EUROPEAN MORTGAGE FEDERATION

MERCER OLIVER WYMAN

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Study on the Financial Integration of European Mortgage Markets

Contents

Annexes

(Available separately from the European Mortgage Federation at www.hypo.org)

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1. Executive summary

1.1. Background

The European Mortgage Federation has launched its first comparative study, investigating the integration of European mortgage markets. The report constitutes its initial response to the European Commission's midterm review of the Financial Services Action Plan and the recent establishment of a Forum Group on Mortgage Credit to look at the best way to promote greater financial integration of mortgage markets[1].

1.2. Comparing mortgage markets across the EU

The Federation's study provides, for the first time, *a comparative analysis of mortgage markets* across Europe using a number of consistent indicators to compare price and cost levels, product ranges and profitability. Secondly the study examines the benefits, both for consumers and lenders, of greater integration and the main barriers to achieving them.

The study found that *differences in mortgage prices between countries are largely due to product differences* and that variances in lender economics across markets are driven by structural factors such as market size and structure, product cross-subsidies and regulation. The combination of narrow underlying price differences between markets, low lender returns and limited market entry suggests that each of the markets is operating broadly efficiently from a consumer perspective. *There are gaps in most countries in terms of product range and the range of borrowers served*, often driven by regulation, consumer preferences, taxation and other structural factors.

On the other hand, the study identified room for both enhancing the product range and range of borrowers served and improving efficiency, primarily through reducing the cost of mortgage provision. *The study found that significant benefits could be realised through greater integration of mortgage markets, although it also identifies a number of barriers to achieving them*, most noticeably the low levels of profitability in mortgage lending and poor information availability and quality.

1.2.1. Comparison of product ranges

- *Breadth of product range* – Most markets offer a large proportion of the complete range of products. Product gaps relating to fixed term products, capped rate products, indexed adjustable rate mortgages and flexible repayment products exist in some individual markets. Most countries have gaps in the range of borrowers that are served by the mortgage market, particularly products for higher risk borrowers (e.g. high LTV loans, sub-prime lending).
- *Drivers of differences in product range* – Many of the product gaps observed are, in part, driven by regulation and consumer protection or by the absence of effective funding mechanisms. Cultural and structural factors can act to restrict consumer demand for certain products (e.g. high risk lending) although lack of lender appetite can also be a key constraint to the provision of new products.

Footnotes

[1] In February 2002, the Commission concluded that the European Union needs to take steps to achieve a single market in financial services. Commission President, Romano Prodi, singled out mortgage credit as one of the areas where progress was needed

1.2.2. Comparison of prices

- *Narrow price range* – The study measures mortgage rates in different countries making adjustments for differences in the cost of funding, cost of prepayment options and local credit conditions. Overall the study found that average adjusted prices in 7 of the 8 countries examined were all within a narrow price range with the variance from lowest to highest just 45bp.
- *Drivers of price levels* – The study finds that product differences are the major determinant of differences in nominal price and account for 60% of variations. The underlying drivers of adjusted price levels include the level of price competition in the market and cross-subsidisation from other products. Cost levels are the key determinant of the long-term sustainable level of prices and as such will be the main driver of prices in the medium to long-term.

1.2.3. Comparison of cost levels

- *Variance in cost efficiency* – Cost levels are less clustered than adjusted prices. Cost levels also vary significantly within countries and the most cost efficient lenders show significant cost advantages over less efficient competitors.
- *Drivers of cost levels* – Differences in cost levels are driven by differences in process efficiency (partly driven by different levels of regulation), lender and market size and differences in labour costs. Lender scale, which drives the ability to realise scale economies is a key driver of average costs although many of the benefits of scale can be realised via other mechanisms such as outsourcing.

1.2.4. Comparison of profitability

- *Low returns in some markets* – Profitability of mortgage lending was found to be generally low in European markets, particularly for new entrants. We find no evidence of excessive returns for lenders in the mortgage markets studied. However, there are wide variations in lender profitability within countries with some lenders making no return on the mortgage product.
- *Drivers of lender profitability* – The main drivers of lender profitability at the country level are the same as the drivers of prices and costs. Aggressive price competition, product cross-subsidies, lack of lender scale and small loan sizes all act to keep average returns low in many of the countries studied.

1.3. Benefits available from improving efficiency and completeness

Having established the current state of the European market and the drivers of differences between markets, the study evaluates the benefits that are available from improving efficiency and completeness at a national and EU level:

- *Efficiency gains* – Improvements in efficiency such as reductions in servicing, distribution, origination and funding costs could deliver benefits of 0.15%-0.30% of EU residential mortgage balances.
- *Completeness gains* – Greater product availability via the closure of observed product gaps could result in a market expansion of up to 10% and increased consumer benefit for up to 25% of mortgage borrowers. This benefit corresponds to a further 0.15% to 0.30% of EU residential mortgage balances.

Many of these benefits can be achieved through changes at the national level, where as others will require greater integration across markets in order to be realised.

1.4. Benefits from integration

The study then evaluates the specific benefits that could be derived from further integration of European markets. Firstly the study identifies three main ways in which greater integration will occur, these are:

- *Increased cross border lending* – organic entry into foreign markets
- *Mergers & acquisitions* – entering foreign markets through the acquisition of an existing lender
- *Asset transactions* – creating loan portfolios or MBS or mortgage bond pools that contain assets from multiple markets

The benefits arising from greater integration are listed below from the point of view of both consumers and lenders:

- *Benefits for consumers* – Consumer benefits could arise in terms of both greater choice of products and lower prices. Increased cross-border lending and removal of barriers to foreign entry would act to close many of the observed gaps. This could mean access to mortgage finance for those segments not currently served as well as provision of products more closely aligned with borrowers' needs for existing borrowers. To the extent that lenders reduce costs, these are likely to be passed on at least partially to consumers in the form of lower mortgage rates as competition between lenders would limit levels of return.

- *Benefits for lenders* – Lenders are likely to benefit from greater integration in a number of ways. The creation of a deeper more liquid secondary market in mortgage debt would act to lower funding costs. Reductions in credit and risk management costs could also accrue from diversification and scale as lenders develop cross-market asset portfolios. Lower servicing costs may result from greater lender and servicer scale via the creation of multi-national lenders and servicers. Finally, the European mortgage industry as a whole would also benefit from greater integration, as it would allow capital to flow where it can be used most effectively.

In total the study estimates that *integration benefits alone could be as high as 0.15% to 0.30% of EU mortgage balances*.

1.5. Barriers to integration

Having looked at the benefits available from integration the study identifies the major obstacles to realising these gains. The majority of obstacles arise from differences in national regulations and market conditions. The study identifies the following as the main obstacles to a single European mortgage market:

- *Economics of mortgage lending* – Entering the market using a standalone mortgage product strategy is likely to be unprofitable in many markets and only marginally profitable in the others. Indeed we observe that the level of returns is a key indicator of the level of foreign entry in a market.
- *Access to information* – The difficulty in obtaining good quality information on foreign markets and underwriting information on customers was singled out as one of the most important barriers to further integration.
- *Distribution channels* – Access to distribution is a very important component of any market entry strategy. Most markets are dominated by branch and tied distribution, often making it difficult for a foreign entrant to access distribution and achieve any significant market share.
- *Regulatory and tax differences* – Differences in regulation of products and lenders must be clearly understood since variations in regulation can act as a deterrent to a single market. Tax barriers also still exist in some countries that discriminate against foreign lenders
- *Mortgage transfers* – The inability to transfer loans from one lender to another in some markets restricts the integration of mortgage markets as it acts as a blocker to creation of multi-national loan portfolios and use of instruments such as mortgage-backed securities.
- *Government intervention* – Government intervention in mortgage markets via take-over policy or housing policy, which is closely linked to the residential mortgage market, can act to deter foreign lenders from entering new markets.

1.6. Next steps

The study's main objectives were to provide a detailed comparative assessment of the studied European mortgage markets and to evaluate the benefits that could derive from greater integration. *The next step is to identify what policy options both at national and at European level would help achieve the benefits identified*.

The Federation will make concrete recommendations towards achieving greater integration and removing remaining barriers during its Annual European Mortgage Conference in November 2003.

In the intervening period the study will form the basis of discussions in the forum groups set up by the European Commission to discuss integration of European mortgage markets.

2. Introduction

2.1. Context

There has been a large amount of recent discussion regarding the efficiency and completeness of European mortgage markets and in particular the benefits that greater financial integration of mortgage markets could bring. In February 2002, the European Financial Services Round Table published a report studying the benefits of a more integrated EU market for financial services. The report concluded that there were significant benefits to be gained from a greater degree of integration of EU retail financial services markets, namely:

- Increased product choice
- Lower prices
- Lower interest rates for borrowers
- International diversification of risk
- Higher economic growth

The report concluded that, whilst there are a large number of obstacles to integration, the potential benefits in terms of product choice and price justify market intervention in the form of adjustments to the EU regulatory framework, including changes to tax practices, consumer protection rules and supervisory arrangements in the EU member states. Subsequently, the European Commission has recently established a Forum Group on mortgage credit to look at the best way to promote greater financial integration of mortgage markets.

Of the benefits outlined in the report greater product choice and lower interest rates for borrowers directly relate to the mortgage product. The report, however, was not conclusive in proving that for residential mortgages there is a substantial case to answer. Due to the lack of available data, the pricing analysis looked at pass-through (i.e. changes in mortgage rates in response to base rate changes) based on ECB mortgage rate data as the measure of mortgage market integration. Given the restrictions of the data there was no consideration of the differences in mortgage product across countries, which lead to very different product economics, e.g. borrower pre-payment risk in some countries. However, the report did highlight a perceived lack of completeness in some markets and perceived discrepancies in pricing levels, both of which warrant additional research, specific to the mortgage product.

Comparisons across the different European mortgage markets are complex. Differences in market composition, legislation and regulation have led to structural differences in the European mortgage markets, which in turn have led to differences in product availability and structures. The economics of mortgage lending are then determined by both product differences and underlying supply conditions. This makes price and product comparisons across countries very problematic and it is therefore important that all factors are taken into account when making an assessment.

In addition to additional research and analysis of the efficiency and completeness of mortgage markets, some consideration should be given to the benefits that can be achieved from removal of efficiency and completeness gaps, and in particular the benefits possible via greater integration.

Given the uncertainties involved, the European Mortgage Federation has commissioned Mercer Oliver Wyman, supported by real estate finance specialist, Hans-Joachim Dübel, to undertake a study looking into these issues. In particular the study will address whether markets do exhibit significant differences in market completeness and efficiency, what the underlying causes of these differences are and hence evaluate the benefits available from integration.

2.2. Purpose of the study

The study's objectives are as follows:

1. To propose a definition and set of empirical indicators for market completeness and efficiency in order to examine and describe the level of completeness and efficiency of selected national mortgage markets in the EU
2. To examine whether price differentials in mortgage markets are due to product differences, and thus value provided to the customer, or differences in national supply conditions
3. To evaluate the potential benefits from greater integration of mortgage markets and the barriers to achieving them

This study should act as a starting point for discussion and seeks to establish a broad information base for further analysis and debate. It also seeks to provide valuable input into the newly formed Forum Group on Mortgage Credit.

2.3. Approach

The study examines the Danish, German, French, Italian, Dutch, Spanish, Portuguese and UK mortgage markets as representative of EU mortgage markets and focuses on residential mortgage lending only. All data collection and analysis has focused exclusively on these markets although the evaluation of the benefits of integration and barriers to cross-border activity should be broadly applicable across all EU markets.

In writing this study, we have tried to draw on the widest possible range of information sources including published reports, the European Mortgage Federation's extensive set of data and our own primary research. This primary research consisted of a detailed questionnaire that has been completed by over 45 lenders in the eight mortgage markets and interviews with over 30 participants in the mortgage market including lenders, servicers, brokers and insurers.

However, data issues still provide a key constraint on the depth of analysis that can be undertaken and so shape the analysis that is presented. For example, detailed information on lender cost structures is difficult to obtain in any detail and so estimates provided by lenders have been used as the main source for evaluating this aspect of mortgage markets.

Additional details of the analytical approach are provided Annex 1 – Evaluation Framework[2].

2.4. Format of the study

The remainder of the study is divided into four additional chapters and four annexes as follows:

Chapter	Content
3. Comparative analysis	Analysis of the completeness and efficiency of European mortgage markets
4. Projection of market developments	Projected developments in European mortgage markets based on 33 interviews in the studied markets
5. Review of the analysis and conclusions	Conclusions from the comparative analysis and identification of the drivers of completeness and efficiency
6. Implications for European mortgage markets	Evaluation of benefits available from improving efficiency and completeness and specifically the potential benefits from greater integration. Identification of barriers to greater integration of European mortgage markets
Annex 1 – Evaluation framework	Description of the metrics used to evaluate completeness and efficiency of mortgage markets and the rationale for their inclusion
Annex 2 – Pricing analysis methodology	Detailed description of the analysis used to compare mortgage prices
Annex 3 – Completeness index methodology	Detailed description of the methodology used to calculate a completeness index
Annex 4 – Country overviews	Overviews of the mortgage markets in each country and expected developments in each market

The four annexes are not included in this document and are available separately from the European Mortgage Federation’s website, www.hypo.org.

Footnotes

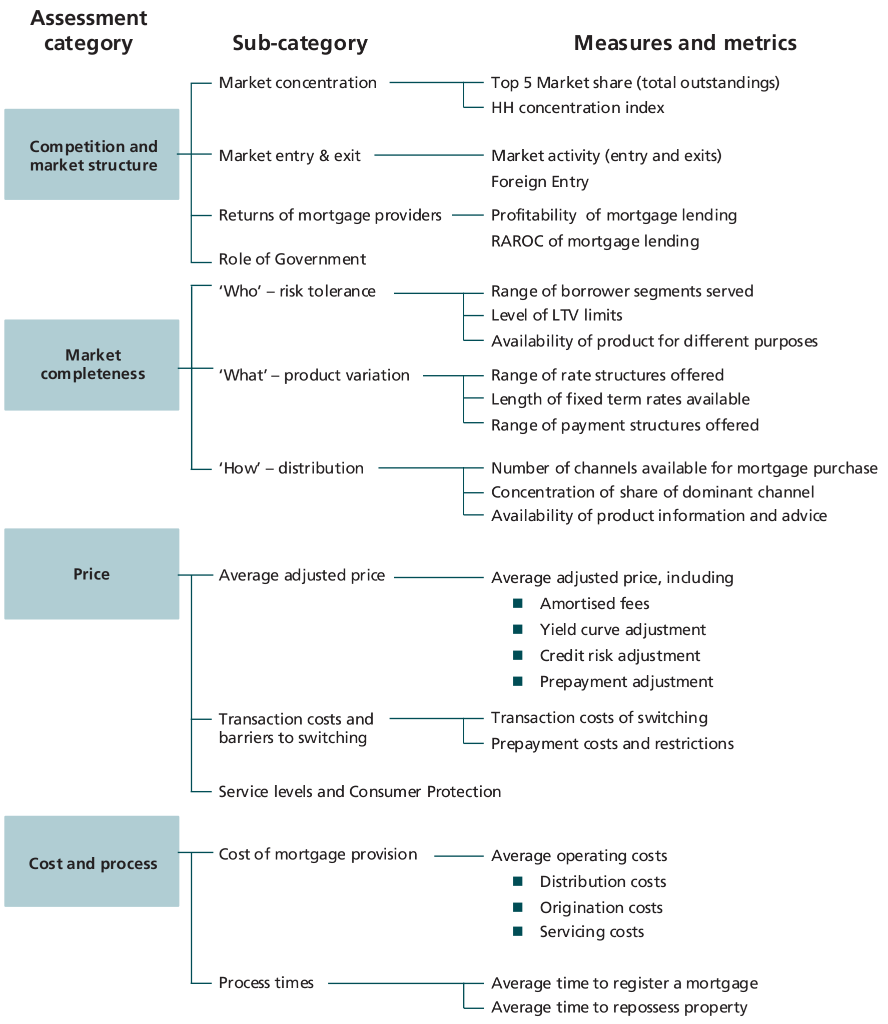
[2]Available from the European Mortgage Federation's website, www.hypo.org

3. Comparative analysis

3.1. Measuring efficiency and completeness of mortgage markets

This chapter compares the selected mortgage markets using a number of measures of market completeness and efficiency as described in Figure 3.1 below.

Figure 3.1: Assessment categories for market comparison



Efficiency and completeness of mortgage markets can both be ultimately considered in terms of how well borrowers served by the mortgage market. From a consumer perspective, efficiency can be measured in terms of the price paid for the product given the benefits received. This measure is closely related to the ability of the mortgage industry to efficiently provide mortgage products that have a low cost to the customer while providing a suitable profit margin to the producer. This in turn will depend partly on structural factors such as regulation, competition and market structure. Therefore, in examining efficiency we take account of important direct consumer effects such as adjusted price levels but also other industry indicators such as cost efficiency (x-efficiency), lender profitability, market structure and government involvement.

Completeness can be defined as the extent to which consumers can access a full range of mortgage products to meet a range of customer needs. As with efficiency, any completeness measure is a relative measure as product innovation can create products that have not previously been considered and customer segments with specific needs are often only identified ex-post.

For a greater description of the chosen measures and the rationale for their inclusion, please see Annex 1 – Evaluation Framework[3].

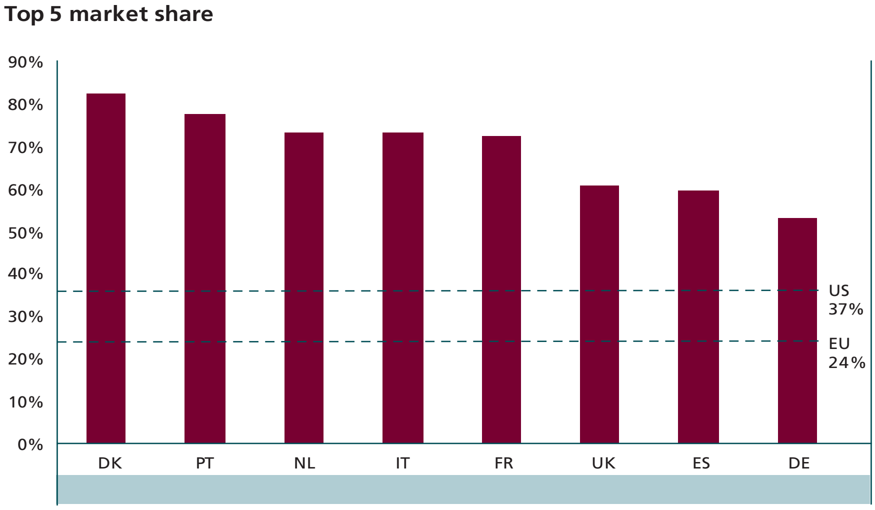
3.2. Competition and market structure

We begin by looking at the overall market structure in each of the markets and examine market concentration, market activity in terms of entry and exit, lender returns and the role of the government in each of the markets.

3.2.1. Concentration

Market concentration provides an indication as to the level of competition within a market as it indicates the extent to which leading lenders are able to dominate the market. At a basic level, we can look at market share of the top 5 mortgage lenders in each country based on outstandings. (See Figure 3.2)

Figure 3.2: Residential mortgage market concentration



Source: EMF Hypostat reports and national sources
Note: In Germany we have represented the savings banks and co-operative banks as one institution each as there is effectively no competition across borders between individual banks. US data represents top 5 lenders share of mortgage origination

Footnotes

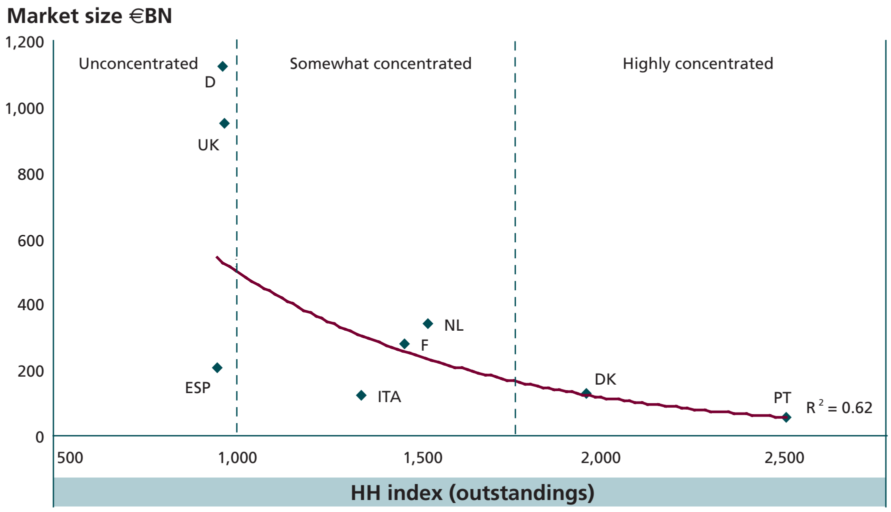
[3]Available from the European Mortgage Federation's website, www.hypo.org

By this measure Denmark and Portugal are clearly highly concentrated markets with 5 or 6 lenders accounting for nearly all of the market. The Netherlands, Italy and France are somewhat concentrated driven by recent mergers of mortgage lenders to create larger banking groups. The UK, Spain and Germany are less concentrated by this measure due to the large number of lenders in both of these countries. However, it should be noted that all markets appear to be quite highly concentrated with the leading 5 providers accounting for over 50% of the market in all markets. We also note that the concentration level for the EU is much lower than that for any individual country (as would be expected from the construction of the measure), but also is below that of the most comparably sized market, the US.

Another concentration measure is the Herfindahl concentration index (HH), which is calculated as the sum of the squares of each market participant's share. This more accurately reflects market entry of new (smaller) participants and well as the impact of single lenders with very large market shares. The US Department of Justice defines markets with HH>1800 as highly concentrated, markets with HH<1000 as unconcentrated, and those in between as somewhat concentrated. The results using this measure are broadly consistent with the share of the largest five lenders (see Figure 3.3). One key observation is that the concentration of mortgage markets appears to be closely related to market size with the smaller markets having a greater degree of concentration via a few large lenders (Figure 3.3). This is most probably driven by the search for scale economies i.e. in a small market only a few lenders will be able to reach a viable scale, whereas in a larger market a small percentage share of the market may provide sufficient scale.

The German market is furthest from the trend of concentration versus market size, and appears more concentrated than one would expect given its size. However, we should note that we have counted the large savings and co-operative sectors as one institution each and while there is no competition within these groups (although there is competition with each other), individual savings banks and co-operative banks do not collaborate to the same level as would a typical commercial bank branch network.

Figure 3.3: Residential mortgage lending concentration vs. market size



Source: EMF Hypostat reports and national sources

3.2.2. Market stability

The stability of the mortgage market must also be considered as part of the discussion of concentration of markets. A detailed assessment of the stability of the banking system in each of the studied markets is beyond the scope of this study. We have therefore confined our treatment of stability to a discussion of the main issues relating to stability and the impact that stability could have on efficiency and completeness of residential mortgage markets.

Stability of the banking system is clearly desirable from a government, regulatory and ultimately a borrower viewpoint as instability and uncertainty regarding the banking sector is likely to lead to higher costs and higher prices. Concentration is a factor influencing stability since larger banks should, on average, be better protected against such shocks due to improved diversification and possibly better risk management due to improved information.

However, there are a number of other factors that influence the stability of the mortgage market in addition to concentration of market share. These include the overall cyclicality of the economy and in particular the housing market as more volatile systems may be liable to greater shocks.

This does not mean that the markets with the most volatile credit cycles are automatically the least stable although this is clearly one of the largest factors in determining market stability. The ability of banks to 'weather the storm' of losses resulting from interest rate or credit risk[4] is an important factor in the stability of markets and will depend on bank

Footnotes

[4] Our analysis indicates that, for many lenders, interest rate risk is a much greater component of total risk than credit risk

capital levels, which in part depend on the ability of the banking sector to replenish capital through profits. Similarly banks control over pricing may allow them to increase stability. For example Danish and UK lenders have the ability to change the servicing spread in times of difficulty. Government intervention also plays a role in ensuring market stability either through guarantees or through involvement in domestic mergers to create a more stable banking system.

3.2.3. Market activity – mergers, acquisitions, entries and exits

Stable markets which have the threat of competition from new entrants may exhibit the strongest ability to provide mortgage credit efficiently. We therefore need to also look at the level of entry and exits in the market and barriers to entry for new providers in addition to our initial focus on the concentration of markets. A high level of entry and exit would indicate a more competitive market. Additionally, high level of market entry would indicate a lack of barriers to entry suggesting a competitive environment for product providers[5].

Figure 3.4 shows the level of market entry and exit in each of the studied markets and uses this to assess overall level of change in market structure in terms of domestic entry, foreign entry and exists and market consolidation. We see from this analysis that some markets (Netherlands, UK, Italy) have seen a relatively higher number of changes in market participation than other markets. In the remainder of countries there has been less new entry recently, in some cases driven by the concentration of the market (Denmark and Portugal) and therefore the increased difficulty of achieving similar product economics. In Germany's case the lack of activity could be driven by the low overall returns in the market. For example Citibank, Germany's largest foreign consumer lender distributes a third party product (manufactured by BHW) rather than selling its own mortgage product. In France, the reason often cited for lack of new entrants are the low margins on mortgage products and the complexity of processes and regulation.

Footnotes

[5] We should also note that in some cases exits are caused by barriers to entry that were not fully understood by the market entrant. Examples include complexity of processes, legislation and regulation

Figure 3.4: Summary of market activity in residential mortgage lending

	Comments	Level of domestic market entry	Level of foreign market entry	Level of merger activity/ market exit
Denmark	■ Deregulation in 1989 allowed the establishment of new mortgage banks e.g. Totalkredit (1990), Unikredit (Now Nordea Kredit 1993) and Danske Kredit (1993) all of which are bank – owned mortgage banks – Nordea, Danske Bank, and (indirectly) Jyske Bank and Sydbank entered the market	Low/ Medium	Low	Medium/ High
France	■ Banking consolidation 1997 – 2003: – Crédit du Nord acquired by Société Générale (1997); – CIC acquired by Crédit Mutuel; – Natexis acquired by Banque Populaire (1998); – Paribas/UCB acquired by BNP; – Crédit Foncier acquired by Caisse d'Epargne (1999); – Crédit Lyonnais acquired by Credit Agricole (2003) ■ Foreign banks have failed to gain significant market share – Abbey National has < 0.5% share of outstandings – Banque Woolwich was recently acquired by Crédit Immobilier de France) – HSBC acquired Credit Commercial de France ■ La Poste has gained significant market share as a new entrant (5% of gross advances). However it currently has restrictions on its product range	Low	Low/ Medium	High
Germany	■ Allgemeine Hypothekenbank (AHB) and Rheinboden (R) merged to form the AHBR ■ Deutsche Hyp, Rheinhyp and Eurohypo merged to create the 'new' Eurohypo ■ Fragmented and very competitive market. Main new entrants are mortgage brokers. Foreign lenders maintain a minimal presence	Low	Low	Medium
Italy	■ Consolidation has developed 5 major groups today dominate the market: Intesa, Unicredito, San Paolo Imi, Monte dei Paschi and Banca Nazionale del Lavoro ■ Large wave of mergers in 2002 – Bipop – Carire and Banca di Roma Group formed Capitalia Group – San Paolo Imi and Banco di Napoli – Banca Popolare di Verona and Banca Popolare di Novara – Banca Popolare Commercio e Industria and Banca Popolare di Bergamo ■ UK mortgage specialists, Abbey National and Woolwich entered in the 1990s and have gained a 4 – 5% market share ■ Deutsche Bank and BHW recently entered, increasing competitive pressure as well as product innovation	Medium	High	High

	Comments	Level of domestic market entry	Level of foreign market entry	Level of merger activity/ market exit
Netherlands	■ Market dominated by top 3 commercial banks: Rabobank, ABN Amro and the ING Group. Specialised mortgage banks have the second largest aggregate market share, but are loosing ground. Wide variety of minor players ■ Intense M&A activity in the past few years; ABN AMRO acquired Bouwfonds in 2000 ■ Foreign lenders have entered the market since 1993, and gained over 10% market share ■ Insurance companies have become more active in the mortgage market	Low	High	Medium
Portugal	■ Deregulation in 1992 ■ BSCH entered in 1999 ■ BBVA and Barclays have Portuguese subsidiaries ■ Domestic M&A has reduced the number of lenders in the market – Banco Nacional Ultramarino acquired by CGD in 2001 – Banco Mello acquired by BCP in 2000	Medium	Medium	Medium
Spain	■ Consolidation that took place among commercial banks in the past few years led to the creation of 2 of the 4 major operators, Banco Bilbao Vizcaya Argentaria (BBVA) and Santander Central Hispano (SCH) ■ After liberalisation in 1981, commercial banks, regional saving banks, credit cooperatives and financial credit institutions have gained market share ■ Foreign banks entered in late 70s and are focused increasingly on corporate lending ■ Specialised credit institutions almost disappeared	Low	Medium/ High	Medium
UK	■ Selected M&A 2001 – 2002 – Northern Rock acquired Legal & General Bank and Legal & General Mortgage Services – Kensington Group acquired The Mortgage Lender – HBOS merger, entry of IF – Barclays acquired Woolwich ■ New entry is frequent including insurance companies (e.g. Standard Life) and foreign lenders (e.g. GMAC RFC). Newcomers (such as the online bank Egg, and specialist lenders) have aggressively targeted new products or markets, while traditional lenders have expanded into niche markets and products, such as sub – prime lending	Medium/ High	Medium/ High	High

Source: National sources, press articles

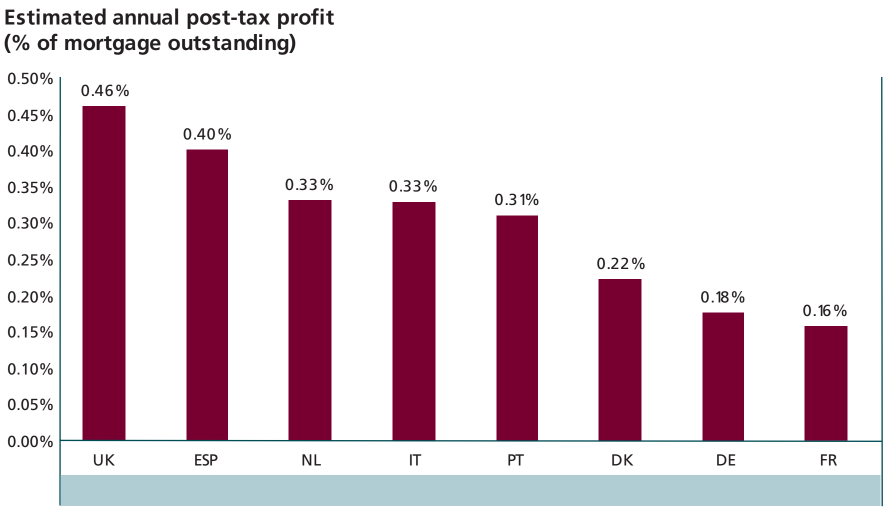
3.2.4. Returns of mortgage providers

We now look at the returns of mortgage lenders within each of the markets, as an indicator of the level of competition within the market.

We should note that a high level of profitability might indicate excessive returns created from exploiting market power, a high degree of cost efficiency of mortgage lenders or a higher risk profile. Similarly low returns may suggest a competitive market, poor cost efficiency or a combination of both. The underlying dynamics in terms of price and costs are key determinants of the reason for different product economics by country and are examined in more detail in Chapter 5.

Profitability estimates for the standalone residential mortgage product are difficult to obtain. Mortgage lenders rarely report accounts at the product level and many institutions have insufficient management information to produce these figures. In addition, some lenders are reluctant to provide this information, as they consider it to be highly confidential. Nevertheless, based on our questionnaire circulated to mortgage lenders and interviews with over 30 market participants, we have developed estimates for the returns on residential mortgage lending in each of the studied markets (Figure 3.5). However, given that this data is based on a small sample of the some of the largest lenders in each country the data should be treated with according caution. For example larger lenders may benefit from economies of scale or beneficial pricing; in this case the data will overestimate the overall market returns. The reader should note that the returns estimate does not include the benefits of any cross selling or product bundling associated with the sale of the mortgage loan (e.g. insurance or savings products) which is common in many of the countries studied.

Figure 3.5: Estimated average returns from mortgage lending



Source: Mercer Oliver Wyman analysis
Note: Estimates are not adjusted for the impact of any product cross-subsidisation or government subsidies, which may distort comparisons across countries
Caveat: Estimates based on a small number of data points for each country

From this data we see little evidence that the most concentrated markets have kept returns high through a lack of competition, as there is no correlation between concentration and returns. The relatively low absolute levels of profit suggest that all of the markets studied exhibits adequate levels of competition, even in those markets where the total number of providers is small (Denmark, Portugal). This is supported by evidence from interviews in these countries, which suggests that fierce competition for customers between the leading providers has led to low prices.

The returns are expressed in terms of post tax profit as a proportion of outstandings. If we assume regulatory capital requirements of 4% of outstandings (50% weighting) and a cost of capital of 8% then we require a profit of 32bp (4% x 8%) to make sufficient returns on regulatory capital. Under these assumptions, we see that in France, Denmark, Germany and Portugal the mortgage product is not able to cover the cost of regulatory capital and so must be subsidised through other products or a lower return on capital must be accepted. This is supported by interviews in these countries where the standalone mortgage product is seen as a low margin product on its own.

However, economic capital is our preferred measure of capital as it more accurately reflects the risks associated with the mortgage loan. Figure 3.6 gives our estimates of the economic capital required for residential mortgage lending in each country and the corresponding risk-adjusted return on economic capital (RAROC) that results.

Figure 3.6: Risk adjusted return on economic capital[6]

Country	Estimated post-tax profit (% of outstandings)	Estimated economic capital (% of outstandings)	Estimated risk – adjusted return on capital (%)
Denmark	0.22%	1.2%	18%
France	0.16%	2.0%	8%
Germany	0.18%	1.7%	11%
Italy	0.33%	2.9%	12%
Netherlands	0.33%	1.5%	22%
Portugal	0.31%	2.4%	13%
Spain	0.40%	1.8%	22%
UK	0.46%	2.0%	23%

Source: Mercer Oliver Wyman analysis
Note: Economic Capital includes credit and operating risk capital. Estimates are not adjusted for the impact of any product cross-subsidisation or government subsidies which may distort comparisons across countries

We see that using this metric mortgage lending is able to cover the cost of (economic) capital in each country (with the possible exception of France) due to the low risks associated with residential mortgage lending. The

Footnotes

[6] Economic Capital is defined as the amount of capital that a company requires in order to support the economic risks it faces

benefits of Basel II, where lenders will be able to more closely align regulatory capital with economic capital, are therefore potentially significant for mortgage lenders.

Additionally, we observe that the highest risk-adjusted return is 23% in the UK which is a satisfactory return for mortgage lenders but not necessarily excessive in the overall context of bank economic returns. From our lender interviews we also note that in the UK profit margins have been falling during the last few years due to increased price competition and increased remortgaging to lower margin loans and so the estimate for the UK may overestimate the returns now available in the market.

We also note that returns for individual lenders within markets are often much higher or lower than the country average indicated in Figure 3.6. Significantly higher returns can be produced by lenders that can improve cost efficiency, either through scale or improved processes or can exploit superior brand and distribution capability through higher prices. Correspondingly there are lenders with economics that are worse than the market average due to higher costs or the need to keep prices and margins low to deliver sufficient volumes of business. For example, we estimate that a substantial proportion of lenders in France and Germany are unable to make sufficient returns on the stand-alone mortgage product to cover the cost of economic capital.

3.2.5. Role of government

Government intervention still plays a major part in European mortgage markets and – while certainly supporting mortgage demand – significantly distorts part of the market. We argue that government activity significantly shapes the market in many countries and has an impact on market structure, price and cost levels. Figure 3.7 illustrates the different types of government intervention that occur in each of the markets under three categories:

Ownership involvement – government ownership of mortgage lenders

- Guarantees – explicit or implicit guarantees for lenders and/or borrowers
- Tax and other subsidies – tax incentives, lender subsidies

We have separated out the role of government into two categories:

- Funding – intervention that affects the funding of mortgages for lenders, through advantaging one funding mechanism or lender over others
- Lending – intervention that influences mortgage lending directly such as subsidised loans, or borrower guarantees

As we can see Germany, France and Portugal have a high degree of government intervention through direct involvement in the mortgage market whereas Spain, UK and Italy have relatively little direct government involvement. The Dutch government has influenced the market through the provision of guarantees to lenders and via its tax policy that leads to the dominance of high LTV interest only products, whereas in Denmark there is a high degree of regulation of mortgage banks but little direct government intervention.

Figure 3.7: Role of government

	Ownership	Guarantees	Tax & other subsidies	Impact on market structure	Interventionism summary: ranking & trend
Denmark					
Funding		■ Heavily regulated industry – implicit guarantee of mortgage bonds assumed by some investors (CSFB, 2002)		■ Almost 100% bond finance share of mortgages	■ Ranking: medium ■ Trend: constant
Lending			■ Mortgage interest deductibility (MID) – Same treatment as other loans	■ Neutral	■ Ranking: low/medium ■ Trend: constant
France					
Funding	■ 1990s privatisation. ■ Government engineering of mergers to create larger domestic institutions	■ CE/CNCE and CFF implicitly guaranteed by government through CDC	■ CE/CNCE & La Poste network subsidy from Livret A distribution ■ Deposit rates fixed by ministry of finance ■ Epargne Logement receives subsidised funding	■ Deposit funding favoured over bond funding. ■ Large networks subsidised ■ Concentration	■ Ranking: high ■ Trend: constant
Lending	■ Public lending e.g. subsidised loans	■ FGAS Social Guaranty Fund		■ Neutral	■ Ranking: high ■ Trend: constant
Germany					
Funding	■ Continued public ownership of savings banks and Landesbanken, beyond 2005	■ Landesbanken and savings banks grandfathered guarantees until 2005 ■ Indirect involvement of KfW (government agency) swapping mortgage into public sector materal	■ Subordinate debt funding of Landesbanken partly with tax-advantages ■ Bausparkassen model	■ Strong role of Landesbanken & KfW in bond finance ■ Fragmentation of private mortgage industry	■ Ranking: high ■ Trend: constant (strong shifts between instruments)
Lending	■ Direct agency lending through KfW and states ■ Regional principle of savings and co-operative banks	■ State guarantee programs (small)	■ Specific mortgage principal and interest deductibility schemes	■ Lack of intra-group competition (savings banks, co-op banks)	■ Ranking: medium ■ Trend: declining

	Ownership	Guarantees	Tax & other subsidies	Impact on market structure	Interventionism summary: ranking & trend
Netherlands					
Funding		■ Government backstop for WEW-backed MBS provides advantages ■ WEW National Guaranty Fund guarantees lenders (0% regulatory capital weighting)		■ Growing MBS market	■ Ranking: low ■ Trend: constant
Lending		■ WEW National Guaranty Fund reduces interest rate for borrowers	■ Mortgage interest deductibility	■ Strong growth of market	■ Ranking: high. ■ Trend: constant
Italy					
Funding	■ Privatisation in 1990s ■ Government engineering of mergers to create more powerful domestic institutions ■ Indirect involvement in banks through foundations	■ Implicit protection of commercial banks by Bank of Italy		■ Increasing concentration	■ Ranking: medium ■ Trend: constant
Lending			■ Some interest deductibility (capped)	■ Neutral	■ Ranking: low/medium ■ Trend: constant
Portugal					
Funding	■ CGD state-owned (40% market share)			■ CGD dominant deposit and bond market position	■ Ranking: medium ■ Trend: declining
Lending	■ CGD state-owned (40% market share)		■ Subsidised mortgages now discontinued, limited mortgage interest deductibility	■ CGD dominant mortgage lender	■ Ranking: medium ■ Trend: declining
Spain					
Funding	■ Preferential share rules keep private investors from holding controlling stakes in Cajas		■ Mortgage bond construction favourable due to over-collateralisation, weakening deposit quality	■ Strong bond and subordinate debt growth although still a small share of total funding	■ Ranking: low/medium ■ Trend: constant
Lending			■ Mortgage interest/principal relief (capped)		■ Ranking: low/medium ■ Trend: constant
UK					
Funding				■ Further regulation and intervention expected e.g. CP186, Miles Review	■ Ranking: low, ■ Trend: increasing
Lending			■ Safety net approach	■ Neutral	■ Ranking: low ■ Trend: constant

3.3. Market completeness

3.3.1. Summary

Market completeness has been assessed based on four main criteria:

- (Credit) Risk Tolerance – which borrowers can access the mortgage product
- Product Range – what range of products is available to the borrower
- Distribution – how easy is it to access the mortgage product
- Availability of Information and Advice – how easy is it to access information and advice on the available products

This information has been combined to form a relative completeness index (see figure 3.8), with higher values showing that a greater proportion of the defined criteria have been met. The methodology used to calculate this index is described in detail in Annex 3[7].

Figure 3.8: Completeness index[8]

Country	Product[9]	Borrower type and purpose	Distribution	Information and advice	Completeness index
Denmark	85%	62%	71%	80%	75%
France	81%	67%	42%	70%	72%
Germany	62%	48%	54%	100%	58%
Italy	65%	51%	42%	50%	57%
Netherlands	81%	73%	88%	80%	79%
Portugal	35%	58%	71%	40%	47%
Spain	58%	67%	88%	90%	66%
UK	77%	92%	100%	100%	86%
Weighting[10]	50%	35%	10%	5%	100%

We note that the completeness index identifies the extent to which there are gaps in an individual market's product range, distribution or range of borrowers served relative to those available in other countries. We do not assess here whether there is a specific need for each product in each country or whether the need is provided outside of the mortgage market (e.g. via the rental housing market). The completeness index is also a point in time analysis, measuring the range of products available in each market at the current time. We note that in all markets, the product range has expanded over the last 10 years such that the range of products available today is much wider than that previously available[11].

Footnotes

[7] Available from the European Mortgage Federation's website, www.hypo.org
[8] Refer to Figures 3.9, 3.11, 3.12, 3.14 and 3.15 for the data underlying the completeness index
[9] Includes both interest rate structures and repayment structures
[10] Weightings are chosen by the author to represent the importance of that factor in determining overall market completeness. Clearly, other readers may select different weightings based on their view of the importance of the individual factors.
[11] e.g. See Diamond/Lea 1992 for Denmark, France, Germany and UK

There is some evidence to suggest that some areas of incompleteness are being addressed (e.g. recent product innovation in Italy, Spain and the Netherlands). However, this is often led by the entrance of foreign lenders into the market. We also note that David Miles, Professor of Finance at Imperial College, London is currently investigating the reasons for a lack of a long-term fixed rate market in the UK for the UK Government.

The remainder of this section analyses the specific components of completeness of each market in more detail under each category.

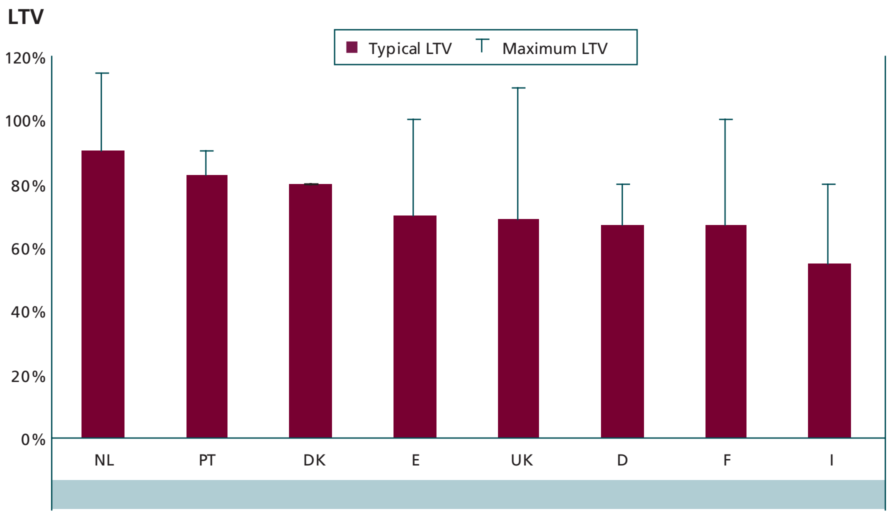
3.3.2. (Credit) risk tolerance

For risk tolerance we look at two types of risk:

- Collateral risk or the risk that the property value will not cover the loan in the event of default the best proxy for which is the loan to value ratio (LTV)
- Borrower credit risk or the risk that the customer will default based on past credit history and affordability

The typical and maximum LTV in each country is shown in Figure 3.9. Typical LTVs in countries surveyed range from 90% in the Netherlands to 55% in Italy.

Figure 3.9: Typical and maximum LTV[12]



Source: EMF data (2001 data), Merrill Lynch, questionnaire responses
Note: Maximum LTV is the highest LTV offered as a mortgage loan by mainstream lenders. A small number of niche players in each market may offer higher LTVs. The LTVs shown above represent a percentage of purchase value, and are less than published LTVs in Germany and the Netherlands as assessed value and foreclosure value are used in these markets respectively.

Footnotes

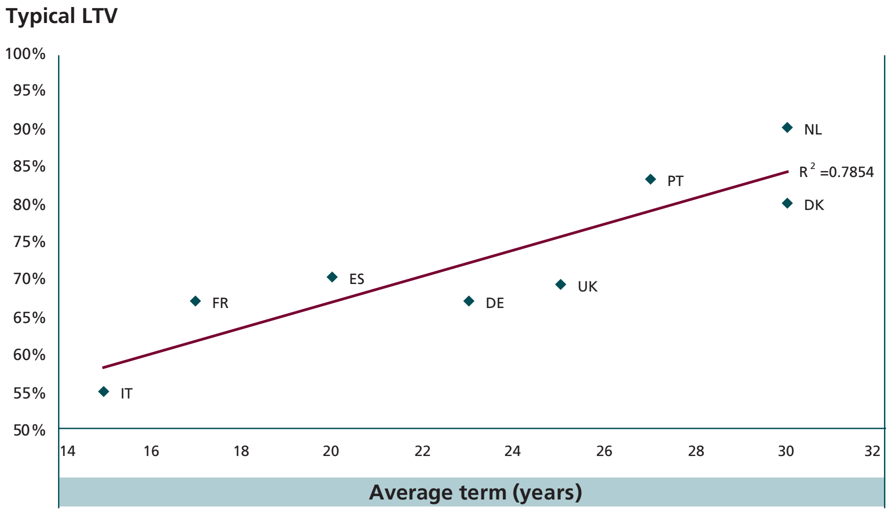
[12] Typical and maximum LTVs for new loans

Maximum LTV varies more by country and is a function of lenders' willingness to price for risk and customers' willingness to pay for it. High LTV loan mechanisms vary by country, and lenders have developed mechanisms more innovative than simply raising prices:

- In Denmark and Germany, mortgage bond funding requirements have strict LTV constraints (e.g. max LTV 60% for Pfandbriefe funding in Germany) and so high LTV loans are often accommodated using a secondary loan structure rather than the main mortgage loan often at a higher margin. The impact of second loans has not been included in the LTV analysis. Non-mortgage banks in Germany can provide loans at any LTV but often cap lending at 80-100% of assessed value.
- Higher LTV loans may also be secured on assets such as bonds or equity portfolios or by use of other guarantees (e.g. Credit Logement in France)
- Tax incentives and the related range of products in the Netherlands promotes high LTV lending

We also observe that the typical term of mortgage loans is related to the LTV ratio (as shown in figure 3.10). This is partly driven by affordability, i.e. if we assume that average house prices in a country are related to average income, then we can see that a given LTV relates to a similar level of affordability. Thus higher, less affordable LTVs take longer to repay. Similarly, shorter term loans, more common in countries such as France and Italy, are driven by the requirement that the loan must be repaid over the borrower's remaining working lifetime, which on average will be shorter than in other countries where the borrower has not had to save up a large deposit. Also, differences in the rental market will influence average LTV as in markets which have had subsidised rental markets, borrowers may, depending on income levels, have been able to save up larger amount of equity while renting. We also note that low LTV limits can also act as a barrier to obtaining a mortgage for younger borrowers who have not had the time and income to save significant amounts, thus restricting product access and that LTV is inversely correlated with first time buyer age as older first time buyers have had more time to accumulate equity.

Figure 3.10: Loan term vs. typical loan to value ratio (LTV)



Source: EMF data (2001 data), Merrill Lynch

Figure 3.11 shows the range of borrower types and mortgage purposes that are commonly available in each of the countries. We see that many types of higher risk products are widely available in the UK. Each of the other countries offer some higher risk products but often do not provide products for credit impaired borrowers and non-conforming borrowers (e.g. those who are not able to certify income).

Figure 3.11: Borrower types and mortgage purpose

	Market							
	Denmark	France	Germany	Italy	Netherlands	Portugal	Spain	UK
LTV								
Typical	80%	67%	67%	55%	90%	83%	70%	69%
Maximum	80%	100%	80%	80%	115%	90%	100%	110%
Borrower								
Young houselold <30	●	◐	●	◐	◐	●	●	●
Older household >50	●	◐	◐	◐	●	◐	◐	●
Low equity	○	●	◐	○	◐	◐	◐	●
Self certify income	○	○	○	○	◐	○	◐	◐
Previously bankrupt	◐	○	○	○	○	○	○	◐
Credit impaired	◐	◐	○	◐	◐	○	◐	●
Self employed	●	◐	●	●	◐	●	●	●
Government sponsored	◐	●	◐	◐	◐	●	◐	◐
Purpose								
Second mortgage	●	◐	●	●	●	●	●	●
Overseas holiday homes	●	●	◐	●	◐	○	○	●
Rental	●	●	●	●	●	●	●	●
Equity release	●	○	◐	●	●	○	◐	●
Shared ownership	●	◐	◐	◐	◐	●	○	●

Key ● Readily available ◐ Limited availability ○ No availability

Note: Readily Available means that products are actively marketed with high public awareness, Limited Availability means that only a small subset of lenders provide this product, often with additional conditions, while No Availability means that no lenders surveyed offered the product

Figure 3.12: Product variation by country

	Denmark	France	Germany	Italy	Netherlands	Portugal	Spain	UK
Rate structure								
Variable	●	●	●	●	●	●	●	●
Variable (referenced)	●	●	○	●	●	●	●	●
Discounted	○	●	○	◐	○	○	●	●
Capped	●	●	◐	◐	●	○	◐	●
Range of fixed terms (years)								
2-5	●	●	●	●	●	◐	◐	●
5-10	●	●	●	●	●	◐	◐	◐
10-20	●	●	●	◐	●	○	◐	◐
20+	●	◐	◐	◐	◐	○	◐	○
Repayment structures								
Amortizing	●	●	●	●	●	●	●	●
Interest only	◐	●	●	◐	●	○	○	●
Flexible	◐	●	○	◐	●	○	◐	●
Fee free redemption*	●	○	○	○	○	○	○	◐
Full yield maintenance fee*	●	◐	●	◐	●	◐	◐	◐

Key ● Readily available ◐ Limited availability ○ No availability

*On fixed rate products only
Note: Readily Available means that products are actively marketed with high public awareness, Limited Availability means that only a small subset of lenders provide this product, often with additional conditions, while No Availability means that no lenders surveyed offered the product

3.3.3. Product variation

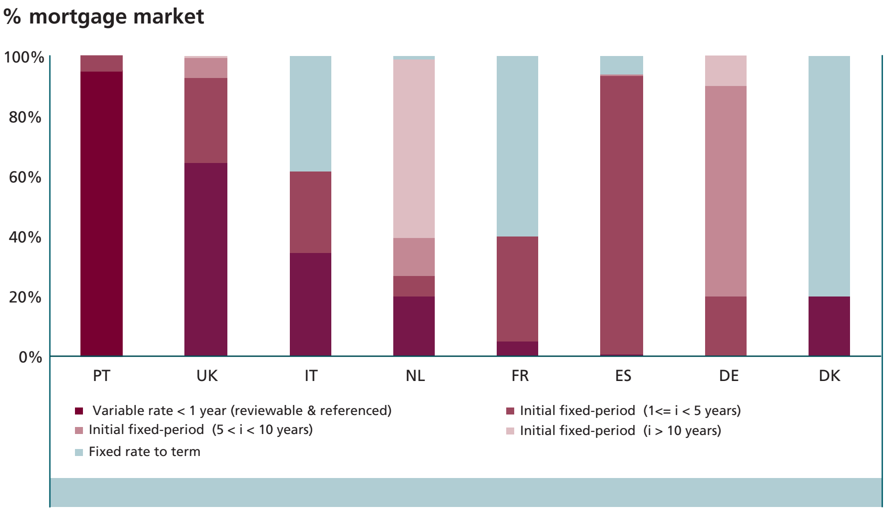
Figure 3.12 summarises the products available in each of the countries studied segmented by rate structures (including the length of fixed term available in each market) and repayment structures.

We note that there are fewer gaps in product range, in general, than for borrower type and purpose. The main gaps relate to long-term fixed rate mortgages, capped adjustable rate products and flexible repayment products.

We note that the range of products broadly follows the funding models used. Long term fixed rate mortgages are more widely available in markets where mortgage bond funding is common (e.g. Denmark, Germany) and the mainly deposit funded markets (e.g. Spain, Netherlands, UK) are, in general, able to provide more repayment structures and flexibility of the core variable rate product.

We also note that Denmark is the only market that widely offers 25-30 year fixed rate products without early repayment fees, using the mortgage bond market to fund the loans via callable bonds. In each of the other markets such mortgages are not widely offered. This is most probably because there is no cost-effective funding source for the product resulting in uncompetitive prices. The rate structures within each market are shown in more detail in Figure 3.13. It should be noted that the split of rate structures may have changed since the last EMF survey undertaken in 2000 and shown in Figure 3.13. However, the mix of rate structures shown is similar in nearly all cases to that indicated by separate national sources in 2003.

Figure 3.13: Market share by interest rate variability % of new lending 1999

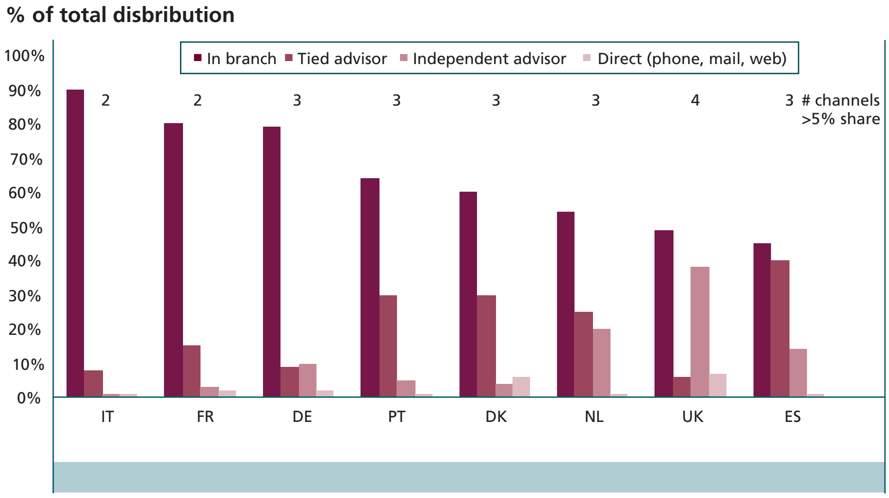


Source: European Mortgage Federation (all countries except Denmark, Portugal), Mercer Oliver Wyman and National sources (Denmark, Portugal)
Notes:
E: Initial fixed period rates must be referenced and are all referred to as variable rate in Spain and are 1-year resets in the majority of cases i.e. are very similar to variable rate products
F: Initial fixed period rate loans are referenced and will usually also be capped

3.3.4. Distribution channels

A wide range of products has implications for distribution. The UK and the Netherlands have a broad range of product structures and repayment mechanisms available making the markets more complex and so advice is more commonly required prior to purchase. This in turn leads to an increased share of the introducer channel in these markets (see figure 3.14). This need for advice can also lead to additional regulation and higher distribution costs as regulators may choose to regulate advice in addition to or in place of product regulation. Figure 3.14 shows the distribution channels used in each of the countries studied.

Figure 3.14: Residential mortgage distribution channel mix by country (2001)



Source: Mercer Oliver Wyman analysis based on European Mortgage Federation data and national sources

A range of distribution channels is available in each country although channel usage varies significantly by country. Distribution in Italy, France and Germany is almost completely branch driven while Portugal, Denmark, Netherlands, UK and Spain have at least two channels that have over 30% of mortgage distribution. We also note that the distribution channel mix in these countries varies widely by institution.

As a general observation we see that branch distribution is the main single channel in each market. This is partly driven by history as traditionally banks operated by building a deposit relationship with a customer before extending a loan.

We can also observe that independent advisors are most prominent in the markets with the most complex products (UK, Netherlands). In most countries, direct purchase of mortgage loans via phone or the internet has not yet reached a significant proportion of lending. Partly this comes down to consumer reluctance to deal entirely over the phone for a significant purchase such as a mortgage, and partly due to legislation that prevents completion of mortgage contracts without notarisation or requires concurrent signatures.

3.3.5. Availability of information and advice

Finally we look at the availability of information on mortgage products looking at a number of aspects of product information and advice:

- Are mortgage information and rates published and advertised by lenders?
- Is mortgage information published in the generalist press?
- Is mortgage information published in the specialist press?
- Do mortgage web sites exist that provide product information?
- Is there an active mortgage advisor channel to provide (independent) advice?

Figure 3.15 summarises this information. In general, internet users have better access to data than offline consumers, but in most cases cannot purchase online. Information on mortgages is widely available in the UK, Germany and the Netherlands via the internet, specialist and generalist press and through an established mortgage advisor network. Price information is not easily obtainable in France, Italy and Portugal. Additionally in countries where prices are sometimes negotiated at an individual level (Spain, Portugal) the published rate is clearly only an indicator of the rate that may be charged.

A closely related area is the provision of pre-contract information as contained in the Code of Conduct. This is discussed in more detail under Section 3.4.6 Consumer Protection.

Figure 3.5: Information availability

Country	Rates advertised?	Best buy tables in newspapers?	Specialist financial press?	Mortgage websites with good market coverage?	Active advisor force?
Denmark	■ Yes: but most rates derived daily from bond prices	■ Mortgage bond rates available daily in newspapers	■ Yes: though mortgages standardised so little information included	■ Realkredit raadet.dk	■ Yes: some 30% of distribution, mostly tied advisors
France	■ Not all lenders publish rates although some do	■ Some newspapers occasionally publish articles and comparisons among mortgages	■ Major newspapers and consumer magazines cover mortgages e.g. 60 millions de consommateurs	■ No: In most cases you need to register, and market coverage is only partial	■ Yes: about 15% of total distribution. Mainly tied advisors (real estate intermediaries) .
Germany	■ Yes: but most rates derived daily from bond prices	■ Yes: comparisons published occasionally	■ Yes: and other consumer magazines e.g. Finanztest	■ www.Dr-Klein.de ■ www.-interhyp.de	■ Yes: some 20% of distribution, independent advisors slightly predominant
Italy	■ No: generic on-line product descriptions are available but to get rates you need to go to the bank	■ Some newspapers occasionally publish articles and comparisons among mortgages	■ Major financial newspapers and magazines occasionally cover mortgage e.g. Il Sole 24 Ore, Milano Finanza	■ www.-mutuionline.it www.casa24.ils ole24ore.com	■ Some: mostly tied advisors (about 9% of mortgage distribution)
Nether-lands	■ Yes: but rates are often individually discounted at the point of sale	■ Occasional articles published	■ Yes: though mainly aimed at professionals such as brokers	■ www.-hypotheek.nl	■ Yes: over 50% of distribution. Tied advisors are slightly predominant
Portugal	■ Yes: though rates normally negotiated in branch, and are discounted based on a customer's product holdings	■ No	■ No: though consumer magazines publish occasional articles on mortgages	■ SCH group's website is one of best	■ Yes: over 30% of distribution, mostly tied advisors
Spain	■ Yes: although rates are negotiated at an individual level	■ Yes: major newspapers report prices and indices	■ Major newspapers and magazines occasionally cover mortgages	■ Comparador.-com ■ Directblue.net ■ Ahe.es	■ Yes: over 50% of distribution. Mostly tied advisors although some independent advisors
UK	■ Yes	■ Yes: most major newspapers publish weekly updates in their financial sections	■ Many personal finance titles cover mortgages e.g. Moneyfacts, What Mortgage	■ www.-moneysupermarket.com ■ www.-charcolonline.-com ■ www-.fsa.gov.uk	■ Yes: Both tied and independent advisors

Footnotes

Source: Mercer Oliver Wyman

3.4. Price

3.4.1. Introduction

Price levels are an important indicator for comparison of mortgage markets as they illustrate the cost of the product to the borrower. However, headline mortgage rates are not directly comparable for a number of reasons:

- Interest rate structures are different e.g. 10 year fixed rate products will be priced differently to variable rate products as the borrower (and lender) carries a different level of interest rate risk
- The benefit of any option to prepay the loan must be accounted for
- Fees must be included as lenders may make trade-offs between rates and fees
- Differences in credit risk must be taken into account e.g. lending to riskier customers would require a risk premium

The following analysis looks to compare prices across markets taking into account the adjustments described above. The methodology is described in more detail in Annex 1 – Evaluation Framework and in Annex 2 – Pricing Analysis Methodology[13].

3.4.2. Adjusted price

Figures 3.16 and 3.17 show the results of the adjusted mortgage price analysis. The price data is based on published data and data provided by lenders and so in some cases may overstate the level of prices by not including discounts given to customers at the point of sale. Additionally, we have excluded government-subsidised loans restricting our analysis to unsubsidised loans provided by mortgage lenders. This means that the results of our price analysis do not take into account the effect of direct subsidies. We also note that this is a point in time analysis and that prices, yield curves and prepayment risk, in particular, will vary over time and so the results of this analysis will also change over time.

Footnotes

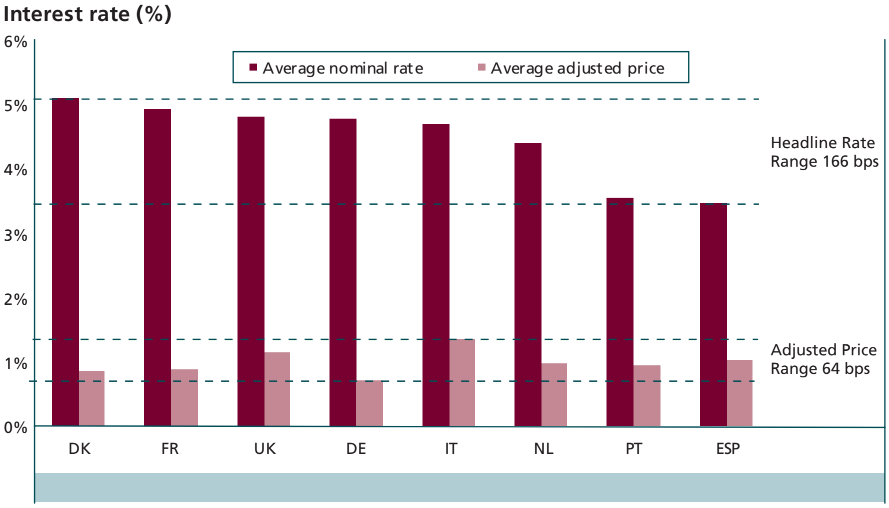
[13] Available from the European Mortgage Federation's website, www.hypo.org

Figure 3.16: Adjusted mortgage price by market, April/May 2003

	Unadjusted price		Adjustments			
	Rate	Fee	Yield curve	Credit risk	Prepayment option value	Adjusted price
Denmark	5.10%	0.09%	3.83%	0.06%	0.46%	0.84%
France	4.93%	0.17%	3.79%	0.13%	0.29%	0.89%
Germany	4.77%	0.07%	3.99%	0.09%	0.06%	0.70%
Italy	4.68%	0.04%	3.00%	0.19%	0.20%	1.34%
Netherlands	4.39%	0.16%	3.30%	0.08%	0.20%	0.97%
Portugal	3.53%	0.06%	2.46%	0.17%	0.00%	0.95%
Spain	3.44%	0.11%	2.40%	0.12%	0.00%	1.03%
UK	4.80%	0.07%	3.60%	0.12%	0.01%	1.15%

Source: Mercer Oliver Wyman analysis based on 45 questionnaires completed by European lenders and market data. Adjusted price analysis based on a composite of prices for all lenders included within each country.
Note: Published rates used. May overstate price in countries where negotiated discounts are common
Note that these numbers are averages across all products and so do not represent the characteristics of any single product. However, we believe that the adjusted price is comparable across markets as it adjusts for differences in product mix, interest rate risk, credit risk and prepayment risk and so represents a comparable price to the borrower.
Note that adjusted price analysis does not adjust for product cross-subsidies or government subsidies and so comparisons across countries are distorted by these factors.

Figure 3.17: Average nominal rate and adjusted price by country, April/May 2003



Source: Mercer Oliver Wyman analysis based on 45 questionnaires completed by European lenders and market data. Adjusted price analysis based on a composite of prices for all lenders included within each country.
Note: Published rates used. May overstate price in countries where negotiated discounts are common
Note that these numbers are averages across all products and so do not represent the characteristics of any single product. However, we believe that the adjusted price is comparable across markets as it adjusts for differences in product mix, interest rate risk, credit risk and prepayment risk and so represents a comparable price to the borrower.
Note that adjusted price analysis does not adjust for product cross-subsidies or government subsidies and so comparisons across countries are distorted by these factors.

Figure 3.17 shows that, according to the adjusted price analysis, approximately 60% of headline nominal rate price differences are accounted for by differences in product structure and the remainder due to other structural factors. The 64bp of average adjusted price variation across national markets must be put into context with variations of 50-100bp in observed prices for similar products within the product database compiled. This suggests that whilst underlying structural factors do indeed lead to price differences that these are not that large at the present time.

We also see a cluster of 6 markets around the 100bp level (+/- 20bp) suggesting that overall price levels adjusted for product differences are currently fairly uniform across markets.

However, given that this is a point in time analysis, we can not see the extent to which this has narrowed over time directly from the analysis. The only previous study, to the authors' knowledge, that has attempted to undertake a similar analysis is the Diamond/Lea study of 1992, which used a slightly different methodology in that the cost of subsidies are added back into the adjusted spread calculation. However, results from this study suggested (subsidy) adjusted spreads of between 120bp and 276bp for mortgage lenders in Denmark, France, Germany and UK suggesting that prices have fallen significantly in the last ten years, most probably due to reduced costs and reduced margins.

The rates observed are comparable to the levels of interest margins suggested by lenders during our interviews and research. The two countries where interest margin estimates varied significantly from the adjusted price to this are France and Germany, where the adjusted price analysis gives a result that is somewhat higher than the margin levels quoted by lenders and analysts.

In France this can be partly explained by two factors. Firstly the adjusted price also takes into account fee levels which are high as a proportion of the loan size in France. Secondly the measure is a composite of both commercial bank and specialist lender prices with specialists typically earning higher margins on their products. Nevertheless, based on feedback from French lenders, the data used to calculate the adjusted price of 89bp may still overestimate price levels in France.

For Germany, we observe that margins for mortgage banks and direct lenders are lower than those for savings banks, co-operative banks and retail banks, which account for a large proportion of the market. Secondly our sample consists mainly of the largest lenders, who may be able to price at a higher level due to distribution advantages. Therefore our sample may be skewed towards higher priced providers, although this could be applicable in all countries.

We observe that comparison of adjusted price for individual products yields similar results (e.g. for variable and 10-year fixed rate products). However due to differences in product sets across markets (and so a full comparison on one product is not possible) and small sample sizes for some countries (resulting in confidentiality issues for some lenders) we have not included this analysis in the study.

The UK market is worthy of particular mention in relation to the adjusted price analysis. It is common practice in the UK for lenders to offer fixed or discounted rates for the first 1-5 years of a loan following which the loan reverts to a higher variable interest rate (often referred to as the Standard Variable Rate). The nominal rate (and adjusted price) in our analysis is therefore a composite of the low rate for the initial period followed by a higher rate until the end of the expected holding period of the loan. This has the effect of making the UK average price look relatively high compared to other countries although the price for new borrowers over the initial discount period is in fact much lower than this (roughly 60-65bp across all products using the same analytical approach). Similarly, the analysis does not capture the dynamic effect of increasing levels of remortgaging and shorter periods for early repayment fees. This leads to shorter average holding periods and so acts to bring average prices down towards the lower level over time.

We should also note that it is not certain that these price differentials will remain. We have already observed that most markets are concentrated and that government intervention can act to keep prices low.

There are a number of explanations for the differences in price, which are explored in greater detail in Chapter 5:

- High levels of price competition in the market
- High levels of product innovation leading to premium pricing (e.g. UK, Netherlands)
- Prices are driven to lower levels due to the low cost of capital for mutual or government owned providers (e.g. Germany, Portugal, France)
- Commoditised markets with high price transparency leading to low margins for suppliers and low prices (e.g. Germany)
- Cross-subsidisation from other products where the mortgage is priced at a low rate used to attract the customer and provides a platform for the sale of additional products (e.g. France)
- High supplier cost levels leading to higher interest margins (e.g. Italy)
- Availability of low cost funding for fixed rate products (e.g. Germany, Denmark)

3.4.3. Efficiency of price changes to changes in capital market rates

Due to significant data restrictions and the abundance of analysis in this area, we have not reproduced pass-through analysis in this study i.e. the rate of change of mortgage rates to changes in base rates. Such analysis has been completed as part of other industry studies[14] and commonly uses ECB mortgage rate data for European analysis, as this is the primary time series data in this field. Unfortunately it can not be disaggregated into product types for adjustment and/or comparison across multiple countries.

Quantifying the impact of pass-through changes is difficult as published mortgage data (e.g. ECB N2 series – mortgage rates) is a composite of rates for different mortgage products for some countries and can use different APR calculations to arrive at the published mortgage rate. Secondly, the overall impact of the changes will depend on assumptions of both the volatility and direction of interest rate changes. Specifically, the impact of pass-through may be lower in a low interest rate, low inflation environment due to less changes in central bank rates, specifically against the last 10 years where higher inflation and Euro convergence led to frequent changes in base rates. Finally, there are a number of other factors that influence the pricing of new loans (e.g. increased price competition) that may cloud the results of the analysis.

However, there are some factors relating to product sets that are likely to impact on the speed of pass-through, and which should be considered in this part of the study. Firstly the use of indexed adjustable rate mortgages that automatically change mortgage rates based on changes in underlying interest rates remove the risk of slow pass-through for the borrower and so are more efficient from a pass-through perspective than reviewable rate products where the interest rate adjustment is at the discretion of the lender (although we note that reviewable rate products have advantages in terms of industry flexibility and stability). Indexed products are available in all markets with the exception of Germany (where they are prevented by burdensome regulation) and are compulsory for adjustable rate products in Spain and France.

Secondly the practice of publishing prices above a capital market benchmark (common in Germany and Spain) increases pricing transparency, allows borrowers to observe differences in margins and puts greater pressure on lenders to pass through changes in capital market rates to borrowers.

Footnotes

[14]e.g. Heinemann & Schüler 2002

3.4.4. Risk based pricing

We also observe from our analysis of prices that risk-based pricing is not prevalent in the mortgage markets studied. Risk- based pricing should be desirable in mortgage markets as it allows lenders to accurately price the product for the risks incurred and provides access to the mortgage product to a wider range of borrowers. Differentiation of price by LTV occurs to some degree in most markets but is not always the norm across lenders. Secondly mortgage insurance or guarantee is only significant in UK and Netherlands (where the National Mortgage Guarantee allows an across the board reduction in rates due to the lower risk to the lender). Rates are offered at the individual customer level by some lenders in France, Spain and Portugal although this is more commonly based on their overall relationship with the lender (usually a commercial bank) than based on their risk profile. Finally, we observe that sub-prime and non-conforming lending (where there are significant differences in price to account for differing risk) is only significant in the UK with all of the other markets having only an emerging or non-existent high risk lending market.

In some cases law restricts this; for example, usury law in Italy restricts the level of interest rate that can be charged and thus effectively prevents risk-based pricing where higher rates are justified by the risk taken. Secondly, it can be problematic for individual lenders to offer risk-based pricing where it is not market practice since risk-based prices may be uncompetitive within the market (particularly for the higher risk segments) leading to lower new business volumes.

We consider the lack of risk-based pricing to be an inefficiency, which leads to a subsidisation of higher risk borrowers by lower risk borrowers who generally will overpay for their credit risk. However, the implementation of the Basel II capital adequacy regulations which differentiate capital requirements by risk level is likely to lead to a much greater degree of risk -based pricing in the future.

3.4.5. Service levels

At this point it is worth also considering some of the benefits of the customers experience of the mortgage product that are very difficult to measure directly in terms of impact on price and can be grouped under the general heading of Service Levels. These benefits may have some impact on price levels e.g. borrowers may pay higher rates for access to a local branch or to borrow from a bank that is more lenient with defaulted clients. However these differences are more likely to influence price differences between providers within a market than price levels in aggregate. However, they may in some cases provide additional indicators that explain price levels in some countries. As an example, in order for other countries' mortgage lenders to replicate the consumer benefits of the range of distribution channels and advice in the UK they would probably need to increase prices to cover the additional cost. These ancillary benefits are analysed elsewhere in this section and so are only referenced here:

- Access to chosen distribution channels (see section 3.3.4)
- Access to high quality advice and product information (see section 3.3.5)
- Speed of application processes and query responses (see section 3.5.3)
- Levels of consumer protection (see section 3.4.6 below)

3.4.6. Consumer protection

The level of consumer protection is a factor influencing overall level of service received by the borrower when taking out a mortgage loan. Measures that protect the consumer against them taking out an inappropriate product are intended to benefit the consumer and so should be considered in this discussion. As noted above, however, it is nearly impossible to quantify all of the impacts[15] that consumer protection has on customer satisfaction and also on costs and prices.

The key aspects of consumer protection in relation to residential mortgages are:

- The provision of pre-contract information to allow the consumer to make an informed choice to purchase the loan. The European Code of Conduct specifies an information sheet that lenders must provide to the borrower as part of the contract.
  - This often includes rules relating to the definition of an APRC i.e. a common definition of the rate paid across lenders
- Regulation relating to rights of early repayment and levels of fees charged
- Restrictions on interest rate adjustment mechanisms e.g. compulsory indexation
- Usury regulation to prevent exploitation of borrowers
- Restrictions on amounts lend to avoid over-indebtedness
- Mandating of reflection periods within the purchase process

The level of consumer protection varies by country as shown in Figure 3.18 below. This difference is most noticeable in relation to indexation of adjustable rate products and the treatment of early repayment fees. As discussed elsewhere in this report these two factors also have

Footnotes

[15]Although some impacts could be quantified in isolation e.g. value of prepayment options

implications for the efficiency of mortgage markets and so consumer protection measures should not be viewed in isolation but as an integral part of the overall mortgage system.

Figure 3.18 – Selected consumer protection measures by country

Country	European code of conduct implemented	Caps on early repayment fees[16]	Compulsory indexation of adjustable rate products	Usury regulations	Mandatory reflection period
Denmark	Yes	Charge for early repayment determined by market bond prices	Rates set by bond market Servicing fee can vary	Yes	No
France	No	Yes – by law	No	Yes	Yes
Germany	Yes	No Fee based on funding loss of lender	No	Case law	No
Italy	Yes	Industry consensus cap	Yes	Yes	No
Netherlands	Yes	No – Fee based on funding loss compensation – calculation defined by Code of Conduct	No	No	No
Portugal	Yes	Industry consensus cap	Yes	Yes	No
Spain	No – National legislation on transparency with higher standards applies	Statutory for variable rates – by law Guidelines for fixed interest rates	Yes – (multiple indices offered)	No	Yes[17]
UK	No – national code of conduct with higher standards applies	No	No	No	No

Source: European Mortgage Federation, National Sources
Note: In most countries the lender must be able to prove that the early repayment fee is to cover losses incurred by the lender and this prevents excessive charges

Footnotes

[16] In most countries the lender must be able to prove that the early repayment fee relates to the losses incurred by the lender preventing excessive charges

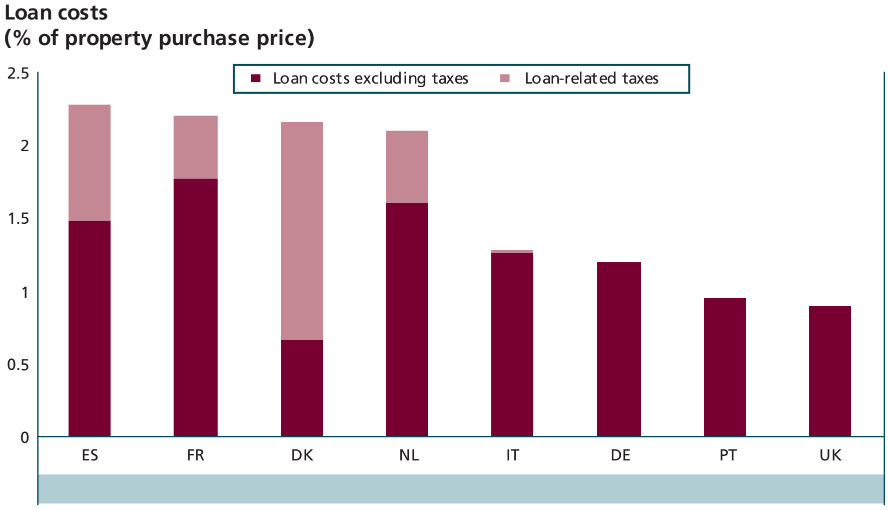
[17] Spain's code of conduct stipulates that lenders must maintain the offered price for 10 days, regardless of changes in market conditions

3.4.7. Transaction costs

A second element of the price to the consumer when purchasing a property or changing mortgage providers are transaction costs. Figure 3.19 shows the transaction costs in each country for purchasing a mortgage loan. However, the reader should also be aware that some or all of these fees are sometimes waived when the loan is switched, particularly if the borrower switches to a new product with the same lender (Spain, Portugal, Netherlands).

It should also be noted that many lenders allow many of the mortgage-related fees (including valuation fees and taxes in some cases) to be added to the loan, which improves mobility, but the costs are still born by the borrower.

Figure 3.19: Transaction costs of mortgage purchase



Source: Mercer Oliver Wyman analysis based on European Mortgage Federation Survey 2002 and national association data

Note: Loan costs includes property valuation, solicitor/notary fees associated with loan purchase, mortgage registration costs, taxes associated with the loan, administration agency costs and other loan costs including lender charges for the loan.

The main additional costs not considered above of switching mortgage provider or product, are restrictions and fees on early repayment. Figure 3.20 describes the early repayment fees and restrictions in each of the countries studied. The reader should note that in most cases these charges are to compensate the lender for funding losses that the lender incurs through the early repayment of the loan. Secondly as discussed in our analysis of prices, the ability to prepay without charge is usually included in the price of the loan through a higher nominal rate.

Figure 3.20 – Early repayment fees and restrictions

Country	Early repayment fees and restrictions
Denmark	■ Most fixed rate products (accounting for 80% of outstandings, 50% of new advances) are fully prepayable without fee (other than administration charge ■ Loans based on non-callable bonds have implicit full yield maintenance fee (redemption cost is based on market price of the bond)
France	■ Early repayment fees capped by law at the lesser of 6 months interest or 3% of the capital repaid (statutory) ■ Early repayment fees on fixed rate mortgages only (statutory) ■ No prepayment charges are permitted for prepayment due to death, involuntary unemployment or professional relocation
Germany	■ Lenders charge fees to recover funding and operational losses ■ Fee waived for repayment of under 10% of the exposure p.a. ■ No early repayment fees on adjustable rate mortgages (statutory) ■ In practice, restrictions on prepayments (e.g. exclusion) will be overlooked if the fees are paid
Italy	■ Law stipulates that fees should not be excessive leading to the removal by lenders of yield maintenance based fees ■ Industry consensus cap of fees of ~5% ■ In practice fees are ~1-2% of the capital repaid
Netherlands	■ National code of conduct stipulates that 10% of capital can be prepaid each year without charge (often 15% is permitted in practice) and there are no fees for borrowers that prepay due to moving property or hardship ■ Yield maintenance fees are commonly stipulated but in practice are often not fully charged (often waived or contested)
Portugal	■ Prepayment fees of 2% of the capital are usually charged (1% for subsidised loans) on repayments of over 25% of the exposure ■ Charges are often waived for switches to a product with the same lender
Spain	■ Prepayment fees capped at 1% on variable rate products (statutory) ■ Bank of Spain guidelines on maximum fees of 4% for fixed rate products ■ In practice, most fees are capped at 2.5% of balance repaid for fixed rate products according to Ministry of Economy suggestions
UK	■ Early repayment fees on many fixed rate and discounted products ■ Early repayment fees have fallen due to consumer group pressure

Source: Mercer Oliver Wyman, Merrill Lynch, Duebel/Lea/Welter
Note: Fixed rate mortgage includes initial fixed-rate contracts

3.5. Supplier costs and processes

3.5.1. Introduction

In order to get a better understanding of the drivers of the prices paid by consumers, we must better understand the cost structure of mortgage lenders as this is likely to be a key driver of the price levels in each country. There are a number of difficulties in conducting this analysis:

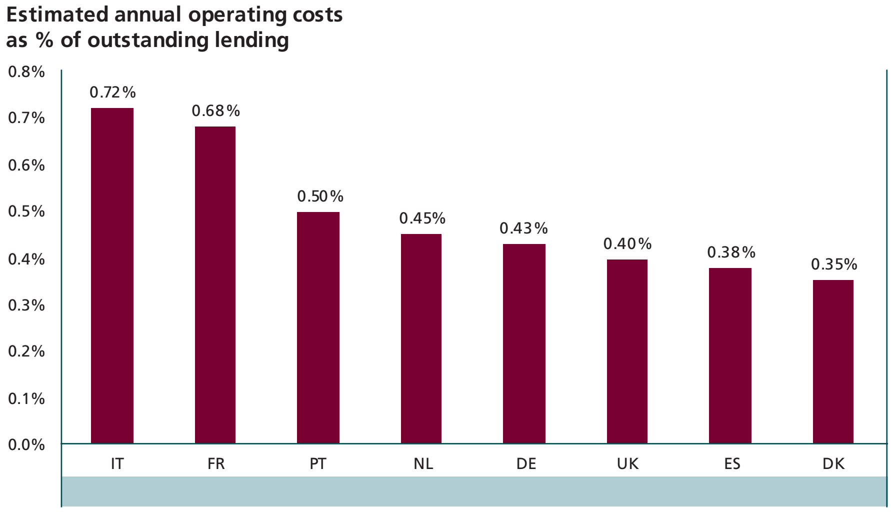
- Comparison of costs across European markets has rarely been attempted and so there are no publicly available data sources containing this information
- Cost allocation methodologies will differ by lenders and so costs are difficult to separate in a consistent fashion
- Lenders are often reluctant to disclose costs for competitive reasons
- Mortgage lenders' understanding of the costs of mortgage operations is sometimes limited. Many lenders are therefore unable to disclose costs as their accounting and management information systems do not provide sufficiently detailed information
- In some countries different types of lender exhibit different economics. For example in France, specialist lenders and commercial banks employ different economic models and so a composite average cost for France loses some of the granularity that a separate analysis would provide

Despite these barriers, we consider that some understanding of cost information is necessary as an indicator of efficiency and so we have attempted to estimate average lender operating costs in each of the countries studied. To do this have used the results of our questionnaires completed by mortgage lenders combined with interviews with over 30 market participants and our past experience of mortgage lending economics to develop operating cost estimates for mortgage lenders in each country (Figure 3.21). However, given that the data is based on a small sample of lenders the data should be interpreted with caution.

3.5.2. Supplier costs

We see from figure 3.21 that operating cost (defined as distribution, origination and servicing costs only) as a proportion of outstanding lending varies considerably across countries.

Figure 3.21: Estimated average operating costs as a % of outstanding lending



Source: Mercer Oliver Wyman, based on lender questionnaires, interviews and analysis of company accounts

Note: Operating costs estimates include distribution, origination and servicing costs only. Every effort has been made to ensure that cost levels are comparable although differences in business model, data availability and lender interpretation mean that these results should be treated with caution. Caveat: Estimates based on a small number of data points for each country

This analysis suggests that the countries studied fall into two broad categories:

- Those with relatively higher operating costs as a proportion of outstandings (Italy, France and Portugal). The main drivers of this appear to be more complex legal processes (particularly Italy) and low average loan sizes which lead to higher cost as a proportion of loan size
- Countries with relatively lower operating costs as a percentage of outstandings (Denmark, Germany, Netherlands, Spain and UK). We note that these countries have both higher average loan sizes but also have more efficient mortgage processes such as mortgage registration and repossession (see section 3.5.3)

While the cost estimates must be interpreted with caution, they are broadly supported by qualitative evidence provided by lenders in each country.

- Italian lenders discussed lengthy and expensive procedures for repossession, but felt that these processes were improving. Over-staffing is also an issue in Italy, with most banks unable to reduce staffing levels due to legal and regulatory restrictions

- Low labour costs and improved efficiency through centralisation and automation of processes were cited as key drivers of low costs in Spain
- French lenders referred to the overall low profitability of the mortgage product driven by low margins and small loan sizes
- Portuguese lenders mentioned that while processes have been historically inefficient, greater automation and process improvements have allowed them to reduce costs
- UK, Dutch and German lenders all pointed to servicing efficiency improvements generated by scale in servicing, either through in house servicing by large lenders or the use of third party servicers for smaller scale lenders. Outsourcing also offers the additional benefit of transforming some fixed costs into variable costs. However the cost of distribution and origination has risen in these countries (particularly UK and Netherlands) due to expanded product ranges and the increased level of advice provided to borrowers, either paid directly through branch advisors or through intermediary costs.
- The fragmentation of the German mortgage institutions was cited as a key constraint on reducing cost levels to lower levels, despite the large average loan size making greater cost economies possible.
- Danish lenders pointed to the standardised origination and serving processes driven by the use of the mortgage bond market and the scale benefits from concentration in the mortgage lending market.

We also note that cost levels vary significantly by lender within each country. The most efficient lenders are able to make superior returns on the back of lower unit costs, often driven by scale and automation of processes.

Secondly, cost efficiency varies by the type of lender within some of the markets. For example, specialist lenders often have more efficient mortgage origination and servicing functions than their commercial banking equivalents, leading to lower costs. However, these lenders are often at a disadvantage in terms of distribution costs as they must rely on intermediaries for the distribution of their product and cannot leverage a large branch network for new sales.

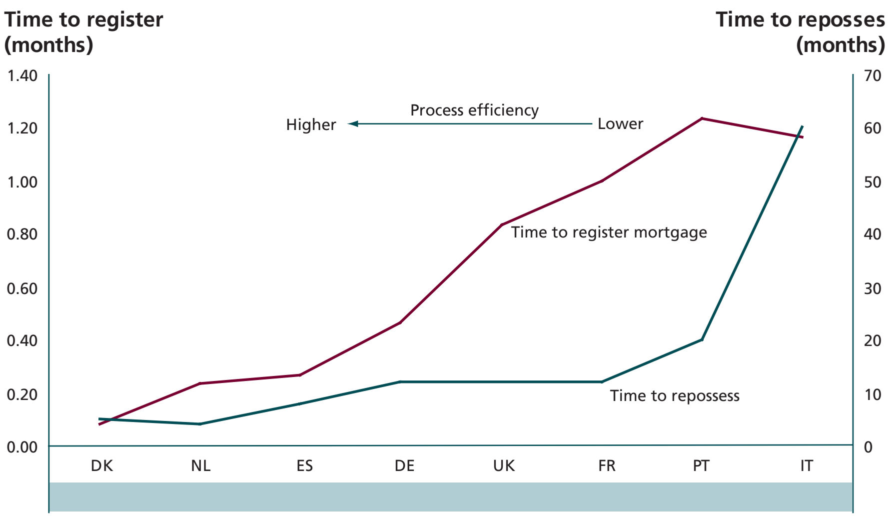
3.5.3. Processing times

Process efficiency is a key driver of costs in the different countries and is worth examining separately. Figure 3.22 shows the average mortgage arrangement and repossession times for each of the studied countries. Arrangement time from a couple of days in Denmark to just over one month in Italy and Portugal. Denmark has the quickest processes, with products being processed in a matter of days, partly driven by automated systems and by the need to ensure bond funding at a particular rate (warehousing in Germany means they do not need to operate so quickly to ensure a particular rate on bond-funded loans).

The main drivers of arrangement time are the valuation and credit assessment processes:

- Valuations in countries where collateral registration is centralised and automated can be completed very quickly
- Portugal and Italy do not have centralised registration of collateral and in some cases this is not in electronic format. Correspondingly valuation is time consuming and costly
- Centralised credit bureau access speeds credit assessment
- Where credit bureau information is not available (e.g. Portugal) credit assessment processes are long unless to existing borrowers
- The burden of borrower documentation required by lenders can increase process times and costs. Self certified loans available in the UK reduce this cost but have higher rates due to the increased risk taken by the lender

Figure 3.22: Average mortgage registration and repossession times



Source: European Mortgage Federation

Italy, Portugal and France demonstrate the slowest processes, particularly in relation to repossession times, driven by complex legal processes and borrower friendly legislation. At the other extreme, in Denmark, Spain and the Netherlands, legislation is much more lender friendly and so repossession times are under 9 months. Costs associated with this process are correspondingly lower as it is less time consuming and less complex.

However we should also bear in mind the consumer perspective of this process efficiency in that different countries and different institutions within countries have different practices with respect to forbearance thus impacting on repossession times. A lender with a more flexible policy on foreclosure will deliver benefits to the customer in arrears or default but will also have higher repossession times and costs.

4. Projection of market developments

In this chapter we examine possible future developments in the European mortgage markets studied, based on a series of over 30 interviews with market participants. We chose a 5-10 year time horizon and have synthesised the views of the market participants to form a view of how the market may develop. Details on the specific projections for each country are contained in Annex 4 – Country Overviews[18] and the main themes are summarised below.

4.1. Industry consolidation

Most markets will see some domestic consolidation
We expect to see some additional consolidation among mortgage lenders (in many cases commercial banks) in most of the countries studied. This will have the impact of increasing concentration ratios and may in some cases lead to intervention by local competition authorities.

In Denmark and Portugal there appears to be little room for further consolidation although some lenders expect the number of players to reduce to three or four in these markets.

In Spain, France, Italy, Netherlands and the UK consolidation is not expected among the large commercial banks where there is little room for additional mergers, indeed in some markets further merger activity is likely to be blocked due to competition concerns. Further consolidation is expected though among the smaller players who will increasingly struggle to compete using a single product strategy with commercial banks who benefit from cross-sell subsidisation of the mortgage product, captive distribution and lower costs from economies of scale. This activity is expected to be prompted by falls in new lending volumes and increased credit risk during the next downturn and will begin by greater selectivity of the value chain segments in which smaller players compete. Such initiatives could include by pooling of resources (e.g. risk management information and resource to comply economically with Basel II), outsourcing of processes to manage costs (e.g. use of third party servicing) or forming joint ventures with distributors.

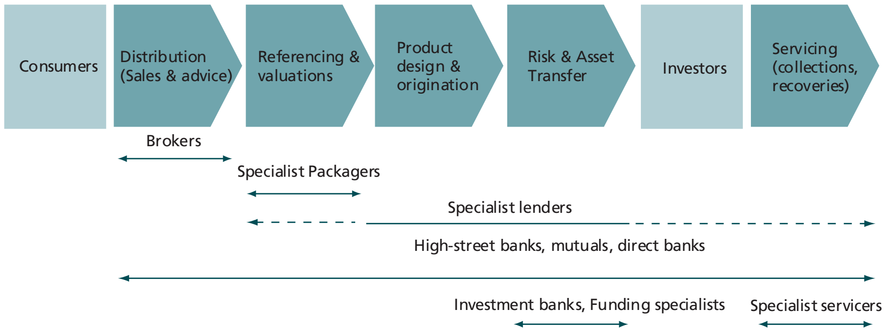
Germany expects the most consolidation due to the fragmentation of its mortgage industry, low returns and expected increases in credit risk, which is likely to force banks to merge to strengthen their financial position and improve profitability.

Footnotes
[18]Available from the European Mortgage Federation's website, www.hypo.org

4.2. Value chain unbundling

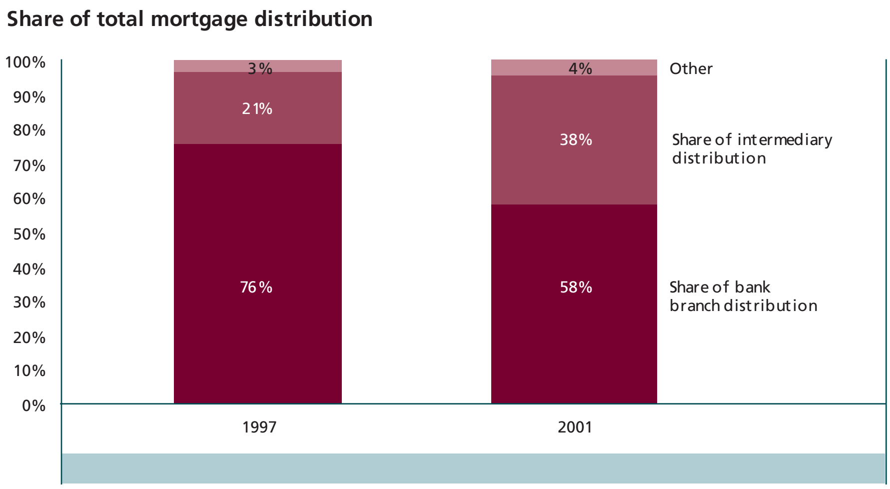
Additional unbundling of the value chain will occur at different speeds
Further unbundling of the value chain is expected in many countries (UK, Netherlands, Germany, Italy) led by specialist brokers and servicers (see Figure 4.1).

Figure 4.1: Mortgage value chain and participants



Third party distributors have captured market share from bank distribution in many countries (UK, Netherlands in particular but to a lesser extent in Germany, Italy, France and Spain). Figure 4.2 shows the aggregate shift from branch distribution to broker distribution in the eight markets. This has been driven by the increased need for advice, led by product complexity and by greater consumer awareness of the range of products and prices available in the mortgage market. In markets where this channel is less developed it is expected to grow share, although this development may be slow due to customer inertia and possible reductions in mortgage volumes discouraging entry of intermediaries into the mortgage market.

Figure 4.2: Distribution mix 1997 – 2001 – aggregate of studied markets*



Source: Datamonitor, Mercer Oliver Wyman

*Studied markets – Denmark, France, Germany, Italy, Netherlands, Portugal, Spain, UK

Specialist servicers have already increased their share of the market, most noticeably in Germany, Netherlands and the UK and this trend is expected to continue. Smaller lenders will increasingly use third party servicers to lower costs in order to compete with larger lenders with lower unit costs. Outsourcing also allows lenders to transform fixed costs into variable costs and provides flexibility to move quickly into new product areas. Outsourcing is expected to become more common in France, Spain, Italy and Portugal although the speed of change in these countries is expected to be slow.

The increase in both mortgage bond and MBS issuance will also lead to greater uncoupling of the funding of the loan from origination leading to further specialisation in the mortgage value chain.

4.3. Government intervention

On Balance, participants expect a reduction in government involvement although the timescales for this are unclear
Reductions in government involvement are possible and often discussed in some markets. Examples include removal or reduction of tax incentives in the Netherlands, reduced state involvement in banking in Germany and Portugal and the removal or reduction of subsidies in France. The impact of the withdrawal of the government from these markets would have large structural implications but such changes are highly uncertain and so mortgage lenders are not relying on them in their business planning.

4.4. Consumer protection

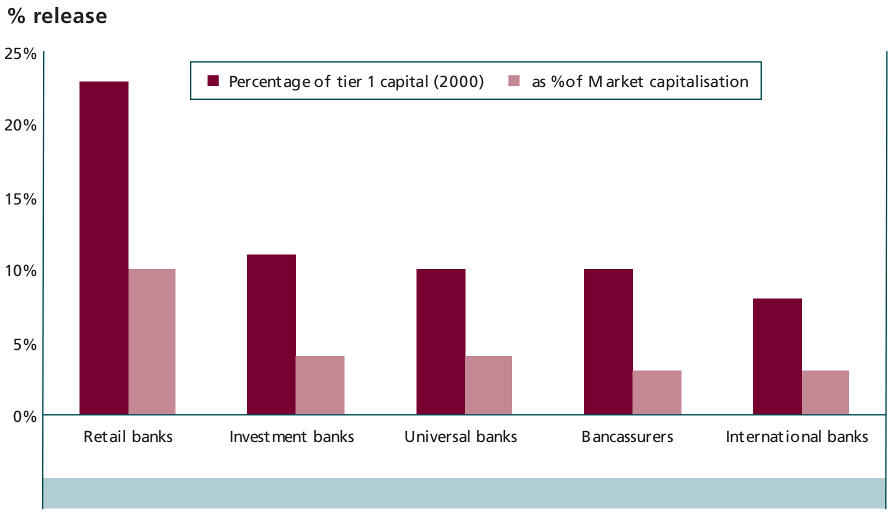
Increases in consumer protection regulation could increase lender costs and limit integration
Strong consumer groups will continue to push for increased consumer protection measures related to mortgages. Key regulatory developments include introduction of mortgage advice regulation in the UK and possible extensions to EU consumer protection legislation to cover mortgages e.g. the Consumer Credit Directive. One effect of consumer protection regulation is likely to be the continuation of caps on early repayment fees and an overall reduction in lenders' ability to charge these fees. This in turn is likely to lead to an increase in the value of the prepayment option associated with the mortgage both through the direct impact of lower fees but potentially through increased customer awareness driving up prepayment rates. Such an impact could result in higher prices, reduced product choice or lower margins for lenders. Additional compliance activity caused by new legislation and regulation may also lead to increased costs for lenders, which may be passed to consumers in the form of higher prices. Both of these effects (increased costs and increased product restrictions) will exacerbate structural and economic differences between markets and make integration of markets even more difficult.

4.5. Capital adequacy

Basel II will release capital for mortgage lenders
The most important regulatory development for mortgage lenders in Europe will be the change in the regulatory capital requirements, commonly referred to as Basel II[19]. Basel II is expected to release large amounts of regulatory capital for residential mortgage lenders (see Figure 4.3). This will encourage many mortgage lenders to move to the Internal Ratings Based (IRB) approach, which is expected to allow them to release the most capital from residential mortgage lending, although not all lenders will satisfy the IRB criteria.

The benefits from reduced capital requirements will be shared between consumers and producers. In theory, risk-based capital should lead to risk based pricing in mortgage markets leading to greater differentiation in price between consumers. Producers will also benefit to some degree, particularly where residential mortgages do not make sufficient profit on a standalone basis and there is therefore economic pressure for an increase in returns, which can be realised through lower capital costs.

Figure 4.3: Estimated capital reduction in moving to Basel II IRB approach



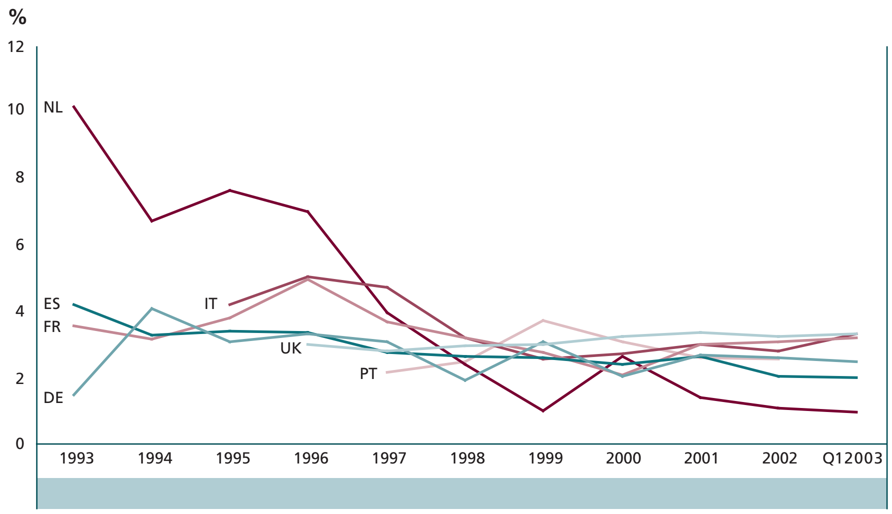
Source: Mercer Oliver Wyman

Footnotes
[19] For a more detailed discussion of the implications of Basel II are contained The New Rules of the Game – Implications of the New Basel Capital Accord for the European Banking Industries, Mercer Oliver Wyman, June 2003 available at www.merceroliverwyman.com

4.6. Pricing

Differences in mortgage rates across countries expected to fall
Mortgage spreads in most countries have fallen over the last 10 years in most cases driven by increased competition by lenders and improvements in operating costs. As an indication of the fall in rates we see from Figure 4.4 that mortgage margins over the time deposit rate were around 4% for most countries in 1993 and have fallen to between 1% and 3% in 2003. This result is a combination of movements in mortgage spreads and deposit spreads but almost certainly includes a degree of compression of mortgage margins.

Figure 4.4: Mortgage rate minus time deposit rate (1993-2003)



Source: ECB retail interest rate data series

Note: Graph indicates margin trends for mortgage and deposit product combined and so provides only a directional indication of mortgage margin trend

Lenders in many countries believe that margins will not be able to fall any further as the standalone mortgage product has become a low margin product with returns below the cost of (regulatory) capital in many cases. Indeed some lenders feel that prices may need to rise in some countries with very low profit margins in order to make the business economically viable (Germany, Netherlands, Denmark).

However further price falls are expected in some countries (particularly UK and Italy) driven by continued price competition. In the UK continued use of discounting along with high levels of remortgaging will lead the 'back book' of customers on high margins to shrink resulting in a reduction in the average margin. In Italy continued price competition and some reductions in costs may drive prices lower although some lenders did not agree with this point.

We observe that that the net effect of these changes combined with the observations from the Adjusted Price analysis would be to narrow the observed price differential between markets. This suggests that some of the differences in price (but not all) will be removed by market forces within the studied markets.

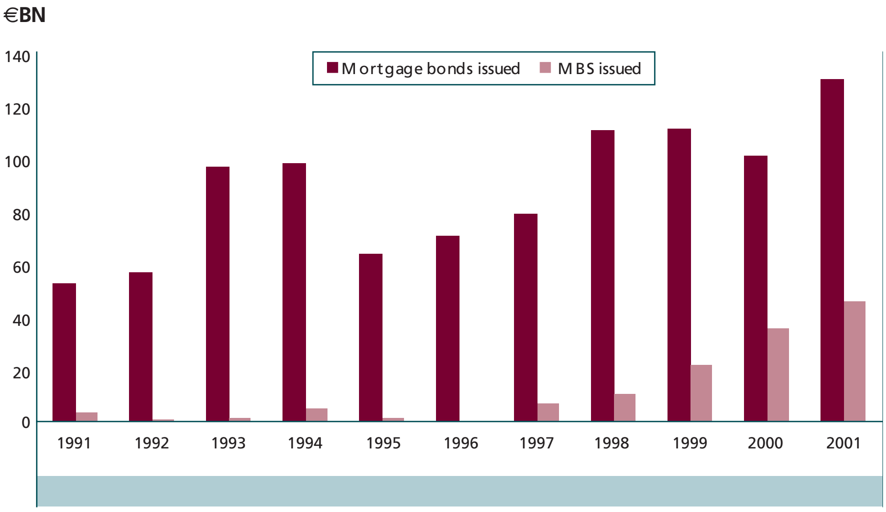
4.7. Funding mechanisms

Increase in mortgage bond and MBS funding will reduce funding costs and allow lenders in some markets to widen their product range
Increases in mortgage bond and MBS issuance have been key recent trends in European mortgage markets (see Figure 4.5). In some markets where the mortgage bond or mortgage backed securities (MBS) market has recently become more established (France, Netherlands, Italy) these instruments are expected to be used increasingly by lenders to fund their mortgage portfolios. Mortgage bond and MBS issuance will continue to be driven by a number of factors:

- Need to diversify funding sources
- Reduction in deposit volumes
- High funding costs of alternative funding sources e.g. unsecured bank debt
- Risk transfer e.g. ability to transfer interest rate risk to investors
- Regulatory capital arbitrage (likely to be significantly reduced or removed following implementation of Basel II)

In some cases use of capital market funding instruments would allow lenders to introduce products that they would have found difficult to economically provide using balance sheet funding. For example, the recent Match I securitisation by ABN AMRO used a pass-through structure that transferred prepayment risk to investors, similar to the structure commonly used in the US. This structure, as with the Danish callable mortgage bond, allows lenders to offer loans without early repayment fees as the risk on these products could be transferred to investors.

Figure 4.5: Mortgage bond and MBS issuance in studied markets – 1991-2001



Source: EMF Hypostat 1991-2001, SDC
Note: includes mortgage bonds and MBS backed by fully or partially by commercial mortgage loans

As a result, investor needs will become increasingly important in product design and this may lead to both a standardisation of product (to meet MBS and mortgage bond standards), an increase in credit enhancement tools (e.g. mortgage insurance, use of top-up loans) and greater levels of risk based pricing at the product and customer level.

However, one constraint on the growth of these markets comes from the lack of liquidity in these markets (particularly MBS markets) leading to high funding costs relative to deposit funding. Many lenders see benefits in improving the liquidity of these markets through harmonisation of standards across the EU or through the development of a European mortgage bond market.

4.8. Completeness

Some gaps in product completeness will be filled via market developments
There are some signs that gaps in product completeness are likely to be filled over a 5-10 year time horizon. For example, there are some signs that high risk and sub-prime lending will increase in markets where it is not currently established. Similarly products without early repayment fees are expected to become more widely available driven by better understanding of the price of the prepayment option and significant pressure by consumer groups on lenders to reduce or remove fees (UK,

Spain, France, Netherlands). Increased use of capital markets instruments to fund mortgages may also lead to more countries being able to offer longer-term fixed rate products or products without prepayments as the risks associated with these products could be passed to investors. Removal of rental subsidies and interest deductibility in some countries may also lead to a greater range of products becoming available.

4.9. Cross-border activity

Very little cross-border lending or foreign entry into mortgage markets is expected

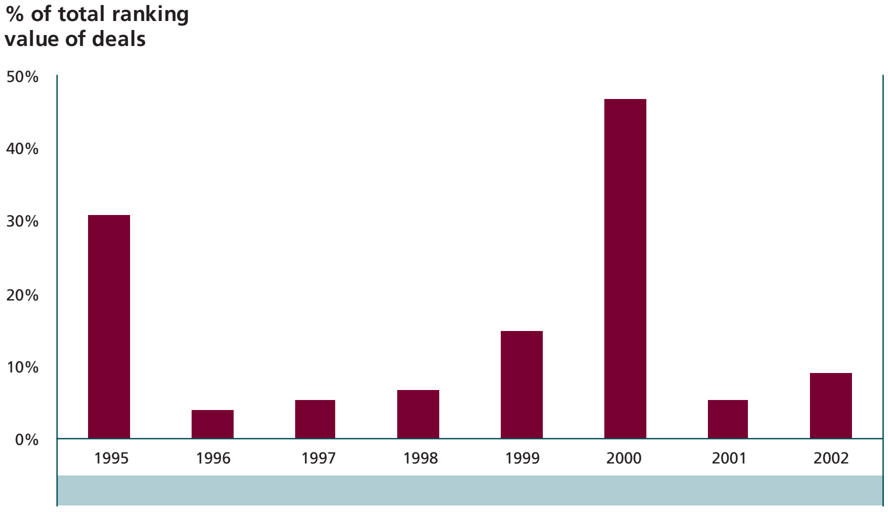
Very few lenders saw any significant increase in cross border lending occurring over the next 5 to 10 years given current regulatory and legal differences across countries. There are a number of significant barriers to cross border lending or M&A including:

- Low profitability of mortgage product in some countries
- Inability to realise cost synergies via cross border lending or M&A
- Inability to access distribution that is controlled by the incumbent lenders
- Large differences in mortgage-related law and regulation
- Repossession law
- Takeover law and treatment of foreign companies
- Mortgage regulation and lending restrictions e.g. Caps on early repayment fees
- Poor quality of information
  - Lack of collateral value information or credit information
  - Lack of common standards of data making comparisons difficult

We can see the effect of these barriers in Figure 4.7 below. The majority of European banking mergers have been domestic as these mergers allow greater cost synergies to be delivered via removal of duplicated costs and integration of operations. We also note that two of Europe's banks that operate in multiple markets, namely Fortis and Nordea, have both chosen to retain broadly separate operations in each country of operation.

Most of our interviewees did not expect this situation to change, as barriers to entry are likely to remain for the foreseeable future in the absence of any intervention.

Figure 4.7: European banking mergers 1995-2002: Share of cross border M&A over total value of deals



Source: SDC

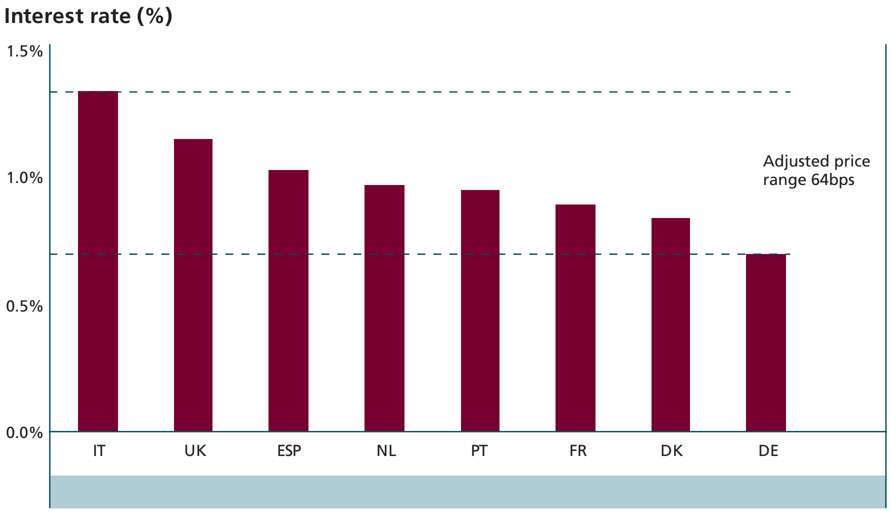
5. Review of the analysis and conclusions

In this chapter we bring together the results of the comparative analysis and arrive at conclusions regarding the levels of efficiency and completeness of the national markets and their drivers. We have divided the conclusions into a general overview where we have attempted to holistically review the implications for efficiency and completeness before going into more detail on the drivers of the two components. In the interests of brevity, within the summary section limited evidence is offered to support the conclusions – this evidence is mostly within the longer efficiency and completeness sections.

5.1. Overview – efficiency

At the very top of the house, the mortgage markets studied appear broadly efficient There is a very narrow adjusted price range (45bp or approximately 10% of the total price) across 7 of the 8 countries, with prices in the 8th country (Italy) coming down sharply driven by foreign entry. Much of the price variation that exists across countries is driven by costs, which are in large part driven by structural factors, such as loan size, registration time, collections regulations etc. Lenders are not earning excessive returns and there is little scope currently for across the board price reduction, unless cost structures change.

Figure 5.1: Adjusted price by country



Source: Mercer Oliver Wyman

We should note that this situation is of low price differentials is not assured for the future. We note that markets operate separately and that product cross-subsidies and the involvement of government acts to keep returns (and prices) low in some geographies. The removal of these conditions could lead to a change in price levels within markets. During our interviews, some participants felt that price rises were possible although few thought that the practice of cross-subsidisation would cease in the medium term.

The most important driver of prices in the medium to long term is operating cost levels, which vary across markets. We have identified the main factors that drive operating cost efficiency at the national level.

- **Processes**. Here we mean both processes that are defined by government or regulation (e.g. costly registration procedures, borrower-friendly collection standards that increase collateral collection costs) and over-manning induced by ownership or regulatory standards (e.g. union, government or cultural limitations on branch closure and staff reduction). These inefficiencies may be serving political purposes (e.g. giving a borrower every chance to cure before their house is sold, protecting access to branches in rural areas, preserving local jobs) but they do raise costs and these costs have to be passed on to borrowers through higher mortgage rates. As these inefficiencies are largely driven by national policy (largely consumer protection policy) it is within the gift of national government to remove them.
- L**ack of national and lender scale.** Clearly the level of impact of this factor depends on the size of the market, as a larger market will have room for more large-scale lenders. Lender scale is often driven by bank ownership structures and national competition policy. In some countries the principal impediment to cost reduction is the fact that institutions are simply sub-scale. A solution to this issue lies in further domestic consolidation and outsourcing of sub-scale processes. One of the possible barriers to this is that many banks are not shareholder corporations but mutual or government owned companies. Consolidation can be difficult for mutual firms as the owners (in most cases the customers) of these firms receive benefits from the bank beyond simple profits (e.g. local investment, lower prices) which may be lost in consolidation, particularly outside of the mutual sector[20]. Government owned institutions might also provide benefits to the government in addition to profits (e.g. subsidised lending, lower prices) that they may not continue to do under other ownership structures. In practice the big mutual/government groups (e.g. in France, Germany, Netherlands) do tend to pool some activities to achieve a level of cost efficiency but this is rarely as high as can be achieved with a single organisation.
- **Loan size.** Loan size is highly correlated to GDP per capita. There are many fixed costs involved in mortgage lending and lending margins are typically lower for larger loans as the lenders can amortise the costs over a larger loan. While countries with lower GDP per capita tend to have lower labour costs, loan size tends to fall faster than labour costs so overall smaller loan size tends to result in higher costs (as a % of loan balance). In some markets, such as France, this is exacerbated by government lending schemes that tend to result in borrowers having multiple loans from different institutions, artificially depressing loan size and raising costs. Where the loan is broken into pieces, but all the loans are from the same institution, the cost inefficiencies are relatively minor as the mortgage can be distributed, disbursed and serviced in a single process.

Footnotes

[20]The UK is an exception here as there have been a large number of recent mergers between mutual building societies

The second key factor influencing prices is the presence of product-cross subsidisation by commercial banks and the involvement of 'non-profit' mutual and state-owned lenders who are able to keep prices low as they do not need to pay dividends to shareholders. Both of these effects have the impact of lowering prices even in markets with high operating costs and so increase barriers to foreign or domestic entry from shareholder owned institutions.

5.2. Overview – completeness

We analysed the completeness of the studied mortgage markets and looked at the range of products available, the range of borrowers that could access the mortgage product, the range of distribution channels available and the availability of information and advice. Our analysis indicates that there are gaps in the product range particularly relating to fixed term products and indexed adjustable rate mortgages, which are not broadly offered in some countries. The gaps that do exist in product completeness are in many cases driven by regulations (e.g. in Germany, lenders face regulatory hurdles to offer indexed adjustable rate mortgages, in Spain the Ministry of Economy suggests a Early repayment fee limit of 2.5%). Access to capital market funding mechanisms has also been historically an important determinant of lender willingness to offer, and regulators willingness to allow some products, especially long-term fixed rate products.

In addition to these gaps in product interest rate options, there are gaps in most countries in terms of products for higher risk borrowers and flexible and equity release products. However, we recognise that demand for these products may be lower than for other products as other instruments may address the customer needs. However, provision of access to mortgage product can deliver large benefits to those borrowers concerned. Additionally, while demand for products that are not offered cannot be assumed, most of the products listed address a specific borrower need and therefore it would be excepted that most products would have some level of demand.

We have also included distribution and information in the overall completeness index. Beyond the issue of product availability, branch distribution dominates almost all markets and advice/information is not available outside of this channel in some markets. The breadth of product availability is however usually strongly correlated with the level of development of alternative competing channels. Equally the availability and transparency of information tends to be correlated with breadth and depth of the product offering. Thus markets that have many channels and good information provision also tend to be more complete mortgage markets.

There is evidence from both the interviews and historic data that the incumbents are slowly closing the completeness gaps. However there are still a material number of gaps in most markets.

5.3. Assessment of efficiency and its drivers

The basis for assessing efficiency from a consumer perspective was in terms of the price paid by the consumer for the mortgage product. Our chosen metric is adjusted price, which reflects the option-adjusted cost to the borrower the consumer for the mortgage product. This is closely related to operating costs, which is a key supporting metric for evaluating mortgage market efficiency.

We note that the price observations include some other factors such as liquidity premiums for funding instruments (e.g. Denmark) although that is not our focus here. The Adjusted Price levels are closely clustered with adjusted prices clustered around 100bp (see Figure 5.1 above). This analysis suggests that, in general, the mortgage markets are able to provide mortgage products to borrowers efficiently at a low price. However, the reader should note that the price analysis does not directly take account of product or government subsidies which may act to distort prices in an individual market and so may hide the impact of these factors in the adjusted price comparison. Based on our analysis the difference between mortgage markets is only 64bp (45bp if Italy is excluded) suggesting that differences in efficiency between markets currently only have a small eventual impact on the end consumer. However, we need to better understand why such differences exist and whether the low differences between markets are sustainable so that we can establish how efficiency can be improved.

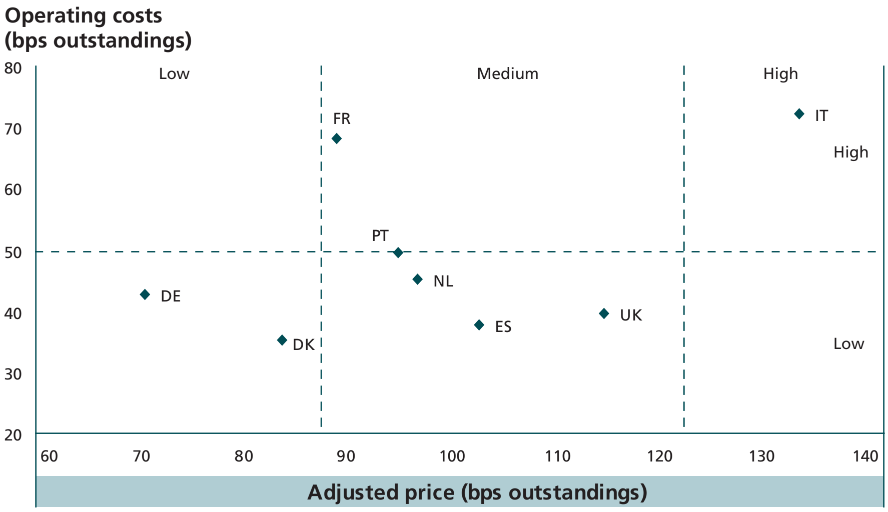
In reaching our conclusions we look at the underlying causes of price differences, including cost levels and lender profitability within each market. We then look at some product-specific causes of inefficiency within the studied markets.

5.3.1. Lender economics

Lender economics is a key indicator of the overall efficiency of the mortgage system and provides a constraint on the level to which prices can fall in an efficient market. Mortgage lenders will not lend at prices that produce returns below their cost of capital indefinitely, unless significant subsidisation (e.g. from cross-sold products) is present. It is therefore very helpful to look at how price fits in with the overall economics of mortgage lending in order to identify its key drivers.

Figure 5.2 shows the estimated operating costs of mortgage distribution, origination and servicing in each market plotted against the adjusted price calculated above, which can be used as a rough proxy for lender revenues from these activities.

Figure 5.2: Adjusted price vs. operating costs



Source: Mercer Oliver Wyman
Note: Adjusted price calculations are not adjusted for the impact of any product cross-subsidisation or government subsidies which may distort comparisons across countries

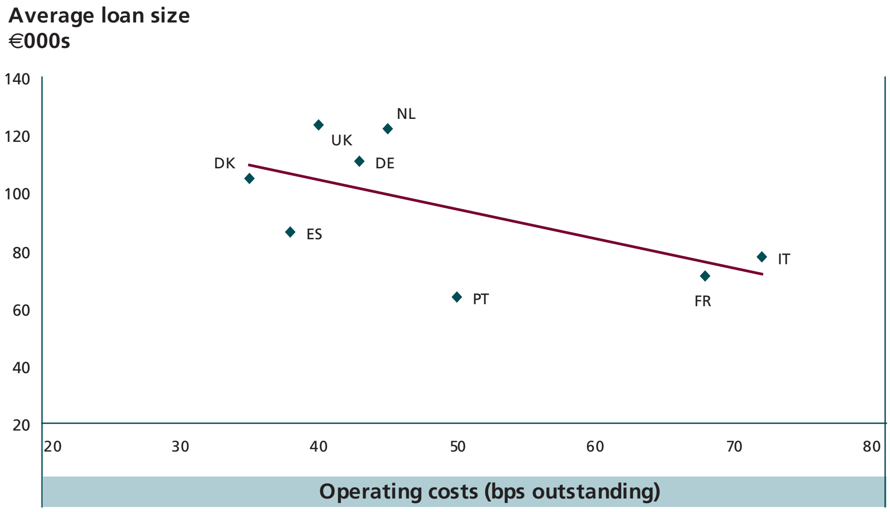
From this analysis, we see that the markets studied fall into four clusters (with Portugal showing similarities with two groups), suggesting different dynamics in each market.

Cluster	Markets	Lender economics
High Price, High Cost	Italy	High costs lead to higher prices – returns are moderate
Medium Price, Low Cost	Netherlands, Spain, UK, Portugal	Cost efficiency leads to higher returns
Medium Price High Cost	France, Portugal	High costs, driven by small loan size or process inefficiencies and low prices, driven by product cross-subsidies lead to unfavourable product returns
Low Price Low Cost	Denmark, Germany	Low prices keep returns low. Prices kept low by competition including that from 'non-profit' institutions

5.3.2. Cost and process efficiency

Given the obvious links between prices and costs we need to look at the drivers of cost efficiency to explain in part the differences between lender returns in markets and to identify constraints to reducing costs and eventually prices in mortgage markets.

Figure 5.3: Operating costs vs. average loan size



Source: Mercer Oliver Wyman
Note: Average new loan size based on average of questionnaire responses

As is suggested by Figure 5.3, average loan size appears to be a key determinant of the cost economics of mortgage lending. Large fixed costs and unit costs associated with the origination and servicing of a loan translate to a lower percentage of the loan for a larger loan and so can be more easily covered with interest margins. This appears to be one of the key drivers of the relatively operating cost observations in France, Portugal and Italy. The low loan size is sometimes driven by the presence of low-cost or subsidised second mortgages that act to reduce the loan size and have a particularly large impact if taken out with different institutions.

Lender size also influences cost efficiency as larger lenders are often able to deliver economies of scale, particularly in loan servicing, where large fixed costs of systems can be spread over the whole loan pool. This effect could be exaggerated in a more integrated market where large multi-market lenders could realise economies of scale across markets, which would reduce average costs and potentially prices. Similarly market share constraints due to competition concerns act to restrict lender scale within markets.

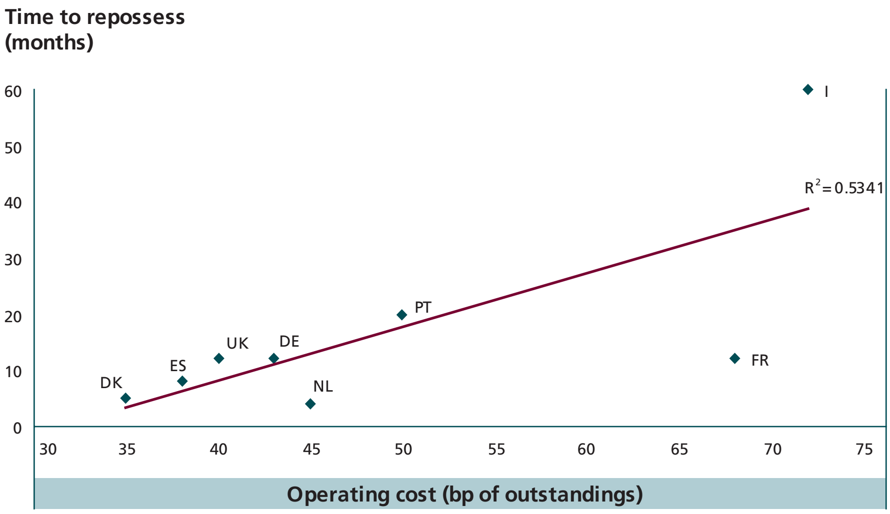
Duration of loan is also a determinant of profitability as the longer the loan is held the longer period over which origination and distribution costs can be amortised and recovered through servicing income. However, this appears to be outweighed by other national factors as we see little direct correlation between profitability and average duration of loans by country.

Finally, labour costs are clearly a key determinant of cost levels and are composed of unit costs, which broadly vary with GDP/head and staffing levels, which depend on the rigidity of the labour market. As an example, one of the main reasons for Italian banks' high cost bases is the labour market law within Italy, which effectively mandates staff levels and restricts the opportunities for cost savings.

5.3.3. Collateral efficiency

Collateral efficiency is a second key driver of cost levels. We see from Figure 5.4 that there is a strong correlation between the speed of repossession and the estimated operating costs of mortgage lending. A similar relationship applies for registration times. This suggests that national collateral law is one important input into lender economics and therefore in part into prices as the speed of registration and foreclosure translate into higher costs for lenders which in may in turn translate into prices for consumers, subject to market constraints such as subsidised competition as seen above. Inefficiencies in collateral include intrasparent or costly registries and expensive registration processes[21].

Figure 5.4: Operating costs vs. time to repossess



Source: EMF, Mercer Oliver Wyman

5.3.4. Access to capital markets

Capital and insurance markets serve to transfer risk away from banks to investors and thus reduce intermediation depth. Broadly speaking, capital markets act to provide funding and to transfer interest rate risk to investors whereas insurance markets are generally used to transfer credit risk. The emerging credit risk transfer market (credit default swaps) acts as an alternative to the insurance markets allowing lenders to offset credit risk for all or part of their portfolios.

Use of the capital and insurance markets acts to make banks more stable (lower risk) and is ideally rewarded by regulatory relief but could adversely affect profitability if the risk costs are high and/or the regulatory relief is not available. Often, capital market access costs exist that make the risk transfer unprofitable, in particular the funding advantage of deposits, which due to their significant greater liquidity are often a much cheaper funding option for banks. Deposits are more liquid

Footnotes

[21] For a more detailed discussion of individual components of collateral efficiency see Efficiency of Mortgage Collateral, European Mortgage Federation 2002

than the deepest domestic bond systems although a European bond market would deepen liquidity and close this gap.

Capital market access makes the cost structures of lenders more transparent as it separates funding costs from administration and servicing costs and so will help to improve banks identification and reaction to cost inefficiency and will likely improve the speed of pass through of capital market rate changes to borrower rates.

The analysis above suggests that markets with significant mortgage bond funding (Germany, Denmark) have managed to provide low prices for borrowers and thus avoid the profitability disadvantage over deposits mentioned above. The mortgage bond appears to be an efficient mechanism for funding long term fixed rate products but possibly less efficient for short-term products where the flexibility of deposits make this a more attractive option.

Essential to the ability to provide an efficient straight bond market similar to the German Pfandbrief market is the ability to charge full yield maintenance fees. However, of the markets studied, only Germany and Denmark have demonstrated the ability to fully charge and recover these fees. The remainder of markets is such that, due to government regulation or consumer pressure, early repayment fees are capped (either by law or de-facto by the lending institutions).

This implies that in those markets, bond financing would be limited to prepayable mortgages with no or partial early repayment fees (similar to the Danish callable mortgage bond). This product may provide a less attractive product to investors because callable bonds have less certain cash flows and the prepayment option is difficult to value accurately. This in turn may lead to a less liquid market for these bonds thus increasing funding costs relative to the non-callable bond where the investor is insulated from prepayment risk via the yield maintenance fee.

Securitisation is becoming more commonly used in some markets (UK, Netherlands, Spain) although in most cases the prepayment risk is not significant component. In addition this is not a perfect instrument as the AAA-tranches trade at a very significant premium to government bonds, typically due to lack of liquidity in the instruments. However, this must be offset against the additional benefits provided by securitisation such as reductions in regulatory capital requirements, transfer of interest rate and credit risk and further diversification of funding sources.

5.3.5. Product cross-subsidisation

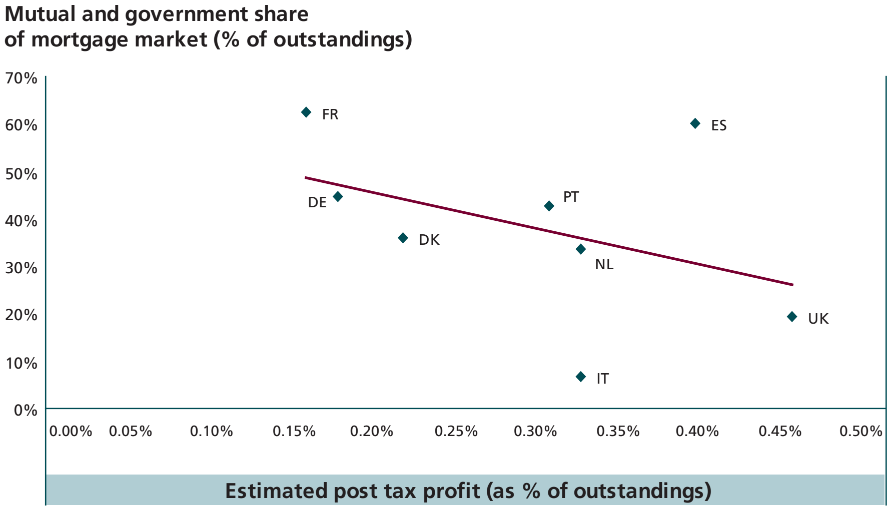
There is strong evidence from interviews with mortgage lenders that the mortgage product is increasingly being seen as a 'gateway' product to gain access to the customer and use as a basis for cross-selling other products. From our interviews, the markets in which this was seen as a key driver of the pricing of the mortgage product were Spain, France and Portugal. We see that two of these markets (France and Portugal) have low returns on the mortgage product on a standalone level, suggesting that there are indeed cross-subsidies within the bank from other products to the mortgage product that recognise the cross-sell value of the mortgage product.

This is an important distortion to the pricing efficiency of the mortgage product as it is extremely hard to measure the impact of this cross-subsidy. It also makes market entry using a single product strategy very difficult, as the returns will be insufficient to meet investment requirements. As we discuss later, cross-subsidisation is one of the main barriers to foreign entry in mortgage markets.

5.3.6. Ownership structure

There is some evidence from our analysis that a higher share of mutual and government owned mortgage lenders can be associated with lower overall mortgage profits in a market (see Figure 5.5). Although the overall correlation across all markets is weak, if we exclude the outliers of Italy (where cost constraints are the key determinant) and Spain, there is a significant inverse correlation between estimated mortgage profitability and the market share of mutual and government ownership.

Figure 5.5: Share of mutual/government ownership vs. lender returns



Source: Mercer Oliver Wyman

This effect is partly to be expected since neither state-owned nor mutual institutions are required to pay dividends to shareholders, their required profit is therefore lower and prices can be reduced to meet this lower level. Indeed one of the objectives of many mutual lenders is to provide lower prices to their owners/customers and so prices should be lower relative to a shareholder-owned institution. There is some direct evidence from our analysis to suggest that the presence of mutuals and government-owned lenders acts to reduce prices to consumers. However, the correlation with price alone is less strong than that with returns suggesting that non-profit organisations may also have higher average cost levels thus reducing overall cost efficiency in the market but potentially generating consumer surplus elsewhere.

5.3.7. Taxation and subsidy

Subsidisation of mortgage lending can distort the pricing within the market. For example, direct government lending at low rates or subsidised loans will reduce the price within the market. However, we should note that within our price analysis we did not include government or separate subsidised loans restricting our analysis to unsubsidised loans provided by mortgage lenders. This means that the results of our price analysis do not take into account the effect of direct subsidies and so where these exist the estimates will overestimate price. However, the impact of indirect subsidies (e.g. reduced funding costs for government-owned lenders) will be reflected in the adjusted price analysis and will act to lower prices in some markets.

In addition, subsidies may lead to lower scale of mortgage finance if publicly sponsored products reduce average mortgage loan volumes. Examples of such products include Pret a taux zero in France and Bausparen in Germany.

Tax breaks for deposits or investment vehicles will also distort pricing for specific products and may result in reduced price transparency for the borrower (e.g. Dutch endowment products).

Corporate taxation also acts to drive up costs and so absolute levels of tax may drive up prices relative to other markets. Similarly taxation on specific processes e.g. outsourcing of servicing can restrict the opportunities for cost savings and so keep costs and prices high.

5.3.8. Product complexity

In general, more complex products can be priced less transparently to the consumer, potentially leading to higher prices for the end consumer. We note that prices in the Netherlands and UK are towards the upper end of the price range and that in these markets product variety and complexity is high. It is normally argued that customers are willing to pay for the benefits that they get from additional features despite the impact that this has on average prices. However the breath of the product offering tends to lower price transparency makes it difficult for consumers to make these choices raising the requirement for information and advice.

The Home Loan Code is aimed at making prices more transparent to borrowers, through making specific information available to the borrower at the point of sale. All of the countries within the study have implemented a form of the code (although not all have adopted the European Code of Conduct).

5.3.9. Rate adjustment mechanisms

The reviewable variable rate mortgage contract (present in UK, Netherlands and Germany) allows the lender to change mortgage rates at its discretion. This may lead to a lack of price transparency for the borrower, as it is unclear how changes in capital market rates will be passed on in mortgage rates. However, price information can be passed on in other ways such as customer statements and via publication of rates. There is also some incentive for lenders using reviewable rates to delay the pass through of interest rate changes to the borrower thus leading to higher prices on average. Indexation of variable rate mortgages avoids this problem, but may provide greater risk to the lender who may then be locked into a margin above an index and therefore unable to operate economically if funding costs rise relative to the index (basis risk). This can be avoided if cost of fund indices are used by lenders.

Pricing over a capital market benchmark is one method to increase pricing transparency and so improve pass-through. This is often restricted by the absence of appropriate benchmarks either due to preferences for deposit funding over bonds or lack of suitable bond infrastructure.

While reviewable rates may give rise to some concerns from the consumer perspective, reviewable rates have in some cases protected borrowers from rate increases and can provide a systematic stabiliser for the financial industry as a whole. This is because lenders are able to change margins on existing loans if the economics of lending changes e.g. increases in costs or credit risk. Reviewable rates also allow lenders to raise margins if balance sheets are weak and thus ensure that banks continues lending in times of economic stress. There is therefore a trade of between reviewable rates, where spreads vary with time, and indexed rates, where spreads vary by cohort of borrowers.

5.3.10. Impact of introductory discounts on product pricing

The practice of pricing differences between new and existing customers is common in markets for long-term goods and services (e.g. telecommunications). The same situation arises in many European mortgage markets both through:

- Introductory discounts that mean that the price charged in the early period of the product is lower than that charged switch to a higher rate after a fixed period
- Declining prices for mortgages (given to new purchases only), brought about via competition and efficiency gains

As a generalisation, older borrowers are lower risk (lower LTV and lower probability of default) and so pricing for risk is distorted as these borrowers often pay higher prices. The effect of this differential is alleviated somewhat by an active remortgaging market as lower risk customers can remortgage easier than higher risk borrowers or by the greater use of risk based pricing (e.g. differences in rate by LTV) which are emerging in some markets.

Whilst this structure appears inefficient as the loan characteristics are not necessarily reflected in the price paid, it has come about mainly due to competition for new borrowers rather than regulation or use of market power. It must also be seen in the context of transaction costs as in a market with low transaction costs the borrower can switch providers with little incurred cost, whereas high transaction costs restrict borrower mobility and so price differences become a greater issue. There appears to be little action that can be taken by regulators or any single lender to remove this particular feature of the market. There are some signs that the differential between customers may diminish as awareness of the ability to switch providers increases, although (even low) transaction costs will always provide a barrier to switching.

5.4. Market completeness and its drivers

Our analysis indicates that there are gaps in the product range in many countries, particularly relating to fixed term products and indexed adjustable rate mortgages, which are not broadly offered in some countries. In addition to gaps in interest rate variations, there are gaps in most countries in terms of products for higher risk borrowers and flexible and equity release products. Access to distribution and information is also limited in some markets with branch distribution dominating distribution channels and access to information and advice on products sometimes not available outside of this channel.

The quantitative and qualitative analysis has indicated a range of underlying causes of differences in completeness across mortgage markets, which we examine in turn.

5.4.1. Risk appetite of lenders/investors

In order to provide access to the mortgage product to a wide set of borrowers within a market, some lenders must be willing to take on the risk of lending to the highest risk borrower group including borrowers with high LTVs, sub-prime borrowers and self-certified borrowers. In many countries there appears to be little appetite from lenders to offer such loans and so in the absence of foreign entry this market remains unserved.

In markets where this group of borrowers in better served (e.g. UK) there are a group of profitable specialist mortgage lenders serving this market, although in many cases they are owned by the largest lenders. These specialists make use of mortgage insurance and MBS markets to transfer risk to insurers and investors respectively and have advanced risk management techniques to manage the underlying risks of their portfolios.

Given the ability to replicate these features in most markets, it appears that lender risk appetite is the main constraint to offering these loans and we have seen foreign entry into the high-risk segment in some geographies to exploit this gap. However, we also note that prudential supervision often puts pressure on bank lenders to avoid higher risk sectors, which both restricts supply of these products and encourages non-banks to engage in this type of lending.

5.4.2. Regulation

Mortgage regulation can clearly restrict the range of products that are offered. As an example all European mortgage bond markets stipulate conditions that the supporting mortgage pool must satisfy for example

LTV restrictions. Levels of early repayment fees may also be stipulated to address investor concerns over prepayment thus restricting these lenders ability to offer loans without early repayment fees.

Another example of regulation that restricts product choice is the usury law in Italy, which prevents lenders charging rates greatly in excess of the average rate and so precludes some high risk lending where higher margins would be required to cover the risk. This may to some degree be offset by the use of insurance products, where the price premium is charged as an insurance premium rather than a higher interest margin.

5.4.3. Caps on early repayment fees

Most of the countries in the study, with the exception of Germany and Denmark, are unable to charge full yield-maintenance fees on mortgages. Due to government regulation or consumer pressure, early repayment fees are capped (either by law or de-facto by the lending institutions). This in turn means that lenders must take some prepayment risk when a borrower takes out a fixed rate loan (which is possibly partially covered by the capped fee). Given the uncertainty of the value of the prepayment option, lenders often price these products at a premium to other products thus reducing their attractiveness to borrowers.

We have seen that in Spain and Portugal, fixed rate loans have been reduced to a small proportion of the total market (less that 5% of advances in both cases) as lenders must charge higher nominal rates to cover their prepayment risk and borrowers have preferred the lower priced variable rate products.

5.4.4. Consumer protection

Consumer protection legislation can work both ways – it can limit and broaden the range of product available to the borrower.

For example the stipulation in Spain that variable interest rates must be references to a published index limits the adjustable rate mortgage product range to indexed-linked products and outlaws reviewable rate products. On the other hand the menu of eligible indices offered to banks and consumers to choose from results in broad product choice. For example a consumer can trade a reduced risk for the bank against lower price, if agreeing to the application of a cost of funds index. Similarly, provision of rescission periods and product information can help to meet consumer needs that may not otherwise have been met.

However, sometimes consumer protection measures that are formulated without consideration to consumer preferences can act to restrict product choice due to the constraints that are placed on products. For example under the current Consumer Credit Directive it may not be possible to offer flexible repayment mortgages as one of the conditions of the Directive is that the amortisation schedule must be clearly stated in the contract.

5.4.5. Transaction costs

Transaction costs are an additional barrier to prepayment in addition to early repayment fees. High transaction costs reduce the attractiveness of products without early repayment fees and so may act to reduce completeness. This is because the transaction costs form a replacement for the fees and act to discourage free prepayment. These high transaction costs are composed of fees charged by lenders (which are often waived if the customer remortgages with the same lender), mortgage re-registration fees and taxes.

5.4.6. Taxation and subsidy

Government tax incentives have a major impact on the range of products offered. For example, tax deductibility of mortgage interest in the Netherlands has led to high LTV loans, interest only loans and longer loan terms. Similarly tax advantages for specialist products (e.g. Bauspar loans in Germany) allows a broader range of products to be maintained in the market but can restrict the development of integrated products (e.g. high LTV loans in Germany)

Direct subsidies, such as in France, also allow mortgages to be offered to a wider range of borrowers thus widening access to the mortgage product. However they can also act to stifle the creation of product markets such as sub-prime loans.

Tax treatment can also restrict the product range, for example in Spain offset mortgage products are not feasible as the savings interest component is fully taxed rather than offset against mortgage interest for tax purposes, thus removing the main incentive to purchase the product.

5.4.7. Access to capital and insurance markets

Access to capital market funding mechanisms has been historically an important determinant of lender willingness to offer, and regulators willingness to allow, products, especially long-term and fixed rate products.

Lenders predominantly funding themselves through the capital market tend to offer a more limited set of products than universal banks. In the US this process of standardisation was accelerated by the creation of specialised housing finance enterprises Fannie Mae and Freddie Mac.

Many of these lenders are unable to offer long-term fixed rate products without early repayment fees as they cannot transfer the interest rate and prepayment risk to investors (e.g. by issuing callable bonds) or only at an elevated cost to the borrower.

This restriction needs to be seen against the benefits of capital market funding over deposit funding. Access to mortgage bond or MBS funding has the potential to lower the funding cost of long-term fixed rate loans as it provides access to a large pool of investors with appetite for such risk, increasing liquidity.

Access to mortgage insurance can also act as an enabler to offering higher risk products as the insurer can take on the risk rather than the lender and can do this more efficiently due to greater diversification of risk. Markets where mortgage insurance is more common such as the UK, have shown greater willingness to offer higher LTV products and loans to higher risk borrower groups.

5.4.8. Concentration of distribution

In many of the European markets studied distribution is highly concentrated among the banks' branch networks (Italy, France and Germany). This implies that most borrowers need to go to the branch to obtain a mortgage loan restricting the choice of the consumer. Whilst the majority of borrowers are comfortable going to a branch there may be a significant proportion that would prefer to access product information via phone or internet or obtain advice from a broker and so in such markets the consumer may not be fully served by the market.

5.4.9. Cultural factors and consumer demand

Finally, a key determinant of the range of products in a market is the level of consumer appetite for different types of product. For example lenders in Spain and Portugal feel that the relative lack of fixed rate products (>1 year reset) in their market is partly due to a historical cultural preference for variable rate products and a corresponding lack of customer demand for these products where offered. We should also note that in many markets, absolute price (i.e. the nominal rate) is an important factor in the selection of a loan thus favouring variable rate loans over fixed rate loans, as customers appear unwilling to pay the additional premium for fixing the interest rate. This may provide a significant barrier to take up of fixed rate products in some countries.

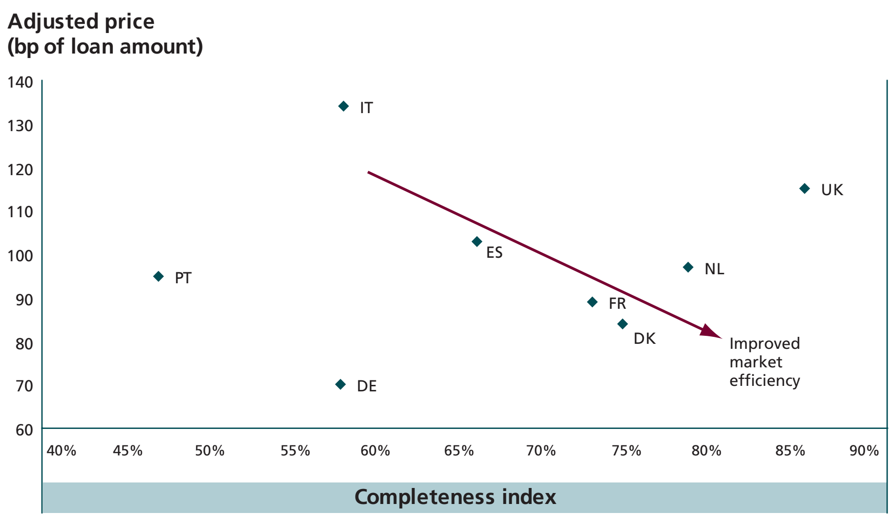
Similarly, local culture and customs influence other determinants of consumer demand. Cultural factors such as how and when wealth is passed from generation to generation and when people buy their first home are likely to affect the range of products offered within a market. The way in which the market has developed, also plays a key role in shaping consumer preferences as more established products will be more familiar to consumers. However, it is very difficult to assess the extent to which completeness is determined by lack of demand rather than lack of supply and there are many examples of newly introduced products finding customer demand that was previously thought not to exist.

6. Implications for European mortgage markets

In Chapter 5 we sought to explain the domestic efficiency and completeness picture, analysing economic, structural and policy-related explanatory factors. Based on our analysis of prices and lender economics, we see a situation of generally low returns and relatively low and clustered adjusted prices, suggesting that the markets are broadly efficient from a consumer perspective. We concluded that nominal pricing differences are mainly due to product variations and that the underlying differences usually reflect structural factors facing the banking industry, such as labour market rigidities, taxation and subsidies. There are gaps in most countries in terms of product range and the range of borrowers served often driven by regulation, consumer preferences, taxation and other structural factors.

On the other hand, we have identified room for both enhancing the product range and range of borrowers served and improving efficiency through reducing the cost of mortgage provision. This is true for both closing the performance gaps between markets and taking average performance to a higher level as evidenced by the most cost efficient providers within a country. We see from Figure 6.1 that markets vary in terms of price levels and completeness. The benefits described below aim to move markets in the direction of the arrow, although the extent to which these gains are possible clearly depends on the starting position of the market.

Figure 6.1: Adjusted price and completeness index



Source: Mercer Oliver Wyman
Note: Adjusted price calculations are not adjusted for the impact of any product cross-subsidisation or government subsidies, which may distort comparisons across countries

In this chapter we estimate the benefits of closing efficiency and completeness gaps, assess how much of these benefits could be delivered via greater integration of European mortgage markets and examine the main barriers to achieving those benefits.

6.1. Evaluation of benefits

Using the results of the previous chapters we list the suggested gaps in efficiency and completeness and roughly estimate the size of each of the gaps in terms of potential benefit to consumers. We note that some of these benefits could be realised via greater integration and some via domestic changes alone and so following estimation of the overall benefits available we divide the overall benefit estimate into benefits from integration and benefits from domestic change.

Estimating the benefits available from improvements in efficiency and completeness is extremely hard. We have made a high level estimate of the range of potential benefits using simple assumptions and our approach is therefore open to challenge. However, we believe that the exercise of assessing the benefits is a valuable one and that the priorities that emerge are valid.

We see three main sources of benefits that will arise through improved efficiency and completeness in mortgage markets:

1. Reduction in costs from improved (cost) efficiency resulting in increased consumer and producer surplus
2. Introduction of new products, resulting in increased surplus as existing customers switch product
3. Introduction of new products creating new mortgage markets by providing access to the mortgage product to new customers

Figure 6.2 and Figure 6.3 provide a summary of the economic issues identified in Chapter 5, the potential impact of these issues. We estimate their quantitative impact in terms of the cost/benefit that each provides to consumers. We have measured each in terms of a percentage per year of current outstanding lending in the EU, which could be converted into a percentage of EU GDP if we assume that outstanding residential mortgages are roughly equal to 40% of EU GDP[22]. Please note that all benefits estimates apply to residential mortgage markets only (benefits accruing to both consumers and producers) and do not include any externalities associated with changes to the mortgage markets.

Footnotes

[22]European Mortgage Federation Hypostat 1991-2001

Figure 6.2: Economic issues and estimated benefits – market efficiency

Main economic issues	Cases	Estimated quantitative impact (bp of EU outstandings)	Assumptions	Benefits realisable via domestic change or via integration
High servicing costs – insufficient scale or barriers to entry – insufficient loan size – structural factors	Italy, Portugal France, Italy, Portugal France, Germany	6-12bp	10-20bp 60% of EU total	Mainly domestic Integration offers further scope for cost reductions
High funding costs for secondary market funding (Covered bonds, MBS, etc)	UK, Italy, Portugal, Netherlands, Denmark, Spain, France Germany[23]	2-8bp	10-20bp liquidity mark up for less liquid instruments over Jumbo Pfandbriefe 20- 40% of EU total funded via capital markets (projected estimate assuming lower funding costs – currently ~25%)	Integration
Artificially low adjusted price/ subsidisation **(Product subsidies, government subsidies)**	Germany, France, Portugal, Spain	10-15bp (negative)	20-30bp of subsidisation benefit 50% of EU total	N/A
High origination and distribution costs	France, Italy	2-3bp	10-20bp reduction in costs 15% of EU total	Domestic
High enforcement costs	Spain, Portugal, Italy, France	<1bp	1-2bp 25% of EU total	Domestic
High transactions costs	France, Italy, Netherlands, Denmark	1-2bp	Reduce up front transaction costs by 50bp of the loan size – amortised over a 10 year holding period 30% of EU total	Domestic
Lack of diversification of credit risk across countries	All	1-2bp	5-10% reduction in capital Economic capital of 2% of loan size at 8% cost of capital	Integration

Footnotes

[23](Lower) Benefits through depth of single-asset class bond issues, increasing transparency and ease of pricing

Figure 6.2: Economic issues and estimated benefits – market efficiency

Main economic issues	Cases	Estimated quantitative impact(bp of outstandings)	Assumptions	Benefits realisable via domestic change or via integration
Prepayment protected fixed-rate market small or inexistent	France, Spain, Portugal, Italy, U.K.	1-3bp	Increases benefit by 10-20bp for 20-40% of borrowers (access to FRM product)40% of EU total	Can be realised via domestic channels although integration may speed process
No prepayable long-term fixed rate mortgage	All countries except Denmark(France Germany and Netherlands have long-term reset FRM)	1-4bp	Increases benefit by 10-20bp for 10-20% of borrowers 95% of EU total	Can be realised via domestic channels although integration may speed process
Index-linked adjustable-rate market small or inexistent	Germany	1-2bp	Increases benefit by 10-20bp for 20-30% of borrowers (access to adjustable rate mortgage) 35% of EU total	Domestic
Subprime and non-conforming market small or inexistent	Denmark, Germany, France, Netherlands, Spain, Portugal, Italy	10-15bp	2% benefit for incremental 5-10% of the market 70% of EU total	Unlikely to be fully developed via domestic channels – integration would speed process
High-LTV market small or inexistent	Denmark, France, Germany, Italy, Spain, Portugal	3-6bp	1% benefit for additional 5-10% of the market 60% of EU total	Unlikely to be fully developed via domestic channels – integration would speed process

6.1.1. Potential benefits from improved efficiency

As mentioned in our conclusions above, the main improvements in efficiency will come from improvements in cost levels, which may be passed on to consumers in the form of lower prices. Below we present a summary of benefits associated to individual elements of cost and price efficiency. Benefits are estimated by first estimating the benefit available through reducing costs and/or prices and then applying it to the proportion of the market (by size of mortgage balances) in which the identified efficiency gap was identified as indicated by the cases column in Figure 6.2:

- Servicing costs are a large proportion of operating costs in most countries and we see a large range in servicing costs both between countries and between servicers within countries. Use of outsourcing has shown that costs levels can be reduced even for small lenders. Looking at differences in servicing costs between countries, we estimate that savings of 10-20bp of outstandings can be made in the least efficient countries with fewer savings in the most efficient servicing countries such as Netherlands, Spain and UK, although clearly in these countries there are cost savings to be made by the least cost efficient lenders. We have therefore assumed benefits of 10-20bp for 60% of the total EU market giving an estimated potential benefit from reduced servicing costs of 6-12bp of total EU lending.
- Funding costs are another key area where benefits may be realised. We observe that liquid European markets exist for government bonds and large covered bonds but to a lesser extent for corporate bonds, MBS and some covered bonds. Obtaining benchmarks to assess liquidity benefits from a broader and deeper capital market in residential mortgage instruments is difficult. The two largest similar markets are the US agency bond market (which has an implicit government guarantee thus distorting spreads) and the German Jumbo Pfandbrief market (which is mainly composed of issues backed by public sector assets and to a lesser extent of commercial and residential mortgage backed assets[24]). Both markets have shown considerable volatility in the past five years, so interpretation requires some degree of caution. We proceed in two steps:
  - **Step 1**: We have chosen to take the German Jumbo Pfandbrief market as our benchmark as volatility seems to have subsided recently, while US agency debt volatility is rising. Also US agency debt is widely held to be implicitly backed by the federal government while Pfandbriefe are not, bringing them closer to the ideal of a corporate bond funded mortgage market. The average spread of 10-year Jumbo Pfandbriefe over government bonds over H1 2003 was approximately 18bp[25]. Given that the majority of Jumbo Pfandbrief issues are backed by public lending we have adjusted this benchmark upwards to 20-25bp for mortgage bonds[26].
  - **Step 2**: To estimate the benefit from a wider EU capital market we compare this very liquid benchmark with a less liquid market as seen currently in Europe's MBS and individual mortgage bond markets. Given the lack of available data elsewhere we have chosen Danish 30-year mortgage bonds, which currently trade at an option-adjusted spread of approximately 35bp-45bp over government bonds[27]. This suggests a liquidity benefit of approximately 10-20bp from greater liquidity. Danish mortgage bond market is a small (in terms of the total EU mortgage market) but relatively liquid market and so improvements in smaller mortgage bond markets and MBS markets

Footnotes

[24] Public sector asset backed Jumbos may contain up to 35% of mortgage assets and vice versa
[25] Source: VDH
[26] Source: Einflußfaktoren auf Jumbo-Pfandbrief spreads, Johannes Rudolph, HSBC Trinkhaus & Burchkhard, June 2003
[27] Source: Interviews with bond traders, Danish Mortgage Bonds, May 2003, Realkredit Danmark. Note that the 10-year government bond is used as a benchmark for the 30-year mortgage bond has a shorter duration due to prepayment and amortisation

could be larger than this. If such liquidity was available then it is likely that a much larger proportion of mortgage funding would be completed through the capital markets than is currently the case (approximately 20-25% of total mortgage outstandings are funded by mortgage bonds and MBS). Moreover, with more liquid instruments, the currently near universal practice of pooling mortgage collateral of different credit risk characteristics (agricultural, various forms of commercial and residential) could be gradually reduced and more single-asset class covered bonds could emerge. This would increase bond transparency, simplify bond pricing, add to the specialisation capacity of issuers and thereby reduce spreads further. We make the assumption that the liquidity benefit applies to 20-40% of the residential mortgage market yielding an overall benefit of 2-8bp.

- Subsidisation either via equity subsidisation from mutual and government institutions or via other products produces a benefit for mortgage borrowers and its removal would likely ***increase*** the price of mortgage lending. We estimate that this effect equates to roughly 20-30bp (8% cost of capital on 2% economic capital gives 16bp excluding product cross-subsidies) and affects approximately 50% of the market. We estimate that removal of subsidies could increase prices by 10-15bp on average across the EU and this is therefore likely to be a significant factor in the development of mortgage markets going forward.
- Origination and distribution costs are high in some countries, often due to inefficient processes. However, looking at gaps in distribution and origination costs between countries, the maximum benefit from cost reduction in this area is only estimated at 10-20bp for the highest cost countries since reduced costs are spread over the lifetime of the loan. These benefits would only be realised in a small proportion of countries, since origination and distribution costs are much lower in many of the countries studied leading to an estimate of 2-3bp of benefit through reduced origination costs.
- We have a similar situation with high enforcement costs. These do not represent a high proportion of lenders' cost bases and so our estimated benefits are small at 1-2bp. Similarly these benefits will not be realisable in all countries and so the overall benefit is estimated to be at most 1bp. There may be an increase in volumes through better enforcement costs due to reduced credit rationing, particularly in less-developed markets although we have not attempted to quantify that effect here.
- The benefits of reducing high transaction costs (e.g. legal fees, valuation, taxes and registration) which implicitly block prepayment are estimated to be approximately 50bp over the period of the loan or approximately 5bp p.a. High transaction costs (identified as the four countries shown in Figure 3.19 in which the loan-related transaction costs are greater than 1.5% of the loan amount[28]) apply in 30% of the market and so the overall EU benefit is estimated as 1-2bp.

Footnotes

[28]Spain, France, Denmark, Netherlands

- Finally, benefits will accrue through greater diversification of credit risk via the creation of cross-border asset pools (via lenders or insurers). We estimate that could reduce capital requirements by as much as 5-10%[29]. Assuming economic capital of 2% of the loan size and 8% return on capital yields a benefit of 1-2bp.

Whilst many of these estimates are broad in nature, the total potential benefit looks a realistic long-term goal given the current differences in cost efficiency observed between the most and least efficient lenders and markets. Excluding the effects of subsidisation we estimate that the potential efficiency benefit available through closing the identified gaps is approximately 15-30bp in total which equates to roughly 0.06% to 0.12% of EU GDP[30].

6.1.2. Potential benefits from improved completeness

Estimating the benefits from improvements in completeness is by its nature difficult. This is because the benefits occur in the form of increased utility for customers that would switch to the new product rather than and the utility from customers that would not previously had access to the product itself. Demand elasticities are important here and are likely to be different by country due to different cross-elasticities (e.g. with the rental sector). However, we have not attempted to differentiate demand elasticities by countries due to lack of data in this area.

As described above, we attempt to quantify the benefit gained from the introduction of new products by first categorising the impact of the product introduction a demand effect in the existing market (i.e. products that address existing customers) or the creation of a new market (products that increase access to the mortgage product). For each of these we estimate the additional (consumer and producer) surplus created.

- Increasing the availability of fixed rate products is the first completeness gap to assess. There are two products considered here: long-term fixed rate products with and without early repayment fees. Assessing the likely take-up of these products is difficult, as consumer preferences are a key driver. However, based on European averages[31] we estimate that in total 30-60% of customers would choose to purchase long term fixed rate products if both prepayable and prepayment protected options were available. Estimating the proportion of these customers that would choose the prepayment option is harder as no market offers both options for otherwise identical products[32]. Demand will depend upon the preferences of the borrower and the cost of the prepayment option. We have made the assumption that one-third will choose to pay the higher interest rates

Footnotes

[28] This assumes that the risk benefits of diversification and insurance are acknowledged by regulators when setting capital requirements.

[29] Note that this estimate is for the benefits accruing to mortgage borrowers and producers only and do not include any externalities associated with changes to the mortgage markets.

[31] 36% of new residential lending in 1999 was fixed rate for longer than 5 years- Source EMF 1999

[32] Denmark is currently introducing legislation that will allow banks to offer both prepayable and prepayment protected loans for 10-year fixed products

for the prepayment option, although this is open to challenge. Finally, we make the assumption that customers would be prepared to pay an additional 10-20bp (2-4% of total costs) for the preferred product. Applying these assumptions to the markets where these fixed rate products do not exist yields overall benefits of 1-3bp for prepayment-protected products and 1-4bp for prepayable FRMs.

- We use a similar approach to estimate the value from introducing a reasonably priced indexed adjustable rate mortgages in Germany. Assuming that 20-30% of customers would be willing to pay an additional 10-20bp for the product, gives an EU benefit (adjusting for the fact that this is only relevant for Germany) of 1-2bp.

- Access to new borrowers (from the rental sector or from overcrowding) and the creation of new mortgage markets creates the greatest benefit from improvements in completeness. The introduction of products for subprime and non-conforming borrowers in particular will provide wider access to the mortgage product and lead to greater benefits for consumers. Based on margins after risk costs in UK and US, observe that customers are willing to pay higher amounts than the increased risk profile would suggest, suggesting inelastic demand. We therefore estimate that the total surplus i.e. the average amount that customers would be prepared to pay above the cost of the industry to supply the product are roughly 2% of the loan. Secondly, we estimate that an additional 5-10% of the market could be served via the introduction of these products. This is based on the UK where approximately 7% of mortgage completions are sub-prime loans alone. Given that such products are small or non-existent in 70% of the EU market the overall potential benefit from their introduction could be as high as 10-15bp. In some markets (e.g. Netherlands, France, Germany) rental subsidies may act to reduce these benefits by suppressing demand for such products.

- Finally, we estimate the benefit of introducing higher LTV loans in a similar way. Here we estimate that an additional 5-10% of the market will now access the mortgage product, as the equity requirement is lower. We estimate the average benefit as 1%, since for these customers as demand is likely to be more elastic than for non-conforming loans. Maximum LTV restrictions of 90% or less apply in 60% of the EU market. Applying the projected benefit to this proportion of the market estimates the overall benefit as approximately 3-6bp

We estimate that the benefits from improved completeness of EU markets could be a 10% expansion in the market size through providing access to new borrowers and provision of more suitable products to approximately 25% of the existing borrower population, thus improving overall utility from the mortgage product. We have not estimated the impact on price of these benefits since that will depend on demand and supply elasticities. Given the broad assumptions evaluating utility from the mortgage product outlined above, we estimate a total potential benefit from completeness improvements (accruing to both consumers and producers) of 15-30bp of current outstanding residential mortgage lending which equates to roughly 0.06% to 0.12% of EU GDP[33].

Footnotes

[33] Note that this estimate is for the benefits accruing to mortgage borrowers and producers only and do not include any externalities associated with changes to the mortgage markets

6.2. Possible benefits of increased integration

The mortgage markets studied are very separate markets with their own characteristics and economics. There is little overlap between the markets in terms of market participants other than the presence of global investors in mortgage bond and MBS instruments.

We see three core channels of integration of mortgage markets:

- **Cross-border lending and insurance**: Organic entry into a foreign market
- **Mergers and acquisitions:** Entering foreign markets through the acquisition of an existing lender
- **Asset transactions:** creating loan portfolios or MBS pools that contain loans from multiple markets

All three of these channels are very small at present with very few cross-border lenders, few cross-border mergers involving mortgage lenders and limited multi-national portfolio transactions or MBS pools.

Section 6.1 estimated the total benefits from closing completeness and efficiency gaps. We have not yet separated the benefits that could arise from greater integration from those that are available via changes in national conditions alone. We see a number of potential benefits directly arising from increased integration of EU Mortgage markets:

- Improvements in market completeness through introduction of new products and competencies from foreign providers.
- Increased cost efficiency through economies of scale
  - Liquidity gains from larger asset pools e.g. capital market funding
  - Servicing, funding and risk management benefits
- Diversification effects on loan and securities portfolios reducing credit risk
- Improved capital efficiency i.e. the ability to transfer capital from low return markets to higher return markets

In relation to completeness we expect, based on empirical evidence, that foreign entry will, in many cases, be the most likely method for achieving the benefits described. There is some evidence from interviews that a proportion of gaps, such as index-linked products in Germany and long-term fixed rate products in the UK may be filled via domestic change but it appears that restrictions on borrower types, LTVs and more innovative products are unlikely to change without foreign entry. We therefore estimate that as much as 10-20bp of the total estimated benefit of 15-30bp can be realised via greater integration, primarily realised via cross-border lending and M&A activity. As noted above there are still significant barriers to achieving this but in many areas (e.g. sub-prime lending) single product strategies have proved a viable method for entering new markets due to the specialised skill set required and high product margins.

In terms of the identified efficiency benefits, a large number of the benefits identified in Section 6.1 can be realised through changes in national conditions. For example there is still significant scope in most countries to reduce operating costs via domestic consolidation, automation of processes and better use of outsourcing.

However, the identified benefits from bond funding liquidity, credit diversification in particular and possibly some of the operating cost savings (e.g. through reduced risk management costs) will only be achievable through greater levels of cross-border activity. We therefore estimate that greater integration is required to deliver 5-10bp of the identified efficiency benefits and the remainder can be realised by changes to national conditions, particularly through cost rationalisation. The total identified benefits from both efficiency and completeness gains are therefore estimated to be 15-30bp of EU mortgage balances or 0.06%-0.12% of EU GDP.

However, it is clear from the current separation of markets and the predominant view of lenders that little further integration will occur, that there are currently significant barriers to achieving these benefits. We now examine the barriers to greater integration of mortgage markets in more detail in order to distinguish between market- and policy-induced drivers.

6.3. Barriers to cross-border activity and foreign entry

Given the potential benefits described above from greater integration of mortgage markets, we need to better understand the reasons why a single market has not developed i.e. What are the barriers to entering foreign markets?

Through our research into each of the markets and interviews with mortgage providers we have identified a number of barriers to cross-border activity, which we describe in more detail below.

6.3.1. Low financial returns on standalone mortgage strategy

This is the most important deterrent to foreign entry of mortgage markets. When making investment decisions, financial return will be the primary decision criterion for companies. The current low returns in European markets will act as a significant deterrent to market entry thus preventing the formation of a single market.

In addition to average returns, the cost of establishing a business are often high in the early years. This is because distribution and origination, along with any initial discount offered to the borrower, must be paid out in the first years of the loan. This factor, coupled with low returns makes the breakeven period on any investment quite long and makes cross-border expansion even less attractive than other options available to European lenders.

In some cases the situation of low financial returns is driven by subsidisation, either via product cross-subsidisation or via direct or indirect government subsidies (e.g. government owned lenders).

6.3.2. Lack of access to information

Lack of access to information on foreign mortgage markets is a key barrier to entry. When considering entering a new market or acquiring a company, mortgage lenders will require information on the market, such as information on credit quality and information on collateral values, all in a format that is compatible with the information available in their own market so that conclusions can be easily reached.

There are a number of barriers to achieving this ideal situation. Firstly, the information is not always collected. For example, land registries are not always complete and electronic databases have not been completed in all markets. Secondly, foreign lenders cannot always get access to information such as credit bureau data due to access restrictions. Finally, data is almost always in a format that is specific to the individual market and so requires a great deal of interpretation by a foreign lender to reach sensible conclusions. As an example LTV information is measured differently in each market using a combination of market value, foreclosure value and assessed value depending on the market.

The net impact of this situation is that lenders are often reluctant to consider other markets as they are unable to get a clear picture of the risks associated with the business.

6.3.3. Different laws regarding collateral

Collateral law and transparent collateral registration processes are key components of the mortgage system. A detailed understanding of the ability to recover property from defaulted borrowers is important for any mortgage lender. Complex variations in mortgage collateral law across countries make an assessment of the market difficult and make it important to obtain local expertise prior to entering a market. This often stops lenders form entering into cross-border lending although is less of an impediment to cross border M&A.

6.3.4. Transferability of mortgage loans

The inability to transfer loans from one lender to another in some markets restricts the integration of mortgage markets as it acts as a blocker to creation of multi-national loan portfolios and use of MBS markets. It also restricts the ability of a cross-border lender to build scale quickly in funding and servicing through purchasing loans from another lender.

6.3.5. Differences in regulation

As with collateral law, mortgage lenders must fully understand the regulation that applies in any market they plan to enter. Difference in regulation of products and lenders must be clearly understood and variations in regulation act as a deterrent to a single market. As an example differences in consumer protection across countries has been listed as a factor that deters foreign lenders from lending in new markets. While some of the regulatory differences seem reasonable, others such as barriers to marketing and advertising for non-domiciled institutions seem protectionist.

6.3.6. Tax barriers

Tax barriers still exist in some countries that discriminate against foreign lenders. For example in Italy taxes on the mortgage loan for authorised banks are 0.25% of the loan and for non-authorised banks approximately 2.5% of the loan thus effectively stopping non-authorised banks from the market. To qualify as an authorised lender, lenders must have a stable representation in the country, which is unlikely to apply to cross-border lending thus effectively eliminating foreign cross-border lenders from the market. Foreign entrants in Italy have then had to set up branch networks to avoid this tax disadvantage. A 2000 survey of tax practices in Europe[34] also identified a 10% withholding tax in Portugal that is levied on foreign lenders.

6.3.7. Currency and interest rate differences

The lack of a common currency with the Eurozone in Denmark and UK is an obvious blocker to greater integration of mortgage markets. Differences in currency and interest rates, will lead to additional risks and complexity for cross-border lenders lending into or out of these countries and may act to delay any activity prior to entry into the Euro for these countries.

6.3.8. Lack of access to distribution

Access to distribution is a very important component of any market entry strategy. In those market that are dominated by branch and tied distribution it is often difficult for a foreign entrant to access distribution and correspondingly difficult to achieve any significant market share. This leads lenders to seek to enter niche markets within these markets, where distribution is more specialised (e.g. sub-prime lending).

Markets where distribution is more accessible (e.g. Netherlands, UK) have seen a greater level of foreign entry as new lenders can access a larger proportion of the market without owning a branch network.

Similarly the ability to access third party servicing capabilities makes it much easier to enter a foreign market. In the Netherlands for example it is now possible to use local companies to distribute, originate and service loans leaving only funding, risk management and product design to the market entrant.

6.3.9. Inability to realise scale benefits cross-border

The ability to realise scale benefits or leverage capabilities in the core market into other markets are key drivers of cross-border expansion. However, in mortgage lending most lenders find this difficult to achieve, as mortgage processes are sufficiently different to require dedicated staff and systems for each country.

Footnotes

[34] European Mortgage federation 2000, Tax & Subsidy Related Problems when Taking out a Mortgage Loan across an EU Border – Residential Lending

Currently cross-border synergies are confined to funding and risk management as distribution, origination and servicing activities must be tailored to the national market. This observation is supported by the separation of the mortgage (and banking) activities of cross-border institutions in Europe (e.g. Fortis and Nordea), which retain separate businesses in each of their countries of operation.

6.3.10. Government intervention (e.g. take-over regulation)

Government and regulator intervention in cross-border mergers and acquisitions is a large deterrent to cross-border activity. In some countries foreign lenders are unwilling to bid for acquisition targets as they feel that national regulators will discriminate against entrants in favour of domestic mergers. Examples of such intervention include the role of governments and regulators in recent large domestic mergers in France and Italy.

Other forms of government intervention that act as barriers to integration include intervention via housing policy, which is closely related to residential mortgage lending and can act to change the attractiveness of individual markets to foreign entrants. This also acts to make entering new markets more complex as new lenders must also understand the impact of current and possible future policy.

6.3.11. Conclusions on barriers to integration

Figure 6.4 summarises the obstacles to integration in terms of market-induced obstacles and policy induced obstacles including legal, regulatory and tax barriers. While the list of regulatory, tax and legal obstacles is larger, we find that the largest obstacles come from the structure and economics of the mortgage markets studied, particularly the lack of profitability of the mortgage product.

Looking at the reasons for a lack of cross-border activity in mortgage markets and the lack of a single market we observe that many of the barriers to foreign entry are caused by the different economics of mortgage lending in each European market. Entering the market using a standalone mortgage product strategy is likely to be unprofitable in many markets and only marginally profitable in others. Indeed we observe that the estimated level of returns is a key indicator of the level of foreign entry in a market. We note that this does not preclude cross-border M&A as an entry route as in some cases commercial banks are profitable where standalone mortgages are not.

One can argue that, in some cases, the lack of profitability is itself caused by government intervention in the form of direct participation in the sector (e.g. government-owned lenders that can force market prices down). However, eliminating this via policy is likely to prove particularly difficult.

Figure 6.4: Integration obstacles

Market-induced obstacles	Policy-induced obstacles
■ Low financial returns on a standalone mortgage strategy – Product cross – subsidisation – Acceptance of low returns – Long time to profitability ■ Lack of information on foreign markets ■ nability to realise cross-border scale benefits ■ Lack of access to distribution	■ Different laws relating to mortgages and collateral ■ Non-transferability of mortgage loans ■ Differences in consumer protection policy ■ Taxation – Barriers to entry – Tax treatment of mortgage product and providers ■ Government intervention (e.g. take-over rules) ■ Currency and interest rate differences ■ Regulatory differences between markets

Secondly, information availability and quality is a key obstacle to greater integration of markets. Data is produced at a national level to varying degrees of quality by market. However, there is limited collection of data at a European level. The European Mortgage Federation and European Central Bank produce data on European mortgage markets but often data has different standards and formats across markets and so is very difficult or impossible to use to compare markets. For a lender looking to enter a market the availability of information in a format that he/she understands is a key enabler since its absence acts to discourage lenders from entering foreign markets.

However, differences in local regulation, law and taxation also present significant barriers to entry and so limit the formation of a single market and so any policy aimed at greater integration must consider these areas in addition to the stubborn market-induced obstacles.

6.4. Concluding remarks

The study has described and analysed European mortgage markets and provided a detailed assessment of the efficiency and completeness of mortgage markets and the benefits that could derive from greater integration of European mortgage markets.

Firstly, it described the eight selected European residential mortgage markets and assessed the completeness and efficiency of these markets using a number of indicators. Secondly, it examined expected trends in mortgage markets based on an extensive series of interviews with mortgage market participants in each of the markets studied. Using these analyses, the study explored the major drivers of differences in efficiency in completeness to help identify and quantify gaps where future benefits could be delivered. Finally it highlighted those areas where integration could deliver some of the benefits identified and described the major barriers to achieving greater integration and hence the benefits described.

The study found that differences in 'headline' mortgage prices between countries are largely due to product differences and variances in lender economics across markets are often driven by structural factors such as market size and structure, product cross-subsidies and regulation. There are gaps in most countries in terms of product range and the range of borrowers served, but these need to be seen, too, in the context of local economic circumstances, consumer preferences, taxation and other structural factors.

On the other hand, the study identified room in all markets for both enhancing the product range and the range of borrowers served and improving efficiency, primarily through reducing the cost of mortgage provision. The study found that significant benefits could be realised through greater integration of mortgage markets, although it also identifies a number of barriers to achieving them, most significantly the lack of profitability of mortgage lending and poor information availability and quality.

The next step is to identify policy options that will act to overcome these barriers and so achieve the benefits that could arise through greater integration of residential mortgage markets. It is anticipated that the European Mortgage Federation will make policy proposals towards the end of 2003, but in the intervening period the study will provide a key input into the discussions in the Forum Groups set up by the European Commission to discuss integration of European mortgage markets.

Bibliography

BATCHVAROV A., COLLINS J., DE PAUW X., SPENCER J.
AND W. DAVIES, 2002
"Merrill Lynch Guide to International Mortgage Markets and Mortgage-backed Securities"
Merrill Lynch, London

BANCA D'ITALIA
Annual Reports

BANQUE DE FRANCE
Annual Reports

COLTON K., 2002
"Housing Finance in the United States – The Transformation of the U.S. Housing Finance System"
Joint Center for Housing Studies at Harvard University
Cambridge, MA.

COUNCIL OF MORTGAGE LENDERS
Annual Reports
London

DANISH NATIONAL BANK, 2002
"Financial Stability"

DANMARKS STATISTIKS
Statistical Yearbook 2001

DATAMONITOR
"European Mortgages 2000"
"European Retail Mortgages 2001"

DEUTSCHE BUNDESBANK
Monthly Report, May 2003

DIAMOND D. and LEA M., 1992
"Housing Finance In Developed Countries: An International Comparison of Efficiency"
Journal of Housing Research, 3(1).

DÜBEL A., LEA M., and R.WELTER, 1997
"Study on Mortgage Credit in The European Economic Area Structure of the Sector and Application of the Rules in the Directives 87/102 and 90/88"
Study commissioned by the Commission of the European Communities (DG XXIV). Brussels.

DÜBEL, A., and M. LEA, 2000
"Micro- and Macroeconomic Consequences of Residential Mortgage Prepayment. Evidence from the Denmark, France, Germany, the United Kingdom and the United States"
Schriftenreihe des Verbandes Deutscher Hypothekenbanken. Fritz Knapp Verlag. Frankfurt.

EMU, 2003
"Housing, Consumption and EMU"

EUROPEAN CENTRAL BANK, November 2002
"Structural Analysis of the EU Banking Sector, Year 2001"

EUROPEAN CENTRAL BANK, March 2003
"Structural Factors in the EU Housing Market"

EUROPEAN CENTRAL BANK, March 2002
"National Retail Interest Rate – Methodological notes"

EUROPEAN MORTGAGE FEDERATION, 2002
"Fact Sheets"

EUROPEAN MORTGAGE FEDERATION
"Hypostat 1991-2001"

EUROPEAN MORTGAGE FEDERATION
Quarterly Reports 2002

EUROPEAN MORTGAGE FEDERATION, 2002
"Efficiency of Mortgage Collateral in the European Union"

EUROPEAN MORTGAGE FEDERATION, 2000
"European Survey 2000 – Tax & Subsidy Related Problems When Taking Out A Mortgage Loan Across An EU Border – Residential Lending"

EUROPEAN MORTGAGE FEDERATION, February 2002
"Methodological Note On Defaults And Losses In Mortgage Lending"

EUROPEAN MORTGAGE FEDERATION, December 2001
"Mortgage Bond and Mortgage-Backed Securities in Europe – a Survey on Recent Developments on European Markets"

EUROPEAN MORTGAGE FEDERATION, 2002
"Mortgage Credit in 2001-2002"

EUROPEAN MORTGAGE FEDERATION, November 2002
Conference on Affordable Housing presentation

EUROPEAN MORTGAGE FEDERATION, September 2002
EuroCatalyst Conference
Madrid

EUROPEAN SECURITIZATION FORUM, 2002
"A Framework for European Securitization"
London

EUROPEAN SECURITIZATION FORUM, 1999
"A Resource Guide"
New York

EUROPEAN UNION, 5 March 2001
"European Agreement on a Voluntary Code of Conduct on Pre-Contractual Information for Home Loans"

FITCH
European Structured Finance Special Reports, 1999-2001
Residential Mortgage Default Models for Germany, France, UK, Netherlands, Spain

HAGEN L., HOLTER R., September 2002
"Implications of Basel II for the Risk Management of German Mortgage Banks"
Housing Finance International, Vol. XVII/No.1

HARDT J.
"Funding Mortgage Loan: Where is Europe Heading?"
European Mortgage Federation

HEINEMANN F., JOPP M., 2002
"The Benefits of a Working European Retail Market for Financial Services – Report to European Financial Services Round Table"
Institut für Europäische Politik, Berlin

HEINEMANN F., SCHULER M.
January 2002
"Integration Benefits on EU Retail Credit Markets – Evidence from Interest Rate Pass-through"
Zentrum for Europaische Wirtschaftsforschung (ZEW), Mannheim

KRETSCHMAR T., RUCHTI G.
Europace Sets a Standard in Mortgage Brokerage
CMSA

KLEIMEIER S., SANDER H., January 2002
"Consumer Credit Rates in the Eurozone – Evidence on the Emergence of a Single Retail Banking Market"
European Credit Research Institute
Report No.2

LEA M., February 2000
"Global Models for Funding Housing: What is the Best Model for Poland?"
PricewaterhouseCoopers

MERCER OLIVER WYMAN, 2003
The New Rules of the Game – Implications of the New Basel Capital Accord for the European Banking Industries

MASTROENI O., 2001
"Pfandbrief-Style Products in Europe"
European Central Bank

NEFTCI S., 2001
"European Mortgage Markets' Securitisation Process"
Master's Thesis – Master of Science in Banking and Finance
University of Lausanne

PFANDBRIEF BANK INTERNATIONAL
"Annual Report 2001"
Luxembourg

REALKREDIT DANMARK, 2001
"Danish Mortgage Bonds 2001 Market Overview"

REALKREDIT DANMARK, May 2003
Danish Mortgage Bonds

REALKREDITRÅDET, 2001
"Realkreditten i tal 2001"

REALKREDITRÅDET, November 1998
"Danish Mortgage Bonds"

RICS, 2000/2001
European Housing Review

SLEATOR A., 2002
"European Covered Bonds: Moody's Rating and Analytical Approach"
Moody's Global Credit Research, London

THE ECONOMIST
May 31st, 2003
"A Survey of Property"

THOMPSON J.K., 1995
"Securitisation – An International Perspective"
OECD, Paris

VERBAND DEUTSCHER HYPOTHEKENBANKEN (Association of German Mortgage Banks), 2002
"The Pfandbriefe – Europe's Biggest Bond Market. Introducing the Classical funding Instrument of German's Mortgage Banks"
"The Pfandbrief – Europe's Biggest Bond Market. 2002 Facts and Figures"
Berlin

Mercer Oliver Wyman is a leader in financial services strategy and risk management consulting. Covering all the major global financial markets in North America, Europe and Asia, our practice spans all segments of financial services: retail, corporate/commercial banking, capital markets, investment banking, insurance and technology/service providers to financial services. Our clients are the top global and domestic names in the sector, where we work both at group level and within individual business units. The range of topics we address for clients is underpinned by our unique core competence: value, finance and risk management for the financial service company. The second unique aspect of our client assignments is our highly expert work within lines of business where the depth of our experience and expertise helps senior management design and implement strategic and tactical improvements. Our expertise is based on a systematic understanding of the customers that our client business unit managers are serving and the competitive dynamics that they face in their own product/ distribution segments. The third unique aspect of our practice is the proprietary research and industry contacts that enrich and inform our client work. Ranging from internal and co-operative research into aspects of financial services to regular liaison with regulatory and supervisory organisations. While most of our client work is confidential, several recent projects in the public domain give a flavour of our value to clients:

- Solutions for the long-term retail savings market in the UK (for the Association of British Insurers)
- Design and implementation of franchising the retail branch network (for a European Retail Bank)
- Future of European wholesale banking (together with Morgan Stanley Equities)
- Supervision of global bancassurance conglomerates (for the Dutch regulator)
- Development of multiparty middle-market corporate risk ratings (jointly with Moody's)

The European Mortgage Federation (EMF) is the voice of the European mortgage industry. It groups national associations as well as individual lenders from all European Member States as well as Switzerland, Norway and EU accession countries. Together, its members grant over 75% of residential and commercial mortgage loans in Europe. Mortgage lending is a growth industry. The volume of mortgage loans outstanding has more than doubled in nominal terms since 1991 and exceeded 4 trillion EUR at the end of 2002. This represents an average annual growth rate of 8%.

The Federation is based in Brussels and its Secretariat currently has 9 members of staff who provide support to a number of working parties and committees covering economic, legal, capital market and statistical issues.

The Federation monitors the initiatives taken by EU institutions which have an impact on the mortgage industry. In particular, it focuses on issues such as:

- Capital markets and the funding of mortgage loans through the issue of mortgage bonds and mortgage backed securities
- The security and enforceability of mortgage collateral
- The transparency of consumer information
- The impact of capital adequacy rules on the mortgage industry

The Federation is the key-talking partner of the European Commission, the Banking Advisory Committee, the European Central Bank and the Basel Committee on all questions relating to the European mortgage industry.

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