CEPS SPECIAL REPORT
Thinking ahead for Europe

A NEW MORTGAGE CREDIT REGIME FOR EUROPE

SETTING THE RIGHT PRIORITIES

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This CEPS Special Report has benefited from discussions that took place within the CEPS-ECRI Task Force on A New Retail Credit Regime for Europe – Setting the Right Priorities, which met between May 2010 and January 2011. Given the policy directions, the discussions focused largely on the largest component of retail credit, mortgages.

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INTRODUCTION

Early in 2003, the Forum Group on Mortgage Credit set up by the European Commission met for the first time in order to take on the ambitious tasks of identifying and assessing the impact existing obstacles to the functioning of an Internal Market for mortgage credit and coming forward with concrete political recommendations on the necessary steps to aid its formation.

The group's work, which ended with the publication of its final report in late 2004, was followed up by a Commission Green Paper on mortgage credit in the EU, a related public hearing, the creation of the Government Expert Group on Mortgage Credit (GECMC), the Mortgage Industry and Consumer Dialogue Expert Group (MICEG), the Mortgage Funding Expert Group (MFEG) and the Expert Group on Credit Histories (EGCH), the publication of the respective reports, a White Paper on the integration of mortgage markets and a public hearing on responsible lending and borrowing. Several studies – on costs and benefits of integration of EU mortgage markets; the role and regulation of non-credit institutions in EU mortgage markets; credit intermediaries in the internal market; equity release schemes; consumer testing of possible new format and content for the European Standardised Information Sheet on home loans; and the costs and benefits of different policy options for mortgage credit (undisclosed) – complemented the Commission's initiatives.

It was, however, the financial crisis that had the greatest impact on the awareness of the interdependence of mortgage markets and of the need for a common EU-wide legal framework for home loans. While mortgage lending moved into the worldwide spotlight with the subprime lending disaster in the US, developments in several European markets served as a gentle reminder that loans for house purchases are not (yet) covered by EU-wide legislation – despite accounting for the lion's share of the indebtedness of European households.

The turmoil has provoked the European Commission to now – after years of consultation – come forward with a proposal for a Directive on credit agreements relating to residential property in March 2011. The Commission simultaneously published the 2008-09 study on the costs and benefits of different policy options for mortgage credit and its own impact assessment on the proposed Directive.

The EU executive thereby confronts critics from both camps: banks and mortgage lenders, which oppose tougher rules and insist on waiting for the impact of the new Consumer Credit Directive (CCD); and consumer representatives, who fear the proposal will fall short of sufficiently enhancing consumer protection.

In May 2010, CEPS and ECRI formed a Task Force in a joint effort to contribute to the debate on how the EU could most efficiently respond to the challenges posed and the deficiencies revealed by the financial crisis in the area of retail credit. Composed of a diverse group of bankers, industry and consumer representatives, independent experts and academics, the group met four times over a period of nine months. The members' work, and this report resulting from it, closed in February 2011. This report therefore does not contain a full analysis of the proposal for a Directive, which was unknown at the time. However, as per May 2011, it has been updated by the rapporteurs to make cursory references to the Directive.

The report starts with an Executive Summary, which comprises observations and general recommendations. It is subdivided in three chapters. Chapters 1 and 2, comparing mortgage credit markets in the EU and the US, and in the EU member states, serve as a background for the discussion in chapter 3 discussing the policy response. The first two chapters are authored by Achim Dübel, chapter 3 by Marc Rothemund in cooperation with Dübel.

EXECUTIVE SUMMARY AND RECOMMENDATIONS*

Policy-makers have long hesitated to embark on harmonising the consumer protection regime in mortgage lending in the EU. This has been motivated by the strong idiosyncrasy of member state mortgage banking structures, their funding and lending products, and the housing, capital market and subsidy environments. Also, the absence of a cross-border market rendered an intervention politically difficult. This distanced view remained dominant even as member state consumer protection regimes continued to show large gaps regarding minimum standards, in particular in the transition countries joining the EU since 1989.

The financial crisis starting in 2008, and the important role of mortgage loans not only in the subprime crisis in the United States, but also in some EU markets, has acted recently as a catalysing factor to change the traditional perspective. Mortgages and related asset classes, such as developer loans, are so large in proportion to bank assets that, as the crisis developed, the problems in some EU mortgage markets no longer remained confined to national boundaries. Rather they had EU-wide ramifications, e.g. by affecting investors in other jurisdictions funding banks, or by deteriorating the country's fiscal position as a result of massive support for failing banks. The effort to harmonise consumer protection thus must be seen as an element of a whole set of financial reform measures to improve and further align banking supervision in the EU, one that tries to address stability problems at their root – the lender-consumer relationship.

This report has been written, and the corresponding CEPS Working Group has been convened, while the Directive on credit agreements relating to residential property was being developed by the Commission. It therefore does not directly relate to the Directive, but rather analyses the consumer protection and stability issues that arose with the crisis, as well as their correspondence with the current status of regulation of mortgage credit in the EU. On this basis, the report makes a series of recommendations regarding credit distribution, underwriting and consumer or lender options in the ongoing concerns over the mortgage credit contract. As also does the proposed Directive, it leaves out the areas of contract enforcement (mortgage foreclosure) and consumer insolvency.

CREDIT DISTRIBUTION

1. The legal framework for the provision of pre-contractual information should be improved.

The provision of pre-contractual information has been the least-contested element of mortgage consumer protection. In order to improve the current legal framework, EU policy-makers should consider:

- Making the handing out of the European Standardised Information Sheet (ESIS), currently governed by a self-regulatory Code of Conduct, a legal obligation.
- Obliging not only lenders but also credit intermediaries to provide potential borrowers with the ESIS.
- Introducing improvements (simplification and format) to the ESIS through a tri-party approach (mortgage lenders, consumer associations, public administration), considering the actual use by consumers.
- Specifying the timing of information disclosure in order to give consumers the time to consider the offer, coupled with the introduction of the possibility for consumers to waive the reflection period.

* The Task Force members, and the institutions to which they belong, do not necessarily subscribe to the recommendations presented in the Executive Summary. The main body of the report is drafted under the responsibility of the authors.

2. *Computation methods for the annual percentage rate of charge (APRC) should be harmonised.*

A clearly understandable and EU-wide common calculation of the APRC could increase mortgage market transparency and product comparability, allow lenders to benefit from an improved competition environment and consumers from lower search costs. To this end, EU policy-makers should:

- Align APRC computation methods with the provisions set out in the Consumer Credit Directive (CCD).
- Address the narrow vs. broad APRC question by quoting total cost of credit according to the CCD concept and a narrow APRC, reflecting the lender-induced cost only. Given the large variety and national specificity of mortgage products and combinations thereof within the EU, a narrow APRC definition serves cross-border comparisons better than the broad CCD definition. In contrast, the broad CCD definition serves better to protect consumers against hidden cost surprises in the established national mortgage markets. The risk of consumer over-information appears limited.
- Introduce a combined APRC if and when different loan, or combined loan, savings or insurance, components are offered simultaneously to consumers.
- Formulate reasonable APRC assumptions, differentiated by product class, that address the described problems arising from interest rate fixing and adjustment mechanisms changing between loan phases.
- Rationalise the assumptions behind the APRC of variable-rate loans, quoting in addition long-term average rates representative of the maturity horizon of the loan as opposed to simply extrapolating today's variable loan rate and pre-empting quotes based on the initial discount rate.
- Reduce the maturity assumption in the APRC, however, from extremely long contractual maturity to expected maturity, given early repayment options.

3. *The risks of providing unsuitable financial advice should be mitigated by exploring the possibility to unbundle the service from credit intermediation.*

The increased complexity of mortgage products, and the number of products on offer and providers on the supply side render the provision of financial advice to consumers critical. In light of the possible conflicts of interest in this area, EU policy-makers should:

- Refrain from making the provision of financial advice by lenders a legal requirement but instead create a framework for ensuring that when advice is given, it is of a recognisably high standard.
- Refrain from prohibiting certain forms of remuneration for credit intermediation, but rather demand consistency with the obligation of intermediaries to act in the customer's best interests, which might include a trail arrangement.
- Ensure that credit intermediaries are sufficiently institutionally independent and operate under minimum professional standards.
- Address the limitations of financial education more proactively and provide financial advice to consumers via government-sponsored entities or programmes. This could help to reduce the strong reliance at present on banks and credit intermediaries regarding financial advice.

UNDERWRITING

4. *Affordability assessments and stress-testing should be made a legal requirement.*

An EU-wide legal requirement could improve incentives to more carefully assess borrower affordability. In this respect, EU policy-makers should:

- Introduce a legal requirement for lenders to conduct a comprehensive creditworthiness assessment based on stress tests regarding the specific product offered (indirect suitability assessment). Stress tests should measure the impact of changes in key environmental variables on the permanent fulfilment of reasonable underwriting criteria, given the contract parameters. For example, such tests would include, but not be limited to, the impact of changes in interest rates via the interest rate adjustment and amortisation regime of the contract on the future debt service-to-income ratio, and the impact of

changes in house prices via the initial loan-to-value ratio and amortisation regime of the contract on the future loan-to-value ratio.

- Introduce a legal requirement to deny credit or propose more conservative underwriting in the case of a negative result of the affordability assessment. Rules should be specific, e.g. differentiate between a 'stretched' or predatory lending situation (individual lack of creditworthiness) and the situation of general house price inflation (systemic lack of creditworthiness).
- Encourage the use of more conservative house price valuation standards, e.g. the discounted cash flow method using saved rent payments, to reduce reliance in underwriting on observed prices and render loan-to-value rules meaningful.
- Extend CCD provisions of non-discriminatory (cross-border) credit database access for mortgage lenders, allowing for full credit data-sharing.
- Explore possibilities to work towards greater convergence of credit registers' database content.
- Explore the possibilities to work towards an agreed minimum level of data in credit registers databases.
- Make available to lenders both income and non-financial services credit data in order to allow them to form a more comprehensive picture about the commitments and indebtedness of the consumer**.**

CONTRACTUAL PHASE

5. *The legal framework governing early repayment rights and compensation schemes should be addressed.*

The pre-payment option is important to safeguard financial and physical mobility of European consumers. Regulating the area might improve the outlook for a renaissance of the European fixed-rate mortgage (FRM) market.

- The consumer should have the right to make an early repayment; rejecting a prepayment or charging arbitrary prices under negotiated prepayments seriously reduces consumer mobility.
- Lenders should be able to recover their cost in case of an early repayment. Pre-payment indemnities should be harmonised along the lines of the fair value approach, ideally on the basis of symmetric yield maintenance computations which are based on standardised benchmarks ('marketing-to-market model of prepayment charges'). Harmonising indemnities is central to positively delimit the 'non-callable' FRM product, which dominates the FRM market in Europe (a 'callable' FRM would be one in which no indemnity is charged).
- The CCD approach of a tight statutory ceiling on indemnities is not transferable to long-term mortgage lending. Tight caps lead to a dual pricing structure of the prepayment option as a spread mark-up and a residual indemnity. Contracts should be clearly structured into either containing a spread mark-up or an indemnity, which requires a degree of flexibility for the latter as described.
- In order to counter a potential credit risk increase, a combination of broad volume and time ceilings (residual interest-rate fixing period) could limit a yield maintenance indemnity computation formula. Examples for simple ceilings would be 10 years and 10% of the outstanding loan amount, or 5 years and 5%.
- The transparency of the indemnity component related to the loss of the lender administration, credit risk and profit ('servicing') income stream from a prepayment should be enhanced. This component should either match the actual cost incurred by the lender, or a simple lump-sum volume formulation should be used (e.g. 1% or 0.5%).

6. *Rate adjustment and caps*

The European mortgage market is dominated by adjustable-rate mortgages (ARM). These exhibited considerable payment shock risk for consumers before and during the financial crisis. Yet, very few regulatory initiatives have been made at EU level for this product. The new CCD has dropped the requirement of using a reference index for rate adjustment and instead asks only for additional disclosure before such adjustment. Given the high importance for consumer protection, bank solvency, competition and monetary policy, the issue should be addressed.

- The approach taken by the CCD to create heightened transparency of an upcoming rate adjustment will not have major consumer protection effects in ARM lending. During a crisis, the options for consumers to avoid an increase by prepaying a long-term loan typically diminish, especially for those consumers most vulnerable to the rate increase.
- ARM lending in the EU – whether in the form of reviewable rate or index-tracker mortgages – should be brought to a minimum standard regarding large downside interest rate risk protection for the consumer. When lenders offer such protection, against a rate mark-up paid by consumers, this significantly improves the risk profile of mortgage borrowing. Markets penetrate less down the credit curve, house price cycles are mitigated as the discount factor for pricing the saved rent stream derived from ownership remains higher, and the political pressure on central banks to reduce interest rates in order to avoid increasing defaults, in particular during crisis, is reduced.
- Limiting downsize risk implies the use of sufficiently tight and long-term interest rate caps (e.g. x+2%, or 150%*x, over at least the first 5 years of the loan, with x being the initial rate). An alternative to interest rate caps are payment caps, or in the case of foreign currency, lending caps on a maximum permissible exchange rate (possibly combined with interest rate caps). The impact will be a narrowing of the cost difference between ARM and FRM; however, this does not mean a full equalisation, since the borrower still takes a determined, yet limited amount of interest rate risk. Interest rate caps can be shorter the faster loans amortise, which reduces the payment shock risk.
- Given detrimental experiences during the financial crisis in both products – reviewable and tracker (reference index-linked) – in the EU, the case for mandating the use of reference indices to govern the ARM product seems weak. This speaks in favour of accepting both types of products throughout the EU, provided safeguards regarding sufficiently reactive adjustment of reviewable-rate products are in place.

7. Dealing with more far-reaching material consumer protection issues

The current policy approach of the European Commission with regard to retail lending focuses largely on recommendations regarding responsible lending. This has been criticised as a departure from the traditional approach of focusing on the internal market and cross-border lending.

Yet, next to structural barriers, material consumer protection issues in mortgage credit are also impediments to an integrated market and fall under the EU's mandate as competition watchdog. Moreover, financial stability issues in one jurisdiction resulting from a lack or excess of consumer protection generate problems within the credit markets of the entire Union. While stability issues are not a formal EU mandate as defined in the Treaty, they clearly impair a number of functions of the EU.

Developing products and practices in consumer lending markets as well as long delays of stakeholder discussion ensure that a comprehensive (maximum harmonisation) regulation approach at the EU level does always too little too late. In contrast, mutual recognition of more far-reaching consumer protection at the national level, as well as minimum harmonisation, which leaves out many relevant issues, preserves the patchwork of legislation, seriously impairing the cross-border market as well as financial stability.

A more defensive approach is proposed, which structures an interaction process between member states and EU regarding more far-reaching consumer protection regulation along the lines of the mechanisms laid down for state aid.

The core of the proposal is to enable the EU to define a methodology to estimate the risk exposures of consumers who purchase certain products and are exposed to certain practices, and create an appeals process for the member states that have stricter national material consumer protection rules. Member states would in particular be subjected to review their idiosyncratic rules on a frequent basis and bear the onus of providing empirical evidence of its rationale.

1. MORTGAGE CREDIT MARKETS IN TRANSATLANTIC PERSPECTIVE

1.1 EU and US markets compared

The EU and the US present quite different pictures in their respective levels of household indebtedness. Credit to households in the US in 2009 stood at 92% of GDP, slightly below the 2007 peak of 95%. The corresponding value for the EU 27 for 2009 was about two-thirds that of the US, or 65% of GDP, but it is impossible to speak of a European model. Within the EU three main categories can be distinguished: transition countries generally feature the lowest debt ratios of between 20% and 30% of GDP, with the notable exception of the Baltics (Estonia 54% of GDP, even higher than Latvia's 46%); followed by a range of 'conservative' established markets in Central Europe with ratios between 40% and 60% of GDP (Germany 58%, France 49%). Finally, most peripheral and northern European retail finance markets are highly leveraged with ratios between 80% and 140% (Ireland 79%, Spain 83%, Portugal 84%, the Netherlands 102%, UK 108% and Denmark 139%). In both the first and the third category – transition countries and periphery – household debt levels have been strongly rising in the past 15 years.[1]

The basic determinant of US and European household debt levels has been a low interest rate environment, with low personal savings rates in the US and a more varied picture in the EU. The underperformance of US personal savings already started in the 1980s, when Japan and the Gulf states financed a large proportion of the current account deficits. A brief spell of higher US savings followed in the early 1990s during which German and European reunification absorbed large amounts of global capital flows and the Clinton administration fiscally consolidated. However, capital flows resumed their direction towards the US in the 2000s: this time in addition to Japan and the Gulf states, China and other emerging Asian markets became key creditors. The US – Asia/Gulf credit relations are mirrored here with the pair eurozone periphery – Germany/France. Intra-European lending helped to drive down the personal savings ratios in Spain and Ireland and other periphery countries, including important non-eurozone members. As the crisis developed, personal savings ratios in Spain, Ireland and other periphery countries have increased dramatically again while the US has adjusted more moderately (see Figure 1).

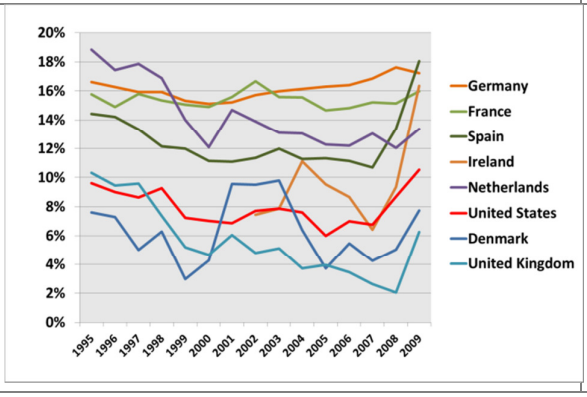
A key feature of the household debt build-up has been an increase in the availability of **inexpensive capital** across borders in increasingly integrated global and regional capital markets. In certain European markets, foreign investors were tapped via the covered bond and mortgage-backed securities (MBS) markets. This allowed banks and new non-bank competitors to continue with the debt build-up (and housing booms) after the domestic deposit base was depleted.[2] In the US foreign capital was attracted via both the government-sponsored enterprises (GSE) – Fannie Mae and Freddie Mac – that had developed Treasury bond substitutes ('agency bonds') which were in high international investor demand. This semi-public channel was complemented by a private channel via securitisation products and their derivatives arranged and sold globally by Wall Street banks.

[1] All data are drawn from the ECRI statistical package 2010.

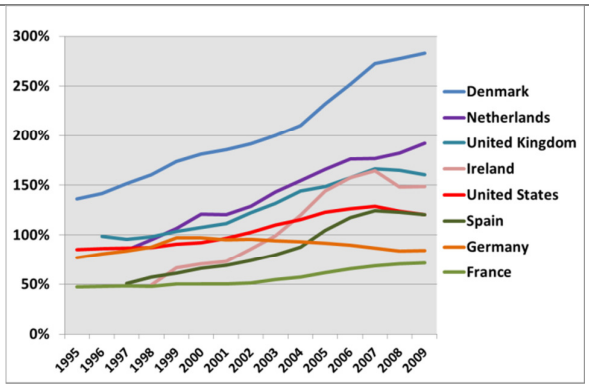
[2] See Addison-Smith et al. (2009) for a quantification for Ireland.

Figure 1. Personal savings ratios, household debt levels, United States and selected European countries

US vs. European countries' gross personal savings as a % of disposable income, 1995-2009



US vs. European countries' household debt as a % of disposable income, 1995-2009



Sources: Federal Reserve, Eurostat, ECRI and Finpolconsult computations.

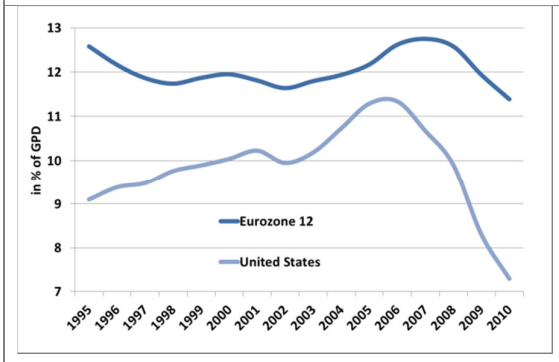
The availability of cheap foreign capital lead to a real appreciation of the currencies in question, i.e. a nominal appreciation over the level implied by inflation differences (US, UK) or alternatively higher wage inflation where no currency appreciation is possible (eurozone periphery). A direct consequence is a **shift of production and investment incentives** from internationally tradable goods to non-tradable goods. The core of the non-tradable goods sector in any economy is **real estate and financial services**, the two sectors of the financial crisis.

The left-hand side of Figure 2 shows the vast **increase of construction investment** in the US and the more moderate increase in the eurozone as a whole during the 2000s. The right-hand side has an estimate of excess construction for eurozone members and the United Kingdom over the historical long-term trend. It shows the large excess in Spain and Ireland, mirrored by underperformance of German construction. The mirror effect of the construction boom, as well as the boom in other non-tradable good sectors, in particular financial and other services, has been declining employment in the tradable goods sectors. For example, US manufacturing employment by 2009 had declined to 11.7 million, while in Germany – a country with a third of the population – there were 7.3 million. Such differences cannot be explained by the benefits of economic specialisation alone.

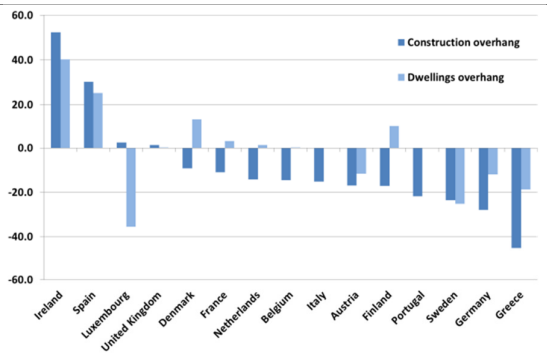
Figure A1 in the Annex demonstrates the close correlation between the **current account** balance, a close proxy for cross-border capital flows, and the housing loan-to-GDP ratio for the US, Spain, Ireland and Germany. **Commercial property lending** across borders by banks had been the driving foreign capital transmission mechanism in the European and US **crisis around 1990**, **housing lending, but it was replaced in the 2000s** by the capital market mechanisms described. Around 1990, only the commercial real estate price cycles were synchronised across the Atlantic while house price cycles were moving in different directions. Today, house price cycles internationally have become far more synchronised. In both subsectors, commercial and residential real estate, the idiosyncratic nature of loans characterised by bulky liquidity and easy international tradability – in the form of agency bonds, covered bonds or mortgage-backed securities and their derivatives – has helped to enlarge capital flows.

Figure 2. Changing sector composition of GDP resulting from cheap capital imports: Overbuilding in the US and Europe

US vs. eurozone construction boom/bust, 1995-2010



European construction and housing overbuilding 2001-09, percentage of long-term average 1970-2000



Notes: RHS – percentage of GDP (construction) and number of completions (dwellings).

Sources: LHS - Gros (2009), RHS – CEPS computations based on European Commission data.

The biased economic structure of the past 15 years in the eurozone periphery and of a full 30 years in the US has both cumulated and interacted with biased incentives set for the industries, regulators and households with one direction: **to take advantage of the capital windfall through increasing household leverage**. This misalignment of interests, which will be discussed in detail below, begs the question whether merely a 'savings glut' (Ben Bernanke) or rather structural domestic factors leading to a weakness of domestic savings and overleveraged balance sheets were primarily responsible for the imbalances and crises seen. Strong contributors to the health of balance sheets, as far as households and their lenders are concerned, are the financial regulation and consumer protection regimes in consumer finance.

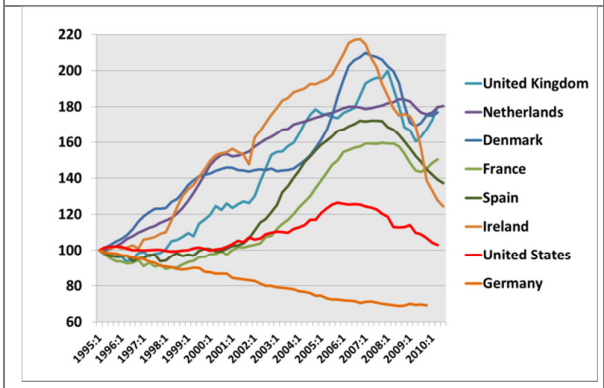
1.2 The decline of the highly leveraged consumer finance system

Inflated house price-to-income ratios come as a reflection of both the direction of capital flows and the sector bias feedback effect described. Around 1990, outside the UK, commercial property was the asset class that was particularly inflated. Figure 3 (OECD data) suggests that elevated house prices, here normalised by income, are a phenomenon not only in current financial crisis countries. A key example here is France, which displays increasing house price levels, in particular in the Ile-de-France region, and yet only moderately rising overall household debt levels. Real underlying trends clearly still matter; it is hard however to disentangle to what extent.

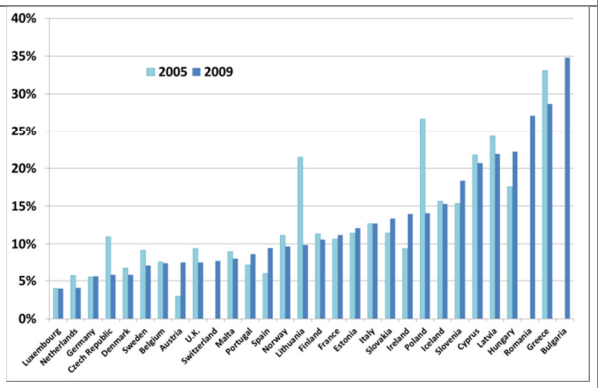
In general, current financial crisis countries are characterised by strong house price inflation and ensuing collapse. Ireland is the record holder in Europe, after Latvia, with a house price to income correction of almost 50% from the 2006 peak to current. Both the UK and Spain have had a larger house price cycle and increasing default rates, for the second time since 1990. **Many European cycles have been larger than the US cycle**, when normalised by income, even though the US has seen far larger default levels. Also, the phase of European house price cycles is one to two years behind the US cycle. Some European markets have not fully adjusted to pre-inflation levels. An example is Spain where, as the story goes, bank practices of underwriting policies aimed at selling empty real estate owned by the banks themselves at non-loss-making prices are keeping the market from adjusting.

Figure 3. House price levels and consumer default indicators, US and selected European countries

House price-to-income ratios, 1995 – 2010



Percentages of households in arrears (on mortgage or rent, utility bills or hire purchase), 2005 and 2009



Notes: RHS – UK 2008 instead of 2009.

Sources: LHS - OECD, re-indexed by author to QI95. RHS – Eurostat/SILC.

Also of interest is the question why **some highly leveraged and inflated Northern European housing finance markets** such as the Netherlands and Denmark, but also the UK, so far have failed to adjust more profoundly. Within this set of countries, only the UK has seen higher mortgage default levels, which were concentrated in the 'non-conforming' loans (see discussion below). The standard argument made in the Netherlands and Denmark to counter concerns is that aggregate figures on consumer leverage are misleading: rather, lending has been focused by prudent lenders on borrower groups with sufficient affordability, in particular those with sufficient taxable income to take advantage of local elevated tax subsidies for banking and insurance products. Supporting this view is that both countries have still active social housing construction programmes that reduce pressure to extend sub-prime credit (see Figure 9 below). Nevertheless, house prices are declining at least in real terms in all three markets, and the question of a 'soft landing' remains a macroeconomic management priority.

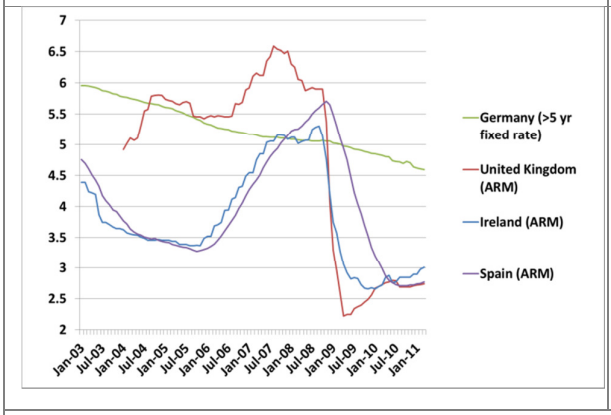
There are severe **data problems** on the national level to assess even the **headline mortgage default levels** in Europe as a basis for further analysis. According to the European Commission's impact assessment of March 2011, the default rate for consumer loans appears to have so far been higher than for mortgage loans, even in almost all countries considered in the housing crisis. Generally, mortgage default rates have been subdued compared to earlier European and the current US housing crises as Figure 4 on the right-hand side, adapted from Lea (2010) suggests. In the current cycle, the number of mortgages in arrears in the UK peaked at 2.58% in 2009, below the 4.1% top level of 1994.[3] Spanish headline mortgage default rates as per end of 2010 are declining again from a 3.04% peak level in 2009, and are also below levels reached in the preceding mortgage crisis of the early 1990s. [4] In Ireland, mortgage arrears in September 2010 were a mere 5.13% of the portfolio by count, even after house prices had veritably collapsed. Recent interest rate increases, however – see Figure 4 on the left-hand side – have contributed to the acceleration to 6.34% by March 2011. The closest parallel to US mortgage default events in Europe has been Latvia with headline mortgage default rates beyond 20%; a distinguishing feature of the Latvian crisis has been that a large part of the mortgage portfolio has been backed by investment loans given to individuals that typically feature high default rates when prices collapse.

[3] Sources: CML and FSA MLAR statistics.

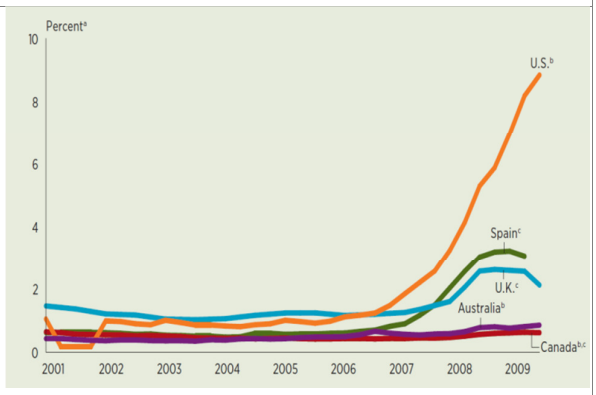
[4] Source: Association Hipotecaria Espanola (AHE).

Figure 4. European vs. US mortgage bailout strategies, default rates

Interest rates on outstanding loans in the dominant national mortgage portfolios in four European countries, 2003-2010



Mortgage default rates, 2001-2009



Notes: LHS - outstanding loans for housing purposes >5 years. ARM: interest rate adjustment of 1 year and below. UK and Ireland data mix index tracker and reviewable-rate portfolio. RHS – from Lea (2010): a. Percent of loans by value. Includes 'impaired' loans unless otherwise stated. For Australia, only includes loans 90+ days in arrears prior to September 2003. b. Banks only. c. Percent of loans by number that are 90+ days in arrears.

Sources: LHS - Germany (Series SUD008, Bundesbank), United Kingdom (Series CFMBI64, Bank of England), Ireland (Series MIR.M.IE.B.A22.J.R.A. 2250.EUR.O, European Central Bank), Spain (Series MIR.M.ES.B.A22. J.R.A.2250.EUR.O, European Central Bank). RHS – Lea (2010) based on APRA; Bank of Spain; Canadian Bankers' Association; Council of Mortage Lenders; FDIC; RBA.

While we see, hence, in Europe a realisation of the common wisdom of the market that occupying owners remain attached to their homes even when being overleveraged, time is an important factor in making people realise that continuing to service high levels of debt may be too costly compared to the default alternative. Default rates in both Ireland and Spain are arguably still subdued also because consumers are legally liable for residual debt without a time limit. This is about to change for Ireland, however, where a legal maximum discharge period is under discussion (see below). Government subsidy programmes have finally added to foreclosure avoidance in Europe (see below).

More importantly, **central bank bailout policies** are heavily contributing to the incidence of default. Irish consumers at the trough only paid 2-2.5% interest rate in the two-thirds of the portfolio tied to ECB refinancing rates at low spreads. Official statistics, as shown in Figure 4, conceal this fact by mixing index tracker (2/3 in the Irish case) and higher-rate reviewable rate portfolio (1/3). By spring 2011, new index tracker supply has disappeared, and Irish rates have risen, as have arrears. Their Spanish counterparts, despite the existence of interest rate floors in a third of contracts according to Bank of Spain analysis of early 2010, pay even less than Irish borrowers.[5] Average British and Danish portfolio mortgage rates also do not exceed 3%. In contrast, while new lending rates have dropped more drastically, the average French or German mortgage rate in the existing portfolio still stands in the range of 4-5%, and the US average rate (with fixed-rate loans carrying the prepayment option) is even higher.[6]

The combination of these factors suggests a fragile situation. High levels of **shadow default inventory** are likely in the most affected jurisdictions, i.e. structurally over-indebted households who are being kept afloat by central bank assistance lowering the payment-to-income ratio.

[5] By early 2011, some Spanish lenders have removed floor clauses, to allow for greater pass-through of low Euribor rates and thus mitigate credit risk, while others have maintained them.

[6] According to DeRitis & Zandi (2010), more than half of US mortgage stock carries an interest coupon of 5.75% and higher.

Interest rate increases moving up payments have been announced by Irish lenders in the reviewable-rate portfolio; they also have attempted to generate a prepayment wave of index-trackers, which are loss-making. The combined effect together with relaxing legal liability for residual debt is expected to push default rates higher. In Spain, Euribor-linked mortgage rates are gradually increasing; an interviewed lender comments that the room for manoeuvre for rate increases, before defaults are expected to increase again, is perhaps 1%. The question is therefore highly relevant of how much additional scope there is in Europe for house price adjustment because delayed foreclosures come to the market as interest rates rise going forward, or because the legal foreclosure regime is changed.

1.3 Drivers of financial regulation and consumer protection

1.3.1 United States – Breakdown of a capital market-based system

Financial system design

The **setup of the US housing finance system** bears partial responsibility for current events even though its core was designed in the 1930s and for a long time has been a source of relative stability. Then, an ill-regulated state bank and thrift system was squeezed into the corset of public liquidity facilities (Federal Home Loan Banks [FHLB]), insurance (Federal Housing Administration [FHA]) and mortgage banking (Federal National Mortgage Association [Fannie Mae]). The failure to abolish the New Deal's institutions when the economy had recovered by the 1950s created a giant policy lag. Eighty years later, Fannie and Freddie turned out to produce some of the biggest loss-makers in US financial history. In the meantime, the private sector was mostly assigned to the risky pockets of the system: private mortgage insurance in the 1950s, moving in the 1970s into insuring high loan-to-value [LTV] ratios, in the 1990s and 2000s into sub-prime lending funded mostly by securitisations, and in the 2000s home equity lending funded by banks.

The **semi-privatisation of Fannie Mae** in 1968 (and the creation of Freddie Mac in 1970) created the major incentive problem of combining publicly supported credit and potential loss absorption with privatisation of profit. The birth of **mortgage securitisation** in 1982 goes back to the (ab)use of the public guarantee of Fannie Mae and Freddie Mac to create tradable securities whose fees were reaped and trading was engineered by Wall Street investment banks. The securitisation model culminated in the private-label (i.e. non-guaranteed) securitisation market of the 2000s and a proliferation of mortgage derivatives. Both public and private-label securitisation took place outside the regulated financial system in the 'shadow banking system'. This is another long-term consequence of the 1930s in which both the FHA and Fannie Mae were created de facto outside the existing regulatory system to circumvent state bank and insurance regulation barriers.

Financial deregulation

At the peak of the housing price bubble, in 2006, both public and private US financial industries provided consumers with the option to finance housing with hardly any own cash savings on the basis of earlier capital gains and/or subsidised high LTV lending. Lax lending standards met a government desire to replace fiscal transfers for housing by an access to credit policy. Deregulation was a key instrument in this public-private partnership.

- **US banks had been gradually deregulated** in the 1970s. What was a necessity regarding some features, e.g. deposit rate regulations, became disastrous elsewhere: **in 1971 US S&Ls** (savings and loans) were allowed to do **95% LTV lending**, against a 'protection' provided by private mortgage. This was the first of numerous holes to be dug into the formal LTV limits that had constrained the system of the 1930s. The **regulatory big bang for subprime lending** was the removal of interest rate usury limits **in the early 1980s**: rather than simply adjust existing loan interest rate ceilings to higher inflation levels, they were removed altogether. The Clinton administration enhanced disclosure requirements on the high-interest rate loans that developed in the aftermath, but the Reagan era liberalisation was never repealed.

- **Deregulation of the public insurance system.** The FHA can be shown to have systematically increased its involvement in high-LTV lending – in the US context after the 1970s deregulations to be defined as over 95% LTV – already by the mid-1990s. Fannie Mae and Freddie Mac used 'mortgage insurance' that turned out to be dysfunctional during the crisis to systematically increase their own refinancing LTVs into the 95% range; when the FHA withdrew from low-income housing finance in the 2000s, Fannie and Freddie purchased highly leveraged mortgage-backed securities and individual loans. Both massively attracted liquidity into the US via 'agency bonds', comparable e.g. to publicly guaranteed bank bonds issued by Landesbanken in Germany.
- **Private label securitisation** and bond insurance both followed and led the decline in lending standards. Apart from transparency standards and legal liability via bond indentures, the sector never really became regulated. Since public insurance and 'agency' MBS mainly provided fixed-rate mortgage (FRM) lending, the private sector focused on adjustable-rate mortgage (ARM) lending. Together with the pervasive use of short initial discount ('teaser') fixed-rate periods, this helped to inflate house prices by reducing the initial debt service of borrowers at the risk of future payment shock. Product innovation in the sector led to a 'credit multiplier': with 'BBB'-rated tranches packaged into mortgage derivatives and sold internationally, a multiple of higher-rated funding provided by foreign banks and institutions to the US could be realised. Credit rating agencies, whose profits depended primarily on securities market volume, contributed to the credit multiplier system. The agencies had de facto deregulated themselves by conversion from private partnerships to listed companies in the 1990s; an official regulation never existed.

In the primary market, **credit intermediaries and other gatekeepers** were also hardly regulated and often acted destructively. State codes of conduct governed the US mortgage broker industry, but their existence could not prevent the active role of many brokers in misdirected borrowers into subprime and other high-rate lending contracts. Specialised loan servicers – now almost all in the fold of large universal banks – arbitraged the multiple capital market funding exits available in the US and also often misdirected borrowers. Both external and in-house appraisals disregarded house price inflation and followed pointless 'open market value' standards that basically only control an individual deviation from the general (inflated) trend.

Some of the instability, especially the large role of shadow banks, goes back to a permanence of **unstable bank funding structures** in the US. In particular long-term bank bonds have hardly been used in the system. This has been partly a result of the powerful role of the deposit insurer FDIC (Federal Deposit Insurance Corporation) vs. bond investors and partly of the destroyed lending standards, in particular high-LTV lending, which enforced different funding models. Monetary policy in the US has the dual mandate of safeguarding price stability and supporting the economy, i.e. the fiscal policy side is at least partially subject to incentives to increase leverage and slow down de-leveraging.

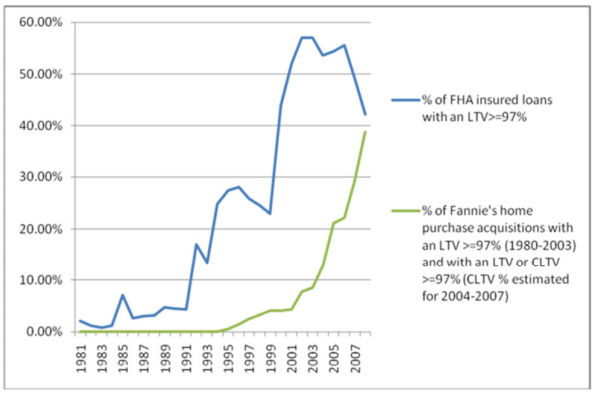
Consumer protection

Borrower selection policies in the US were completely dominated by the capital market system set-up, and despite rhetoric in Codes of Conduct, enabling laws and other regulations became corrupted. When FHA was kept from increasing their house price limits in 2003 by the Bush administration, the resulting gap was quickly occupied by private **subprime lending**. As house prices further inflated, 'Alt-A' lending by the private sector replaced direct Fannie/Freddie lending to prime credit. Essentially prime credit borrowers became classified as 'Alt-A' if they failed to meet one or several check boxes on Fannie/Freddie loan purchase checklists. Fannie/Freddie then purchased many 'Alt-A' bonds, i.e. de facto circumventing their own rules. Those bonds contained many 'liar' loans: house price levels, especially in the coastal regions, were simply too high to be fundable at correctly stated income levels, and so income quotes were 'adjusted'. Loan servicers were free to place almost any loan into any of the different capital

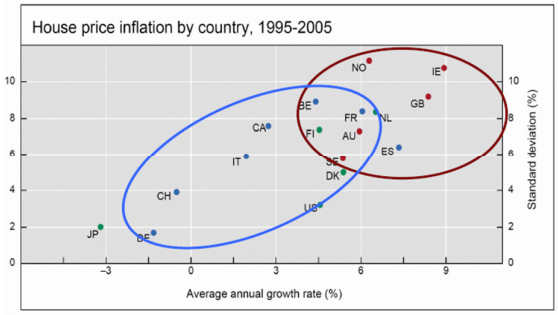
market exits – prime, subprime, FHA, 'Alt-A', jumbo, bank balance sheets – to maximise profit. Investment loans to retail customers ('condo flippers') made up 1/3 of subprime market. Finally, the scoring system failed – for example LTV and thus implicitly the savings capital available to support a financing was not part of the borrower score.

Figure 5. Mortgage product structure in the credit risk dimension, US and selected European countries

United States – high-LTV lending by Fannie Mae and the FHA as a percentage of total lending

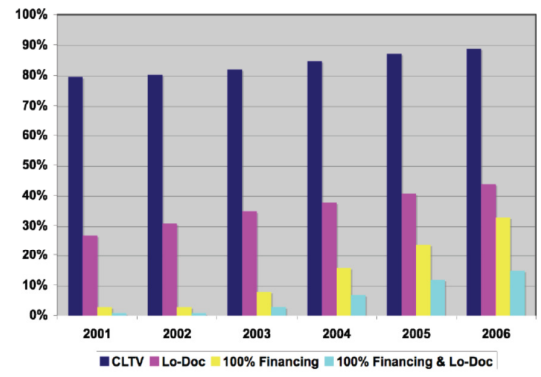


European countries and comparators – high-LTV lending, fixed/variable lending and house price inflation

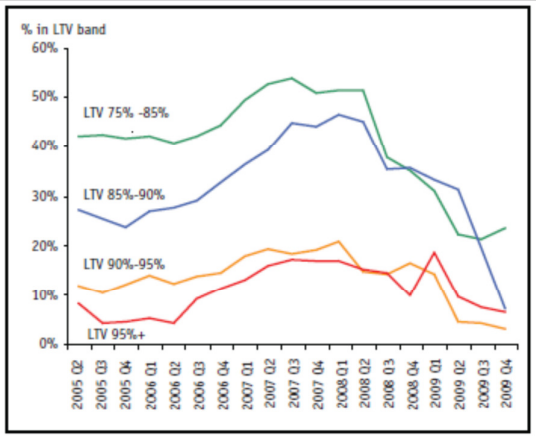


		Mortgage rate	MEW	Maximum LTV	Valuation method
Group 1	BE, CA, FR, DE, IT, ES, CH	Mostly Fixed	No	Low	Mixed
Group 2	DK, FI, JP, NL, US	Mostly Fixed	Yes	Medium	Mixed
Group 3	AU, IE, NO, SE, UK	Variable	Yes	Very high	Market value

United States – risk layering (100% LTV and low-documentation lending)



United Kingdom – risk layering (higher LTV lending where income was not verified)



Notes: No consolidated European databases on lending standards available. See IMF (2011) for more detailed cross-country regression analysis of product and mortgage finance system determinants of mortgage credit and house price growth.

Sources: Upper LHS - Pinto (2010), lower LHS - Levitin/Wachter (2010), upper RHS – Tsatsaronis (2005)/Bank for International Settlements, lower LHS – FSA (2010).

The increasing US household **leverage levels were stimulated by a combination of tax and regulation policies**, in particular mortgage interest deduction. Existing regulatory LTV limits were systematically circumvented (e.g. the 80% Fannie/Freddie limit via mortgage insurance). At the price peak in 2006, an estimated 30% of US new home purchase borrowers put no money down, and 40% of that combined loan-to-value ratios above 97%. Contributing was a vast increase in second mortgage and home equity lending, which together reached some 40% of new originations in 2006. The consumer protection response to high-LTV lending was anemic or absent: consumers

had been living in a world of permanent house price appreciation since the 1940s, i.e. taking out insurance in order to increase leverage was widely seen as preferable to greater savings, which would have meant deferring the purchase. Saving for housing purposes ranked only sixth in a set of eight motives for savings quoted by US households in 2010; in Germany, with a far lower homeownership rate, it is routinely the third most important after cash for retirement and precautionary savings motives. The FHA and the housing ministry HUD operated in the past 20 years without a single savings programme for low-income borrowers.

Risky products proliferated after the FHA withdrew from low-income housing finance and during the housing bubble peak, when affordability was lowest. A contributing factor to the increase in ARMs, which carry payment shock risk, was the expensive nature of FRM, which in the US, in contrast with most of Europe, carries a full prepayment option without indemnities. The associated reinvestment risk for lenders raises borrowing cost on a 30-year loan by somewhere between 70 and 100 bp. A deeply divided market was the result: borrowers who could afford the option systematically lowered their interest payments during the 2000s via pre-payable FRM, and borrowers who could not afford that product or intended to speculate on interest rates staying low took out ARMs. Derivatives of ARMs increased the payment shock risk further (initial discount rates, interest-only loans, loans with negative amortisation such as 'option' ARM) and penetrated gradually from subprime into prime markets. In particular, most second mortgages and home equity loans at high LTVs were ARMs.

Clearly, against these sector trends, the **traditional transparency focus of US consumer protection** – the country had pioneered the APRC in the 1960s under the Truth in Lending Act and developed a detailed loan disclosure system in the 1990s – was completely inadequate. Moreover, responsible lending rules embedded in the State Codes of Conduct for originators were toothless. Clearly, material consumer protection and fiscal policy issues mattered: the excessive expansion of the credit curve, the replacement of savings by high-LTV lending, an unabated lending boom as house price-to-income ratios ballooned, the proliferation of bubble endgame products in that phase, and in particular risk layering. It should also be emphasised that the default incidence of borrower selection and products, and in particular the mispricing of the associated securities, became strongly overlaid by house price levels: 2006-07 are the worst lending cohorts in US financial history, for whatever class of lending. Finally, research by Amherst Securities shows that while sub-prime lending carried the highest default rates, in terms of investor protection such securities were less prone to mispricing by rating agencies than securities backed by prime and 'Alt-A' ARM loans.

1.3.2 Europe – A less vulnerable bank-based system?

Financial system design

The US housing finance system design relying on insurance found copiers in other Anglo-Saxon markets (Canada, Australia). However, the **United Kingdom** after the mortgage crisis of the 1990s changed course and **turned from third-party to lender self-insurance**. This resulted in a considerable decline in the LTV-financed, and paid out in greater resilience in the current crisis. Both in the UK and Ireland, the traditional housing finance system via building societies has seen a diminished role since the 1980s, vs. the rise of commercial banks.

Housing finance in **continental Europe** in contrast has **relied more strongly on the issuance of standardised bank bonds**, primarily (mortgage) covered bonds by specialised banks. This combined the features of bank regulation and high asset quality standards required via the statutory definition of covered bonds. In the case of Denmark, covered bonds still today fund almost the entire mortgage portfolio. In Germany, Italy, Spain and France, the historic strong reliance on covered bonds became diminished with the deregulation of the 1970s and 1980s, which allowed deposit-funded commercial banks to enter housing finance. While the public sector role in ensuring the functioning of covered bonds was always strong, and in the French, Italian and

Spanish markets even one of direct ownership of issuing banks, over time the covered bond system in Europe as a whole became largely privatised. Spain and Ireland were countries that modernised or adopted their covered bond framework in the 2000s in order to address a shortage of domestic deposits amidst the lending boom.

Financial deregulation

While the core differences between Anglo-Saxon and continental European systems can still be traced today, the advent of **mortgage securitisation** and **banking sector deregulation** has blurred the distinctions. Banking deregulation in Europe took place mostly in the 1980s. The UK lifted LTV limits on building societies and admitted commercial banks to the mortgage market; this led directly to the Lawson boom and a wave of high LTV lending. The median LTV ratio on new loans increased within only five years during the early 1980s from 70% to 90%. Loan-to-value limits in German mortgage banking were liberalised as well at the time: total LTVs[7] ratios were allowed to be higher than the conservative Pfandbrief senior funding LTV limit (60%). German Bausparen, a contract savings scheme designed to deliver safe high-LTV mortgages, came under pressure in the aftermath from cyclical high-LTV lending by both Pfandbrief issuers (mortgage banks) and commercial banks. In Denmark, commercial banks had been willing since the 1980s to give personal loans to fill the gap left by the 80% LTV limit for covered bonds, leading to an implicit rise in total LTV. European-covered bond legislation continues to differ today regarding permissible senior funding LTV ratios – from 60% statutory ratios in Germany are found to be up to 80%. Recent EU legislation capped the senior funding LTV for covered bonds and also for the residential mortgage definition allowing capital relief; yet, apart from such incentives, no regulatory limits exist for total LTV, or borrower leverage as a whole.

Outside the Netherlands, Ireland, the United Kingdom and Spain, **securitisation has played a minor role in Europe**. In Ireland and Spain, the role of the instrument has mainly been as an instrument to attract private cross-border flows and later during the crisis European Central Bank funding. While the industry points correctly to the lower overall impairment levels of European MBS, largely due to the relative stability of the UK and the Netherlands, there have been incentive and mispricing problems. Spanish and Irish MBS were endowed with too little subordination – lower than AAA-rated tranches – which mismatched the increasing risk as house prices ballooned during the 2000s. Also, MBS have in many European markets not grown beyond the small high-risk niches of non-performing (Italy) or high-LTV (Germany) lending. This has resulted in partial stigmatisation of the product. European banks generally have preferred to keep high-quality loans on balance sheet, in particular those using extensively covered bonds that require high asset quality. Finally, European MBS performance has strongly benefited from the mortgage bailout via low interest rates and thus cannot be compared to US MBS performance (see Figure 4).

There is a **reduced role** also **of public mortgage insurance in Europe** vs. the US (see Table 2 below), with the exception of the largely unconditional public insurance programme of the WSW in the Netherlands. The French FGAS programme, in contrast, focuses on a narrow access to credit mandate. In combination with a lower incidence of mortgage interest deduction, which was reduced during the interest rate compression phase of the 1990s in a number of countries, this has moderated incentives favouring leverage.

[7] Total LTV can be defined as the amount of housing finance divided by the value of the house. It is equal to combined LTV (CLTV) in the case of several financings, e.g. senior plus junior. The issuance of covered bonds is usually restricted by a senior funding LTV, i.e. the amount of covered bonds that can be issued against the value of the house. In the current German system, for example, covered bond lenders are able to disburse any amount of total LTV while the senior funding LTV remains limited to 60%. In the Danish mortgage bond system, however, total LTV and senior funding LTV must be identical, 80%.

Funding instability of banks in Europe has been less pronounced than in the US, as European regulation continues to favour bank intermediation of mortgage loans. There is generally no absolute priority of deposits in the bankruptcy process comparable to US practices. As recapitalisation and restructuring practice during this crisis shows, there are de facto government guarantees protecting covered bonds and – arguably – also senior unsecured bank bonds. However, this approach has increased recent European bank bailout costs dramatically, and its viability depends on the national sovereign credit. Despite implicit sovereign support, many long-term bank bond instruments are still insufficiently used as a result of regulation failures allowing for large mismatches, which Basel III intends to address. McKinsey (2010) estimates that the top-12 European banks would need to issue €1.34 trillion in long-term bonds to fulfil the proposed 'net stable funding ratio' (NSFR) requirements. Industry resistance against the new ratio is therefore large.

The role of brokers and other **credit intermediaries** has led to problems in Europe that vary from the US. Generally, brokers have a more limited distribution role, and banks are more in control of origination through their networks. However, in some markets, such as the UK, brokers have been given similar incentives to sell profitable loans and misclassify customers, which led to tight regulations. Markets with large broker intermediation, including recently emerging countries such as Poland, also tend to feature higher prepayment rates than optimal ('churn'), to maximise broker revenue. As a consequence, there has been a discussion in some jurisdictions whether trailing broker fees, a potential disciplining element, are anti-competitive or should be encouraged in order to discipline brokers. Brokers are often tied in Europe by lenders in forms not directly visible to consumers. In some jurisdictions, such as Spain, Ireland or Poland, brokers have self-targeted to the lower end of the credit curve not served by bank branches; in Germany, in contrast, primarily high income clients unwilling to do branch shopping use brokers. The most prevalent distortion seems to have been caused by the opportunities for brokers presented by the 'bankassurance' concept: in Austria and the Netherlands, brokers have benefited from interest-only lending backed by repayment vehicles set up by insurers. This allowed them to earn a commission on two contracts: loan and repayment vehicle.

Consumer protection

Borrower selection policies have been generally less aggressive in Europe compared to the US; however, the **claim that there have been no subprime practices in some European market would be incorrect**. The analogies to the US are subtle, but there. In the UK, a market with analogous structures existed officially as 'non-conforming' and was funded dominantly by securitisation deals. Building societies, banks and a new class of non-bank firms participated as originators and servicers. Lending activity, especially to previously bankrupt borrowers, according to FSA (2010), has been a key contributing factor to elevated mortgage defaults.[8] Yet, since the standard delimitation of prime/subprime by scoring values – an ex-ante risk concept addressing vulnerability – is not available, there is no reliable definition or calibration of subprime for the UK. The market is certainly larger than lending to the credit-impaired, an ex-post concept describing already realised credit risk as opposed to the ex-ante risk expressed by scores. Other non-conforming lending concerns activities not typically served by banks, many of which are unrelated to borrower credit issues.

[8] According to FSA data provided in the CEPS/ECRI Task Force on a New Retail Credit Regime for Europe, credit-impaired borrowers are typically low-income households, although the bottom-two income groups with incomes below £10,000 are less affected. These could be retired households with small mortgages.

Table 1. Incidence of mortgage lending in Europe and the US

	Share of households with a mortgage	Share of households in the lowest income quartiles with a mortgage	Share of households (head < 35 years) with a mortgage
Germany	27	7	16
Ireland	***36***	***7***	***49***
Greece	17	4	12
Spain	25	8	46
France	30	na	35
Italy	12	4	14
Netherlands	39	23	25
Portugal	30	6	53
United States	45	na	na
United Kingdom	40	na	na

Notes: National household budget survey data.

Source: Doyle (2009) based on Irish Central Statistical Office Household Budget Survey 2005 and Drudi et al. (2009).

In Ireland, at least one large building society has been widely held to be engaged in lending activity to credit-impaired and vulnerable borrowers on a large scale; market observers estimate the size of the Irish market to be up to €2 billion. In Spain, a factor increasing defaults has been a wave of lending to immigrants to the big cities with scant or no credit histories that were served in particular by local Cajas. Spanish lenders have argued that such lending at rock-bottom Euribor interest rates prevailing during 2005 and 2006 did not violate underwriting standards commonly practiced elsewhere in Europe. The trouble with this perspective is that it implied assuming the same low rate levels going forward. Table 1 reports survey data compiled by the Central Bank of Ireland regarding the share of low-income and young households with mortgages in selected European states: Spain, Portugal and Ireland excel with a high incidence of mortgage borrowing among young households with very limited credit histories for the most part.

Central and Eastern European countries have less convincingly been portrayed as 'subprime' for some time: the predominant foreign-currency lending in the newly established markets 'skimmed' higher-income groups. In all high (house price) inflation countries there also has been, as in the US, a fair amount of investment lending to retail customers ('condo flipping') with very limited income, which may be qualified as subprime. This included countries that did not experience wider crises in household credit, such as Poland and Denmark.[9] Condo flippers lead the default hierarchy in a number of countries, e.g. in Ireland, Latvia and Poland.

Empirically more relevant for Europe than a narrow technical definition of subprime as lending to low-score borrowers **has been** risk layering for what under normal house prices were creditworthy borrowers. These practices could be called **the European version of 'Alt-A' lending**. Spain, Ireland and others have seen **considerable high-risk lending**, in particular high loan-to-value ratios, high loan-to-income ratios especially for first-time buyers, and maturity extensions, as well as **risk-layering**.

In Ireland, typical first-time buyer **LTV**s prior to the house price collapse were 95%, based on highly inflated house prices.[10] Spanish lenders had started to abolish their traditional conservative LTV lending limit policies in the late 1990s when house price inflation picked up. When regulations were relaxed in 2004, higher-LTV lending appeared. The Spanish mortgage association reports that a quarter of loans that originated in 2006 had original LTVs over 80%. More problematic is that a quarter of new lending at the time had also debt-to-income ratios over 45%.[11]

[9] However, Denmark has seen a number of bank failures related to defaults by real estate developers, which are indirectly related to the end of the local consumer lending and house price boom.

[10] See Doyle (2009).

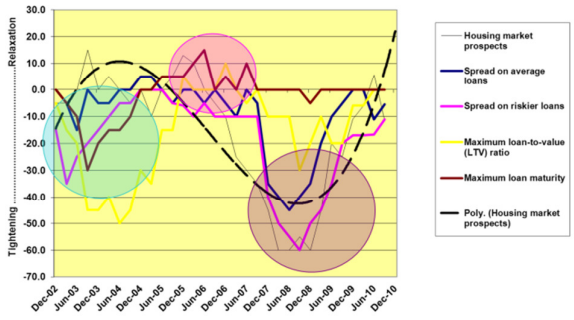
[11] See FitchRatings (2007).

A March 2011 Bank of Spain review of the LTV structure of the mortgage portfolio suggests that some 20% of loans have current LTVs greater than 80%.[12] In the UK, according to the Council of Mortgage Lenders, median new lending LTV during the 2000s was far more moderate than in the 1980s, at around 80%. The higher risk of high-LTV lending was explicitly priced, at moderate and fairly constant spreads of 20-30bp for the 95-75% LTV band over the below 75% LTV band. Nevertheless, there was a considerable amount of risk layering (see Figure 5): in 2007, in 15% of financings with an LTV greater than 95%, borrower income was not verified. Also, loan-to-income ratios had increased with general house price inflation, making the same LTV ratio a less safe underwriting criterion. The core saw some mild LTV increase during the 2000s too: on Germany's Hypoport platform linking more financially astute and higher-income customers via brokers with banks, the share of lending with LTV greater than 80% increased from 47% in 2004 to 55% in 2008.

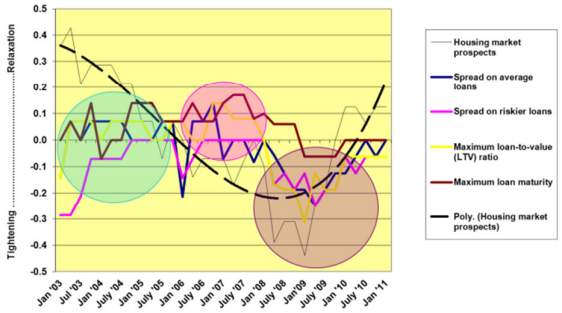
LTV needs to be seen in the context of house price inflation and the ability of valuation techniques to identify the long-term value relevant for lenders. Even if LTV lending limits in Europe look generally more conservative than in the US, on both sides of the Atlantic **house price valuation** remains often conceptually flawed and operates pro-cyclically under the open market value approach. This open market value approach is taken even when rental data are abundantly available to benchmark a house purchase via a cash flow valuation method. For example, in Germany lenders take open market values or simply sales contract values and if anything deduct small haircuts only. A number of smaller countries are characterised by extreme scarcity of publicly available house price data, which renders an open market valuation difficult; examples are Belgium and Ireland, most transition countries, or the large German states Bayern and Baden-Wuerttemberg. The huge house price swings in Ireland have been widely attributed to the data opacity of the market that misled both lenders and consumers.

Figure 6. Change in housing loan underwriting standards in four European countries according to bank lending surveys

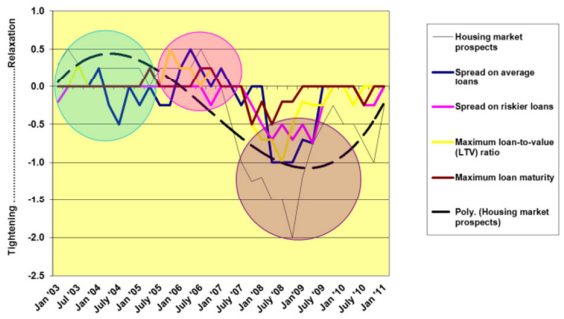
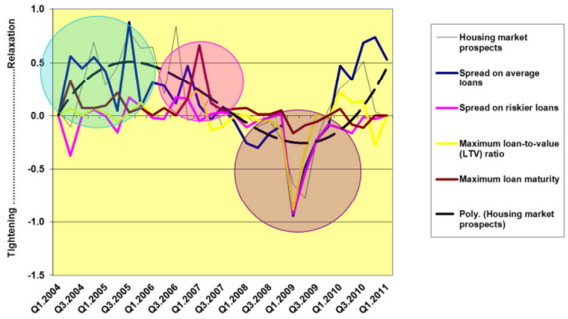
Spain



Italy



[12] "La banca concedió 100.000 millones en hipotecas con alto riesgo de impago", El País, 7 February 2011.

Ireland	Poland
	

Notes: Diffusion indices with scales as defined by national central banks. Bubbles represent, from left to right: house price inflation phase, house price peak phase, house price deflation/credit crunch phase.

Sources: National central bank websites, bank lending surveys. Finpolconsult computations.

Maturity extension played a crucial role in gradually increasing debt service risk in Europe, in particular regarding a potential pass-through of an interest rate shock. The emerging markets experienced partly dramatic extensions, which translated into greater affordability, i.e. a seeming ability to finance permanently higher house prices. The typical maturity of Irish amortising mortgages according to the Central Bank of Ireland increased from historically 20 to 30 years by 2007. Interest-only mortgages rose from virtual insignificance in 2001 to 15% of new business in 2007. The typical maturity of loans in Spain, according to FitchRatings (2007) had increased from 17 years to 28 years within the decade before 2006, with maximum maturities of 35 years now available. In some core countries with more established markets, amortisation standards had declined as a result of tax policy moves: the Netherlands and Austria practiced a high share of interest-only loans for income tax arbitrage purposes.

Another phenomenon in Europe with similarities to the US 'Alt-A' universe was the **rise of low-documentation** (or 'self-certification') **loans.** Such lending boomed especially in the UK and Ireland as house prices inflated, beyond the initial niche of the market focused on self-employed objectively lacking documentation. In the UK, portfolios with a large share of low-documentation and interest-only lending produced significant default rates and prepaid only slowly during the crisis. There are clear analogies to the prevalence of such lending practices in US coastal, i.e. high-house price, areas, even if the European numbers are certainly far lower.

Central bank loan officer surveys from a number of countries document the **cyclical relaxation of underwriting standards**, in particular regarding LTV and amortisation, close to the house price peak. Risk layering practices, which existed in esoteric pockets of the market, became amplified in such spells. The Central Bank of Ireland reports that the availability of 95% LTV mortgages peaked together with long amortisation periods and high debt-to-income ratios in 2007; in that year an estimated 10% of new originations were made for 'mortgage equity withdrawal' purposes, i.e. with the purpose to increase the LTV on hitherto low-LTV loans. Long maturities in Spain in the originations of 2006, according to FitchRatings (2007), were concentrated in loans with high debt-service-to-income ratios and high LTVs. Such pro-cyclical behaviour of lenders with the goal of catering to borrowers even as housing becomes harder to afford is universal in mortgage finance, also in Europe. See Figure 6 reporting an extension of LTV and loan maturities near the house price peak for the non-crisis countries of Poland and Italy.

The quantitatively most relevant risk feature in Europe beyond the classic risk layering is the **high empirical relevance of ARM lending** outside the core of France, Germany, Belgium and the

Netherlands, which carries large potential payment shock risk. US ARM lending at its peak in 2005 reached 39.8% market share and the US average of the critical phase of 2003-08 was 25.9%.[13] In the eurozone, over the same period, the market share of ARM has been 59.8%[14] with limited time variation. In the two largest European markets, both outside the eurozone – the UK and Denmark – ARM is currently the predominant product. These two markets should take the European ARM share closer to 70%. In non-eurozone transition countries, finally, the predominant lending form is foreign currency lending, a variety of ARM (even if interest rates are fixed in foreign currency, which is rarely the case). In short, **European borrowers are exposed to far greater interest rate risk than their US counterparts**. As mentioned above, credit performance in all these markets is now directly dependent on the short-term interest rate policies of the European Central Bank, the Bank of England and in the case of some transition countries, the Swiss National Bank.

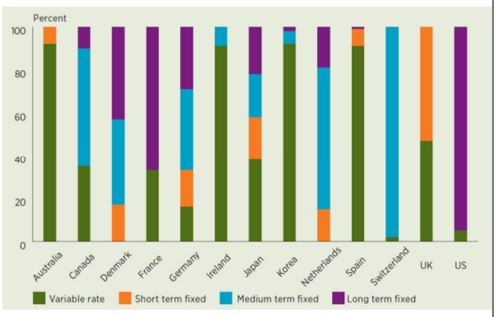
The ARM product, and in particular index trackers, had passed the declining interest rate environment prevailing from 1990-2005 through to consumers fastest of all products. As a result, the **most dynamic European markets** in that period **have been the ARM-dominated mortgage markets** (see Figure 5, upper right-hand side, for a BIS analysis). IMF (2011) runs a full regression analysis regarding determinants of mortgage market growth and confirms this role. A number of the particularly fast-growing periphery markets used to be FRM markets still in the 1980s and turned to become ARM markets in the 1990s, most notably Italy, Spain and Greece. The first structural factor here has been deregulation: for example, the French-style centralised mortgage lenders in Spain (Argentaria) and in Greece (National Bank of Greece) were quasi-monopolists and exclusively offered FRMs until the 1980s. With the liberalisation of the 1980s, they encountered competition from commercial banks, which, in the absence of long-term funding instruments – covered bond issuance was often a monopoly of the mortgage banks – lobbied strongly for the use of ARM. Consequently, legislation was changed to enable ARM: in 1994 Spain implemented a sweeping reform to define five indices for index-trackers. The deregulation factor was later overlaid by the dynamics of house price inflation: at swiftly increasing house price levels, affordability of traditional fixed-rate lending, which requires paying an additional price to investors for interest rate risk protection, was no longer given. This created bizarre situations: in the early 2000s, Spanish commercial banks ran out of deposits and issued and started selling fixed-rate covered bonds to international investors, only to swap them back to match the cash flows of the adjustable-rate products in 'demand' by consumers.

[13] This figure is derived by dividing the cumulative sum of new ARM single-family home lending of GSE and private-label securitisation sectors 2001-08 through the cumulative sum of total single-family home lending of both sectors 2001-08. Source: Federal Housing Finance Agency.

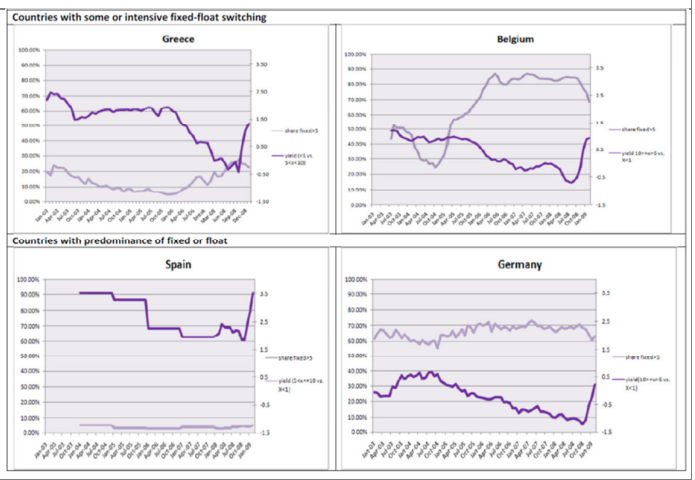
[14] The figure refers to lending with an initial interest rate fixation period of equal to or under 5 years as ARM. Computation method as in footnote 13 for the US. Taking a 5-year initial interest rate fixation period cutting point as the definition is a compromise between the US approach (only interest rate fixation over the entire maturity of the loan considered as FRM) and the predominant European practice (all initial interest fixation > 1 year referred to as FRM). Source: ECB.

Figure 7. Mortgage product structure in the interest rate dimension, US and selected European countries

US vs. Europe, mortgage product variability in different definitions 2009



Mortgage yield curve and share of FRM vs. ARM in four European countries, 2003-09



Notes: RHS – Market share of FRM with initial interest rate fixation period > 5 years (light line) vs. mortgage yield curve (interest rate differential of 5-10 yrs vs <1yr) (bold line).

Sources: LHS - Lea (2010), RHS – Dübel/Finpolconsult computations based on national central bank statistics.

ARM, as in the US, with its low initial rates made the perfect **ground recipe for risk-layering**, but also at the same time bolstered profitability in the European mortgage industry. Consumers paying, say 3% for an ARM rather than 5% for an FRM will **'save' the yield curve costs**. Lenders in certain market segments can exploit this fact by increasing the margin – this happened in the US subprime market. If, in contrast, competition is intense, as in most prime EU markets, the 'low' credit cost and high pass-through translates into a fast-growing market and inflating house prices. See BIS analysis in Figure 5, and again IMF (2011) confirms this earlier BIS result. Higher house prices in a negative feedback effect further stimulate the growth of ARMs as declining affordability leaves lenders and borrowers no other product choice: in Ireland, the ARM share increased within six years from 60% (1999) to 80% (2005), as house prices ballooned.

The **'savings' in initial payment** are not cost-free, however; they **come against future payment shock risk**: in Spain, Euribor interest rates almost doubled between 2005 and 2007 (see Figure 4), and with them the interest burden of practically all existing mortgage borrowers. This happened although Spanish lenders were obliged to cap interest rates contractually; however, the typical cap is fixed at double-digit interest rate levels rendering it economically pointless. **Meaningful caps** are available in Europe **only in markets that have larger FRM shares**, most prominently in Belgium and France where permissible rate increases under an ARM are tightly limited (see discussion in section 3.4.2). The behavioural change of both consumers and lenders that the described product changes induce cannot be underestimated: in markets switching from FRMs to ARMs, housing starts to be priced over the far more volatile and lower short end of the yield curve as a discount factor for a fairly stable future saved rent stream. These simple mechanics imply higher house price volatility for ARM countries (see BIS analysis in the upper right corner of Figure 5), everything else being equal, and also higher house price to income levels.

The index tracker boom of the 2000s has profoundly changed ARM markets, including in countries such as the UK and Ireland that primarily had used reviewable-rate ARM allowing lenders to control the variations and smooth the interest rate cycle. By 2007, those were almost entirely replaced by **index trackers** with extremely low spreads. Southern Europe (Italy, Greece, Portugal) saw an index tracker boom in the 2000s, too. In Spain index trackers had been universally used since 1994 – for consumer protection reasons, in order to minimise lender discretion over pass-through of declining market rates. In fact, in numerous European countries,

court legislation now enforces a swift pass-through of falling interest rates by the lender to the consumer even in the case of a reviewable-rate contract, turning it essentially into an index tracker. Denmark remains an exception to the new index world: lenders re-auction the ARM-backed covered bond portfolio once a year, in December, to find the new capital market rate for the next year. The pervasive use of trackers has swiftly decreased borrowing cost in the interest rate compression trend of the 2000s. It symmetrically has also increased the susceptibility to shocks, as tracker interest rates are empirically far more volatile than the rates reviewed by lenders (see Figure 15 in chapter 3 with the UK example). Most critically, index trackers are putting central banks into a strait jacket as they remove all options for the banking system to alter spreads and increase pressure on central banks to directly manage both bank balance sheets and household cash flows under stress.

As a result of balance sheet stress, in Ireland lenders in the aftermath of the crisis try to reclaim pricing power by converting trackers into reviewable rate loans through prepayments. This predictably meets resistance from existing borrowers who demand debt reduction. New index tracker lending has ceased in Ireland and become significantly reduced in the UK; however it remains the workhorse of mortgage markets in Southern Europe. Still, reviewable-rate ARMs come with their own set of consumer protection problems. The classic consumer group critique is sluggish downward adjustment when benchmark rates fall; given the negative implications of too fast interest rate compression for house price inflation, this is debatable. More problematic has been the lack of transparency and risk amnesia generated by the comprehensive use of **low introductory fixed 'teaser' rates.** This practice continues to be widespread in the UK, and to a lesser degree in Ireland. Low introductory rates remove pressure from the bank to quote the consumer the relevant reviewable ARM rate already upon contract closure. They also create the problem known from US subprime loans that consumers are underwritten, effectively, on the introductory rather than the permanent rate. UK regulators historically have justified initial discount rates as pro-competitive, but a discussion is going on whether this is not outweighed by the problems described. US regulators have essentially banned introductory rates now, and demand underwriting on a permanent interest rate basis.

Foreign currency credit in Central European transition countries emerged because of the absence of a viable local currency alternative, or simply a borrower choosing between a 'more expensive' local currency and 'less expensive' foreign currency loan. Loans indexed in a foreign currency imply negative amortisation risk of the outstanding amount measured in the local currency. This means, in combination with using short-term interest rates in the foreign currency, that the product carries some of the highest payment shock risk. The outcome may be hard to predict. In Poland the interest rate in CHF-denominated loans was tied to the Swiss National Bank rate, i.e. the increasing loan balance in local currency was compensated for by declining interest payments in foreign currency. In Hungary, foreign currency rates were reviewable by lender, and by not adjusting them downward – a step taken in response to rising CHF funding cost during the crisis – they created an interest rate shock for borrowers with subsequent elevated default rates. Transition countries within the EU have reacted quite differentially as we will discuss in chapter 2.

Often, European markets converge **to a single product** (class) dominating the market. The UK at the peak in 2006 boasted some 650 different product types; however, essentially all of these were adjustable-rate products matching the funding base of commercial banks. Figure 7 shows the examples of Germany vs. Spain with predominant FRM vs. ARM markets and hardly any movement of market share of these, despite comparable yield curve incentives inside the eurozone. The comparison of both countries suggests a strong relevance of liquidity in the dominant product: an FRM is systematically less expensive than an ARM in Germany, and the situation is the reverse in Spain. Whether supply or demand effects are responsible for the result is a matter of discussion. However, the legal and regulatory regime in the member states often further prioritises locally dominant products. Germany, for example, outlaws ARM prepayment indemnities (limited market share) while permitting relatively large FRM prepayment indemnities

(main market), including an element for lost servicing income. Spain for a long time tightly capped FRM prepayment penalties (limited market share), while permitting 1% prepayment penalty on ARM (main market). Spain, already in 2007, in reaction to the interest rate shock affecting ARMs (see Figure 4), reformed its prepayment penalty regime in order to correct the legal bias and stimulate a greater FRM lending share.[15] The mortgage bailout, which led again to record-low ARM interest rates, has rendered this effort unsuccessful so far.

As in the US, product transparency standards in Europe have had a limited impact in countries seeing currently elevated default rates. The US APRC model (1968 Truth in Lending Act) has been copied in Europe almost everywhere, outside a few transition countries. Its most significant problem is that it is not consistently applied to different product classes warranting different APRC calculation assumptions, as will be further detailed in chapter 3. For example, a fixed-to-float contract (i.e. fixed initial discount rate followed by reviewable-rate ARM) warrants numerous assumptions to render an APRC calculation and comparison meaningful and some parameters are unknown at contract closing. Contracts with differing expected maturities, considering the prepayment behaviour of consumers, e.g. due to different formulations of the prepayment option regime, require different maturity assumptions.

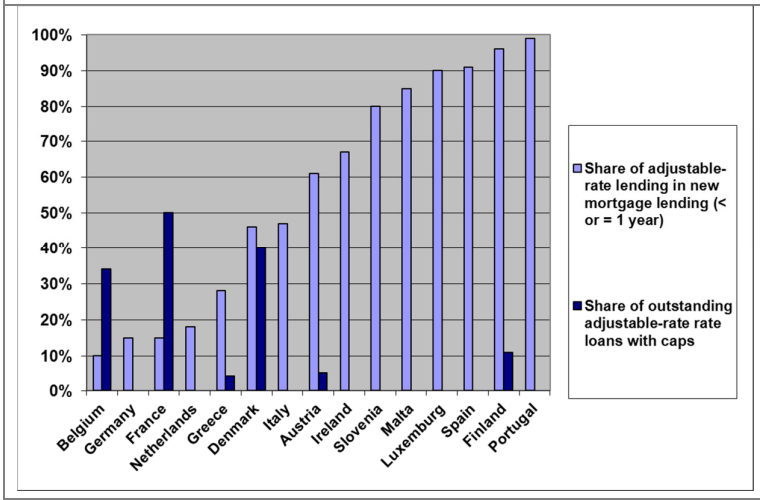
Other discussed consumer protection standards may have had greater relevance, e.g. the **early repayment regime** that crucially determines the supply conditions for FRM. As in the US, Denmark has seen a strong movement in market share from costly pre-payable FRM towards ARM as house prices inflated. The 'mezzanine' cost product non-callable FRM (5-10 years)[16] practiced in Germany, Austria or Canada is missing here as well as in a number of other countries that heavily use the ARM, partly due to legal intervention into prepayment indemnities. The non-callable FRM product can be more easily priced over same-maturity government bonds, which are generally non-callable too, than the callable FRM, and will be less expensive. This is bought by some moderately higher risk for consumers, especially when the loan must be rolled over into a new interest-rate fixing period. The early repayment regime has also been handled particularly restrictively in emerging European mortgage markets, e.g. in the Czech Republic. Typically, early repayment options are closely correlated with consumer satisfaction levels, as consumers tend to value financial flexibility highly.

As important as the subject is, the regulation of FRMs cannot be separated from regulating ARMs, if the goal is to arrive at a product menu conveying lower house price and credit risk. For instance, capped ARMs will provide greater interest rate risk protection at somewhat higher cost for the borrower, further narrowing the cost difference with FRMs. We discuss the issue of rate adjustment and caps in more detail in chapter 3, and note here that countries with a high share of FRMs will also be those more likely to offer caps as a protection against interest rate risk on ARMs (see Figure 8).

[15] See Dübel et al. (2009, Chapter 8.2) for a discussion of the legal baseline in the EU for early repayment.

[16] For a discussion of product classification and terminology, see chapter 3.

Figure 8. Adjustable-rate lending share and use of caps in the eurozone



Sources: Finpolconsult, in Dübel et al. (2009), based on Table 2 of Drudi et al. (2009)/European Central Bank.

The empirical **lessons for the European responsible lending debate** seem in general quite similar to the ones for the US. The four fundamental drivers of default risk – excessive house price levels, excessive consumer leverage, excessive expansion of the credit curve and product risk layering – can also be identified as present in the European markets most seriously affected by mortgage lending crisis. Severe data gaps – there is no EU-wide securitisation market and bank-based systems are inherently non-transparent – render a pan-European forensic default analysis impossible. Individual analysis of UK data undertaken jointly by CML and FSA based on 4 million loans in 2010 suggest a similarly strong role of risk-layering and the particular institutional structures of risk transfer associated with non-conforming lending in generating defaults, as in the US Moreover, there has been risk layering in the eurozone periphery and Central and Eastern Europe, with the most important underlying factor being the overwhelming use of ARM lending. Compared to US, there is less incidence of an industry-wide proliferation of product innovation in Europe due to the absence of a cross-border market. A missing transmission channel in Europe is also the extreme multitude of funding channels in the US that distorted lender and broker incentives. Finally, the European mortgage bailout has been more profound than in the US leading to lower headline default rates, which conceal many of the credit issues discussed.

1.4 The role of fiscal policy

It has been overlooked for a long time and still plays only a minor role in the debate, but it should be observed that the **corollary to** the **downward expansion of the credit curve by the financial sector has been a less interventionist government** in direct transfers to lower-income consumers for housing purposes.

The US housing market is characterised by a **small rental sector**, which has declined further after the exit of government from public (council) housing in the 1990s. Tax credit systems for rental housing exist, but they are small, as is the infrastructure of professional rental landlords. Short-term termination options in rental law, providing limited tenure security only, lead to selecting the riskiest consumers as tenants. Because no rental housing is available, the first-time buyer age is low and first-time buyers require a combination of high leverage, insurance support and direct subsidies, such as stamp duty and property tax exemptions. Down-payment savings programmes are absent, which implies heavy reliance on such subsidies. Once the first step into an owned home is made, young households rely on 'climbing the property ladder', i.e. producing early capital gains, to fund downpayments for the next home. Such a system works only in the

presence of permanent house price inflation. The higher inflation is, the better it works. According to the Survey of Consumer Finances of 2007, buying a house in the US ranks only sixth in a list of eight motives for household savings; only 4.2% of respondents cite buying a house as a reason for savings.

Table 2. Mortgage policy menu differences, US vs. selected European countries

Government mortgage market support

Country	Government Mortgage Insurer	Government Security Guarantees	Government Sponsored Enterprises
Denmark	No	No	No
Germany	No	No	No
Ireland	No	No	No
Netherlands	NHG	No	No
Spain	No	No	No
U.K.	No	No	No
Australia	No	No	No
Canada	CMHC	CMHC	No
Japan	No	JHF	Possible
Korea	No	No	Korean Housing Finance Corp.
Switzerland	No	No	No
U.S.	FHA	GNMA	Fannie Mae, Freddie Mac, FHLBs

Tax treatment of owner-occupation

	Mortgage Interest	Capital Gains	Other
Denmark	deductible at 33% max tax rate	exempt if primary residence of less than 1400 sq. m.	
Germany	non-deductible	exempt if held more than 10 yrs.	
Ireland	deduct for 7 yrs. At 25% max tax rate falling to 20%	exempt	
Netherlands	fully deductible	exempt	imputed income taxed
Spain	capped at € 9015 @ 15% rate	exempt if reinvested or sale after age 65	
U.K.	non-deductible	exempt	
Australia	non-deductible	taxable with indexed cost base	first time homebuyer tax credit
Canada	non-deductible	exempt	temp. withdrawal of retirement savings for downpayment
Japan	non-deductible	tax at 30% if ≤5 yrs., 15% if >5 yrs	deduction of 1% of principal per year for 10 yrs.
U.S.	deductible limit $1 million of debt	exemption of $250/$500k if principal residence 2 out of last 5 yrs.	temporary tax credit 2009-2010

Source: Lea (2010).

The **US mortgage policy menu** is traditionally designed in a way as to **maximise the benefits of the property ladder system** by lowering the cost of credit, traditionally via public guarantees and interest tax deductions. In 1998, far-reaching capital gains tax exemptions had been put in place. What was meant as further stimulation to the property ladder system according to many observers turned housing into a speculative good in the hand of consumers. The approach as a whole has turned out to be costly: interest tax deduction alone cost 0.75% of GDP in 2009 and the permanent cost of the broken public insurance system may well be 0.5% of GDP (assuming crisis cost of 10% of GDP and a recurrence every 20 years). Total recurring housing policy costs are safely in excess of 2% of GDP. In short, the policy menu is oversized, dominated by hidden subsidies, and combines to produce and rely on inflation.

In Europe, also, housing transfers have been sharply reduced. **Housing policy budgets steeply declined in the 1990s** caused by a combination of the secular interest rate compression trend enabling the lending boom and Maastricht fiscal austerity requirements. Using ARM maximised the relief impact of the lending boom on budgets because it meant access to credit for many more households. Total housing policy programme costs in European countries, including tax subsidies, today officially range between 0% (Italy) and 1.63% (France) of GDP, with a median below 1%.[17] Subsidy programmes in the range of 3-4% of GDP were no rarity in the 1970s and still in existence in the 1980s (e.g. Germany, Netherlands, most of Scandinavia, France). While some mortgage subsidies have been cut, too, these trends have in particular gone at the expense of public rental housing.

Still, the European picture regarding the main alternative to owning for young and low-income households, i.e. renting, is more mixed than for the US It is of interest to compare the story of two European countries:

- Spain has been struggling with the long-term implications of decades of rigid rent controls. This has reduced the share of non-owner-occupied tenure beyond what would be indicated

[17] See Ministry of Infrastructure of the Italian Republic and Federcasa (2006). Because of fears regarding the potential cost of housing policy programmes, there is no formal responsibility of the European Union in the sector.

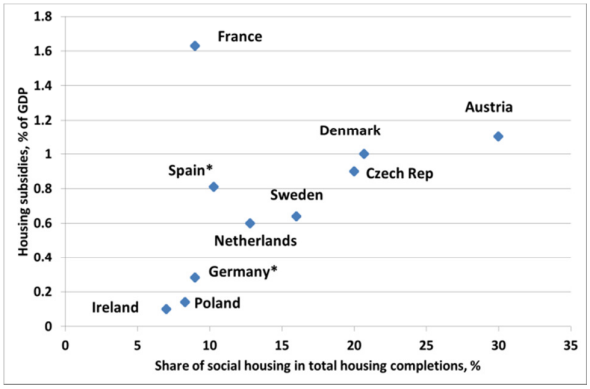
by the structure of the building stock (see right-hand side of Figure 9). Many young households and migrants have no rental housing option and are forced to buy apartments. This has given rise to the de-facto subprime lending market in the 2000s that in turn was only made feasible by very low interest rates. The Spanish housing policy budget has responded to median voter – i.e. homeowner - preference and been systematically biased towards income and value-added tax relief for owners. There has been no comprehensive public revival strategy for rental housing apart from some largely ineffective legal reform steps.

- The UK, in contrast, has been successful in increasing rental tenure share again since its nadir in the late 1980s. Post-WW I rent control had destroyed private rental housing and given rise to local government ('council') housing. Margret Thatcher's right-to-buy policy in the 1980s allowed tenants to privatise these publicly owned units under a combination of price discounts and market rate loans, assisted by liberalisation. This policy ended in the early UK version of a subprime lending crisis after the house price and lending boom ('Lawson boom') associated with this policy in the late 1980s burst. The subsequent UK governments supported the creation and funding of rental housing associations, which essentially replaced 'council' housing, and also private rental housing experiments. The UK even experienced a speculative private rental housing boom ('buy-to-let') during the 2000s. The improved rental sector conditions have helped to expand first time buyer age and supported the reduction of LTVs in retail mortgage finance. The median LTV in the 2000s was a full 15% lower than during the Lawson boom in the 1980s, even as house prices began to rise strongly again. Structural problems for financing rental housing remain, in particular the absence of a meaningful fixed-rate Sterling market.

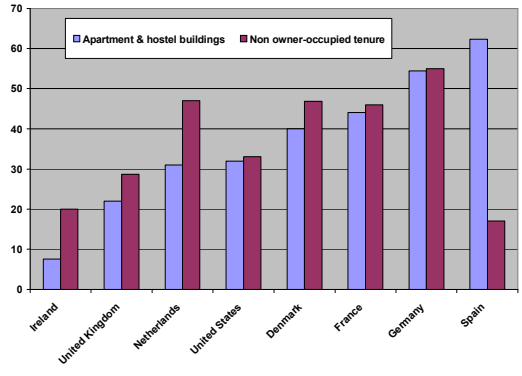
Countries with a **high 'natural' home-ownership rate** such as Ireland due to very low-density building stock also in Europe, **tend to be more vulnerable to mortgage crises** than the jurisdictions with high rental housing shares, e.g. Germany, the Netherlands, Denmark, Austria and France. In the latter jurisdictions, first-time buyer age is higher and an infrastructure of (both private and social) rental housing investors and lending to them exists. Essentially, this replaces a big part of retail mortgage finance through corporate mortgage finance, via housing associations and private investors.

Figure 9. Housing policy menu differences, selected European countries

Public subsidy budgets and social housing construction in selected European countries, 2005



Share of multi-family housing and non-owner occupied tenure in the US and selected European countries, ca. 2005



Notes: LHS – *Spain and Germany federal subsidies only, excludes public loan subsidies. RHS – percentage share in total housing stock.

Sources: LHS – European Statistics on Housing/Federcasa (2006), RHS - Dübel et. al. (2006).

In some European markets, similar **policy and loan product menu distortions** as in the US have strongly encouraged high leverage: in the Netherlands, a combination of public mortgage insurance with tax deductions for both mortgage interest and repayment vehicles has led to a strong market penetration of interest-only mortgages and median underwriting LTVs near 100%. Leverage has also been extremely high in Denmark, where interest tax deductions and income tax rates have been high historically. Germany has a parallel in the market for loans for investment purposes, where interest rates are deductible against taxing rental income; in fact, typically middle-income households become owners of a rented-out apartment before they become homeowners. Table 2 highlights the mixed picture regarding tax and guarantee practices. The **implications for both household leverage and savings ratios** in these countries can be traced in Figure *1*.

2. THE POLICY RESPONSE SO FAR

2.1 Are finance and housing markets self-correcting?

We have seen that both the United States and a large group of European countries have embarked upon an access-to-credit policy to replace housing subsidies/transfers and take advantage of the secular interest rate compression trend that has developed since the 1980s. Together with banking sector deregulation and the development of an unregulated shadow-banking system, this strategy has increased household leverage to historic levels. It has led to overbuilding and in some cases – most notably the US, Spain and Ireland, but also in others – to a structurally manifested bias of the affected economies towards the construction and financial sectors. At the peak of house price inflation in these economies, this strategy has generated a highly risky menu of financial products delivered to increasingly vulnerable consumers; a system of risk layering that is bound to fail. The result has been a protracted financial crisis in the US and parts of Europe, leading later on to fiscal crisis.

We have also seen that both capital-market and bank-based systems can run into house price inflation and financial crisis when no safeguards against increasing leverage are implemented, and the current account remains in imbalance, reflecting large capital imports. Countries that have had regulation or market practices limiting leverage – notably Germany and France – seem to have fared better on the whole. However, deregulation has been a universal trend not limited to crisis countries, and the banking systems in the capital exporting countries have been co-responsible for creating the leverage/lending problem in the importing ones. The question of responsibility for the surge of capital exports – whether conservative credit policies and thriftiness, or structural deficiencies in demand making local investment unprofitable – is an open one.

In an ideal world, real estate and banking sectors would clear the problems out through a wave of insolvencies, the target economies would suffer from major credit crunch in the sector and the remaining lenders would adopt more conservative policies, without much regulatory pressure. This is broadly the **history of the UK banking system in the aftermath of the 1990s crisis**.

During the 1990s, some 5% of the UK home borrower population were repossessed and lost their homes. New lending conditions significantly tightened. At the peak of the UK house price cycle in 1989, median underwriting LTV stood at 85% with many lenders going beyond 100%, e.g. some 25% of new building society lending.[18] With the subsequent collapse of house prices and rising defaults, in particular of high-LTV loans to right-to-buy tenants, the British mortgage insurance industry was completely wiped out. The building societies that had difficulty in recapitalising faced a secular decline in market share. **Universal banks essentially took over the system, and started to self-insure against high-LTV risk**. Clearly, some learning effect on the part of the industry can be discerned: after a short-term increase in LTVs in the immediate aftermath of the crisis resulting from falling house prices, LTV dropped back to almost pre-liberalisation levels (of the 1980s) during the late 1990s. Even in the 2000s, characterised by strong house price inflation, LTV remained conservative compared to the 1980s.[19] Major UK regulation reform was

[18] See Dübel & Pfeiffer (1994).

[19] However, a drawback of lender self-insurance in the UK has been less crisis resilience in some corners: during the current mortgage market crisis, certainly milder for the UK than its predecessor as a result also of lower borrower leverage, the high-LTV market simply collapsed.

only implemented in 2004 ('M-Day'); the preceding decade was characterised by industry self-adjustment and the search for joint minimum consumer protection standards (via establishing new insurance products and a code of conduct).

Yet, **tolerance for household and in particular bank insolvency runs low** both in the US and the EU during the current financial crisis, **and so does tolerance for major economic adjustment through rapid borrower and bank deleveraging**. In the 1990s, the UK, together with Sweden, was an outlier regarding high levels of household debt, and financial crises elsewhere in Europe were limited to isolated cases and sectors (e.g. French commercial property lending). Going forward, in the current European situation a high level of public intervention remains likely. This puts the quality of public sector management under the spotlight:

- As the crisis has incentivised bank mergers and an exit of parts of the specialised mortgage industry, both American and European household lending is now dominated by large, too-big-to-fail banks. In many cases, these banks were rescued by taxpayers with even capital owners being only partially wiped out. The system of **national banking champions** has, if anything, become more important in Europe, giving rise to a new type of cross-border market with member state sovereign credit determining future household loan market shares and interest rates. While the cross-border market has been cut back as the immediate fallout of the crisis, national champions intermediating excess savings may generate a new wave of capital exports sponsoring individual boom countries. Regulation efforts will have to be massively stepped up to control the ensuing moral hazard as well as the structural information opacity of ever larger banks. Both pose increasing systemic and fiscal risks.
- In the short term, high-leverage consumer lending needs to be continued for the sake of slowing down the deleveraging of households and supporting the economy. Clearly, there is risk that short-term solutions keeping leverage high will remain in place in the long term, as in the case of the US New Deal of the 1930s, whose institutions survived for 80 years before they collapsed. The euro crisis has created mutual support mechanisms that are tantamount to New Deal policies for the eurozone: state public budgets are guaranteeing banks and their household debt portfolios, and those state budgets in return are guaranteed by a developing supra-state budget.

These trends imply a strong role of public sector as a household credit market player for at least the next 3-5 years in Europe. Financial reform therefore will mean not just regulating the private sector, but also improving public sector governance and carefully designing potential exit strategies.

2.2 Current financial regulation reform discussion

The United States first reacted to the financial crisis by issuing a number of **emergency regulations** and actions to be implemented by the public insurance system. Particularly influential for the correction of lending standards was the 2007 Interagency Guidance on Sub-prime Lending. It established, inter alia, the requirement to underwrite consumers based on fully-indexed-fully-amortising loan characteristics, rather than initial discount rates and interest-only conditions, and banned prepayment penalties for high-interest rate loans. While there has been no general consensus on universal LTV limits, the public insurance system has reacted – for many prematurely, given the stage of the credit cycle - by re-tightening LTV limits: Fannie Mae and Freddie Mac increased loan purchase discounts for higher LTV lending as well as guarantee fees by the end of 2008, and the FHA in 2009 introduced 'risk-based pricing' for higher-LTV lending. The FHA nevertheless managed to refinance, de facto – given its earlier loss in market share - recapture, a large share of the sub-prime market, and also, via far higher lending limits, substantially expanded her insurance universe into the middle-income market. Fannie and Freddie have been criticised recently for discouraging prepayments by their tightening policies, thus

forcing consumers to keep paying high interest rates.[20] As a comparison: the typical US mortgage borrower pays 5-6%, the typical Irish or Spanish borrower 2-3% interest (see Figure 4). The issue of 'streamlined refinancing', i.e. allowing higher levels of prepayments to interest rates nearer to Fannie and Freddie funding levels has become more pressing as US house prices started to fall again in 2011.

The main wider financial reform proposal is the 2010 Dodd-Frank bill. Central to consumer finance is the reference to "**skin in the game"**, i.e. risk retention by the securitisation industry. Lenders are required to hold at least a 5% stake in the asset-backed debt they structure and sell.[21] Regulators will have flexibility to tailor risk-retention rules to specific products. Credit risk retained by lenders may not be hedged. Importantly, 5% will not be a first loss piece, but rather a 'vertical slice' that will have meaningful accounting implications.

The hopes are that exemptions from 'skin in the game' rules applying to **'qualified residential mortgages'** will help to create a new standard for private sector lending. Federal regulators will jointly define the substance of the term; as of early 2011 a limitation to 80% LTV mortgages is under debate. Outside the technical purchase limits of Fannie Mae and Freddie Mac for loans not carrying private mortgage insurance, which did not pre-empt high-LTV lending, there has so far been no national agreement in the US on where LTV limits could be. An April 2011 Federal Reserve rulemaking proposal calling for tighter LTV limits is likely to meet resistance, given declining house prices. In contrast – as documented in historic national regulation - in most European states and implied by EU legislation regarding covered bonds and capital requirements, there are LTV limits. Also, the US FHA that runs explicit high-LTV guarantee programs, Fannie Mae and Freddie Mac, as well as other agencies or government guarantee schemes, are exempt from the Dodd-Frank bill. This is unlikely to increase the willingness of the private financial industry to agree on specific terms. Finally, there are no LTV limits in the proposed new legislation on covered bonds, a funding tool that should gain in relevance in the US over securitisation in the near future.

Table 3. Mortgage policy response synopsis, United States vs. European Union, 2007 - early 2011

(p) proposal or working document	**European Union**	**EU Member states (selection)**	**United States**
Legislation, general	Financial reform directives (CRD IV, deposit insurance, bank resolution (p)) Directive on credit agreements relating to residential property (p)		Dodd-Frank financial reform law (2010) Various interagency guidelines on mortgage lending standards.
Legislation, Transparency	ESIS, APRC (in Directive, p)		Increased high-risk and high-cost product disclosure
Legislation, Underwriting	Responsible lending rules, focus on credit assessment, regulation of credit intermediaries, waiting period (in Directive, p).	UK: ban of low-documentation loans (p) UK: standards for whole loan residential portfolio purchase by Bank of England.	Responsible lending rules. Penalties for irresponsible lending. Exemptions from skin in the game for high-quality residential mortgages (QRM). Fed paper with specific QRM proposal, esp. related to LTV (p).

[20] See DeRitis & Zandi (2010), who identify Fannie/Freddie, the Federal Reserve and depository institutions (banks) as key stakeholders standing to lose from higher prepayments.

[21] The 5% retention for securitisation was also enacted in Europe in an amendment to the Capital Requirements Directive (CRD) in 2009.

Legislation, Products	Early repayment and rate adjustment rules (in Directive, p) Product suitability criteria tb laid down by Commission (in Directive, p)	Austria: CHF product ban Hungary: foreign currency product ban (earlier: LTV limits, differentiated by currency)	Fed QRM specification (p). Prohibition of certain prepayment penalties (Dodd-Frank) Mandatory variable rate caps (Dodd-Frank).
Legislation, Securitisation /funding	Bank insolvency reform (p) Skin in the game rules for securitisation (CRD IV, p) ECB ABS initiative.	UK, Germany, Ireland – bank insolvency reform UK: Bank of England eligibility req for ABS and cov bonds	Bank insolvency reform. Skin in the game rules for securitisation. Covered bond legislation (p).
Foreclosure prevention	Empirical review of member state practices.	Ireland: foreclosure moratorium Spain: short sale legislation (dacion en pago)	De-facto foreclosure moratoria by public insurers and in the private sector (absence of documentation)
Proposed new institutions	European Banking Administration (EBA).		Consumer Financial Protection Bureau. Office of Housing Counselling.
Existing institutions reforms		UK, Germany : restructuring of financial regulator system	Restructuring of financial regulator system. Fannie Mae/Freddie Mac (public guarantor) reforms (p)
Ad-hoc fiscal support		Ireland: mortgage interest subsidy Various member state support programs for unemployed / young homeowners (e.g. France, Spain)	First-time buyer support, home loan modification (HAMP).
Fiscal policy reforms	Eurozone rescue fund (EFSF) and stability mechanism (ESM), Eurobond issuance (p)	Netherlands: restrictions on mortgage interest deduction	Reduction of mortgage interest deduction and public guarantee system (p).

There are numerous **responsible lending rules** in Dodd-Frank, an area that so far has been unregulated or dealt with in state codes of conduct. Lenders must ensure that borrowers can repay the loans they are sold. Incentives that encourage lenders to steer borrowers into more costly loans are prohibited. Many forms of prepayment indemnities will become prohibited. The bill also establishes penalties for lending considered as irresponsible. It generally expands the protection for high-cost mortgages and requires additional disclosures, including about the maximum a consumer could pay on an ARM (i.e. de-facto a statutory cap). Yet, regarding disclosure, also a de facto counter proposal has been made with the aim of arriving at a simplified mortgage disclosure form, comparable to the ESIS practised in the EU.

On the **institution-building** side, Dodd-Frank establishes the Consumer Financial Protection Bureau under the Federal Reserve System in order to create a vested policy interest in consumer protection. An Office of Housing Counselling is established within the housing ministry HUD.

The **European Union** naturally faces greater **difficulty in developing and agreeing on a consumer finance reform proposal**, due to its construction, but also to the widespread notion of a substantially different nature of the financial crisis. Numerous failures characterise the historical efforts to transpose even the limited canon of the Consumer Credit Directive to mortgage lending. Particularly controversial has been any rule in the 'material' consumer protection context: minimum withdrawal period, early repayment right and indemnities, interest rate adjustment rules, and loan assignment (securitisation). Both the Forum Group of 2005 and the Mortgage Funding Expert Group of 2006 failed to produce agreement among stakeholders.

At first the financial crisis brought the stagnating EU mortgage reform discussion process almost to a halt, even though mortgages in some jurisdictions were at the heart of the European banking and later sovereign crisis. The European Commission's **White Paper** of July 2010[22] was the first official piece of dedicated crisis response: yet, it did not touch on any material consumer protection issues, as for example would be implied by proposing to transpose – *mutatis mutandis* – the CCD. Within the more tangible areas regarding transparency requirements, the paper proposed to render the use of the personalised European Single Information Sheet obligatory, including a 10-day waiting period before contract closure, and introducing a 'broad' version of the APRC, i.e. referring to the total cost of credit. A set of covenant rules were proposed in order to promote **responsible lending** practices on the EU level. Central is the intent to transfer existing bank regulation requirements for a creditworthiness assessment into the ambit of consumer protection and expand it with the concept of 'suitability'. Consumers insisting, despite the lack of suitability of a given product, on signing a contract should be given a 'warning' by the lender. 'Advice' is defined as a service separate from lending, i.e. non-obligatory for lenders. Credit intermediaries, the most likely providers of advice, are asked to get authorised, registered and supervised. Intermediaries shall disclose to consumers their commissions, and whether they are tied to a lender. Consumers have certain information duties to lenders in order to facilitate credit assessments.

By March 2011 the Commission had proposed a "**Directive on credit agreements relating to residential property**" on the basis of the White Paper. The Directive clarifies the legal quality of transparency and responsible lending rules proposed in the White Paper; however, many formulations are less specific than before - for example the 10-day waiting period before contract closure – disappeared in favour of subsidiarity. The Commission proposes the specification of certain criteria, including in material consumer protection areas such as credit assessment and product suitability. Such criteria could potentially have a significant market regulation impact. Yet, the Directive is devoid of any specific wording regarding these issues, such as loan-to-value or loan amortisation principles, and the wording adopted in the areas of early repayment and rate adjustment is unrestrictive (see discussion in Chapter 3).

While the EU has copied some of the US securitisation regulation approaches, especially the 'skin in the game' idea, **no explicit linkage between the quality of mortgage lending and securitisation** has been proposed. Such linkages have been present in national covered bond legislations and some emergency activity (e.g. a proposed UK MBS guarantee programme in 2008). However, any notion of a legislated EU standard is elusive given the 30 years of fruitless discussion of an EU Covered Bond Directive and vastly differing member state laws and sovereign credit support structures. For example, excess collateral going with bondholders in case of insolvency may differ from virtually none (Denmark) to some 70-100% (Spain) of the outstanding bonds. The ECB, which has completed a €60 billion emergency purchase programme of covered bonds between July 2009 and June 2010 had called for a reduction of such national idiosyncracy. By early 2011, given plans for haircuts on unsecured bank lenders, covered bonds have gained so much in relevance for mortgage lenders that progress seems unlikely.

Member states have also taken or are planning domestic regulatory initiatives. Given the slow progress on the EU level, the prospect of a further scattering of consumer protection legislation is rising. In early 2010, before the detailed default analysis had come out and even though it would seem that UK practices had been far less problematic than in the US, the **British FSA** suggested a ban of low-documentation loans. It would seem that in the meantime efforts are being made to disentangle the valid core of the product - e.g. for self-employed people facing long delays in formalised income documentation via tax files- from its abuse as one of many risk layers during the house price boom. Similarly, **regulators in Latvia, Austria, Hungary and Poland** have

[22] Commission Services Working Document: Responsible Lending and Borrowing, 22.7.2010.

been struggling in very diverse ways with the perceived or materialised risk of foreign currency lending. Austria has essentially banned CHF lending except for consumers with matching CHF incomes. Hungary has shifted between imposing severe LTV limits and a ban, Poland has tightened stress testing and Latvia has done nothing to curtail EUR lending, despite the non-zero probability of a breakdown of the currency board. The EU has withdrawn a regulatory initiative calling for stiff capital requirements on foreign currency mortgages in early 2010 and the issue is not part of the proposed Directive.[23]

Capital requirements and liquidity standards are subject to review under the heading of **Basel III.** The outcome is still unclear, but might in particular change the environment for mortgage credit. The Basel Committee has proposed a 'Net Stable Funding Ratio' forcing lenders to fund long-term loans with long-term liabilities only. While the long-term definition includes almost all deposits of a lender, it rules out the use of some short-term bond and repo instruments. It could thus strengthen the use of covered bonds, for which at least some national regulations have formulated high asset quality standards. With a combined consumer (mortgage), bank and sovereign debt crisis on hand, the concept of 'risk-based' capital requirements for debt of these counterparties has come under intensive discussion, too. A tangible output in Basel III in this vein so far has been the leverage ratio, which will indirectly put a floor under capital requirements for both sovereign and mortgage debt held by banks. It should be recalled that the risk-weighting for residential mortgage loans under the standardised approach in Basel II was 35% of 8%, i.e. a capital requirement of 2.8%. A leverage ratio limit of 30 would lift that requirement indirectly to 3.3%, and also limit options to arrive at lower capital ratios via the internal risk-based approach. The Financial Stability Board (2011) has finally set up a working party looking into mortgage underwriting standards. Preliminary findings encourage greater use of LTV and debt service limits and suggest a critical review of the capital support quality of third-party mortgage insurance.

2.3 Current fiscal (and monetary) policy actions

Emergency fiscal and monetary policy **actions** have been the priority in addressing the household debt crisis in the affected jurisdictions. The general thrust has been twofold: to **reduce the carry cost of high household debt levels** by reducing interest rates payable, and – so far with far lesser intensity - to reduce debt levels themselves.

In the US the HAMP (**loan modification**) and HARP (loan prepayment) programs have largely been seen as failures, because insufficient pressure has been put on either the banks or public insurers to accept haircuts and relax their underwriting conditions for refinancing.[24] Obviously, the long-term need to arrive at a more conservative system and restore corporate profitability, and short-term emergency policy considerations, are in conflict. More specifically, the US government is interested simultaneously in short-term solutions reducing the burden for consumers and in retaining the solvency of Fannie/Freddie and the banks that it supports. This conflicted constellation has been a decisive factor in the massive purchase programs of mortgage securities by the Federal Reserve remaining largely ineffective in reducing mortgage rates. As of early 2011 house prices are falling further.

What seems to have worked in the **US** is the extensive refinancing and guarantee expansion program provided by the FHA. Other elements of the **housing policy menu** are **under review**, with the priorities of reducing or eliminating mortgage interest deduction, reviewing the capital gains tax regime and supporting rental housing. In February 2011, the US Treasury and housing ministry HUD published a broad housing finance reform strategy, focusing mostly on the future of public guarantees. It is unlikely, given the high fiscal cost of emergency action, that new housing

[23] Commission Services Staff Working Document 'Possible Further Changes to the Capital Requirements Directive' of November 2009.

[24] See Goodman (2010).

policy initiatives will enjoy major fiscal support. In fact even the design of the public insurance system is unlikely to change fundamentally, given the perceived emergency situation. This puts the spotlight on a restructuring of tax incentives and a gradual deleveraging by tightening insurance conditions.

European households pay far lower mortgage interest rates than US borrowers via the predominant ARM, and in particular index tracker, regime. Thus the credit loosening tactics of central banks in Europe have been more effective and foreclosures were kept lower than in the US. While refinancing has come to a halt in the UK, Spain or Ireland, too, the **carry costs of the portfolio remain low** – for both lenders and borrowers. The paying agents are savers deprived of returns and governments supporting far-too-low spreads in the banking portfolios with capital subsidies and guarantees. In Hungary, the government has been asking banks to moderate their reviewable CHF interest rates to reduce defaults. National foreclosure prevention programmes assisting certain homeowners exist in France, Spain, the UK, and Ireland. Their main focus is to assist unemployed and young households. In the Irish case of 'Mortgage Interest Support', they further reduce effective interest rate payments, following the successful UK model of Mortgage Interest Direct of the 1990s.

Europe has so far done very little to address the **structural over-indebtedness situation** of many households, however. This is particularly relevant in the eurozone periphery where incomes are falling and the economic outlook is shaky. There are plans for legislation reducing the residual debt due from households in Ireland in case of a shortfall after foreclosure, by shortening the discharge period from the current twelve to six years. The threat of high levels of residual debt to be borne by young households has been a central motive behind the current Irish foreclosure moratorium. Spain is still resisting legal reform: households there are currently liable for residual debt for the rest of their lives. Reform might become unavoidable when the European Central Bank increases interest rates and house prices adjust further. The current voluntary legal option of repossession ('dacion en pago') does not seem to be widely used by banks. First court judgments are denying banks a residual debt claim. A political initiative in hard-hit Latvia has tried to push in the same direction. Also, no EU member state seems to have started a comprehensive household debt restructuring programme along the lines of US HAMP. When European central banks are forced to increase interest rates due to inflationary pressure, the subject could finally be back on the European agenda.

2.4 Assessment

On both sides of the Atlantic, the household debt crisis has led to a flurry of regulatory and fiscal activity, as well as the relaxation of monetary policy. The main immediate thrust of fiscal policy can be identified as **'kick the can'**, i.e. avoid household debt restructuring and avoid an accelerated cleaning out of the banking system that holds the household debt, by keeping interest rates low for an extended period. Some of the delay in European house price adjustment in the eurozone periphery, but also in the UK or Denmark, must be seen as an artefact of a strategy relying primarily on monetary policy. Clearly, the common denominator is fear of a deepening of the European banking crisis and, via the legally questionable assumption of bank debt, of the sovereign debt crisis of some European states.

This approach is limited, however, by simple economics: interest rates cannot be kept below levels suitable to contain inflation for the sake of supporting the most affected jurisdictions for a longer time without risking the stagflation scenario of the 1970s for Europe as a whole. Such a scenario might reduce debt and its carry cost via inflation, but it would also destroy investment and real growth dynamics, and possibly hurt sovereign budgets even more. Therefore, some **real reduction of household debt in the most affected jurisdictions is paramount**, as is the engineering of a soft landing regarding debt levels in others. This will necessarily imply a rising number of home loan modifications and household insolvencies, and by implication further bank debt and potentially sovereign debt restructuring. The view that over-indebted homeowners will

never default, regardless of how far their mortgages are under water, is deeply rooted in Europe. This confidence is highly likely to prove to be misplaced, as is already suggested by current US default trends.[25] Similarly with the view that the house price peaks of 2006/7 will be reached again soon: if earlier housing crisis (UK and Spain in the early 1990s) are any example, this will not happen for at least a decade, even under a moderate inflation scenario.

Financial regulation reform needs to be seen in the context of the political constraints imposed by the current state of emergency, or political myopia, depending on perspective. The most prominent need for Europe seems to be **mortgage product reform**: both foreign currency and local currency ARM lending create massive moral hazard by both borrowers and lenders by destroying the willingness to pay for interest rate risk protection via fixed rates and generate mismatch risk with the basically fixed income stream from housing. These products also lay the foundation for dangerous risk layering, even in markets in which they have been established for generations, resulting in aggressive central bank intervention to bail out the system. A low discount factor as embedded in the ca. 3% interest rate level that Spanish or Irish homeowners have been paying for much of the last decade, permanently inflates house prices, and pricing a fixed income stream (saved rent payments) over the volatile short end of the yield curve also implies more volatile house prices. Changing the structural bias towards ARMs – e.g. by differentiating capital requirements or stress-testing during underwriting - appears more important than addressing temporary house price bubble endgame covenants, such as low amortisation or high LTVs, even though these practices deserve attention, too. However, the interest rate pass-through properties of ARMs on household debt service and consumption are also currently assisting central bank emergency action to reinflate the economy. This establishes a conflict between stability and pump-priming that needs to be addressed.

Behind product reform there is need for **financial institution reform**: a liberalised mortgage finance system – as designed in the 1980s - relying mostly on commercial banks with their focus on ARM lending, their implicit government guarantees and interest subsidy relations with central banks, is bound to fail within a short period of time again. Europe has almost completely dismantled its specialist housing finance system offering FRM in the past two decades. It could take the opportunity of the crisis to consider bringing it back as a stable long-term option to isolate housing finance risk, make such risk transparent and strengthen the specialist knowledge and focus needed in the sector. A clean separation of risk would essentially be the 'Volcker rule' for long-term lending and with specialist subsidiaries could be compatible with a predominantly universal banking system. The alternative is the attempt to regulate large universal banks, which are fully aware of their political clout, and use it. The fierce rejection of the 'Net Stable Funding Ratio' by large European banks is a vivid illustration of the situation.

When attempting to regulate, rather than actively shape the housing finance system, constraining the product set to the least dangerous and **penalising risk layering** should be the priority. It remains to be seen whether the Basel III process can produce agreement on a sensible framework for mortgage products. It is highly unlikely that the EU will do so, given the political economy, while the US, like the other large Basel III stakeholder, has put the issue on the agenda in Dodd-Frank. Consumer protection reforms in the EU, due to entrenched stakeholder interests, are bound to remain a slow process, unlikely to even reach the modest Consumer Credit Directive standard in the mortgage sector. Often, the opposition harms the very self-interest of the opponents – an example is Germany's opposition to harmonising the fixed-rate mortgage prepayment regime that blocks an important export channel for capital surpluses into a relatively safe loan product.

Suggestions that the EU – if it cannot positively agree on rules - might at least attempt to **moderate or arbiter the myriad of national consumer protection regulations**, e.g. by demanding –

[25] See Goodman (2010) for an assessment of the default likelihood of US underwater mortgage borrowers.

along the lines of state aid regulations – empirical evidence of their stability vs. competition impact, remain unheard. Many discussions on mortgage finance on the EU level also appear confused, for example regarding the limitations of the APRC concept or the legal implications of 'suitability' or 'advice'. This demonstrates a gap of financial expertise and institution-building. It would seem from this perspective that a specialised European consumer finance agency along the lines of the US Consumer Financial Protection Bureau might be best suited to advance the EU discussion. At least it could be a place in which to concentrate expertise and create a vested interest responding to the build-up of the European Banking Agency.

Both Europe and the US finally need a **turnaround of public housing policy** to a new equilibrium. This should lie somewhere between the vast social housing expenses of the 1970s – a by-product of stagflation, which severely curtailed housing finance – and the view gaining ground since the 1980s that market-based lending can provide housing solutions to all stakeholders and minimalistic public intervention in the sector is sufficient. Europe needs to start to understand that – very much analogous to the US - the current fiscal crisis is not just the result of 'lax lending standards' in banking. Rather it is a reflection of the partial withdrawal of the public sector from social transfers and housing policy.

Again, the **organisation of the EU in this sector is dysfunctional**: the housing sector has been left out of the EU's operational ambit for fear that it might create another agricultural sector, i.e. demand huge subsidies from member states. Member states have cut back their budgets to near zero, and the sector remains inconsistently and diversely regulated across the continent. Without some co-ordination of national housing policies and regulations, e.g. in the areas of rent control, mortgage interest deduction, housing allowances or minimum scale of rental programmes benefiting young households and migrants, it is likely, however, that the crisis will be repeated as important housing market segments remain underserved. Too many consumers unfit to borrow will search for credit in this case, while the potential for safer lending to housing via corporate and non-profit (rental) investors will remain untapped.

3. SELECTED MORTGAGE CONSUMER PROTECTION ISSUES

3.1 Introduction

The EU Consumer Credit Directive (CCD) adopted in 1987, reformed in 2008, has taken a moderately interventionist approach to consumer credit regulation. It regulates pre-contractual transparency and a number of material consumer protection issues during the contract phase, but leaves out contract execution via foreclosure and the consumer insolvency regime.

A full transposition to mortgage credit – some member states transpose the entire CCD and all others have transposed at least parts of it – has been pre-empted historically by concerns not to interfere with long-standing local industry practices and funding approaches.

Moreover, in particular in Anglo-Saxon case law jurisdictions, material consumer protection going beyond the distribution phase has historically only developed over long periods of time as a result of a series of court judgments. In contrast, Roman (Napoleanic) law countries in continental Europe have been more aggressive in structuring products and limiting practices by law. While the outcome of both approaches may ultimately be similar, processes and time scales clearly differ.

The difficulty to establish a consensus has therefore forced recent EU initiatives in mortgage credit to focus on transparency provisions. Only with the financial crisis did the White Paper of July 2010 add the aspect of responsible lending, i.e. proper conduct by lenders (and borrowers) when underwriting a mortgage loan.

This approach still left aside all phases of the mortgage finance life-cycle beyond the point-of-sale, and thus shortened the canon of issues contained in the CCD for the case of mortgage lending. The 2011 Directive proposal promptly has taken up many material consumer protection issues – particularly those of early repayment and rate adjustment – while still leaving out others (e.g. loan assignment during securitisation).

The subsequent discussion therefore, by historical coincidence, broadly covers the ambit of the current Directive proposal. However, because this report was largely completed in February 2011, no specific reference to the text of the Directive proposal is made.

3.2 Credit distribution

3.2.1 Mandatory provision of standardised pre-contractual information

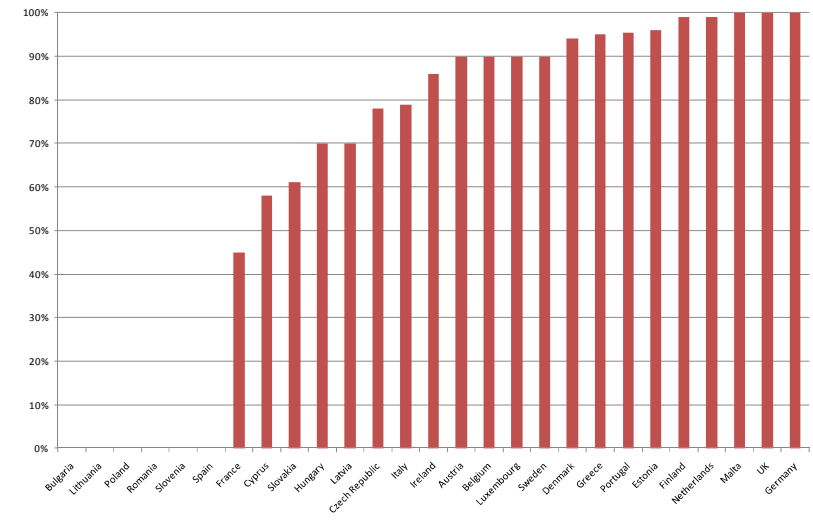
On the EU-level, pre-contractual information disclosure for mortgage credit is currently covered by the 2001 pan-European Voluntary Code of Conduct on Pre-contractual Information for Home Loans (the Code),[26] which entitles consumers to receive a personalised European Standard Information Sheet (ESIS) prior to the conclusion of the loan contract. The latter is intended to facilitate consumers' access to comprehensive and understandable as well as personalised key information items on the mortgage product of interest in a form. The idea is to enhance

[26] The Code of Conduct was negotiated between the European credit sector associations offering home loans and European consumer associations under the aegis of the Commission. Information on the code of conduct is available on the Commission's website (http://ec.europa.eu/internal_market/finservices-retail/home-loans/code_en.htm).

comparability between various offers in order to narrow down the product menu according to their personal preferences prior to contract closure. The simplified ESIS has been designed as the counter model to over-information of the consumer through comprehensive and long, but hard to analyse and easy to manipulate information sets. This issue has been a key concern of consumer protection in the US mortgage sector.

The latest available data provided by European Commission[27] and the European Banking Industry Committee's (EBIC) third progress report on the implementation of the code published in April 2009[28] show, however, that adherence to the Code is, despite improvements since 2001, unsatisfactory for several countries, although important country-specific differences do exist. Germany, the UK and Malta feature compliance rates of 100%, while the share of mortgage lenders providing the ESIS in France and Cyprus, for example, stands at only 45% or 58%, respectively (see Figure 10). Failure to comply could result in higher search costs for borrowers in those member states.

Figure 10. Share of mortgage lenders providing the ESIS



Source: 3rd EBIC progress report; own computations.

Table 4 summarises the current legal situation and shows that the mortgage industry in 13 countries has not explicitly advised lenders to adhere to the Code, while it has decided to respect the Code in 12 member states. Germany and Malta have transposed the Code into national legislation.

Existing UK legislation in many areas goes beyond the Code, implying de-facto transposition. For example, the Key Facts Information (KFI) document requires the disclosure of the total amount payable, the impact of additional loan fees, commissions paid to third parties and specific risk factors (e.g. an interest-only loan). Conversely, among the items included in the Code but not in the KFI, are a demonstration of the effect of interest rate stress and a monthly amortisation table. This example demonstrates the differences in interpretation, or empirical

[27] For more information: http://ec.europa.eu/internal_market/finservices-retail/home-loans/code_en.htm

[28] The report can be downloaded here: http://www.eubic.org/Position%20papers/3rd%20EBIC%20Progress%20Report%20on%20the%20Implementation%20of%20the%20Code%20of%20Conduct%20on%20Home%20Loans.pdf

evidence, which may result in over-information of consumers leading to confusion or a reduced attention span.

Table 4. Level of industry adherence and implementation of the Code

Country	Explicit industry agreement of lenders to adhere to code?		Code legally binding?		Percentage of national market adherence
	YES	NO	YES	NO	
Austria		x		x	90
Belgium	x			x	90
Bulgaria		x		x	unknown
Cyprus	x			x	58
Czech Republic	x			x	78
Denmark	x			x	94
Estonia	x			x	99
Finland	x			x	99
France	x			x	45
Germany	x		x		100**
Greece	x			x	95
Hungary	x			x	unknown
Ireland	x			x	86
Italy		x		x	79
Latvia		x		x	4 lenders
Lithuania		x		x	unknown
Luxembourg		x		x	90
Malta	x		x		100**
Netherlands		x		x	99
Poland		x		x	0
Portugal	x			x	95.4
Romania		x		x	unknown
Slovakia		x		x	100
Slovenia		x		x	0
Spain		x		x	0
Sweden	x			x	90
UK		x*		x	100
TOTAL	**14**	**13**	**2**	**25**	

* In the UK, a Key Facts Information (KFI) sheet is provided. While this is not the same as the ESIS, the UK's Financial Services Authority (FSA) argues to fulfil the information requirements stipulated by the ESIS, or even go beyond these.

** Through binding legislation.

Source: CEPS.

Consumer testing exercises carried out by the European Commission have revealed that the provision of pre-contractual information in a structured way is key to efficient information absorption, both in a general as well as specific form on the requested loan including characteristics, risks and costs of the loan.

From this perspective, it seems evident that universal industry adherence to the Code or other minimum transparency requirements could bring benefits to European consumers, as well as to lenders facing unfair competition. The European Commission commissioned London Economics to assess this question in 2008, but so far no report has been published. In particular consumer representatives have become increasingly critical of slow implementation efforts on the

side of the lenders. In addition, consumer groups have repeatedly criticised the absence of independent monitoring and credible enforcement mechanisms.[29]

The European Commission's impact assessment accompanying its 2007 "White Paper on the Integration of EU Mortgage Credit Markets"[30] identified the following problems in relation to the provision of pre-contractual information on mortgage credit:

- insufficient and complex information;
- lack of EU-wide comparability;
- differences in the timing of providing pre-contractual information; and
- lack of credible monitoring and enforcement mechanisms.

In addition to the wide variance of information content and lender practices that exists across the European Union, efforts to find a common standard have always also been handicapped by consumer heterogeneity, which sparked discussions on whether the point of reference should be the marginal (i.e. most vulnerable) or average consumer. Research has indeed shown that a majority of potential mortgage borrowers face difficulties in processing the information provided to them. A Eurobarometer survey, for example, carried out in 2005 indicated that 59% of EU citizens find it difficult "to understand the information given by financial institutions about the way mortgages work and the risks involved".[31] And while the use of the ESIS may have helped consumers to move up the learning curve,[32] customers still struggle with complicated technical and legal terms as well as the complexity and breadth of product on offer.

Europe has advanced with the single information sheet concept, with the aim of minimising confusion through over- or misleading information at least of those consumers who are able to process basic financial information. Concerning the substance, the creation of a tri-party commission (mortgage lenders, consumer groups and public administration) tasked with drawing up and formally authorising a new design could be considered. A working group consisting of mortgage banks and the consumer council is currently conducting such an effort on a national level in Denmark.

The challenges in enhancing consumer education on mortgages can also be ascribed to the fact that taking out a mortgage is still a once-in-a-lifetime decision in many markets. This argues in particular for standardising certain information items and devising an official classification of products to allow comparisons. A Eurobarometer survey of 2009 shows that only around 50% of Europeans find the comparison of offers between mortgage providers easy to understand, with 27% thinking it was 'fairly difficult' and 12% considering it 'very difficult'.[33]

The timing of the receipt of pre-contractual documents is another critical issue, if the goal is to enhance consumer options to 'shop around' and allow for an adequate period of reflection. As

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[29] According to the agreement on the code (http://ec.europa.eu/internal_market/finservices-retail/docs/home-loans/agreement_en.pdf), the lending associations are to publish an annual progress report on the implementation of the code. The Commission is charged with monitoring the uptake and effectiveness of the code and review the operation of the code. The latter was done through a study by the Institute for Financial Services (http://ec.europa.eu/internal_market/finservices-retail/docs/home-loans/home-loans-final-report_en.pdf).

[30] The White Paper and accompanying documents can be found on the Commission's website (http://ec.europa.eu/internal_market/finservices-retail/credit/mortgage_en.htm).

[31] Special Eurobarometer 230 (2005), Public Opinion in Europe on Financial Services (http://ec.europa.eu/public_opinion/archives/ebs/ebs_230_en.pdf).

[32] Denmark opted for the use of the ESIS in the implementation of the CCD due to the familiarity of borrowers with the wording and layout.

[33] Flash Eurobarometer 243 (2009), Consumers' view on switching service providers (http://ec.europa.eu/public_opinion/flash/fl_243_en.pdf).

the Code does not specify at what stage of the process the consumer has to be provided with the documents, potential borrowers are currently – depending on the country – receiving pre-contractual information either together with the binding offer, in advance of a binding offer or only upon request.[34] While virtually all stakeholders support the handout of the ESIS without delay, opinions are divided whether a specific number of days prior to contract signature should be required. A long period has implications for funding risks of lenders.

The extension of the requirement to produce the ESIS to credit intermediaries also warrants further discussion. Despite setbacks after the crisis, intermediaries are a growing source of mortgages in Europe. A recent study carried out for the European Commission[35] indicates that the share of intermediaries in the retailing of mortgages and other lending secured on own property reaches levels of 60% (Ireland) to 70% (UK), with the EU average amounting to 41.5% in 2007. Currently, intermediaries are not subject to the obligation to comply with the Code.[36] Intermediaries could at least act on behalf of lenders in delivering the ESIS, in order to further the goal of providing timely and understandable information.

POLICY OPTIONS AND RECOMMENDATIONS

The provision of pre-contractual information has been the least-contested element of mortgage consumer protection. In order to improve the current legal framework, EU policy-makers should consider:

- Making the handing out of the European Standardised Information Sheet (ESIS), currently governed by a self-regulatory Code of Conduct, a legal obligation.
- Obliging not only lenders but also credit intermediaries to provide potential borrowers with the ESIS.
- Introducing improvements (simplification and format) to the ESIS through a tri-party approach (mortgage lenders, consumer associations, public administration), considering the actual use by consumers.
- Specifying the timing of information disclosure in order to give consumers the time to consider the offer, coupled with the introduction of the possibility for consumers to waive the reflection period.

3.2.2 Standardised APRC calculations

The Annual Percentage Rate of Charge (APRC) is defined as the internal rate of return of future payment streams from consumers to lenders. It is a central element of the concept of disclosure since it was first introduced in the US Truth in Lending Act in 1968. A clearly understandable and EU-wide APRC should in theory help to increase mortgage market transparency and product comparability, allow lenders to benefit from an improved competition environment and consumers from lower search costs. However, matters are not as simple in long-term credit, which comes in a large number of varieties in a union of more than two dozen distinctive consumer finance markets.

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[34] "Monitoring the uptake and the effectiveness of the Voluntary Code of Conduct on Pre-contractual Information for Home Loans" (2003), Institute for Financial Services e.V (http://ec.europa.eu/internal_market/finservices-retail/docs/home-loans/home-loans-final-report_en.pdf).

[35] "Study on Credit Intermediaries in the Internal Market" (2009), European Commission (http://ec.europa.eu/internal_market/finservices-retail/docs/credit/credit_intermediaries_report_en.pdf).

[36] Only in eight countries (AT, BE, DE, DK, IT, NL, SK, UK) has the industry decided that intermediaries, in addition to the lenders, should respect the code.

As of today, and in contrast to consumer credit, APRCs for mortgage financing are not harmonised by a common computation methodology through EU-wide legislation. In fact, legal requirements setting out the specificities for the calculation of the APRC for mortgages do not even exist in every member state. Common (national) rules are applied in only 16 EU countries. In particular, most emerging European markets still do not apply an APRC. Table 5 provides an overview.

Table 5. *Overview of countries with legal specification for the calculation of the APRC*

Country	Does a legal specification for the calculation of the APRC Exist?	
	NO	YES
Austria		x
Belgium	x	
Bulgaria	x	
Cyprus	x	
Czech Republic	x	
Denmark		x
Estonia		x
Finland		x
France		x
Germany		x
Greece	x	
Hungary		x
Ireland		x
Italy		x
Latvia	x	
Lithuania	x	
Luxembourg	x	
Malta		x
Netherlands	x	
Poland	x	
Portugal		x
Romania	x	
Slovakia		x
Slovenia		x
Spain		x
Sweden		x
UK		x
TOTAL	**11**	**16**

Source: CEPS.

The preservation of the status quo of no harmonisation of APRC cost elements and computation methods is clearly unacceptable to the European Commission. Policy options formulated for the London Economics study discuss variants of the breadth of the APRC definition:

- narrow definition (all costs paid to the lender for his own benefit);
- a broad definition (all costs paid by the consumer, including to third parties); or

- on the basis of an alignment with the provisions set out in the CCD ("all the costs, including interest, commissions, taxes, fees for credit intermediaries and any other fees which the consumer has to pay in connection with the credit agreement, except for notarial costs"[37]).

This menu is reflected in the European Commission's impact assessment accompanying its 2007 "White Paper on the Integration of EU Mortgage Credit Markets", which refers to two issues to be taken into consideration in the process of finding a common methodology for APRC calculation: i) the recipient of the payment of the costs on the one side and ii) the relation of these costs to the credit (direct vs. indirect costs). The former aims to separate costs levied by the lender (interest and commission payments) from payments made to third parties (insurance premiums, notary costs or taxes), while the latter targets the differentiation between costs related to the establishment of the mortgage loan and the charges and fees over and above the direct cost of the funds taken out by the borrower (cost of a survey for the establishment of the surety of a loan, file opening fees, etc.).

APRC harmonisation could have a positive impact on consumers via an improved comparability of prices of different offers. By including relevant non-interest rate cost factors, the risk could be mitigated that consumers are misled towards only superficially more attractive offers. The classic case has been a loan offered at a lower interest rate, e.g. 6% instead of 6.5%, but disbursed at a disagio (or points), e.g. at 98% instead of 100%. Both products could have the same APRC, but look very different to consumers. The trouble is that such simple situations are today only found in emerging mortgage markets in Eastern Europe, which offer very few products. The rest of the European mortgage market has become far more complex.

Consumer groups have for long been supporting a broad definition of the APRC that is also embedded in the CCD, i.e. one that includes all associated costs and fees borne by the borrower, including insurance/surety and other third-party-induced cost. Notary costs are exempted since they can strongly vary across jurisdictions. Lenders tend to reject the call to include third-party costs as this may slow down underwriting and raise liability issues between legally distinct providers of services when quoting each others' prices to consumers. A broader APRC in this perspective might even decrease consumer benefit by disclosing the APRC necessarily only late in the underwriting process, when all such information becomes available.

The complexity of European mortgage products renders a total cost concept a difficult tool to use for comparison purposes, in particular across borders. Even when limited to a simple setup – say comparing the cost of a 90% LTV loan with mortgage insurance with a 90% LTV loan on which the lender takes the entire credit risk himself – matters become complex, e.g. due to different quality of mortgage collateral, insurance coverage or pricing standards across borders. A definition in that case would conceptually at least have to assume a specific credit support and risk profile of the borrower in order to make sense. Comparable information seems hard to create and communicate to borrowers, and even more difficult to police. Such arguments would speak in favour of quoting the narrow cost of a standardised loan (e.g. mortgage surety, 80% LTV, prime borrower) to have at least one like-to-like cross-border comparison.

A possible compromise between the competing comprehensive cost information and the comparability interest could be to consider the broad CCD APRC definition as mandatory for mortgage finance on the national level, with parameters specified on the national level. A narrow APRC concept leaning on the CCD concept of the 'borrowing rate' could then also be made mandatory in order to ease cross-border comparisons. The risk of over-information seems limited in this approach, compared e.g. to price quotation practices in other consumer sectors (say, cellular phone contracts) and given the financial relevance of the housing investment for the consumer.

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[37] Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC, Recital 20.

These questions, high on the Commission's agenda, unfortunately neglect the enormous importance of additional safeguards to protect the consumer from misinterpretation or misinformation. Most important here is the need to classify mortgage loans prior to applying the APRC. This is critical since stating a price without describing the risk and other important features does not allow for meaningful comparison domestically, let alone between heterogeneous product classes internationally. Consider as an analogy the protection different car products offer drivers in case of an accident, which typically reflected production costs and prices, which most consumers understand easily. This is less so in the case of consumer finance regarding the risk transferred by products. The attempt in the White Paper to make assumptions for variable-rate loans implicitly acknowledges this problem. In fact, several stakeholders have gone further and called for using the APRC as only one of several key figures (rather than a solitary measure for mortgage comparison).

Conceivable product classes in the interest-rate risk dimension would be reviewable-rate mortgages, index-tracker mortgages, short-term/reset non-callable fixed-rate mortgages and mortgages fixed to maturity with prepayment option. Fixed-to-float mortgages should be classified according to their dominant loan phase – in a product with a long initial fixed rate period – e.g. 5 or 10 years - this will be the fixed-rate; a product with just a short fixed-rate teaser will be classified as variable (ARM). Obviously, a harmonisation of early repayment indemnities (see below) would support the harmonisation of APRCs, since it would permit a comparison of maturities of prepayment-protected ('non-callable') fixed-rate mortgages across Europe.

In addition, product subclasses would have to be differentiated with regard to the presence of interest rate caps, prepayment indemnity formulations, pre-savings requirements, other consumer options (e.g. portability to a different house) and certain credit features. If necessary, specific option costs or idiosyncratic cost components could be either stripped or merged in order to reach comparability.

Dealing with loan rate variability is an additional issue, given the increase in ARMs in Europe in the past two decades. Obvious problems are the unpredictable changes in market circumstances on the one side and different rate adjustment processes applied by lenders on the other.

Consider for example a standard variable rate (SVR) loan with a 2-year initial period of low fixed rates ('teaser'), followed by a variable interest rate determined by the lender and which is unknown in advance. This has been the most popular loan product in the UK; similar products have also gained in popularity in the US during the housing boom (so-called 'hybrid' ARMs). Applying the APRC over the fixed-rate period is misleading for such a product, as it is usually a teaser (below-market) rate. Even the concept of an 'initial' APRC – comparing the teaser rates only – is misleading, since the lender can 'claw back' any discount by a certain amount of overcharging in the variable rate loan phase. The interest rate, finally, that the lender will charge on the variable-rate phase, is unknown in the case of the SVR. In contrast, so-called 'tracker' ARMs, following an inflation or interbank cost of fund index with constant contractual spreads, can be compared with relative ease.

Both SVR and index-tracker products have in common that they convey considerable interest-rate risk to consumers. According to the White Paper, the potentially very low current interest rate shall be assumed to prevail for the life of the loan, instead of serving as a representative interest rate for the life of the loan (for example, an historical average).

The current interest rate approach is taken by the CCD for short-term loans with some justification, but it is highly questionable for long-term lending. Data presented in chapter 1 show that the misleading of consumers in mortgage finance is not just theory. ARM demand is highest when the yield curve is steepest, reflecting the reaction of borrowers to price signals and their assumption that they remain permanently low. This assumption is bolstered by the officially implemented APRC calculation methodologies, which suggest the same constancy of short-term rates. Market professionals, in contrast, understand that if the yield curve is steep, the cost of

protection against future interest rate risk is so, and that by implication the borrower going for an ARM takes a higher interest risk than usual.

The approach is even more dubious if, as intended by the CCD total cost of credit approach regarding cost elements, the intention of the APRC is to inform the consumer about the maximum cost, i.e. personal financial risk, incurred when servicing the loan. Consistency with that concept would imply informing consumers in with distribution data, i.e. showing the highest and lowest ARM interest rate charged over a sufficiently long historical period of time.

Similar considerations apply to mortgages denominated in foreign currencies, a common practice in Eastern European markets. Given the highly volatile nature of exchange rates, current exchange rate levels are very poor predictors of future exchange rate developments. Currency risk often adds to interest rate risks in the case of foreign currency ARMs (e.g. a Swiss Franc loan priced over Swiss short-term interbank rates, as practiced in Poland).

Another mortgage-specific issue to be resolved is the length of the repayment period taken into account for the calculation of the APRC. Should the benchmark be the actual life of the mortgage, i.e. the typical average number of years until prepayment, or the contractually agreed term to maturity? The effective costs of a loan depend on the borrower's prepayment behaviour. In some jurisdictions almost no loan reaches contractual maturity, and in particular the comparison of fixed-rate mortgages (FRMs) will be misleading without considering prepayment behaviour. The comparison of the typical US product, a 30-year pre-payable fixed-rate loan, with the typical German product, a 10-year fixed-rate loan with prepayment indemnity or exclusion, can serve as an example. Since US borrowers frequently exercise the prepayment option, the effective duration of the US loan is between 4 and 7 years, after which a new loan is closed. Germans, in contrast, because of the legal structure, basically prepay only when moving house, which hardly reduces the duration of the loan below 10 years. In effect, the German loan has therefore a longer duration than the US loan, even though its fixing period is far shorter, and closing costs will be amortised over longer periods, which leads to distorted APRC results. Ideally, thus, APRC concepts should use a statistically meaningfully derived expected rather than contractual maturity measure to avoid economically pointless and misleading results. If that cannot be achieved due to data problems, reducing the maturity assumption behind the APRC formula from contractual to a lower figure reflecting typical prepayment behaviour, e.g. 5 or 10 years, will be an acceptable substitute.

The German fixed-to-term loan (*Abschnittsfinanzierung*) has run into another difficulty: technically, the fixed-rate period is initial, even if it is 10 or 15 years long, and contract conditions typically state as default that it is followed by a variable-rate phase for the rest of the loan maturity. However, almost all German loans are rolled over into a new fixed-rate phase. An APRC taken over the combined initial fixed-rate and subsequent variable-rate phase, assuming today's variable-rate level, will thus end up with a rate indication that is lower than the initial fixed-rate level. This is the reverse problem compared to the typical UK fixed-to-float product.

The Austrian or German *Bauspar* loan could serve as an example for the problems of computing the APRC for combined mortgage products: the product entails a long savings phase (e.g. 5 years) preceding the loan phase (e.g. 15 years). The loan phase benefits from below-market mortgage rates, and the borrower in exchange receives very low deposit rates only. Taking the APRC over the lower loan rate only, while failing to include the below-market deposit rate, gives a misleading picture. Technical solutions to taking a joint APRC over both phases, at least for products with immediate disbursement of an interim loan to be prepaid by the *Bauspar* loan, are straightforward.

Additional problems arise when smaller loans – such as *Bauspar* loans, typically second mortgages – are combined with first mortgages. So far, we are not aware of any member state regulation that would force lenders to indicate a joint APRC of both steps in the financing process. This has crucial implications for comparability of combined financing with a single financing going out to a higher LTV, where the APRC calculation is straightforward.

POLICY OPTIONS AND RECOMMENDATIONS

A clearly understandable and EU-wide common calculation of the APRC could increase mortgage market transparency and product comparability, allow lenders to benefit from an improved competition environment and consumers from lower search costs. To this end, EU policy-makers should:

- Align APRC computation methods with the provisions set out in the Consumer Credit Directive (CCD).
- Address the narrow vs. broad APRC question by quoting total cost of credit according to the CCD concept and a narrow APRC, reflecting the lender-induced cost only. Given the large variety and national specificity of mortgage products and combinations thereof within the EU, a narrow APRC definition serves cross-border comparisons better than the broad CCD definition. In contrast, the broad CCD definition serves better to protect consumers against hidden cost surprises in the established national mortgage markets. The risk of consumer over-information appears limited.
- Introduce a combined APRC if and when different loan, or combined loan, savings or insurance, components are offered simultaneously to consumers.
- Formulate reasonable APRC assumptions, differentiated by product class, that address the described problems arising from interest rate fixing and adjustment mechanisms changing between loan phases.
- Rationalise the assumptions behind the APRC of variable-rate loans, quoting in addition long-term average rates representative of the maturity horizon of the loan as opposed to simply extrapolating today's variable loan rate and pre-empting quotes based on the initial discount rate.
- Reduce the maturity assumption in the APRC, however, from extremely long contractual maturity to expected maturity, given early repayment options.

3.2.3 Financial advice and qualified credit intermediation

In the light of existing consumer heterogeneity in large mortgage portfolios and abuses seen both in the US and Europe, improvements in the area of disclosure standards alone might not sufficiently protect consumers. Consumer vulnerability can be aggravated by growing mortgage product complexity in combination with ever-increasing ranges of both product offers[38] and product providers on the supply side and limited levels of financial literacy on the demand side. This situation renders the provision of financial explanations and advice critical in order to optimally match a specific borrower with the most suitable loan product. In fact, many consumers consciously seek to compensate for their difficulties in understanding credit products and information overload by (excessive) reliance on counselling given by the lenders themselves or (tied and untied) intermediaries.

In its 2010 Working Paper on Responsible Mortgage Lending and Borrowing, the European Commission defines 'advice' as a financial service separate from the granting of credit, constituting "the provision of a personal recommendation to a consumer on suitable credit agreements for that consumer's needs and financial situation, either upon his request or at the initiative of the creditor or credit intermediary providing advice". Currently, however, and despite the EU executive's

[38] The FSA's 2009 Data Pack, a supplement to its Mortgage Market Review, shows that lenders responded to the pre-crisis market growth by introducing many new products in the UK. At the peak of the mortgage market in 2007, more than 12,000 mortgage products were available with 8,000 specifically marketed to credit-impaired borrowers. According to figures presented by Forbrugerrådet, the Danish Consumer Council, the last 20 years of financial innovation drove the figure of possible housing loan variants from numbers as low as 10 to up to 150.

positioning in its 2007 "White Paper on the Integration of EU Mortgage Credit Markets", there are no EU-wide rules or standards in the area of mortgage credit.[39]

Table 6 shows that 16 member states have specific rules and standards for the provision of mortgage advice, while five member states feature only recommendations or guidelines. In four countries – Italy, Luxembourg, Lithuania and Romania – there is currently neither specific legislation nor recommendations in place with regard to provision of mortgage credit advice.

Table 6. Overview of countries with legal requirement for the provision of mortgage advice

Country	Rules on provision of mortgage advice		
	No legal texts	Recommendation or guideline	Legal provisions
Austria			x
Belgium			x
Bulgaria		x	
Cyprus			x
Czech Republic			x
Denmark			x
Estonia		x	
Finland		x	
France			x
Germany			x
Greece			x
Hungary			x
Ireland			x
Italy	x		
Latvia			x
Lithuania	x		
Luxembourg	x		
Netherlands			x
Poland			x
Portugal			x
Romania	x		
Slovakia		x	
Slovenia			x
Spain			x
Sweden		x	
UK			x
TOTAL	**4**	**5**	**17**

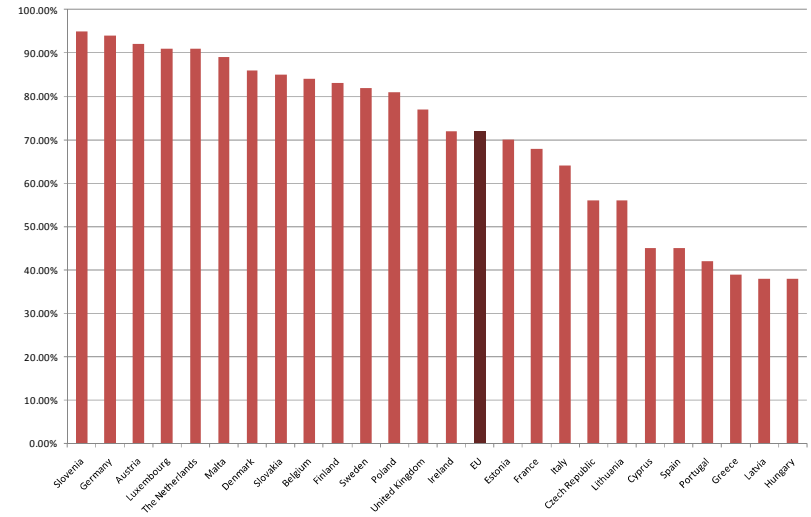
Note: No information on Malta.

Source: CEPS.

[39] Nor does the Consumer Credit Directive (2008/48/EC) regulate advice. Paragraph 5(6) merely obliges creditor and credit intermediaries to "provide adequate explanations to the consumer". In other areas of financial services, however, certain advice standards have been set: Article 19(1) of the Markets in Financial Instruments Directive (MiFID, 2004/39/EC) imposes on investment firms the obligation to "obtain the necessary information regarding the client's or potential client's knowledge and experience in the investment field relevant to the specific type of product or service, his financial situation and his investment objectives". Article 12(3) of the Insurance Mediation Directive (IMD, 2002/92/EC) lays down similar provision for insurance intermediaries and in Article 12(2) obliges the latter "to give that advice on the basis of an analysis of a sufficiently large number of insurance contracts available on the market, to enable him to make a recommendation, in accordance with professional criteria, regarding which insurance contract would be adequate to meet the customer's needs" if the intermediary claims to give advice "on the basis of a fair analysis".

While on average slightly more than nine in ten EU citizens (92%) state that they make their "own decisions what to do with [their] money", consumers' expectations in their financial institutions to provide them with advice on products and services offered were confirmed by an EU-wide survey of the European Commission conducted in 2005: Figure 11 demonstrates that percentages of respondents expecting "financial institutions to give […] advice" ranged from a low 38% in Hungary and Latvia to 95% in Slovenia, with the EU average standing at around 72%.[40] While the results are hard to interpret, the wide variety of expectations measured seems to hint at a vastly differing credibility of financial institutions in a potential advisory role.

Figure 11. Proportion of EU citizens expecting provision of advice



Source: Special Eurobarometer 230 (2005): Public Opinion in Europe on Financial Services.

More specific to mortgage financing, an online survey of 2,500 customers across five markets (France, Germany, Spain, Sweden and the UK) carried out in 2006 by Oliver Wyman[41] found that the proportion of customers choosing mortgage products on the basis of advice varies from 60 to 76%. These findings are correlated with the Eurobarometer data regarding advice expectations of consumers for the surveyed countries (see Table 7).

Table 7. Proportion of customers expecting financial advice and choosing mortgage product on this basis

	Percentage of EU citizens expecting provision of advice, 2005	**Percentage of customers choosing mortgage products on basis of advice, 2006**
Spain	45	60
France	68	72
UK	77	67
Sweden	82	76
Germany	94	76

Sources: Special Eurobarometer 230 (2005): Public Opinion in Europe on Financial Services, Oliver Wyman and CEPS comparison.

[40] Special Eurobarometer 230 (2005): Public Opinion in Europe on Financial Services (http://ec.europa.eu/public_opinion/archives/ebs/ebs_230_en.pdf).

[41] Oliver Wyman (2007). "European mortgage distribution: Changing channel choices" (http://www.oliverwyman.com/ow/pdf_files/european_mortg_dist_RBB_0307.pdf).

Similar to the discussions revolving around the variance of disclosure standards and (country-)specific lender practices, consumer needs may strongly differ in terms of how much (or whether at all) financial advice is needed and/or demanded.

The European Commission's impact assessment accompanying its 2007 "White Paper on the Integration of EU Mortgage Credit Markets" has identified "sub-optimal" advice as a key problem in EU mortgage markets. The European Commission has since repeatedly attempted to clarify that any efforts to promote high-level mortgage advice standards in order to govern conduct of business in this area did not inevitably entail a legal obligation for lenders or intermediaries to actually provide advice.

Defining advice as a non-obligatory, separate financial service is problematic due to a lack of consumer willingness, and sometimes ability, to pay an independent advisor. Lenders, however, are under too much conflict of interest to sell products to be mandated to give advice. Still, there is some hope that regulation thrust and market reality can be reconciled, given recent trends in the mortgage industry.

In particular, better financial advice may be facilitated by the rise of credit intermediation. In the UK, for example, a moderate 38% of closings made by banks and other lenders between April 2008 and March 2009 were based in part on advice received. This stands in contrast to 90% of mortgage sales by credit intermediaries that were advised.[42] Some 70% of mortgage originations are intermediated. As far as the U.K is concerned, therefore, rulemaking on advice for intermediaries is more relevant. Moreover, intermediaries can be assumed to act more independently than banks. This moves the discussion to the question of potentially inappropriate forms of remuneration offered by lenders that might tilt the intermediary's incentives to giving up his independence and to distributing a certain product by a certain lender. The majority of credit intermediaries earn money by charging lenders (downstream charges to consumers are much less common). Volume-based fees appear to be the most common payment scheme applied in the EU.[43]

The provision of impartial advice to potential borrowers can sit uncomfortably with volume-based fees as intermediaries are incentivised to 'close the deal' and sign a maximum number of contracts. Similar considerations hold true for varying levels of fee payments for the sale of different products (alignment of the broker fee with the profitability of the loan to the lender) or full up-front fee payments (no credit risk sharing between lender and intermediary, as in the case of trailing fees).

There are potential market mechanisms that can help ameliorate this risk: fees on prime mortgages in the UK market for example tend to be fairly homogenous at 0.3–0.35 per cent, and potentially detrimental differentiation of fees is closely monitored by the FSA. Intermediary concern with reputational risk and the likelihood of repeat business or referrals from customers may also play a role.

Given the complexity of the issue, the routes taken by regulators to regulate intermediaries have been varying. Unsurprisingly, the most intensive regulation in the credit business has occurred in the markets with the most active role of intermediaries (i.e. UK, Ireland, Netherlands, see Figure 12). One approach has been to demand that a firm calling itself "independent intermediary" fulfils institutional independence requirements (as is done in the Netherlands); this is already a requirement in European law in the insurance business (10% shareholding limit). A second approach has been intensified supervision, which restricts market entry. The UK FSA de-

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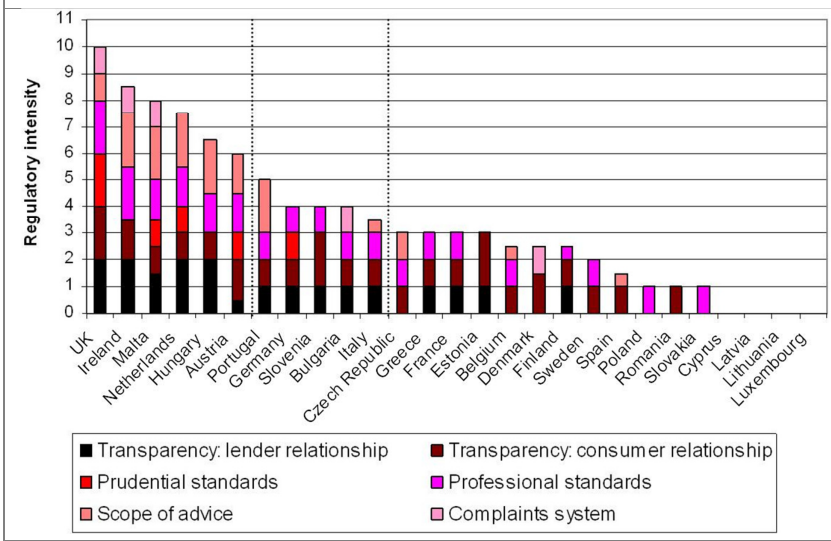
[42] Financial Services Authority (2009). Mortgage Product Sales Data (PSD) Trends Report (http://www.fsa.gov.uk/pubs/other/mortgage_report_09%20final.pdf).

[43] For a detailed reading on the economic contribution of credit intermediaries and various forms of remuneration, the reader is referred to a study carried out for the European Commission by Europe Economics (2009), "Study on Credit Intermediaries in the Internal Market" (http://ec.europa.eu/internal_market/finservices-retail/docs/credit/credit_intermediaries_report_en.pdf).

facto supervises intermediaries on the individual transaction level and can hence establish a case of mis-selling swiftly, if needed. Complementary, and less costly, approaches include enhanced professional standards, such as conduct-of-business rules, formalised systems of redress and enhanced transparency of the intermediary relationship with the lender.

Figure 12. Extent of statutory regulation of residential mortgage intermediaries (2008)



Source: Europe Economics.

Given the lack of development of regulation, transparency plays the key role so far for the majority of member states. As critical as it may be, however, studies have shown that transparency is not sufficient to address problems: a study carried out by the Federal Trade Commission in 2004, in which a group of recent mortgage borrowers were asked to compare two loans (one with broker fee and related disclosure of its value, the other without broker fee) and identify the cheaper one. It revealed a potential for detriment as consumers may be confused by full fee disclosure: only 63-72% of the tested consumers successfully identified the less expensive loan – as opposed to 90% in the case without fee disclosure, so that the proportion failing to identify the cheaper loan tripled. In addition to consumer confusion, disclosure that focuses exclusively on the remuneration of intermediaries could bias consumers against intermediated products, which may reduce the likelihood of receiving independent advice. [44] Intermediary market share has become more volatile recently, as UK data suggest. The share of intermediated mortgage sales peaked in 2007 at 62%, but from Q1 2008 onwards, the ratio consistently declined to 47% by the end of 2009.[45]

Regarding advice provided by lenders, the result of several rounds of stakeholder meetings and discussions has shown that they are generally not opposed to providing advice but would strongly reject a legal duty to do so. Calls to introduce such a duty (as was for example stipulated – under strong disagreement between participating parties – by the final report of the EU Forum

[44] "The Effect of Mortgage Broker Compensation Disclosures on Consumers and Competition: A Controlled Experiment", James M. Lacko and Janis K. Pappalardo (2004), Federal Trade Commission Bureau of Economics Staff Report (http://www.ftc.gov/os/2004/01/030123mortgagefullrpt.pdf).

[45] Financial Services Authority (2010). Mortgage Product Sales Data (PSD) Trend Report 2005-2010 (www.fsa.gov.uk/pubs/other/psd_mortgage.xls).

Group on Mortgage Credit)[46] are rejected as lenders point to their conflict of interest when being mandated to perform counselling. Their economic goal is indeed to sell the most profitable product, which will be difficult to reconcile with the requirement to sell in parallel a public good, advice to consumers on their financial circumstances. This holds even true if lenders themselves bear the cost of a mis-selling as investors in the loan, since short-term profitability considerations might push the potential long-term default risk as a consideration aside. If implemented, mandating advice would increase lender liability, impose strong litigation risks on lenders and subsequently most probably reduce incentives for product innovation and cause a simultaneous mutualisation of costs among consumers.[47]

Consumer groups argue that in the absence of such a duty, however, and combined with the still low market shares of intermediaries in most EU member states that could provide advice as an alternative, consumer confidence and mobility may be hampered. This would result from legal uncertainties caused by unclear attribution of liability as well as possible redress mechanisms in the case of damages occurred through the provision of low-quality or inappropriate advice.

One solution to this conflict could be more government-sponsored, independent consumer networks that complement intermediaries in providing third-party advice. Germany already has such a structure, in which the Verbraucherzentralen and credit broker networks such as Dr. Klein or Creditweb de-facto compete on providing advisory services to consumers. Clearly, two different solutions with two different subsidy/pricing regimes can give rise to distortions; a regulation option could be to limit publicly sponsored entities to advisory services, while allowing intermediaries to provide more complete matching services.

Government sponsorship could also be replaced by industry sponsorship, e.g. via a low contribution per credit closed. Charging for example 1 basis point on the 6 trillion Euro mortgage market would yield 600 million Euro per annum for independent consumer advisory services. The industry's benefit from this solution would be vastly reduced legal risk and fairer competition between lenders via better advised consumers. Such networks could also, over the long-term, improve the financial education level of consumers, even if the success chances of such efforts are regularly doubted by stakeholders and academics.[48]

When forcing lenders to provide advice, in contrast, this would likely have to be even more tightly regulated than in the case of intermediaries. Objective benchmarks, rather than mere meeting protocols, as currently is widely the legal requirement and practice, would have to be set against which the quality of advice given could be effectively assessed. Yet, policing is difficult and without more networks supporting them, consumers would still lack (legal) clarity with respect to the possibilities of successfully pursuing a case. This not only holds true for borrowers in a single country without such standards but also for borrowers demanding cross-border services between two countries with varying stringency levels of existing rules.

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[46] European Commission (2004). The Integration of the EU Mortgage Credit Markets – Report by the Forum Group on Mortgage Credit: http://ec.europa.eu/internal_market/finservices-retail/docs/home-loans/2004-report-integration_en.pdf

[47] For reasons laid out in the previous paragraphs (conflict of interest creation through fee structures) intermediaries too (both untied and tied) would be weak candidates for rules imposing a duty to advice.

[48] At a conference hosted by the European Commission's DG SANCO on behavioural economics in the area of retail investment products on 11 November 2011, Harvard Professor David Laibson stated that the need for financial literacy is not backed by any evidence suggesting that efforts to introduce financial education programs are necessarily worth the money being spent on it. Laibson was supported by representatives of the consortium responsible for a recent Commission study on "Consumer Decision-Making in Retail Investment Services: A Behavioural Economics Perspective", who pointed at the weak efficacy of long-term educative factors.

Finally, the most drastic approach to the issue would be to reduce product complexity, in order to bring the product menu back in line with financial education levels. Consumer representatives argue that new layers of complexity in mortgage products are nullifying the positive impact of some financial innovation over the past years (such as, e.g. flexible payment loans). They point at a positive correlation between the speed of the creation of new (mortgage) products and the amount of financial advice requested by customers to get orientation. Anecdotal evidence from Denmark for example suggests that virtually no mortgage loan is sold without a form of supporting financial advice. This supports the above UK figures on the high share of advised sales. Even without curbing the product menu, any further increase in diversity could defeat efforts to enhance the impact of advice by improving its quality, or make advice even more costly. It seems in the interest of both consumers and industry to review the product menu and consider moves towards certain product standardisation, or at least greater transparency.

POLICY OPTIONS AND RECOMMENDATIONS

Increased mortgage product complexity, numbers of product offers and providers on the supply side renders the provision of financial advice to consumers critical. In the light of conflicts of interest in this area, EU policy-makers should:

- refrain from making the provision of financial advice by lenders a legal requirement but instead create a framework for ensuring that where advice is given, it is of a recognisably high standard;
- refrain from prohibiting certain forms of remuneration for credit intermediation, but rather demand consistency with the obligation of intermediaries to act in the customer's best interests, which might include a trail arrangement;
- ensure that credit intermediaries are sufficiently institutionally independent and operate under minimum professional standards;
- address the limitations of financial education more proactively and provide financial advice to consumers via government-sponsored entities or programs. This could help to reduce the currently strong reliance on banks and credit intermediaries regarding financial advice.

3.3 Underwriting

3.3.1 Assessing loan affordability

As discussed in Chapter 1, the expansion of lending down the consumer credit curve has been excessive as a structural trend in many markets. Additionally, in situations of cyclically inflated house price levels underwriting standards have demonstrably temporarily declined – e.g. loan-to-value ratios increased, amortisation payments were reduced (see Figure 6), and/or the share of ARM increased -, only to be tightened again shortly after the price collapse in a credit crunch. In both cases, the result has been the occurrence of underwriting practices mismatching with borrower repayment abilities.

The empirical message from the structural trends observed lies in calling for changes in the broader policy framework of the sector, including transfers and housing policy. Clearly, reducing credit cannot be the task of the banking industry alone when alternative housing options are unavailable. Also, general macroeconomic conditions conducive to lending booms are beyond the financial regulation ambit. However, the longer-term trends also contain a warning regarding risk amnesia when dealing with established products and practices, in particular when they convey payment shock risk that eventually materialises, in particular in the case of financially vulnerable consumers.

The pro-cyclical characteristics of underwriting are seemingly universal. They signal that while proper risk assessment is surely in the long-term interest of lenders and well established in lending guidelines, short-termism – e.g. unleashed by competitive dynamics - might tilt the balance towards excessive risk-taking.

Turning to the regulatory response, the Joint Forum – in a report for the G20 – in January 2010 assumed that "systemic risk will be reduced if mortgages are properly underwritten" and if it can be ensured that "borrowers have the capacity and economic incentive to honour their commitments to retire the debt in a reasonable period of time".[49] The adoption of minimum underwriting standards focusing on consumers' repayment capacities hence features in the Forum's 17 recommendations.

The European Union on her part nurses hopes that general legal requirements could strengthen incentives for better underwriting. According to the European Commission's 2010 Working Paper on Responsible Mortgage Lending and Borrowing lenders need first to be able to access all relevant sources of information and secondly be able to correctly interpret data on potential borrowers received. The importance of comprehensive, comparable, up-to-date and accurate credit information in the process of assessing the creditworthiness of a potential borrower (as well as the suitability of a given product for a certain type of consumer) is largely uncontested. Appropriate credit risk models or other risk approximation techniques that adequately address consumers' risk profiles and hence the probability of loan default also can only be developed and applied efficiently under the condition of data availability. This includes internal data gathered through already existing (long-term) client-lender relationships or data retrieved directly from the potential borrower.

EU-wide legislation is planned that demands from lenders to do creditworthiness assessments. Yet lenders do already have to undertake the necessary checks on the financial background of potential borrowers under general national banking laws or as an integral part of their business operations. Sometimes, loan volume limits apply in these laws, making this less visible. For instance German Kreditwesengesetz technically does not require a creditworthiness assessment on a loan of or below the size of financing a typical apartment. However, other German regulations, such as the "Mindestanforderungen für das Kreditgeschäft" (minimum conduct requirement for the credit business) then result in a de-facto requirement to do a credit assessment even below such limits. Beyond national legislation, any legal requirements is in addition to the provisions already set out in the Capital Requirements Directive[50] on reserve requirements and risk-weighing.

With regard to the national level, Table 8 shows that specific legal requirements (or industry guidelines/recommendations) are missing only in eight member states, while 18 member states do in one form or another encourage mortgage providers to conduct a creditworthiness assessment prior to making a lending decision.

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[49] Basel Committee on Banking Supervisions, The Joint Forum (2010). Review of the Differentiated Nature and Scope of Financial Regulation – Key Issues and Recommendations: http://www.bis.org/publ/joint24.pdf

[50] Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of a credit institution (recast) and Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions (recast): http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0048:EN:NOT and http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0049:EN:NOT

Table 8. Overview of countries with legal requirement for assessment of consumer creditworthiness

Country	Legal requirement for creditworthiness assessment?	
	YES	NO
Austria		x
Belgium	x	
Bulgaria	x	
Cyprus	x	
Czech Republic	x	
Denmark		x
Estonia	x	
Finland	x	
France		x
Germany	x	
Greece	x	
Hungary	x	
Ireland	x	
Italy	x	
Latvia	x	
Lithuania	x	
Luxembourg		x
Netherlands	x	
Poland	x	
Portugal		x
Romania	x	
Slovakia		x
Slovenia		x
Spain		x
Sweden	x	
UK	x	
TOTAL	**18**	**8**

Note: No information on Malta.
Source: CEPS.

While this overall picture is subject to change as certain countries opt to apply Article 8 of the CCD to housing lending and thus introduce a legal obligation to assess the creditworthiness of consumers, lenders in a residuum quantity of member states not transposing the CCD might avoid this requirement without a specific EU regulation.

Ample room for interpretation within Article 8 of the CCD could also hinder the removal of regulatory differences with regard to requirements for lenders to obtain credit information "where necessary on the basis of a consultation of a relevant database" (Art. 8, CCD).[51] A recently conducted survey among members of the Association of Consumer Credit Information Suppliers (ACCIS)[52] indicates that a legal obligation on the lender to consult credit reporting databases currently exists in only two of the 17 covered EU member states, Belgium and the Netherlands.

[51] With its transposition, the CCD will also, where applied to mortgage, support the elimination of barriers for cross-border database access for lenders through the non-discriminatory access provision of Article 9. Currently, relevant legal obstacles remain in all but five member states (Finland, Spain, Slovakia, Sweden and the UK).

[52] The European Credit Information Landscape – An analysis of a survey of credit bureaus in Europe, ECRI Industry Survey.

Interestingly, in three further EU-27 countries (Greece, Hungary and Slovenia) the sharing of credit data is required by national regulation, despite the absence of provisions to consult the database holding credit information before the loan transaction. This situation is depicted in Table 9, which also includes information on the non-EU member states Croatia, Iceland, Serbia, Russia and Turkey.

Table 9. Voluntary vs. required sharing of and access to credit data among ACCIS members

Country	Is credit data sharing required by national regulation?		Do lenders have the obligation to consult credit reporting databases	
	YES	NO	YES	NO
Austria		x		x
Belgium	x		x	
Czech Republic		x		x
Germany		x		x
Denmark		x		x
Finland		x		x
Greece	x*			x
Croatia		x		x
Hungary	x			x
Iceland		x		x
Italy		x		x
Netherlands	x		x	
Norway		x	x	
Poland		x		x
Romania		x		x
Serbia	x		x	
Russia		x		x
Sweden		x		x
Slovenia	x			x
Slovakia		x		x
Spain		x		x
Turkey		x	x **	
United Kingdom		x		x
TOTAL	**6**	**17**	**5**	**18**

* For bad cheques

** For the issuance of credit cards

Source: Association of Consumer Credit Information Suppliers, ACCIS survey 2010

The Mortgage Industry and Consumer Expert Group ("Mortgage Dialogue") has agreed on the formula that "the lender is expected to assess the creditworthiness of the consumer in the context of the transaction envisaged" and industry groups assure that loans are not granted if under the impression that "the candidate will not be able to meet his repayment obligations."[53] Over the past years, mortgage lenders have continuously emphasised that proper assessments already are an integral part of their business conduct. Yet, insufficient underwriting quality has been obvious in some corners, for example a combination of booming housing markets and rising values of the underlying (claimable) collateral letting lenders rely on price appreciation rather than

[53] Mortgage Industry and Consumer Expert Group (2006). Final Report, page 7. http://ec.europa.eu/internal_market/finservices-retail/docs/home-loans/miceg/final_report-en.pdf

borrower standing, large amounts of risk transferred to third parties via securitisation reducing the lender 'skin in the game'; and generally high competitive pressure.[54]

The European Commission has recognised the need to remove existing obstacles that potentially hamper lenders' ability to access reliable sources of information and interpret available data on the one side and generate avoidable costs in the lenders' efforts to carry out the necessary creditworthiness assessments on the other. While concerns exist with regard to the accurateness of data retrieved from the loan candidate himself (risk of income inflation and incentives to hide negative information items), the policy focus lays on access to information gathered and distributed by external third-party market players, which ideally assist lenders in the avoidance of credit risks under- and overestimation.

Difficulties in accessing credit in another member state may nowadays seem a relatively minor problem. The on-going financial crisis and the general low appetite by consumers for financial services products in another EU country have further reduced cross-border activity and consumers focus more on local markets, where the perceived risk is lower. In relation to that and considering the low demand, private credit registers and public credit bureaux did develop few specific infrastructures to provide credit data cross- border. Credit information providers have established different systems to exchange data. For instance between the National Bank of Belgium and the Dutch credit bureau BKR there is an intensive exchange of data. Yet, it is not significant when comparing to the total amount of transaction of consumer credit in each market[55].

Cross border data access is meeting problems related to unfair or discriminatory access conditions to credit registers caused by varying membership/client criteria, fee structures and/or the need for eligible institutions to have a physical presence in the country of the credit register. Data coverage issues have also been an issue as registered information may be incomplete due to differences in relation to the national data protection law. Some credit register can collect positive and negative information while others, just a couple across Europe, can collect only negative data [56] Even though, France and Denmark are now evaluating the introduction of the collection of positive data, so it will remain only Finland as a negative data country in Europe.

Where positive information is available it is often restricted to traditional credit from lenders and may not include communications or utility data which can also represent large financial commitments for consumers. And since the usefulness of available data is derived also from its comparability, existing divergences in the amount of data shared on accounts, as well varying interpretations of certain terms (e.g. default, delinquencies) and underlying definitions (e.g. non-performing loan) on the one side and different levels of data collection thresholds on the other side create additional shortcomings and problems especially in a cross-border context. Furthermore, some states restrict the use of the data so tightly such that it cannot drive the level of benefit that it could and, indeed should.

Table 10 shows, however, that the latter is problematic only in the cross-border comparison of a limited amount of countries and not necessarily in the case of mortgage lending. This is a result of the low thresholds especially in private credit bureaus (and hence effective almost exclusively with respect to small amount consumer credit agreements).

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[54] See, for example, the Commission's impact assessment accompanying its 2007 "White Paper on the Integration of EU Mortgage Credit Markets". Documents can be found on the Commission's webpage: http://ec.europa.eu/internal_market/finservices-retail/credit/mortgage_en.htm

[55] See, the EU Report of the Expert Group on Credit Histories, chapter *3.3.2. Private arrangements.*

[56] Its in Report on the retail sector inquiry (2007), the European Commission found that some private credit registers "may accommodate larger banks by waiving the requirement for full disclosure of data": http://ec.europa.eu/competition/sectors/financial_services/inquiries/sec_2007_106.pdf

Table 10. Threshold for data collection on consumers

Country and credit bureau	Threshold (in euro)	
	Private credit bureaus	*Public credit registers*
Austria	300	35,000
Belgium	n.a.	No threshold
Bulgaria	No threshold	No threshold
Cyprus	No threshold	n.a.
Czech Republic	No threshold	No threshold
Denmark	134	n.a.
Estonia	No threshold	n.a.
Finland	No threshold	n.a.
France	n.a.	500
Germany	100	1,500,000
Greece	No threshold	n.a.
Hungary	No threshold	n.a.
Ireland	No threshold	n.a.
Italy	No threshold	30,000*
Latvia	No threshold	150
Lithuania	No threshold	No threshold
Luxembourg	n.a.	n.a.
Malta	No threshold	n.a.
Netherlands	125	n.a.
Poland	No threshold	n.a.
Portugal	No threshold	50
Romania	No threshold	No threshold
Slovakia	No threshold	No threshold
Slovenia	No threshold	n.a.
Spain	60	6,000
Sweden	No threshold	n.a.
United Kingdom	No threshold	n.a.

Notes: Exchange rates as of 05/01/2011; n.a. = not applicable

* No threshold applied to bad debts

Source: Association of Consumer Credit Information Suppliers, ACCIS survey 2010 and European Commission (2009). Report on the Expert Group on Credit Histories.

Credit Bureaus already play, and will continue to play, an increasingly central role in supporting lenders and borrowers to lend and borrow responsibly. Credit Bureaus stand in between lenders and borrowers, as a third party custodian of data in the credit chain, with the objective to increase transparency, reduce information asymmetry, increase consistency and, above all, support an informed credit transaction for both parties.[57] In policy terms, they provide to the credit industry the tools for responsible lending, helping to protect individuals from establishing significant borrowings beyond their means by ensuring that all parties are aware of the precise nature of a borrowers commitments[58] or, at a minimum, whether the borrower is in severe difficulties.[59] The way these tools are deployed, including where scoring value cut-offs are set, is a decision for the lender based on the lenders' appetite for risk and the charges they make. A credit

[57] Jappelli Tullio and Marco Pagano, "Information sharing, lending and default: cross-country evidence", *CSEF working paper No. 22*, University of Salerno, Italy, 1999.

[58] Only possible in countries with full data sharing

[59] All that is available in countries with default data sharing

reporting system does not decide whether an individual qualifies for credit or not. It collects and provides information that the credit industry considers relevant to a person's credit history and ensures that data is as accurate as possible and collected and deployed in a consistent manner.

This is endorsed by the Report on the Expert Group on Credit Histories where experts clearly stated: "The purpose of credit data sharing is to support creditors analysing a borrowers' creditworthiness. Information sharing about borrowers' characteristics and their indebtedness has important effects on credit markets activity. First, it improves the creditors' knowledge of the borrower's characteristics and permits a more accurate prediction of their repayment probabilities if the data is accurate and up-to-date. It therefore assists creditors in complying with responsible lending obligations. Second, it helps creditors acquire that information more quickly and often at a lower cost. Third, in the case of default data sharing, it can operate as a borrower discipline device. Finally, it reduces the risk that borrowers become over-indebted by drawing credit simultaneously from too many creditors."[60]

Such benefits can only be achieved in those countries where credit registers can store both positive and negative credit data across a wide range of credit types. Without positive data, responsible lending and borrowing cannot be fully achieved. For this purpose, the more positive information about a borrower that is known, the better the consumer's commitments and hence, creditworthiness can be assessed. At the same time, the consumer can themselves authorise access to reliable independent evidence of his creditworthiness, facilitate his financial transaction and evaluate his level of indebtedness. With access to a positive and negative credit data report, the consumer can clearly demonstrate that he knows how to handle credit and respect his financial obligations. Overall, this leads to reduced risk for lenders, lowering costs and therefore interest rates. As a result, more consumers are able to be helped and gain access to credit.

However, credit is only one side of the equation; income is also required in order to conduct a reliable assessment of creditworthiness and in many professions the only source for such information is the applicant themselves. If checking creditworthiness is set to be the norm then it behaves the relevant authorities to support access to reliable income information such as is available at the national tax authorities. Thus, just as it is now accepted that expecting the applicant to keep good records and provide accurate information about their credit is unrealistic so, the same argument must apply to the verification of income, too.

Credit is also one side of consumer debt. The Commission is aware that a consumers indebtedness is made up of credit debts, plus other types of debts, such as utilities bills, telecom bills, etc which represent a significant part of the consumers' debt. While in almost all European Countries credit data is available to lenders, alternative debt data is not always available. Where alternative data or non-financial services credit data (e.g. with merchants, utilities providers, landlords, etc.) is available, it can add even more value to the relationship between lenders and borrowers. This data provides a more comprehensive picture about the commitments and indebtedness of the consumer and allow a lender to make a more accurate decision and credit assessment. In this respect, there is a very interesting study recently published by the National Bank of Belgiumwhich shows that there is a statistically significant link between payment arrears for mobile telephony and credit arrears, and this applies for various definitions of payment arrears.[61] Repayment problems generally tend to emerge sooner in payment arrears for mobile telephony bills than in arrears on loans.

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[60] See paragraph *3.2.2. Purposes of credit data sharing* of the Report of the Expert Group on Credit Histories, published by the EU the 15 June 2009 (http://ec.europa.eu/internal_market/finservices-retail/credit/history_en.htm).

[61] *The link between mobile telephony arrears and credit arrears.* National Bank of Belgium, March 2011 Link to the working paper: link

The European Commission's 2010 Working Paper on Responsible Mortgage Lending and Borrowing summarises the discussion by asking: Is there a need for a legal requirement on lenders to assess a candidate's financial capability and what can be done to grant access and assist the correct interpretation of all available credit data?

With regard to the first question, the working paper indicates the EU executive's intention to go ahead with the introduction of a legal requirement not only obliging creditors to a "thorough assessment of the consumer's creditworthiness […] in accordance to appropriate processes" but also a re-assessment "before any significant increase in the total amount of credit". To lenders, such proposals constitute one of the most worrying aspects of the new initiative in light of the fear that an EU-wide prescribed formula will lead to additional costs and – more importantly – replace country- and market specific know-how as well as personal knowledge. While it could be argued that the introduction of a general legal obligation will not negatively affect banks already engaging in responsible lending activities, if – as is the case in the CCD – no prescription of a specific methodology is annexed to any such requirement, the usefulness of such an approach has been questioned by consumer representatives. The latter support rules on proper (and personalised) creditworthiness assessments, which strike the balance between granting only affordable loans on the one hand and avoiding financial exclusion on the other. In addition, they emphasise the necessity to avoid an over-reliance on automated scoring and negligence of personal face-to-face assessments, for the reason of which some consumer groups call for a use of the wording 'affordability assessment' along the lines of the FSA's proposals on responsible mortgage lending in the UK. [62]

In effect, the UK's financial regulator already requires lenders to take into account a potential borrower's repayment abilities. The FSA underlines that every lending decision has to be made individually based on the borrower's disposable income and calls for a combination of any creditworthiness assessment with stress-testing rules regarding interest rate variation. In more detail, the FSA proposes to ban self-certification and fast-track mortgage in an effort to ensure that income is always verified and expects a line-by-line expenditure assessment to complete the affordability test though allowing for some flexibility as the prescribed methods.

With regard to the second question, the European Commission's working paper states that "in order to facilitate the effective exploitation of credit data, further work might be necessary to achieve a convergence of the definitions used in such databases and data processing conditions applied in such databases". In this respect the article 9 of the Consumer Credit Directive should be extended to this initiative on mortgage lending and go beyond by taking into consideration the principle of reciprocity as recommended by the EGCH at the Recommendation n.6: "*The EGCH recommends that compliance with the non-discriminatory access to databases requirement in Article 9(1) of the Consumer Credit Directive should be considered, in particular, as providing foreign creditors access at the same level and terms as local creditors, i.e. with no additional barriers or privileges, and respecting the principle of reciprocity, without prejudice to data protection rules, as stated in Article 9(4) of the Consumer Credit Directive.*"

A definition of reciprocity should be included in the Glossary of the future Directive. The reciprocity rule will ensure that creditors in exchange for obtaining the data from a credit bureau are obliged to transfer to the credit bureau the same type and scope of the data they received. Only by incentivising membership in this way will coverage be increased. Reciprocity is the base for non-discriminatory cross-border access to the data base, too and to guarantee a higher level of data quality.

Consequently, the amount of costs incurred by stakeholders to arrange for the necessary infrastructure is limited to an extension of similar access conditions to mortgage credit data (rather

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[62] Financial Services Authority (2010). Mortgage Market Review – Responsible Lending: http://www.fsa.gov.uk/pages/Library/Policy/CP/2010/10_16.shtml

than creating new systems from scratch) and, in addition, only to the number of countries that have not opted to apply the CCD provisions to mortgage credit. And as those provisions can be expected to bring about benefits for credit registers (expansion of business opportunities), lenders (increased pool of credit information) and – to a lesser extent – also to consumers, the task of finding the necessary support for general non-discriminatory access conditions is limited.

POLICY OPTIONS AND RECOMMENDATIONS

An EU wide legal requirement could improve incentives to more carefully assess borrower affordability. In this respect, EU policy-makers should:

- introduce a legal requirement for lenders to conduct a comprehensive creditworthiness assessment based on stress tests regarding the specific product offered (indirect suitability assessment). Stress tests should measure the impact of changes in key environmental variables on the permanent fulfilment of reasonable underwriting criteria, given the contract parameters. For example, such tests would include, but not be limited to, the impact of changes in interest rates via the interest rate adjustment and amortisation regime of the contract on the future debt service-to-income ratio, and the impact of changes in house prices via the initial loan-to-value ratio and amortisation regime of the contract on the future loan-to-value ratio;
- introduce a legal requirement to deny credit or propose more conservative underwriting in the case of a negative result of the affordability assessment. Rules should be specific, e.g. differentiate between stretched or predatory lending situation (individual lack of creditworthiness) and the situation of general house price inflation (systemic lack of creditworthiness);
- encourage the use of more conservative house price valuation standards, e.g. the discounted cash flow method using saved rent payments, to reduce reliance in underwriting on observed prices and render loan-to-value rules meaningful;
- extend CCD provisions of non-discriminatory (cross-border) credit database access for mortgage lenders, allowing for full credit data sharing;
- explore possibilities to work towards greater convergence of credit registers' database content;
- explore the possibilities to work towards an agreed minimum level of data in credit registers databases;
- make available to lenders income and non-financial services credit data help creditors a more comprehensive picture about the commitments and indebtedness of the consumer**.**

3.4 Contractual phase

3.4.1 Improved early repayment rights and indemnity design

The term "prepayment option" (or "call option") describes the borrower's right to terminate a mortgage loan prior to its contractual maturity date. The value of the option depends first on the legal regime, i.e. whether a European consumer is granted a universal right to prepay his mortgage debt, whether he is given this right under certain circumstances only or whether he is subjected to individual contractual specificities agreed upon with the lender depends on the applicable national early repayment schemes, whose characteristics vary widely across the EU member states. Secondly, if the right to prepay is given, the value of the option depends on the scale of prepayment indemnities, which can be fair value (covering cost of the lender incurred through the prepayment), or above or below fair value. Thirdly, the value of the prepayment option depends on the factors driving exercise behaviour such as (mortgage) interest rate volatility (determining the likelihood of the option coming into the money), the duration of the interest rate fixing period, the opportunity costs of the alternative credit offer, and the financial astuteness of the borrower determining the optimal exercise point in time.

Technically, the prepayment option is an American call option on the loan at par (100%, of the current exposure). As underwriting a call option generates costs on the supply side, in particular reinvestment risk and a truncation of the income stream for the lender from the loan that finances loan servicing costs and profit margin, a borrower choosing a contract with a prepayment option not restricted by indemnities will pay a mark-up over the lending rate, the option premium. Such a contract is called 'callable' in the financial industry.

In contrast, the more typical fixed-rate lending contract in Europe reduces or eliminates the value of the call option via prepayment indemnities, often in combination with additional legal transactions costs (e.g. re-registration of the mortgage). These cost factors constitute an exit pricing mechanism that massively reduces both prepayments and lender cost of a prepayment and in consequence leads to saving the interest rate mark-up, or lower loan cost. The most radical version is to exclude the prepayment option contractually, which in practice could mean a rejection and high opportunity cost for the borrower. In practice, lenders will eventually accept a prepayment, but negotiate an arbitrary exit price.

We can therefore divide the mortgage product world into three main loan product classes according to their interest rate characteristics:

- ***Non-callable fixed rate mortgages (FRM),*** with the term 'non-callable' as discussed referring to lenders being able to charge a prepayment indemnity and not necessarily legal exclusion. Non-callable FRM generate a stable and easily predictable stream of income for lenders, just as owning a government bond does. While offering protection against interest rate increases, long remaining fixed-rate terms that are locked in via indemnities may be costly for the borrowers if market rates have declined and meanwhile income growth has slowed (e.g. because of declining inflation, as in the 1990s, or an economic crisis, as currently). Non-callables are typically funded by the issuance of bank bonds that are close substitutes to government bonds on capital markets. Non-callables can be easily priced off the government bond curve.

- ***Callable fixed rate mortgages*** (FRM) allow a prepayment without an indemnity. They offer borrowers the highest interest rate risk protection via an asymmetry: interest rates are fixed and thus eliminate payment shock risk; however, consumers can fully benefit from interest rate compression through a prepayment without cost. Yet, there is no free lunch. The cost of this potential benefit is paid by the borrower in form of a call (or prepayment) option premium. For lenders the product also means considerable uncertainty about the income stream derived from the loan, which leads to greater upfront pricing through disagio or points, or even larger margins.

- ***Adjustable rate mortgages (ARMs)***, finally, are typically callable without or only small indemnities. While lenders are protected against interest rate risk, rate increases may create significant payment shock or a reduced payment for borrowers. ARMs are funded by short-term deposits of banks and characterised by periodical interest rate resets.

Currently basically all mortgage markets in Europe empirically apply some form of prepayment protection to fixed-rate mortgages. Where this is not (entirely) possible in the form of indemnities due to tight legal caps, legal cost of prepayment are typically high creating an additional break against a prepayment (e.g. France, Belgium). Italy is the only country that has completely outlawed prepayment fees and thus forces lenders to offer only callable FRM. Denmark is a special case, where the purchase of callable FRM by institutional investors has a long historical tradition and that market has existed without legal intervention.

The existing diversity in the legal regimes of indemnities effectively pre-empts the cross-border trading in particular of non-callable FRM, and has contributed to the strong market share of ARM in Europe. A high ARM market share is a stability threat, as clearly demonstrated by current events. Spain has reacted to this and re-regulated the non-callable FRM prepayment indemnity regime in 2007 in order to incentivise more bank offers of this product, after ARM interest rates had more than doubled in 2006. Both excessive cost and the inability to prepay in some jurisdictions may hamper financial consumer mobility. These factors have led the European Commission to conclude that early repayment is "one of the most important issues for integrating

EU mortgage markets".[63] The document consequently promised to explore possible policy options and assess related costs and benefits.

The study "on the costs and benefits of different policy options for mortgage credit" that was commissioned to European mortgage market experts and covers the area remains unpublished. The European Commission's 2010 Working Paper on Responsible Mortgage Lending and Borrowing as well as the forthcoming Directive had indicated no intention to forward regulation However, there are indications as of early 2011 that this view has changed.

Regardless of law-making tactics, the before mentioned cross-border and stability issues suggest that a measured regulatory response in the area is justified. The fundamental questions on the table are:

- Early repayment rights: Should borrowers be granted a universal prepayment option or should the lender have the right to contractually exclude it?
- Early repayment indemnities: Should lenders be entitled to charge prepayment indemnities?
- Early repayment indemnities formula and limits: Should ex-ante determined indemnities remain allowed, or should indemnities follow the fair value principle? Should regulators introduce limits to the fair value principle?

The reason for addressing the first issue is be the existence of legal regimes lacking provisions on – or specifically allowing – the contractual exclusion of loan prepayments, which may lead to considerable reductions in consumer utility, e.g. borrowers having to seek the lender's agreement to prepay and possibly being forced to pay an arbitrary exit price from the contract. Full contractual freedom to exclude a prepayment is no longer characteristic for European countries, outside Eastern Europe with recently emerging legislation. Even in the prominent German case, where exclusion is still possible, this lender option has been constrained by a Federal Civil Court ('Bundesgerichtshof') order for the important case of a consumer moving house. The Court in the judgment from the mid-1990s argued that the consumer's interest in financial mobility should be respected by the lender.

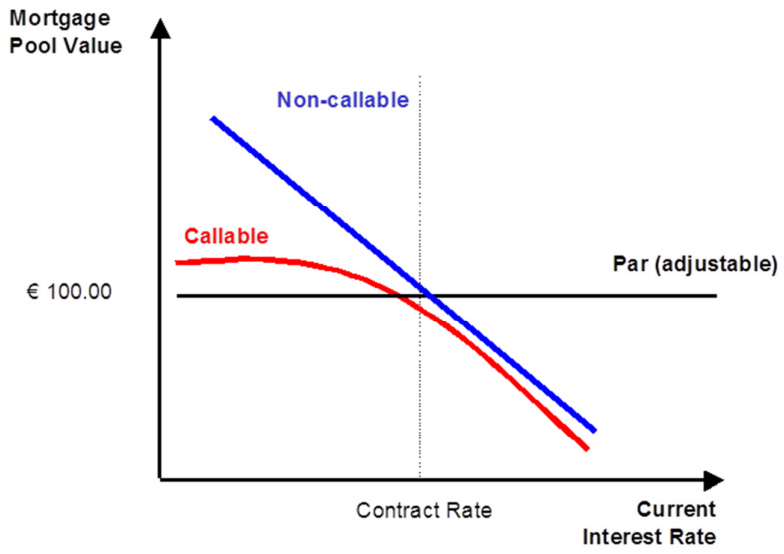
Moving to the analysis of the second and third question, it is essential understand the pricing mechanics and related market value of non-callable vs. callable FRM.

Figure 13 demonstrates in a simplified form the pricing behaviour of pools of ARMs as well as callable and non-callable FRMs in response to changing market interest rates. The value of a pool of adjustable rate mortgage loans remains broadly constant (priced around par) as their interest rate is tied to current market rates. In contrast, the value of a pool of fixed rate mortgage loan products responds to interest rate cycles and its price, in principle, is determined like the price of a fixed-rate government bond: if interest rates fall (rise) versus the actual contract rate ('coupon'), the value of a lender's fixed-rate mortgage pool increases (decreases).

This government bond-style pricing works only, however, in the case of non-callable FRM. If call protection is prohibited or curtailed by the national legal regime, fixed-rate mortgage pools price like non-callable FRMs in the event of rising interest rates (as only few borrowers in the loan pool with prepayment option will exercise their option) but similar to ARMs in a scenario of declining interest rates. They become hybrid assets, which are complex to value for investors/lenders. The fact that these loans (callable FRMs) can be prepaid at par (100%) lowers the value of the mortgage pool as interest rate drop, because the prepayment option 'comes into the money', leads to increase prepayments and thereby to a gradual replacement in the loan pool by loans with lower interest rates or cash.

[63] "White Paper on the Integration of EU Mortgage Credit Markets" (2007), European Commission: http://ec.europa.eu/internal_market/finservices-retail/credit/mortgage_en.htm

Figure 13. Interest rate mechanics of three principal mortgage products



Source: Dübel (2005).

In order to compensate for incurred reinvestment losses, truncated intermediation profit from loan origination and servicing or for additional administrative costs from shorter and variable loan durations, lenders will demand call protection to the extent they are legally allowed to. Alternatively they will charge additional the prepayment option premium depending on the level of indemnity. US and Danish experiences suggest option costs in the range of 70-100bp for a 30 year FRM. Moreover, option costs can vary strongly over time depending on parameter constellations predicting future exercise and investor appetite to take the associated risk.

In the majority of European cases, when permissible indemnities are insufficient to cover lender cost, loan pricing will involve a combination of option costs and indemnity. The backdoor solution to keep the legal cost of prepayment, via e.g. notarial costs, high, adds to this calculus.[64] Both mixed pricing and hidden legal prepayment costs are highly inefficient and intransparent approaches to call protection.

There is a considerable debate in consumer protection regarding abuses of the indemnity concept by lenders aiming at overcharging consumers or locking them into high interest rates. Also non-harmonised and often undisclosed indemnity calculation methods across Europe (limited by law vs. limited by industry agreement/standards) are an issue. A third area of concern is missing relief for a prepaying borrower in an interest rate scenario favourable to the reinvesting creditor, i.e. when interest rates have risen.[65].

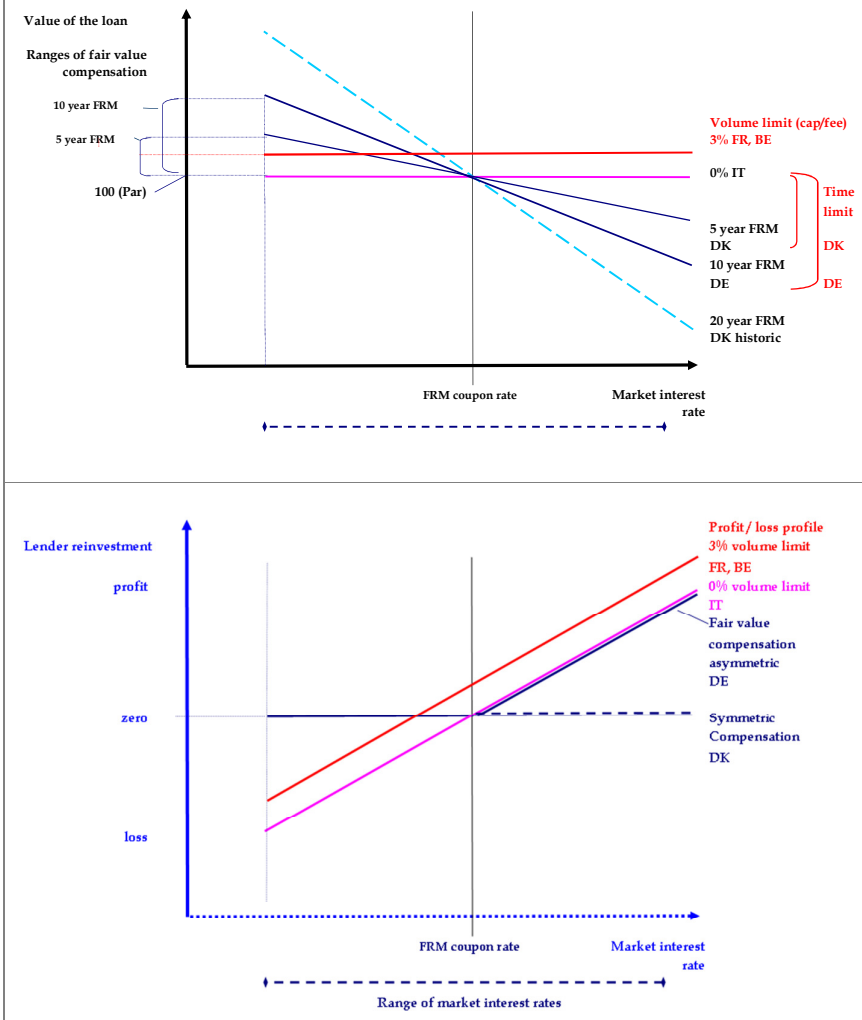
Figure 14 below serve as basis for the discussion by illustrating the pricing of loans that carry different fixed-rate periods of 5, 10 and 20 years and demonstrate lender reinvestment losses and profits under different compensation schemes. The slope of a line indicates the price risk of lenders/investors according to changing market rates ('duration'): the longer the fixed-rate period,

[64] Belgium, France and Spain are examples for countries with low compensation caps but featuring some of the highest mortgage transaction costs in the EU. It is, however, unclear whether lenders responded to curtailed compensations by lobbying for against reductions in legal and notary transactions costs or vice versa, i.e. whether regulators introduced low cap levels to counter-balance high transaction costs.

[65] An exception is Denmark's symmetric market price model of prepayment offering borrowers the option to buy back their fixed-rate loans at the going market price, which can be below, equal to or above par.

the greater is the change of the value of the mortgage pool for investors or lenders in reaction to a change in interest rates.

Figure 14. Conceptual framework for the pricing of non-callable FRM



Source: Finpolconsult,, from Dübel, Duke and Muller (2009).

In the past, lawmakers and courts in Europe have tried to call the debate on the optimal compensation scheme on the national levels, which resulted in the creation of a 'Swiss cheese' of regulations. Diversity can be partly explained by the vastly diverging national inflation histories of the 1970s that created different risk of the kind just described for borrowers. France, for example, introduced her tight prepayment caps at the height of inflation, in 1978, fearing that consumers would be locked in for a long time into high interest rates and would subsequently default. Also, differing attitudes of lenders play a role: both France and Italy had anti-trust cases against lenders colluding to refuse to accept prepayments. In Germany, resistance by lenders against offering the prepayment option is officially motivated by the intent to protect the covered bond ('Pfandbrief'), even though the bond is only modestly used for retail mortgage finance. A more important aspect could be the low legal transaction costs via the use of fiduciary liens dominating in the German mortgage market that drive down the exercise cost of the prepayment option and could jeopardise already low margins.

Generally, Europe can be divided into two schools with regard to indemnity design for non-callable FRMs:

- 'Pragmatists' support ex-ante fixed indemnities, arguing that clear and understandable statutory maximum volume limits are desirable from a consumer perspective. France and Belgium are examples of two jurisdictions which impose tight volume limits (cap or fee) on indemnities, and de-facto allow lenders to charge a fixed prepayment fee in all rate scenarios. Though reducing the incurred reinvestment loss, this approach does not close the gap to 'fair value compensation' as can be seen in Figure 14 for market rates below the FRM coupon rate, the loss of lender revenue is indicated as the difference between the red line (3% volume limit on prepayment compensation, the case of France) and the horizontal blue line ('fair value compensation'). Rising market rates, however, deliver a reinvestment profit to the lenders, which – again – is a departure from the fair value compensation principle, and the ex-ante fixed indemnity adds to this profit. Such a formulation of an indemnity volume limit is hence simple, but by definition always mismatches with lender profit and loss. Note that the outlawing of indemnities in Italy since 2007 (equal to a capping of the volume limit at 0%) does not pre-empt lenders from making a profit in a scenario of prepaying borrowers in times of rising interest rates (magenta line).

- The 'fair-value compensation' school, mostly based in Northern Europe, on the other hand suggests a calibration of indemnities according to actual reinvestment profit and loss incurred by the lender (as well as in some cases loss from truncation of the income stream of the lender). This implies the use of a mathematical formula which – in the Danish 'symmetric' compensation model – eliminates both losses (profits) in the case of falling (rising) interest rates (see horizontal then dotted blue line in Figure 14). In the predominant class of jurisdictions with 'asymmetric' models, in particular including Germany, however, lender losses from prepayments into falling interest rates are compensated for while lenders can make a profit from reinvesting prepayment proceeds during rising interest rates. Borrowers prepaying when market rates are above the coupon do not participate in the reinvestment gain of the lender (blue line in Figure 14). The scenario is empirically less relevant, as few borrowers prepay when interest rates have risen.

The volume of compensations payable under the fair value compensation model can be implicitly constrained. One option is imposing a time limit on the residual interest rate fixing period permissible for the calculation. This is the legal situation in Germany, where an indemnity can be only charged for a maximum of 10 years, or the residual interest-rate fixing time until 10 years are reached, whichever is lower. A 15 or 20 year FRM loan in Germany hence carries an indemnity only for a maximum of 10 years. If that loan is prepaid after 4 years, the yield maintenance formula applies only to the residual period, i.e. 6 years. This limits the maximum penalty payable indirectly.

However, since a yield maintenance formula might lead to high indemnities in drastic circumstances, e.g. a very strong rate decline as seen in the 1990s, it could be combined with a sufficiently high volume limit. A simple formulation could combine the limits of 10 years and 10% of the outstanding loan volume. This would cut higher indemnities seen e.g. in the German market in the 1990s, and thus lead, under extreme interest rate scenarios to lender loss. It needs to be emphasised in that regard that average indemnities on 10 year loans under the far less volatile European fixed-rate interest rate trends in the past decade have been far lower than the levels seen in the 1990s, in the range of 0 to 5%.

The mitigation of reinvestment risk for lenders under the non-callable FRM has enabled very low spreads over government-bonds; for example German FRM rates are among the lowest in Europe and systematically lower than Danish FRM rates, where the callable FRM product entails the mark-up for the prepayment option costs. Ideally, both products should be offered jointly and in a clean pricing structure: either under a spread mark-up for the prepayment option cost and no indemnity, or an indemnity and no or only minimal prepayment option cost spread mark-up. A harmonisation of indemnities could facilitate moving towards that market structure.

POLICY OPTIONS AND RECOMMENDATIONS

The prepayment option is important to safeguard financial and physical mobility of European consumers. Regulating the area might improve the outlook for a renaissance of the European fixed-rate mortgage (FRM) market.

- The consumer should have the early repayment right; rejecting a prepayment or charging arbitrary prices under negotiated prepayments seriously reduces consumer mobility;
- Lenders should be able to recover their cost in case of an early repayment. Prepayment indemnities should be harmonised along the lines of the fair value approach, ideally on the basis of symmetric yield maintenance computations which are based on standardised benchmarks ('marketing-to-market model of prepayment charges'). Harmonising indemnities is central to positively delimit the 'non-callable' FRM product, which dominates the FRM market in Europe (a 'callable' FRM would be one in which no indemnity is charged);
- The CCD approach of tight statutory ceiling on indemnities is not transferable to long-term mortgage lending. Tight caps leads to dual pricing structure of the prepayment option as a spread mark-up and a residual indemnity. Contracts should be clearly structured into either containing a spread mark-up or an indemnity, which requires a degree of flexibility for the latter as described;
- In order to counter a potential credit risk increase, a combination of broad volume and time ceilings (residual interest-rate fixing period) could limit a yield maintenance indemnity computation formula. Examples for simple ceilings would be 10 years and 10% of the outstanding loan amount, or 5 years and 5%;
- The transparency of the indemnity component related to the loss of the lender administration, credit risk and profit ('servicing') income stream from a prepayment should be enhanced. Either this component should match the actual cost incurred by the lender, or a simple lump-sum volume formulation should be used (e.g. 1% or 0.5%).

3.4.2 Rate adjustments and caps

This final section regarding specific consumer protection rules will deal with a core material topic that has been largely left out of the European mortgage consumer protection debate in recent years: unilateral rate adjustments. The neglect of the area comes despite the fact that mortgage contracts carrying adjustable interest rates are by far the largest product class in Europe and carry significant credit and systemic risk.

The main regulatory questions in the consumer protection area are the following:

- Should interest rates be required to be adjusted based on use of an agreed index or reference rate only?
- Should interest rates on ARMs be statutorily capped or heightened transparency / risk warnings be favoured?

There are wider bank regulatory questions, such as capital requirements, which will not be addressed here.

The CCD of 1998 had answered the first question in the affirmative and had required an objective reference rate that could not be altered by either contract party. This approach followed in particular Southern European traditions to require and define official indices, e.g. Spain or France, governing adjustment. Spain, as discussed in Chapter 1, had created a menu of ARM indices in 1994 to structure the product set in the mortgage market.

The greatest opposition to the old CCD approach came from the countries applying products where the interest rate remains unilaterally reviewable by the lender, most prominently Britain with its dominant 'Standard Variable Rate' (SVR) product. Germany and other countries, of which

many in the 1990s still rarely used ARMs, found themselves in a mezzanine position as court judgments had increasingly cut back lender options to use discretion upon a rate review (which often had delayed downward adjustment).

In the meantime, the relevance of ARM in the EU has ballooned. In the new CCD the issue of regulating adjustment has been dropped in favour of greater transparency, spelled out in Article 11. The intention of Article 11 clearly is to buy the consumer time to facilitate a prepayment before an adjustment, rather than defining the options for the lender.

Contrasting with this very laid back approach, the scope of regulating the area, and in particular finding a solution suitable for mortgages, has increased, rather than diminished. First, mortgage prepayments tend to be less feasible in a financial crisis, as the declining prepayment shares in new mortgage originations across Europe in the past years show. This exposes the borrower to lender re-pricing discretion exactly at the time when he is most vulnerable to it, e.g. to potential loss of employment during a crisis.

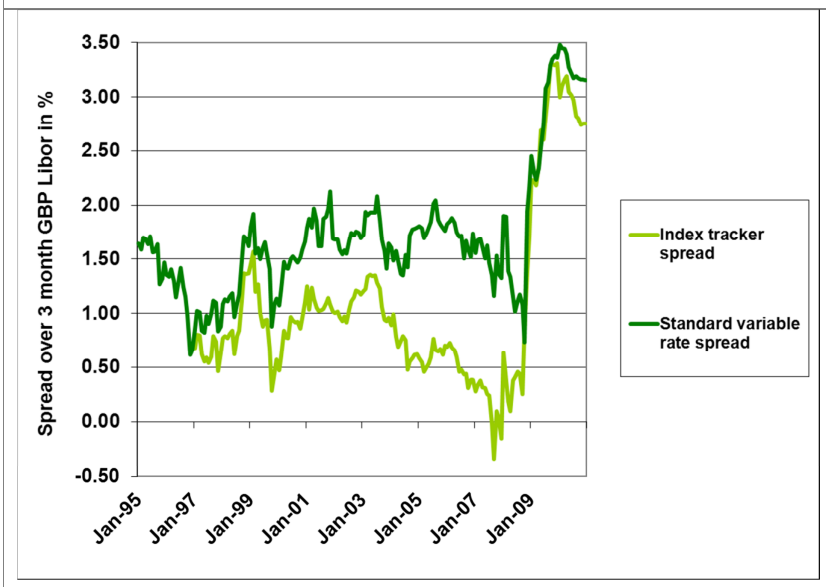
Secondly, together with the increasing relevance of the product, an ever increasing number of court cases and regulations have further scattered the regulation playing field, making a sale of a specific ARM product across borders a virtual impossibility. For example, reviewable rate products are banned in countries demanding the use of an index, e.g. the standard British product is banned in Spain. Also permissible indices and adjustment periods differ between countries demanding indexation.

Thirdly, the financial crisis has added a new dimension to the debate, as witnessed by a number of empirical observations:

- The importance of (central bank) interest rate pass-through in order to stem a possible default wave has dramatically increased due to the scale of house price cycles and the resulting level of indebtedness. The Bank of Spain reported in early 2010 that a whole third of Spanish mortgage loans carried interest rate floors that pre-empted a sufficient downward adjustment during the crisis. Such loans are currently in some cases getting prepaid and refinanced into unconstrained Euribor ARM, as banks faced consumer protest and/or became aware of the increased default risk brought about by the rate floor. Anecdotal information suggests that by early 2011 the Cajas, which tend to be confronted with higher potential credit risk in their portfolios, are more proactive in removing floor clauses than private banks.
- However, the crisis has also put the spot on the downward rate review issue in unilaterally reviewable rate contracts, which in the 1990s already had been an issue in many jurisdictions and triggered court intervention. As discussed in Chapter 1, in the Hungarian mortgage market, foreign currency mortgages denominated in Swiss Franc typically carry interest rates that lenders do unilaterally review, while in the Polish market Swiss Franc rates are tied to Swiss interbank indices. When the combined banking and devaluation crisis hit both economies, Hungarian lenders decided to pass-through their increased funding cost and created a double shock for borrowers – a devaluation increasing instalments via the exchange rate effect, and an increase in the interest rate. Polish borrowers, in contrast were hedged as the decline in Swiss interbank rates compensated for the exchange rate effect. Polish banks took a temporary loss as their funding cost exceeded Swiss interbank rates. Mortgage default rates in Poland were considerably lower than in Hungary.
- Such examples noted, it is at the same time increasingly clear that the surge in index-tracking ARM, which do avoid the downward review issue, in the run-up to the crisis in a number of countries was leading to heavy under-pricing of mortgages and contributed to house price inflation in the periphery – from Spain to Ireland. In the British case, as Figure 15 shows, index tracker mortgages in 2007 for months were sold at de-facto zero mark-up over Libor, the typical reference rate. Pricing was so aggressive that a discussion arose whether, when interest rates declined during the crisis, banks should eventually pay interest to borrowers, rather than vice versa. Tracker mortgages have as a result of changing pricing policies shown

extreme spread volatility over time. Their pricing is considerably more volatile than standard variable rate loans in the UK The situation in other markets using trackers has not been different.

Figure 15. Tracker vs. standard variable rate mortgage spreads in the UK 1995 - 2009



Source: Bank of England, Finpolconsult.

- Finally, in both the cases of index tracker mortgages and reviewable-rate mortgages, the question of mandating the use of interest rate caps, and if so their levels, has an increasing urgency. After all, typical Euribor interest rates widely used in the eurozone multiplied by a factor of 2.5 between 2005 and 2007. Tracker loans tied to the ECB discount rate are increasing in relevance (e.g. Ireland), where the multiple in case of a rate increase could be even higher.

Regarding reviewable rate contracts, the Hungarian example of banks passing through cost of funds to borrowers, disregarding the elevated default risk, is joined currently by Irish banks, which according to press reports of February 2011 have plans to raise mortgage rates for the reviewable-rate portfolio drastically to 4.5%, from a current average of 2.5-3%. The reason is similar, higher cost of funds during the Irish banking crisis. These financial crisis trends contrast with conventional wisdom, based in particular on historical UK evidence, that lenders use their review option with caution in order to avoid defaults.

The outcome does not improve when interest rate caps are widely used or mandatory, but at the same time not properly enforced. In Spain, Euribor interest rates are capped contractually, responding to legal requirements. However, the caps are in practice defined at extremely high interest rate levels, typically beyond 10%. Such cap levels do not cause cost to the lenders and expose borrowers to severe payment shock risk.

Those countries that are using meaningful caps in the EU are generally those that also have a strong FRM market. In particular this is the case in France and Belgium. In both countries, ARMs are typically issued under a 'rate+x%' formula, in France the maximum rate increase x permissible over the initial rate is typically 2%. Lenders take the downside risk under this formulation, instead of borrowers, who in exchange pay a higher spread to lenders.

These findings present policymakers with a dilemma. On the one hand can unilateral rate adjustment options in the hands of lenders directly lead to great affordability pressure on

borrowers and higher defaults, on the other hand can the enforcement of indexation in mortgage contracts lead to extremely volatile pricing conditions and stimulate house price inflation. Secondly, caps protecting against payment shock are exactly used in those member states where they are least needed, and remainder exposes borrowers to severe payment shock risk. The feedback effect linking both is that if meaningful caps are not used and hence priced into the rate, as in France, rates become even lower and push house prices and risk up even further.

As demonstrated in Chapter 1, fixed-rate mortgage lending largely (depending on the length of the fixing period) avoids these problems. However, it seems politically inconceivable to do regulation in Europe discouraging ARM products in their entirety, given their dominance in the market. Obviously, finally, the historic preference for tracker mortgages taken by the old CCD seems to have lost appeal.

The challenge going forward is therefore to structure both products in a way that minimises their risk. There are a number of options to be explored:

- Rate adjustment could be linked to an objective reference rate, as under the old CCD, while demanding caps. This would lead to a re-pricing of ARM via higher spreads. Extreme situations of zero spread as in the UK market during 2007 would be less likely (even if of course not excluded). ARM and FRM interest rates would converge, as ARM borrowers pay the cap premium to lenders / investors.

  Borrowers would be protected against catastrophic downside risk (interest rate shock), while remaining exposed to some interest rate risk. This is essentially the French ARM model. If moreover, an agreement on the classes of permissible reference rates could be made on the European level, there would be the potential for a cross-border market in ARM.

- Caps could be made a generalised requirement for both reviewable rate and index tracker mortgages, leaving the discussion about the use of reference rates to subsidiarity, i.e. to the courts. Caps could be defined – in this and the former option - at meaningfully tight distance to current rates, e.g. 2-3% in absolute terms, or a ratio relative to current rates).

  This would at least protect borrowers domestically against interest rate shock, and by implication protect central banks against being held hostage by the mortgage market when inflation starts to pick up. The downside would be a less integrated European markets, as reference rate use is not universal and its selection remains a national item.

- Thirdly, the CCD could be transposed in its current form, essentially limiting ARM regulations to enhanced disclosure of a forthcoming rate adjustment, giving time for prepayments. This essentially leaves the status quo intact, since prepayments – the only relevant potential reaction of borrowers to stem a rising payment – are infeasible during crisis.

There are obviously other mathematical combinations, which seem to make less sense, however. Demanding caps, for example, without specifying some maximum distance to current rates, renders them meaningless, as the Spanish case shows. Regulating rate adjustment only without defining a cap, the old CCD approach, may create more risk as the British index tracker example demonstrates. In fact, borrowers could prepay easily into less secure forms of credit as the result of mis-designed regulations.

If confronted with the alternative, the requirement of meaningful caps, i.e. a narrowing of the cost of credit between ARM and FRM, should be the priority over managing the rate adjustment. Floors seem to have been a problem related to forcing lenders to use an official reference rate. Such practices could be outlawed without loss of product diversity. In a reviewable-rate system, the floor issue is captured by banks being able to maintain a margin over their cost of funds. In an index-based system, banks should be hedged by attracting funds under the same index. If they cannot manage the index risk, they should be allowed to do reviewable rate contracting.

POLICY OPTIONS AND RECOMMENDATIONS

The European mortgage market is dominated by adjustable-rate mortgages (ARM). These have exhibited considerable payment shock risk for consumers before and during the financial crisis. Yet, only scant regulatory initiatives have been made at EU level for this product. Given the high importance for consumer protection, bank solvency, competition and monetary policy, the issue should be addressed.

- The approach taken by the CCD to create heightened transparency of an upcoming rate adjustment will not have major consumer protection effects in ARM lending. During crisis the options for consumers to avoid an increase by prepaying a long-term loan typically dramatically diminish, and in particular so for those consumers most vulnerable to the rate increase.
- ARM lending in the EU – whether in the form of reviewable rate or index-tracker mortgages - should be brought to a minimum standard regarding large downside interest rate rate risk protection for the consumer. When lenders offer such protection, against a rate mark-up paid by consumers, this significantly improves the risk profile of mortgage borrowing. Markets penetrate less down the credit curve, house price cycles are mitigated as the discount factor for pricing the saved rent stream derived from ownership remains higher, and the political pressure on central banks to reduce interest rates in order to avoid increasing defaults, in particular during crisis, is reduced.
- Limiting downsize risk implies the use of sufficiently tight and long-term interest rate caps (e.g., x+2%, or 150%*x, over at least the first 5 years of the loan, with x being the initial rate). An alternative to interest rate caps are payment caps, or in the case of foreign currency lending caps on a maximum permissible exchange rate (possibly combined with interest rate caps). . The impact will be a narrowing of the cost difference between ARM and FRM; however, this does not mean a full equalization, since the borrower still takes a determined, yet limited amount of interest rate risk. Interest rate caps can be shorter, the faster loans amortize, which reduces the payment shock risk.
- Given detrimental experiences during the financial crisis in both products – reviewable and tracker (reference index-linked) - in the EU, the case for mandating the use of reference indices to govern the ARM product seems weak. This speaks in favour of accepting both types of product EU-wide, provided safeguards regarding sufficiently reactive adjustment of reviewable-rate products are in place.

3.4.3 Dealing with more far-reaching consumer protection issues, the role of Commission vs. member states

We have so far discussed policy options and recommendations regarding a limited canon of consumer protection issues. This list has been an amalgam of the issues proposed by the European Commission's White Paper as crisis response (advice, responsible lending), the historical agenda of transposing at least the transparency sections of the CCD (pre-contractual information, APRC), to mortgage lending, and of product regulation issues discussed in Chapter 1 (early repayment/fixed-rate lending, rate adjustment/variable-rate lending).

The focus on items beyond transparency, e.g. responsible lending, has been criticised as a departure from the traditional approach of focusing on the internal market and cross border lending. Yet, next to structural, legal, behavioural and cultural barriers, material consumer protection issues in mortgages are also impediments to the cross-border market and fall under the EU's mandate as the competition watchdog.

Moreover, financial stability issues in one jurisdiction resulting from a lack or excess of consumer protection generate problems within the credit markets of the entire Union. While

stability issues do not fall into a formal mandate as defined in the Treaty, they impair a number of defined functions of the EU, for example regarding competition and state aid to banks.

Clearly, national legislations and even the CCD go beyond the list of issues discussed and cover issues of sometimes at least or even greater relevance to the cross-border market and stability:

- First, our list addresses only transparency and underwriting and thus not the pivotal endgame of the credit relationship: execution via repossession or foreclosure, or at the near-execution stage options for household debt management. Member state laws also vary vastly in the post-execution/consumer insolvency area, from lifetime residual debt (Spain) to swift discharge (UK). These differences have massive implications for bank solvency/resolution policies, other fiscal policies, and monetary policies.
- Secondly, important issues in underwriting and during the loan life are not addressed. Prominent is the issue of loan assignment, which has become more tightly regulated together with the emerging market for non-performing loan portfolios often involving US investors in the 2000s (e.g., in Germany). Another high-profile issue, especially for periphery countries with construction boom and bust, that has been left out are linked credit agreements. This concept addresses the conflict of interest presented by a lender closely interacting with producers of goods to be financed. An example would be an apartment building where both sales and financing contracts are closely linked. A CCD transposition would imply that a deficient consumer-developer sales contract (e.g. due to construction deficiencies) could, under certain circumstances, impair the entitlement of the lender to full repayment under the loan contract.

These and other issues that arise as market products and practices develop have great relevance. Still it is either politically unrealistic or excessively complex, or both, to attempt a maximum harmonisation for the entire area of consumer lending and of all relevant additional issues. Yet, mutual recognition of national legislation, the option at the other extreme of maximum harmonisation, may seriously impair the above goals. Minimum harmonisation represents the status quo of a national regulation patchwork, unless additional national regulation options become more limited.

This raises the question regarding a more defensive strategy conducive to protect minimum goals and in particular the internal market (cross-border lending). One defensive approach would be to create an interactive law-making process between member states and the EU, i.e. between the consumer protection lawmaker of first resort and the competition authority.

The model that could be followed here is state aid, considered by many as the grand success story of the EU. State aid is generally permissible in well-defined and limited cases and requires a decision of the European Commission in a majority of cases. The onus is on the member state to motivate whether conditions are met, for example a state aid to a bank is indispensable in order to fend off stability risks.

The approach could be transferred to the area of protection of consumers in consumer lending in the following way. The EU would:

- define a methodology to estimate the risk exposures of consumers that purchase certain products and are exposed to certain practices,
- set wide minimum material consumer protection rules under the maximum harmonisation approach and regularly (e.g. every 10 years) review the rules empirically,
- allow member states experiencing new products and practices sold across borders to temporarily require from lenders heightened disclosure which could serve as a "warning system",
- create an appeals process for the member states aiming to keep or introduce stricter national material consumer protection rules, effectively barring those new products and practices, based on the above-mentioned methodology.

The member states would:

- either accept the maximum harmonisation level (i.e. eliminate more restrictive consumer protection legislation),
- or appeal to the European Commission for setting stricter rules subject to review on more frequent basis, e.g. every 3-5 years, by providing empirical evidence within the provided methodological framework.

Consider again the example of loan assignment. National legislation exists that ties a loan assignment to another creditor to maintaining the initial loan servicer. Such legislation de-facto pre-empts the transfer of loan servicing for the life of the loan and seriously impairs the options for loan portfolio buyers and sellers, thereby depressing loan portfolio prices. It sacrifices both the loan transfer and the loan servicing markets across borders in Europe, indeed, it has been passed in order to block foreign lenders with possibly swifter execution preferences from the national market.

Yet, national legislation in this area has also had a fairly solid core of consumer protection purpose. It is protecting borrowers in a non-performing or near-non-performing ('sub-performing') situation from becoming subjected to more aggressive execution. A more fundamental point has been that consumers select contract counterparties according to their execution preferences. As in the case of rate adjustment, simply prepaying a loan when the lender changes may not be an option, especially for more vulnerable consumers.

The process proposed here would ultimately gauge the validity of the competition arguments against the consumer protection (stability) arguments. It would force the member state to sunset the more far-reaching legislation on loan assignment and submit it to the empirical test. This test would include studying whether there have been or could be expected significant differences to the detriment of consumers in loan execution between initial servicers (upon underwriting) and third-party servicers. Alternatively, a modified formulation of the legislation could be passed that serves the same intended purpose of minimising differences in execution practices, with less restrictive means from a competition perspective.

POLICY OPTIONS AND RECOMMENDATIONS

The current policy approach of the European Commission with regard to retail lending focuses largely on recommendations regarding responsible lending. This has been criticised as a departure from the traditional approach of focusing on the internal market and cross-border lending. Yet, next to structural barriers, material consumer protection issues in mortgage credit are also impediments to an integrated market and fall under the EU's mandate as competition watchdog. Moreover, financial stability issues in one jurisdiction resulting from a lack or excess of consumer protection generate problems within the credit markets of the entire Union. While stability issues are not a formal EU mandate as defined in the Treaty, they clearly impair a number of functions of the EU.

Developing products and practices in consumer lending markets as well as long delays of stakeholder discussion ensure that a comprehensive (maximum harmonization) regulation approach at the EU level does always too little too late. Mutual recognition of more far-reaching consumer protection at the national level, as well as minimum harmonization leaving out many relevant issues as currently the case, in contrast, preserve the patchwork of legislation seriously impairing the cross-border market as well as stability.

A more defensive approach is proposed that structures an interaction process between member state and EU regarding more far reaching consumer protection regulation along the lines of the mechanisms laid down for state aid.

The core of the proposal is to enable the EU to define a methodology to estimate the risk exposures of consumers that purchase certain products and are exposed to certain practices and create an appeals process for the member states aiming to keep or introduce stricter national material consumer protection rules. The member states would in particular be subjected to review their idiosyncratic rules on a frequent basis and on this occasion bear the onus of providing empirical evidence within the defined methodological framework.

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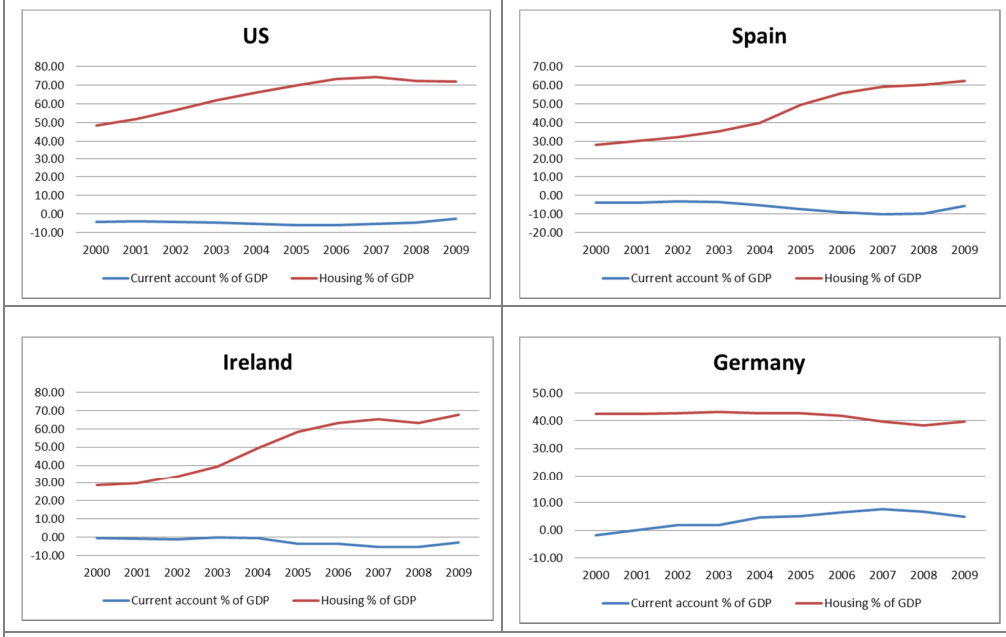
ANNEX. ADDITIONAL DATA

Figure A1. Current account and housing lending, United States and selected European countries



Sources: IMF, CEPS, Finpolconsult computations.

LIST OF ABBREVIATIONS

AHE	Associacion Hipotecaria Espanola
APRC	Annual Percentage Rate of Charge
ARM	Adjustable-Rate Mortgage
CCD	Consumer Credit Directive
CHF	Swiss Franc
CDO	Collateralised Debt Obligation
CLTV	Combined Loan-to-Value Ratio
CML	Council of Mortgage Lenders
EBIC	European Banking Industry Committee
EGCH	Expert Group on Credit Histories
ESIS	European Standard Information Sheet
EU	European Union
EUR	Euro (currency)
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration (US)
FHFA	Federal Housing Finance Agency (US)
FHLB	Federal Home Loan Banks (US)
FRM	Fixed-Rate Mortgage (in Europe, includes fixed-to-term)
FSA	Financial Services Administration (UK)
GDP	Gross Domestic Product
GECMC	Government Expert Group on Mortgage Credit
GSE	Government-Sponsored Enterprises
HAMP	Loan modification programme
HARP	Loan prepayment programme
HUD	Housing and Urban Development Department (US)
KFI	Key Facts Information
LTV	Loan-to-Value Ratio
MBS	Mortgage-Backed Securities
MFEG	Mortgage Funding Expert Group
MICEG	Mortgage Industry and Consumer Dialogue Expert Group
S&Ls	Savings and Loans
SVR	Standard Variable Rate

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