

Recent Trends and Developments in European Mortgage Markets

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Ten years ago, persistent dysfunctionalities on mortgage markets inherited from the previous decade greatly contributed to the largest financial crisis in half a century. Since then, significant deleveraging processes have been observed in some EU markets, such as Ireland, Portugal and Spain, where the ratios of outstanding residential lending to household disposable income have contracted markedly. In these economies, the 2016 volumes recorded for both outstanding and gross residential lending were much below 2007 levels, although a timid recovery could be observed in recent years. By contrast, the volume of mortgage activities moved around significant upward paths in Belgium, France, Germany and Sweden, and stagnated somewhat in the Netherlands and Denmark.

In terms of products, excluding Sweden, the share of adjustable-rate mortgages (ARMs) for gross residential lending has been moving along downward trends in all the analysed mortgage markets. And these downward trends have deepened in all countries (excluding the UK and Sweden) in the last three years. As a result, the aggregate ARM market share contracted markedly in the last decade. Whereas fluctuations in current spreads between ARM rates and fixed-rate mortgage (FRM) rates appeared overall to be a powerful driver behind the ARM market share over the last decade, this impact seemed to trail off in the last four years. In the current context where FRMs are considered to be historically low, many households are likely to anticipate increases in fixed interest rates on the foreseeable horizon, resulting in greater preference for FRMs, no matter the level of spreads. Other factors related to mortgage and household characteristics could also impact on this preference for FRMs: the average amount of mortgages, evolution of household income, etc.

Finally, some encouraging signs of convergence in recent years in spreads, ARM market shares as well as ratios of household residential debt to disposable income could contribute somehow to reinforcing the consistency and efficiency of euro monetary policy.

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1. Outstanding lending versus gross lending

The volume of mortgage activity can be approached through two methodologies: outstanding lending or gross lending. While the former concerns the total amount of residential loans on the lenders' books at the end of the period, the latter places the focus on the amount of residential loans advanced during the period. Gross lending includes new mortgage loans and external remortgaging (i.e. remortgaging with another bank) in most countries. For most cases, internal remortgaging (i.e. remortgaging with the same bank) is not included.

Considering outstanding loans in ten EU mortgage markets (Belgium, Denmark, France, Germany, Ireland, the Netherlands, Portugal, Spain, Sweden and the UK), mortgage markets have increased significantly in the last decade in most of these economies.¹ In 2016, outstanding lending at current prices was indeed markedly above 2007 levels in Belgium (+32.0%), Germany (+73.3%), Denmark (+18.8%), France (+40.6%), the Netherlands (+14.4%), Sweden (+89.2%) and the UK (+20.7%). On the other hand, it decreased significantly in Portugal (-6%) and Spain (-12.7%), and tremendously in Ireland (-40.6%).

Relative measures reveal a rather different picture, mirroring broad deleveraging dynamics in many EU economies. For example, between 2007 and 2016, the ratio of outstanding residential lending to GDP decreased in half of the covered countries: Germany (-2.4 percentage points or pp), the UK (-3.3 pp), Portugal (-6.2 pp), Spain (-8.8 pp) and Ireland (-35.1 pp). In the meantime, the ratio stagnated somewhat in Denmark and the Netherlands, and rose appreciably in Belgium (+10.3 pp), France (+7.5 pp) and Sweden (+19.8 pp). In more recent years (2013–16), marked downward trends were recorded in Denmark, Spain, Ireland, Portugal and the UK.

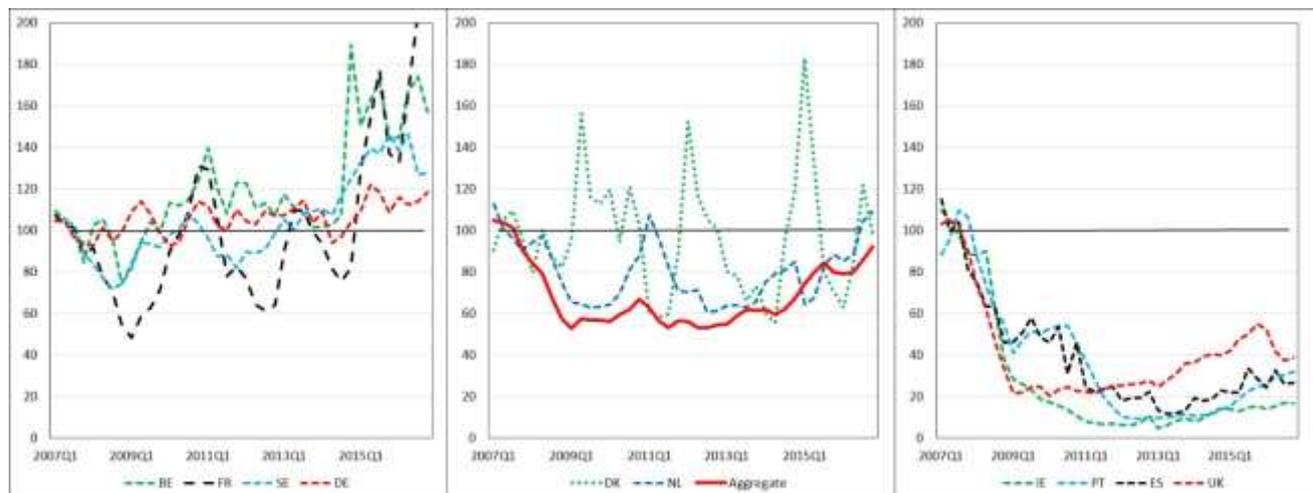
Deleveraging processes are even stronger when considering outstanding residential lending to the disposable income of households. Over the last decade, the ratio contracted in six countries: Germany (-2.4 pp), the UK (-7.9 pp), Portugal (-8.2 pp), Spain (-18.0 pp), Denmark (-18.8 pp) and Ireland (-58.9 pp). Nevertheless, these downward trends eased somewhat in the last four years, excluding Portugal. It is worth noting that after having continually diverged between 2001 and 2009, the ratios of outstanding residential lending to disposable income converged continually from 2010 within the panel of countries.² However, excluding Germany (where it decreased by 5.30 pp), the ratios registered in 2016 remained much above the levels observed at the introduction of the euro in 2001.

As regards gross residential lending, the differentiation in trends across countries was more pronounced. As shown in Figure 1 below, there are broadly three groups of countries. Within the first group, gross lending overall moved around significant upward paths between 2007 and 2016. In 2016, the volume of new loans and external remortgaging stood much above pre-crisis levels in Belgium (+60.7%), France (+86.6%, owing to very dynamic remortgaging in recent quarters), Sweden (+31.4%) and Germany (+15.2%). Contractions were recorded in the other countries, albeit with different intensity: low in Denmark (-8.3%) and the Netherlands (-3.1%), and very sharp in the UK (-57.5%), Portugal (-70.5%), Spain (-72.6%) and Ireland (-84.3%). Still, since 2013, gross lending has increased in all ten countries, notably on the back of a gradual macroeconomic recovery.

¹ Data come from the ECRI Statistical Package 2016.

² This concerns σ -convergence: when the dispersion of the ratios across the countries analysed falls over time, there is σ -convergence.

Figure 1. Gross mortgage lending (in domestic currencies, deseasonalised quarterly data, average of 2007 = 100)



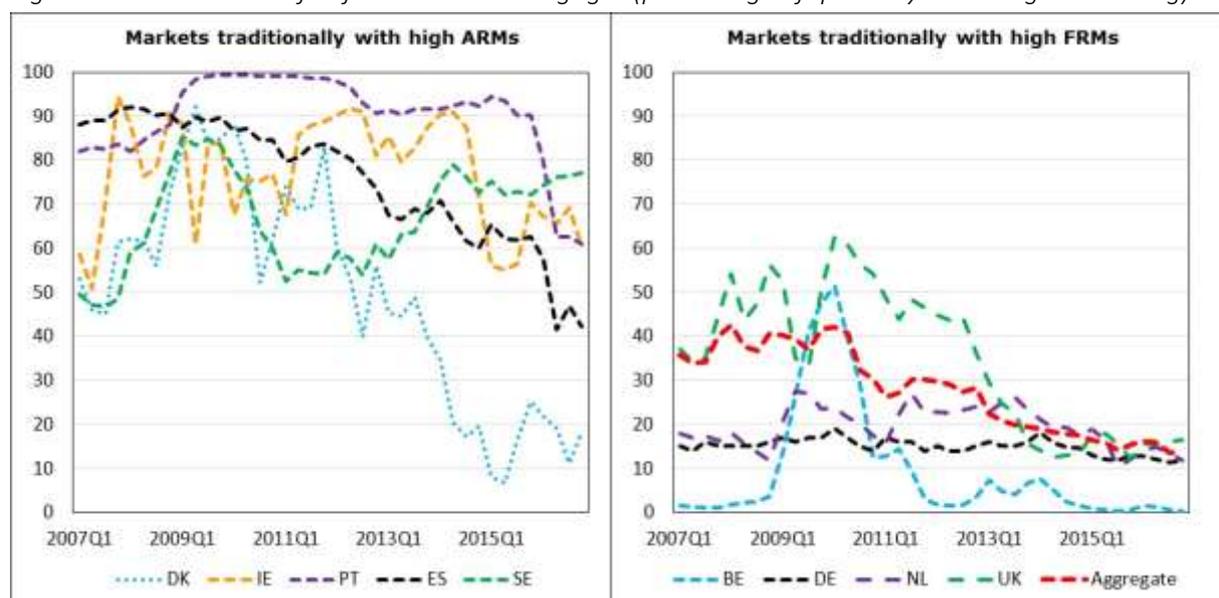
Sources: National central banks, author's calculations.

2. Variable rates versus fixed rates

Overall, consumers have to choose between two broad categories of mortgage products: adjustable-rate mortgages (ARMs), called “variable rate” mortgages in the Mortgage Credit Directive (MCD), and fixed-rate mortgages (FRMs). As shown in Figure 2, some EU domestic markets have on average been dominated by ARMs in the last ten years (Denmark, Ireland, Portugal, Spain and Sweden), whereas others have placed further emphasis on FRMs (Belgium, Germany, the Netherlands and the UK). Nonetheless, excluding Sweden, the share of ARMs in gross residential lending has been moving along downward trends in all of these mortgage markets. And these downward trends have deepened in all countries (excluding the UK and Sweden) in the last three years. As a result, in aggregate terms, the ARM market share contracted from 35.7% at the beginning of 2007 to 13.7% at the end of 2017.

Overall, domestic ARM market shares have followed successive patterns of convergence and divergence over the last decade. Yet since mid-2014, significant convergence has been observed. As a result, fragmentation in domestic ARM market shares recorded its lowest level in a decade at end-2016. In parallel, after continuous divergence in spreads between 2009 and 2011, noticeable convergence has been observed in these spreads since mid-2012.

Figure 2. Market share of adjustable rate mortgages (percentage of quarterly data on gross lending)



Sources: National central banks, author's calculations.

Spread between FRM rates and ARM rates as a driver of the ARM share

Observation of the level and evolution of ARMs across the EU in the last decade triggers a question about the main drivers behind such dynamics. For almost all the domestic markets covered, simple tests tend to reveal a significant positive impact of the current spread between FRM rates and ARM rates on the ARM market share. For example, over the period 2007–16, quarterly data show positive correlations³ that are significant in Belgium (41.1%), Denmark (42.7%), Germany (27.4%), Ireland (30.5%), the Netherlands (17.3%), Portugal (17.5%) and Sweden (36.5%).⁴

To a certain extent, these correlations suggest that a significant proportion of households are accustomed to comparing FRM rates with ARM rates when seeking finance for their housing. Certain rules developed within the MCD could potentially have reinforced the quality of the framework under which these consumers decide on their borrowing rates.⁵

³ These simple correlations concern quarterly data on the variations in pp of ARMs and spreads.

⁴ Owing to the different methods of designing ARM products across the EU27, cross-country comparisons are often difficult and building data with consistent methodologies across countries remains a challenge.

⁵ One of the main objectives of European law has been to find an appropriate balance between the obligations and rights of the lenders and the borrowers regarding the question of the type of rate. As a result, the MCD includes several provisions that have a significant impact on some of the conditions under which consumers choose between ARM rates and FRM rates. First of all, the MCD contains diverse articles on information requirements, adequate explanation and publicity concerning the borrowing rate (Arts 11, 13, 17, 24, 27 and Annex II B).

Numerous provisions of the MCD also aim at enhancing responsible lending by banks for the whole mortgage market, through articles on explanation obligations, tying practices, inducement principles and the nature of sanctions (in addition, Art. 45).

Further tests reveal that correlations between variations in spreads and ARM shares are relatively robust over time in Belgium, Denmark and Ireland.⁶ As such, the downward trends recorded in spreads in these three economies between 2013 and 2016 might have been a key driver behind the contractions observed over the same period in ARM shares. Nevertheless, in the last four years, such correlations prove to be non-existent in Germany, Portugal and Sweden, a priori reflecting a disconnection between the current spread dynamics and the choices of consumers.

Therefore, analyses of the dynamics of spreads and their influence on consumers' decision process should be refined by addressing specific questions on household expectations regarding future spreads and the intervals at which ARMs are adjusted. The former issue was notably addressed by Badariza et al. (2013). Using a nine-country panel (Australia, Belgium, Denmark, Greece, Ireland, Italy, the Netherlands, Sweden and the US) and the instrumental variables method, the authors presented evidence that households are forward-looking over relatively short periods when integrating spreads in their decision process.⁷

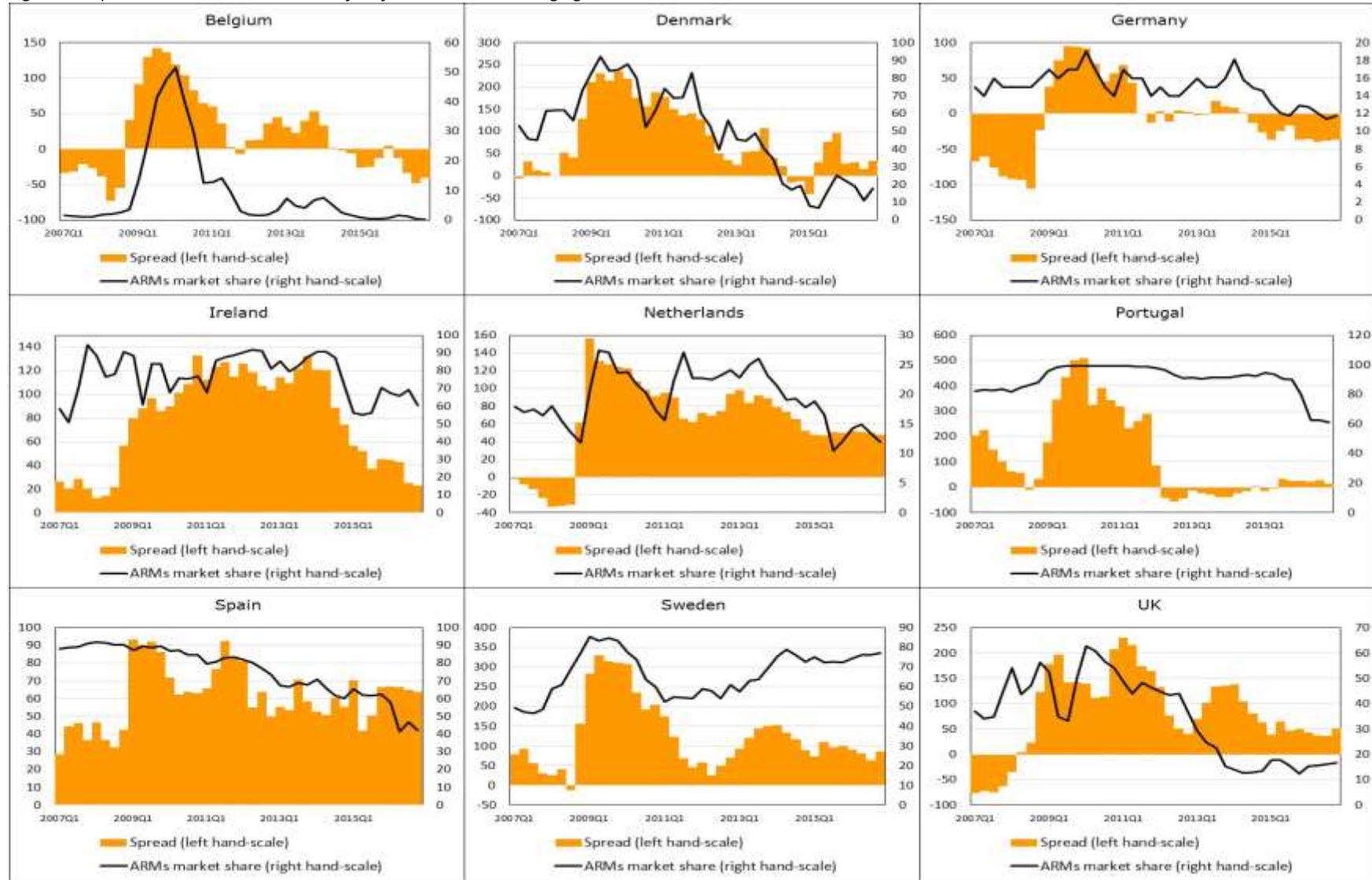
Other analyses on the expectations of borrowers concern the appreciation of the current level of interest rates. As such, the empirical study by Bacon et al. (2012) covering the 1992–2001 period in the UK for a large sample of mortgage choices made by households suggested a rising ARM market share when interest rates are high. In other words, consumers also base their expectations on the nominal levels of current mortgage interest rates and predict a reduction in the forthcoming FRMs, should they consider the current FRMs to be too high. In this context, an increasing share of households would opt for ARMs.

In the current context, in which FRMs are considered to be historically low, many households are likely to anticipate increases in fixed interest rates on the foreseeable horizon, resulting in greater preference for FRMs. This assumption could partly explain the contractions recorded since 2013 in ARM shares for all countries excluding Sweden (where FRMs have been increasing in recent years).

⁶ These tests imply that correlations have occurred for different periods: 2007–16, 2008–09, 2010–13, 2007–14 and 2013–16.

⁷ As such, the spread between the FRMs and the average rationally expected ARMs over the next year is often a better predictor of the ARM share than is the spread between the FRM rate and the current ARM rate. However, over a longer three-year horizon, the current rate spread tends to have a larger influence on the ARM share than the rate spread involving rationally expected future rates. The evidence for forward-looking behaviour would be particularly strong in more recent data since 2001.

Figure 3. Spreads and market share of adjustable rate mortgages



Sources: National central banks, author's calculations.

Other factors behind the level of the ARM market share

In recent years, a large body of analyses on the drivers behind the ARM market share has developed in the academic literature. Broadly speaking, empirical and theoretical research has emphasised three main groups of factors behind ARM market shares:

- macroeconomic elements
- mortgage characteristics
- household characteristics.

Macroeconomic factors behind ARM shares can for example be inflation variance in consumer prices. Based on Eurostat data, a significant positive correlation was observed between the ARM market share and inflation variance in the harmonised inflation of consumer prices between 2007 and 2016. As such, countries with a higher variance in consumer prices, such as Ireland, Spain or Portugal, tend to have higher market shares of mortgages with variable rates. This can notably be explained by the prepayment fees scheme that prevails in each domestic market. If a fixed-rate mortgage cannot be prepaid without significant penalties, as is the case in Germany, then an FRM is risky to the extent that inflation is volatile and persistent.

As regards mortgage characteristics, the literature placing the focus on the relationship between the amount borrowed and consumers' preferences for ARM or FRM rates has produced contradictory findings. On the one hand, Campbell et al. (2003) and Bacon et al. (2012) suggest that smaller mortgages generally result in a preference for ARM rates. One of the main reasons behind this causality resides in the risk behaviours of households: according to these authors, a higher risk aversion is typically associated with a preference for FRM rates. Given that higher mortgages tend to raise the risk aversion of households, borrowing gradually tips the scale further in favour of FRMs.

On the other hand, in their empirical analysis using a large EU27 sample of micro data from the Eurosystem Household Finance and Consumption Survey, Ehrmann et al. (2014) showed a robust positive impact of the debt-service-to-income ratio (DSIR) on ARM market shares. Households in the top quintile of the DSIR distribution are 7 pp more likely to have an ARM. One of the explanations put forward by the authors is that households with a high level of debt are less concerned about the increased payment risk of ARMs and instead select an ARM because FRMs become too expensive. Considering household characteristics, it therefore seems that increases in disposable income could potentially result in further demand for ARMs.⁸

The impact of the duration of the loan has also been the subject of some key papers. Campbell et al. (2003) assume in their lifecycle model that long-term FRMs protect homeowners against the risk resulting from rising real interest rates, while ARMs do not. Nevertheless, as argued notably by Ehrmann et al. (2014), the "insurance" premium is likely to be disproportionately expensive for longer mortgages, thereby prompting consumers to opt for ARMs. Their empirical findings confirm this view, with every ten additional years increasing the propensity to hold an ARM by 8 pp.

⁸ Simple correlations between the variation in household disposable income and ARM market shares could potentially suggest an opposite view, as a significant negative correlation has been recorded with the disposable income of households between 2007 and 2016 within the panel of countries. In economies with high increases in household disposable income, consumers are likely to opt for ARMs. Yet, such preliminary results need to be refined significantly to provide exploitable findings.

The transaction costs of default refer to the costs associated with a borrower's defaulting on a mortgage, and include damage done to a borrower's credit rating, psychological adjustment costs due to relocation, search and other default disutilities (Harrison et al., 2011).⁹ Both empirical and theoretical literature (Campbell et al., 2003, and Harrison et al., 2011) tend to show a positive relationship between the costs of default and the preference for FRMs. In other words, in the context of a borrower's default costs, the characteristics of the borrowers can play two opposite roles: high default-risk borrowers disproportionately self-select into FRMs, while low default-risk borrowers are more likely to self-select into ARMs.

Other characteristics of the borrowers should markedly influence the decision-making process between ARM and FRM choices. For instance, the effect of current spreads might be stronger among households with credit constraints. Also, households that are highly impatient or have a high moving probability are likely to care more about the first mortgage payments. In such cases, the current yield spread is likely to be much more impactful on the FRM–ARM trade-off.

3. Conclusion

Significant deleveraging processes have been observed over the last decade in some EU markets, notably in Ireland, Portugal and Spain. In these economies, both outstanding and gross residential lending, as well as the ratios of outstanding residential lending to household disposable income have contracted markedly since 2007. By contrast, the volume of mortgage activities has moved around significant upward paths in Belgium, France, Germany and Sweden, and stagnated somewhat in the Netherlands and Denmark.

In terms of products, excluding Sweden, the share of ARMs for gross residential lending has been moving along downward trends in all the analysed mortgage markets. And these downward trends have deepened in all countries (excluding the UK and Sweden) in the last three years. Over the last decade, the levels of current spreads proved to be a key factor behind the ARM market share, but its effect seemed to trail off in the last three last years, as a result of the environment of low FRM rates.

Although some convergence in terms of ARM market shares and spreads has been observed in the euro area in more recent years, mortgage markets in terms of activity and dynamics overall remain fragmented across the EU. The persistent heterogeneity observed across the EU with respect to mortgage dynamics continues to be a barrier to the development of a balanced currency union, as the related monetary policy inevitably creates losers and winners among its national members.

Further analyses on the dynamics of mortgage markets and on the role of spreads and any other relevant factors can provide valuable insights for monetary policy, and micro-prudential and macro-prudential supervision. In the meantime, a better understanding of the different drivers behind consumer decisions in terms of products can contribute to appreciating the possible long-term impacts of the MCD on the interactions between ARM and FRM markets.

⁹ The transaction costs of default may not only be non-financial. For example, in the event of a default that leads to loss of the house, a family will also be forced to move and will likely have to adapt to a new neighbourhood.

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