Autorité de Contrôle Prudentiel
Banque de France

Analyses et Syntheses

Housing finance in France in 2012

No. 18 – July 2013

Contents

Abstract

❑ In a context of declining housing sales and decreasing prices, the annual survey on housing finance carried out by the *Autorité de Contrôle prudentiel et de Résolution* (ACPR) recorded a 27.6% decrease in loans extended in 2012. Outstanding loans experienced their lowest annual growth since 2001 (+2.4%).

❑ The market remains characterised by strong fundamentals, in line with the assessments made by the Joint Forum[1] and the International Monetary Fund,[2] even though some risk indicators stabilised at high levels:

- In 2012, the maturity of new loans at origination remained similar to 2011 at 19.8 years. However, the effective maturity, which take early redemptions into account, increased by almost 5 months to 13.3 years;
- The proportion of the most indebted borrowers (i.e. with a debt service ratio above 35%) in the production decreased slightly in 2012 and the average debt service ratio was stable at 30.5%, although it remained at its highest level since 2001;
- Since 2005, the proportion of fixed-rate loans has increased to reach almost 90%. Uncapped floating-rate loans, which entail the highest risk for borrowers, only accounted for 3% of total loans at the end of 2012. Interest-only loans continued to represent a very scarce proportion of the production (0.44% in 2012);
- Almost every home loan is covered by a guarantee that has been issued by a credit institution or an insurance company in most cases;
- The average loan-to-value (LTV) ratio at origination, i.e. the amount of the loan for home buying to the property purchase price, decreased by almost 2 points as compared to 2011; nevertheless at 79.9%, it remained higher than its 2008 trough (75.5%).

❑ Several other trends deserve attention:

- The average loan amount increased faster than real estate prices in 2012, supposedly reflecting the continuing decline of interest rates over the year;
- The ratio of non-performing housing loans grew again in 2012, but, at 1.47%, it still remained below the average ratio of non-performing loans; nevertheless, delinquency rates vary significantly from one segment to another, owners-buyers as well as floating-rate loans exhibiting the highest levels;
- The average coverage ratio stabilised at 22% of specific allowances for loans to total gross impaired loans, a level still significantly lower than the average coverage ratio for all types of loans (51.5%);
- While banks benefit from borrowers frequently taking out insurance against death or work disability, they are still exposed to unemployment risk as only a small fraction of their customers has subscribed a job-loss insurance;
- The cost of risk on housing loans, which had continued to decrease in 2011 from its 2009 peak, rose by almost 50% in 2012, from 0.043% to 0.061% of gross outstanding loans, but it still remains at a very low level.

❑ In this context, the main market participants generally recorded a low to medium risk level.

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[1] *Mortgage insurance: market structure, underwriting cycle and policy implications*; August 2013

[2] *Housing prices and financial stability, Technical note*, June 2013 and *France, 2013 Article IV Consultation*, August 2013

❑ In 2012, the ACPR performed on-site examinations in French credit institutions. The purpose was to assess banks' strategies regarding housing finance, their underwriting standards and the quality of risk management. These audits highlighted that, despite noticeable improvements, risks monitoring and internal control still called for a strengthening.

❑ A significant downward adjustment cannot be excluded given the strong increase in property prices since 1998. Credit institutions thus must make sure that interest rates on housing loans fully take into account funding costs, operating expenses and expected cost of risk. They must also avoid aggressive pricing strategies so as to ensure healthy conditions of competition. Borrowers' debt service must stay limited to a reasonable proportion of their disposable income, and credit institutions have to pay attention to the LTV at origination as well as periodically thereafter. Finally, any excessive lengthening of loan maturities should be avoided.

Keywords: housing loans, loan amount, loan maturity, loan-to-value ratio, debt service ratio, first-time borrowers, owners-buyers, loan transfers, buy-to-let, non-performing loans, coverage ratio, interest rate margin
JEL classifications: G21, R21, R31

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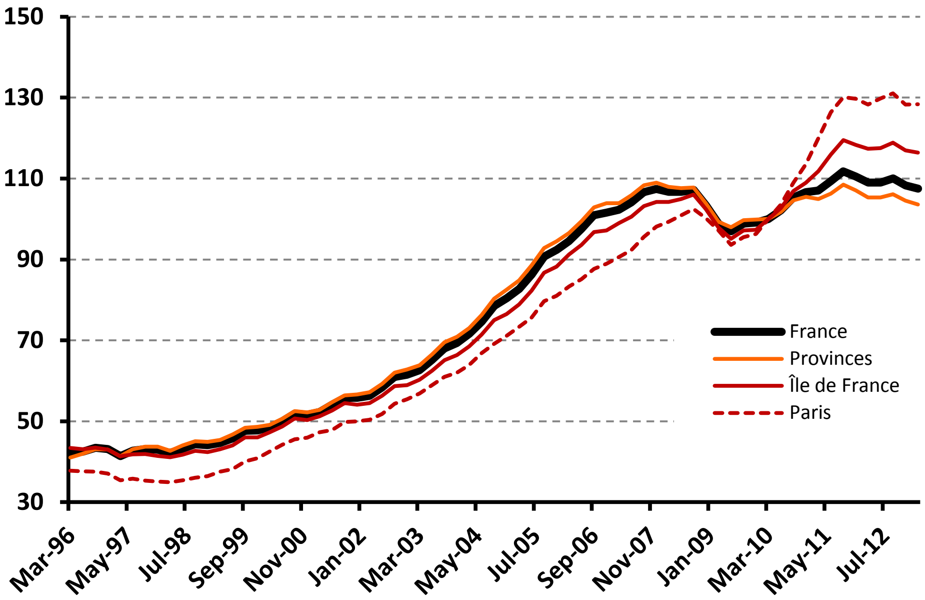
This study is based on the information collected through the annual survey of the ACPR as well as on the ACPR's monthly monitoring of housing loans flows, which was set up in September 2011.

1. Main features of the French housing market in 2012

1.1 Housing sales contracted in 2012 while prices trended slightly downwards

Following a 3.7% increase in 2011, residential property prices declined by 2% in 2012 for existing homes (Chart 1) –by far the main market segment as compared to new homes. The decrease was stronger in the provinces (-2.4%) than in *Île de France* (-1.1%). Nevertheless, the trend somewhat receded in the first quarter of 2013, with a year-on-year price contraction of only 1.4% in France as whole and a 0.1% rise in Paris alone.

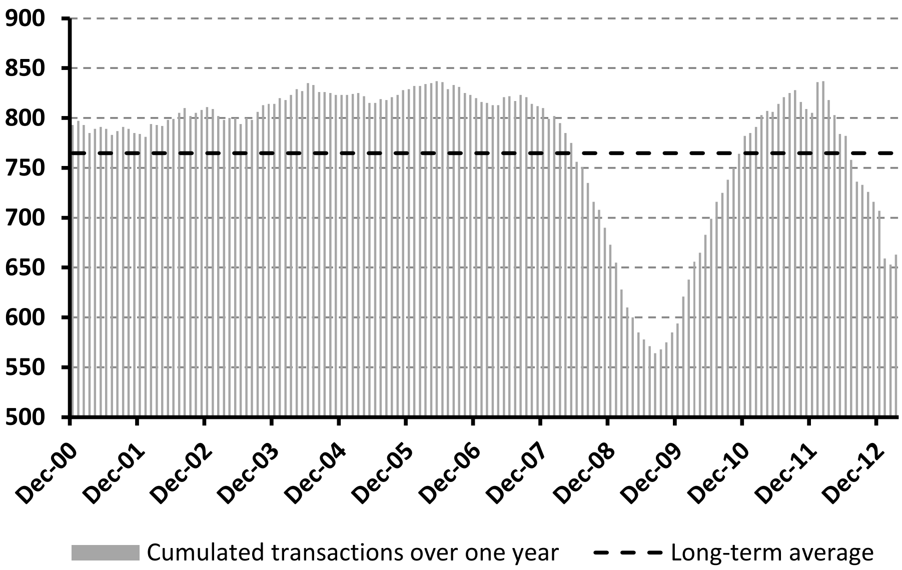
Chart 1
Prices for existing homes



Source: INSEE

The number of transactions for existing homes declined by 12.2% in 2012 (Chart 2). At the end of the year, only 707 000 transactions were recorded, a level significantly lower than the long-term average (764 583 units).

Chart 2
Transaction volumes on existing homes
(in thousands of units)

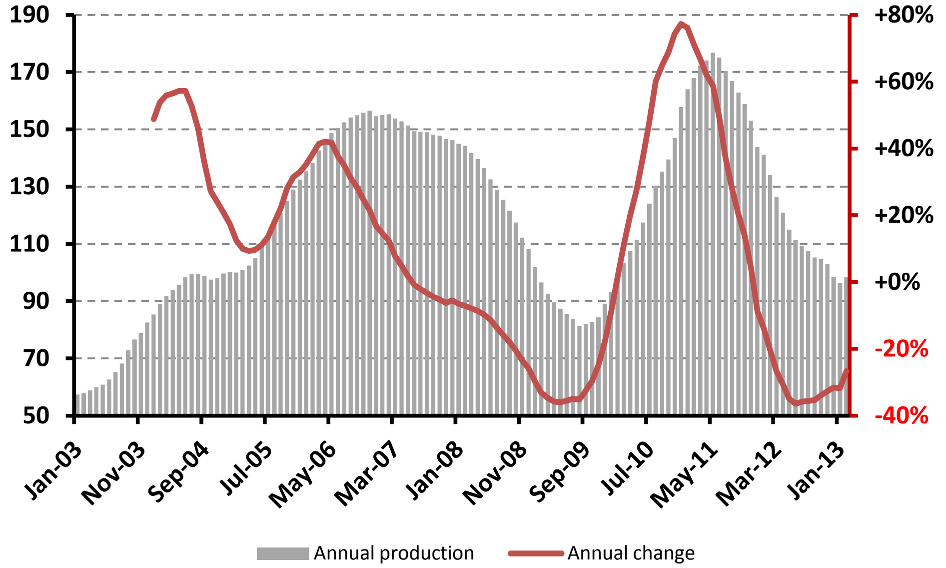


Source: CGEDD after Tax Department and notaries' databases

1.2 Loan production declined in 2012

Housing loans production decreased by 31.6% compared to 2011 at EUR 98.5 billion in 2012 (Chart 3).

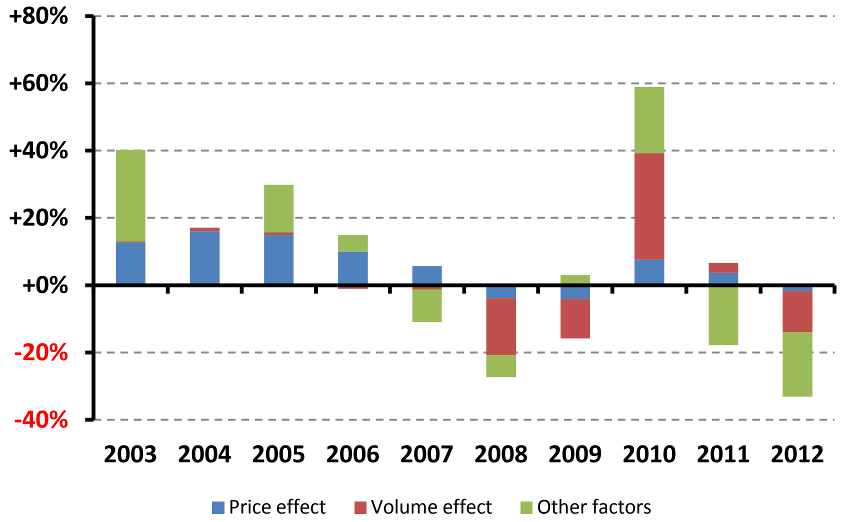
Chart 3
Housing loans production
(EUR billions)



Source: Banque de France – Monthly credit flows to French households cumulated over one year, all maturities, new contracts

Since 2011, housing loans production has been weakly correlated with market trends. Other factors than prices and volumes have accounted for the bulk of annual changes over the past two years (Chart 4). Production decrease reflected a still depressed demand (Chart 5), in spite of the continuous decline of interest rates which have reached unprecedented lows (see point 4 below), along with the tightening in banks' lending standards since 2011 (see point 5).

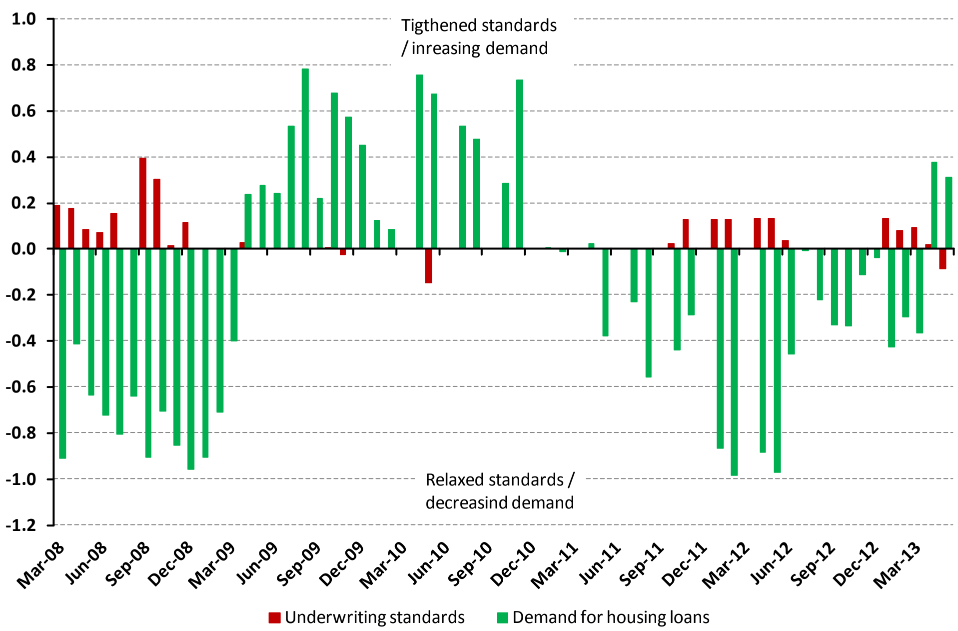
Chart 4
Housing loans production: annual change[3]



Sources: Banque de France; INSEE; CGEDD after Tax Department and notaries' databases; ACPR's calculations

[3] The annual change in loans production (p, in %) is supposed to reflect the annual change of property prices (i, in %, or price effect), the annual change on transactions (t, in %, measured on existing homes, or volume effect) and other factors (a, in %); the relationship between the four variables can be written as follows: $(1+p) = (1+i) \times (1+t) \times (1+a)$; Chart 4 displays i (in blue), t (in red), and a (in green; a is derived from the latter formula using values observed each year for p, i and t).

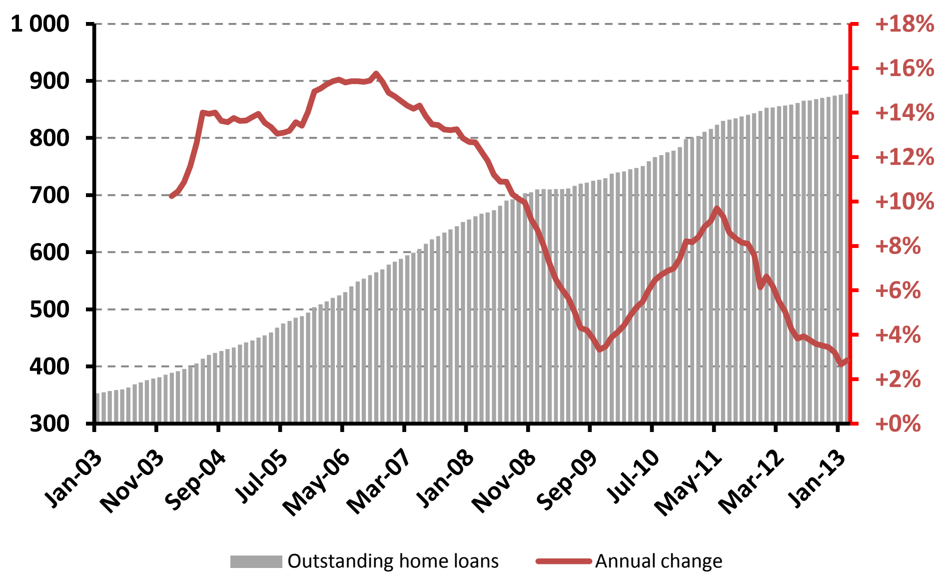
Chart 5
Lending standards and demand for housing loans



Source: Banque de France, monthly survey on bank lending conditions

Consequently, at the beginning of 2013, the annual growth rate of outstanding housing loans reached its lowest since 2003 (+2.8% in January). Housing loans amounted to EUR 877.8 billion in February 2013 (Chart 6).

Chart 6
Outstanding housing loans
(EUR billions)

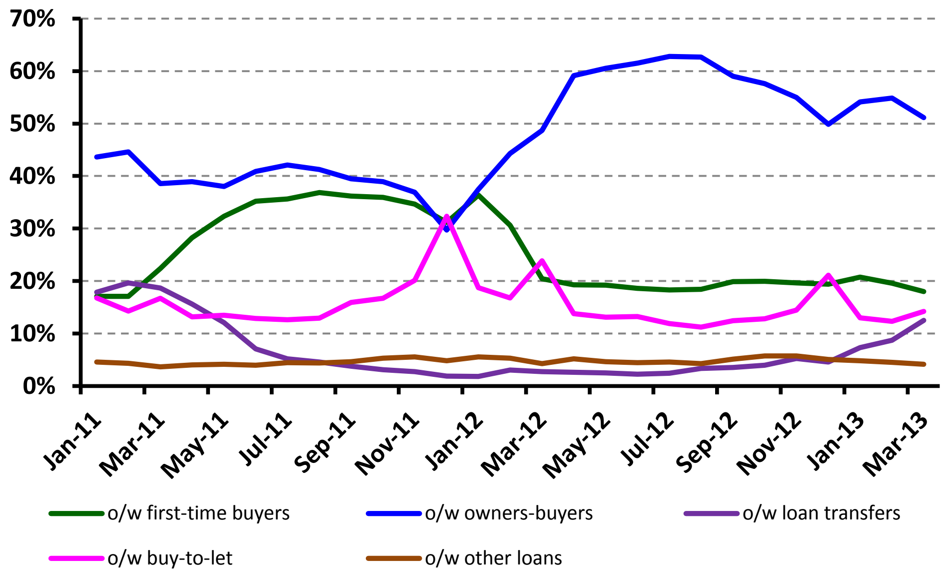


Source: Banque de France – Housing loans (including securitized loans), resident households and individual entrepreneurs (S14 and S15)

1.3 Credit activity was mainly fuelled by owners-buyers in 2012

The market was largely sustained by owners-buyers in 2012, i.e. households who already own a property that they intend to sell to buy another one. The ACPR's monthly monitoring of new housing loans shows that the share of first-time buyers in the overall production has stabilised at around 20% since mid-2012, after a significant decline at the beginning of last year due to the tightening of the criteria governing the eligibility for subsidised, interest-free loans (PTZ, *prêt à taux zéro*) (Chart 7). Besides, the low interest rates environment fostered a significant increase in loan transfers,[4] which accounted for 12.5% of the production in March 2013, a proportion 10 percentage points higher than in mid-2012.

Chart 7
New housing loans: breakdown by market segment

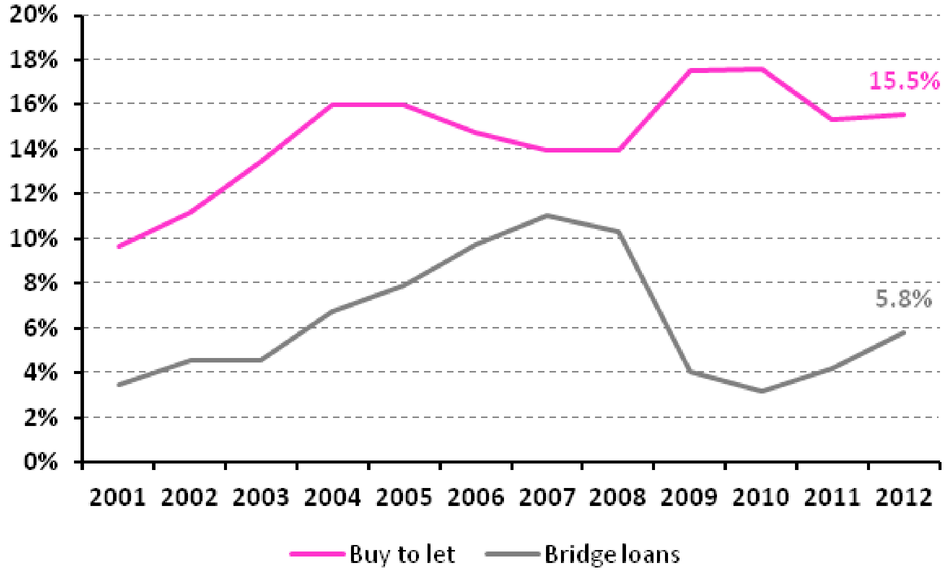


Source: ACPR's monthly monitoring

The share of loans for buy-to-let purposes stabilised at 15.5% at the end of 2012. The share of bridge loans remained lower than its 2007 peak, even if it has increased over the last two years: since the 2008 market correction, owners-buyers have generally preferred to sell their property before buying a new one (Chart 8).

[4] In a context of lower interest rates, fixed-rate borrowers have an incentive to renegotiate their credit conditions with their bank or to contract a new loan from a new bank. In this paper, loan transfer refers to the situation where borrowers switch to another bank so that there is an early redemption of their former loans.

Chart 8
Share of buy-to-let and bridge loans
(% of the yearly issuance of new loans)

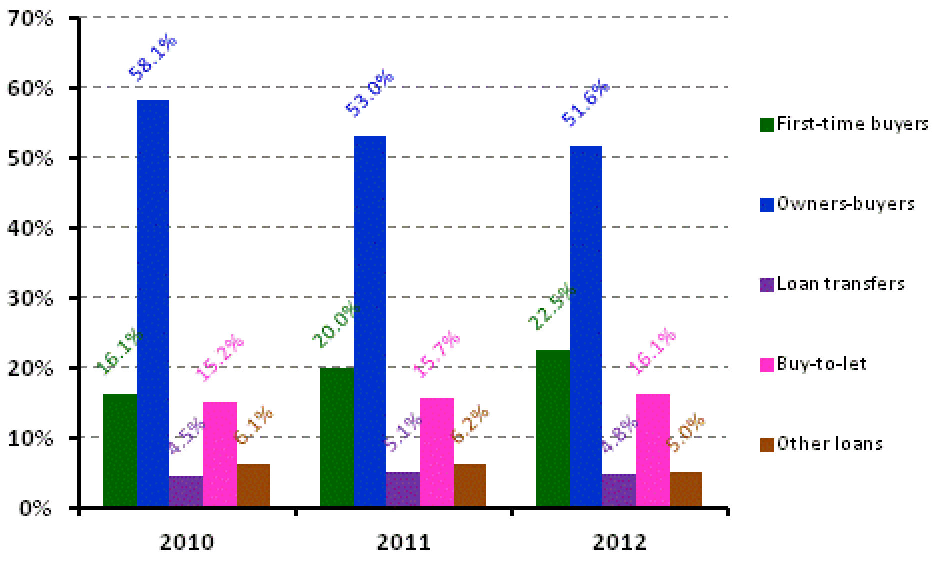


Source: ACPR's annual survey on housing finance and monthly monitoring

The breakdown of housing loans by location shows that the proportions of *Île de France* and the provinces in new loans remained stable, at around 25% and 75% respectively.

The breakdown by market segment is similar between new and outstanding loans. The acquisition of the permanent residence remains the primary motive of borrowers and accounts for almost three fourths of housing loans. Within this market segment, first-time buyers accounted for 22.5% of new loans in 2012 (Chart 9).

Chart 9
Outstanding housing loans: breakdown by market segment



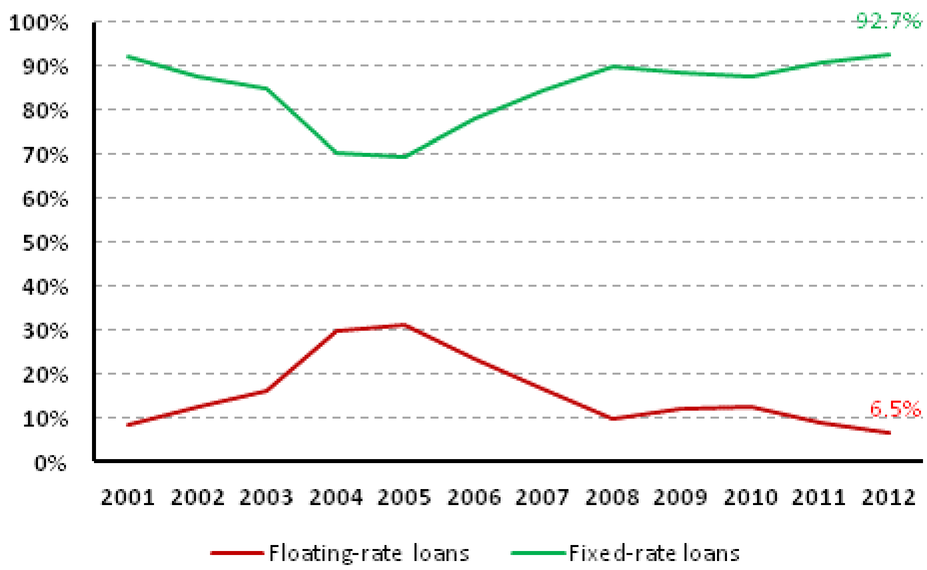
Source: ACPR's annual survey on housing finance

However, this breakdown has progressively evolved over the last years, as the proportion of first-time buyers has regularly risen since 2010 at the expense of owners-buyers.

1.4 Fixed-rate loans remain predominant

Since 2005, the proportion of fixed-rate loans in the production has kept growing to reach more than 90% in 2012 (Chart 10). Floating-rate loans thus have become even scarcer, gathering only 6.5% of the production in 2012, the vast majority of which (4%) bears a cap that preserves borrowers from excessive interest rate hikes.

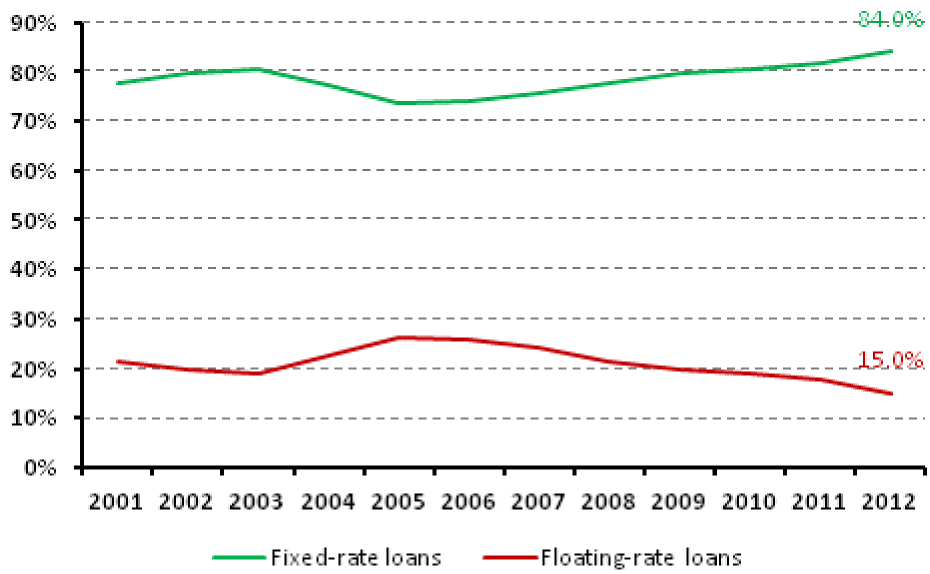
Chart 10
New housing loans: breakdown by interest rate type



Source: ACPR's annual survey on housing finance and monthly monitoring: housing loans that mix fixed and floating rates are not represented given their very low share

As a consequence, the proportion of fixed-rate loans in outstanding housing loans has almost regularly grown since 2001 to reach 84% at the end of 2012 (Chart 11). Conversely, uncapped floating-rate loans, which imply the highest risks for borrowers, represented no more than 3.8% of the loans amount at the end of 2012.

Chart 11
Outstanding loans breakdown by interest rate type

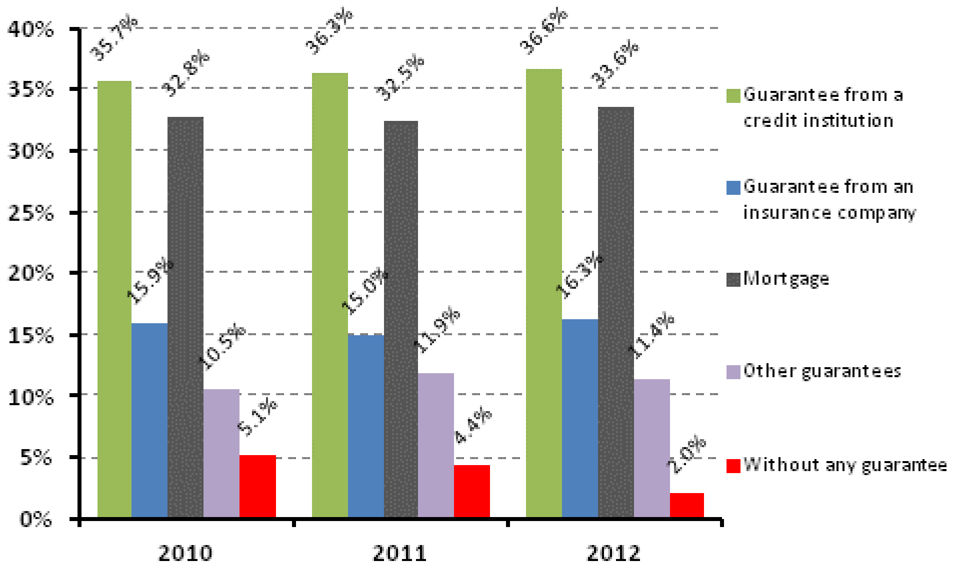


Source: ACPR's annual survey on housing finance; housing loans that mix fixed and floating rate are not represented given their very low share

1.5 Most of housing loans benefit from a guarantee

In 2012, 98% of outstanding loans were covered by a guarantee, a proportion that has increased since 2010 (Chart 12). Personal guarantees are predominant (52.9%) and are mainly issued by specialised credit institutions. Mortgages represent one third of outstanding housing loans.

Chart 12
Loans outstanding: breakdown by type of guarantee

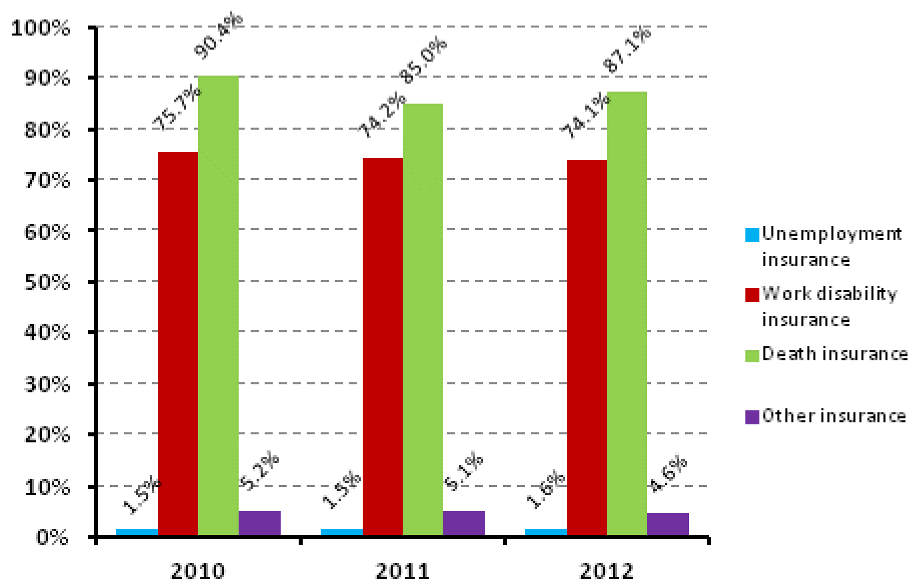


Source: ACPR's annual survey on housing finance

Other guarantees may encompass different types of collateral (securities portfolio, life insurance, savings accounts, cash deposits…), endorsements, the *Fonds de Garantie à l'Accession sociale* (FGAS; Social Purchase Guaranty Fund, a state-funded guarantee scheme for low income borrowers), rents delegations, etc.

Besides, the vast majority of borrowers are insured against work disability and death (Chart 13). On the contrary, unemployment insurance is very scarce, either because borrowers find it too expensive or because they feel they can find a new job before they would stop benefiting from the public unemployment insurance scheme (up to two years in general).

Chart 13
Share of borrowers covered by an insurance policy



Source: ACPR's annual survey on housing finance

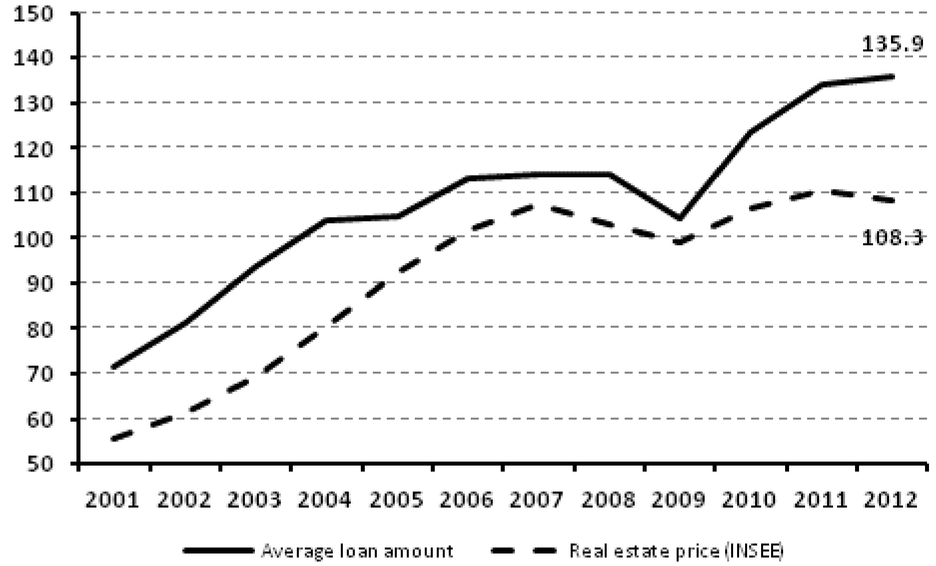
2. Borrowers' risk profile

As the bulk of housing loans bear a fixed- or a capped floating-rate, borrowers are largely covered against an interest rate rise. Consequently, the monitoring of underwriting standards is pivotal to ensure borrowers' solvency.

2.1 The average loan amount increased in 2012

In spite of decreasing property prices, the average loan amount grew slightly in 2012 to reach EUR 135 900 (Chart 14).

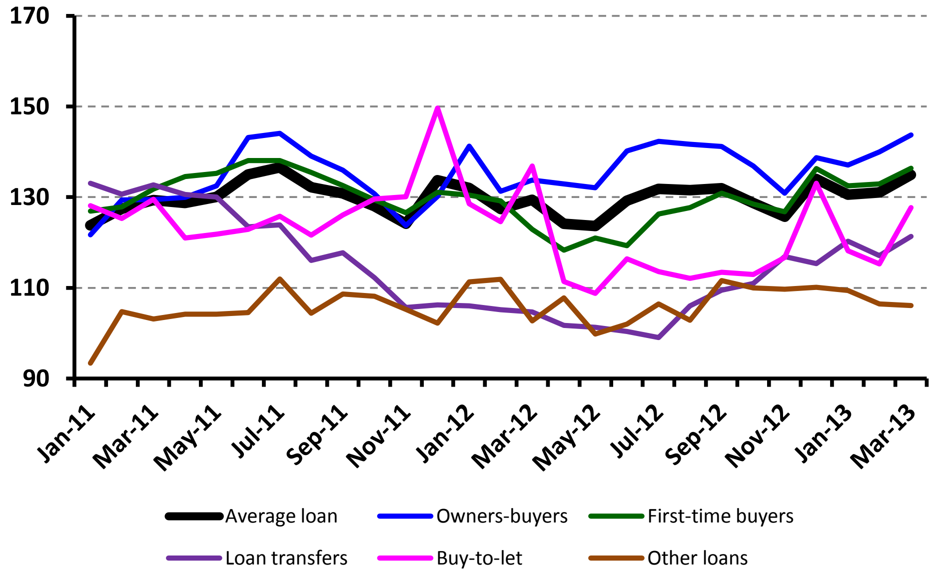
Chart 14
Average loan amount (EUR thousands) and real estate prices



Source: ACPR's annual survey on housing finance and monthly monitoring; INSEE (second hand price index, metropolitan France)

Data from the ACPR's monthly monitoring provide a more contrasted picture of the period starting from 2011: the average loan amount has fluctuated between EUR 120 000 and EUR 140 000 and came back to its July 2011 peak at the end of March 2013. This trend seems to be linked with the first-time buyers segment, which has risen since mid-2012, and loan transfers, which could relate to more recent loans with a larger amount (Chart 15).

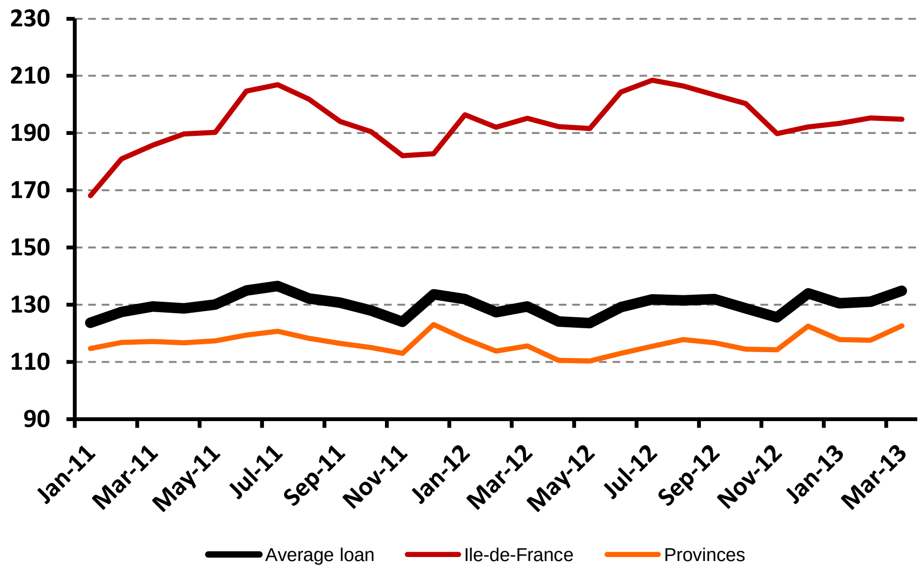
Chart 15
Average loan amount: breakdown by market segment
(EUR thousands)



Source: ACPR's monthly monitoring

Similarly, the average loan amount seems to have increased since mid-2012 in the provinces, back to its end-2011 level. The average loan amount fluctuated more in Île-de-France (Chart 17).

Chart 16
Average loan amount by region
(EUR thousands)



Source: ACPR's monthly monitoring

2.2 The maturity at origination remained stable but the effective maturity increased

Definitions

For a given housing loans vintage, the **initial maturity** is the loan weighted average of maturities as set up in the lending contracts at issuance.

The **effective maturity** is the loan weighted average of loans effective maturities, taking into account early redemptions.

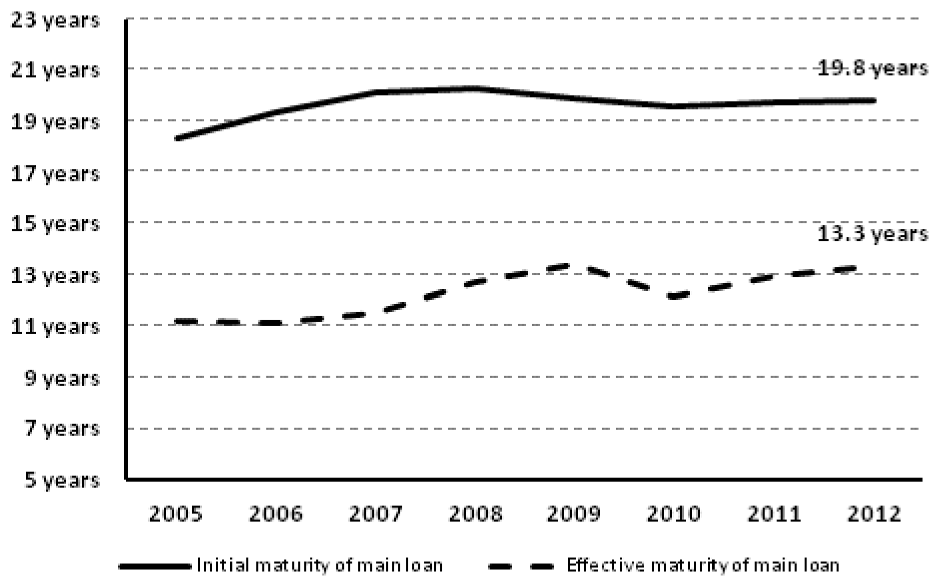
The **residual maturity** of a loan refers to its remaining expected life until its expiry date, as set up in the lending contract.

For most of French housing loans, the scheme of amortisation provides for the payment of constant monthly instalments comprising interest payments and capital redemptions. Interest-only loans account for a very modest part of the production (0.44 % in 2012).

In 2012, the initial maturity of loans for home buying purposes[5] remained stable as compared to 2011, at 19.8 years. Simultaneously, the effective maturity increased for the second consecutive year, from 12.9 to 13.3 years (Chart 17).

[5] As opposed to loans for home improvements and bridge loans.

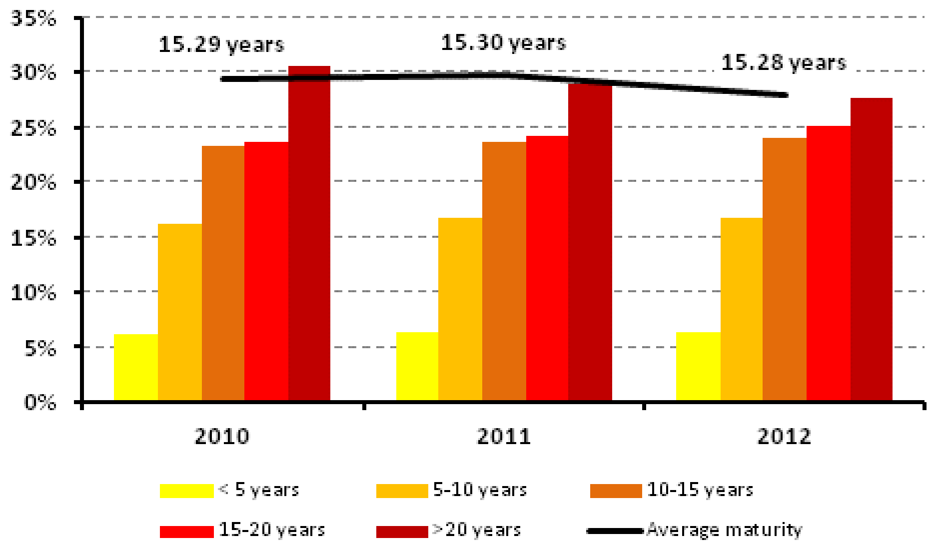
Chart 17
Housing loans: Initial and effective maturities



Source: ACPR's annual survey on housing finance and monthly monitoring

The residual maturity of outstanding loans has kept almost unchanged over the past three years (Chart 18): the 3 percentage points decrease that can be observed for loans with a residual maturity of more than 20 years was offset by the increase on the 15-20-year maturity band (+1.3 point) and, to a lesser extent, 10-15-year and 5-10-year maturity bands (respectively +0.8 and +0.5 percentage points).

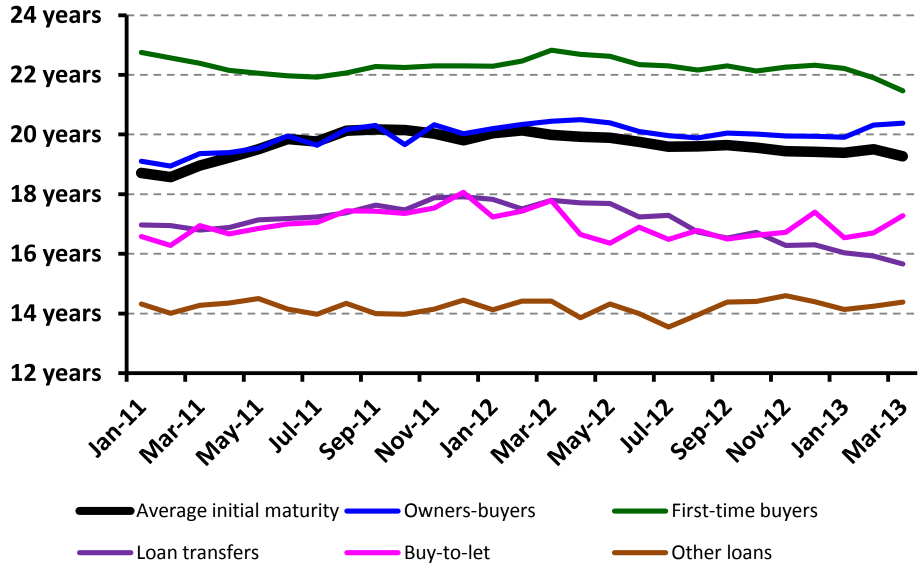
Chart 18
Breakdown of outstanding housing loans by residual maturity



Source: ACPR's annual survey on housing finance

The maturity of housing loans has remained almost stable for all market segments with the only exception of loan transfers since the end of 2011 (Chart 19).

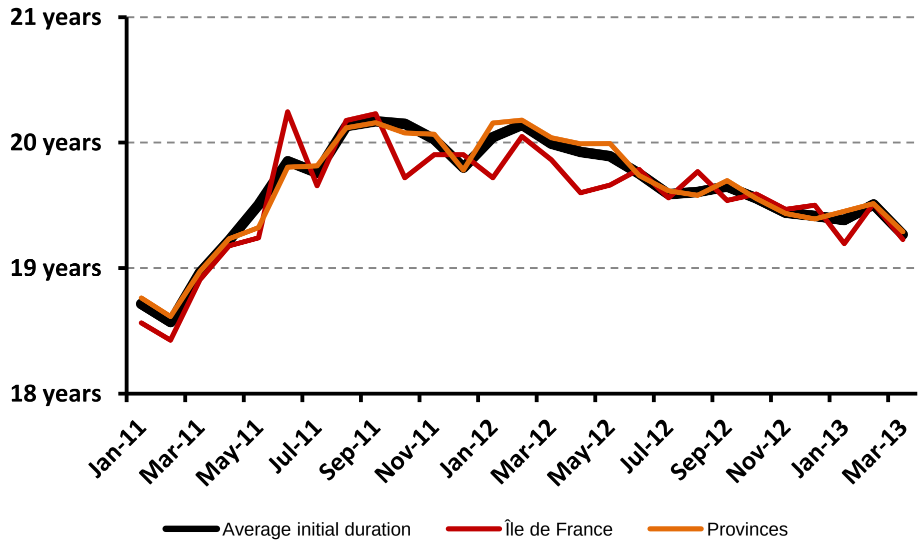
Chart 19
Average initial maturity by market segment



Source: ACPR's monthly monitoring

Île-de-France and the provinces show almost identical situations as far as loans maturity is concerned (Chart 20).

Chart 20
Average initial maturity by location



Source: ACPR's monthly monitoring

Finally, according to the qualitative data that banks reported in the survey, loans with the longest initial maturities (i.e. > 25 years) are generally granted to borrowers with the following details: they are younger than the average; they are mainly blue collars or employees; and they benefit from a subsidised *prêt à l'accession sociale* (PAS; loan for social purpose) along with a PTZ to buy a first property.

2.3 Decreasing average LTV

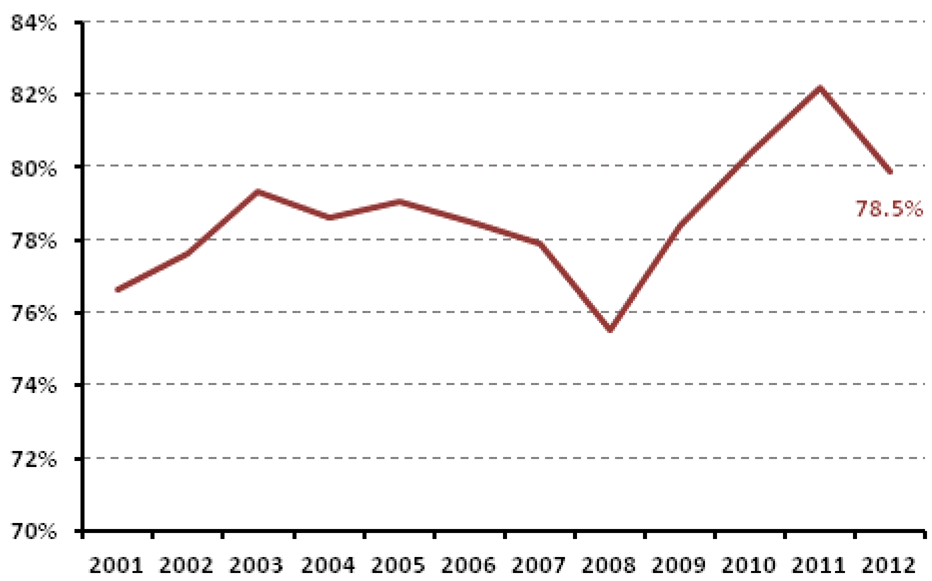
Definition

The loan to value (LTV) is the ratio between the amount of the loan for home buying and the purchased property price (excluding tax, notary fees or other administrative or registration fees).

In the ACPR's survey, credit institutions provide average LTVs by operation. LTV figures are weighted averages by loan amounts during a given period of time (month or year).

The average LTV at origination of housing loans improved slightly, from 82.2% in 2011 to 79.9% in 2012 (Chart 21). However, it remains at a higher level than in 2001.

Chart 21
Initial average LTV

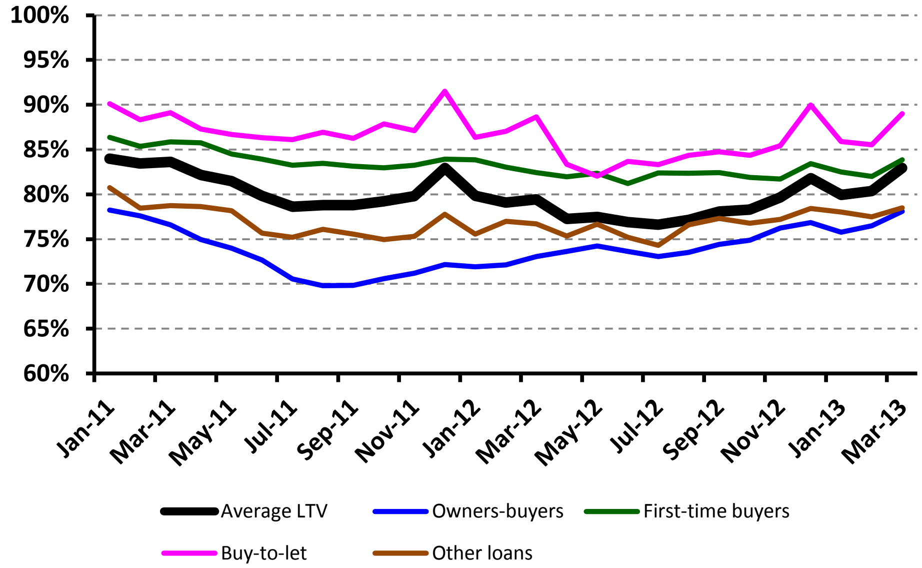


Source: ACPR's annual survey on housing finance and monthly monitoring

The rise of the buy-to-let share in the production of housing loans (Chart 7) only partially explains this long term trend,[6] which could also reflect the increasing proportion of first-time buyers in the production, since they generally provide lower down payments and have therefore above-the-average LTVs (Chart 22).

[6] Although a positive correlation can be observed between the two variables, the coefficient of determination between the proportion of buy-to-let loans in the production and the initial LTV level is only 0.24.

Chart 22
Average initial LTVs by market segment



Source: ACPR's monthly monitoring

The different market segments exhibit distinct developments. The buy-to-let segment shows the highest LTVs which reflect investors' interest in benefiting from tax incentives at full. This market segment is relatively seasonal, peaking up at the end of the years when most of the operations are sealed. For first-time buyers, LTV has slowly declined. On the contrary, it has increased almost steadily for owners-buyers since September 2011. Therefore, the gap between these two main market segments reached its lowest level in March 2013. Finally, at the end of March 2013, the overall average LTV came back to the relatively high level that it had reached at the beginning of 2011.

According to the qualitative data from the banks in the panel, loans exhibiting high LTVs mainly relate to:

- either the first buying of the permanent residence; it generally concerns young buyers, who are mainly blue collar workers or employees, with quite low incomes and little savings;
- or buy-to-let investments, for which the search for tax optimisation leads to an almost 100% leverage. In this case, borrowers are mainly intermediate or senior executives or liberal professions with high incomes.

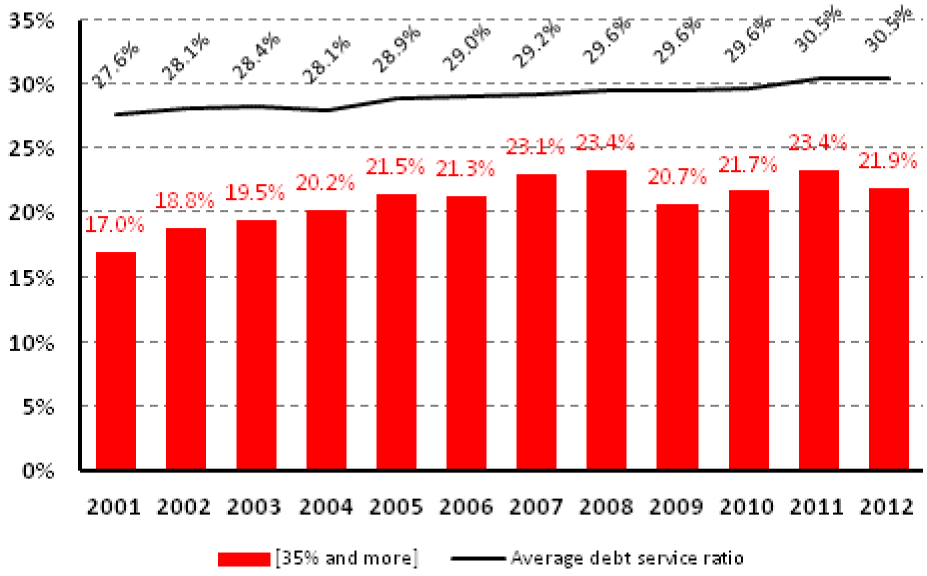
2.4 Stable average debt service ratio but decreasing proportion of the most indebted borrowers

Definition

The debt service ratio (DSR) is calculated by dividing all of the borrower's recurring expenses (including repayments of all loans) by the borrower's gross income. The ratio is measured at the issuance of the loan.

The households' average DSR reached 30.5% in 2012, just like in 2011 (Chart 23). The proportion of the most indebted borrowers (i.e. showing an initial DSR above 35%) in the production decreased a little bit in 2012 (-1.4 point).

Chart 23
Initial debt service ratio

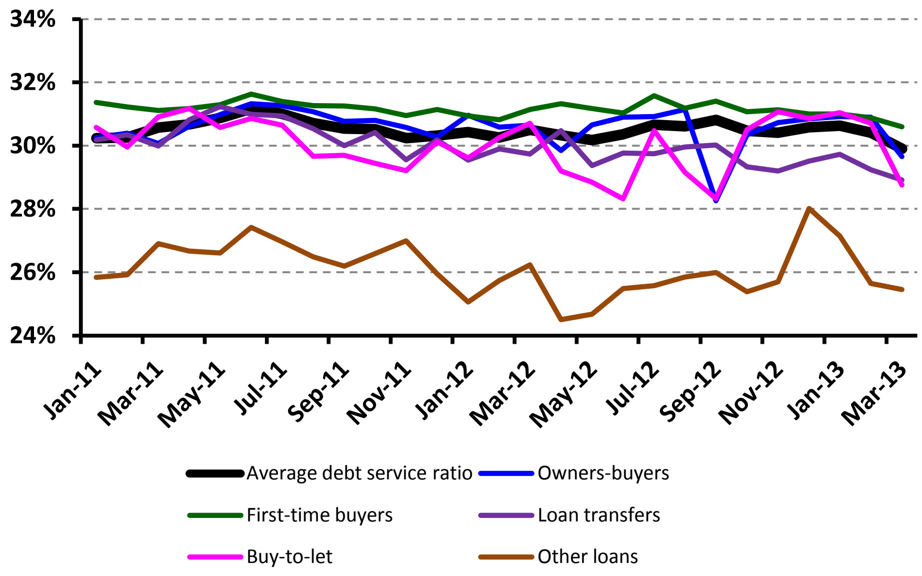


Source: ACPR's annual survey on housing finance and monthly monitoring

According to banks' qualitative data, loans with an initial DSR above 35% relate to high-net-worth individuals who engage, either directly or through special purpose companies, in buy-to-let investments. Nevertheless, if the correlation between the shares of the buy-to-let loans and of the most indebted borrowers in the production is positive, the coefficient of determination is only 0.35. Like LTV, the fluctuations of the share of borrowers experiencing a DSR above 35% could reflect the variability of the proportion of first-time buyers in the production.

With the exception of "other loans", DSRs are relatively homogeneous from one market segment to another (Chart 24).

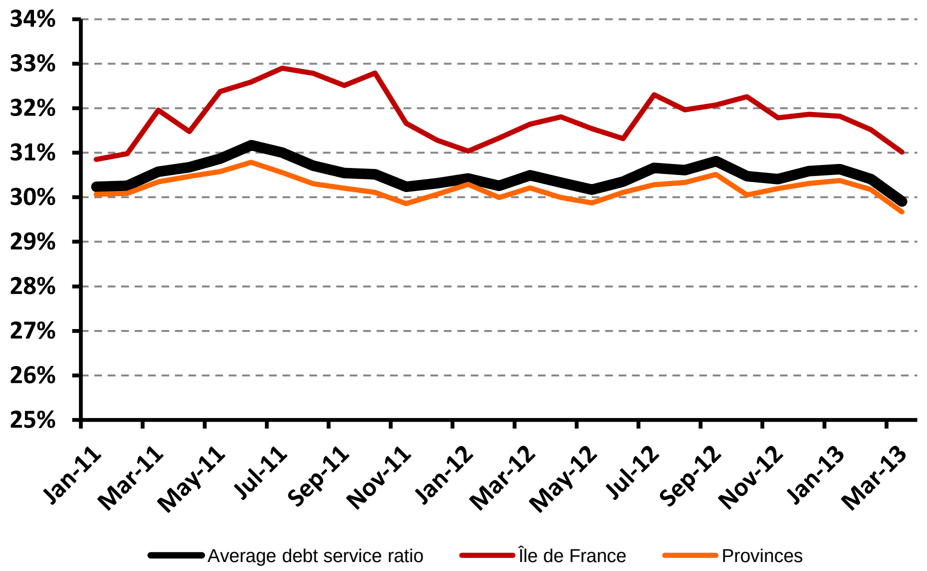
Chart 24
Average initial debt service ratio by market segment



Source: ACPR's monthly monitoring

DSRs in *Île-de-France* remain significantly higher than in the provinces, even if the gap has somewhat decreased compared to the second half of 2011 (Chart 25).

Chart 25
Average initial debt service ratio by region



Source: ACPR's monthly monitoring

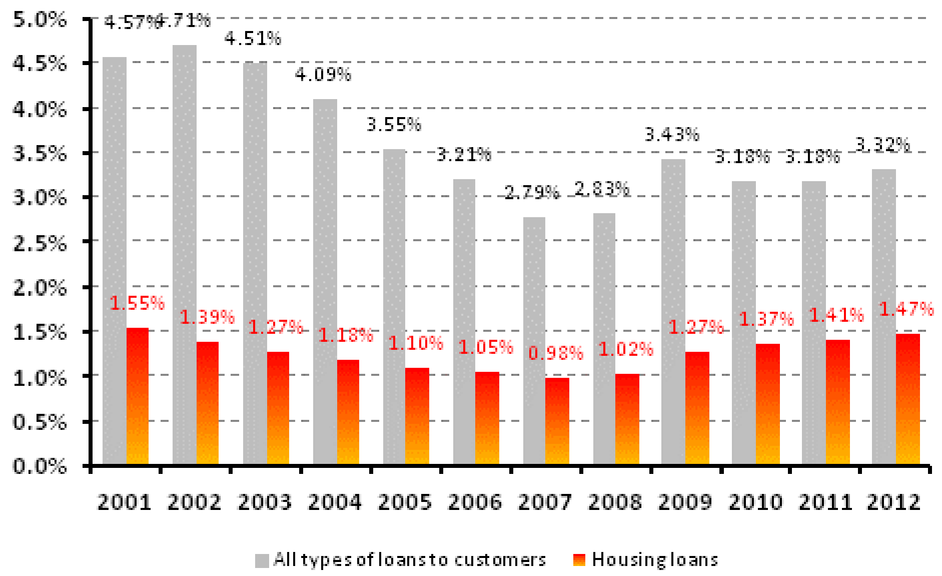
3. The NPL ratios and the cost of risk on housing loans increased in 2012

3.1 Non-performing loans and coverage ratios

3.1.1 The non-performing loan ratio grew in 2012

The non-performing loan (NPL) ratio[7] grew once again in 2012, reaching 1.47%, its second worst since 2001. However, it still remains largely below the average NPL ratio for all types of loans to non monetary financial institutions in France (Chart 26).

Chart 26
Non-performing loan (NPL) ratio

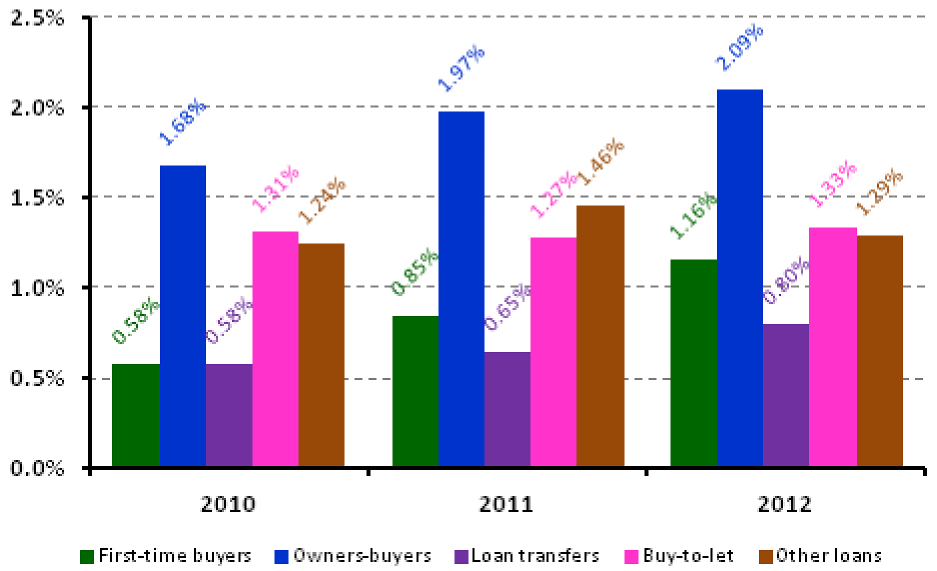


Source: ACPR's annual survey on housing finance

A closer look reveals differences across market segments. First-time buyers display the lowest NPL ratio, although it has doubled over the past three years. Conversely, owners-buyers experience the highest delinquency rate, which has furthermore increased since 2010. Loans for buy-to-let purposes record a lower NPL ratio than owners-buyers, and the ratio remains relatively stable over time (Chart 27).

[7] The non-performing loan ratio is defined as the gross amount of non-performing loans (i.e. before provisions) divided by the total loan amount (including gross non performing loans).

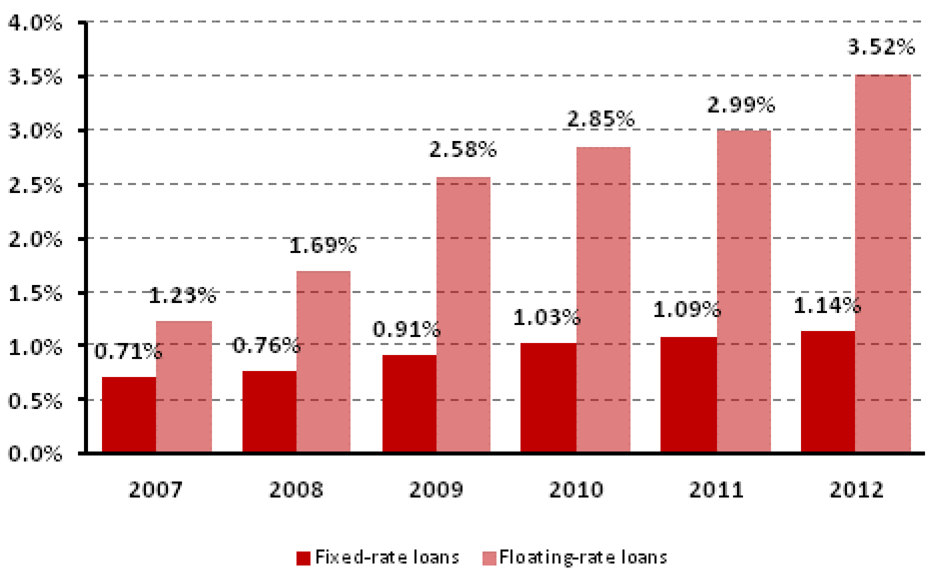
Chart 27
NPL ratio by market segment



Source: ACPR's annual survey on housing finance

In spite of decreasing long-term interest rates since mid-2008, floating-rate loans still show a higher NPL ratio than fixed-rate loans, which have also experienced a slower growth of NPL over time (Chart 28).

Chart 28
NPL ratio by interest rate type

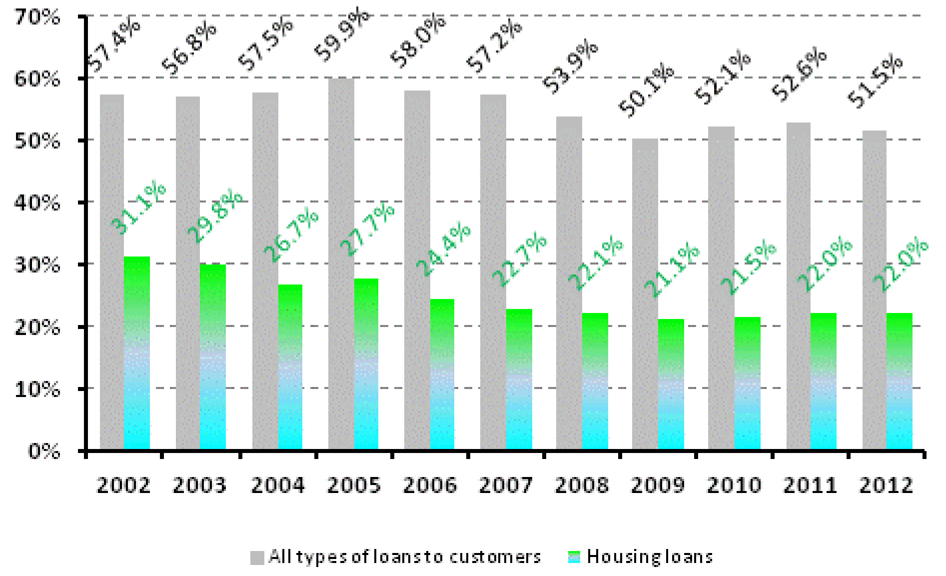


Source: ACPR's annual survey on housing finance

3.1.2 A stable coverage ratio

The coverage ratio of non-performing housing loans[8] remained stable in 2012, at 22%, a level almost unchanged since 2008. However, it is still much lower than the coverage ratio of NPL for all types of loans to non monetary financial institutions in France (Chart 29).

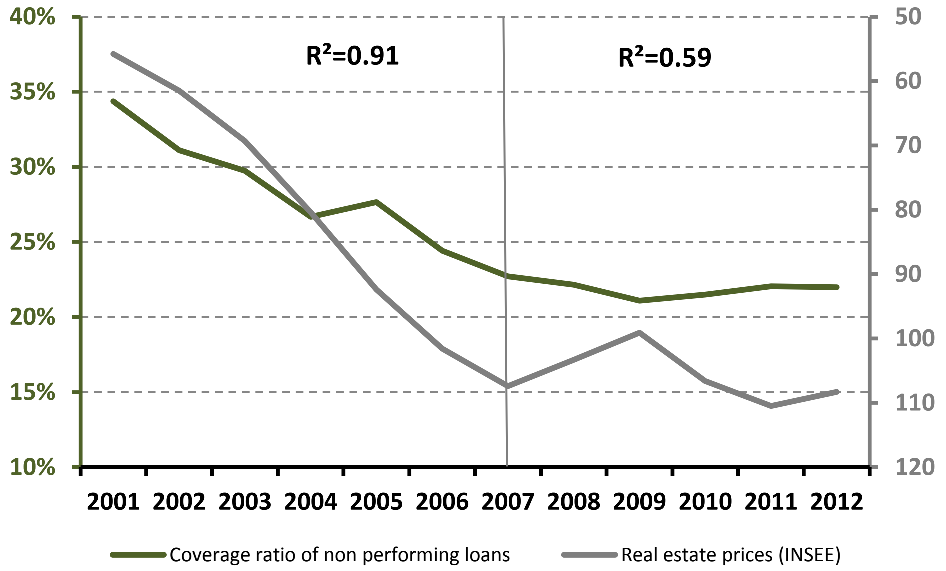
Chart 29
NPL coverage ratio



Source: ACPR's annual survey on housing finance and French credit institution's accouting data

In the long run, the coverage ratio of non-performing housing loans has decreased along with real estate prices growth (Chart 31; property prices are displayed using an inverse scale).[9] However, the correlation between the two indicators has somewhat lessened since 2007 (the coverage ratio slightly decreased in 2012 while real estate prices recorded a 2% decline).

Chart 30
Real estate prices* and the coverage ratio of non-performing housing loans



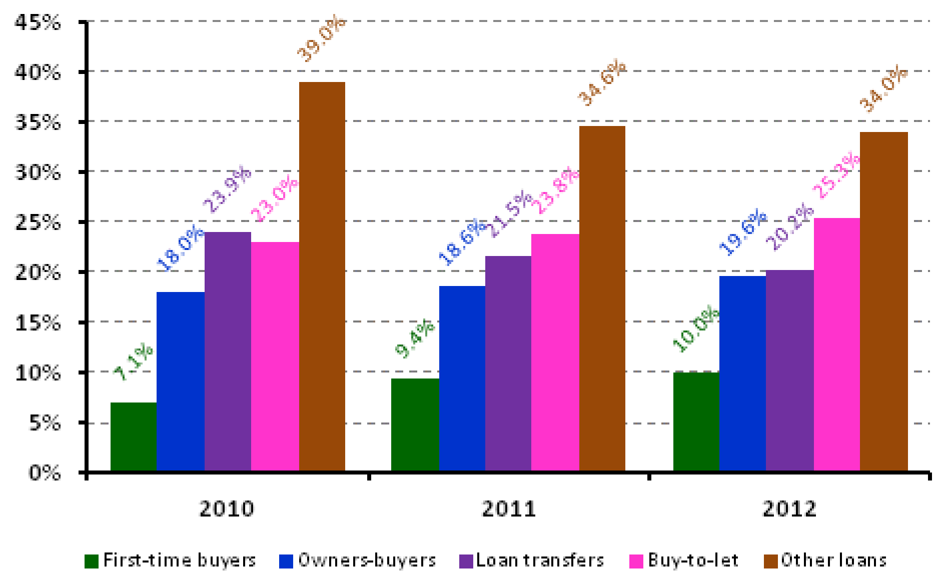
Source: ACPR's annual survey on housing finance; INSEE
**inversed scale*

[8] Defined as the ratio of specific allowances for loans to total gross impaired loans.

[9] It makes sense to seek a negative correlation between real estate prices developments -observed and anticipated- and the coverage ratio of non-performing loans since, in most cases, disputes are closed by selling the borrower's property.

Like for NPL ratios, a closer look at coverage ratios evidences significant differences across the different market segments (Chart 31).

Chart 31
NPL coverage ratios by market segment



Source: ACPR's annual survey on housing finance

The coverage ratio is extremely low for first-time buyers, a portion of the outstanding loans being insured by the FGAS (cf 1.5); nevertheless, coverage ratios on this segment range from 7.9% to 36.1% for the 8 credit institutions that provided this information at the end of 2012.

At the opposite side, the "other loans", which encompass (among others) second home financing, show a coverage ratio much higher than the average, even if it has decreased over the last three years. For the other segments, coverage ratios are closer to the average.

Finally, coverage ratios are very close for fixed- and floating-rate loans (Chart 32).

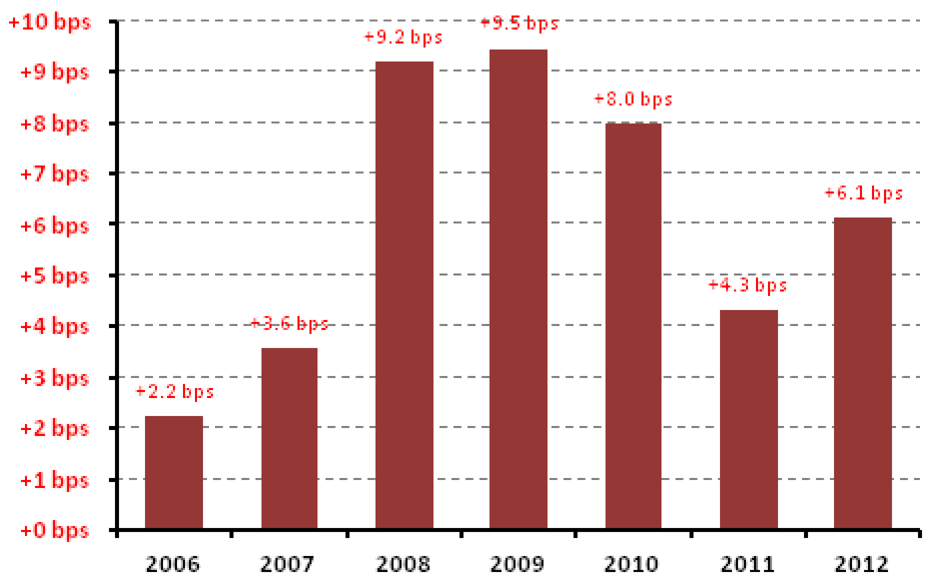
Chart 32
Coverage ratio by type of interest rate

Source: ACPR's annual survey on housing finance

3.2 After a steady decrease, the cost of risk rose in 2012

Compared to the previous year's outstanding housing loans, the cost of risk recorded a substantial increase, from 4.3 basis points (bps) in 2011 to 6.1 bps in 2012 (Chart 33).

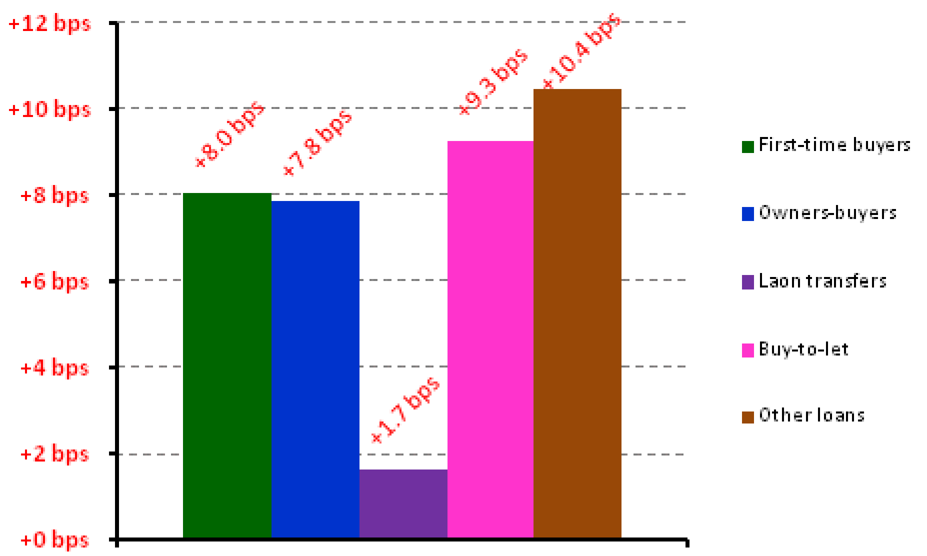
Chart 33
Cost of risk / previous year's outstanding loans



Source: ACPR's annual survey on housing finance

Apart from loan transfers, the cost of risk is relatively similar across market segments, even if slightly higher for buy-to-let and "other loans"; in that respect, it is worth noting that first-time buyers and owners-buyers are very close.

Chart 34
Cost of risk by market segment
(compared to previous year's outstanding loans)



Source: ACPR's annual survey on housing finance

3.3 Loans for permanent home buying were the most risky in 2012

The table below, which summarises the risk analysis for each market segment,[10] highlights that loans granted to buyers of their permanent house (either first-time buyers or owners-buyers) ranked at the top, both *ex ante* (first 4 criteria) and *ex post* (last 3 criteria). Moreover, risk appeared to be generally higher in *Île de France* than in the provinces.

Table 1
Risk level estimates for each market segment in 2012

	First-time buyers	Owners-buyers	Loan transfers	Buy-to-let	Other loans	Île de France	Provinces
Initial average loan amount	*0.71*	*0.86*	*0.29*	*0.57*	*0.14*	*1.00*	*0.43*
Initial average LTV	*0.71*	*0.29*	*1.00*	*0.86*	*0.43*	*0.14*	*0.57*
Initial average initial maturity	*1.00*	*0.86*	*0.43*	*0.29*	*0.14*	*0.71*	*0.57*
Initial average debt service ratio	*0.86*	*0.71*	*0.43*	*0.29*	*0.14*	*1.00*	*0.57*
Borrowers with a DSR over 35%	*0.50*	*1.00*		*0.75*	*0.25*		
Average 1	***0.76***	***0.74***	***0.54***	***0.55***	***0.22***		
NPL ratio	*0.60*	*1.00*	*0.20*	*0.80*	*0.40*		
Coverage ratio	*1.00*	*0.80*	*0.60*	*0.40*	*0.20*		
Cost of risk	*0.60*	*0.40*	*0.20*	*0.80*	*1.00*		
Average 2	***0.73***	***0.73***	***0.33***	***0.67***	***0.53***		
All criteria	**0.75**	**0.74**	**0.45**	**0.59**	**0.34**	**0.71**	**0.54**

Source: ACPR's annual survey on housing finance and monthly monitoring

Loans for buy-to-let purposes bore a slightly higher risk than the average. Loan transfers and "other loans" were the less risky segments.

[10] Methodology: *n* is the number of segments for which data are available for a given risk indicator (for example, « non-performing outstanding housing loans » data are available for 5 segments); for this indicator, the score *1/n* is attributed to the segment which shows the lowest risk level and 1 (or *n/n*) to the one which shows the highest risk level; the overall score of a segment is set as the arithmetical mean of its scores for each risk criterion.

4. Interest rates on housing loans decreased substantially in 2012

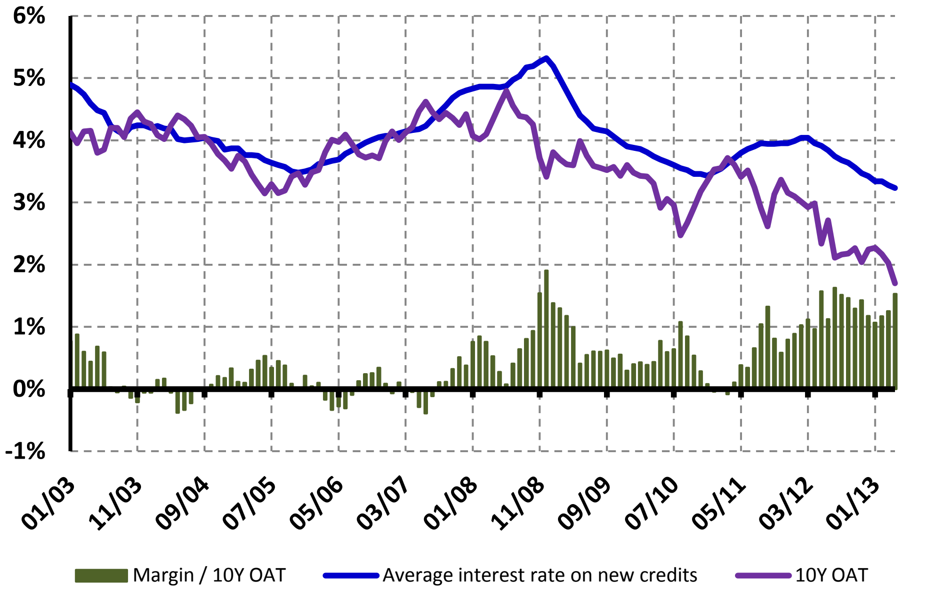
4.1 Interest rates on new housing loans declined consistently with long-term interest rates

After a rebound in 2010, interest rates on new housing loans have declined again since the beginning of 2012 along with long-term interest rates; they have reached their lowest level since 2003. However, the spread between interest rates on new housing loans and the risk-free rate (as represented by the 10-year French Treasury bond[11] (*Obligations Assimilables du Trésor*, OAT)) has widened and has come back to its end-2008 highs (Chart 35).

This reflects a material improvement of housing loans initial profitability compared to pre-crisis times when the OAT rate sometimes exceeded the yield on new loans. Nonetheless, the decrease of French state's borrowing rates is partly explained by a *flight-to-quality* phenomenon, from which banks' funding costs do not benefit in the same proportions.

Therefore, it is essential that the interest rates that banks charge on housing loans be rigorously set so as to take full account of the financing costs, the operating expenses and the expected cost of risk.

Chart 35
Interest rate margin on housing loans at origination



Source: Banque de France and ACPR's calculations

4.2 A stabilising margin on outstanding housing loans

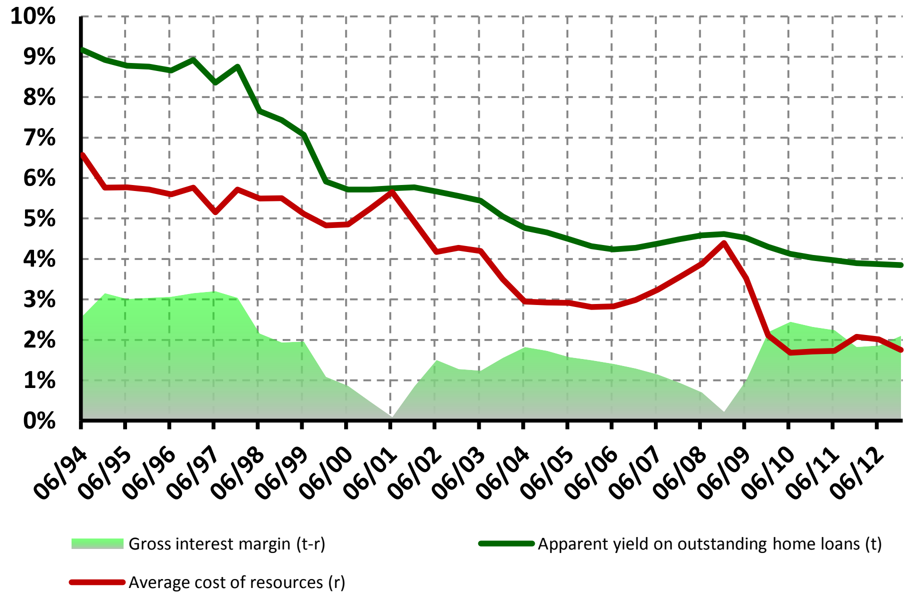
A complementary approach to monitoring spreads above the risk-free rate consists in looking at the interest incomes and expenses that have been effectively received and paid by credit institutions. This measure relates more closely to the profit and loss statement and provides an estimate of the interest margin on outstanding housing loans. Moreover, this approach does not make the difference between the intermediation margin (which would correspond to the interest margin on assets and liabilities with the same maturity) and the transformation margin (which would be generated by maturity mismatches).

[11] Almost all of the French housing loans follow a regular amortisation scheme (as opposed to bullet credits). Therefore, their duration is far shorter than the initial loan term. For example, the duration of a 20-year amortisable home loan bearing a 3% interest rate is about 9 years.

A high interest margin could reflect an excessive transformation that would expose the bank to a liquidity risk that the new Basel regulations (the Liquidity Coverage Ratio and the Net Stable Funding Ratio) aim to prevent.

The gross interest margin on the amount of outstanding housing loans, which is set as the difference between the apparent yield on outstanding loans and the average cost of resources, reached +2.10% at the end of 2012, above its long-term average (+1.78%); it grew by 28 basis points compared to 2011.

Chart 36
Gross interest margin on outstanding housing loans[12]



Source: credit institutions accounting data and ACPR's calculations

However, the apparent yield on outstanding housing loans, which is defined as the ratio of annualised interest income to the amount of housing loans, has followed a long term downward trend, which only stopped between mid-2006 and the end of 2008. At the end of 2012, it reached a new low at 3.85%, 5 bps lower than in 2011. In this context, the improvement in the interest margin ratio over the recent period stemmed exclusively from the decline of the cost of funding.

Furthermore, the gross interest margin as calculated above must be sufficient to cover the cost of equity, in addition to the operational costs and the expected/incurred cost of risk that were already referred to above.

[12] The gross interest margin on outstanding housing loans is set as the difference between the apparent yield on outstanding housing loans (*t*) and the average weighted cost of resources (*r*):

- *t* is defined as the ratio of the annual interest incomes on housing loans to the average housing loans amount for a given year;
- *r* is defined as the ratio of the annual interest expenses on interbank borrowing and deposits, customers' deposits and outstanding debt (including subordinated debt) to the average amount of interbank borrowing and deposits, customers' deposits and outstanding debt for a given year; annual interest expenses do not take into account interest incomes and expenses that might stem from asset and liability management.

The calculation of the gross interest margin on outstanding housing loans thus relies on the hypothesis that all type of liabilities participate in the funding of housing loans.

5. On-site audits findings

Considering the persistent risk of a downturn on the French real estate market, the ACPR performed horizontal on-site audits regarding housing finance in 2012 with a view to analyse the strategy of major market participants, their underwriting standards, and their risk management. In spite of some improvements, these audits evidenced that risk monitoring and internal control systems need to be further strengthened.

Credit institutions now build up on strategies associating more closely marketing development, risk control and profitability. Indeed, although housing loans are still regarded by banks as pivotal in attracting customers and winning over their loyalty, since 2011, banks have appeared to better account for borrowers' risks as well as the new liquidity constraints. Moreover, most credit institutions have tightened their underwriting standards and the credit process is generally well structured and properly monitored.

However, some audits showed there is still room for improvements:

- Credit policies sometimes appeared insufficiently stringent in some banks. Banks' customer advisors were sometimes given too large credit limits or the rules for authorising exceptions were insufficiently formalised or lacked homogeneity. In some cases, the systems of credit limits showed some inadequacies, with officers from the risk department being granted commercial delegations. In some other circumstances, information systems did not manage appropriately lending criteria, which thus could not be correctly controlled. Finally, some credit institutions excessively relied on guarantors' risk analysis, without performing their own independent assessment;
- If most of new loans are originated by banks' own networks, business providers sometimes also contribute to business activity. These providers were not always correctly accounted for in credit policies nor appropriately controlled. Furthermore, the autonomy that some banking groups granted to branches within their retail network often required a better formalisation of strategic orientations and stronger controls by the risk department;
- Operational risk was sometimes insufficiently monitored given the lack of indicators dedicated to housing finance and document frauds appeared material in some cases. This calls for an upgrading of both the lending processes and the associated internal controls;
- Finally, the ACPR's examinations confirmed internal audit findings regarding some systems' weaknesses to discriminate risks and to assign adequate credit scores.

Credit institutions need to better formalise and implement guiding principles regarding housing finance policies. Groups' strategies must be more strongly respected in the lending process. Banks must also improve the efficiency of their credit scores and strengthen their independent assessment of borrowers' risk.

In some banks, the process of placing loans in the non-performing category was not prompt enough and relied excessively on arrears thresholds. Moreover, some credit institutions displayed heterogeneous NPL coverage ratios across their different branches and recovery departments sometimes appeared insufficiently cautious regarding impairments amounts. In other cases, the systematic use of an insufficiently sophisticated statistical tool to determine impairments could have led to underestimate risk. Furthermore, for some institutions, collateral management needed to be improved by strengthening controls on the legal enforceability of claims on premises and by implementing periodic property appraisals. Imperfections in the calculations of regulatory parameters were also evidenced, calling for improvements in the measure of defaults in order to ensure adequate risk coverage.

Weaknesses were identified in the risk controls. Some credit institutions were required to build stronger Chinese walls between commercial units, credit risk departments and internal controls. They were also required to dedicate sufficient staff to risk functions and internal control.

In a situation where real estate prices reached historically high levels, it is essential that institutions maintain cautious underwriting standards and make sure that risks monitoring systems are constantly adequate. The ACPR will remain extremely vigilant on these key risk controls.

APPENDIX 1 – ACPR's monthly monitoring and 2012 annual survey – key indicators

New loans in 2012	Minimum	First quartile	Median	Third quartile	Maximum
Breakdown by market segment					
First-time buyers	2.2%	16.4%	**26.6%**	38.9%	47.2%
Owners-buyers	31.0%	36.6%	**50.7%**	19.4%	66.0%
Buy-to-let	3.9%	13.7%	**16.8%**	18.5%	20.7%
Loan transfers	0.8%	2.9%	**3.1%**	4.1%	6.9%
Bridge loans	3.6%	4.8%	**5.8%**	8.7%	31.4%
Other loans	0.7%	3.4%	**4.5%**	6.7%	19.4%
Average loan amount (EUR thousands)	99 kEUR	131 kEUR	**145 kEUR**	166 kEUR	232 kEUR
Breakdown by type of interrest rate					
Uncapped floating-rate loans	0.0%	0.0%	**0.3%**	1.4%	5.7%
Floating-rate loans with constant instalments	0.0%	0.0%	**0.0%**	0.2%	78.6%
Capped floating-rate loans	0.0%	0.1%	**5.8%**	12.0%	63.9%
Fixed-rate loans	21.1%	87.3%	**96.0%**	96.8%	99.3%
Others	0.0%	0.0%	**0.2%**	2.5%	12.7%
Outstanding loans	**Minimum**	**First quartile**	**Median**	**Third quartile**	**Maximum**
Breakdown by market segment					
First-time buyers	0.2%	15.7%	**22.2%**	28.6%	47.1%
Owners-buyers	33.6%	39.9%	**46.9%**	53.0%	77.0%
Buy-to-let	6.8%	11.6%	**18.4%**	20.3%	23.3%
Loan transfers	0.0%	0.1%	**4.7%**	6.2%	9.2%
Other loans	0.6%	2.6%	**4.8%**	18.3%	13.3%
Breakdown by type of interrest rate					
Uncapped floating-rate loans	0.0%	0.0%	**0.0%**	1.8%	14.5%
Floating-rate loans with constant instalments	0.0%	0.0%	**0.0%**	2.9%	64.0%
Capped floating-rate loans	0.0%	0.4%	**6.2%**	8.9%	21.2%
Fixed-rate loans	29.0%	79.1%	**89.6%**	92.8%	99.6%
Others	0.0%	0.0%	**0.3%**	1.4%	7.1%
Breakdown by residual maturity					
< 5 years	3.6%	5.7%	**6.2%**	6.7%	8.3%
5-10 years	9.5%	15.7%	**16.4%**	20.1%	22.8%
10-15 years	15.1%	22.9%	**25.3%**	28.1%	8.3%
15-20 years	19.8%	23.8%	**24.9%**	28.2%	31.4%
Over 20 years	12.5%	18.8%	**25.1%**	30.6%	50.3%
Average residual maturity	13.5 ans	14.1 ans	**14.6 ans**	15.9 ans	19.3 ans
Type of guarantee					
Guarantee from a credit institution	0.0%	29.0%	**41.7%**	65.3%	79.6%
Guarantee from an insurance company	0.0%	0.0%	**2.0%**	15.8%	64.9%
Mortgage	14.3%	24.0%	**30.6%**	48.1%	79.6%
Other guarantee	0.0%	5.0%	**8.3%**	9.6%	36.1%
Without any guarantee	0.0%	0.4%	**1.3%**	2.6%	8.4%
% of borrowers who are covered by an insurance					
Unemployment insurance	0.0%	0.0%	**0.1%**	19.7%	29.6%
Work disability insurance	48.2%	56.2%	**74.3%**	88.6%	99.7%
Death insurance	64.5%	81.5%	**88.2%**	99.1%	100.0%
Other insurance	0.0%	0.0%	**0.0%**	19.7%	25.8%

Risk measure	Minimum	First quartile	Median	Third quartile	Maximum
Initial average LTV	64.6%	76.5%	**81.1%**	84.0%	91.5%
Initial debt service ratio					
35% and more	1.4%	20.2%	**25.2%**	30.8%	39.9%
Average initial debt service ratio	24.8%	29.3%	**30.8%**	32.7%	34.4%
Loan maturity (average)					
Initial maturity of lain loan	16.3 ans	18.0 ans	**18.8 ans**	20.1 ans	26.1 ans
Effectife maturity of main loan	4.1 ans	6.2 ans	**7.4 ans**	11.0 ans	18.8 ans
Effectife maturity of bridge loan	0.4 ans	0.7 ans	**1.1 ans**	1.6 ans	2.8 ans
NPL and coverage ratios					
NPL ratios	*0.26%*	*0.89%*	***1.42%***	*2.17%*	*4.28%*
- o/w fixed-rate loans	*0.22%*	*0.66%*	***1.34%***	*2.07%*	*2.59%*
- o/w floating-rate loans	*0.71%*	*1.18%*	***3.02%***	*6.52%*	*6.65%*
- o/w first-time buyers	*0.19%*	*0.54%*	***0.78%***	*1.50%*	*3.02%*
- o/w owners-buyers	*0.26%*	*0.90%*	***2.33%***	*2.76%*	*6.71%*
- o/w loan transfers	*0.00%*	*0.12%*	***0.31%***	*0.87%*	*1.39%*
- o/w buy-to-let	*0.00%*	*0.39%*	***1.01%***	*2.32%*	*2.99%*
- o/w other loans	*0.00%*	*0.23%*	***0.68%***	*2.72%*	*23.79%*
Coverage ratios	*2.74%*	*13.63%*	***29.77%***	*30.54%*	*51.11%*
- o/w fixed-rate loans	*2.73%*	*8.63%*	***17.98%***	*29.20%*	*36.54%*
- o/w floating-rate loans	*2.83%*	*14.56%*	***24.36%***	*29.54%*	*32.99%*
- o/w first-time buyers	*3.83%*	*10.25%*	***13.25%***	*21.48%*	*36.15%*
- o/w owners-buyers	*2.74%*	*11.87%*	***18.93%***	*22.60%*	*30.87%*
- o/w loan transfers	*2.47%*	*10.30%*	***10.42%***	*27.96%*	*29.17%*
- o/w buy-to-let	*3.82%*	*10.83%*	***18.08%***	*35.77%*	*39.63%*
- o/w other loans	*1.74%*	*7.99%*	***24.68%***	*28.89%*	*49.33%*
Cost of risk					
Cost of risk / Y-1 outstanding loans	-0.04%	0.03%	0.06%	0.09%	0.17%

APPENDIX 2 – ACPR's housing finance annual survey – Historical data

1. New loans

	Representativeness	31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
Home loans production (EUR millions)		**60,570**	**73,290**	**94,855**	**112,207**	**135,209**	**154,178**	**155,413**	**124,441**	**107,556**	**164,248**	**155,661**	**109,212**
o/w buy-to-let	71%	*9.66%*	*11.19%*	*13.47%*	*16.02%*	*16.01%*	*14.72%*	*13.97%*	*13.92%*	*17.52%*	*17.60%*	*15.37%*	*15.55%*
o/w bridge loans	76%	[redacted]						*3.58%*	*3.78%*	*3.96%*	*8.31%*	*9.33%*	*3.16%*
o/w loan transfers	89%	*3.48%*	*4.57%*	*4.58%*	*6.78%*	*7.94%*	*9.75%*	*11.02%*	*10.30%*	*4.08%*	*3.15%*	*4.17%*	*5.79%*
Average loan amount (EUR thousands)	100%	**72**	**81**	**94**	**104**	**105**	**113**	**114**	**114**	**104**	**123**	**134**	**136**
(Breakdown by interest rate type)													
Floating-rate loans	90%	4.3%	6.9%	7.6%	10.7%	7.1%	8.2%	9.0%	3.8%	1.0%	1.2%	0.7%	1.4%
Floating-rate with fixed instalments	90%	0.1%	0.1%	0.2%	0.2%	3.2%	1.8%	0.9%	0.5%	1.0%	0.2%	0.0%	1.1%
Capped floating-rate loans	90%	3.8%	5.5%	8.3%	18.7%	20.8%	13.3%	6.8%	5.3%	10.2%	11.0%	8.2%	4.0%
Fixed-rate loans	90%	92.0%	87.7%	84.7%	70.2%	69.2%	78.0%	84.3%	90.1%	88.6%	87.8%	91.0%	92.7%
Others	90%	0.1%	0.1%	0.2%	0.2%	0.1%	0.1%	0.0%	2.6%	1.1%	1.1%	1.5%	1.2%

2. Outstanding loans

(EUR millions)		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
Outstanding home loans excluding NPL		**254,518**	**293,377**	**327,632**	**370,473**	**429,353**	**494,446**	**560,921**	**607,147**	**634,288**	**672,877**	**714,637**	**739,504**
2.1 Breakdown by market segment													
o/w first-time buyers	66%	[redacted]									*16.10%*	*19.99%*	*22.54%*
o/w owners-buyers	66%										*58.10%*	*52.97%*	*51.57%*
o/w loan transfers	66%										*4.54%*	*5.15%*	*4.75%*
o/w buy-to-let	66%										*15.18%*	*15.66%*	*16.09%*
o/w other credits	66%										*6.08%*	*6.23%*	*5.05%*
Breakdown by interest rate type													
Floating-rate loans	78%	9.6%	9.1%	8.4%	8.7%	7.7%	9.2%	7.6%	6.6%	5.5%	4.5%	3.3%	3.8%
Floating-rate with fixed instalments	78%	0.0%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	5.9%
Capped floating-rate loans	78%	12.0%	10.8%	10.6%	13.6%	18.2%	16.4%	16.5%	14.6%	14.1%	14.6%	14.3%	5.3%
Fixed-rate loans	78%	77.8%	79.6%	80.5%	77.4%	73.7%	74.2%	75.7%	77.8%	79.7%	80.5%	82.0%	84.0%
Others	78%	0.6%	0.4%	0.4%	0.2%	0.2%	0.1%	0.1%	0.8%	0.5%	0.4%	0.3%	0.9%

2.3 Breakdown by residual maturity

		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
> 5 years	66%	[redacted]									6.2%	6.4%	6.4%
5-10 years	66%										16.3%	16.7%	16.8%
10-15 years	66%										23.3%	23.7%	24.1%
15-20 years	66%										23.7%	24.3%	25.1%
Over 20 years	66%										30.5%	29.0%	27.7%
Average residual maturity	66%	[redacted]									15.3 ans	15.3 ans	15.3 ans

2.4 Type of guarantees

		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
Guarantee from a credit institution	66%	[redacted]									35.7%	36.3%	36.6%
Guarantee from an insurance company	66%										15.9%	15.0%	16.3%
Mortgage	66%										32.8%	32.5%	33.6%
Other guarantee	66%										10.5%	11.9%	11.4%
Without any guarantee	66%										5.1%	4.4%	2.0%

3. Risk measure

LTV		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
Initial average LTV	75%	75.65%	76.59%	78.28%	77.60%	78.01%	77.51%	76.88%	74.56%	77.36%	79.32%	81.15%	78.50%

Initial debt service ratio

		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
[35% and more[	54%	17.0%	18.8%	19.5%	20.2%	21.5%	21.3%	23.1%	23.4%	20.7%	21.7%	23.4%	21.9%
Average loan amount (EUR thousands)	54%	27.6%	28.1%	28.4%	28.1%	28.9%	29.0%	29.2%	29.6%	29.6%	29.6%	30.5%	30.5%

Loan maturity (weighted average)		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
Initial maturity of main loan	43%	[redacted]				18.34 ans	19.37 ans	20.10 ans	20.27 ans	19.91 ans	19.60 ans	19.76 ans	19.80 ans
Effective maturity of main loan	43%	[redacted]				11.21 ans	11.10 ans	11.49 ans	12.67 ans	13.40 ans	12.15 ans	12.89 ans	13.33 ans
Effective maturity of bridge loan	61%	[redacted]				0.28 ans	0.31 ans	0.61 ans	0.75 ans	0.71 ans	1.39 ans	1.38 ans	1.11 ans

3.2 Nonperforming loans

		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
NPL ratio	99%	**1.55%**	**1.39%**	**1.27%**	**1.18%**	**1.10%**	**1.05%**	**0.98%**	**1.02%**	**1.27%**	**1.37%**	**1.41%**	**1.47%**
o/w fixed-rate loans	99%	[redacted]						*0.71%*	*0.76%*	*0.91%*	*1.03%*	*1.09%*	*1.14%*
o/w floating-rate loans	99%	[redacted]						*1.23%*	*1.69%*	*2.58%*	*2.85%*	*2.99%*	*3.52%*
Coverage ratio	99%	**34.36%**	**31.11%**	**29.75%**	**26.68%**	**27.66%**	**24.42%**	**22.72%**	**22.15%**	**21.08%**	**21.50%**	**22.04%**	**21.99%**
o/w fixed-rate loans	66%	[redacted]						*25.15%*	*22.34%*	*19.51%*	*19.91%*	*19.30%*	*19.47%*
o/w floating-rate loans	66%	[redacted]						*22.42%*	*21.91%*	*18.52%*	*19.28%*	*20.25%*	*21.47%*

3.3 Cost of risk

		31/12/2001	31/12/2002	31/12/2003	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2009	31/12/2010	31/12/2011	31/12/2012
Cost of risk / Y-1 outstanding loans	65%	[redacted]					+2.2 pts	+3.6 pts	+9.2 pts	+9.5 pts	+8.0 pts	+4.3 pts	+6.1 pts

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