings.

Bausparen continues to be subsidized through a savings premium and tax advantages, which both of moderate size and targeted to households with moderate incomes. The premium works as an annual percentage grant of 10% added to the saved amounts; however, premium levels and eligible income levels of savers are capped by law. The subsidy is only disbursed if the saver stays saving into the contract until maturity – generally after 5 years. This incentive structure creates a long-term funding instrument for the Bausparkasse. So-called good brothers that do not take up loans also receive the savings premia.

More problematic than the remaining mortgage sector subsidies is the continued policy bias in favor of rental investment. In rental housing, fictive depreciation allowances are continued until today. A degressive depreciation model, which lead to high initial tax deductions for the rental investor, was replaced by a linear depreciation model in 2005. Still, the capital costs after tax are considerably lower for a rental investor compared to a homebuyer.

List of Acronyms

ARM . . . . .Adjustable-rate mortgage
BAFIN . . . . .Bundesamt fur Finanzdienstleistungsaufsicht
BIS . . . . .Bank for International Settlements
ECB . . . . .European Central Bank
FRM . . . . .Fixed-rate mortgage
FSA . . . . .Financial Services Authority
IMF . . . . .International Monetary Fund
KfW . . . . .Kreditanstalt fur Wiederaufbau
MBS . . . . .Mortgage-backed securities
RMBS . . . . .Residential mortgage-backed securities
VdpB . . . . .Verband der privaten Bausparkassen
VdP . . . . .Verband deutscher Pfandbriefbanken
RMBS . . . . .Residential mortgage-backed securities

Chapter 5.
Kazakhstan

This paper is based on the following sources:

a. Materials of the International conference on Mortgage Lending in CIS countries, 9-10 November 2005
b. FitchRatings, «Kazakhstan: Rising external borrowing by banks and sovereing rating implications», special report, 15,04,2005
c. The Economist, «Small but elegant», May 31, 2003
d. Web-sites of the Agency for Financial Supervision, Kazakhstan Mortgage Company, Kazakhstan Mortgage Loans Guarantee Fund, National Bank of Kazakhstan, BTA Ipoteka

1. HISTORICAL OVERVIEW

The Kazakh financial system was less damaged than those of other central Asian countries by Russia's debt crisis in 1998 and is now characterized as stable and growing, gradually regaining the trust of the country's households[1]. Kazakh regulators acted more decisively than their Russian counterparts to re-establish stability: the 230 banks that existed in 1993 have been consolidated to 34 with three largest holding over 60%[2] of the country's banking assets.

The first mortgage credits in Kazakhstan were granted by private commercial banks in 1998. Since then the residential mortgage market has grown substantially, although from a relatively small base. The government contributed significantly into establishment of mortgage finance system.

The strategy for the new system was approved by the Government in November 2000. It introduced new financial mechanisms such as contract savings, specified the terms of mortgage lending, and created a second-tier institution aimed at providing long-term finance for commercial banks engaged in mortgage lending through purchasing their mortgage portfolio and issuing mortgage securities. Pursuant to the Concept the Kazakhstan Mortgage Company[3] was established by the National Bank and started operations in 2001.

With the goal to further promote market growth and increase the affordability of mortgages, the Kazakhstan Mortgage Loans Guarantee Fund[4] was established in November 2003. A contract savings system along the lines of the German Bausparkassen[5] model is in an early stage of development. The State House Construction Savings Bank of Kazakhstan, acting under this system, was established in April 2003 – it is formally the only state-owned bank in the housing finance system.

In June 2004 the Government approved the State Programme for Housing Construction Development in the Republic of Kazakhstan for the years 2005 – 2007[6], which defines a development plan for the mortgage market and is aimed at improving access to the market.

Legislation passed in parallel tried to cover most aspects of mortgage finance, in particular property registration and non-judicial foreclosure procedures. Lenders received in particular the right to repossess pledged residential housing in case of borrower's default.

[1] The Economist, «Small but elegant», May 31, 2003, page 75
[2] The Agency for Financial Supervision, Banking Sector Overview, www.afn.kz
[3] See Chapter 7 for more detailed information on Kazakhstan Mortgage Company
[4] See Chapter 8 for more detailed information on Kazakhstan Mortgage Loans Guarantee Fund
[5] The Bauspar system is in essence a collective self-help system with the aim of house-building financing. The product combines a savings phase prior to the investment and a loan phase after the investment. Customers accumulate assets in their Bausparkasse and acquire an entitlement, having saved towards a Bauspar fund, to be granted a Bauspar loan at a later time. http://www.lbs.de/ost/english/bausparen/bauspar-system
[6] See Chapter 11 for more detailed information

Aimed at further credit risk reduction and facilitating the credit approval process, the «First Credit Bureau» was founded in July 2004 by seven large banks under USAID assistance.

In February, 2006 the Law on Securitization came into force, which is expected to favour the broad development of Kazakh securitization market.

2. MORTGAGE MARKET SIZE

Notwithstanding the rapid expansion of the retail lending over the last five years (average 50% p.a.) it is still modest in comparison to developed countries, at level of 25%. Traditional business with corporates is prevailing in banking lending activities. This is true for mortgage lending as well.

Kazakhstan's residential mortgage market has grown substantially especially during the past two years, rising from 42 billion KZT (280 million US$) at the end of 2003 to an estimated 288 billion KZT (2.2 billion US$[7]) as at end 2005.

Table 1. Mortgage credits to individuals, billion KZT[8] (billion US$), end of the period

	2003	2004	2005
Commercial banks	29.5 (0.20)	99.4 (0.73)	220.5 (1.7)
Mortgage companies	12.5 (0.08)	35.2 (0.26)	68.3 (0.5)
Total	**42 (0.28)**	**134.6 (0.99)**	**288.8 (2.2)**

Source: National Bank of Kazakhstan, Agency for Financial Supervision

According to the bank regulator, the Agency of Financial Supervision, outstanding mortgage loans, both to individuals and to legal entities, reached 757.7 billion KZT (5.7 billion US$) as of 1st October, 2005, which is equivalent to 11.8% of GDP. Kazakhstan has thus a far more developed mortgage market than Russia and is at par with the more advanced markets in Central Europe and the Baltics.

3. HOUSING AND MORTGAGE MARKET LINKAGE

Although the Kazakh real estate market extensively developed during recent years, influenced by increasing wealth of the population, higher disposable incomes and improved macroeconomic situation, there is still a large unsatisfied demand for housing in Kazakhstan. The booming mortgage market contributed to upward pressure on real estate prices, especially in the large cities. In 2004, existing home transactions prices increased by 76% compared to 2003 while prices for new units grew by around 50% over the same period. Whereas initially strong price growth was recorded predominantly in both Astana and Almaty, the situation is changing and the major potential for price growth has moved towards the regions.

[7] Here and onwards the following official exchange rates are used: 149.58KZT/US$ for 2003, 136.04 KZT/US$ for 2004 and 132.88 KZT/US$ for 2005

[8] The Agency for Financial Supervision (AFN), Banking and Non-Banking Sector Overview, www.afn.kz

Over 95% of the total housing stock of Kazakhstan is privately owned. At present the current average ratio of residential space is slightly less than 18 sq. m. per person and while in most large cities this ratio is close to this level, it remains less than optimal in smaller towns, at an average 15.8 sq. m.. This backlog as well as migration are expected to be a strong catalyst for further mortgage market growth.

4. MARKET STRUCTURE

Commercial banks

Despite the strong role of mortgage companies, commercial banks remain the major player in the mortgage market and expand their market shares (see table 1). The market is also concentrated: four major commercial banks with almost equivalent market shares hold 75% of the mortgage market[9]. These are Kazkommertsbank (KKB), Bank TuranAlem, ATF Bank and Halyk bank. The latter bank is leading the expansion into retail lending and has a 25% share of the market[10].

Kazkommetsbank was established in 1990 and is one the largest banks in Kazakhstan. Its major business advantage lies in a developed network of branches. KKB offers a variety of mortgage products and as of 01.01.2006 its mortgage portfolio amounted to US$ 455 million or 71% of its retail lending business.

Halyk bank was transformed from the former Soviet saving bank and has an extensive network of branches throughout the country as well as the ability to provide a large number of services to its client base. The bank's mortgage portfolio accounted for US$ 588 million or 57% of its retail portfolio.

Bank TuranAlem is the leading financial group, present in all segments of the market: corporate and retail banking, trade financing, securities market, credits, SME development, leasing, mortgage lending, pension funds and others. It provides mortgage lending through its daughter company, BTA Ipoteka, which started activities in 2001 and today is one of the largest players in the Kazakh market.

ATF Bank, established in 1995, is recognized as leading financial institution in corporate management and best bank for small and middle-sized business.

Mortgage companies

The share of mortgage companies in the total amount of mortgage loans granted to individuals is significant and constituted 23.6% in 2005. Although, it is worth mentioning that banks show faster growth in mortgage lending than the growth rate recorded by mortgage companies, which leads to a gradual decline in their market share (see table 1).

[10] Mortgage lending regulation in Kazakh Republic, Elena Bahmutova, AFN, Speech at International conference for mortgage lending in CIS countries.

[11] Kazakhstan: Rising external borrowing by banks and sovereign rating implications, Special Report, FitchRatings, 15 April, 2005

Table 2. Mortgage companies, as of January 1st, 2006, balance sheet data in thousand KZT (million US$)

Mortgage companies	Assets	Liabilities[11]	Mortgage credits
Kazakhstan Mortgage Company	40,677,519 (306.1)	30,619,756 (230.4)	34,598,514 (260.4)
BTA Ipoteka	34,061,956 (256.3)	31,359,081 (235.9)	33,260,362 (250.3)
Mortgage company Damu	302,305 (2.3)	501 (0.004)	14,762 (0.1)
Kurylys Ipoteka	100,684 (0.8)	59,637 (0.4)	80,553 (0.6)
Mortgage company Astana Finance	114,173 (0.9)	14,154 (0.1)	21,968 (0.2)
First Mortgage Company	48,687 (0.4)	0	35,166 (0.3)
Almaty Regional Mortgage Company	40,930 (0.3)	770 (0.001)	18,408 (0.1)
Total	75,346,254 (567.0)	62,053,899 (467.0)	68,029,733 (511.9)

Source: AFN report, Current Status of non-banking institutions as of 01.01.2006

As of the beginning 2006, 7 mortgage companies were active in Kazakhstan. The primary activity of mortgage companies is mortgage warehousing and investment. After accumulating a pool of mortgages in the warehousing process, the companies issue mortgage bonds or receive long-term credit in the international financial markets in order to fund their investment. To 78.6% mortgage companies are funded by issued mortgage bonds and 18.6% are loans taken from other banks[12].

Contract savings system

The public State House Construction Savings Bank of Kazakhstan is the only lender that relies solely on contract savings for housing to fund mortgage loans (see below for product details). The lending volumes of State House remain insignificant in comparison to those of commercial banks. As of November 2005 the 12,000 savings contracts were signed to the amount of 7.8 billion KZT (58.7 million US$).

5. DISTRIBUTION AND MORTGAGE PURCHASE PROCESS

Mortgage loans in Kazakhstan are mainly originated through branch network of the banks and mortgage companies, although the impact of alternative distribution channels, such as mortgage brokers[13], real estate agents, so-called «mortgage supermarkets» acting under «one-window» principle and covering the whole mortgage lending process, and construction companies is increasing. The banks and mortgage companies widely use the internet for pre-qualification of the borrower, monthly repayment calculation, informing about the available products and loan repayment schedules.

The mortgage lending process is standardized in each bank or mortgage company. It comprises the assessment of the creditworthiness of the potential borrower and property valuation by the certified appraiser. The Kazakhstan Mortgage Company and Kazakhstan's Guarantee Fund for Mortgage Credit

[12] The Agency for Financial Supervision (AFN), Banking and Non-Banking Sector Overview, www.afn.kz
[13] A company or individual that places mortgage loans with lenders, but does not originate or service loans like a mortgage banker

(see below) have developed their own standards and requirements to the underwriting procedures, which are obligatory for partner banks and companies for mortgage loans under their programs.

The credit approval process is rather short and usually takes 7 days. Some mortgage banks and mortgage companies adhere to the European Agreement on Voluntary Code of Conduct on Pre-Contractual Information for Home-Loans which discloses the information to be provided to the borrowers on the pre-contractual stage regarding home loans.

6. PRODUCT RANGE

6.1. Product types and target group

Loan purpose

According to different analyses app. 70% of all mortgage credits are taken with the purpose of purchasing new housing. The share of mortgage credits for renovation is increasing. In general the mortgage credits are granted for the following purposes:

- Purchase of real estate in the primary and secondary market;
- Renovation / modernization of available / new housing;
- Construction of private cottages;
- Remortgaging;
- Investment;
- Purchase / reconstruction of commercial real estate.

Underwriting standards

Most market players require as underwriting criteria that the costs on mortgage debt servicing are not exceeding 50% of total family income. Loans are available up to 90% of the assessed property value.

Several lenders already began offering mortgages up to 100% LTV, but they attempt to limit the risks by higher margins, additional collateral or requirement to open a deposit account for at least 15% of the real estate value.

Table 3. Development of mortgage product choice in Kazakhstan

	2000	2005
Purpose	Only housing	Any purpose
LTV	50%	90% (exception up to 100%)
Maturity	3 years	25 years
Currency	KZT	KZT, US$
Availability	Only in Bank	Alternative distribution channels
Interest rates / KZT	35%	10%[14]-13%

[14] 10% interest rate only under State program

New products

Driven by the borrower demand, the choice of available mortgage products has developed dynamically during the last years as table 3 reveals. Initially, choice was constrained by high interest rates (35%), low LTV's (50%) and extremely short loan terms (3 years).

Currently, the banks and mortgage companies offer a wide spectrum of products, including «mortgage packets» designed to the needs of special group of customers. Some banks issue «express loans», however they are supported by higher margins.

Those borrowers who cannot officially prove their income have restricted access to mortgage loans. For them the lenders developed the «hybrid» mortgage product. The borrower transfers to the bank deposits equally to at least 15% of the housing value; subsequently the bank grants the credit in the amount of the housing value. The interest rates for such loans are usually lower and depend on the deposit amount.

Products offered by the State House Construction Savings Bank of Kazakhstan

The State House Construction Savings Bank offers 4 contract savings for housing products to its customers, whose main features are summarized in table 4. Minimum savings amounts are very low in comparison to European schemes, in order to stimulate lending.

Table 4. Products of the State House Construction Savings Bank

Products / Characteristics	**«50%-50%»**	**«25%-75%»**	**«25%-75% State «**[15]	**«Savings»**
Deposit period	Up to 5 years	3 years	3 years	5 years
Minimal savings amount	50% of contract amount	25% of contract amount	25% of contract amount	50% of contract amount
Deposit interest rate	3%	3%	3%	5.5%
Possibility of getting interim loan	+	+	+	+
Loan amount	Difference between contract and savings amount			
Loan term	Up to 10 years	Up to 7 years	Up to 25 years	Up to 8 years
Loan interest rate	5%	6%	5.5%	8.5%
Interest rate on interim credit	8%	8%	7.2%	11%

Public low-income housing program

The State Programme for Housing Construction Development for the period of 2005 -2007 plans to fund 12 million sq.m. of housing, to be sold at prices up to 350 US$ per sq. m. The Program aims at providing loans to 49,000 households,

[15] For loans under State Program for Housing Construction Development

the primary target groups are civil servants and young families. The restrictions under the program include a 3-year period, during which the prepayment is excluded[16] (usually this period is much shorter in the non-state programs), and the maximum size of the loan which is capped at 5 million KZT (37,630 US$).

6.2. Amortization

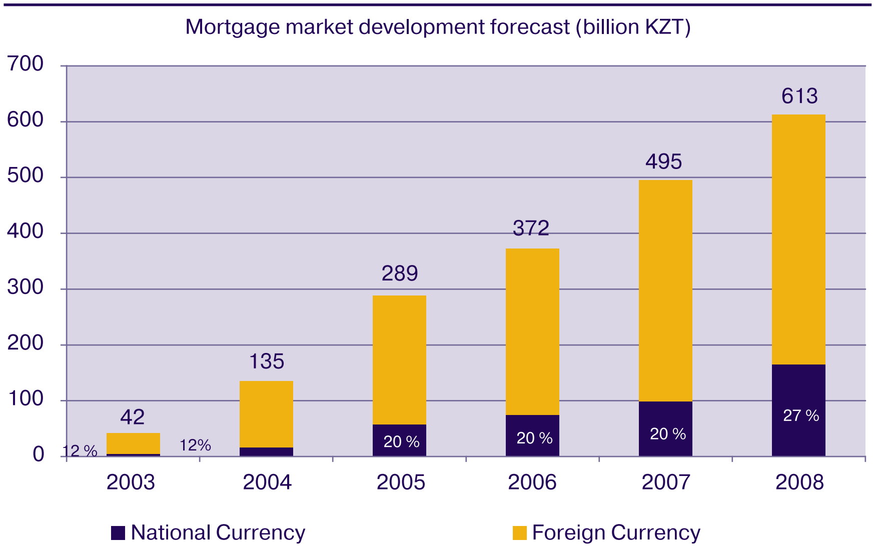
Although the majority of lenders declare the maximum loan term to be up to 25 years, almost the half of all mortgage loans are granted for the term between 10 and 15 years. Still, maturities have considerably become extended in recent years. Loans are given as repayment mortgages.

6.3. Interest rate adjustment

Due to a history of high inflation in the immediate transition phase, banks provide mortgage loans predominately in foreign currency and here primarily US$. Foreign exchange denominated lending accounted for around 80% of total loans at end-2005 (see figure 1), compared with 88% in 2003.

Mortgage credits with both variable and fixed interest rates are broadly used by primary market lenders. Variable interest rates for mortgage loans denominated in foreign currency are usually based on LIBOR 3M + bank's spread (app. 7-8%). Lenders generally set a 6-month period, during which early repayment is not allowed.

Figure 1. Mortgage market development forecast, accumulated (billion KZT)



Source: Bank TuranAlem, Presentation «Mortgage Lending in Kazakhstan», Almaty 2005

The share of KZT lending is expected to rise, anchored by KMCs exclusive focus on lending in the national currency. KMC sets variable rates for mortgage loans under its programs, which are calculated on the basis of an inflation index and changed on a monthly basis. KMC's asking rate is currently (June 2006) 9.9% p.a., including 9.0% inflation and a spread of 0.9%. During the last years the rates gradually decreased. The primary lenders under KMC program are allowed to set their own margins over the costs of funds, which however cannot exceed 4 percentage points. The final interest rates for borrowers vary between 11.8% and 13.8%. KMC has set a 4.5 percentage points cap and floor on its loans.

7. PRICING

7.1. Transactions costs

The process of property registration according to the legislation should take only 5 working days, but a number of complains about the bureaucracy and corruption of the State Property Register put in question if this period is kept to.

Kazakh mortgage lenders charge relatively high transaction fees for mortgage loans. Some banks charge loan closing fee (1% of the loan amount) and account maintenance fee in case of «hybrid» mortgages (0.25% – 0.5% of the loan amount).The disbursement fees of the three major mortgage lenders range from 0.4% till 1.1% of the loan amount.

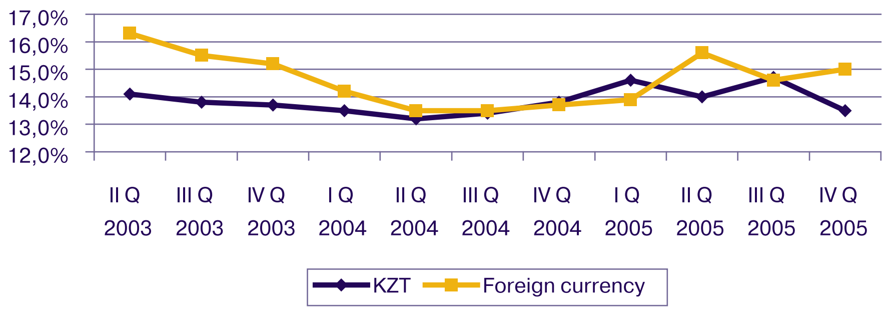
7.2. Interest rates and spreads

Interest rates have been on a gradual downward trend in Kazakhstan, but as in neighbouring Russia have not yet fallen to single-digit levels – neither in US$ nor in KZT currency.

Figure 2 shows a comparison that suggests that average interest rates for foreign-currency denominated loans in 2005 were as high or even higher than for loans in the national currency. Generally, it would appear that at a level of 13-15% a floor for interest rates has been reached that no longer can be explained by inflation. It could be rather related to Kazakhstan's country risk premium, the counterparty risk of Kazakh banks, liquidity and convertibility risks.

A reason for the somewhat lower KZT rates could be that the majority of loans in national currency are granted under KMC or state programs and the interest rates on such loans are below market level. At the same time, one lender, BTA Ipoteka provides US$-mortgage loans for as low as 12.08% rate (LIBOR3M+7%).

Figure 2. Weighted average interest rate on mortgage credits, issued by banks on both state and commercial programs



Source: National Bank of Kazakhstan, Statistic bulletin for 2005

Due to a highly concentrated banking system, resulting in very low competition, interest rate spreads are high. Despite substantial decline in interest rate spread since 1996, they are still higher than in many other transition countries – equalling 4.02 percentage points in 2004 and 3.15 in 2005[17]. For mortgage loans the spreads are usually ranging between 3 and 5 percentage points. In KMC programs the spreads are capped at 4 percentage points.

8. FUNDING

8.1. Instruments

Kazakh mortgage lenders fund mortgages through their large deposit base, mortgage bonds, international borrowing on the interbank or corporate bond markets, or most recently mortgage-backed securities.

8.1.1. Mortgage bonds

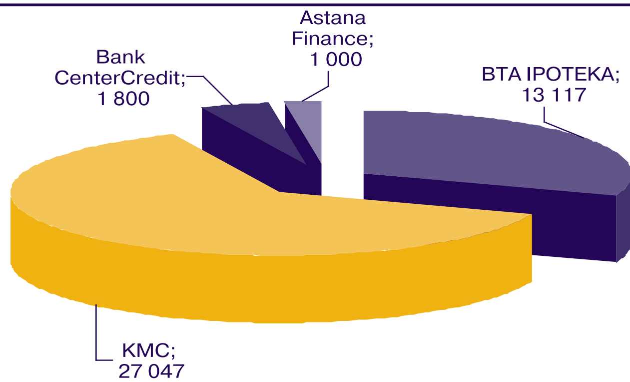
The development of mortgage bond market was driven by the State Program for long-term financing of housing construction and development of mortgage lending through issuance of mortgage bonds. Following the approval of the Program by the Government in November 2000, a number of legislative and regulatory documents, regulating the issue and circulation of mortgage bonds both by banks and mortgage companies[18] were developed and amended.

The first mortgage bonds to the amount of $US1million were issued by Lariba Bank in 2001 and carried a guarantee by USAID's Developmental Credit Authority

[17] AFN Annual Report for 2005, www.afn.kz
[18] Civil Code, Decree of the President «On Mortgage» and the Law «On banks and banking activities», the Law «On securities market», Regulations of NBK on state registration and issue of non-governmental bonds, etc.

(DCA) for 50% of principal. The next to enter the mortgage bonds market were the Kazakhstan Mortgage Company and BTA Ipoteka in 2002 and 2003 respectively. As of mid 2005 the mortgage bonds in circulation equalled to 42.9 billion KZT (322.6 million US$)[19]. The largest issuer was KMC, followed by financial companies BTA Ipoteka, Tsesnabank and Astana Finance (see figure 3).

Figure 3. Mortgage bonds in circulation, million KZT



Source: «Mortgage bonds, securitization and REITS», presentation by Steven Moody, Pragma, at International conference on mortgage lending in CIS, 9-10 November 2005

Kazakhstan Mortgage Company

In order to provide long-term finance for the emerging mortgage market, at the end of 2000 the National Bank of Kazakhstan created a fully government-owned second-tier institution, the **Kazakhstan Mortgage Company**. Initially, it operated as a primary mortgage lender, but in 2001, it was converted into a liquidity facility supporting other lenders.

KMC' s partners are 14 banks and 3 mortgage companies[20]. KMC signs a general agreement with partner banks and purchases mortgage loans from them with the commitment that the banks will buy them back in the event that there is a default on the loan or if the loan is not consistent with KMC's mortgage lending standards. The credit risk thus remains with the primary lenders. KMC refinances mortgages only in the national currency.

[19] «Mortgage bonds, securitization and REITS», presentation by Steven Moody, Pragma, at International conference on mortgage lending in CIS, 9-10 November 2005

[20] Kazakhstan Mortgage Company, www.kmc.kz

Table 5. Basic lending conditions under the Kazakhstan Mortgage Company funding program

Currency of loan	KZT
Amount of loan	up to 50 mln. KZT (376 thousand US$)
Terms of loan	from 3 to 20 years
Prepayment	Moratorium[21] – 6 months Minimal amount – 600 000 KZT (4 515 US$) Penalty – 1% of repayment
LTV	70% or 90% if subject to insurance by KGFMC
Paying capacity ratios: – payment / income – total payment / income	 35% – 45% 40% – 50%
Insurance	Life and property insurance

Source: Kazakhstan Mortgage Company

Between the start of its operations in 2001 and January 2005 the KMC purchased 15 thousand mortgage loans to the amount of 31 billion KZT (equivalent to 233 million US$) from its partner-banks. The volume of mortgage bonds placed by KMC totalled 26 billion KZT at the end of 2004, including 19 billion KZT placed in 2004.

The KMC has a right to issue and place coupon and discount[22] mortgage bonds. The interest rate on coupon mortgage bonds can be fixed or floating with maturity period up to 15 years. The maturity period of discount mortgage bonds is from 3 to 12 months.

Table 6. Mortgage bonds, placed by Kazakhstan Mortgage Company

# of issue	Amount	Tenor	Fixed margin over inflation [23]	Total coupon
1	1.5 billion KZT	3 years	4.75%	10.75%
2	3.0 billion KZT	10 years	1.80%	6.90%
3	5.0 billion KZT	10 years	1.00%	8.30%
4	5.0 billion KZT	10 years	0.50%	6.90%
5	5.0 billion KZT	4 years	0.39%	7.69%
6	5.0 billion KZT	6 years	0.39%	7.29%

Source: Kazakhstan Mortgage Company, as of June 2006

In 2005, the first bonds issued were redeemed. As of end 2005, 13 mortgage bonds issues were registered to the amount of 59.5 billion KZT (447 million US$). The six last issues are being placed. In addition to this, the KMC plans to issue mortgage bonds for the amount of 111.2 billion KZT (836 million US$) in 2006-2007.

8.1.2 Corporate bonds

As the long-term funding is not available domestically in the required volumes, the larger banks have been increasingly funding this through external borrowing. In 2003 they raised internationally more than US$ 2 billion, mostly via Eurobonds, medium-term notes and syndicated loans. In 2004 the external borrowing increased by a further US$ 3.6 billion[24].

[22] A discount bond is a bond trading at a price lower than par.
[23] Fixed margin over quoting rate set by KMC and based on inflation index
[24] Kazakhstan: Rising External Borrowing by Banks and Sovereign Rating Implications

8.1.3 Residential Mortgage-backed Securities

The recent adoption of the Law on Securitization is likely to stimulate the secondary mortgage market. The first securitization deal took place, however, through a Dutch SPV.

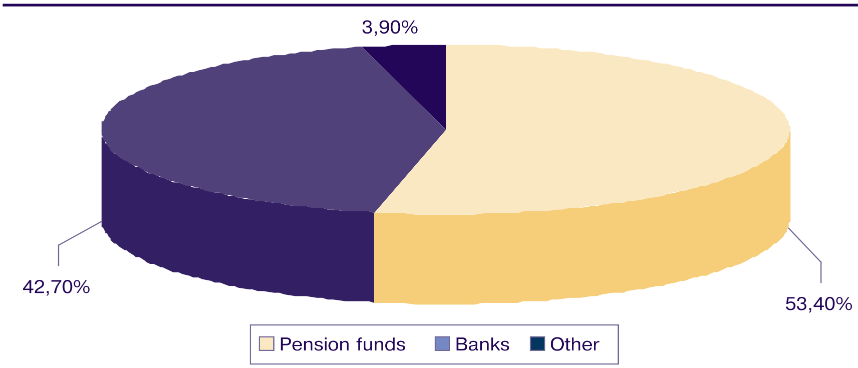
In February, 2006 ABN AMRO closed the first cross border mortgage-backed securitization for Kazakhstan and CIS. The structure of the transaction, a US$ 150 million mortgage-backed securitization for BTA Ipoteka, involved a «true sale[25]» of residential mortgage pool under Kazakhstani law to First Kazakh Securitization Company B.V., a newly established special purpose vehicle located in the Netherlands. The SPV is ultimately funded by an ABN AMRO-sponsored multi-sector conduit (rated A1+ / P1 by S&P and Moody's, respectively). The Multilateral Investment Guarantee Agency, a member of the World Bank Group, provided political risk coverage for a portion of the principal and interest payments generated by the mortgage portfolio.

8.2. Investors

Investors' demand for mortgage bonds is significant, which indicates the increased capital accumulation among financial institutions, such as commercial banks, pension funds and insurance companies.

Figure 4 illustrates the various investors as of 2004 in bonds issued by the KMC. Data for all mortgage bond issuers are not available. The high share of banks supports the notion of the value of the mortgage bond system for liquidity absorption in an overliquid banking market.

Figure 4. Investors in mortgage bonds, issued by the Kazakhstan Mortgage Company, as of December 31, 2004



Source: Presentation of the Kazakhstan Mortgage Company at the conference Mortgage Lending in Russia and the CIS, 24-25 February, 2005

[25] True-sale securitizations involve the sale of securitized receivables that are isolated from bankruptcy or insolvency of the originator.

9. RISK MANAGEMENT

9.1. Credit risk

The credit risk management of mortgage lenders has been supported by the Kazakh authorities through legal-regulatory measures. A credit bureau has started operations. Moreover, a national guarantee fund is available to insure mortgage loans.

Legal-regulatory measures

Foreclosure reform has created strong incentives for borrowers to repay their loans. Lenders have the right to repossess pledged residential housing rather than going through foreclosure. That means a non-judicial foreclosure process is available, with strictly sequenced steps and time lines. Although no specific cases have been recorded, it is widely recognized that the enforcement process could work out effectively in the event.

In order to reduce the credit risk associated with the rapid growth of mortgage lending during the last years (e.g. mortgage lending to individuals increased by 262.2% in 2004) and considering the fact that the share of mortgage credits[26] constituted 28.8% of the total credit portfolio of the banking sector[27], the Agency for Regulation and Supervision of the financial market and financial institutions has revised the system of capital requirements.

Starting from 1.07.05 a 50% risk weight is applied to mortgage credits secured with property, which value is below 7,000 MTI[28] (app. 50,000 US$). In case the collateral value is over 7,000 MTI a 75% risk weight is applicable. For comparison, the Basel II requirements set the risk weight for mortgage credits in the standardized approach at the level of 35%. Considering the fact, that the credits in the amount of 45,000 – 50,000 US$ (collaterized with real estate valued over 7.000 MTI) constitute the majority of retail mortgage portfolio of the banks, the requirement of a 75% risk weight is viewed as too high by the mortgage players, as the most risky usually are the credits taken for investment purposes with real estate value over US$ 130.000. It could also establish an implicit subsidy for the Guarantee Fund (see below), which so far lags behind in securing enrolments.

Credit Bureau

The «First Credit Bureau», founded in July 2004, stores all past and present credit transactions entered into by a particular legal or natural person and provide credit reports to lenders. In February 2006 it commenced its operations and today

[26] Both to private and corporate sector

[27] Source: The Agency for Regulation and Supervision of the financial market and financial institutions of the Republic of Kazakhstan, 1.07.2005

[28] MTI – Monthly target indicator is an indicator which is used in order to calculate pensions and social benefits as well as to impose penalties, calculate taxes and other payments, for example, state duty, fee for registration of legal entities and private entrepreneurs. The target indicator is set each year by the Law of Kazakh Republic «On the Republican Budget» for a current year. The target indicator was set as KZT 971 for the year of 2005 and as KZT 1,030 for 2006.

is supported by most primary market lenders: ATF Bank, Alyans Bank, Kazcommertcbank, Halyk bank, BankTuranAlem, Bank CenterCredit, Tsesnabank, Astana Finance, CreditInfo Group.

Kazakhstan's Guarantee Fund for Mortgage Credit

Kazakhstan's Guarantee Fund for Mortgage Credit[29] was created as publicly owned guaranty fund in November 2003 with the aim of developing mortgage system and ensuring financial stability of mortgage lending players. The Fund was designed based on the US private mortgage insurance model, which requires the Fund to be monoline insurer and unaffiliated, i.e. independent in decision making from a mortgage company or bank. In the initial stage of development, a private or public/private structure was considered, but as Kazakh insurance companies are lacking adequate funds for investment and do not have sound capital structures, being mostly bank subsidiaries or affiliates, i.e. not adequately independent, this was not feasible.

The Guarantee Fund is fully capitalized by the National Bank of Kazakhstan. Initially the authorized capital of the Fund was 500 million KZT, but after the first stage of capitalization (issuance of the shares to the amount of 1.5 billion KZT) it was increased up to 2 billion KZT (app. US$15 million). It is planned that during the 2nd stage of capitalization 180 000 shares will be issued, thus increasing the authorized capital till 3.8 billion KZT (app. US$28 million).

The Fund offers only mortgage insurance products (monoline insurer). To private lenders, only first loss coverage with coverage level up to 50% is offered. With the launch of the State Program for the Development of Housing Construction, the Fund started to offer 100% coverage on mortgage loans for this particular program. Under the State Housing Program, mortgage loans are granted for up to 20 years, with 90% LTV level and with an interest rate not exceeding 10%.

The mortgage borrowers are paying the mortgage insurance premium, which depends on the coverage level, LTV level and loan term. There are two modes of payment, an up-front charge (single premium payment, range from 0.55% till 3.73%) and yearly payments (regular premium payments, range from 0.12% till 0.59%) are used.

100% of the premiums received by the Fund remains in the Loss Reserve, unless used to pay claims in case of default loans (if the proceeds after sale are insufficient to cover outstanding balance of the lender). The administrative expenses of the Fund are covered by its investment activities.

In case of delinquency, a claim is paid if the borrower, pledged property and mortgage loan comply with Fund's policy requirements and/or lender's underwriting procedures approved by the Fund. Eligible loan amounts are

[29] The description is based on the materials, obtained from the web-site of Kazakhstan's Guarantee Fund for Mortgage Credit (www.mgf.kz), Strategy for the development of the Fund for 2005-2007, and the Rules of guaranteeing mortgage credits by the Fund.

restricted – between 300 thousand and 50 million KZT (2,258 – 376,279 US$) – which creates a very wide operation field for the public insurer. In order to diversify the risks the Fund plans to introduce upper loan volume limits for each region depending on the market situation.

As of beginning 2006, 24 banks and mortgage companies[30], active in mortgage lending, were involved in the guaranty system for mortgage credits and the amount of guarantied credits exceeded 5 billion KZT (37.6 million US$). This is, however, not more than 1.7% of outstanding loans.

9.2. Interest rate risk

Interest risk management in Kazakhstan is provided on the one hand (KZT market) through the option to refinance through KMC or private label mortgage bonds and on the other hand (US$ market) through US$ deposits and foreign loans or bond issues. Prepayment can be excluded contractually, in practice for up to 2 years.

10. PROCESS EFFICIENCY

There are no specialized mortgage service providers in Kazakhstan and the mortgage lenders service their loans in-house, including the loans sold under the KMC program. The servicing of such loans is commissioned to the originators, which receive a servicing fee.

11. SUBSIDIES

State Program

The program envisages that the State will construct and sell the housing at prices up to US$ 350 per sq.m. In order to increase the access to mortgage credit, the State shall take action to improve the mortgage credit parameters. The following program parameters are envisaged:

- fixed interest rate – 9-10 %;
- down-payment – 10 %;
- mortgage loan term – 20 years.

In the market, currently, some banks offer mortgage loans, which feature only one of the above mentioned criteria. No bank has as yet offered loans with all three parameters. The objective of the State shall consist in focusing the market on the compliance with them.

Pursuant to the State Program for Housing Construction Development in the

[30] Allians Bank, Kazkommertsbank, Tsesnabank, Bank CenterCredit, Housing Construction Savings Bank of Kazakhstan, Bank TuranAlem, Temirbank, EurasianBank, Senim Bank, Texakabank, ATF Bank, Bank Caspian, DanaBank, People's Bank of Kazakhstan, Industrial Bank of Kazakhstan , Valut-Transit Bank, BTA Ipoteka, Kurylys Ipoteka, Kazakh Mortgage Company, Nurbank, Mortgage Company Damu, First Mortgage Company and Mortgage Company Astana-Finance

Republic of Kazakhstan for the years 2005-2007:

- In 2005, the scheduled commissioning of the housing amounted to 3 million square meters;
- In 2006 – to over 4 million square meters;
- In 2007 – to over 5 million square meters.

It is expected that about 195,000 households will be covered with housing over the years of implementing the housing program.

The main objectives of the State Program which will support the development of mortgage lending system are:

- taking measures to lower the inflation levels, which will enable to decrease the mortgage lending rates;
- issuance of long-term governmental securities in order to support the government bond benchmark for mortgage bond pricing;
- development of the mortgage guarantee system. For these purposes, it is possible that the capital of KMGF could be increased.

Tax advantages

Starting with 2005 the taxable income of the borrowers can be reduced by the amount of interest paid on housing loans. However, only clients of the State House Construction Savings Bank can benefit from this tax allowance.

List of Acronyms

AFN . . . . .Agency for Financial Supervision
ARM . . . . .Adjustable-rate mortgage
FRM . . . . .Fixed-rate mortgage
IMF .International Monetary Fund
GDP . . . . .Gross Domestic Product
KKB . . . . .Kazkommertsbank
KMC . . . . .Kazakhstan Mortgage Company
KMGF . . . . .Kazakhstan Mortgage Guarantee Fund
KZT . . . . .Kazakh Tenge (national currency)
MBS . . . . .Mortgage-backed securities
MoF . . . . .Ministry of Finance
NBK . . . . .National Bank of Kazakhstan
RMBS . . . . .Residential mortgage-backed securities
USAID . . . . .United States Agency for International Development

Chapter 6.
Poland

This paper is based on the following sources:

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1. HISTORICAL OVERVIEW

Irrespective of centuries of political division between Austria, Prussia and Russia, banking institutions in Poland developed by and large simultaneously with the European mainstream. A first 'Polish' mortgage law can be seen in the Code Napoleon, which in 1808 was applied together with its mortgage chapter to the new country established after the Vienna Congress. A first mortgage bond issuer inspired by the Silesian landscape model of Germany, the 'Societe du Credit territorial', was created in 1825 in Warsaw and chartered by law in 1838. Mortgage bond issuers with the same approach emerged in parallel in the Austrian (Lviv, Krakiv) and Prussian (Poznan) ethnic Polish territories; the trend accelerated in the mid-1860s with the advent of specialized mortgage banks.

After WW I, several commercial banks, a commercial mortgage bond issuer and the public development bank BGK, which also at the time issued mortgage bonds, were created. In 1928 Poland adopted a banking law that absorbed many of the rules of the German mortgage bank act of 1899. The development came to a halt by WW II. During the subsequent 45 years of socialism (1944 – 1989), mortgage lending almost and mortgage bond issuance completely became eliminated. During this period, the state savings bank PKO was the monopolist for deposit-taking from consumers and mortgage lending to co-operatives and – on a limited scale – also to single family homeowners.

In 1990 Poland experienced one of the most severe housing shortages in Eastern Europe: waiting time for an apartment in the cities could be 15 years. In urban areas the vast majority of land was owned by the state and only 22% of urban housing units were privately owned. To change matters, in the first transition phase an active policy of housing privatisation was pursued; yet, in contrast with many other transition countries, in Poland the large sector of housing co-operatives and a considerable municipal public housing sector remained in their substance intact. More consequential were two other strategies: the government made state-owned land relatively abundantly available for private developers of new single-family housing, and it embarked on a restitution program of pre-war inner-city buildings that jump-started a supply of private rental housing.

Throughout the 1990s a policy focus was laid on improving the legal framework supporting the mortgage sector. However, high inflation – over 300% in the early 90s – created problematic financial conditions: the state savings bank PKO BP in response issued indexed loans with deferred payments (DPM). The government subsidized these loans by inducing the bank to cancel a significant portion of the capitalized interest payments. Not unexpectedly, this policy had to be given up as unsustainable in 1995. In 1994, under a World Bank funded project, the first mortgage loans in Polish zloty granted on a fully commercial basis appeared: the new dual-index mortgage (DIM) loans were refinanced by the Mortgage Fund that was managed by BGK. In parallel to both public programs, USD lending was started in the early 90s by commercial banks; the first to extend such loans was the Polish-American Mortgage bank.

The DIMs, designed for an inflationary economy, lost their popularity in 1999, when anti-inflation policy was stepped up. Since this time, Polish mortgage lending is entirely undertaken with short-term fixed-rate products denominated either in PLN or in foreign currencies. The USD has been replaced over time as the most relevant currency by the Euro – in anticipation of often delayed EMU access of the country – and the Swiss Franc – because of its very low nominal rates.

In addition to mortgage lending, two types of contract saving for housing schemes, kasa mieszkaniowa (housing association) and kasa oszczednosciowo-budowlana (contract savings association), were introduced in Poland in 1995 and 1997 respectively. Both were imperfectly modeled on the German Bausparkassen system[1]. Generally, contract saving schemes did not become very popular in Poland, and after the tax incentives for them were abolished in 2002 only little further demand for them is expected.

In further developments, in August 1997 the Sejm (Polish Parliament) passed the Act on Mortgage Bonds and Mortgage Banks, which determined the principles of issue, purchase, and redemption of mortgage bonds as well as principles of establishment, organization, operation and supervision over mortgage banks. In February 2003 the new Act on Bankruptcy and Rehabilitation Law was adopted, which secured creditors' rights to satisfy their claims from the pledged property through segregation in the bankruptcy case.

As of 2006, privatizations of state banks and in particular greenfield entry of numerous foreign banks have given rise to a largely privatized and foreign-owner dominated banking system. Confronted with this situation and despite an IPO of minority shares in 2005 intended to improve corporate governance, it is likely that the government will decide that PKO BP will remain in public ownership or under public influence in the near future.

2. MARKET SIZE

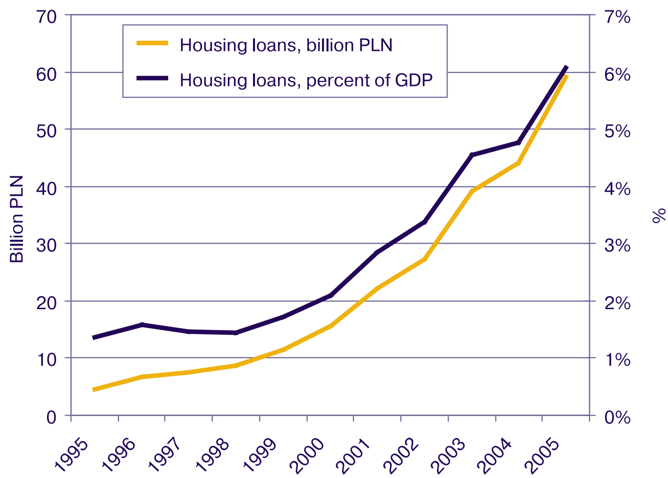
The improved legal framework, corporate governance and bank management, under strong foreign influence, have provided stimulance to mortgage market. The primary trigger for the current strong growth, however, was the recovering and eventually booming economy since the late 1990s that benefited strongly from a credible anti-inflation policy that helped to improve affordability by extending loan terms and lowering interest rates.

According to the National Bank of Poland at the end of 2005 the total outstandings of housing loans amounted to 59 billion PLN (15.2 billion Euro[2]), or approx. 6.1% of

[1] For a detailed description of the contract saving system, please see the German country description.
[2] As of end 2005 exchange rate of PLN/Euro was 3.8598.

GDP (see figure 1). After a dent in 2004, growth has picked up in 2005 again to 35%, which is approx. the per annum growth average since 2000. The outstanding loan number includes approx. 84% of loans to households – the rest goes to corporate clients, in particular housing companies, co-operatives and private developers. Out of the 59 billion PLN only 34 billion PLN are formally secured by mortgages.

Figure 1. Outstanding housing loans in Poland 1995-2005, in billion PLN and percent of GDP



Source: National Bank of Poland, Deutsche Bank.

It is noteworthy that subsidies to mortgage lending in Poland are much smaller in comparison to other Central European countries, which as a result show somewhat higher outstanding loan levels in relation to GDP (e.g. Czech Republic, Hungary). A drawback of the Polish development is that the absence of subsidies for domestic currency loans is bought with higher risk, i.e. a share of foreign-exchange denominated new originations of more than 80% – the share in outstandings is still 54.6%. Yet, that risk is mitigated by strong fundamentals; in particular housing demand is very strong in Poland and suggests a large unexploited growth potential. Finally, bank balance sheets have room for more growth, with housing loans so far representing only slightly over 40% of loans to consumers. 70-85% of Polish housing acquisitions are now financed by bank loans.

3. HOUSING AND MORTGAGE MARKET LINKAGE

The total housing stock in Poland at the end of 2003 amounted to 12.6 million dwellings. Insufficient supply through new construction and comprehensive modernizations is still an issue[3]. The census of 2002 claims a statistical deficit of dwellings of 1.6 million. The figure is calculated as the difference between the number of households and the number of inhabited dwellings, i.e. calibrating the degree of overcrowding of units.

Other sources of deficit however co-exist with overcrowding, for instance a large quality mismatch with today's household preferences and partly minimum quality standards: according to varying estimates, approx. 3 million apartment units built in a rush after WW II, when more than a third of the Polish population had to be relocated, are obsolete; moreover 1 million units are vacant – they are often in dilapidated conditions and/or concentrated in the economically most depressed areas. The small typical dwelling sizes in the apartment sector mismatch with the demand patterns of today that require larger living spaces. Ongoing migration into the urban growth centers of the country creates local surpluses and deficits. The total of housing units to be replaced by new construction or equivalently extensively modernized over the coming decades under those demand conditions could easily amount to 30-50% of the Polish housing stock.

In addition to mismatch, strong demographic and household dynamics in Poland provide the largest pressure on any housing market in Central Europe. Dubel (2004) estimates the average household size as of 2001 at about 2.95 persons, 20% higher than in neighbouring Czech Republic. With a demographically stable population, expecting simultaneously a reduction of the overcrowding, a total of 2.25 units per 1,000 inhabitants is additionally demanded per annum. Adding to this figure the inevitable stock losses – just through dilapidation and vacancy increases – total demand for new construction easily comes close to 4 units per 1,000 inhabitants – 50% higher than in the Czech Republic. This figure does still not entail major quality improvements in or replacements of the existing housing stock as described above.

In contrast, despite a recovery from the extremely low mid-1990s production levels, Poland has until very recently not been building more than 100-120,000 units per year (2004: 108,000), or 2.8 per 1,000 inhabitants, and thus has continued to add to the statistical housing deficit about 50,000 units every year. The great challenge for the mortgage industry will be to expand to a point that allows gradually to fill these demand gaps.

There are signs that new construction in 2005 has picked up with the strong mortgage market, with – according to Oberhaus realtor – Warsaw adding 13.200 apartment units over 8,800 in 2004. However, land and construction industry supply constraints threaten to slow down the pace of growth again during 2006.

Challenges for mortgage finance are also established by the pending rebuilding of the (social) rental housing finance system into one that could be effective in replacing or modernizing much of the rapidly deteriorating urban apartment stock. So far, primarily due to rent controls, flows of funds into the sector are insufficient

[3] Source: Housing Finance Markets in Transition Economies: Trends and Challenges; OECD 2005, p. 86.

to stem the deterioration – in many cases, new building has become the less costly option compared to comprehensive modernization.

No reliable figures on Polish house prices are available that would allow for gauging a price impact of the historic lending activity until 2005. While prices are rising strongly according to anecdotal evidence in the largest urban centers – for instance in Warsaw on average 18% in 2005 (Source: Oberhaus), it is likely more the real demand pressure described than the so far limited expansion of mortgage finance that contributes to these increases. Going forward, mortgage finance in Poland is less likely to induce strong price effects than elsewhere in Central Europe because of a relative elastic land supply and competitive, while underscaled, developer industry. Outside the largest urban areas, due to abundant availability of land the house-price-to-income ratios are still very modest – at approx. 3 annual incomes.

4. MARKET STRUCTURE

Residential mortgage loans in Poland are granted by a system of universal banks. Mortgage lending in the 1990s was highly concentrated, with the savings bank PKO BP holding 80-90% of outstanding loan market share. This result came about despite efforts by international institutions to diversify the lender structure, e.g. by offering the Mortgage Fund as an option to refinance dual-indexed mortgages.

The market structure only changed with the lending boom of the current decade (see figure 1) that coincided with new, mostly foreign lenders entering the Polish market and old lenders expanding their mortgage operations.

As of March 2006, the savings bank PKO BP had approx. PLN 18 bn in housing loan outstandings at market interest rates, and an additional PLN 2.8 bn outstandings in the old subsidized portfolio. This amounts in total to a market share of approx. 32%. Yet, PKO BP still holds only PLN 52 bn in total loans against PLN 80 bn in deposits and has room in the balance sheet to grow.

The second and third largest lenders are with approx. PLN 10 billion outstandings (15-16% market share) each Bank Pekao and BPH PBK, the former owned by Italian Unicredito and the latter by HypoVereinsbank, which was bought in 2005 by Unicredito. In contrast, the total assets of the mortgage bank owned by BPH PBK are only PLN 1.6 bn. Both banks are currently being merged under constraints imposed by the Polish government (sale of branches to competitors), which could still be challenged by the European Commission.

The three market leaders are followed by three smaller banks with outstanding loan market shares each of approx. 6%. Millennium bank owned by Portuguese capital, pioneered in 2004 the Swiss Franc lending market and with approx. 14% in new originations (QI 06) is gaining market shares. U.S. GE Moneybank and German-owned BRE bank show somewhat lesser aggressiveness in new originations.

Taken together, the six largest banks in the Polish market as of early 2006 hold

80% market share, which for a market of small size in relation to GDP must be seen as rather unconcentrated.

In the rental housing sector, although little data is available it is safe to say that public Bank Gospodarstwa Krajowego (BGK) is dominating outstandings – with lending to a public-private partnership housing association investors called TBS. However, as its funding is provided only by occasional loans from international agencies and recently dried up taxpayer funds, BGK has become illiquid. New lending in the rental sector based on a new public-private partnership models are currently envisaged by the PKO BP and BPH PBK.

The specialized mortgage banks that were created under the 1997 law as yet play no significant role in residential lending, for reasons further explored below. In 2004, the mortgage banks originated approx. 5.4% of all real estate loans; within that share they targeted mainly commercial real estate.

5. DISTRIBUTION AND MORTGAGE PURCHASE PROCESS

In the initial development phase of the Polish market housing loans were overwhelmingly originated through bank branch networks, with PKO BP's abundant network playing almost a monopoly role. Branches remain the largest distribution channel into the current decade as the competing commercial banks swiftly added to their branch networks.

However, comparable to other Central European markets, non-branch distribution channels have developed strongly over 2004 and 2005. The Banking Association estimates that now 50% of originations are made in this way: most relevant are urban apartment developers, which have created their own loan broker arms with the intention to generate mortgage market transparency for their clients. Another swiftly emerging channel is tied distribution by the smaller lenders with limited branch networks, e.g. through real estate agents or insurance companies. Independent loan brokerage so far plays a minor role (0.4% at the end of 2004), but that could be considerably increasing due to the value that their absence of conflict of interest brings to both lenders and consumers.

The internet is extensively used by the relatively young borrower population in Poland for information gathering and comparison of mortgage products. Most banks provide the customers with on-line services such as loan application, monthly repayments calculation, etc.

In order to qualify for a mortgage loan the borrower is required to submit a credit application along with the required documentation. The amount of documentation required depends on the income sources and the purpose of the required loan. Generally, permanently employed borrowers provide the verification of employment confirming the position, duration and income during the last 3 months. In addition the extract from the real estate entry in the Land and

Mortgage Register is required. Most banks require insurance against unemployment and accident.

Subsequently the valuation of property is undertaken by a licensed valuer and the borrower is assessed for creditworthiness by the bank, based on the total family income. In the case of buy-to-let properties, Polish lenders will only take into account 50% of the projected rental income from the property that the borrower wishes to buy. Usually the decision on a loan application is made within 10 days.

In the case of forex-denominated mortgages banks by and large follow more restrictive requirements in underwriting, i.e. the borrower has to sign a statement where he/she confirms to have rejected PLN mortgages, to be aware of the risks implied by forex mortgages that he/she has decided to take. In this respect, the Polish Mortgage Credit Foundation published a special forex risk credit guide book, aiming at informing borrowers about the associated forex risks. As of June 2006, the Central Bank is preparing additional strict regulation governing underwriting of forex loans. Yet, some banks still accept higher LTV ratios with forex loans with the argument of a lower initial debt service payment, disregarding future payment shock risk.

Before the money is transferred to the borrower's account, the bank is sending a motion to the court maintaining the land and mortgage register to have the mortgage registered. Due to the fact that the mortgage registration process is rather lengthy, a large proportion of mortgage loans are now being disbursed without mortgage registration at the time of disbursement. To protect lenders against the associated risk, title insurance is available from local insurance companies in a specific Polish version, which covers only the registration period.

6. PRODUCT RANGE

6.1. Credit curve

Loan purpose. Whereas in 1995 the banks granted mortgage loans only for housing purposes, by 2005/6 they expanded to a full range of purposes:

- purchase of real estate at a primary and secondary markets,
- construction or extension of a one-family house,
- remortgaging,
- renovation / modernization,
- investment («buy-to-let mortgages»),
- or for another purpose, such as refurnishing of the dwelling.

Banks also do lending to small entrepreneurs collateralized by their homes.

Maximum and typical LTVs. The typical LTV (about 60-70%) is less than the maximum stated in the banks' policies, reflecting a relative conservatism of both Polish lenders and borrowers.

However, LTVs on foreign-exchange loans are often higher than on PLN-loans, despite the higher default risk.

The maximum LTV level offered by banks is about 80%, though some products requiring no down payment. Although the maximum LTV level could be up to 100%, a refinancing with the mortgage bonds is possible only up to the 60% level.

Banks offering housing loans of up to 100% of the acquisition cost try to limit their risks by offering such products only to their most credit worthy borrowers and only for properties in larger and more marketable areas. Additionally some require cash flow insurance.

Debt-service-to-income ratios. The ratio of loan payments to a borrower's monthly income varies widely; generally 40% are not exceeded. Due to the more moderate interest rate levels the permitted maximum is not quite as high as in emerging markets with higher price levels (e.g. Russia, Turkey). Yet, there is considerable risk of a future debt-service-to-income shock due to the denomination of most loans in foreign currencies.

Polish banks typically vary the income thresholds they apply by region and size of conurbation.

Non-standard products. Due to the comparatively late macroeconomic stabilization, the mortgage market in Poland is still in a rather early stage of development. As a result, the range of products available is not as comprehensive as e.g. in the Czech market, which offers home equity loans and other types of sub-prime loans.

However, some Polish banks have started to launch new products that target the self-employed and small and mid-sized enterprises, i.e. borrowers with hard-to-verify or volatile incomes.

Table 1. Comparison of Mortgage Products

	1995	**2005**
Purpose	Only housing	Any purpose related to real estate
LTV	70%	80% (exception up to 100%)
Maturity	10 years	15 years (up to 35 years available)
Currency	PLN	PLN, CHF, EUR, USD
Availability	Only in Bank	Alternative distribution channels
Interest rates / PLN	37%	8%

Source: Mortgage Market growth factors after 1989, Justyna Galbarczyk, speech at Single European Mortgage Market Conference; author's research

6.2. Amortization

While loan maturities range from 5 to 35 years, typical maturities do not exceed 15 years. This is still a considerable lengthening compared to the situation in the mid-1990s.

Banks are also offering grace periods for loan repayment in order to reduce the initial payment burden. One lender continues to offer ballooning PLN mortgages (i.e. interest rates may be capitalized into outstandings which may rise above the initial loan volume); indeed, most lending economically is undertaken with potentially ballooning PLN outstandings, since the foreign-exchange denominated mortgages are generally repayable in PLN.

6.3. Interest rate adjustment

Innovation in the Polish mortgage market has traditionally been closely linked to the macroeconomic and in particular interest rate risk environment.

The hyperinflation phase in the early 1990s was characterized by the predominance of indexed loans, in particular the dual-indexed mortgage (DIM) introduced with World Bank assistance in 1994. In a DIM, a wage index determines the payment rates of the borrower while an inflation index determines the outstandings due. The loan amortizes as scheduled if the initial payment rates are properly set, something which was not always done in the early Polish schemes. New DIM originations ceased in 2000.

In the first half of nineties due to high inflation most of loans were foreign-currency nominated (preferably US Dollars, but also Deutsche Mark and French Franc). As inflation slowly decreased, the share of foreign currency loans declined and some domestic banks, such as PKO BP and Bank Pekao already in the late 1990s started offering exclusively PLN loans. Foreign banks that entered the market in the late 1990s, however, continued to offer forex loans; when in addition PLN real interest rates remained surprisingly high for almost 5 years (1997-2002) due to the stabilization effort, domestic lenders were forced to return to also offering forex loans.

The foreign investment process also by itself contributed to the real appreciation of the PLN in recent years, which made forex loans look even cheaper. In 2003, the new Millennium Bank, created from a takeover of a Polish regional bank by a large Portuguese lender, started an aggressive lending program in Swiss Francs at extremely low interest rates. Other banks followed with a diversification of their currency menus. Due to the increasing risk exposure of Polish borrowers in these loans, the Central Bank is increasing pressure to raise the share of PLN loans again. The current approximation of PLN and Euro loan rates should naturally stimulate such a trend, yet greater consumer awareness of forex risks and tightened underwriting standards seem indispensable in order to reach a turnaround in favor of a PLN market.

In terms of the types of interest rate adjustment mechanisms used, most loans until about 2002 had PLN interest rates fixed over several years, usually 5 years. With the new aggressive lending style, extremely volatile short-term rates (WIBOR) were introduced as repricing benchmarks for PLN loans. Forex loans continue to carry longer-term fixed rates, however, there are also short-term forex loans available (CHF WIBOR, USD WIBOR, EURIBOR) which correlate the risks of a foreign interest rate increase and a PLN depreciation).

These structural changes also affected prepayments, which were fairly common in 1990s but than became rare due to the increasing use of variable interest rate loans. Prepayment indemnities and even exclusion of prepayment up to 5 years were introduced in mortgage bond legislation in the 1990s, but are generally seen as hard to enforce in an environment of very consumer friendly courts.

7. PRICING

7.1. Transactions costs

According to European Mortgage Federation estimates for the year of 2004, housing and mortgage loan transactions costs in Poland are only modest – totaling 3.8% of a typical transaction. Of these costs, approx. 1.5% is related to the mortgage – primarily to loan appraisal, land registration and origination fees.

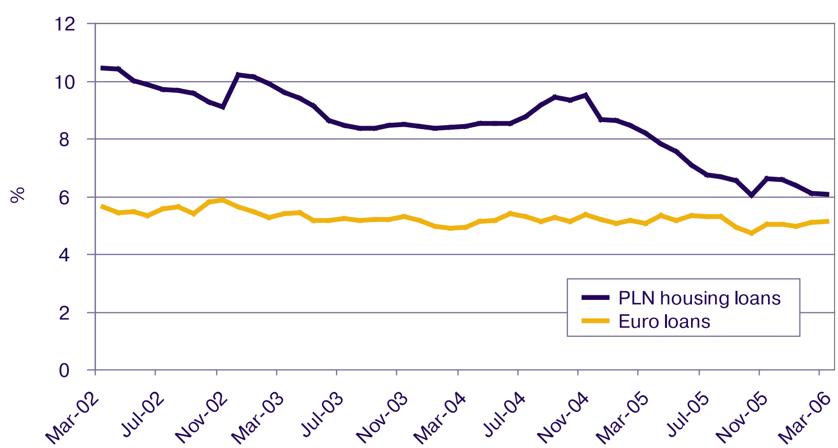
Banks have recently attempted to win over customers from their competitors by slashing or completely relinquishing origination fees for refinancing housing loans taken over from other banks.

7.2. Interest rates and spreads

After a long phase of high long-term PLN interest rates at the end of the 1990s, these finally started in 2002 to decline and currently approach Euro rates (see figure 2). 5 year PLN housing loans are now available for approx. 6-7%, only about 1% above Euro rates, but still is 4% above comparable Swiss Franc rates.

Moreover, borrowers 'save' interest rate costs – against taking higher payment risk – by borrowing in 6 months WIBOR, which reflects typical short-term costs of funds for Polish mortgage lenders. 6-months WIBOR mortgages are available for between 4 and 5%.

Figure 2 Interest rates on 5 year housing loans in PLN and Euro loans



Source: Central Bank. Note: all Euro loans.

Despite the relative youth of the mortgage market, bank margins are already approaching Western European level. If we look at the profitability based on WIBOR interest rates, the margins are between 100bp-160bp on PLN mortgages, and 160bp-200bp for CHF mortgages.

Commercial banks are exposed to additional liquidity risk funding long-term mortgage loans with short-term liabilities that gives a possibility to keep a gross interest margin around 3.5-4% (average rate on household PLN deposits in 2004 was 3.84% and average housing loans rate 8.13%).

8. FUNDING

8.1. Instruments

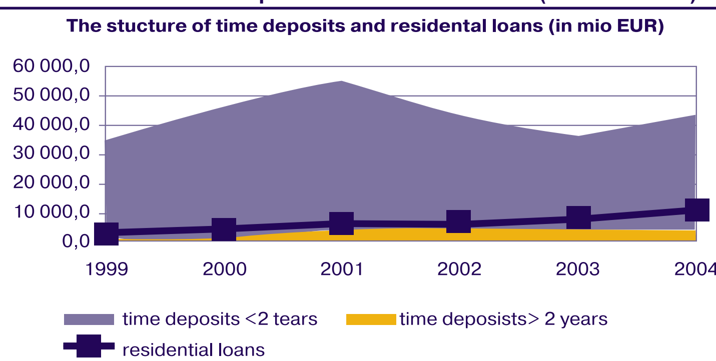
Deposits

Polish universal banks unsurprisingly use their strong deposit base in PLN and foreign currencies to fund mortgage loans. This funding strategy has been facilitated by the fact that borrowers have become less risk-averse and now accept variable-rate loans in all currencies.

The cross-currency swap market between PLN and USD, Euro or CHF is used to close the large foreign exchange positions.

As figure 3 demonstrates, at the current stage of market development the liquidity of universal banks is high enough to sustain stronger loan growth. In the case of PKO BP, for example, the loan-to-deposit ratio is still only 65%.

Figure 3. The structure of time deposits and residential loans (in million EUR)



Source: Covered bonds vs. MBS and deposits, case of Poland, 9th Central European Covered Bond Conference Budapest, 17 / 18 October 2005; Polish Mortgage Credit Foundation

Alternative funding mechanisms may become interesting once liquidity constraints are hit, cf. also the section on Spain, where lenders issue covered bonds despite the fact that consumers prefer variable-rate loans that can be match-funded with deposits.

Even if borrowers in the Polish market would return in greater numbers to the longer-term fixed-rate loans, the spreads in the market would currently be too low to render bond funding techniques competitive. Changes in the regulatory framework, e.g. addressing mismatch risk, could stimulate a greater use of bond funding techniques.

Other unsecured funding instruments

The large demand for foreign-currency denominated loans is catered in many banks through interbank loans from the mother banks (e.g. HVB for BPH, or Caixa Geral de Depositos for Millennium Bank) or Eurobonds issued with the signature of the bank.

Mortgage bonds

In 1997 the Act on Mortgage Bonds and Mortgage Banks was adopted. It introduced specialized mortgage banks as the sole banking group entitled to issue mortgage bonds. The Act also in other aspects followed the German model very closely, e.g. with low loan-to-value and strict valuation rules. On the other hand, loans to housing co-operative members – a large potential market in Poland – were excluded. Finally, the law stipulated that mortgage liens had to be completely registered before issuing the bonds, and it rendered development finance very complicated.

In contrast, universal banks in Poland are not subjected to nearly comparably strict rules in mortgage lending. For example, instead of waiting for the mortgage to be registered, they simply use insurance protection during the lengthy registration process or do even entirely unsecured lending. The popularity of the latter approach explains some of the large discrepancy between outstanding mortgage and housing loans. Universal banks also have greater flexibility in underwriting, e.g. regarding loan-to-value ratios. While some of these policies – especially unsecured lending – may be seen as unhealthy, most of them simply reflect necessary adaptations to the Polish legal and economic environment.

Moreover, the requirement to make a sizeable fixed investment into the equity capital of a specialized bank just for the purpose of mortgage finance turned out to be problematic in a market that offers many opportunities and challenges to banking investors. That argument was finally heard even in the German market, where the legislator moved to abolish the special bank principle in July 2005. As Denmark in 2006 is following the German footsteps in abolishing its own version of special banks, mortgage credit institutions, Poland could be in the paradox situation of being the last European country – together with Hungary – to impose the special bank principle on covered bond issuance.

Each of the four mortgage banks created so far has followed its own strategy, but generally found it difficult to compete for individual mortgage loans against larger commercial banks for the reasons explained.

Table 2. Mortgage banks in Poland

Mortgage banks	Parent Company	Date of establishment
Rheinhyp-BRE Bank Hipoteczny SA	BRE Bank SA (Polish leading bank)	12.03.1999
HypoVereinsbank Bank Hipoteczny SA	HVB Group (Germany)	01.12.1999
Slaski Bank Hipoteczny SA	ING Group (Netherlands)	08.11.2000
Nykredit Realkredit A/S (branch)	Nykredit Realkredit A/S (Denmark)	18.11.2002

At the end of 2004 the total value of mortgage bonds outstanding was therefore only Euro 249.8 million[5]. Most of the bonds issued were financing commercial property. Mortgage bond issuance was supposed to become the main source of funds at least for the mortgage banks themselves, but inter alia due to the lack of compliance of the available legal asset qualities with the requirements of the Act, the most common source of funds for them has actually been the interbank market. Mortgage bonds finance only about 25% of the mortgage banks' loans portfolio.

Three mortgage banks, BPH Mortgage Bank, BRE Mortgage Bank, and Slaski Mortgage Bank, have so far issued mortgage bonds denominated in three currencies: PLN, USD and EUR, where PLN bonds typically gain a AAA rating and USD/EUR bonds typically BBB. Mortgage bonds yields are around 6-7% per annum, which is close to the benchmark government bond yield (6.62% on 10 years government bond). The maturities of the bonds issued are short- and mid-term (from 3 to 10 years).

The size of most bonds has been small, as if tailored to the needs of private placements. Public offerings were in the minority. There is no secondary mortgage bond market to speak of. The banks, which buy the mortgage bonds, typically intend to hold them in their portfolios until maturity.

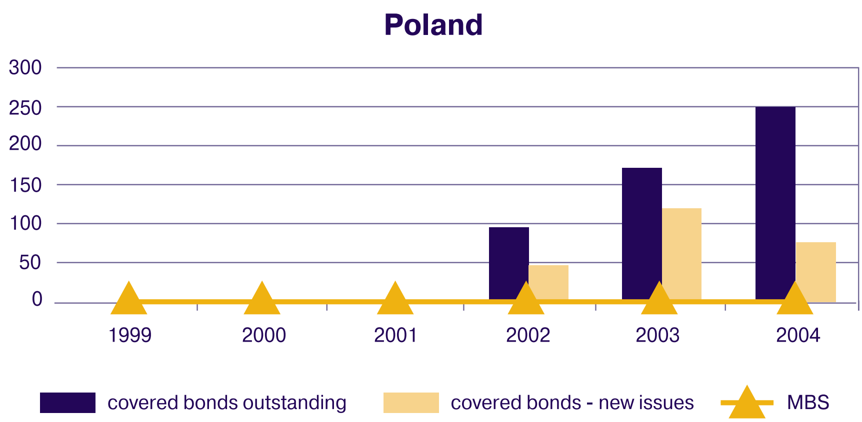
An interesting cross-border mortgage funding scheme was pursued by Nykredit Realkredit A/S, Poland which is a subsidiary of Nykredit Realkredit A/S, the largest Danish mortgage credit institution. Nykredit Realkredit A/S Poland is funding its Polish activities by issuing bonds in Denmark, which are sold at the Copenhagen Stock Exchange. All activities launched in Poland are therefore subjected to the Danish Mortgage Credit Act and its balance principle, loan-to-value limits, maturities, repayment profiles, etc.[6]. By doing so the Danish owner

[5] Source: Issue of mortgage bonds in Poland in 2004, Polish Mortgage Credit Foundation.
[6] For details, see the Danish country description.

has been able to re-use the know-how from Denmark, and fund its activities at costs far below those to be incurred on the Polish capital market.

In September 2005, Nykredit issued two new Euro-denominated floating-rate bonds; the bonds were callable and carry an uncapped floating coupon rate tracking 3-month Euribor rates or 3-month WIBOR rates. In order to finance the lending in PLN, Nykredit issued Euro denominated 6 months' WIBOR bonds. The investor receives settlement from Nykredit in Euro based on interest priced according to the Polish WIBOR index. The cross border funding is the first in Europe of its kind as far as the Project is aware of.

Figure 4. Covered bonds and MBS in Poland (in million Euro)



Source: Covered bonds vs. MBS and deposits, case of Poland, 9th Central European Covered Bond Conference Budapest, 17 / 18 October 2005, Polish; Polish Mortgage Credit Foundation

Residential mortgage-backed securities

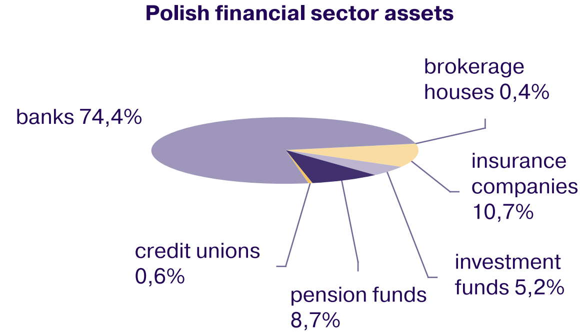
In 2004, a regulatory framework for mortgage securitization was passed in an amendment to the Banking Act as well as through the new Act on Investment Funds that allows the creation of special securitization funds. Offshore commercial real estate securitizations had been undertaken already before the law. However, so far no residential MBS issuance has been made in Poland.

8.2. Investors

Poland has a growing non-bank investor base including insurance companies, mutual funds and pension funds, whose net assets keep rising strongly. At the end of 2004 the share of non-bank financial institutions assets amounted to 20% of GDP and 25.6% of financial sector assets (see figure 5).

As of September 2005, commercial banks were the most active investors in the Polish mortgage bonds market holding 48.4% of the outstanding.

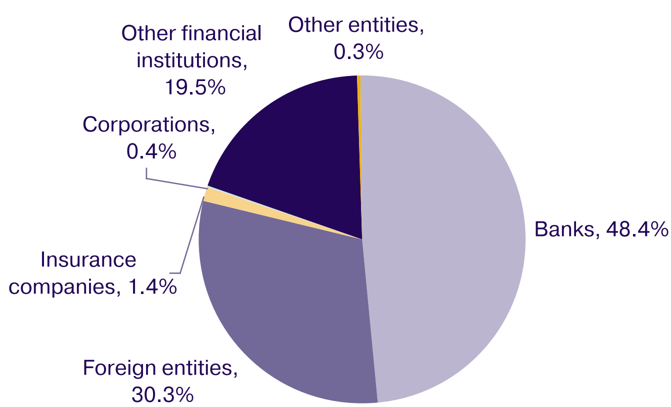
Figure 5. Polish Financial Sector Assets



Source: Summary Evaluation of the Financial Situation of Polish Banks, 2005, National Bank of Poland

The second position was held by foreign investors, frequently the mother banks of mortgage bank subsidiaries, which bought over 30%. The share of the insurance companies has been decreasing and constitutes a mere 1.4%. Pension funds again were not active on this market. Since the outstanding volume is small (see above), these investor share figures have only limited significance.

Figure 6. Investors in mortgage bonds market, as of September 30, 2005



Source: Fitch Polska S.A. and National Bank of Poland

From a legal perspective, there are no investment limits in mortgage bonds for banks. This is different for institutional investors, where the limits are 40% of reserves for insurance companies, 30% for pension funds, and 80% for investment funds. However, the market is too small to reach those limits even distantly.

9. RISK MANAGEMENT

9.1. Credit risk

Although with the implementation of electronic land and mortgage registers the duration of the registry process in Poland has dramatically shortened over the last few years, until 1.5 months, according to the Mortgage Credit Foundation[7], registration is still considered to be one of the risk areas for mortgage lenders.

To perform their credit risk assessments more efficiently, the biggest banks together with the Polish Bank Association initiated Poland's first credit bureau, which opened for operation in early 1999. In 2000 its credit information sharing system became available for banks; in the beginning of 2001 the first agreement was signed with a bank and the first credit report was sold. During the year 2001 0.5 millions credit reports were sold, in the year 2004 the volume had increased to 4.0 millions reports.

While the official debt-service and loan-to-value ratios of banks look conservative, underwriting practices are often not sound – due to the reasons described above (high share of foreign-currency loans, high share of variable rate loans, large proportion of loans without immediate mortgage registration).

This fact together with the high growth rate of housing loans has forced the Polish banking regulator in the last years to tighten rules concerning loan underwriting, inter alia by better defining the valuation methods for loan collateral and introducing acceptable loan-to-value ratios. Also, the exposure of banks to the property market is now monitored closely by the regulator.

The regulator has moreover amended his regulations on the calculation of capital adequacy, with effect as of January 2005. In analogy to the most conservative Western European practices, esp. Germany, a preferential risk weight for claims secured by a mortgage on residential property under the Basel I rules (50%) is only applicable with respect to the portion of a loan up to 50% of the market value of a given property, as determined by a professional appraiser, or 60% of its mortgage lending value. The portion of the loan above these thresholds will attract a 100% risk weight. To loans secured by non-residential property a 100% risk weight will be applied, as they are perceived to carry higher risk.

Tighter regulation is also pending as mentioned before in the area of forex mortgages. Some mortgage lenders have begun to acknowledge the higher default risk of those loans and have taken internally measures aimed at reducing the risk, such as those identifies in the case study of Bank BPH[8]:

- Advisers are required to confirm that clients are aware of and able to carry foreign-currency risk.

[7] Legislative improvements in Central and Eastern Europe: Quality of mortgage collateral. Country report: Poland. Dr. Agnieszka Drewicz-Tulodziecka, 2005.

[8] Example of BPH Bank. Source: CEE Housing Finance: Rapid Growth, but at What Risk? Fitch Ratings, Special Report, 7.11.2005.

- Credit assessments are more restrictive:
  - Client must meet monthly income requirements with an extra 30% buffer.
  - Monthly liabilities (including mortgage installment) cannot be more than 50% of monthly net income.
  - Maximum LTV 70%.
- All loans must be amortized (no balloon repayments).
- Life insurance is not accepted as part of the required equity.
- Borrowers can choose to prepay from foreign currency to PLN at any time.

Absent major adverse exchange-rate shocks in the past years, the credit quality data for Polish housing loans still appear at this point satisfactory, especially when compared to other loans to the private sector. According to the NBP's General Inspectorate for Banking Supervision, 4.7% of housing loans are in arrears over 1 month, out of which 3.6% for individuals, and 3.1% are in arrears over 3 months. This compares to an average 17.2% delinquency ratio for other loans to the private sector.

The somewhat elevated level of arrears over 3 months is a signal that foreclosure is problematic. Banks report the Polish foreclosure processes to be still generally long, untested or hazardous. According to the World Bank the time elapsing to debt recovery through court proceedings is almost 3 years. Another problem is the low recovery rate, i.e. the percentage of the debt that can realistically be recovered by the creditor. In Poland this rate is generally seen at levels of just 40%, although the insufficient data coverage of foreclosure cases does not allow reliable estimates.

A legislative change, an amendment to the Code of Civil Procedure, effective as of early 2005, introduced the possibility to apply the simplified foreclosure procedure, which allows the bank to sell a real estate without a public auction. This is expected to significantly reduce the foreclosure time.

A mortgage insurance system has as yet not developed. However, several private insurance companies that are operating and selling non-life (mortgage and property insurance) and life insurance products are intending to enter the market, as do international (mostly U.S. based) mortgage insurers. A problem in a possible competition scenario between the two groups could be strongly different insurer regulations, and the absence of specific mortgage insurance regulations in Poland.

9.2. Interest rate risk

With a primarily foreign-owned banking system and deep liquidity of the PLN deposit market, the liquidity risk for mortgage lending must be considered minor.

Yet, since loans are made primarily in foreign-currency, lenders funded with deposits are required to hedge their foreign-currency exposure with cross-currency swaps. The typical length of the PLN to CHF, Euro or USD swap curves, however, is only 3 years, so that strong repricing or equivalent liquidity risks exists that might be exacerbated in phases of macroeconomic instability.

Traditional single-currency interest rate risk is receding as contracts are increasingly closed at variable rates. It is likely that prepayment rates on earlier PLN fixed-rate lending are high as a result of the PLN rate decline, so that fixed-rate loan durations should not be far above average deposit durations.

10. PROCESS EFFICIENCY

The declining margins in the Polish mortgage market have forced the banks to make fast improvements on their origination and servicing processes. In the origination market, after years of branch network expansion, the likely future growth will concentrate on non-branch distribution – especially through independent brokers and distributors tied to banks.

Polish mortgage lenders as yet do service their mortgage portfolio in-house, with many having gone in the past through major restructuring and build-up the relevant back office functions. In BRE bank, for example, after the takeover by Germany's Rheinhyp this process took almost 10 years. The BPH-Pekao merger will also give momentum to the necessary increase in scale of loan servicing, while smaller lenders will likely either have to grow fast, or use third party servicing that is likely to emerge in the coming years.

11. SUBSIDIES

In Poland, as in other socialist economies, housing subsidies were a cornerstone of public housing policy. Before the transition lending for housing in Poland was made through state-controlled banks. The subsidies were large, accounting for 2-3% of GDP and 8-13% of budget expenditures in the early 1990s.

However, contrasting with the Czech Republic and Hungary, the new residential loan portfolio has by and large not been subsidized since 1996. The reasons were partly a lack of opportunity – the housing ministry never was given sufficient budget due to the priority of fiscal consolidation – and a politically induced focus on rental housing subsidies. The latter subsidies became quite large, especially those given to the public-private TBS system in the form of extremely concessional and long-term financing conditions.

The two systems of contractual housing savings and credit schemes created by law in 1997 were never fully implemented. This has avoided some of the problems of ineffective subsidies and excessive profits accrued by specialized issuers of such contracts encountered in several other transition economies (e.g. Czech Republic and Slovakia).

After long and controversial discussions, the 2002 budget law introduced the possibility for income tax deduction of mortgage interest payments. However, the conditions attached to this option are handled very restrictively: (i) the principal amount may not exceed the value of a 70m2 apartment, (ii) the deduction can be used only once during the lifetime of the household, and (iii) the beneficiary must not have enjoyed other housing subsidies, which is easily the case if he was a rental tenant. As a result, few borrowers use the deduction.

Several public programs have tried over the years to stem the tide of forex lending and promote a greater use of the PLN currency, sometimes with an eye on supporting the business of the state-owned banks PKO BP and BGK. As an example, in a 2003 program the state promised to pay interest rate subsidies by converting 3-month WIBOR variable rate loans into 6.5% fixed rate loans. A fund was created for that purpose and managed by BGK. The system was administratively too complex, however: it limited prepayments, and capped the banks' interest margin at 1.5%, which was found insufficient to compensate banks for their operating costs and risks. In addition, short-term interest rates during the implementation attempt declined and banks therefore did not use the program.

The housing policy Action Plan for 2005-2006 considers several modifications in the current housing policy tools. The most substantial are aimed at addressing housing issues of low income groups, to support a long-term saving-for-housing system, assisting private and public affordable rental housing and preventing negative results from the increase of VAT rates for construction materials enforced by the European Union. Yet, in the midst of severe fiscal stress the budget means of the housing ministry appear too limited to reach the intended goals.

List of Acronyms

ARM . . . . .Adjustable-rate mortgage
BGK . . . . .Bank Gospodarstwa Krajowego
BPHPBK . . . . .Bank Przemyslowo-Handlowy PBK SA
DIM . . . . .Dual-indexed mortgage
DPM . . . . .Deferred payment mortgage
FRM . . . . .Fixed-rate mortgage
FX .Foreign exchange (denominated)
GDP . . . . .Gross Domestic Product
IMF .International Monetary Fund
IPO .Initial Public Offering
PLN .Polish Zloty
MoF . . . . .Ministry of Finance
MBS . . . . .Mortgage-backed securities
NBP . . . . .National Bank of Poland
RMBS . . . . .Residential mortgage-backed securities
TBS .Towaryszystwa Budownictwa Spolecznego (non-for-profit housing associations)
WIBOR . . . . .Warsaw Inter Bank Offer Rate

Chapter 7.
Russia

This paper is based on the following sources:

a. Agency for Home Mortgage Lending: company presentation downloadable from www.rosipoteka.ru, February 2006
b. World Bank: «Building Trust: Developing the Russian Financial Sector». 2002.
c. World Bank: «Developing Residential Mortgage Markets in the Russian Federation», Policy Note, 2003.
d. Dubel, Brzeski, Hamilton: «Rental Choice and Housing Policy Alignment in Transition». World Bank Policy Research Working Paper 3884, April 2006.
e. DZ Bank: «Securisation in Russland». April 2006.

1. HISTORICAL OVERVIEW

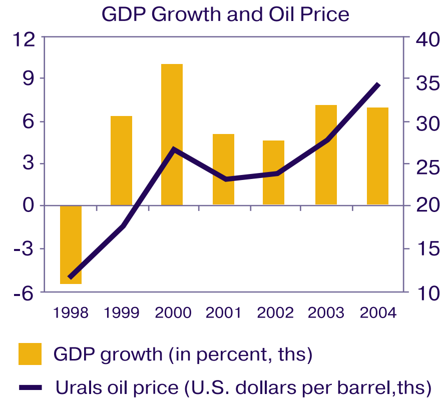
The current Russian banking sector emerged from the demise of the central planning system of the Soviet period. It includes a central bank and commercial banks. The Central Bank of Russia (CBR) was created in November 1991. Russia's 1993 constitution gave the CBR a certain level of autonomy, however, not at levels comparable to central banks in developed markets.

The banking sector grew rapidly in the 1990s as the centralized economy collapsed. At the same time, CBR failed to regulate the banking market properly, which led to the existence of 1,650 private banks by 1998. Most of these were of dubious quality, created often by the new oligarchs or corporations as financing arms, and some were involved in illegal activities. In the mid-1990s, the World Bank supported Russia with a plan to establish a core of large banks that met the governance and capital standards of the Bank for International Settlements.

The Russian financial crisis in August 1998, which brought about a 50% devaluation of the Ruble, brought these efforts to a halt. During the quasi-fixed exchange rate policy of the preceding years, many banks had taken up large amounts of foreign debt on which they now defaulted. Even the largest banks faced liquidity problems; hundreds of mid-sized and smaller banks went bankrupt and the savers lost their deposits. The Russian banking system on the whole made 60 billion RUR (approx. € 3 billion) of losses within twelve months.

The recovery took five years, until 2003, during which the number of banks dropped to ca 1300 and CBR enforced high core capital requirements. It was assisted by strong economic growth and the oil price bonanza (see figure 1).
In 2004, though, the banking sector found itself again in another crisis as panicky depositors staged a run in response to CBR revoking the license of a mid-sized bank, Sodbiznesbank. Despite the subsequent introduction of mandatory deposit insurance fund and a new bank licensing system linked to it, concerns about the fragmentation and vulnerability of Russian banks have remained.

Figure 1. Russia's macro situation 1998-2004 – GDP growth and oil price



Source: IMF Article IV consultations September 2005

Russia has also still not privatized its large public banking system, which has in recent years even increased its market shares due to creation of new regional public lenders and the federal Agency for Home Mortgage Lending in 1997. Sberbank, the former monopoly savings bank, remains the dominant public lender in the consumer finance sphere. AHML, endowed with federal guarantees for the bonds it issues, became the second largest lender. Bank of Moscow, Gazprom and Vneshtorgbank are other examples of large public banks. In many regions, public agencies and banks are the only mortgage lenders of significance. While this policy is partly a reaction to low private bank activity, especially in the aftermath of the crisis, it also limits the growth prospects of the industry.

The first decade of transition, from 1991 to ca 2001, was characterized in Russia by almost zero mortgage lending activity, in contrast to transition countries in Central Europe that saw a certain market activity early. International agencies tried to assist Russia in developing laws and regulations in mortgage finance; however, progress was slow; for instance, due to conflicts with the extremely protective constitution foreclosure still today requires the provision of substitute housing. Also, the mortgage-related securities legislation that passed in 2003 has remained imperfect, despite later improvements. Against all these odds, with the end of the transition crisis a strongly growing mortgage market has emerged which provides opportunities for both private and public lenders.

2. SIZE OF THE MARKET

At the time of this report, the Russian mortgage sector is still small in comparison to its counterparts in other transition countries. According to a DZ

Bank report (2006) by September 2005 USD 3.5 billion or € 2.8 billion or 0.6% of GDP were outstanding. Approx. € 400 million in mortgage loans, likely outside these estimates, was held by 1.1.06 on the balance sheet of the federal agency AHML. The loans were purchased from regional public lenders who are likely to hold additional loans of the same or larger scale. Generally, the Russian banking sector penetration is still low: only 19% of GDP in outstanding bank loans to the private sector vs. 30% in Poland and 41% in Czech Republic.

However, despite these low levels it is justified to speak about a consumer lending boom. At the end of 2005, consumer and mortgage loans combined surpassed the threshold of RUR 1 trillion, Euro 28.5 billion, up from only 3.5 billion Euro at the end of 2002. The annual growth rate of consumer lending during these 3 years was over 100%. Mortgage loans outstandings alone doubled during the first 9 months of 2005, for which data are available; mortgages are the fastest growing loan sector with 160% p.a. growth between December 2002 and September 2005. Figure 2 presents an assessment of a Russian bank of late 2005 that is likely to have been already outpaced by developments during 2005/6.

While the strong market growth has to be seen related to the base effect – there was de-facto no mortgage portfolio prior to 2002 – it is also driven by a strong economy with positive long-term outlook. Russia in 2000/2001 ended her decade-long transition crisis and GDP growth since has been steadily between 5 and 7% p.a., private disposable income has even grown at annual rates of 7% - 11%. Strong economic growth, declining interest rates and the extreme scarcity of housing in the main urban centers support an increase in real estate prices, which in turn fuels the demand for mortgage loans.

Figure 2: Outstanding mortgage lending in Russia, 2005 actual and forecast until 2009

Source: DeltaCredit.

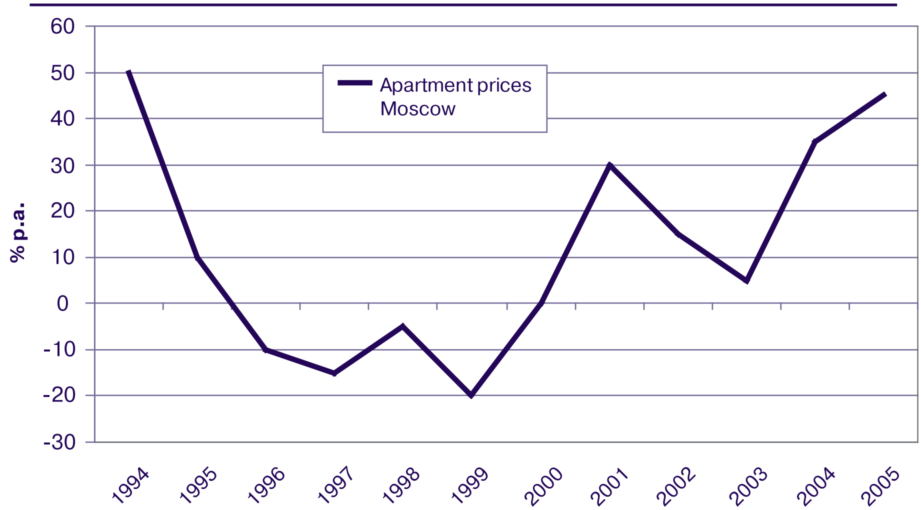
It should be added that factors remain that are slowing down mortgage demand, such as the low trust in banks after repeated crises leading to a low penetration of bank accounts, consumer aversion against borrowing, partly related to the increased income and tax transparency requirements that lenders pose when underwriting and which conflict with the shadow economy. 90% of the Russian population has as yet no experience with taking a bank loan. Also, lender economics are a constraint, in particular the high level of defaults in the consumer loan market, the continued problems of enforcement of mortgage foreclosure and the lack of distribution networks delivering scale.

Little is published about the structure of mortgage lending: the overwhelming share of loans goes to individuals, a corporate and small investor rental lending market has not yet developed. By regional breakdown, approx 60% of mortgage loans in 2003 were extended in Moscow; this figure has probably declined due to increasing relevance of lending in the regions.

3. HOUSING AND MORTGAGE MARKET LINKAGE

Russian housing investments in the 1990s were made without bank involvement – surveys suggest that as of 2005 still only close to 10% of transactions are at least partially funded by banks. Most private new construction during the transition crisis was funded by developer pre-sale schemes with a subsequent short leasing period – in other words, the capital was provided by the

Figure 3. Moscow apartment price growth rates, 1994-2005



Source: Goskomstat.

beneficiary himself through a savings process. These schemes usually also necessarily involved the municipalities, who in exchange for providing land and infrastructure taxed the developments by demanding housing units for public uses. Housing also remained dead capital for millions of beneficiaries of the public apartment privatizations, which while asset-rich remained cash-poor.

The emerging Russian mortgage market is likely to replace the obsolete construction financing techniques – in particular the pre-sale schemes, which are extremely risky for consumers – and provide new options for consumers to finance or liquidate property. However, the strong growth of liquidity in the market also brings about risks since it meets one of the world's most inefficient housing supply systems that is likely to change only slowly. The liquidity expansion is exacerbating the already high price growth, shown for the city of Moscow in figure 3.

Russia's land markets are highly monopolized by state ownership, and the inefficient construction and developer industries contribute to the permanent housing supply shortages. The cement industry, for example, is highly concentrated – with inflation slightly above 10%, one cement producer with 40% market share raised his output prices in 2005 by 80%. In Moscow and most other large cities, land is not sold by the dominantly public owners, but rather only leased for 49 years. Moscow's 5 developers – deeply connected with the City government – divide the construction land lots offered to them and regard each other not as competitors. Faulty building codes and bribes to officials continue to give rise to substandard construction quality. Purchasers of new buildings are not sufficiently legally protected against losses from such corner-cutting.

Despite those factors and the cost levels they induce for consumers, demand for new housing is likely to stay high. One of the key factors is migration, which has exacerbated the notorious shortages in the most dynamic urban areas: after the Soviet system of urban migration controls called Propiska was officially terminated in the late 1990s, most major cities tried to stem the migration flow by introducing similar, new barriers. Still, in 2005 Moscow with only 7.3% share of the population combined 20% of GDP and 75% of the real estate market turnover in Russia. Moscow apartment prices easily match comparable Western European values, with approx. USD 2300-2700/sqm in early 2006 (Source: Analytical center «Indicators of real estate market IRN.RU»). Prices in the second largest city, Sankt Peterburg, are only approximately half.

A second, even more fundamental factor in the long-term is quality mismatch. Russian builders still produce standardized, large apartment buildings to catch up with the huge global demand overhang. However, the demand pressure disguises the changing preferences in a market economy towards single-family homes and larger apartments that already have altered construction patterns in the Central European transition economies and are likely to also affect Russia. This change in demand will become a particular problem for the several millions of apartment units built during Soviet times with simple building technologies in standardized formats. These units suffer moreover from under-maintenance and deferred capital investments: after the – incomplete – privatization of the past decade, according to Dubel et. al. (2006) the proper management of over half of all Russian apartment units became all but impossible due to the fragmentation of ownership that resulted from it. Neither local government or the many fragmented owners felt responsible for organizing the management.

New construction in Russia was severely depressed by the transition crisis, which also saw falling prices (see figure 2), but since 2001 has reasonably picked up. In 2005 44 million sqm were newly constructed, which equals the 1995 production. It remains below levels seen in the 1980s, though, when the housing sector was entirely state-controlled. It would seem that without major land and construction market reforms it will be hard to reach higher supply levels than currently, and severe shortages will persist for decades.

4. MARKET STRUCTURE

The Russian banking system features a few dozen of large and mid-sized public banks stands against a fragmented private banking system with 1,300 institutions.

In the public sector, Sberbank, Gazprom and Moscow Bank as well as Vneshtorg bank have relevance for mortgage finance. Sberbank, the previous monopoly savings bank owned 60% by CBR, has already a 50% share in the market. Its portfolio grows approx. with the market, however, further growth could be slowed down by a capital ratio only slightly above the regulatory minimum of 10%.

Bank of Moscow is a typical example of a regional public lender. It was set up by the City of Moscow, with a strong side-interest in promoting the sales of properties that the city owns or controls. Gazprombank is investing excess liquidity generated by his energy giant owner. Vneshtorgbank, primarily a corporate lender whose IPO is planned for 2007, has identified retail lending as a new business focus.

Table 1. Top Russian consumer lenders at 1.1.2005 by loan outstandings, RUR billion

1.	Sberbank	301.193
2.	Russian Standard Bank	35.171
3.	Home Credit & Finance	18.994
4.	Raiffeisenbank	10.298
5.	Ural Sib	7.959
6.	Central OVK	7.147
7.	MDM-Bank	7.005
8.	Bank of Moscow	5.495
9.	Siberian OVK	5.333
10.	Gazprombank	4.936

Source: Russian Standard Bank, AR 2004. Note: AHML and regional lending agencies not covered.

None of the private banks in Russia owns more than either 3% of bank deposits or loans. However, mortgage lending has been a focus for an increasing number of them. DeltaCredit, Alfa Bank and Austrian-owned Raiffeisenbank are seen to now follow Sberbank, together with public Bank of Moscow, with each approx. 5% in market share.

DeltaCredit, a mortgage specialist and IFC investment, can indeed be seen as a pioneer of mortgage lending in Russia. Its underwriting standards became the model for most banks and compete only with the standards of the AHML agency system.

Other specialist consumer lenders, e.g. Home Credit & Finance Bank, owned by Czech PFF Group – which did the first Russian consumer loan securitizations – or Russian Standard Bank – another user of securitization programs – have the potential to grow in the mortgage sector.

As far as Moscow, Sankt Peterburg and other large urban centers are concerned, despite Sberbank's weight the mortgage market can be seen as decentral and competitive. In the regions, in contrast, the small private banks have only very limited distribution.

Dominant in the regions is the parallel lending channel through public mortgage agencies, many of which were initially tax-funded. The Agency for Home Mortgage Lending (AHML), the second largest Russian mortgage lender, now provides lending through agencies in 59 regions. However, 46% of her lending is concentrated in six relatively advanced regions: Bashkotarstan, Altay, Orenburg, Samara, Novosibirsk and Vologda.

According to the State Register of Rights on Real Estate the share of loans underwritten by AHML and the regional agencies in 2005 was approx. 26%. This is not considered in the market share figures reported above for banks.

5. DISTRIBUTION AND PURCHASE PROCESS

Insufficient scale of the branch distribution network is arguably the greatest bottleneck for mortgage market development and competition; and distribution problems have been causal for the particular Russian market structure described.

Sberbank's high market share is directly linked to its quasi-monopoly position in bank branches in many regions and in particular rural areas. Dwarfed by the crisis and public bank competition, private lenders have so far limited their branch networks to the main urban centers – lenders with presence in 5-10 centers like to call themselves 'national'. The lack of foreign investors in the banking system with sufficient capital for expansion has exacerbated the weaknesses – Raiffeisenbank and the HVB-Nordea joint venture International Moscow Bank are the exceptions. Cities and regions have filled the gaps with own local banks or agencies linked to their construction and property sales activities.

The emergence of a nationwide homogenous market is slow, yet, non-bank distribution channels such as loan brokers and real estate agents are likely to expand quickly. A model are the supermarkets that already support the strong growth of consumer lenders as originators.

The loan origination standards of AHML and DeltaCredit, #2 and 3 in the mortgage market, are seen to be the most advanced. AHML originates only in RUR, allowing for a relatively high maximum payment-to-income ratio of 50% and loan-to-value ratios up to 90%. USD loans originated by DeltaCredit are typically underwritten more conservatively.

Consumer credit scoring in Russia was pioneered by Russian Standard Bank, the second largest private consumer lender, and is likely to penetrate the mortgage market practice soon.

Income evidence requirements by Russian mortgage lenders are relatively strict, to the point that many potential borrowers belonging to the shadow economy do not take up loans as they fear that data might get transmitted to tax authorities.

A common feature for mortgage contracts is the requirement of title, property and life insurance. Also, due to the legal problems surrounding foreclosure, most lenders continue to ask for personal guarantees by family members or co-signers of the loan.

The typical timelines reported for underwriting are long: loan application – 14 days, processing – 10 days, underwriting – 10 days, credit committee – 1 day pre-closing department- 13 days, closing – 4 days registration – 11 days. This suggests significant room for improvement of bank internal processes.

6. PRODUCT RANGE

6.1. Credit curve/target group

In an emerging market with uncertainty about the foreclosure value of real estate collateral, interest rate and borrower's income volatility, banks generally target high income clients. This was initially also the case in Russia, when in particular clients with sufficient USD incomes were the prime targets of lenders, in order to minimize default risk arising from currency risk – most loans were being extended in USD.

As the market developed, resulting from strong competition between lenders in the urban centers and rising house prices, payment-to-income limits have increased – 50% of income, considered excessive in Western Europe and also Central European transition countries, is not an unusual limit for Russian banks (average payment-to-income limits are 35-45%). Also, the credit risk concerns about borrowers with non-USD incomes taking USD currency risk have lost relevance during the long phase of appreciation of the Ruble.

Lenders have also – under pressure of competition – diversified their loan programs into modernization loans or special programs for young families.

Russia's mortgage market has two distinct classes of financial institutions, public agencies and (public and private) banks. This brings about a potential for a division of labor between both institution classes in targeting different income groups, as for example in the U.S. (see country report on United States).

However, the Russian regional mortgage agencies are wholly autonomous in their policies and often their emergence was related to filling market voids left by the inactivity of banks. This leads to a situation where, for instance, the Samara and Orenburg mortgage agencies aim to serve moderate-income families while the Irkutsk agency targets the upper twenty percent of the income distribution of its market (Source: World Bank (2003)).

A widely used creditworthiness signal that serves to expand access to finance are pre-savings that form the basis of pre-sale and leasing arrangements for new constructions everywhere in Russia. Public agencies and developers, both primarily driven by funding constraints and the need to access low-cost funds, ask borrowers to pre-save typically 40-50% of the apartment value in a special savings account, before delivering the apartment. After delivery, either a short-term loan is given to repay the remaining capital, or the apartment is leased – i.e. ownership remains with the lessor and ownership is only transferred after the last leasing rate has been paid. However, the schemes are very risky for consumers, who in hundreds of cases have lost their pre-savings to runaway developers. In the more formal schemes run with preference by public agencies short of funds, the spreads between deposit rates, if paid, and implied interest rates of leasing contracts are very high.

6.2. Amortization

The classical means for preserving the loan value for the Russian lender is to denominate the loan in foreign-exchange. Still, loans are relatively short-term in the private sector – with typical maturities of 10-20 years. Public agencies in contrast lend up to 30 years.

Loans in both RUR or USD are typically fully amortized; however, due to stretched payment-to-income conditions in high-price areas, lenders increasingly accept grace periods.

6.3. Interest rate adjustment

The high and volatile Russian inflation levels during the first decade of transition have permitted only foreign-exchange denominated lending until very recently, overwhelmingly denominated in USD. Mortgages with their outstandings indexed to RUR consumer prices and other inflation proxies had been proposed in the 1990s, and some were implemented in pilot schemes, but never gained relevance.

USD borrowing has proved to be profitable and safe for Russian consumers, at least for those that closed after the 1998 devaluation. Since then, the RUR-USD rate has steadily appreciated, leading to capital gains for borrowers with their debt denominated in USD. Only since 2003, some private banks have started to offer RUR loans in parallel to USD loans (for instance Sberbank and Vneshtorgbank), with so far limited success due to the fact that RUR interest rates continue to be higher than USD rates and offer no capital gain. Some private Russian lenders also offer variable-rate loans in USD.

In contrast, the regional public agencies have focussed – with a few exceptions that also offer USD loans – on starting the long-term RUR lending market at fixed rates. At the time the agencies started lending around 2002/3, these conditions amounted to considerable subsidies. For instance, a typical agency-funded mortgages would carry 15% RUR rates for up to 30 years, matching only about the inflation level.

However, in the meantime, AHML has started issuing long-term bonds over which many agency loans are priced. Also, the loans carry a practically costfree prepayment option and – although few prepayment data are as yet available due to the short lending program – are seen by AHML to have expected durations of only 6 years.

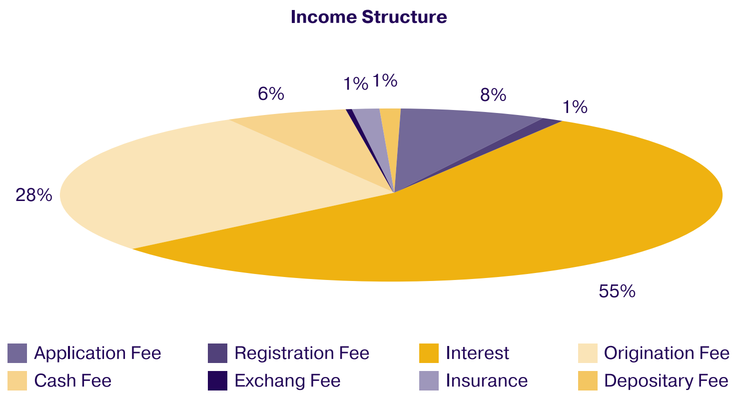
7. PRICING

7.1. Transactions costs

Russia operates with standard European property and lien registration systems as well as notaries. The property registry is centralized through the State Register of Rights on Real Estate. Registration costs are nominal; however, the process can be slow and the low reliability (lack of computerization, maintenance problems) has created a market entry slot for title insurance companies.

Loan origination, appraisal and other bank fees in the Russian mortgage market in contrast can be substantial – USD 1000-1500 per closed loan are not untypical. Only recently, some lenders have started to waive fees due to the effect of increased competition.

Figure 4. Income structure of a Russian private mortgage lender



Source: E.Klepikova, National Reserve Bank, presentation held at the Metropolitan Research Institute Conference on housing finance in transition in Budapest, 2004.

Many lenders also require cash fees – in the U.S. these would be called 'points' – in exchange for offering lower loan interest rates. Finally, cross-selling with the mandatory forms of insurance is common, providing lenders with an additional sources of income through the frequently tied insurance companies.

Figure 4 demonstrates the importance of fee income for a typical Russian private mortgage lender.

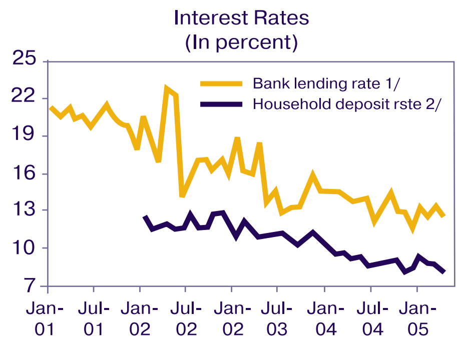
The introduction of an annual percentage rate of charge (APRC) concept would ease the associated cost identification problem for the consumer – such a step is currently being discussed.

7.2. Interest rates and spreads

As figure 5 suggests, the interest rate picture until about the end of 2004 was dominated by the macroeconomic stabilization task. Inflation declined from an average of 20-25% in 2000/2001 to 10-13% in 2004/2005. Lending rates are on average down to 13%, and deposit rates to 7%, which suggests very low real interest rates.

However, the recorded RUR inflation rate is not a good measure for real interest rates: it is strongly influenced by non-monetary factors such as administrative price changes, terms of trade effects and in particular the impact of rapid growth on house prices and rents on the consumer price index itself.

Figure 5. RUR lending and deposit rates 2001-2005



Source: IMF Article IV Consultations September 2005

The typical short-term deposit-lending spread has remained relatively steady over the past years at 6%. In long-term fixed-rate lending, AHML is recording funding costs of approx. 7% for 5-10 year bonds and typical interest rates of 12-16% on loans with an expected life of 6 years. This provides the agency system with 5-9% spreads that is divided between the central and the regional entities.

Private lenders operate in the USD market with somewhat lower spreads, typically 5-7%.

8. FUNDING

8.1. Funding instruments

Retail deposits

Deposits form the main funding source for Sberbank and increasingly also the urban public and private banks. They fund the majority of mortgage loans outside the public agency system. The relevance of deposits is likely to grow further, especially for private banks, as the branch distribution networks expand and the trust of savers into the banking system returns.

Foreign currency bonds or interbank loans

The main non-deposit funding instruments for mortgages for banks are interbank loans or Eurobonds denominated in foreign currency. While Russia has a small foreign ownership share of banks, foreign capital flows to Russian banks have been strongly encouraged by the 7 year-long real appreciation of RUR.

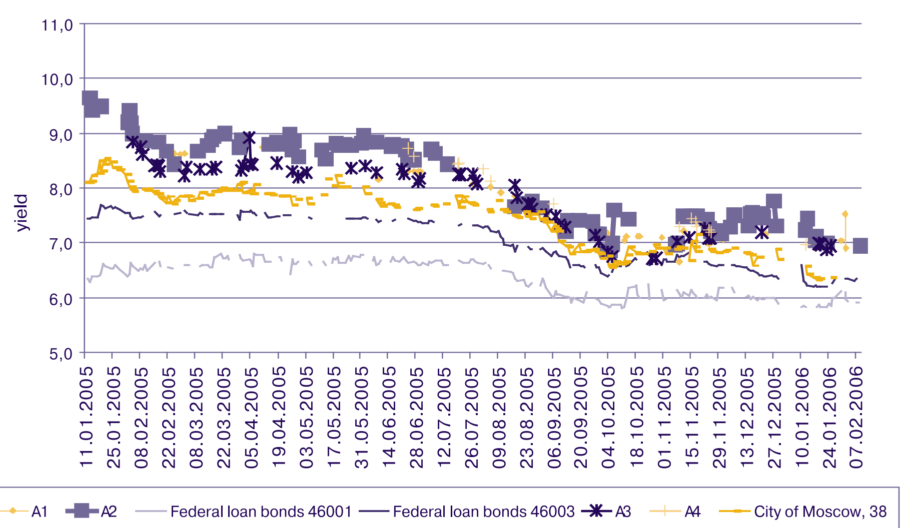
Russian banks ultimately only reacted to strong customer demands for USD loans and CBR requirements to close their forex positions by raising sufficient funding. Many observers see the overreliance on forex funding critical and as a potential risk for the stability of the banking system.

Agency bonds with federal guarantee

The federal agency AHML operates as a centralized issuer of agency bonds with a Russian federal government guarantee. The federal guarantee is a timely payment guarantee, ensuring that investors are paid within 90 days of the bankruptcy of the AHML. The state guarantees are capped by the Russian treasury at a total bond issuance volume of USD 7 billion by 2010, allowing for a per annum guaranteed bond issuance volumes of 1-2 billion USD between 2005 and 2010. While the guarantee covered both principal and interest of the earlier agency bonds issued, current issues are guaranteed only with regard to principal – possibly in order to achieve greater leverage of the guarantee.

Since AHML's growth is outpacing the federal guarantee ceilings either way very quickly – by 2010 the agency expects to hold USD 14 billion in mortgages contrasting with the USD 7 billion maximum – , the agency is considering the issue of covered bonds backed by its own mortgage portfolio (see Figure 6).

Figure 6. AHML long-term bond yields and comparable yields of public-sector bonds



Source: AHML (2006). Note: A1-A4 denominate individual AHML bond series.

AHML agency bonds have become increasingly competitive compared to federal government bonds, as figure 6 shows, with spreads narrowing down to approx. 70-100 bp. More importantly, AHML has expanded the maturities of the bonds successfully – from the first 5-year bond in 2003 to the current maximum of 12 years. AHML structures them, inter alia with varying repayment dates and call options in order to shorten the maturities, if necessary for asset-liability management purposes.

Covered bonds and mortgage-backed securities

Covered (mortgage) bonds and mortgage-backed securities were enabled simultaneously in Russia through a single 2003 Law on Mortgage-Backed Securities. This approach was seen by many as a problematic because of the inherent differences in construction and regulatory philosophy of the instruments: while covered bonds are essentially a bank bond concept, funding a revolving mortgage portfolio and thus requiring strong asset-liability management regulations, mortgage-backed securities are single loan pool sales with little risk left to manage for the issuer – and to regulate. Implementation ordinances thus were required that specified risk management conditions for covered bonds and delayed the finalization of the framework. It is now in force since January 1, 2006.

The emerging instruments have so far not been used. Housing Finance Bank issued a mortgage-backed bond in December 2005 (RUR 500 million, 3 year fixed-rate, non-amortizing, 12.65% coupon), which however was not formally under the new law as the implementation ordinances had not been enacted. More relevant are plans by AHML to issue a USD 100 million covered bond with 10 year average life by the second half of 2006. AHML plans to become a regular mortgage-backed issuer in order to compensate for the tight ceilings imposed on federal guarantees with an alternative form of credit enhancement. Whether banks will be attracted to use the domestic covered bond framework remains unclear at this stage – international unsecured funding continues to be cheap for those with sufficient creditworthiness, and offshore issues moreover enjoys tax advantages over domestic ones.

The Russian securitization market started in 2003, but has seen as yet no mortgage-backed issue. The primary issuance structure is via foreign SPVs. Most of these deals are in fact not structured finance but rather designed to tap a foreign investor base which would otherwise hesitate to buy Russian debt because of convertibility risk.

Vneshtorgbank has been a particularly active user of foreign SPVs (7 transactions). As of April 2006, there have been 3 asset-backed deals: Home Credit & Finance Bank did two consumer loan-backed issues (USD 275 and 150m) in 2005. Also there was one deal by Russian Standard Bank in consumer loans. Generally banks enjoy a high capital ratio (average of 16%), however, risk-weighted assets are strongly growing and pressure could be increasing on them to use securitization, including eventually via the new domestic options.

8.2. Investor structure

Investing in Russia's banking system during the transition crisis has been a nightmare for foreign and domestic investors alike, and the system is still struggling to get back on its feet. International bond issues or loans are heavily collateralized, e.g. by diversified payment rights or future foreign receivables, and few investors are willing to buy unsecured debt. After sustaining significant losses, private households still hesitate to invest in deposits, despite the creation of the deposit insurance fund.

On the positive side, after years of junk status, in 2005 Russia's international sovereign rating reached again investment grade (Fitch: BBB-), which raises its attractiveness for foreign investors. These investors will also become interested in AHML debt, due to its yield pick-up at comparable credit quality to sovereign debt. However, due to the dearth of good credit, AHML bonds might become expensive very soon – currently most are placed to the State Pension Fund.

The Housing Finance Bank's mortgage-backed bonds were reportedly completely placed with banks and institutional investors – it is premature to infer from this isolated event to a future demand pattern of these investors.

Certainly, AHMLs planned issue in 2006 is both large and safe enough for high-credit oriented investors in the Russian system to start investing in mortgage-backed bonds. A problem in Russia are still investor regulations that pre-empt public institutions, e.g. the State Pension Fund, from buying non-government guaranteed bonds.

9. RISK MANAGEMENT

9.1. Credit risk

After series of default crises in the Russian banking system, including in the just recently emerged consumer lending portfolio, a great deal of attention is currently being paid to credit portfolio performance by both regulators and markets.

Recent CBR stress tests seem to indicate that credit risk has increased somewhat in the light of strong loan growth while non-performing loan ratios have stayed low and provisioning has increased. However, the system is not immune against surprises: consumer lenders such as Russian Standard Bank or Home Credit Group experienced recently increases in NPLs to levels of 15 and 20% due to lax underwriting standards and questionable intermediaries used.

In the mortgage sector, lenders have been adamant to stress their good portfolio performance – for instance DeltaCredit reports delinquency levels of less than 1% and AHMLs official figure is 0.3% or only 70 out of its 28,000 loans.

Moreover, convincingly in a strong increasing house price environment, despite the fact that foreclosure is legally highly problematic and generally requires the provision of substitute housing, there is reason to believe that lenders can avoid losses in cases of default. Some lenders, notably public banks and agencies, have arrangements with local governments to provide substitute housing to defaulting borrowers, which allows them to auction off the vacated properties at attractive prices. Other lenders simply buy properties in poorer locations and qualities as a reserve to house the foreclosure cases.

Still, the Russian economic environment is fragile and the dominance of USD-denominated lending in combination with relatively high payment-to-income ratios and loan-to-value ratios raises questions about the shock resistance of the portfolio.

A particular problem is the low savings rate of the household population; many Russians still do not trust banks and even overall economic reforms and therefore consume aggressively. The combination of low equity, i.e. high loan-to-value ratios, and nominal interest rates beyond 10% drives up payment-to-income ratios and increases vulnerability.

Another problem is the severely flawed housing supply system, which would stretch borrower affordability even in low interest-rate economies. It can be safely assumed that somewhere from 30 to 70% of the costs of a new apartment in Russia reflects pure developer or landowner profit – a liberalization of the supply side might hence lead to fall in new house prices, although the scale of the risk should be less pronounced in the urban areas with the highest demand.

9.2. Interest rate risk/prepayment risk

Interest rate risk in the Russian mortgage market is substantial – both in the USD and RUR market, for two main reasons: liquidity risk, as most funding is short-term, and costfree prepayment options.

Liquidity risk can result in interest rate risk for lenders, if a sudden dearth of capital drives up their costs of funds. Public lenders with their access to a strong deposit base (Sberbank), plentiful owner loans (Bank of Moscow, Gazprombank) or foreign bond markets (Vneshtorg) face low liquidity risk. However, many private lenders with insufficient access to deposits use ad-hoc funding programs whose conditions could sharply deteriorate in case of a confidence crisis of the very small base of investors. The developing securitization and covered bond market might help those lenders to broaden their investor base and reduce the risk somewhat going forward.

AHML estimates that while the weighted average maturity of its RUR loan portfolio is 16 years, due to prepayments its weighted average life is only 6 years. This means that AHMLs current final bond maturities – from 5-12 years – broadly suffice to match funds with its assets. However, there is considerable risk that the actual life of the portfolio will be higher or lower than 6 years – therefore, AHML issues new bond series with call options that allow it to shorten maturities and reissue new bonds at lower prices, if necessary. Also, there are in total 9 bond series outstanding against the portfolio, most of which each in addition are tranched with varying repayment dates, which creates a certain degree of flexibility. Yet there is risk of negative maturity transformation (duration of assets shorter than liabilities, implying significant risk of negative spreads) should competition levels in the Russian regions, where AHML is particularly active, increase or nationwide RUR interest rates start to decline again.

While prepayment risk problems will be unlikely to hit the large depository lenders, in particular Sberbank, the USD-bond issuers among the mid-sized lenders might become affected. This could become a particular problem in case of a sudden devaluation, which would trigger high consumer desire to prepay their USD with RUR loans while leaving those banks with repaying their USD debt.

10. PROCESS EFFICIENCY

While Russian consumer lenders start third-party distribution, loan servicing is still performed in-house. The larger lenders and AHML have specialized departments dealing with non-performing loans.

As most mortgage lenders are non-specialist, margins continue to be high, products are not yet standardized and business focus is on growth and market share, it is unlikely that cost efficiency will be a major issue driving management strategies for the near future. However, as competition increases and margins are being depressed in the most competitive urban areas, lenders with insufficient processes will likely sooner or later exit the business or become fee originators.

11. SUBSIDIES

As probably the most extreme case in transition economies, due to its political failure to raise user fees Russia is massively subsidizing utility, modernization and maintenance costs for the large privatized apartment sector. Funded by the oil revenue boom, a new subsidy programs was set up in December 2005, which will particularly benefit the regions while trying to standardize across regions the ways in which housing and utility services are paid for.

Concerning the mortgage sector, the Federal Government has created two large tax subsidies for buyers: an income tax credit is given on the construction and purchase volume of a housing unit – for amounts up to approx. € 20,000; and mortgage interest for loans originated by commercial banks is deductible from income tax. According to the World Bank (2003) the tax code appears to contain a bias against non-bank financial institutions with regard to interest deductibility; however, interest on loans provided by public agencies is tax deductible.

A premium subsidy system for contract savings for housing schemes, as under schemes practiced in Germany, the Czech Republic and Austria, is currently under discussion in the Russian parliament.

The World Bank has been arguing with the public agency system about the subsidy content of the long-term RUR loans, for which – if they were not prepaid and lived up to their final maturity of up to 30 years – no government bond benchmark exists. However, both a benchmark and a funding program for the expected maturities of around 6 years exists, and it seems that the spreads charged are sufficient to cover capital and intermediation costs. There is a certain extension (of duration) risk for those loans as RUR interest rates might not drop quickly below the 10-12% threshold, due to inflation inertia, or even rise again. This might lead under certain scenarios to losses which ultimately in the public agency system would have to be covered by taxpayers.

List of Acronyms

ABS . . . . .Asset-backed securities
AHML . . . . .Agency for Home Mortgage Lending
ARM . . . . .Adjustable-rate mortgage
CBR . . . . .Central Bank of Russia
FRM . . . . .Fixed-rate mortgage
GDP . . . . .Gross Domestic Product
IPO .Initial Public Offering
MBS . . . . .Mortgage-backed securities
NPL .Non-performing loans
RMBS . . . . .Residential mortgage-backed securities
RUR . . . . .Russian Rubles
SPV . . . . .Special Purpose Vehicle
USD . . . . .U.S. Dollars

Chapter 8.
Spain

This paper is based on the following sources:

a. «Informe del Presidente» presented at the 2005 annual conference of the Associacion Hipotecaria Espanola.
b. «Mortgage Market Development in Ukraine: A Strategy for the future», presentation by Simon Walley, deputy secretary general, European Mortgage Federation, December 2005.
c. «Spanish Housing Market: «Are Spanish Financial Institutions Ready to Deal with a Potential Slow Down?», Fitch Ratings, July 2005
d. «Spanish Multi-Seller Covered Transaction», Investment Banking. Caja Madrid, November 2005
e. «Merrill Lynch Guide to International Mortgage markets and Mortgage-Backed Securities», Merrill Lynch, 2003
f. «EMF>HYPOSTAT 2004, A review of Europe's Mortgage and Housing Markets, European Mortgage Federation, 2005
g. Eurocatalyst 2005: regional market sessions on Spain.
h. European Mortgage Federation/Mercer Oliver Wyman: «Study on the Financial Integration of European Mortgage Markets», October 2003

1. HISTORICAL OVERVIEW

The Kingdom of Spain together with the Italian city states became a pioneer of European consumer and small business banking in the 15th century. That era in Spain saw the emergence of religiously-socially motivated non-profit banking institutions ('Montes de piedade'), which were sponsored by rich philantropists and lent to urban small manufacturers and craftsmen. The medieval pawnbroker system that provided access to credit against collateral for the urban poor also became more formalized in these institutions.

The modern Spanish savings banks – Cajas de Ahorro – emerged over the centuries from this structure and still today are characterized by their unique construction as private-law foundations, with depositors, private non-profit sponsors, and local governments holding the voting rights. Spanish Cajas pay a minimum ratio of their profits out as 'social dividends' and are the backbone for social public expenditures – from culture sponsorship to payment of pension topping-ups for retirees – in many regions of the country. They also continue to be rooted in the regions; however, contrasting with France and Germany their activities are no longer confined to them, which has facilitated the emergence of two large savings banks, Caja Madrid and La Caixa.

Spanish commercial banks developed in the mid 19th century, with Banco de Bilbao and Banco Santander created both in 1857 as industrial and infrastructure lending bank. Other commercial banks followed until the first decade of the 20th century. Those lenders played a strong role in the industrializiation of Spain, esp. in their home regions in the North of Spain.

However, the country's vast dimensions and the structural development problems in many regions motivated a third leg of the banking industry – public credit institutions, each with a specialized sectoral spheres of influence in industry, agriculture, local government and provinces, and real estate. These institutions during the Franco era implemented Spain's highly state-controlled directed credit policies that in the 1960s even culminated in the nationalization of the commercial banking industry.

The Mortgage Bank of Spain (Banco Hipotecario de Espana) in this way since 1873 had provided mortgage loans for urban and rural properties. It enjoyed similar public privileges as his French counterpart, Credit Foncier de France, inter alia until 1982 the monopoly privilege to issue mortgage bonds. It shared even the ultimate fate of its French counterpart, when in its last incarnation as a private lender under the name Argentaria (1991) it was merged with Banco de Bilbao and Banco de Vizcaya in 1999, leaving only the 'A' in the new name of BBVA.

The Spanish specific legal system for mortgage lending dates back to 1861 where the Mortgage law and the Mortgage Regulatory Regime were established. The legal framework introduced property registration system based on the German model. The law has been subject to many reforms: in 1872 covered bonds issuance (Cedulas

Hipotecarias) was enabled, and in 1946 the role of the Public Land Registry, public notaries in the the registration procedures and the judiciary in foreclosing procedures were established.

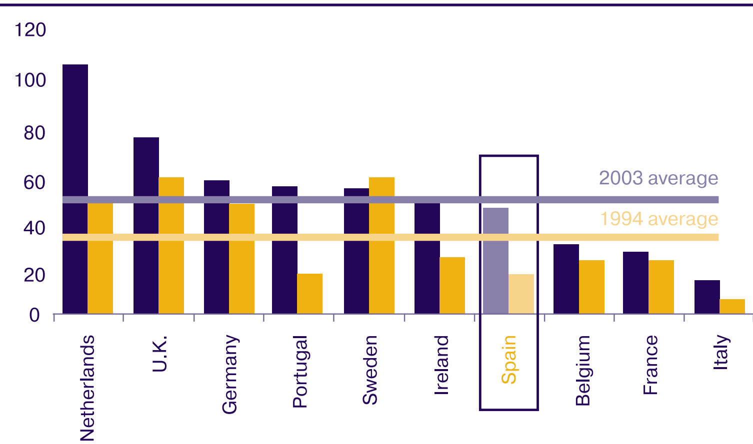
The 1980s saw in parallel with the change of the political regime a tide of legal reform, starting in 1982 with the Mortgage Market Act. The law removed Banco Hipotecario's monopoly on cedula issuance, limited the maximum legal LTV to 80% for residential mortgages, and regulated other areas, such as valuation methodology, and professionals of valuation of the property. Spain even became a forerunner in European legal development when the regional principle for savings banks was lifted in 1988 and the Securitisation law was introduced in 1992 as the first in Europe. Also, the mandatory linkage of adjustable-rate loans to a menu of official indices provided by the Banco de Espana in 1994 stimulated the market. Finally, Spain in 2003 overhauled the Cedula issuance criteria and reformed its bank bankruptcy laws in order to improve the protection of investors.

2. SIZE OF THE MARKET

Spain features one of the most dynamic mortgage markets in Europe, with an annual growth rate of 19% p.a. 1995-2005 (EU average ~ 8% p.a.). At the end of 2005 there were approx. € 450 billion outstanding mortgages, representing 45% of 2005 gross domestic product (GDP).

The strong catch-up growth of the Spanish market relative to its European peers is depicted in Figure 1. Within 10 years, outstanding loans grew from 10% to almost 40% of GDP, and from less than half of the EU average to close to it.

Figure 1: Spanish mortgage market size – catch-up to the European average in a single decade



Source: BBVA. Note: in % of GDP.

The main drivers of mortgage market growth have been declining interest rates, the improvement of borrower affordability through the predominant use of index-linked adjustable-rate mortgages that allow for a swift decline of monthly payments as interest rates fall, a generally buyoant economy, immigration and second home demand, as well as the backlog from several decades of repressed housing demand in a market with limited options other than buying, but little access to finance.

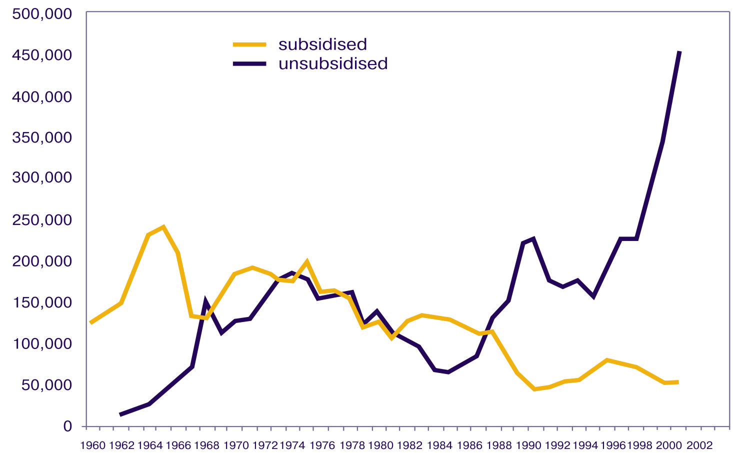
Spain has one of the highest percentages of owner occupied dwellings, i.e. 83% compared to EU average of ca 64%; so most mortgage loans are provided for the retail purposes. About 10% are invested for second home purchasing (Source: BBVA).

3. HOUSING AND MORTGAGE MARKET LINKAGE

The vibrant mortgage market supports growth in the Spanish housing sector in a spectacular way. According to the mortgage association AHE, house prices in Spain soared by an impressive 135.5% in the period end-1998 to end-2004, equivalent to an annual average index rate growth of 15.4%. Driven by the price signals, construction is booming – from an average of 200,000 units in the early 1990s, production has climbed to 800,000 units in 2005; this was more than France, Germany, the United Kingdom and Italy combined!

The recent price growth seen in Spain is much higher than the annual average growth seen in the period end-1993 to end-1998 (2.9%), but comparable to the mortgage market growth rate of 19% p.a. reported above. This supports the conclusion that the demand-enhancing factor of mortgage finance has strongly stimulated housing demand. In fact, there is considerable concern about a financial 'bubble' – unsustainably low interest rates driving house prices. In combination with the strong construction activity, which is already putting pressure on prices, this could lead to a strong price decline as interest rates rise again.

Figure 2. Subsidized and non-subsidized housing construction in Spain, 1960-2002



Source: Professor Michael Ball, European Housing Review 2003, p89.

However, real demand factors in Spain interact strongly with financial factors and raise the outlook for a continued positive long-term trend of house prices and construction activity. The country has no rental sector to speak of, forcing young households to buy. As figure 2 shows, a significant share of the increase in private mortgage lending only replaced the massive public interventions into housing finance and construction of the past, which now have almost disappeared. Household preferences are changing with the greater availability of finance: in only 20 years, between 1991 and 2011, Spain is expecting almost 6 million new households – a 50% increase over the 11.7 million households that existed in 1991. Many of these new households will be immigrants, whether poor from the South or rich from the North seeking for second homes – 3 million foreigners in 2004 called Spain their home, up from 500,000 in 1996. Others will be Spanyards that consume per capita amounts of housing space unknown in the previous, repressed housing market.

Without doubt the buyoant construction sector has also benefited the overall economy and unleashed a virtuous circle of investment and demand. Since the mid-1990s, Spanish growth has outpaced that of EU average (2.8% between 2000 and 2004). In 2004 the GDP growth on average in EU (25 countries) was 2.3% compared to Spain's 3.1%.

4. MARKET STRUCTURE

The mortgage market landscape is currently populated by three types of institutions: commercial banks, mutual saving banks (*cajas de ahorro*), and credit co-operatives (*cooperativas de credito*).

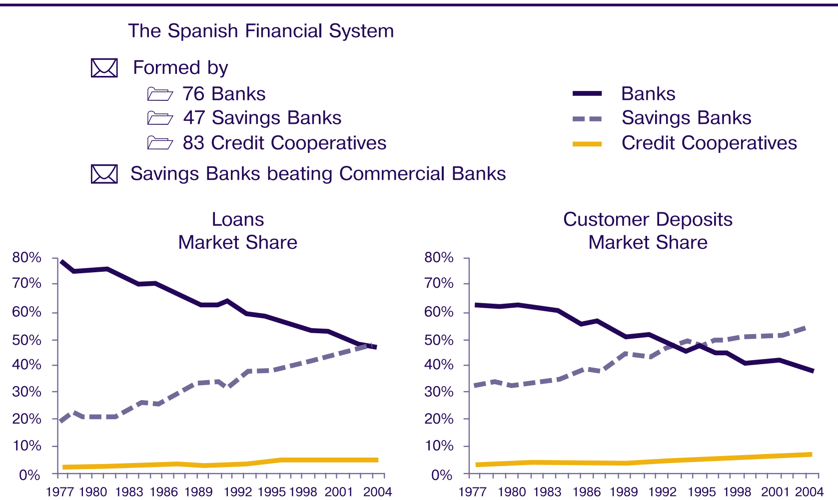
Of these, commercial banks and savings banks are by far the most relevant mortgages lenders combining 95% of the market share.

Both groups lead by two large institutions with today European and even global business ambitions: BBVA (Banco Bilbao Vizcaya Argentaria) and BSCH (Banco Santander Credito Hispano); as well as Barcelona-based La Caixa and Caja Madrid. BBVA is also large mortgage player in the mortgage market in Latin America (Mexico, Argentina).

The savings banks group took a particularly interesting development since the regional principle for their activities was lifted in 1988. The reaction was a strong expansion of numerous savings banks across Spain, which lead to a hierarchical structure as of 2005, with two large and many mid-sized and smaller savings banks. The latter group, however, are integrated through centralized service institutions provided by the trade group of Cajas, which include a joint payment system and capital market activities including joint Cedula issuance (see below). Cajas are heavily concentrated in mortgages, which make up for two thirds of private sector loans on their balance sheets.

The commercial banks differ from the savings banks through a lower concentration on mortgage loans and declining market share. The high market share reported in figure 3 for the 1980s represents the monopoly position of Banco Hipotecario/Argentaria, which was successfully removed. Mortgage loans accounted for 48.7% of the commercial banks' total domestic loans at end of 2004. In the case of the saving banks, at end of 2004 this figure was 59.6%. Still, mortgage lending remains a core business for commercial banks.

Figure 3. Market shares of the main groups in the Spanish financial system



Source: Caja Madrid

5. DISTRIBUTION AND PURCHASE PROCESS

Branch distribution accounts for 45% of distribution, using Spain's extensive network of over 40,000 branches. Due to the lifting of regional bank principle of Cajas and the lending boom in general, Spain has been the only European country where branch network has expanded since 1990. However, most newly opened bank branches are small – on average 3 employees.

Real estate developers represent an important distribution channel in Spain. Their construction loans are usually backed by mortgages; once the units are completed, the final buyers can either assume the mortgage from the real estate developer or can receive a loan from his own bank. In the latter case, the developer's mortgage has to be cancelled, and the new mortgage to be registered, resulting in higher fees. The number of other agents tied to lenders, such as finance brokers, is also increasing. They usually offer a complete range of a single bank's products (including mortgages).

Independent mortgage brokers do not play a significant role in distribution. However, the internet is growing in popularity as an information and distribution channel, providing room for more independent brokerage.

The mortgage underwriting process is swift; it takes not more than three weeks from application to drawdown mainly due to relatively efficient legal processes. The process has recently been shortened further following the introduction of measures to standardize and guarantee mortgage registration through Registradores, the land registry agency. When applying for mortgage the borrower has to provide the financial institution with pay slips and tax receipts for past two years. Property registration checks and valuation are carried out by independent companies and credit assessment is provided by scorecard models and credit bureaus, making the overall application process short.

6. PRODUCT RANGE

6.1. Credit curve/target group

As typical for an emerging mortgage market, Spanish lenders in the early 1990s targeted mostly prime credit quality borrowers. Often these had saved significant equity amounts for a non-bank-financed home purchase, which had been the rule so far.

However, the house price boom, a minimal rental sector size, and the competitive dynamics of the mortgage market with new entrants, changed the picture fast. For instance, as of 2004, 50% of BBVA mortgage borrowers were under 35 years, which is a figure only comparable in Western Europe to the United Kingdom, where rental supply is similarly scarce. Also, as house prices grew, lenders relaxed their underwriting standards by accepting higher LTVs and debt service ratios.

Sub-prime mortgages specifically targeted to lower-income groups or the elderly are not well developed in the Spanish market and have only recently been offered by some specialist lenders. However, it is not quite clear how many loans matching typical international definitions of 'subprime' are actually held by mortgage lenders.

6.2. Amortization

Spanish banks have contributed to affordability in the past two decades by lengthening the maturity of mortgage loans, according to Fitch from an average of 10 years in 1985 to 25 years in 2004.

In the current situation of interest rate increases, banks even offer 50 year maturities to new customers in order to cushion the impact on initial monthly payments.

Flexible repayment mortgages are increasingly popular, especially in the region of Cataluna. These loans (*bipoteca abierta*, as marketed by La Caixa; *credito total primera vivienda*, as marketed by Caixa Cataluna) are established as a revolving line of credit secured by a mortgage on the borrower's property. Borrowers are allowed to redraw on the line of credit up to the amount of the amortisted principal or any unused amount on the line. Each redraw is treated as an independent loan, with a new credit underwriting for each loan. From the borrower's perspective, payment related to all draws are consolidated in one monthly instalment.

6.3. Interest rate adjustment

Variable-rate mortgages are the most popular loan product in Spain, with rates typically reviewed every 6-12 months. Their predominant use is not only closely tied to the disinflation trend but also to a legal enabling strategy implemented by Registradores and the Banco de Espana. In 1994, the Transparency and Consumer Protection Act was passed which mandates lenders to fix the spreads of their loans over one of five reference indices published by the Banco de Espana on a monthly basis: 1 year Euribor, 1 year interbank rate (MIBOR), secondary market yield of public debt between 2 and 6 years maturity, reference mortgage interest rate > 3 years, reference lending rates of savings banks.

The overwhelmingly used index is 1 year Euribor, which as of April 2006 is approx. 3.3% and since January 1994 has varied between 2.0% and 8.0%. This gives an impression of the potential payment shock to which Spanish borrowers are exposed, especially those underwritten at extremely low interest rate levels and high house prices in recent years.

Some banks have started to offer hybrid mortgage products where the interest rate is fixed for a number of years and then becomes variable for the remainder of the life of the loan. The fixed rate period usually ranges between three and five years.

Longer-term fixed rate mortgages are available but represent less that 5% of total mortgages due to low interest rate levels on variable rate products, borrower preferences and restrictions on prepayment fees for fixed rate mortgages leading to higher nominal interest rates. Only during 2003/2004, when end of interest rate decline process started to become forseeable, the largest credit institutions began to offer fixed rate loans, a process that has since gained dynamic.

In particular, given high perceived credit risk, as of 2005/6 the Banco de Espana has started to pressure lenders to increase the borrowers protection by mixing fixed and variable-rate components for new house financings ('prestamos hipotecarios a tipo mixto').

A structural problem in that regard is that the prepayment indemnity caps imposed by Banco de Espana – 4% for fixed rate products – are not covering the potential reinvestment losses of a fixed rate lender. However, the Bank has signalled in March 2006 to review and possibly lift these limits in favor of full yield maintenance indemnities. With such protection in place, the huge international success of Cedula issuance will allow lenders to efficiently tap the European fixed-rate funding market to supply more fixed-rate mortgages in Spain.

7. PRICING

7.1. Transactions costs

Spain is among the European economies with the highest property transaction costs (c. 10%), of which property transfer taxes form the highest share (7.5%).

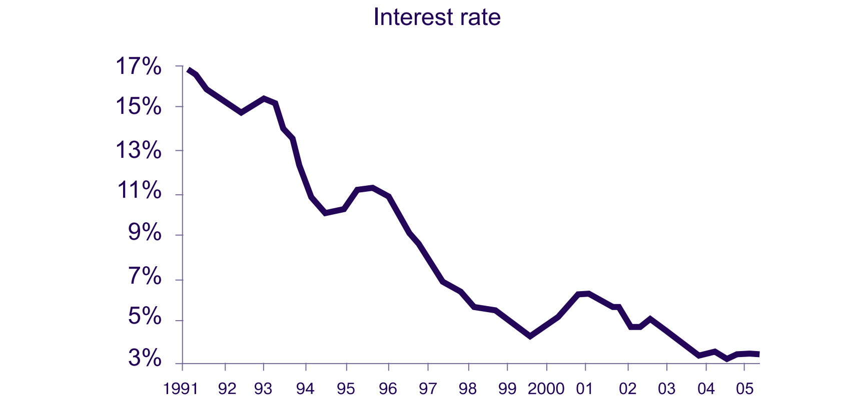
The mortgage transactions costs are also slightly above the European average. According to an EMF survey of 2002 the average for a € 100,000 loan were € 1,900 in legal costs, land registration costs and taxes alone. In addition, loan closing costs in Spain are high, at typically 1-1.5% of the loan. Closing fees are usually capitalized into a higher loan amount today.

The land registration process itself is efficiently organized through the centralized agency Registradores. Land registration takes up to two weeks, the use of notaries is not required.

7.2. Interest rates and spreads

Spanish mortgage interest rates are closely tied to the Euribor interbank index and have dramatically decreased over recent years, as figure 4 shows. For the last two years, 2004 and 2005, Spanish loans were the cheapest in Europe.

Figure 4. Spanish mortgage interest rates, 1991 – 2005



Source: Caja Madrid.

Associated was also a strong compression in the net interest margins for lenders. For mortgages, these have fallen now below 1%. Phases of rate increases, e.g. the year 2000 and 2006, see additional pressures on spreads as banks are competing for new customers in a more difficult interest rate environment. Margins over 1 year Euribor are reported for early 2006 to be in the range of 30-50 bp.

Depite the tendency of margin decline, the strong loan growth in recent years has supported growth in net interest revenues of lenders. Fitch reports that Cajas net interest revenues have risen from 2001 to 2004 by 25%.

Also, in a deepening financial markets lenders use mortgages increasingly as loss leaders to cross-sell other products such as insurance and credit cards.

8. FUNDING

8.1. Funding instruments

Deposits

Retail and interbank deposits still represent the main source of funding of mortgages in Spain (~70%), however, covered mortgage bonds (cedula hypotecaria) and mortgage backed securities have each gained significantly in relevance for funding in the past decade.

The incentives to use deposits will likely not disappear in a market with overwhelming demand for adjustable-rate instruments and yet high dominance of banks as collectors of savings. Deposits also play an important role as an implicit credit enhancements for covered bonds, which require a large minimum overcollateralization by mortgage assets (see below).

Covered bonds

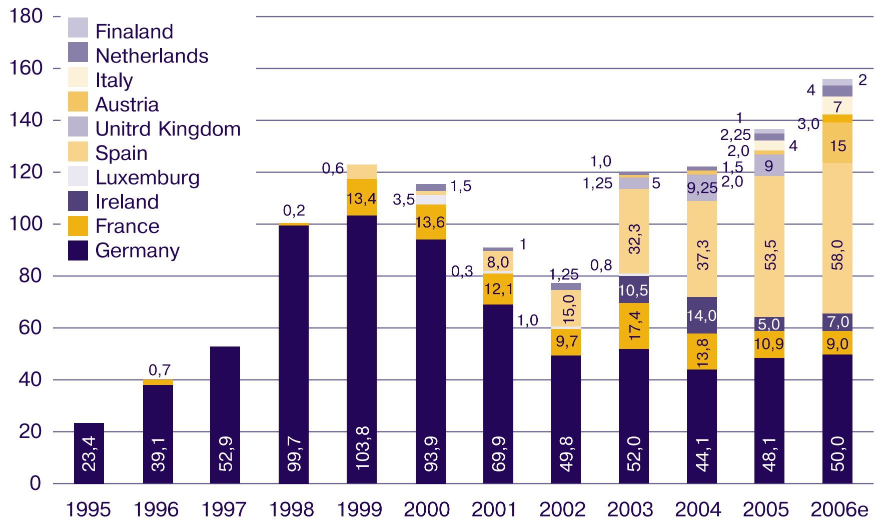
Understandable from the history of the legislation, which prioritized the removal of the issuance monopoly of Banco Hipotecario, the Spanish legal concept for covered bonds (Cedulas Hipotecarias) differs substantially from the rest of Europe. To facilitate issuance by as many banks as possible there is no dedicated cover pool backing the bonds, rather the bonds issued are backed by the entire mortgage book of the lender, with a minimum overcollateralization requirement of 11% (eligible mortgage book over covered bonds issued).

The eligibility criteria for mortgage assets are only moderately strict in European comparison, with an 80% LTV limit on residential or 70% for commercial property; the 'V' is the open market value, in contrast to stricter valuation criteria e.g. in Germany. In a typical bank portfolio, 65% of the volume of mortgages will thus be eligible.

In 2003, the legal status of covered bonds was strengthened through the Insolvency Act , which now clearly defines the ring-fencing procedures for mortgage assets protecting the covered bond investors in the case of bankruptcy of the bank. 2005 saw the modification to the withholding tax regime, which no longer applies to foreign investors.

Spanish Cedulas have been the greatest economic success story in the European covered bond market in the past decade. Almost a fifth of mortgages are now funded by Cedulas, and 1/3 of new lending. As in some banks, e.g. BBVA, covered bonds already reach 60% of the mortgage book, rating agencies are discussing scenarios of insufficient overcollateralization, should house prices decline. In 2005, Spanish Cedula issuance, which also includes bonds backed by public sector loans (Cedulas Territoriales), was the largest in the European covered bond market, surpassing that of Jumbo Pfandbriefe. The expected issuance of covered bonds for 2006 is approximately EUR 58 Billion. Figure 5 shows the dramatic increase in the Spanish market share.

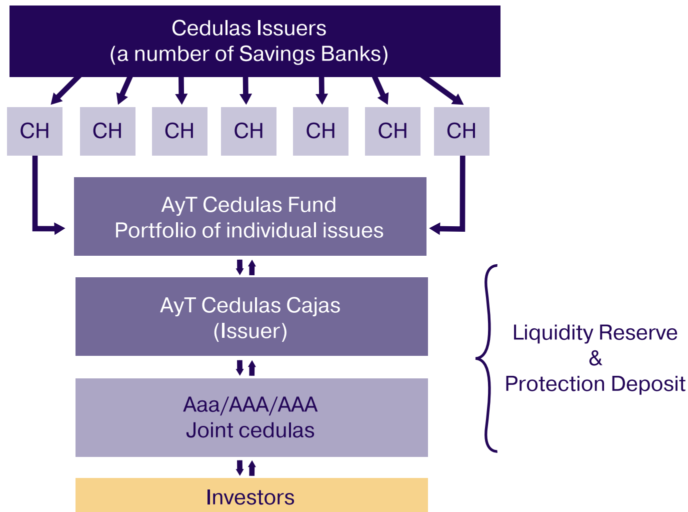
Figure 5. European covered bond issuance 1995 – 2006, Spanish market shares



Source:HypoVereinsbank. Note: 2006 expected ('e').

Perhaps interesting for banks in emerging market is that the Spanish legislation allows the small savings banks to pool their individual covered bond issues together and repackage them in an instrument with higher liquidity and lower funding costs. Packaging is not possible in German legislation for instance. Figure 6 shows how in a typical transaction the central capital market service provider for Cajas in Madrid, Ahorro y Titulizacion, creates a joint Cedula fund which backs a Jumbo Cedula issued by a special purpose company with limited liability. The individual savings banks guarantee their individual issues. Caja Madrid, the second largest savings bank in Spain, offers a similar service to smaller savings banks.

Figure 6. Ahorro y Titulizacion, centralized Cedula issuer for Spanish Cajas



Source: Ahorry y Titulizacion, HypoVereinsbank.

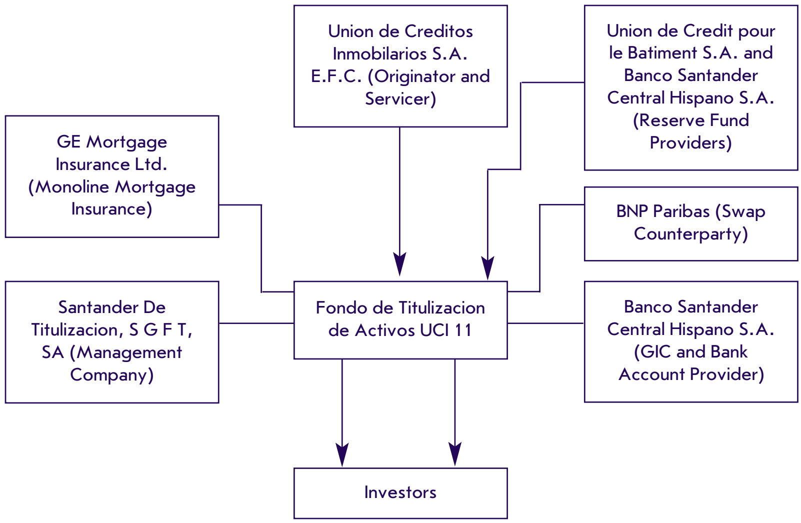
RMBS

The Spanish MBS market was enabled by a special securitization law in 1992, which addressed issues related to the characteristics of the Spanish mortgage instrument, the true sale definition, issuer regulations and taxation. MBS transactions under the law had to comply with strict conditions, among them that the assets should have certain specific characteristics (standard mortgages). In 1998, a new ABS norm was issued allowing for more flexible conditions in terms of assets and structures. The Financial System Reform Law of 22.11.2002 confirmed the possibility of securitising mortgage loans which fail to comply with the conditions of the Mortgage Market Law, although under a different name than the one of 'M'BS.

The RMBS market was initially very successful, with all lender types accessing the market, and has just recently come under some pressure due to the lower costs of covered bond issues. However, RMBS is still intensively used, e.g. by finance companies.

Figure 7 shows a typical transactions structure. The issuer, UCI, is a specialized mortgage finance company without access to own covered bond issuance, which has tapped the RMBS market regularly.

Figure 7. UCI 2004 RMBS Deal Transactions Structure



Source: Standard & Poors presale report.

Recent developments in the Spanish MBS market include: securitization of all kinds of mortgage asset classes including commercial ones, securitization through open funds comparable to Master Trust structures (see country report on U.K.), MBS that include in its assets subordinated financings from other MBS, structures that include interest only bonds, etc. This focus on specific risk transfer structures provides room for the market to grow while the Cedula market funding the standard portfolio is booming.

8.2. Investors

The investor base for Spanish RMBS and covered bonds is increasingly internationalizing, driven by the seasoning of both markets and the specific appeal of large issues to investors with specific liquidity needs. Covered bonds are eligible for repo operations of the European Central Bank and thus high in demand by banks.

9. RISK MANAGEMENT

9.1. Credit risk

In recent years, credit risk in the Spanish market has been extraordinarily low. The mortgage association AHE reports a decline of default rates (arrears over 90 days) from 1-1.2% at the end of the 1990s to an all-time low of 0.4-0.6% recently.

Multiplying default rates with losses-given-default, Fitch estimates that loss rates on Spanish mortgages average only around 12 bp p.a. over the economic cycle and in recent years are as low as 5 bp p.a. This is strikingly low in an economy where foreclosure by lenders faces numerous legal obstacles – however, low losses-given-default may be explained by rising house prices, if defaulting borrowers can be convinced to sell the house.

There are two main reasons for expecting credit costs in Spain to rise in the near future: first, the existing loan portfolio is entirely priced over very volatile interbank interest rate indices, in particular Euribor, and thus is exposed to strong interest rate risk; secondly, due to high house-price-to-income levels – now reaching 8-9 annual salaries, up from 4-5 in the 1990s – new loans in Spain are frequently originated to borrowers under stressed financial conditions, which means greater likelihood of future stress when interest rates increase.

Fitch has observed that banks have employed stress scenarios when granting loans and have factored this into their risk management processes. The Bank of Spain has already in 2003 introduced a requirement for lenders to build general loan loss reserves ('dynamic provisioning') with the effect that many lenders have a significant reserve relative to loan losses.

Banks have also tried to impose conservative underwriting – however, a 40-45% ratio of debt service to household income is still common. Also, the share of underwritten borrowers with two incomes is very high, which raises default risk in case of loss of one income through unemployment.

In some cases, credit risk problems may occur that are related to the huge scale of the construction boom, which frequently overwhelms the public planning capacities of local governments. Many houses – especially in coastal areas – are built without valid public zoning and building rights, which may impair their value as collateral.

9.2. Interest rate risk/prepayment risk

Spanish lenders face low prepayment risk since most loans are index-linked at constant (and relatively low) spreads. Prepayments in RMBS deals are reported in the range of 5-7% p.a. These figures should reflect primarily non-financial motives, such as house sales, inheritances, divorces and labour mobility.

It is noteworthy also that lenders charge a 1% prepayment indemnity on adjustable-rate loans, a practice outlawed in many other European countries (e.g. France, Germany; but not Portugal) which should further cushion prepayments.

On fixed-rate mortgages, in contrast, indemnity levels are capped typically at 2.5% (by regulation of Banco de Espana at 4%), a low level which has induced a reluctance by lenders to offer the product due to the requirement to price the prepayment option to the borrower, which increases the initial payment rate. The Banco de Espana is currently considering to modify the statutory cap to allow lower cost fixed-rate mortgages to be offered.

A salient feature of interest rate management is that the high share of fixed-rate covered bonds issued does not correspond to the low share of fixed-rate loans. Spanish covered bond issuers, in an internationally unusual practice, rather swap the fixed cash flow to offer variable-rate loans. The intensity of the practice may diminish with the increase in demand for fixed-rate loans.

10. PROCESS EFFICIENCY

Given the only recent decline of spreads, process efficiency is just becoming a priority of Spanish lenders. The majority of Spanish lenders conduct all of their mortgage processes in-house, although larger lenders and specialized service providers provide services inside the savings bank industry. This has partly been facilitated by the concentration trend, especially in the private banking industry, and partly reflects a backlog in outsourcing and disintermediation that will likely be addressed in the coming years.

The specialist mortgage lender UCI – a joint venture between Banco Santander Credito Hispano and Banque Nationale de Paris Paribas – appears the only third party loan servicer in the Spanish (and Portuguese) market and services non-standard loans for savings banks as well as loans for its parent institutions.

11. SUBSIDIES

Figure 2 above highlighted the decline in the subsidised housing sector during the 1990's. In 2001, it was less than 10% of all loans extend for housing purchases and has since stabilized on a low level.

The subsidised mortgages are targeted to lower-income families. To acquire subsidised housing, a family must meet two main requirements: the family income should not exceed 5.5 multiplied by the minimum salary, and a family should not own another subsidised home. A lower VAT for subsidised housing to 1.7% has also been introduced as compared to the normal level of 4%.

In addition mortgage loans allow borrowers to benefit from several income tax advantages in the case the dwelling is owner-occupied. In this case part of the principal repayments can be deducted from the income tax starting with 25% in the first years, and subsequently declining. Mortgage interest payments are not tax deductible.

List of Acronyms

ABS . . . . .Asset-backed securities
AHE . . . . .Associacion Hipotecaria Espanola (Mortgage Association)
ARM . . . . .Adjustable-rate mortgage
BBVA . . . . .Banco Bilbao Vizcaya Argentaria
BdE .Banco de Espana
CNMV . . . . .Comission Nacional del Mercado de Valores (Securities Commission)
EMF . . . . .European Mortgage Federation
FRM . . . . .Fixed-rate mortgage
GDP . . . . .Gross domestic product
IO-ARM . . . . .Interest-only adjustable rate mortgage
MBS . . . . .Mortgage-backed securities
RMBS . . . . .Residential mortgage-backed securities

Chapter 9.
United Kingdom

This paper is based on the following sources:

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1. HISTORICAL OVERVIEW

Britain's urban conditions during its long and gradual industrialization phase in the 18th and 19th century supported the development of detached or terrace housing and with such individual housing a high rate of homeownership. This contrasts for instance with Germany's hasted urbanization in only three decades at the end of the 19th century, which was only possible with mass housing urban development at high density levels.

In Britain, public (council) housing for the urban poor unable to become owners developed in parallel during the early 19th century. Less than on the Continent, but still important, was the private rental housing sector during that time; it was essentially destroyed through the strict post-WW I rent controls, which Britain kept in place for much longer than most European counterparts. These historic trends help explain today's investor structure in housing, which consists basically of individual owners or public investors, with private housing companies and landlords playing only a minor role.

On the banking side, Britain in 1775 was the birthplace of modern mutual building societies – the model for housing finance institutions worldwide. Their 1836 regulation in the Building Societies Act can be seen as the first comprehensive mortgage banking regulation in Europe. The early societies were terminating, once their purpose – serving their members with loans – was fulfilled. As societies became permanent institutions over time, they started to dominate British mortgage lending, an era that only came to an end recently. The 1980s reforms in the U.K. saw their partial deregulation – inter alia LTV limits were relaxed and societies opened up to lend to non-members. In the 1990s, the conversion of some of the largest building societies to joint-stock bank charter reduced their relevance.

Trust savings banks (TSB) in Britain developed in parallel with the savings bank movement on the Continent, but were nationalized in the mid-19th century following a series of fraud cases and solvency crises. Their funds were directed to national public investment purposes. The 20th century saw a gradual merger of the surviving TSBs. Today, the single surviving entity Lloyds TSB is the U.K.'s second largest mortgage lender.

Commercial banks in Britain as in Continental Europe were latecomers in the retail mortgage market, starting their entry during the high inflation phase of the 1970s. After two decades of competition with building societies at par, banks started to dominate the market in 1997, when five large building societies demutualized and either merged with banks – e.g. the largest building society Halifax with Bank of Scotland – or continued their existence now as banks – e.g. Abbey National, the fourth largest mortgage lender. Nationwide Building Society by a narrow margin survived a vote to demutualize and today is Britain's fourth largest lender.

While the historic struggle between savings banks and commercial banks in principle paralleled developments on the Continent, the British mortgage product and funding structure has remained somewhat idiosyncratic until today. Contrasting also with anglo-saxon countries such as the U.S. that reformed their system in the 1930s, Britain only recently started to develop capital market funding systems for mortgages. The country was in fact a forerunner of the U.S. inspired RMBS market in the 1990s, which was used particularly actively by banks and finance companies; European issuance is today still dominated by collateral originated in Britain. Only in 2002, with the first covered bond issue by a British bank, Halifax Bank of Scotland, Britain joined the continental European trend bank bond finance for mortgages.

Paralleling the lack of capital market funding, British lending practices also overwhelmingly relied on adjustable and short-term fixed rate products. Various public initiatives, most recently the Miles Review of 2004 – a report commissioned by the Department of Treasury, have failed to raise the market interest for long-term fixed rate mortgages; however, the introduction of covered bonds and the decreasing interest rate volatility of Sterling after the review of the monetary policy regime in the mid-1990s have improved the perspectives in that regard.

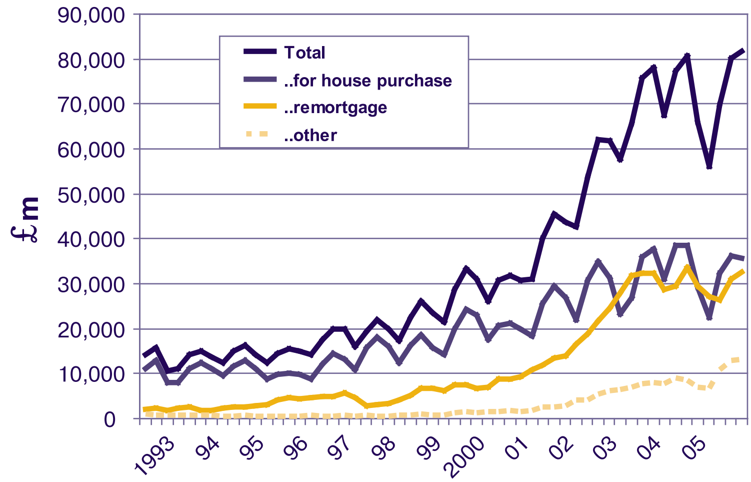
Due to the size of its mortgage market as Europe's largest, Britain also has been an important laboratory for lender-consumer-relations. The 'M-Day' in 2004 brought about the most comprehensive legal regime change ever in Europe for mortgage intermediaries when legislation was enacted that expanded their definition beyond banks and building societies to include advisers, intermediaries and servicers and gave the executing agency FSA considerable powers to regulate and supervise the market.

2. SIZE OF THE MARKET

Outstanding mortgage debt in the United Kingdom is set to break through the GBP 1 trillion barrier for the first time in May 2006. In the segment of mortgage lending to consumers the U.K.s market is Europe's largest, before Germany's which slightly exceeds the British market in total size if one includes finance provided to housing companies. The outstanding loan volume in Britain is equal to 82.5% of 2005 gross domestic product (GDP). By this measure, the market is the third largest in Europe and only exceeded by Netherlands and Denmark – both continuing to support the market with considerable tax subsidies that are today largely absent in the U.K.

Gross new mortgage lending in 2005 stood at GBP 287.8 million or 23.8 % of 2005 GDP. As figure 1 suggests, new loan production has been extremely dynamic through the interest rate decline period of 2000-2003 with growth rates in the range of 20-40% p.a., paralleling developments in the late 1980s. In times of interest rate increases, e.g. 1999-2000 and 2005, in contrast gross new lending loan in contrast stagnated or grew only slowly. In addition, low economic activity slowed down lending in the early 1990s.

Figure 1. Quarterly gross new mortgage lending in the United Kingdom, 1992-2005



Source: Council of Mortgage Lenders (Survey of Mortgage Lenders). Note: «other» includes lifetime mortgages, further advances, buy to let.

44% of new lending in 2005 was used for house purchases and approx. 41% were refinancings, a strikingly high figure in a country with overwhelming adjustable- and short-term fixed rate lending where financial incentives to prepay due to interest rate motives appear low.

15% of new lending, up from virtually nil in the 1990s and 1980s, subsumes new products not used for house purchase of refinancings, including home equity products, reverse mortgages[1] and the vibrant market for 'buy-to-let' mortgages for small investors in rental housing units.

3. HOUSING AND MORTGAGE MARKET LINKAGE

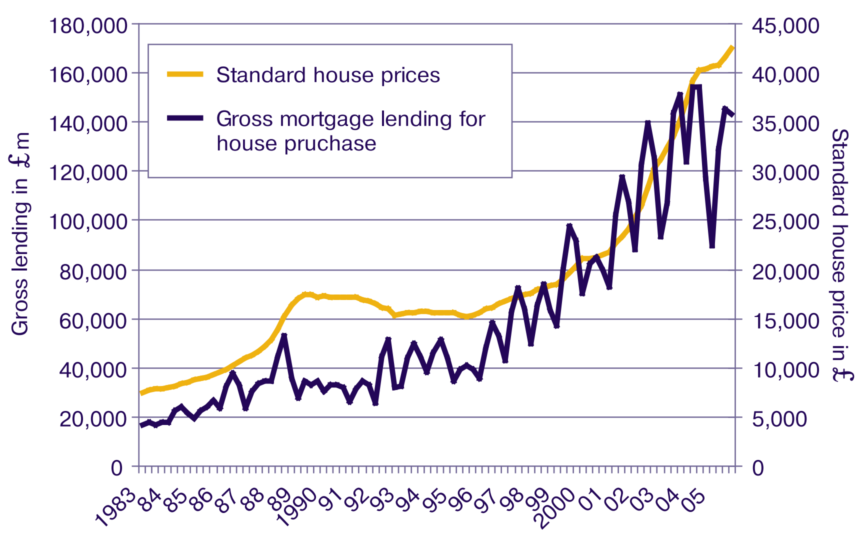
The Council of Mortgage Lenders estimates British borrower's homes to be collectively worth GBP 3.6 trillion more than the mortgages they had taken out to buy them (GBP 1 trillion), with housing equity being by far the largest component of wealth for households in the U.K.

[1] Equity release products are targeted to mid-aged borrowers that wish to liquefy some of the equity in their house without selling the house, e.g. by a revolving credit line (in the U.S. home equity line of credit/HELOC) or a second mortgage. Reverse mortgages are mortgages engineered in reverse, i.e. involve both – the liquidation of equity and – at some stage of the liquidation process – also the sale of the house. They are targeted to elderly borrowers. There is no commonly internationally accepted definition because these are relatively new products on the market.

Home ownership in Britain has expanded from 60% of the population to 70% over the past 20 years. The question is, however, which share of credit for that result should be given to the development of the mortgage market and which to other factors. For example, public discretionary interventions such as the right-to-buy policies of Margret Thatcher for public council housing tenants in the 1980s have significantly expanded the homeownership rate in Britain. The homeownership rate in the past 15 years, which were characterized by strong price increases, has in contrast remained almost unchanged. An important factor is the scarcity of rental housing, which until the development of the private buy-to-let market very recently received primarily only (limited) public funding.

The mortgage market, by virtue of its primarily adjustable-rate and short-term lending instruments, certainly has a more direct impact on house prices than elsewhere, as the correlation of house prices and lending levels in figure 2 strongly suggests.

Figure 2. House prices and gross mortgage lending in the United Kingdom, 1983-2005



Source: Council of Mortgage Lenders (Survey of Mortgage Lenders), Halifax Bank of Scotland.
Note: house prices seasonally adjusted.

The two last waves of house price increases in the U.K. were preceded by strong interest rate reductions in 1986-1989 and 2000-2003, both were also accompanied by strong and stable real GDP growth. The linkage between house prices and interest rates only broke down in the mid-1990s when both the recession and the reluctance of mortgage lenders to take new risk while simultaneously providing for the losses of the major default crisis of 1990 dominated market developments.

Finance can be seen as both a curse and a blessing for affordability: U.K. house-price-to-annual-income ratios have deteriorated since the 1980s from 2-3 to approx. 5 today. Similarly, borrower indebtedness has risen from under 2 to 3 times annual income. House price levels in the U.K. have thus now caught up with those in the German market. The new house price levels only remain affordable at low interest rates, which raises considerable concern about a possible default crisis in the British market.

The increase in lending would result in a mere short-lived financial bubble, if new housing supply in Britain was as large as in Spain with the consequence of a moderating effect on prices. However, this is not the case: Spain is currently producing more than twice as much new housing as the U.K, with a 30% smaller population. This slow reaction of supply means that prices are likely to stay high in the U.K.

The Barker Review of 2004 – another report commissioned by the Department of Treasury – analyzes the multitude of factors that contribute to this situation, including land rationing and taxation policies, the low technological status of the construction industry, and house price volatility itself, which discourages investors from taking the long-term view and scaling up their businesses. Particular extreme is the situation in the South-Eastern region of the country including and surrounding London, where land supply remains extremely rationed.

4. MARKET STRUCTURE

Britain's mortgage industry features three types of lenders, mutual building societies, commercial banks and finance companies. Lloyds TSB as the only trust savings banks is specially chartered, but for all practical purposes operates as a bank.

Building societies in 2004 had a market share of 19% in outstanding loans and 16% in new originations. Until 1997, the year of conversion of some of the largest building societies to joint-stock company status, they had dominated the mortgage market. Table 1 shows that among the top twelve lenders only one, Nationwide BS, has remained mutual. Many building societies continue to have strong regional market positions, though.

The societies are member-owned by their retail depositors and mortgage borrowers. These members automatically become shareholders and they own the retained earnings of the society. They do not receive a formal dividend; most societies try to benefit members by offering more competitive loan rates than banks.

The inherent conflict of interest in this construction is that members have an incentive to unearth retained earnings accumulated by earlier member generations.

Table 1 Top-12 British mortgage lenders in 2004

Name of group	Gross advances £m	Estimated market share
HBOS	68.4	23.4%
Lloyds TSB	26.3	9.0%
Abbey National	24.9	8.6%
Nationwide BS	23.2	8.0%
Northern Rock	20.1	6.9%
The Royal Bank of Scotland	19.3	6.6%
Barclays	17.5	6.0%
HSBC Bank	13.5	4.6%
Alliance & Leicester	8.7	3.0%
GMAC-RFC	6.3	2.2%
Bradford & Bingley	6.3	2.2%
Bristol & West	5.3	1.8%

Source: Council of Mortgage Lenders.

The incentives became overwhelming during the stock market boom at the end of the 1990s: in 1997, five building societies demutualized, including Halifax the largest UK mortgage lender and Abbey National, now the third largest. Nationwide BS survived a vote to demutualize by the narrowest of margins.

British commercial banks were latecomers in the mortgage market, as in rest of Europe. They consistently had expanded their market shares to approx. 40% by 1997, when the demutualization wave opened the opportunity for merger and acquisition among former socities. Bank of Scotland in this way merged with Halifax to expand their position as largest British lender, with almost a quarter of the market. Other commercial banks, such as Royal Bank of Scotland and HSBC grew organically.

Finance companies, such as GMAC-RFC, GE Money Home Lending or Kensington Mortgage among the top-20 lenders, entered the market in the 1990s on the back of the strong emergence of securitization, which gave them access to funding without developing large branch networks, and new loan products. Finance companies have contributed to a disintermediation trend that in the U.K. is more advanced than in continental Europe and comprises a high market share of independent brokers and fee originators, loan servicers and packagers/conduits.

Given the size of the market and its dynamics of innovation, British mortgage market concentration levels continue to be somewhat lower than in most other European countries.

5. DISTRIBUTION AND PURCHASE PROCESS

Branches continue to play important role in mortgage distribution in the U.K. with approx 50% of originations. Britain has seen a unique outlet system of banks concentrated in close proximity in shopping areas that – in combination with comparative consumer journals such as Moneyfacts – have given rise to greater transparency than elsewhere in branch-dominated systems. As in the rest of Europe, banks replace branch distribution partially by 'direct' distribution channels through internet and call centers (~10%). The largest lenders are also beginning to target borrowers directly to make better use of their branch infrastructures.

In addition to direct and street bank distribution, independent intermediaries ('introducers') play a strong role (41% of originations in 2004), which has increased with the arrival of finance companies and other lenders with little desire to open branches. As far as the mortgage purchase process is concerned, such introduced business is either packaged, whereby the broker provides all the documentation the lender requires to make a mortgage offer, or unpackaged, whereby an application form is completed and the bank itself instructs the valuation, requests evidence of income and seeks any other information.

There are many thousands of mortgage intermediaries in the UK and many lenders offer exclusive deals based on price and criteria to encourage business volumes. Since the introduction of mortgage regulation, however, intermediaries can no longer be rewarded according to an increasing business volume they bring to a lender. Still, an inherent conflict remains because of the temptation to direct applicants to the product that pay the highest per-loan commissions. The Key Features Illustration, introduced as part of mortgage regulation, is given to all applicants and discloses the commissions paid to intermediaries.

Upon receipt of a completed application, lenders usually conduct a credit bureau search: several bureau offer lenders a variety of data on applicants, the most commonly used being Experian and Equifax. Further information lenders may seek includes county court judgments, bankruptcies, account performance information, mortgage possession orders, previous credit applications and linked addresses.

Many British underwriters are trained to assess applications using a mnemonic known as «CAMPARI» and although, over time, reliance on the mnemonic has diminished, the general principles remain very important when underwriting applications. See box 1 for details.

Box 1: CAMPARI loan assessment

Character: This is typically assessed using the results of the credit bureau searches and credit-scoring models.
Ability: Essentially, the affordability of the loan.
Margin: Does the return justify the risk?
Purpose: Does the rationale for the loan make sense?
Amount: A further check on the affordability, which is linked with ability.
Repayment: Where will the capital to repay the loan come from? This is particularly important for interest-only and investment-linked loans.
Insurance: In this case, the meaning is security: what is the property's value and marketability. Also what is the efficacy of the loan documentation.
Source: Fitch

The other general approach to underwriting is the auto decisioning of loans, which uses predictive credit scoring based on credit and application variables to help stratify risks. The resulting «scores» are generally filtered between accept, decline and refer, and any applications in the latter category are referred to an underwriter for consideration. This enables originators to achieve faster decision times on the «easier» cases and allows the underwriters to focus their skills on the more «complex», marginal cases. For most prime lenders, this process continues to be the standard underwriting process. No universal market credit score exists, like FICO in the United States, and lenders have generally developed proprietary credit-scoring systems in-house.

A borrower's income multiple, calculated as the loan balance divided by the borrower's gross annual income, is one means of assessing their ability to pay their loan. When assessing the creditworthiness of individual mortgage loan applicants, the lender generally asks the borrower to provide evidence of income in the form of their most recent payslips, or certified accounts for self-employed borrowers.

Under the Building Society's Act 1986, a property valuation was required before a mortgage can be extended. Although it is not a legal requirement, it would be unusual for any prudent financial institution to offer a mortgage without obtaining some form of independent verification of the collateral's value. Computerized valuation models have yet to break into the «mainstream» higher-LTV purchase market, but are increasingly being used in the case of low-LTV loans (typically <75%), further advances and, in some cases, low-LTV remortgages.

6. PRODUCT RANGE

6.1. Credit/target group

Plain vanilla products

Mortgages of approx. GBP 210 million per year in value, or 80% of gross new lending, are originated as 'plain vanilla' products, i.e. lending to prime credit quality borrowers with limited special features. However, even the 'plain vanilla' market provides many options to consumers that are non-standard elsewhere – for example flexible mortgages allow borrowers to vary amortization or even capitalize interest. Also, due to the absence of rental markets the British standard market has in contrast to many continental European counterparts always included lending to young households under 30.

One characteristic of plain vanilla products that has remained fairly constant are the maximum LTV limits, traditionally 95%. Lenders traditionally differentiate prices by LTV ratios.

Special products

Non-standard products now include originations of about GBP 50 million/year or 20% of gross new lending. Approx. 35% of these are self-certified mortgages, 30% are buy-to-let mortgages for rental investment properties, 16% high-LTV loans – for LTVs in excess of 95%, 17% 'adverse credit' (subprime), and 2% equity release products.

Self-certification mortgages are in fact dominating the British subprime market. These loans are provided to borrowers with limited or no income documentation (in the U.S. «Alt-A»), such as free lancers and small entrepreneurs.

Buy-to-let mortgage products lending against investment properties have dramatically increased recently. The investor, and his financing lender, bets on a positive return from renting over the capital costs, which were depressed by recent low interest rate levels. However, since rents are unlikely to adjust as fast upwards as interest rates, both investor and bank take considerable risk in the adverse scenario.

Borrowers with sufficient equity in their homes but income- or age-wise classified as subprime, often elderly, benefit from new equity release products, such as cashback mortgages, which provide cash against an increase in the outstanding amount of the same mortgage.

Home reversion and lifetime mortgages are the two main reverse mortgage products, which are in essence combinations of life insurance products and mortgages. The main difference is that with a lifetime mortgage, the consumer retains ownership of the property and borrows against it, while with a home reversion mortgage the consumer sells the property to the reversion provider and becomes a tenant, usually for a very low rent. In this case, the consumer does not benefit from any future increases in property values or have a property to bequeath to his beneficiaries on death.

Safe Home Income Plans (SHIP) is a trade body for firms involved in equity release products, which represents around half of home reversion providers and specialist intermediaries. According to table 2, in the last five years, SHIP members have sold a total of 10,600 home reversion plans, with a total value of about GBP 614m.

Table 2. Home reversion and lifetime mortgages in the United Kingdom, 2001 – 2005

Year	Number of home reversion sales	Value (£ m) (HRs)	Number of LTM sales	Value (£ m) (LTMs)
2001	3,700*	213	**	**
2002	3,075	200,8	**	**
2003	1,938	129,4	25,114	1,101
2004	835	40,5	26,270	1,210
2005	1,137	54,6	23,216	1,048

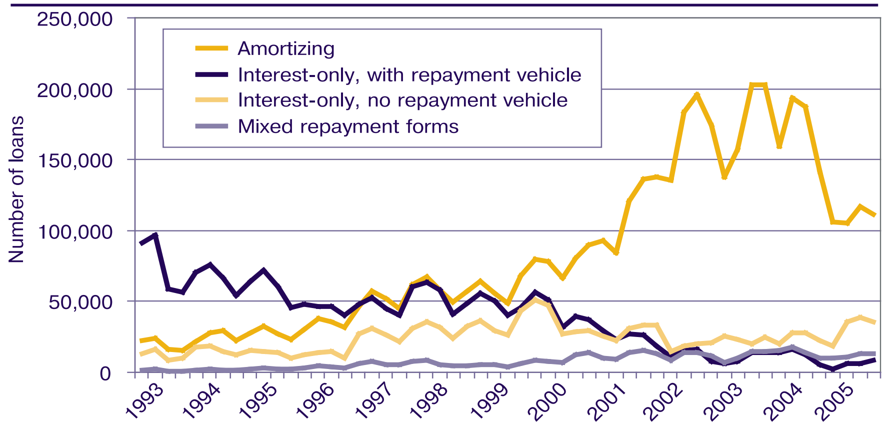
*Source: FSA (2006) based on data provided by Safe Home Income Plans and Council of Mortgage Lenders. Notes: *estimate, **data not available.*

Almost 75,000 lifetime mortgages were sold in only three years, in contrast, as home reversions are unattractive if house prices rise, as they did strongly during the period. Contrary to the United States, where most reverse mortgages are insured by a federal agency, reverse mortgage risk (longevity, interest rate, house price, maintenance) in the British market is entirely taken by the private sector.

6.2. Amortization

The amortization profile of British mortgages has dramatically changed in the past decade, as reflected in figure 4. Britain practiced mortgage interest deductibility until 1995, a fact that taken together with subsidies for saving in insurance contrast supported interest-only mortgages whose outstandings would be repaid at maturity by the funds accumulated in an insurance endowment.

Figure 4. Repayment profile of mortgage loans in the United Kingdom, 1992-2005



Source: Council of Mortgage Lenders.

While these subsidies have disappeared, the stress on borrowers imposed by rising house prices has lead to the emergence of interest-only loans without such vehicles. This amortization structure entails significant risk of both a future payment shock (multiplied by higher exposure) or unavailability of funds at maturity to cancel the debt and thus indebtedness at retirement age.

Islamic finance mortgage is a recent innovation – a forerunner was the global bank HSBC, which brought the product from their operations in Islamic countries to Britain. The products are usually amortizing, however, they appear to the outside as leasing contracts from a vehicle that invests in the property and thus satisfy religious norms.

6.3. Interest rate adjustment

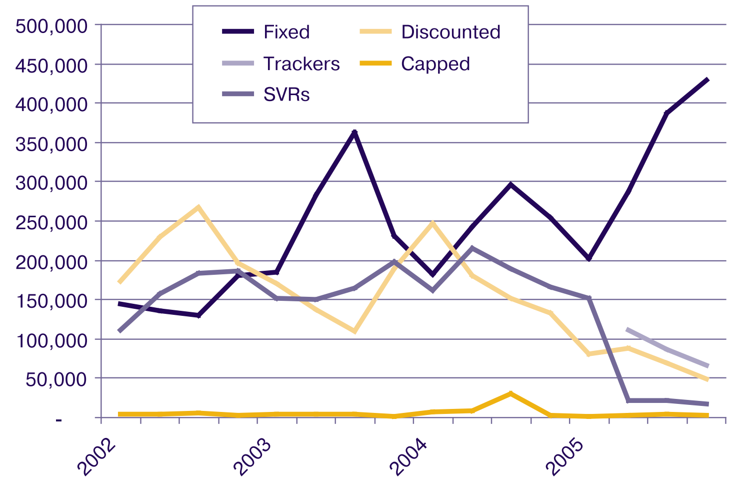
The classical British interest rate adjustment profile is through the Standard Variable Rate (SVR). The SVR is published by lenders individually and serves to reprice both new and existing mortgage contracts as the cost of funds environment of the lender changes. With the SVR, the lender decides unilaterally and independently about the scale of any change – figure 6 shows, however, that the SVR broadly follows the interbank rate Libor which approximates short-term funding cost.

It is very typical for lenders, however, to offer a discount period of 1-2 years to the SVR, or even a comparable fixed-rate period, to attract new borrowers. As a result, SVR for new customers is usually lower than for existing ones – a fact that has been attacked as 'back book discrimination' by consumer groups.

However, apart from indemnities covering the short SVR discount or fixed-rate periods preceding the full SVR phase, borrowers in the U.K. can costlessly prepay an SVR loan, and many over time have done so and changed to index trackers. In this alternative product, which have gained 10% market share, a reference index is chosen, e.g. 3-month Libor, and a spread over the index fixed. The spread is usually fixed for lifetime.

To the great chagrin of policy makers, who fear a repetition of the 1990 default crisis, capped adjustable-rate products – apart from isolated specially marketed actions by lenders – have still not gained any significant market share in the U.K. This contrasts with the situation in France, Germany or Denmark, where a majority or all adjustable-rate loans come with interest rate caps.

Figure 5. Number of mortgage loans by interest rate adjustment type, 2002-2005



Source: Council of Mortgage Lenders. Notes: 'fixed' summarizes loans with various interest rate fixing terms – usually these are short-term and rarely loans in the United Kingdom are fixed to maturity. 'trackers' are variable-rate loans following an index with a fixed spread. 'SVR', in contrast, are standard variable rate loans whose rates can be unilaterally adjusted by lenders. 'Capped' means variable rate loans with interest caps. 'Discounted' are variable rate loans with initial fixed-rate periods often below market (hence: discount). In October 2005, the Regulated Mortgage Survey substituted the Survey of Mortgage Lenders. In this context, index trackers were for the first time recorded. For periods prior to the last quarter of 2005, those loans are included in the 'SVR' and 'Discounted' categories.

Figure 5 reporting official British lender statistics would suggest that fixed rate mortgages have increased; however, most fixed-rate loans in the U.K. are what in the U.S. are called 'hybrids' – short-term fixed rates followed by tracker or SVR arrangements. Nominally, fixed rate loans up to 10 years are available. Analysis by Miles (2004) show that demand is strongly determined by the yield curve differential between long-term and short-term fixed rates.

7. PRICING

7.1. Transactions costs

According to a comparative analysis performed by the European Mortgage Federation, Britain has the lowest transactions costs for house purchase and mortgage loan take-up in the 15 old (pre-2004) EU Member States. The study arrives at 1.9% for a standard GBP 100 K property price. However, real estate agent fees of another 2% of the house price were excluded from the study calculation. Even including the latter, Britain has with Ireland the lowest transactions costs level in Western Europe.

Contributing factors are a very low property transfer tax ('stamp duty') level (1%, compared with 3.5% in Germany and 7% in Spain), and low property registration costs (0.1%). Solicitor's fees – Britain does not use the Continental European notary system – are the main legal cost block with 0,4% for the house purchase process and 0.3% for mortgage loan takeout.

Britain also exempts new housing sales from value-added taxation. De-facto VAT is thus not charged on developer services and on land – although VAT is charged on construction materials. Due to the high visibility in a high-transaction and high-homeownership economy, stamp duties have historically been frequently adjusted by British governments to stimulate or dampen demand.

7.2. Interest rates and spreads

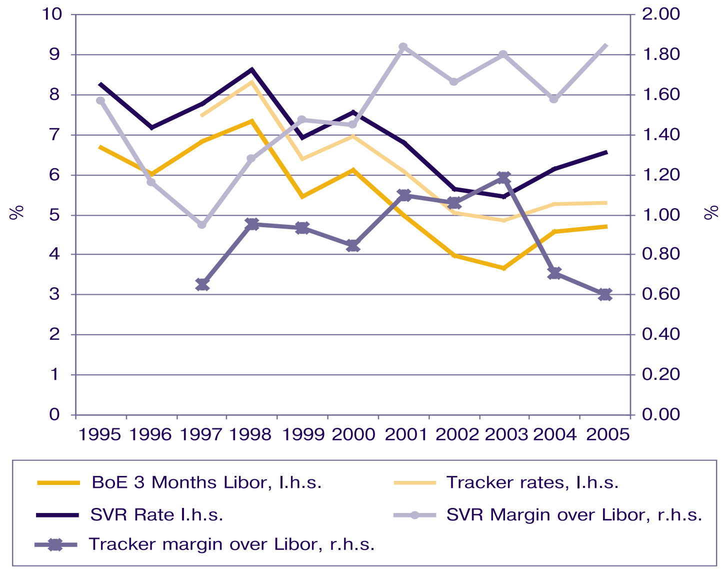
Due to the predominance of short-term interest rate adjustments in mortgage contracts, the Bank of England has a significantly higher impact on interest rates paid by mortgagors than for instance the ECB in the Euro-Zone.

The Bank pursues an independent monetary policy, which however has undergone an important paradigm change in the mid-1990s: from the 1970s to the early 1990s, the Bank targeted Sterling's exchange rate relative to the Euro's predecessors (currency snake, ECU). This policy ended in disaster for the British mortgage market, when domestic interest rates almost doubled after German reunification. The result was a massive default wave, which affected in particular of borrowers that had been attracted to the market with high-LTV loans.

The Bank of England drew the consequences and abandoned exchange rate targeting since the mid-1990s. It since has pursued a domestic inflation targeting policy, which has significantly reduced interest volatility and sent interest rates on a downward trend. As a result, 3-months Libor during current decade has only varied between 3.8 and 7.2%, in contrast to variations between 6% and 18% in the 1980s and early 1990s.

Plain vanilla mortgages in the United Kingdom are typically loss-making, on average according to industry reports -15bp over funding costs. Contributing are refinancings: the market share of SVR products is declining in favor of index trackers, which in 2005 according to Bank of England figures reported in figure 6 were 125 bp cheaper.

Figure 6. United Kingdom Standard Variable Rates and Libor, 1995-2005



Source: Bank of England, Dubel (2005)

The big lenders cross-subsidize standard mortgages partly by cross-selling insurance products. Building socieities traditionally were able to offer lower lending rates due to lower deposit rates, lower return on equity requirements and cost savings on dividends. But as a result of cross-subsidization by banks the situation almost reversed throughout current decade. According to Bank of England figures, building society loan rates on SVR contracts are still cheaper than those of banks (20-50 bp), but almost identical on index trackers.

Special mortgage products provide the highest margins for lenders – e.g.85 bp for self-certified and 170 bp for lifetime, 120 bp for buy-to-let mortgages. All these products initially carry higher risk of arrears, however, empirically the differences to plain vanilla loans have become negligible.

8. FUNDING AND INVESTOR STRUCTURE

8.1. Funding

Deposits

Bank or building society deposits are the traditional funding instrument for the British mortgage market, estimated to fund directly approx. 85% of gross new lending. Mutual deposits differ from bank deposits in that they implicitly convey borrowing rights, which allows for somewhat lower debt funding costs.

Covered bonds

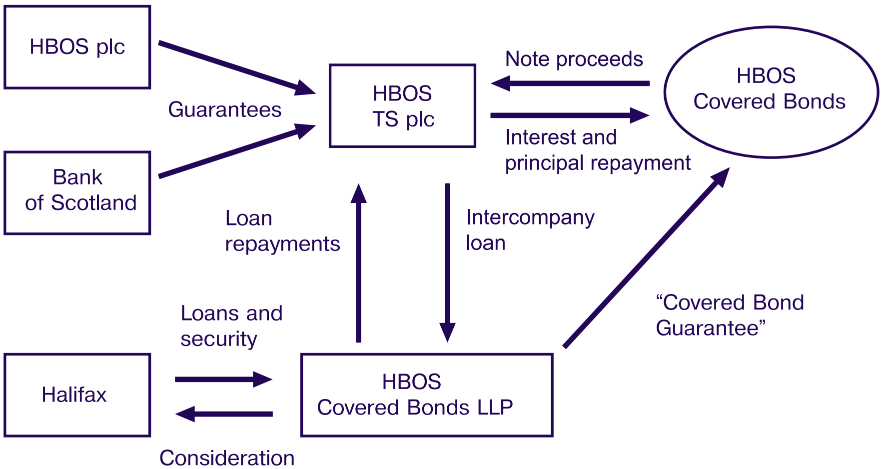
Despite the fact that no special enabling law existed, in 2003 British lenders started tapping the European covered bond market. HBOS Plc, the UK's largest mortgage lender, sold a 7 yearˆ3 billion Jumbo covered bond deal that combined typical features of covered bonds with a structuring of tranches according to risk levels. The combination of absence of specific legislation and structured finance elements triggered a classification of the deal by Moodys as a 'structured covered bond', opening a new hybrid asset class for the European market.

The structure of the first transaction that was made in the UK is displayed in figure 7. The originator of the mortgage loans – former building society Halifax – transfers loans and collateral to a special purpose vehicle, in Britain usually a limited liability partnership (HBOS Covered Bonds LLP). With this step, the assets are put beyond the reach of the originator and can effectively serve for guarantee purposes. A corporate bond is issued and serviced by HBOS treasury services (HBOS TS plc), it is 'covered' by the guarantee of the special purpose vehicle and becomes a 'covered bond'. At the same time, HBOS treasury services enjoy the corporate guarantees of the two banks HBOS plc and Bank of Scotland so that, as in any other covered bond transaction, the bondholders enjoy dual protection: through mortgage assets and through corporate credit.

The financing flows mirror the asset flows. The treasury service finances the originator Halifax with the proceeds of the issued bond; these are passed through to the special purpose vehicle by an intercompany loan, which is repaid by the principal and interest of the mortgages held by the special purpose vehicle. The special purpose vehicle uses the intercompany loan to buy the assets from Halifax against a cash payment.

The structure of the transaction ensures that the rating of the covered bond issued is almost independent from the rating of the issuer: while the formal issuer HBOS treasury service is guaranteed by its owners, the existence of a separate and bankruptcy-remote guarantor holding the mortgage assets mean that the rating of the issuer becomes less relevant.

Figure 7. HBOS covered bond series, basic structure diagram



Source: Moody's Presale report on HBOS covered bond I. Notes: «consideration» is British English for

The transaction was also innovative in raising the protection level for investors by various tests ensure that sufficient overcollateralisation and liquidity at all times. For instance, the asset coverage test («ACT») requires that outstanding covered bonds cannot exceed 92.5% of the adjusted total cover pool, providing a minimum 7.5% credit enhancement at any time. Contrasting with continental legislation, the coverage test is performed on a monthly basis.

By April 2006, U.K issuers apart from HBOS include Nationwide BS, Abbey National, Bradford & Bingleys and Northern Rock. According to Bayern LB (2006) the issuance volume has reached already ˆ71 billion or 4.5% of outstanding mortgage loans. Funding spreads are broadly comparable to the European average. The FSA has given up initial resistance against the instrument and – given the increasing similarity of issues – is planning a set of minimum standards for covered bonds later in the year.

RMBS

The U.K. pioneered the European residential mortgage-backed securities market, with the first issuances going back to 1987. It today dominates the European securitization market: according to the European Securitization Forum, a lobby group for MBS issuers, collateral originated in the UK backed 45.4 percent of the European securitised markets in 2005, an increase from

[2] Under U.S. securities law, for example, mortgage-backed securities must be self-liquidating through amortization and cannot be based on revolving pools.

43.8 percent in 2004. UK new issue activity rose 39.3 percent to $145.0 billion, compared to the $105.8 billion in 2004.

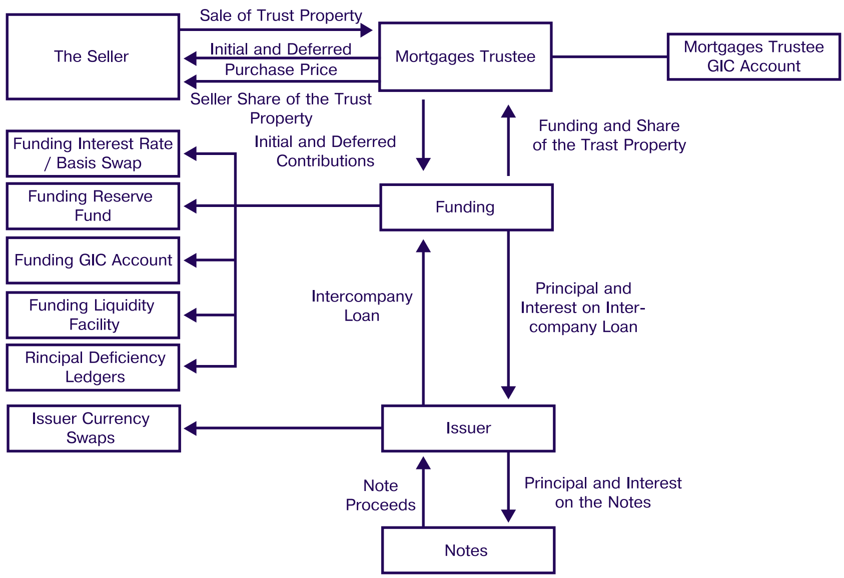
The most popular RMBS issuance structures in the U.K. are so-called Master Trusts, a unique concept in the case of mortgages that only exists under British legislation.[2] Master Trusts combine three unique features that render RMBS issuance more flexible:

- In a Master Trust transaction, the mortgage loan collateral provided may simultaneously back several individual issuances of notes sold to investors. With a large and diversified collateral pool, the sponsors of the Master Trusts – large banks and building societies – are able to credit enhance the individual notes in a way that bears similarity to a covered bond program where the issuance of individual covered bonds is enhanced by a common cover asset pool. In another parallel to covered bond, U.K. sponsors also use exclusively prime quality mortgages for Master trusts.
- Secondly, unlike in the case of most RMBS, but in line with the practical requirements of the mortgage lending business, the collateral pool may change its composition over time through additions or substitutions. Such additions or substitutions only have to follow certain criteria laid down in the initial prospectus of the transaction in order to avoid dilutions of the quality of the notes issued. When further financing is needed, the issuer simply transfers loans from additional accounts to the same trust and issues new notes.
- Finally, the cash flows of the individual notes issued may be structured very flexibly. They may be pass-throughs as in typical RMBS transactions, or bullet (non-amortizing) or sequential so-called 'pay-through' structures. This allows the sponsor to taylor the cash flow allocation to the demands of investors, or protect the investor against certain cash flow risks.

Figure 8 below shows the typical three-stage Master Trust transactions structure. The issuer vehicle of the notes is technically separated from the funding vehicle, which provides the credit enhancement to several issuers, and the trustee that holds the mortgage assets. The funding vehicle provides an almost active management of the program by holding the principal deficiency ledgers and reserve funds for the entire program, as well as managing the relationship in terms of cash flow allocation between the various issuers.

Whereas the principal deficiency ledgers and reserve funds in ordinary pass-through RMBS transactions are always at the issuer level, as only one special-purpose vehicle is involved, the situation is different in Master Trust transactions. Since there are several levels of special purpose vehicles, the reserve funds and principal deficiency ledgers can alternatively also be held at the issuer level. This results in two possible structures, the so-called 'capitalist' and 'socialist' structures. Figure 8 shows a 'socialist' structure, with joint credit enhancement provided for all issuers.

Figure 8 Structure of a Master Trust transaction



Source: Fitch. Note: GIC – guaranteed investment contract.

The Master Trust concept offers British lenders a mix of greater options for asset-liability management, greater match with their business practices, higher liquidity and standardization of issuances inducing better pricing, and a preciser targeting of their investors. For investors, there are certain credit risks involved with asset substitution and additions, which lenders – as in the case of covered bonds – mitigate by asset quality restrictions. In contrast, in the area of interest rate risk, Master trusts have become tools to securitize highly idiosyncratic products – such as flexible mortgages, interest-only loans, buy-to-let mortgages etc..

The first RMBS master trust transaction in the UK was issued by Bank of Scotland in May 2000. In 2004, of the top-15 British lenders 5 held Master trusts, pooling between 21 and 58 % of the outstanding mortgages of the lenders.

As of early 2006 the total amount issued in this form accounted for approx. 10% of the total mortgage balance outstanding, as reported by the Bank of England.

8.2. Investor structure

As British lenders had access to Master trust structures and the lending instruments required little use of capital markets, the start of the covered bond program in 2003 was primarily motivated by the desire to diversify the investor structure. Covered bonds attract higher investment by Continental European and Asian investors than RMBS, partly due to regulatory advantages for investors and partly due to the name recognition effect of the instrument (despite the fact that the European market is not standardized as yet). British RMBS are primarily held by banks and other short-term investors.

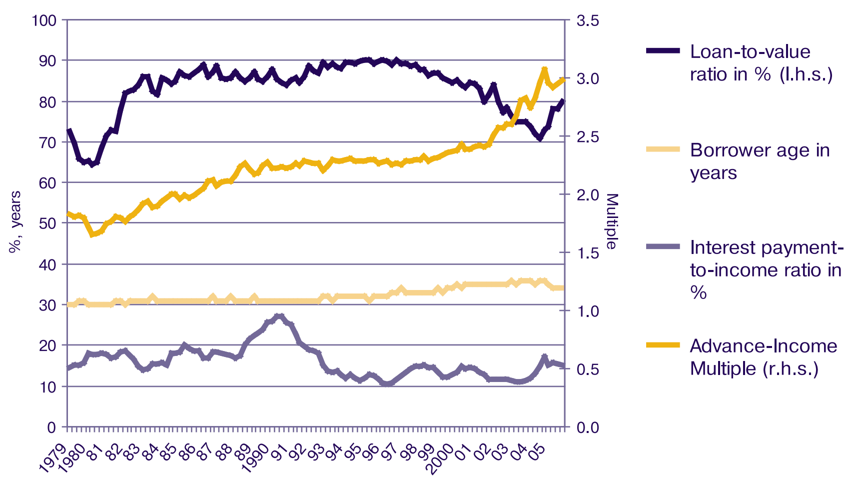
9. RISK MANAGEMENT

9.1. Credit risk

The default crisis of the 1990s – in 1994 over 420,000 mortgages were in arrears – has left deep traces with both the British mortgage industry and the government, which paid for a substantial part of the losses through public support programs for defaulting borrowers. With rising house prices in the current decade, nervousness has arisen that the same combination of factors as 1990, rising rates meeting a predominantly adjustable-rate portfolio, high house prices and leverage, and a sudden recession and unemployment may force the market to relive the same again.

Typical credit risk factors currently look more conservative this time around, though, as figure 9 would suggest: the growth in median LTV ratios, which was so characteristic for the liberalization era of the 1980s, has stalled throughout the 1980s and 90s, and LTVs even have recently declined. The first time buyer age increased considerably, from 30 years in 1980s to 34/35 years. And the interest-payment-to-income ratios, which had peaked around 1990, has remained below long-term averages.

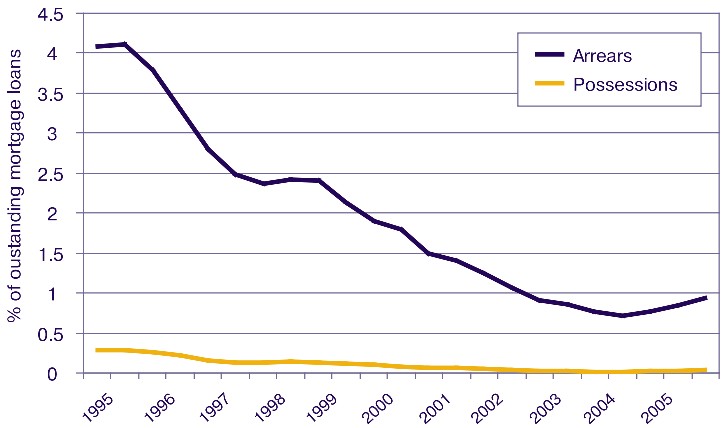
Figure 9. Mortgage loan affordability indicators in the United Kingdom



Source: Council of Mortgage Lenders. Note: Median values.

However, there are also strong reasons for concern: since 2002, house prices in Britain are overvalued relative to renting, suggesting the presence of strong capital gains expectations with house buyers that might not materialize; indebtedness (advance-income multiples) has increased, and the prevalent loan instrument do not provide for interest rate ceilings. Contrary to Spain, where the Bank of Spain is coercing lenders to do more fixed rate lending, the Bank of England has remained passive. This puts particular pressure on the Bank to keep interest rates low and, if necessary, sacrifice her inflation target in favor of bailing out lenders.

Figure 10. Arrears and possessions in % of outstanding mortgage loans, 1995-2005



Source: Council of Mortgage Lenders.

It is finally noteworthy to mention the success of a cash flow insurance scheme called Mortgage Payment Protection. The insurance product, which primarily safeguards mortgage payments in case of unemployment, was promoted by mortgage lenders during the crisis in the 1990s, when public benefits proved insufficient or too rigid to cushion the effect of rising unemployment on affordability. Approx. 60% of mortgagors in the U.K. are enrolled in such a protection plan, a remarkable result given the failure elsewhere to introduce the product.

9.2. Interest rate risk/prepayment risk

British lenders primarily face so-called 'basis risk', i.e. a mismatch of their short-term cost of funds with the short-term lending rates. Basis risk is particularly pronounced in the case of tracker mortgages, as the underlying indices – e.g. Libor – might not fully match the deposit and other cost development of the lender.

The SVR, in contrast, gives lenders the option to fully match the interest rate risk of liabilities and assets – however, the practically costfree prepayment option in this case stimulates high borrower switching to other products and reintroduces basis risk.

Fixed-rate and discount mortgages in the U.K. carry prepayment indemnities, which until a recent series of court interventions could be set arbitrarily by the lender. While current indemnity levels are close to yield maintenance, the concept of a yield maintenance indemnity (compensating the lender for reinvestment risk) has not become established in the market.

10. PROCESS EFFICIENCY

Disintermediation on the one hand, and prepayment risk and customer retention on the other hand are the dominating process efficiency issues in the British mortgage market. We discussed the origination side above, where the major trend is the increasing use of intermediaries.

Concerning loan servicing, British lenders are traditionally servicing loans in-house. However, third-party servicers have emerged at the end of the 1990s. that are now much more widely recognised, and are administering portfolios on behalf of a number of originators, including some of the top-10 largest lending institutions in the UK. Several US-based servicers have entered the UK market via joint ventures with large, well-established mortgage lenders – for example GHL with Barclays Bank and EDS Credit Services with Abbey. Smaller building societies, foreign and non-bank lenders use the third-party market because they find the cost of establishing and running in-house servicing capabilities prohibitive.

11. SUBSIDIES

The main fiscal support for the housing market in the U.K. is the low level of stamp duties and the absence of VAT being charged on new housing. General mortgage interest deduction was abolished when interest rates declined in the mid-1990s.

The British government in contrast continues to provide a safety net supporting defaulting mortgage borrowers, although at a diminished scale. The support schemes mortgage interest direct (MID) and income support for mortgage interest (ISMI), were cut back in the wake of high calls during the crisis of the 1990s. ISMI now only kicks in after 9 months, which has forced borrowers to either develop an own savings cover or buy Mortgage Protection Plans offered by insurers. Still, approx. a fourth of U.K. borrowers are eligible for state help in the case of default and only a minority has no protective cover at all.

Finally, British public housing support has been generally cut back since the mid-1990s, although in recent years expenditures per supported case have increased somewhat to keep pace with increasing land prices and cost increases. Subsidies are available for traditional (public) council housing as well as the non-profit sector of Registered Social Landlords. In the latter, subsidies are auctioned to the lowest-cost solutions offered by the contenders.

List of Acronyms

ARM . . . . .Adjustable-rate mortgage
BoE .Bank of England
BSA . . . . .Building Societies Association
CML . . . . .Council of Mortgage Lenders
ECB . . . . .European Central Bank
FRM . . . . .Fixed-rate mortgage
FSA . . . . .Financial Services Authority
GBP . . . . .British Pound Sterling (?)
GDP . . . . .Gross Domestic Product
GE .General Electric
GHL . . . . .Global Home Loans
GMAC . . . . .General Motors Acceptance Corporation
HBOS . . . . .Halifax Bank of Scotland
HSBC . . . . .Hong Kong Shanghai Banking Corporation
H.M. . . . . .Her Majesty
HR .Home reversion (mortgages)
IO-ARM . . . . .Interest-only adjustable rate mortgage
LIBOR . . . . .London Interbank Offer Rate
L.h.s. . . . . .Left hand side
LTM . . . . .Lifetime mortgages
MBS . . . . .Mortgage-backed securities
RMBS . . . . .Residential mortgage-backed securities
SHIP . . . . .Safe Home Income Plans
SVR . . . . .Standard Variable Rate

Chapter 10.
United States

This paper is based on the following sources:

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1. HISTORICAL OVERVIEW

United State housing finance system can be seen as a classical example for the dependency of the development of housing finance institutions and products on the particular economic and institutional environment, and in particular the strong role of government in that process.

Two periods in the 20th century critically shaped the American housing finance system of today: a radical transformation of public economic policies, including but not limited to housing, adopted under the New Deal era in the 1930s with strong government involvement, and the high-inflation crisis of the 1970s which laid the seeds for the savings & loan debacle and the rise of the government-sponsored enterprises Fannie Mae and Freddie Mac into the center of the American housing finance system in the 1980s.

New Deal — new housing finance system

Until the 1920s, U.S. housing finance system was analogous to their other anglo-saxon counterparts: depositaries, most of them mutuals, would raise funds from their members to onlend them to other members. In order to become eligible for loans, members usually had to accumulate savings for several years. To secure matching with deposits loans were short-term and moreover non-amortizing, i.e. bullet loans, and at variable or short-term fixed rates.

The 1920s witnessed a strong housing boom which turned into recession in 1929 with the start of the «Great Depression». Rising unemployment and a drastic decline in personal incomes triggered high delinquencies on the short-term loans. As the value of foreclosed houses dropped and deposits were withdrawn in high volumes, a large number of lending institutions failed.

In addition the lending industry was highly fragmented and undercapitalized, due to banking regulations that had virtually pre-empted deposit-taking and lending business across state borders. To alleviate the resulting liquidity mismatches for the Savings & Loans, already in 1932 12 regional federally chartered wholesale banks called Federal Home Loan Bank were created.

Addressing the default crisis and reviving the housing finance system required stronger means: when the Roosevelt administration took over in 1933, the system was virtually in collapse and new lending almost ceased. Two bold steps were taken: a restructuring agency, the Home Owners Loan Corporation (HOLC), was created in 1933 that took over non-performing loans from lenders[2], and the Federal Housing Administration (FHA) in 1934 started insuring newly originated residential mortgages.

The role that this FHA program played for the development of the American housing finance system cannot be overestimated. From the outset, it was

[2] The agency was unwound almost two decades later, after WW II. It was successful in restructuring or foreclosing on debt and terminated without losses for the U.S. government.

limited to a new type of mortgage loan, with long terms, fixed interest rates, and high loan-to-value and therefore low and affordable down payment ratios. Due to their longer terms, the loans were amortized now according to the annuity principle. FHA facilitated this revolutionary product by providing its insurance against moderate premia.

At the same time, FHA rules in combination with the construction of motorways also actively shaped the American city: for decades, FHA would not insure inner-city multi-family houses and focus on single-family homes in the now easily reachable and swiftly sprawling suburbs. As a result, the U.S. homeownership ratio rose from 44% of all households in 1940 to 65% in 1976, to increase only slightly since to 68% in 2004. The flipside of the discrimination of the cities was obvious: the decline of large urban areas stripped of a middle class moving to the suburbs.

The New Deal housing policies were completed in1938, after a year of setbacks for the U.S. economy, when the Federal National Mortgage Association, now known as Fannie Mae, was established as a government agency. The purpose of Fannie Mae was to purchase FHA-insured mortgages from non-deposit-taking lenders, which had no sources of funds. By taking action when the private sector failed – the new national mortgage association charter that had been introduced already during the 1934 reforms – the government had created a national mortgage bank, which issued federal debt to fund home mortgages for the coming three decades.

The inflation crisis: Savings & Loan debacle and the rise of Fannie Mae and Freddie Mac

The Vietnam war brought about severe fiscal stress for the U.S., which by the end of the 1960s due to exploding debt levels no longer allowed adding federal debt for the purpose of funding home mortgages. As a result, in 1968, Fannie Mae, which had grown into a major funder of middle-class mortgage loans, became divided into two entities: the first retained the original name but was privatized as a joint-stock company while keeping its special public charter. Its new debt, while being perceived as government-backed, would no longer be accounted for as federal.

The second entity was a new government corporation, the Government National Mortgage Association, Ginnie Mae, with a specific mandate to initially purchase and since 1970 only guarantee pools of FHA-insured loans sold to investors in so-called mortgage-backed securities (MBS).[3] The FHA's, mandate under the impression of urban riots of the late 1960s, had been refocussed to support home acquisitions of low-income households.

However, the situation threatened to leave a monopoly in the secondary market for middle income households. Therefore, the Savings & Loan

[3] The GNMA guarantee 'wraps' the pool, whose loans are individually insured by the FHA to the lender, in order to secure timely payment to investors.

industry in 1970 was allowed to create their own version of Fannie Mae: the Federal Home Loan Mortgage Corporation, now called Freddie Mac. Since the S&Ls already owned the Federal Home Loan Bank system as a long-term funding vehicle, Freddie Mac soon developed an own profile and – following Ginnie Mae's example of reducing its role to the one of a guarantor – became the main driver behind the new mortgage-backed security market. Fannie Mae, in contrast, continued business as the classical debt-funded wholesale mortgage lender.

As inflation accelerated in the 1970s, however, a major weakness of the reforms of 1934 became apparent: the Savings & Loan industry, which now dominated the U.S. housing finance system, was borrowing short-term to fund long-term fixed-rate mortgages. The interest rate risk embedded in this mismatch had been only concealed by the extension of the deposit ceilings of «Regulation Q» in 1966 to the S&Ls for a few years:[4] when inflation rose the S&Ls were forced to offer higher deposit rates to their savers through alternative instruments. At the same time, state usury laws constrained their ability to raise mortgage rates. When short-term interest rates soared after the monetary tightening in 1980 (so-called 'Volcker break') the average return on assets of S&Ls were 1% below their average costs of funds.

As part of a hectic bailout action during 1982 U.S. Congress simplified and through tax breaks subsidized the sale of S&L mortgage portfolios as MBS to investors. Lobbied by Wall Street, Fannie Mae and Freddie Mac became entrusted to guarantee those S&L portfolios, investment bankers made hefty profits during what became the birth period of the 'agency' MBS market.[5] Fannie Mae itself had been forced to start selling loan pools through MBS as a result of its own mismatch situation during 1981. With additional political support, e.g. an exemption from the prudential minimum capital requirements agreed on for banks under the Basel Accord of 1988, Fannie Mae and Freddie Mac grew within 15 years from small wholesale institutions into the two central institutions of the American mortgage market, funding and/or guaranteeing by the turn of the 20th century 2 in 3 home mortgages.

Two important indicators demonstrate how the housing finance system had changed: the S&Ls[6] market share fell from 60% in 1976 to 21% in 2000 while mortgage banking companies' share grew from 14% in 1976 to 58% in 2000. However, S&Ls as well as banks continued to hold long-term mortgage assets, now in the form of MBS bought back from the agencies. Again, political support – inter alia in form of absence of counterparty risk limitations against issues by the GSE – helped to cover the fact that it was paradoxically mainly the credit risk that had left the depositaries balance sheets in the course of events, but not the interest rate risk.

[4] A popular joke of the 1970s described the savings & loans under Regulation Q as the «3-6-3» industry: borrowing at 3%, lending at 6% and the CEO at 3 pm on the golf course.

[5] For an insider's report on this period, see Lewis (1989).

[6] Includes Savings and Loan Associations, Savings Banks and Credit Unions.

A new era?

Over the past decade, the continued existence of regulatory favors for the secondary mortgage market have attracted increased attention as Fannie Mae and Freddie Mac grew dramatically in size and a possible bankruptcy threatened to repeat the S&L debacle with far-reaching implications for the entire U.S. financial system. In a series of steps, U.S. congress stepped up pressure on both GSEs and their regulator, OFHEO: in 2004, Fannie Mae was classified by OFHEO as significantly undercapitalized both agencies were essentially forced to hold Basel I minimum capital.[7] Fannie Mae issued $5 billion in preferred stock and took additional measures to improve operations and the capital base. OFHEO also increased transparency requirements and found Fannie Mae in 2004 to have used improper accounting methods for derivatives. The findings echoed those made in 2003 about Freddie Mac. The accounting errors for the two companies amount to more than $13 billion[8]. The GSEs have also been pressured to sell more MBS and issue less so-called 'agency' bonds (see section on funding), in order to reduce their risk exposure from prepayment risks. The Bush administration expects that the Congress plans to approve legislation creating a tougher regulator for the two companies during 2006. More far-reaching reforms are being debated.

In the meantime, the private mortgage industry has regained market share in the secondary market; large servicers have started to compete with the GSE by offering lower guaranty premia to investors. A large product class, the ARM market, is funded entirely separately from the GSE through large MBS programs, or on balance-sheet. Although concentration remains an issue in the U.S. mortgage market as a whole, a more healthy secondary market structure – and a less potentially costly one for taxpayers – is expected to emerge in the coming years.

2. SIZE OF THE MARKET

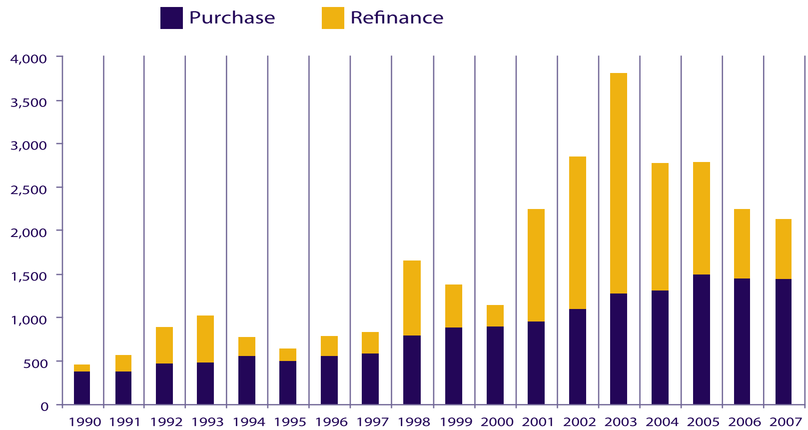
The U.S. mortgage market with 9.1 trillion USD of outstandings as of September 2005 and 2-3.5 trillion USD of new originations during the first half of the current decade (see figure 1) is the largest globally. In relation to gross domestic product (GDP), it is with ca 76% the third largest in industrialized countries, only exceeded by the Netherlands and Denmark, and substantially larger than the EU average (ca 48% of GDP). Since the beginning of the decade the outstanding mortgage volume has been growing at annual rates of 11-12%, ca 5% above nominal GDP growth rates.

A large share of the new mortgage production in the United States is generated by refinancing activity ('prepayment'), which develops cyclically with the interest rate environment. As a result, new originations as displayed in figure 1 are harder to compare than outstandings with most European markets that feature more limited

[7] Regulatory body to ensure that Fannie Mae and Freddie Mac are adequately capitalized and operating safely.
[8] According to Detroit Free Press, 5 June 2005

such activity. The cyclicity of prepayments and resulting new originations also has strong implications for the industry value added and is strongly influencing the turnover and pricing on the mortgage-backed securities markets.

Figure 1. Annual new originations of mortgage loans in the United States 1990-2005, forecast 2006 and 2007, in billion USD



Source: Mortgage Bankers Association and Department of Housing and Urban Development.

Multi-family housing loan originations, usually for rental housing purposes, in 2005 made up only for approx.7.6% of U.S. mortgage outstandings, this is significantly lower than in most European jurisdictions with ratios of 15-30%.

3. HOUSING AND MORTGAGE MARKET LINKAGE

The U.S. has a strong and relatively stable housing market: over the past 30 years, house prices at the national level have grown at about a 6 percent annual rate. House price-to-income ratios have tended in the past to be significantly lower than in Europe, partly due to lower building standards and standardized construction practices, and partly as a result of elastic land supply policies.[9]

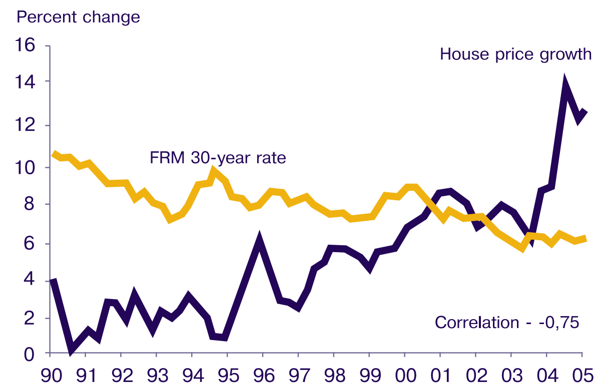
However, as figure 2 reveals, house price growth in the first half of the current decade lied significantly above the long-term average. In some regions, especially California, Florida and the East Coast, this raised house price-to-income ratios to previously unseen levels. The reasons go back to changing financial and 'real' land and housing sector conditions and are worth exploring in detail.

[9] Residential land in the U.S. historically became supplied so abundantly through a combination of incentives for suburban counties to expand their residential zones (e.g. higher tax revenues, higher block grants for schools etc..), relative autonomy for developers to subdivide and develop feeder infrastructure, strong public investments in main infrastructure, such as roads and motorways, and low gas prices. A cultural affinity to individualism and angst when confronted with deteriorating inner-city living conditions – especially after the 1968 riots, supported these policies.

Financial sector conditions:

- The U.S. experiences a record low interest rate phase, which drives up the valuation of houses. The decline in mortgage interest rates is fuelled through large foreign, esp. Asian, investments in the U.S. mortgage-backed securities (MBS) and equivalent 'agency' bond markets (see discussion below). Especially, securities with the guaranty of the GSE's – Fannie Mae and Freddie Mac – are perceived by Asian investors as substitutes to government bonds.
- The fact that almost all fixed-rate loans can be prepaid without indemnities for a lower-rate fixed-rate loan and that adjustable-rate loans otherwise dominate have led to a significant reduction of housing costs for sitting homeowners as interest rates dropped. Other homeowners 'traded up' to pay the same housing costs for more expensive houses. Prepayments experienced a strong acceleration during 2001-05, when they made up for >50% of new originations.

Figure 2. Fixed rate mortgage rates and house price growth in the U.S. 1990-2005



Source: MBAA, OFHEO.

- In the U.S. long-term fixed-rate mortgage system, the effect of a housing cost saving -once materialized through prepayment and taking up a new, lower rate loan – is locked in for 20-30 years. This means low long-term opportunity costs for most mortgagors when considering buying a home, and hence higher acceptable house prices.
- The mortgage interest tax deduction in the U.S. is extremely generous and is becoming more effective as an affordability support as incomes grow. This supports affordability especially in high-income areas, whose house prices tend to increase more strongly.
- Speculation, i.e. strong capital gains expectations for houses, contributes to house price increases. The U.S. Fed contributed to house price speculation by keeping short-term interest rates very low for a long time (2001-2005).

Real sector conditions:

- Real housing demand is dynamically increasing on both East and West coasts and in parts of the South (Florida) through continued strong economic and job dynamics, which trigger migration, higher incomes and strong new household formation.
- Despite the still relaxed approach to land, there are new limits to growth imposed through stricter urban planning restrictions as a reaction to decades of urban sprawl – for instance, the entire area between Washington D.C. and Boston now is essentially one urban area – and increases in transportation costs. House price growth is supported by tight land market conditions.

Going forward, the U.S. housing markets are most likely to cool down in a gradual fashion due to the strong underlying demand trends. However, house price-to-income ratios in the most attractive locations may remain permanently at higher levels, as in the South East of Britain, reflecting the large demand and changing supply conditions.

4. MARKET STRUCTURE

Much of today's U.S. mortgage market structure can be explained by the political decisions and interventions made in the 1930s and 1960s, especially the strict separation between primary and secondary markets, the strong role of insurance & guarantees in both markets and the relative weak role of banks.

Going forward, a less interventionistic political approach towards housing finance is likely, and technological changes may dominate the further development.

Since the 1990s, technological progress associated with the IT revolution and the removal of the last barriers for nationwide operations of financial institutions allowed for the effective exploitation of scale in all sections of the value added chain of mortgage lending. The result was an increasing 'disintermediation' with large and efficient 'horizontal' specialists – companies specializing in origination, servicing, guarantees and securitization/funding – beginning to dominate their respective markets. It is fair to say that, in all those submarkets of mortgage finance, the U.S. today features global technology and cost leaders.

Primary market

Figure 3 gives an impression about the increasing concentration levels in both origination and servicing markets. The top 5 retail originators in 2005 combined 53.4% of new volumes, which is almost as concentrated as in large European markets as the United Kingdom or France. Those lenders are the household names of Bank of America, Wachovia, Washington Mutual, Citibank, Countrywide.

Concentration of retail lenders and also correspondents, typically regional banks and finance companies, is mitigated by the decentral mortgage broker industry. The strong role of brokers goes back to the 1930s when Fannie Mae started providing a nationwide funding channel for these originators. With the rise of Fannie Mae and

Figure 3. Concentration in the U.S. primary market 1999 and 2005

	1999	2005	Percentage Point Changes
Retail			
Top 5 share	28.5%	53.4%	24.9
Top 10 share	41.9%	70.7%	28.8
Top 15 share	49.8%	81.9%	32.1
Broker			
Top 5 share	24.2%	30.1%	5.9
Top 10 share	41.2%	51.9%	10.7
Top 15 share	51.6%	66.9%	15.3
Correspondent			
Top 5 share	31.3%	60.8%	29.5
Top 10 share	47.1%	79.9%	32.8
Top 15 share	55.2%	88.7%	33.5
Servicing			
Top 5 share	27.2%	43.3%	16.1
Top 10 share	40.7%	56.5%	15.8
Top 15 share	47.9%	62.1%	14.2

Source: Mortgage Bankers Association of America.

Freddie Mac into the center of the housing finance system in the 1980s, the broker's market shares rose analogously – to now around 45%, with retail and correspondents amounting to 55%. With that amount of competition to retail lending, the U.S. system is likely to stay a very dynamic origination market, even if the origination role especially of banks is expected to rise in the mid-term.

Secondary market (conduits, credit guarantees, 'agency' bonds)

The secondary market in the U.S. predominantly uses the technique of loan sales by the originators to investors rather than issuance of bonds on the balance sheet of originators, as in most of Europe. For all historic coincidence and convolution that was responsible for this particular structure – in particular the rigid interstate barriers to lending and funding in the 1920s imposed on banks and the federal institutions created during the New Deal to overcome them[10] – the result has been a system of specialized capital market oriented industries that has been influencing mortgage markets worldwide. Indeed the U.S. secondary market is at the heart of the strong capital market focus of the U.S. finance system as a whole, which is leading current global capital markets trend in finance.

Next to holding loans, three types of secondary market issuance mechanisms through loan sales can be distinguished from figure 4 for the U.S.: sales to conduits, which issue mortgage-backed securities for purchase by investors; sales to wholesale investors who hold the loans on balance sheet and issue – mostly

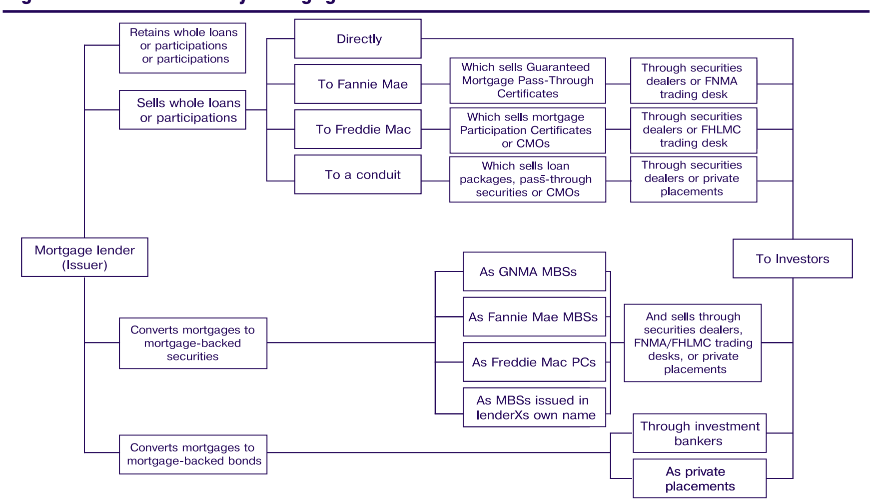
[10] In particular, the creation of the Federal Home Loan Bank system and of Fannie Mae.

unsecured – bonds; and the important hybrid form of sales to wholesale investors who decide whether holding or on-selling loans in the form of mortgage-backed securities. In addition to the financing function, credit guarantees for mortgage-backed securities play an important role.

The government-sponsored enterprises Fannie Mae and Freddie Mac dominate all secondary market issuance mechanisms. The main reasons are their wide eligibility criteria for purchasing loans – the statutory maximum loan limit for their purchases as of 2006 is USD 417,000 – and the implicit government guarantee backing their guarantees and bonds issued.

All securitizations of the two GSE come with their own, 'agency' guarantee which wrap mortgage-backed securities in the form of either Mortgage Pass-through Certificates (Fannie Mae), Mortgage Participation Certificates (Freddie Mac), or varieties hereof that differ in terms of cash flow allocation to investors. Fannie and Freddie by far dominate the guaranty market for MBS although their premia are high (ca 20 bp) relative to actual credit losses (ca 4-5 bp) and the Federal Home Loan Banks offer a similar product through the Mortgage Partnership Finance program. The reason primarily lies with the large liquidity advantages that securitizations through Fannie and Freddie can offer to both originators and investors, for whom the securities issued or guaranteed are substitutes to government bonds, which translate to a certain degree into more competitive borrowing conditions for consumers.[11]

Figure 4. U.S. secondary mortgage market flow chart



Source: Duncan (2006), Mortgage Bankers Association of America.

[11] The precise extent of the 'pass-through' of the benefits that Fannie Mae and Freddie Mac receive through their government sponsorship is hotly debated, see inter alia Passmore (2003).

In the low-income market, Ginnie Mae in addition acts as a guarantor of MBS backed by federally insured loans; however, here the loans are securitized through private conduits. The non-government guaranteed MBS market is limited to the so-called 'private label' MBS market, which securitize 'non-conventional' loans either exceeding the loan max or violating the purchasing criteria established by Fannie Mae and Freddie Mac (subprime, adjustable-rate).

Both institutions have during the 1990s started to remain invested in the loans they purchased or have retained their own MBS, with the result of strong balance sheet growth of both institutions. With together almost 2 trillion USD in assets they are now the largest financial institutions in the world. The main factor stimulating this growth was the strong demand for U.S. government bonds, which promised strong profits for anyone able to issue liquid government look-alike bonds. The analogy in Europe are German Jumbo Pfandbriefe; however, Fannie and Freddie's 'agency' bonds remained unsecured, i.e. are not directly backed by mortgage loans, whereas Pfandbriefe are.

The economic consequence was that Fannie and Freddie increasingly took prepayment (or call) risk – since the type of bonds is in strongest demand by investors, as government bonds, were non-callable. The perception of large balance sheets and increasing prepayment risk-taking lead to a political backlash against the institutions and calls to reduce their balance sheet size. In 2004 and 2005, the balance sheet volumes of Fannie and Freddie have started to decrease, as less loans became retained. Also, their market share in terms of purchased loans, including those sold to investors in MBS pools, declined. Yet, still, even at decreasing dynamics, Fannie and Freddie still intermediate vasts amounts of both prepayment and credit risk and their potential inability to manage those risks poses a potential threat for the U.S. financial system.

As figure 8 below reveals, between 2005, the 'private-label' MBS market, originally limited to large ('Jumbo') mortgages exceeding the purchasing limits of Fannie and Freddie, has vastly gained in importance. Both the subprime and in particular the adjustable-rate mortgage segments of the market are strongly growing and more than compensate for the volume effect of the increase in the loan ceilings for Fannie Mae and Freddie Mac in the conventional market. The private market share in the MBS guaranty market in the last quarter of 2005 stood at 57%, up from 21% in the first quarter of 2003, with all major banks and servicers now acting as conduits and/or guarantors.

5. PRODUCT RANGE

1.1. Rate adjustment types

With the support of the loan purchasing policies of Fannie Mae and Freddie Mac in the secondary market the U.S. features the largest global market in fixed-rate mortgages with interest rates fixed to maturity (20 or 30 years), rather than fixed to term (1-10 years) as in most European markets. Moreover, these loans are prepayable throughout their entire life without additional costs. In Europe, only the Danish mortgage credit industry has a comparable product to offer.

However, prepayable fixed-rate mortgages are not costfree. In fact, investors (depositaries, institutions, investment banks) have to take the prepayment risk and charge prepayment options costs (30-100 bp, in spikes 120bp). See discussion below.

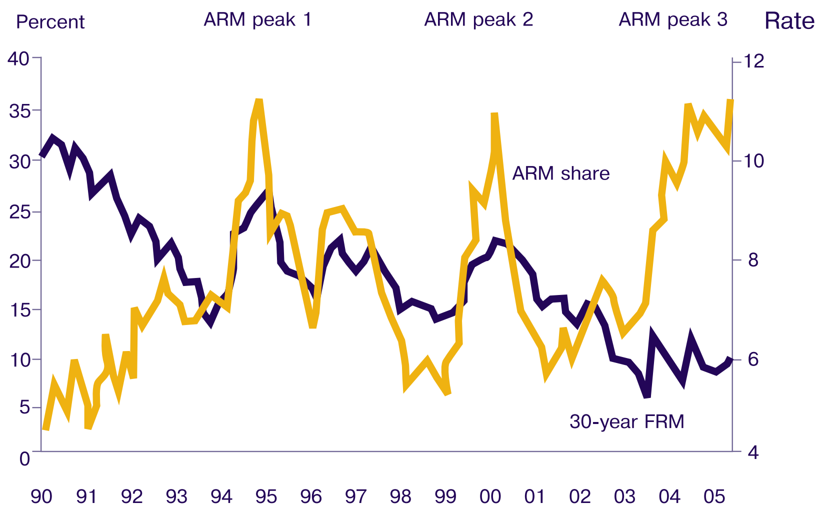
Table 1 Product market shares in the U.S. and European comparator markets, and the strength of security of termination for fixed-rate mortgages

Country		Germany		Denmark		France		Spain		U.K.		U.S.***	
Year		2003	ca 1995	2003	ca 1995	2003	ca 1995	2003	ca 1995	2003	ca 1995	2003	ca 1995
Product	Rate Fixing												
Variable	up to 1 year		40	19	10	5	20			65	70	40	27-39
Reset, short	> 1 to 5 years	20	60	16		35	80	93	80	28	30		
Reset, long*	> 5 to 15 years	80		10		60		7	20	7			
Fixed to term	> 15-30 years			55	90							60	73-61
Call protection**		Strong		None		Weak		Weak		Rel. Strong		None	

*Source: Mortgage Bankers Association of America, Federal Reserve (USA), Nykredit (Denmark), Low, Dubel and Sebag-Montefiori (2003), Dubel/Lea/Welter (1997), trends estimated by Dubel. Note: *The data for France and Germany include several short-term loans of less than 20 years that have fixed rates until final maturity. **For the most important fixed-rate product. ***US data for around 1995 comprise the years 1994-1996; data for variable-rate loans may include short-term fixed-rate loans that are classified as 'reset' in Europe. The data for the second quarter of 2004 reflect the author's estimate based on the rephrased quarterly survey of the Federal Reserve at bank loan departments.*

Any loan with interest rates not fixed to maturity is called 'adjustable' in the United States. Figure 5 reveals that the market share of adjustables has strongly risen in the recent decade, conversely the prepayable fixed-rate mortgages has come under pressure. Until ca 2002, the main causes for fluctuations in the relative market shares of the two product classes were changes in fixed-rate mortgage interest rate conditions. However, since then the share of adjustable-rates has risen without rising fixed interest rates. The reason can be largely seen in the strong house price growth (see figure 2), which forces new borrowers to reduce initial payments. The difference of a fixed-rate mortgage to a typical adjustable-rate mortgage in that regard 'saves' two price components: the yield curve, i.e. the difference between short-term and long-term fixed rates, and the prepayment options costs, all in all ca ~ 100-300 bp.

Figure 5. Market share of adjustable rate mortgage (ARM) loans and 30 year fixed-rate mortgage (FRM) rates in the United States 1990-2005



Source: MBAA surveys. Note: ARM market shares are scaled on the left hand, FRM interest rates on the right hand. In the U.S. all loans whose interest rates are not fixed to maturity are defined as ARMs. This differs from European practice, where typically loans with interest rate fixing period greater than 1 year and under maturity are defined as fixed-rate. The residual to the ARM market share are FRMs with rates fixed to maturity (usually 20-30 years). For example, in mid-2005 the ARM market share was 35% and the FRM market share was 65%. The graph correlates FRM interest rates with ARM market shares in order to demonstrate the power of one of the long-term drivers of ARM demand. Typically, when FRM rates increased, ARM increased, too. The linkage has disappeared in the past years.

30 year fixed-rate mortgages currently cost ca 6.5% in the U.S. A first step in saving initial payment costs are 'hybrid' ARMs, where initial rates are fixed for 2, 3, or 5 years, often below comparable market rates in order to attract consumers, and then turn into 1-year adjustable-rate loan. This product, which is comparable to European fixed-to-term products, offers a compromise between the goal of initial payment reduction (no prepayment options costs, as the fixed-rate period is usually offered only with prepayment indemnities) and safety (limited payment shock risk, depending on the length of the interest-rate fixing period).

Larger initial payment savings are possible with regular adjustable-rate loans, of which approx. 30% are offered with periodic or lifetime caps to provide some safety against payment shocks. However, the largest share of adjustables is with with subprime loans (see below) and do not offer such protections.

So-called 'options ARM' further reduce the initial payment of the consumer by allowing him to postpone amortization (so-called 'interest-only', or 'IO-ARM') or even interest payments, in which case the nominal outstanding balance increases (so-called 'negative amortization', or 'neg-am ARM'). The swiftly increasing market share of 'options ARM' has raised strong concerns with U.S. regulators – in particular the Fed and the FDIC – due to the possibility of future payment shocks. Rating agencies already define stricter criteria for the credit assessment of portfolios containing loans with such features; the FDIC is preparing a regulation for these 'non-traditional' mortgage loans.

According to MBAA model calculations, while the initial payments can be halved and the 'affordable' house price can almost double between a callable fixed-rate loan and a typical 'option ARM', the unpaid loan balance after 5 years is almost 25% higher and a rise in interest rates of 100 bp can more than double the periodic payment.

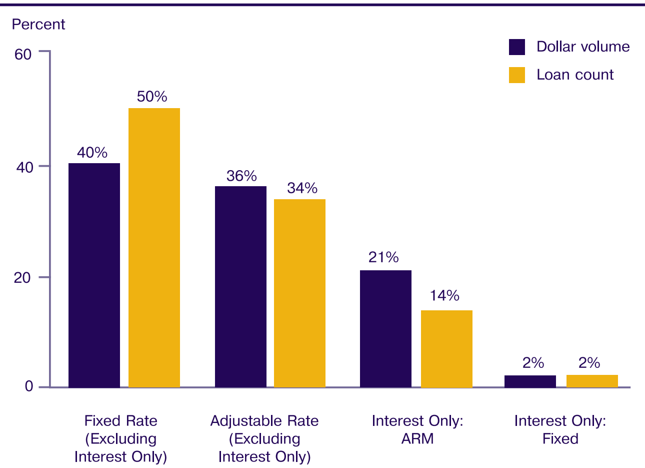
1.2. Amortization schemes

Level payment loans with amortization to a fixed maturity were introduced in the U.S. as early as the 1930s, with the New Deal reforms.

As discussed above, non-amortizing structures (IO ARMs and FRMs) and grace periods become increasingly popular due to the current high house price levels.

Also, negative amortization (or balloon) morgages are strongly growing – which capitalize some of the interest into the loan amount. Usually, lenders in the U.S. quote a maximum negative amortization amount – e.g. 15-20% over the initial loan amount[12], although there is generally no legal requirement to do so. Figure 6 shows the significance of these products as of 2005.

Figure 6. Mortgage originations by amortization type, first half of 2005



Source: Mortgage Bankers Association of America. Note: «loan count» denominates the distribution of the number of loans. «dollar volume» denominates the distribution of the dollar volume of loans.

[12] I.e. in the case of a USD 100,000 loan, the maximum outstanding reached during the loan life could be USD 115,000 or USD 120,000. This typically implies that any exceeding outstandings are cancelled by the lender.

Of increasing relevance are also Reverse Mortgages, where an elderly borrower receives a fixed annuity against pledging his house to the lender. This product thus by definition features negative amortization, and the risk for the lender is to ensure that the loan build-up does not exceed the house price. Due to the high risk involved for lenders, 85% of reverse mortgages are insured by the FHA.

Home equity lines of credit (HELOC), which offer credit cards to draw on a given credit line backed by the home, and other second mortgages are other ways to exploit the equity in a home usually for consumption purposes in the U.S. Many second mortgages are issued together with GSE-eligible conventional conforming mortgages – where uninsured loans are only accepted up to 80% LTV ratio. This avoids mortgage insurance costs imposed on a lender that would sell – for instance a 90% LTV loan – to Fannie Mae or Freddie Mac. Rather than paying mortgage insurance on the additional 10% the whole 80-90% tranche is funded with a second mortgage.

The rise of non-amortizing or negatively amortizing loans in the U.S. is facilitated by the generous ceiling for mortgage interest deduction, standing currently at 1 million USD (see section on subsidies).

1.3. Credit/target group

Since the 1968/70 system reforms (see section on historical overview), three strictly separated segments of the U.S. residential mortgage market can be distinguished by their respective housing finance policy target groups.

Through the agencies Federal Housing Administration (FHA) and its analogon for armed forces veterans Veterans Adminstration (VA), the federal Housing and Urban Development Department (HUD) insures loans to low-income mortgagors directly for the entire loan amount against shortfalls of principal and interest. Banks and S&Ls through permanent MBS programs that carry an additional timely payment guaranty given by the agency Ginnie Mae (GNMA) sell many of these loans in the secondary mortgage market. MBS carrying Ginnie Mae guarantees are «full faith and credit» liabilities of the federal government and thus – in terms of their credit risk – equivalent to treasury bonds.

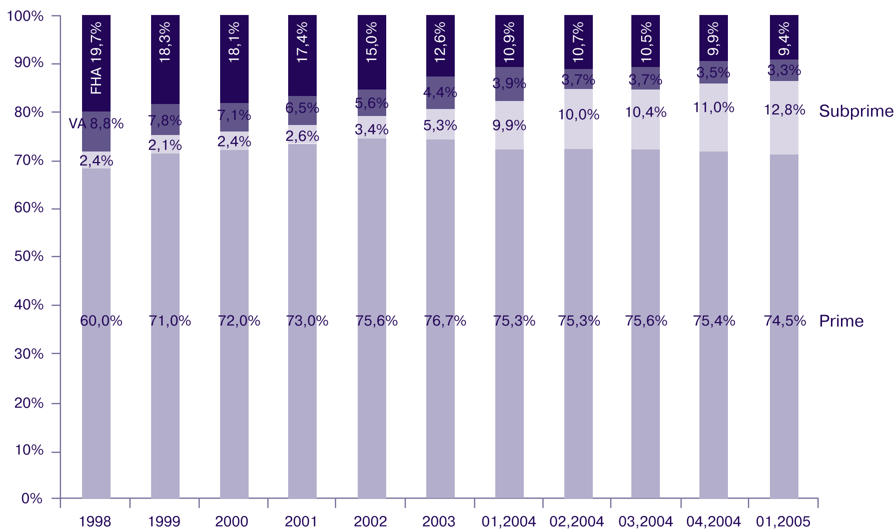
In 2005, the total volume of this mortgage market segment was approx. 1 trillion USD. The maximum allowable loan volume for FHA insurance enrollment in 2006 was between 250,000 USD and 350,000 USD, recognizing different regional house price levels. In high house price areas it can go up to 87% of the conforming mortgage limits (see below). Income ceilings and target group quota are used to further refine the targeting. State and in some cases communal agencies are active with similar loan insurance programs for target groups of local interest.

The low-income mortgage market is separated from the remaining, so-called *conventional mortgage market* whose outstanding volume by 2005 approached

5-6 trillion USD. Within the conventional market, mortgage loans not exceeding the generous volume ceiling of 2006 417,000 USD, with sufficiently high borrower scores and documentation, are eligible to funding through the government-sponsored enterprise system of Fannie Mae, Freddie Mac and the FHLB as *conforming conventional mortgages*. Unlike in the FHA/VA market, no borrower income ceilings are attached. As a consequence of this wide interpretation of mandate, government-sponsored enterprises have access to over 80% of the total mortgage market and 90% of the conventional market. When purchasing loans with loan-to-value ratios over 80%, Fannie Mae and Freddie Mac currently require additional loan insurance that is provided by private mortgage insurers (see previous section).

Contrary to the insurance of the full loan amounts in the low-income mortgage market segment through FHA, Fannie Mae and Freddie Mac as government-sponsored enterprises are therefore only partially protected by private guarantees covering the first losses. Losses incurred below the 80% LTV threshold are borne by Fannie Mae and Freddie Mac.

Figure 7. Share of prime, subprime and public mortgage products in the U.S., 1998-Q I 2005



Source: Fratantoni et al (2005).

Ca 25% of the outstanding mortgages, approx. USD 2 trillion, are completely free of public credit or guaranty interventions. This segment is labelled as non-conforming conventional mortgage market. It caters several distinct target groups:

- the extremely high-income market with so-called 'Jumbo' mortgages exceeding the limits set for Fannie Mae and Freddie Mac.
- loans which are otherwise eligible for Fannie Mae and Freddie Mac, but where borrowers have insufficient documentation (Alt-A mortgages).
- the dynamic market for loans to borrowers with impaired credit histories or insufficient credit scoring results (sub-prime mortgages) that do not fulfill the underwriting criteria set by the government-sponsored enterprises.
- beyond those definitions, those conventional conforming loans which are adjustable-rate mortgages and are not purchased by Fannie Mae or Freddie Mac.

At the *margin*, through changes in market structure in recent years, the share of newly originated non-government guaranteed mortgages has increased, to currently ca 45%. The funding of these loan categories comes mainly from the issue of MBS and on-balance sheet funding provided by banks, savings & loans and finance companies.

6. PRICING

Transactions costs

Practices in the U.S. are unique in that consumers usually pay two types of loan transactions costs to lenders, fees and 'points'.

Upfront fees are charged only by some lenders and brokers for their upfront costs, typically related to property appraisal and credit reporting as well as origination-related costs. They do not directly correspond to originator fees paid by the loan investors to the same lenders or brokers when buying a loan.

Points are an upfront cash payment required by the lender expressed as a percent of the loan amount; e.g., «3 points» means a charge equal to 3% of the loan balance. It is common for U.S. lenders to offer a wide range of rate and point combinations, especially on fixed-rate mortgages, including combinations with negative points. On a negative point loan the lender contributes cash toward meeting closing costs. Positive and negative points are sometimes termed «discounts» and «premiums,» respectively. A positive of points for the loan investors and servicers is to protect against early repayment, as the interest rate on the loan is lower; however, for the borrower it means finding ways to finance the points – either through own cash or higher loan amount.

Since mortgages in the U.S. are accessory, i.e. need to be re-constituted every time the loan agreement is changed, registration costs for mortgages, including re-registration in the event of prepayment, occur. Also, if buying a new home, typically title insurance premia, settlement and attorney fees are typically charged from the borrower. Total legal costs are typically estimated to be in the range of 1,500-3,000 USD.

In addition, borrowers may have to prepay certain items before being underwritten, such as pre-paid interest (interest due for the month of loan closing), hazard insurance, and deposits to set up an escrow account.

Rates and spreads

The MBAA survey as of 3/31/06 indicates average contract interest rates for 30-year fixed-rate mortgages standing at 6.36 percent, with points at 1.02 (including the origination fee) for 80 percent loan-to-value (LTV) ratio loans. Spreads and points on one-year ARMs for the same LTV are lower, at 5.83 percent and 0.88 respectively.

The investor in a mortgage-backed security divides the spread between the so-called 'options-adjusted' spread, which reflects only loan servicing and credit risk costs, and the – substantial – 'options' spread charged for the prepayment option (see below). Loan servicing costs in the U.S. are extremely low, with top performers administering loans for charges in the range of 5-7 bp – comparable European figures start at 20 bp.

Insurance premia and spreads on second mortgages

The main function of private mortgage insurers is to protect the investor in mortgages loans – typically Fannie/Freddie, or banks – from the higher credit risk embedded in high-LTV loans. The pricing structure thus strictly depends on the LTV level. Charges can be either upfront or financed as a spread. There is a legal discussion going on about whether mortgage insurer should be entitled to charge premia only as long as the outstanding loan in relation to the original house price exceeds the LTV levels established in the insurer-lender contract (usually 80%).

Avoiding private mortgage insurance is very popular today, e.g through second mortgages (piggybacks) with a higher interest rate. This has put insurers under pressure to accept lower premia; many are now expanding internationally rather than in the U.S.

Consolidating price information, kickbacks

The multitude of prices – points, fees, rates, title and mortgage insurance premia – quoted to American consumers has raised concerns whether the mere requirement for their disclosure, embedded in federal legislation such as the Truth in Lending Act of 1969, is sufficient to inform the borrower. There are demands from observers to reduce the complexity for the consumer by consolidating all ancillary costs, and possibly also the rate, into a single figure.

Kickbacks between third parties such as insurers and originators or investors have been outlawed in consumer protection legislation (RESPA Act).

7. FUNDING AND INVESTOR STRUCTURE

7.1. Funding

We discuss the funding aspect in all three dimensions – the liquidity, the credit and the interest rate risk position of the investor.

Deposits

Figure 9 below reveals that in 1980, banks and thrifts organizations (S&Ls) took 65% of the credit risk and 71% of the interest-rate risk. In 2000 the percentages were 33% and 46% respectively. Despite of the strong role of capital market intermediation and guarantees, a surprisingly large share of the interest rate risk and a large (and in the meantime again strongly increasing) share also of the credit risk in the U.S. is thus still taken by depositary institutions.

The reason why much of the interest rate risk is still allocated to depositaries is that the secondary market offers these institutions the option to swap their originated mortgages against GSE-guaranteed mortgage-backed securities – actually Freddie Mac's started its operation with a swap program with its owners, S&Ls. Secondly, with the recent rise of the subprime and adjustable-rate mortgage markets, the depositaries also have raised their share in taking credit risk exposure – both types of products are not purchased by the GSE.

According to Fratantoni (2005) close to 50% of the assets on balance sheet of FDIC- insured depositaries (banks and S&Ls) continues to be related to real estate. Of these 11.1% are invested in MBS and 23.3% in retail mortgage loans, i.e. 34.4% are invested in mortgage loan pools (MBS are mortgage loan pools). This ratio does not differ drastically from typical European figures, where lenders typically directly invest in mortgages.

Residential mortgage-backed securities

Still, capital market instruments are extremely important as vehicles to transfer certain risks. Figure 8 shows the dramatic growth in private label MBS relative to government (Ginnie Mae) or GSE-guaranteed MBS. Despite a strong deposit base, many depositary issuers use the instrument actively to transfer risks to investors. The ratio of outstanding MBS to outstanding mortgages in September 2005 was 49.7%, which should reflect relative shares in originations.

There are various forms of MBS in the U.S.; next to differentiation by credit enhancement, MBS differ by the way in which they allocate cash flow to investors. In order to limit prepayment risk, Freddie Mac in the early 1990s created the market for Collateralized Mortgage Obligations (CMO), which create tranches with different prepayment speeds sold to different forms of investors (and priced over different benchmarks, by tranche).

'Agency' bonds

A third important instrument that arose in the 1990s as a new funding vehicle for mortgages are bonds issued by government-sponsored enterprises on signature, i.e. not backed or secured by mortgages. The issuers, primarily the government-sponsored enterprises Fannie Mae and Freddie Mac hold the loans and take or hedge the prepayment risk.

The bonds are called 'agency' bonds in a frivolous attempt by the GSE to suggest direct government-backing, which the U.S. treasury however requires to explicitly deny in the issuance prospectuses.

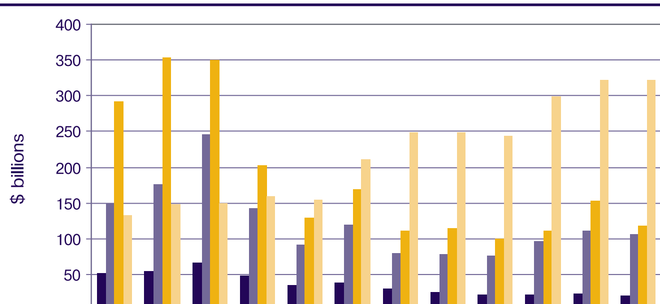
'Agency' bonds issued by Fannie and Freddie regularly reach 5 billion USD ticket size, compared to 1 billion Euro for Jumbo-Pfandbriefe. They are extremely competitively priced over government bonds.

Outstanding 'agency' bonds peaked in 2003 at around 35% of outstanding mortgages and since somewhat declined due to the pressure on the GSE to reduce their balance sheets. However, given the ongoing attractive prices for long-term government bonds and similar instruments, they are likely to stay an important funding instrument for mortgages as long as the GSE are perceived to enjoy government-backing.

Mortgage bonds

The global trend towards covered bonds is likely to lead U.S. depositaries to issue such bonds in the future, following the example of British counterparts. As of May 2006, the investment bank Barclays Capital is advising Washington Mutual on such a step.

Figure 8. Size and issuer distribution of the U.S. RMBS market



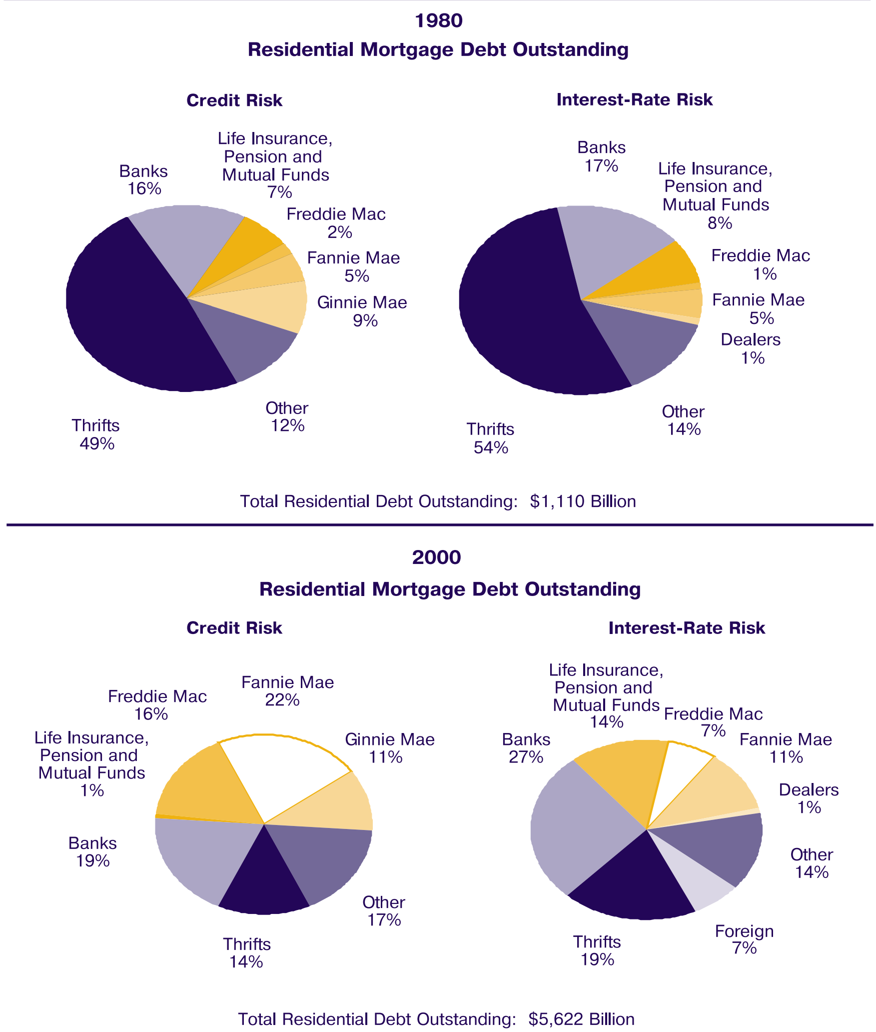
	2003 Q1	2003 Q2	2003 Q3	2003 Q4	2004 Q1	2004 Q2	2004 Q3	2004 Q4	2005 Q1	2005 Q2	2005 Q3	2005 Q4
Ginnie	51.2	54.5	65.8	48.2	34.1	38.6	29.6	24.3	21.1	22.1	23.6	19.2
Freddie	149.1	176.0	245.4	142.9	90.7	119.0	80.2	77.7	77.0	95.6	111.6	107.0
Fannie	292.6	353.0	349.9	203.1	129.0	168.8	110.6	114.0	100.3	111.2	153.5	118.5
Private Label	132.3	147.4	148.6	159.3	154.2	210.5	249.4	249.3	243.8	299.2	321.5	321.9

Source: Inside MBS & ABS

7.2. Investor structure

The secondary market created a redistribution engine for risk: as credit risk went primarily to government agencies, interest rate risk primarily returned to the depositaries in the banking and savings & loan systems (see figure 9).

Figure 9. Estimated distribution of holdings of credit and interest rate risk in the U.S. mortgage market



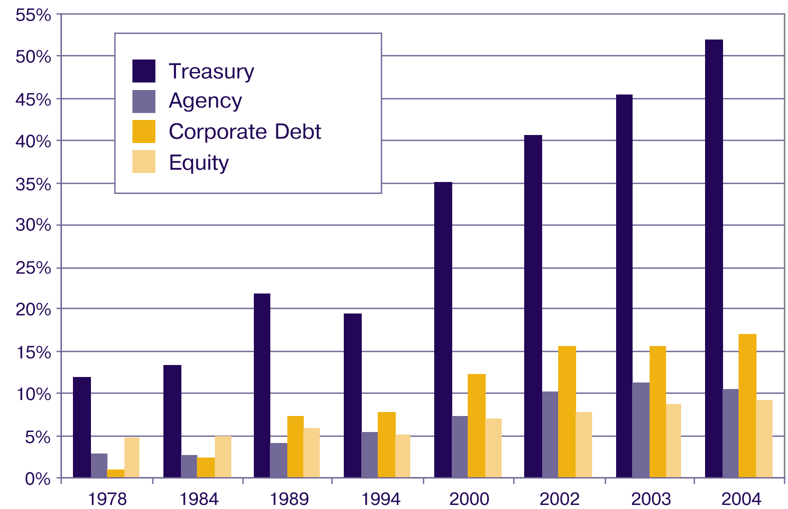
Source: Freddie Mac.

Hence the key problems of the savings & loan debacle of the 1980s continues to be virulent in the 2000s: depositaries holding large mortgage positions in mismatch with their short-term deposit base. This has not been a particular problem during the disinflation process of the past 20 years: with strong prepayments caused by rate declines, MBS pool durations have dropped to the values of short-term treasuries, from typically 5-7 years in the 1990s to 2-3 years in 2004. However, it could become a problem for stability as MBS pool durations must be expected to increase again throughout the remainder of the decade as a result of rate increases, and possibly drastically so. A success for the depositaries, in contrast, has been the increase in liqudity through MBS: depositaries no longer have to run to investment banks and offer mortgages against huge spread losses, should they need to sell off mortgage assets as rates rise.

For pension funds and insurance companies, the secondary market raised the ability to invest into the – in principle desirable – interest rate risk features of mortgages while avoiding the credit risk they were not willing to take. This protection has raised their investment share from about 7% in 1980 to 14% in 2000 (last available evaluation). The overall share, however, is by far lower than one would expect, e.g. from the history of European covered bonds, which is a primary reason for the strategy change of Fannie Mae and Freddie Mac towards issuing 'agency' bonds. The key reason is that institutional investors in the 1990s with rising prepayments had difficulty to manage the prepayment and duration risk embedded in MBS, from which only the GSE were able to shield them effectively. Their future share in funding U.S. residential mortgages will critically depend on the capacity of the system to provide prepayment-protected bond instruments, or generate more prepayment-protected loans.

A widely publicized role of funding the American housing market is the one of foreign investors: by 2004, the agencies had sold 622 billion USD to foreign investors, with Chinese and Japanese taking alone 215 billion USD. However, Asian (mostly central bank) investors preferred prepayment-protected and government-bond like 'agency' bond segment which made up 72% of the total. MBS only accounted for 38% of the sales and largely went to investors in the U.K., the Netherlands, Luxemburg or the Caiman Islands, where institutions with greater sophistication with regard to securities pricing (e.g. prepayment risk) are concentrated.

Figure 10. Foreign holdings of long-term securities in the United States



Source: U.S. Department of Treasury

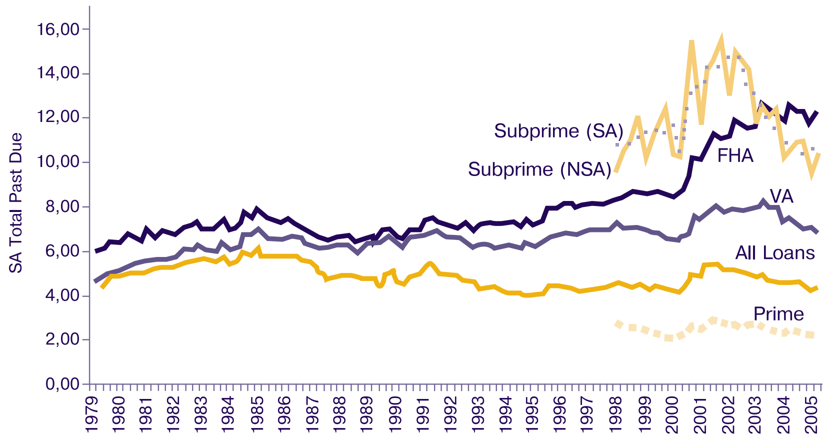
The companion piece to the success story of the secondary market in terms of creating liquidity for mortgages is high counterparty risk concentrated with American investors. Generally, how could the system become so large? The key factors include inconsistent and lax domestic U.S. investor regulations: although no government guarantee comes with them, 'agency' bonds and MBS issued by the GSE are exempt from counterparty risk limitations in the National Banking Act and dozens of other pieces of legislations concerning pension funds, insurance companies and mutual funds. While relaxations of counterparty risk limitations exist in Europe for covered bonds, the U.S. rules are far more generous: the results has been that U.S. depositaries hold on average more than their capital in securities issued by the GSE. Other issuers, in particular corporate and bank issuers, are essentially discriminated against by this structure, which however is under public criticism and review for gradual change.

8. RISK MANAGEMENT

Credit risk

Outside the GSE system and the S&L industry, which became heavily regulated after the crisis of the 1980s, the U.S. practices few regulatory constraints limiting the credit risk taking of mortgage lenders. MBS structuring allows to create AAA rated tranches from pools of all levels of credit risk, by concentrating the credit risk in subordinated tranches that are usually taken by the originator or sold to investors with high risk appetite and limited regulatory constraints.

Figure 11. Past due loan ratio in the U.S. residential mortgage market, 1979-2005



Source: Mortgage Bankers Association of America's National Delinquency Survey.

In particular banks and finance companies have thus upscaled their originations in high credit risk markets. As figure 11 shows, in particular the subprime market has featured high default levels, especially during the recent economic slowdown. This is reflected in relatively high credit risk premia charged from borrowers, which some observers claim create a vicious circle of high debt service and default likelihood.

However, also FHA delinquencies have been rising, a reflection of the economic stress to which American low-income households are exposed in times of stagnating incomes (in the lower-income brackets) and rising house prices. While the FHAs losses are taken by the government, the agency has developed the most sophisticated foreclosure management standards in the market. In the 1990s, FHA was the first agency to introduce mandatory 'preforeclosure' action, i.e. helping households to free-handedly selling houses, rather than defaulting. Other agencies and the mortgage insurers have followed suit, which has reduced the number of foreclosures in the U.S. significantly, if compared to the 1980s.

Within the agency-GSE system, Fannie Mae and Freddie Mac limit their purchasing policies to loans with a maximum loan-to-value exposure of 80% and private mortgage insurers insure any LTV portion in excess. This split of risk management functions between lender and insurer is a standard in anglo-saxon countries, with analogies in Canada or Austalia, however, it is noteworthy that it is neither statutorily mandatory in the U.S. nor even widely used outside the agency-GSE system. As a result, while mortgage insurers have developed sophisticated pricing, their underwriting – i.e. loss mitigation – strategies have not nearly become as sophisticated as for instance in Canada, where the insurer, and not the lender, effectively underwrites the borrower.

Mortgage insurers in the U.S., mindful of FHA and subprime market experience, also try to stay away from the low-income and subprime markets and focus on insuring the risks of higher LTV portions. These will materialize primarily over the house price cycle in a housing market downturn – since the insurers operate nationwide, they try to diversify that risk over state housing market cycles that occur historically in the U.S. asynchronically.

Prepayment risk

Figure 1 and the discussion of the dominance of the fixed-rate mortgage product has indicated a great significance of mortgage prepayment risk management for the U.S. housing finance system. Essentially, prepayment risk in the U.S. is managed in three forms by investors:

The government-sponsored enterprises Fannie Mae and Freddie Mac buy and hold mortgages, against which they issue a mixture of short-term fixed, long-term fixed and callable debt as well as derivatives appropriate to hedge prepayment (call) risk. They thus create a corridor of durations of liabilities, within which they can adjust durations (e.g. by not rolling over short-term debt or calling debt) according to changes in the durations of the mortgage portfolio. The need to issue or buy protection from derivatives on a huge scale for that purpose, and the associated accounting problems, have been at the root of the 2003 Freddie Mac 'scandal'.

In the case of MBS that pass through the prepayment risk, capital market investors have to take and manage the risk. This is efficiently possible only in those institutions that possess comparable levels of interest-rate risk management expertise to the GSEs and are moreover interested in that risk exposure.

For classical long-term investors such as pension funds, prepayment risk remains a problem, since they are interested only in very long asset durations protected against prepayments. Investment banks do offer hedging service to these institutions for protection, which however are typically either imperfect or expensive.

In contrast to long-term investors, banks and property/casualty insurers, which have to invest their reserves in liquid short-term assets, have little difficulty to take the prepayment risk, when interest rates decline. But they may be hit by extension risk, i.e. the risk that fixed-rate loans are NOT prepaid, as interest rates rise.

Implicit investors in prepayment risk are also the loan servicers, because the durations of the servicing income strips they buy, and by activation of the servicing strips also the sizes of their balance sheets, vary strongly with the prepayment cycles. Rating agencies see these fluctuations of the balance sheet size very critical and have thus imposed high capital ratios on servicers as a response Some servicers are unsurprisingly lobbying strongly for greater prepayment protection, e.g. through the introduction of prepayment indemnities.

9. PROCESS EFFICIENCY

The disintermediation process of the U.S. mortgage industry has created a strict segmentation of services by function and a multitude of specialized service providers. In each segment of the value-added chain, title insurance, real estate brokerage, legal services, property appraisal, borrower scoring/credit bureaus, loan origination, warehouse lending, loan insurance, loan servicing, default management, loan investment, securitization, financial guarantees, hedging services etc.. there is a competitive market with large numbers of firms. The last bastions of oligopoly, financial guarantees and loan insurance issued by agencies and GSE, are under pressure to fall.

Some elements of the value-added chain are doubtless among the most efficient in the world. The U.S. servicing industry now exploits the scale effects to the full and produces at a third to a fifth of the costs of European banks. Under the influence of servicers and investors, property appraisal and borrower scoring have become an automated statistical model-based businesses, with individual controls replacing individual scrutiny and review. Also, doubtlessly the U.S. capital market industry is able to both seek low-cost funding and financial guarantees. Process efficiency has been supported by a favorable legal environment that efficiently enforces contracts, both between lenders and borrowers and lenders and other their service providers.

At the same time, there is continued evidence of inefficiency in some parts of the value-added chain, often for historic reasons. European lawyers question whether private title insurance is really more efficient than a public bona fide land register, at least fees are higher in the U.S. than in Europe. Real estate brokerage fees in the U.S. are also among the highest worldwide (usually 5%), possibly as a result of collusion – stronger use of the internet is likely to reduce those costs. Clearly, mortgage insurance and financial guaranty fees charged by GSEs are relatively high, explicable by the remains of the strict secondary market regulations – but the trend to ARMs and other non-conforming loans and second mortgages weakens the oligopoly pricing powers.

The use of empirical modeling techniques for virtually all aspects of the consumer-lender relations has also efficiency drawbacks: errors are frequent, i.e. excluding good customers and including bad – and widely publicized. In some states, consumer protection rules force lenders to individually assess consumers and properties rather than solely rely on model results.

Finally, the concentration trend in some parts of the industry could become the source of new inefficiencies. Lacking development perspectives in the U.S, mortgage specialists already are strongly expanding internationally. The movement is led by investment banks, insurers and servicers. Whether a reverse route of non-U.S. banks and mortgage specialists entering the U.S. market (e.g. ABN Amro, Depfa) can lower U.S. concentration levels must be doubted.

10. SUBSIDIES

The entire history of the U.S. mortgage finance system is one of strong government intervention and subsidies. The love affair between the average U.S. household and their home has created vast political populism, which at least partly, if not wholly, is responsible for the cycles of gloom and glamour of the housing finance system.

So was the road to the hell of the savings & loan crisis, which costs 5% of U.S. GDP over 10 years to mop up, plastered with the good intentions of enabling the savings & loans to offer fixed-rate mortgage protection to consumers and bailing them out by allowing them new (commercial) sources of profits when the first strategy failed. Similarly, U.S. politicians tend to shrug off criticism of the Fannie Mae and Freddie Mac duopoly, which holds new financial stability dangers to the entire U.S. finance system, as 'anti-housing'. The potential fiscal costs due to another bailout of core institutions of the housing finance system could be in the triple hundred billion USD range – actuarial per annum costs of this form of risk amnesia could be in the range of 0.5%-1% of U.S. GDP.

Secondly, the mortgage interest deduction subsidy continues to be the engine of mortgage market growth and product innovation. The booming home equity loan product, although interesting for elderly or high-consumption households as such, would have been hardly thinkable without the lenient interest deduction loan volume limit of 1 million USD. Similarly, the costly prepayable fixed-rate mortgage benefits from the deduction, which with approx. 1% of GDP costs is the second largest federal subsidy after the medical insurance for the poor and elderly, Medicare. Other large subsidies include property tax and capital gains tax exemptions for first-time buyers.

Direct subsidies to low-income households, in contrast, have declined over the past decade. While FHA loan volume limits have been recently increasing again as the FHA tried to not loose high house price areas, the continued growth of the private subprime market and a reduced federal support for other HUD programs are diminishing the role of direct public assistance in the low-income mortgage market.

List of Acronyms

ABS . . . . .Asset-backed securities
ARM . . . . .Adjustable-rate mortgage
CMO . . . . .Collateralized Mortgage Obligation
FDIC . . . . .Federal Deposit Insurance Corporation (agency)
Fed .Federal Reserve System
FHA . . . . .Federal Housing Administration (agency)
FHLB . . . . .Federal Home Loan Banks (GSE)
FHLMC (Freddie Mac) . . . . .Federal Home Loan Mortgage Corporation (GSE)
FNMA (Fannie Mae) . . . . . .Federal National Mortgage Association (GSE)
FRM . . . . .Fixed-rate mortgage
GNMA (Ginnie Mae) . . . . . .Government National Mortgage Association (agency)
GSE . . . . .Government-sponsored enterprises (denoting Fannie Mae, Freddie Mac and the Federal Home Loan Banks).*
HUD . . . . .Department of Housing and Urban Development (government)
IO-ARM . . . . .Interest-only adjustable rate mortgage
MBAA . . . . .Mortgage Bankers Association of America (lobby group)
MBS . . . . .Mortgage-backed securities
OFHEO . . . . .Office of the Housing Enterprises Oversight (regulator)
PC .Pass-through certificates
RMBS . . . . .Residential mortgage-backed securities
SEC . . . . .Securities and Exchange Commission (regulator)
S&L .Savings and loan institutions (also called: thrifts)
VA .Veterans Administration (agency)

*Government-sponsored enterprises are privately owned corporations with implicit or explicit forms of government support (e.g. government guarantees, regulatory advantages). They are not to be confused with public agencies, although their securities issues are frequently called 'agency' bonds or MBS.