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RECENT DEVELOPMENTS IN SECURITISATION

FEBRUARY 2011





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EXECUTIVE SUMMARY

This report by the Banking Supervision Committee (BSC) presents a snapshot of recent developments in the European securitisation markets and relates them to factors impacting on the demand for and the supply of securitised products. The report is part of the strand of BSC work that reflects on the impact of the financial crisis on structural features of the banking system, and follows earlier reports on the incentive structure of the “originate and distribute” model and on EU banks’ funding structures and policies.

The years before the crisis were marked by an increasing use of market-based funding by banks at the expense of deposits and by a rapid expansion of securitisation markets. The crisis made it evident that these developments were accompanied by conflicts of interest and misaligned incentives among the participants along the securitisation chain, over-reliance on rating agency risk models, and a lack of transparency with regard to collateral and deal structures. These shortcomings were partly to blame for the freezing of market demand for securitised products during the crisis as investors withdrew from the market and the scope for market-based funding of banks became reduced.

Several factors impact on market-based securitisation (which is currently weak) because of the effect they have on the demand for, and supply of, securitised products. On the supply side, deteriorating macroeconomic conditions, including rising unemployment and low consumption, have subdued the issuance of loans and weakened the performance of collateral for securitised products. On the demand side, the role of public institutions in the securitisation markets has increased during the crisis, which has partly compensated for the weak demand from private investors. In the future, the demand for securitised products is also likely to be directly or indirectly affected by the robustness and transparency of securitisation structures as well as the ongoing regulatory reform.

The data analysed in the report show that overall issuance has indeed continued in Europe and the United States despite the crisis, albeit at lower levels and supported to a significant degree by public institutions. Whereas originators in Europe have been able to use eligible securitised products as collateral for Eurosystem or Bank of England credit operations, in the US securitisation markets government-sponsored enterprises (GSEs) have played a leading role. The United Kingdom, the Netherlands, Spain and Italy are the main issuers of securitised products in Europe.¹ In addition to issuance of assets for use as collateral, some evidence of market-based demand has emerged in Germany, the Netherlands, the United Kingdom and most recently also in Italy in 2010. Common factors of these public placements include collateral with a low risk profile and transparent and simple structures. As regards trends for the various asset classes, residential mortgage-backed securities (RMBSs) remain by far the most important asset class both in Europe and in the United States.

Turning to secondary markets, the report shows evidence of sovereign risk spilling over to covered bond and securitised product yields in the affected markets. The spreads of securitised products also vary considerably across asset classes. Whereas certain products such as commercial mortgage-backed securities (CMBSs) remain high-risk assets, spreads for asset classes such as RMBSs or card and auto asset-backed securities (ABSs) have decreased significantly. A wave of rating downgrades complements the picture.

A separate section on covered bonds discusses their role as an important neighbouring product to securitisation, in particular as a funding tool. As such, they may have an impact on the development of securitisation markets. Covered bonds have distinct features from securitised products. Most importantly, covered bonds do not allow for risk transfer in the same way as

¹ Please note that securitisation does not include covered bonds which are treated separately throughout the report.

securitised products. This may be one reason why the covered bond market has been less affected by the crisis than the securitisation market. The ECB covered bond purchase programme contributed to the revival of jumbo covered bond issuance in 2009.

The outlook provided by the report touches on the effect of regulation on originators and investors, highlighting potentially higher costs for participants in the securitisation chain in the future. Finally, the report proposes as possible avenues for future work more thorough analyses of the investor base, accounting issues and covered bonds.

I INTRODUCTION

I.1 BACKGROUND

The years before the crisis were marked by a rapid and possibly unsustainable expansion of securitisation markets, fuelled by the demand from leveraged investors such as conduits, structured investment vehicles (SIVs) and money managers, and by banks moving from deposit-based funding towards market-based funding. The crisis has revealed several shortcomings in the securitisation process, including conflicts of interest and misaligned incentives among participants along the securitisation chain, overreliance on rating agency risk models, and a lack of transparency as regards collateral and deal structures. These shortcomings, together with other market factors, contributed to the withdrawal of the various investors from the securitisation market. As a consequence, market demand for securitised products froze during the crisis, and narrowing the banks' scope for market-based funding.

In the wake of the crisis, market commentators and participants have made great efforts to identify the weaknesses of securitisation products and to start devising remedies. However, the success of securitisation markets does not only depend on the robustness of the securitisation chain, but also on a much wider set of factors and market conditions. As the markets have undergone considerable change since the beginning of the crisis, it is therefore useful to review the recent developments in the European securitisation markets and to shed some light on the relevant demand and supply factors.

The report is part of the strand of BSC work that reflects on the impact of the financial crisis on structural features of the banking system. An earlier BSC report on the incentive structure of the “originate and distribute” model has already examined the possible misalignment of incentives in the securitisation process. An analysis of the impact of the financial crisis on the wider issue of bank funding can be

found in the BSC report on EU banks' funding structures and policies.² In contrast, the report at hand has a clear focus on factual aspects of securitisation. In this way it aims to provide a snapshot of the current situation in terms of market structure and factors influencing the supply of and demand for products.

I.2 FACTORS AFFECTING DEMAND AND SUPPLY

Currently, market-based securitisation is still very weak and it appears that the market has not yet found a new stable path and that investors and other participants are staying mostly on the sidelines. However, there is also some sign of a change in investor sentiment and increased market activity. At this stage, it is therefore appropriate to identify the demand and supply factors for securitised products and to assess their importance.³ What are the relevant factors?

A first important factor on the supply side relates to the overall economic conditions that directly impact on the performance of the collateral. As the report shows, these conditions vary considerably across the various assets used for securitisation and across EU Member States. In this respect, sovereign risk also plays a major role in affecting the demand for, and the supply of, securitised products. This report explains how these conditions affect issuance and retention decisions, as well as spreads and prices in the secondary market.

On the demand side, the report highlights the importance of Eurosystem credit operations in supporting the issuance of securitised products by substituting for market-based demand. Banks have issued securitised products for use

2 See the recent BSC reports on the incentive structure of the “originate and distribute” model (December 2008) and on EU banks' funding structures and policies (May 2009), available at <http://www.ecb.europa.eu>.

3 The emphasis here is on the identification of factors, i.e. on providing a snapshot of the current situation in the securitisation markets, which are arguably in a “re-orientation” phase after the crisis. In the future, these factors should be analysed in a more structured fashion, thereby possibly also distinguishing between cyclical and structural factors.

as collateral in Eurosystem credit operations, or at least for precautionary liquidity reasons. Other forms of central bank and government agency support also play a role, such as the support of government-sponsored enterprises (GSEs) for the residential mortgage-backed security (RMBS) market in the United States or the Spanish Government's support for the securitisation of loans to small and medium-sized enterprises (SMEs).

Furthermore, the report discusses the role of covered bonds as a neighbouring product for RMBSs in particular. Some commentators have suggested that investors may favour covered bonds over securitised products because of the higher protection level, which would reduce the demand for RMBSs. From a supply side perspective, products which compete with securitisation covered bonds may also absorb much of the supply of mortgage loans, reducing the sums available for securitisation purposes. The report therefore also reviews the development of the European covered bond markets and reveals some parallels between covered bonds and securitised products in terms of sovereign risk exposure and their use as eligible collateral for Eurosystem credit operations.

The question of whether market participants have addressed the shortcomings of the securitisation process in terms of transparency, misaligned incentives and conflicts of interest also constitutes an important demand factor. The report reviews evidence of recent market-based demand to provide an insight into the characteristics securitised products need to display if they are to attract investors.

Lastly, future regulation may have a major impact on securitisation markets. It is premature and beyond the scope of this report to study the precise effect on the markets of the ongoing regulatory and accounting reforms. However, a preliminary assessment suggests that investors will face higher costs when investing in securitised products, which could have a dampening effect on securitisation markets.

1.3 STRUCTURE OF THE REPORT

The report is organised as follows. Section 2 provides an aggregate view of the securitisation markets, comparing EU-US developments as well as trends for the various European countries and for various asset classes. Section 3 examines the use of securitised products for Eurosystem credit operations. Section 4 gives an overview of covered bond markets in Europe, as these markets may compete with the securitised product markets. Section 5 highlights differences across a sample of EU Member States, while Section 6 summarises the findings, discusses the impact of regulation and suggests topics for future work.

2 AN AGGREGATE VIEW OF SECURITISATION MARKETS

This section discusses recent developments in securitisation markets with the help of data both from the European Union and from the United States. Both primary and secondary markets are considered.⁴

2.1 PRIMARY MARKET ACTIVITY

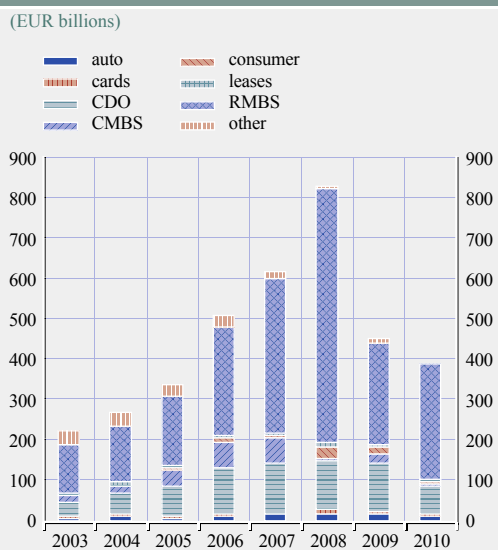
This sub-section compares trends in the European Union and in the United States, and across EU Member States, in terms of issuance volumes and asset classes. In general, issuance has continued in Europe and the United States despite the financial crisis, although mostly supported by public institutions. RMBSs remain the most important asset class. The United Kingdom, the Netherlands, Spain and Italy are the main issuers of securitised products in Europe.

2.1.1 OVERALL MARKET TRENDS IN EUROPE AND THE UNITED STATES – ISSUANCE AND ASSET CLASSES

US and European issuance has evolved differently since 2008. After increasing strongly until 2008, issuance (retained and placed) has decreased sharply in Europe (see Chart 1). In contrast, although volumes in the US securitisation markets fell sharply in 2007 and 2008, they have slowly increased in 2009 and 2010 (see Chart 2). This increase is attributable in particular to support for the RMBS market from the GSEs Freddie Mac, Fannie Mae and Ginnie Mae.⁵

In Europe, RMBSs represent by far the most prominent asset class, and issuance has remained very high between 2008 and 2010, ranging between 53% (2009) and 76% (2008) of total issuances. Commercial mortgage-backed securities (CMBSs) traditionally represent a small part of total European issuance, which has decreased even further in the last three years. This market has been sharply affected by the decrease in commercial real estate prices,

Chart 1 Issued volumes, all asset classes, Europe



Source: JP Morgan.
Note: CDOs here include CLOs and especially SME CLOs, which have been quite dynamic in southern Europe.

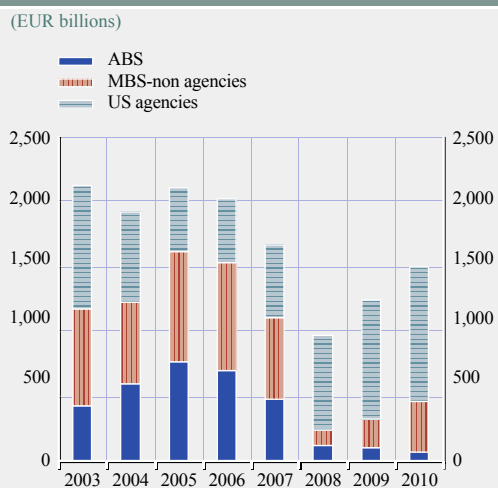
the increase in default rates and the negative perspective in this sector.

The lower aggregate volume of the ABS (consumer, auto, lease) and collateralised debt obligation (CDO) segments in 2010 is partly attributable to less benign macroeconomic conditions, which have reduced the demand for securitised products and the supply of loans for securitisation, and partly to a smaller supply of loans as a result of the more extensive use of

4 Unless otherwise stated, securitised products comprise residential and commercial mortgage-backed securities (RMBSs and CMBSs), asset-backed securities (ABSs) and collateralised debt obligations (CDOs). ABSs are classified according to their asset class, such as auto, credit card or consumer loans and leases. Other ABS types issued in the United States include student loans, floor plans and home equity loans. CDOs also comprise collateralised loan obligations (CLOs). Spanish SME securitisations, which are more similar to lease ABSs than to CLOs, are categorised as CLOs by JP Morgan. Since this report relies on data from JP Morgan, the categorisation used by JP Morgan is maintained.

5 Indeed, market participants in the United States argue that the revival of the non-agency RMBS segment will crucially depend on the reform of the GSEs. It appears that some observers even question whether the RMBS securitisation market could function without government guarantees (see “Toxic mortgage securities in a deep freeze”, *The Financial Times*, 6 December 2010).

Chart 2 Issued volumes, all asset classes, United States



Source: Dealogic.

alternative funding channels.⁶ The current activity is mainly related to Spanish SME loan securitisations (which are closer to ABS products owing to the high granularity of portfolios, but which are categorised here as CDOs, in line with JP Morgan’s definition),

traditional business on specific markets (German auto ABSs) or temporary public support measures (e.g. the cash-for-scrap scheme in France to support the car industry). It should be noted that Spanish SME loan securitisations benefit from public guarantees, which foster issuance.⁷

Similarly, RMBS issuance is significantly higher than ABS issuance in the US market – even if GSE-supported RMBS issuance is not taken into account (Chart 2). Issuance of ABSs decreased sharply in 2007 and 2008 and is still falling. Chart 3 below shows the changes for

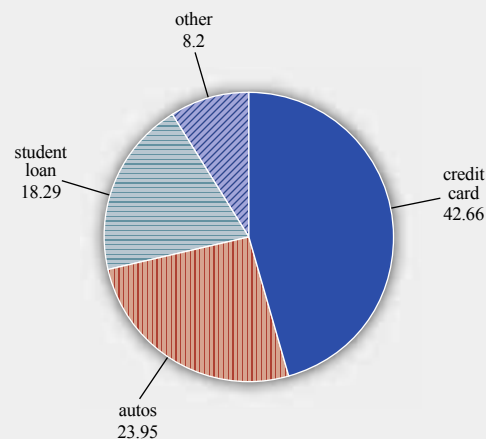
6 For instance, some car manufacturers have turned their financing arms into banks, which has enabled them to fund auto loans with deposits rather than by using them as collateral for securitisation. In addition, some British banks have issued credit card ABSs denominated in US dollars, since prices are higher in the US market than in Europe.

7 The Spanish government provides public guarantees for securities issued by “Fondos de Titulización de PYMEs” (FTPYMEs). FTPYMEs are securitisation funds that issue securities backed by SME loans. To secure a government guarantee, these funds must invest in loans to SMEs which meet precise criteria, such as having fewer than 250 employees or an annual turnover of no more than €40 million. As mentioned above, the loan portfolio of a fund must also be highly granular to profit from government guarantees.

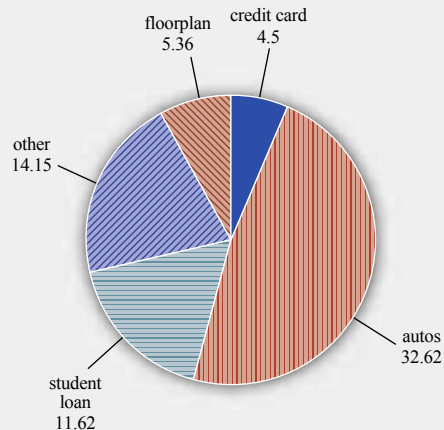
Chart 3 Structure of US ABS issuance

(EUR billions)

2008 – Total: €93.1 billions



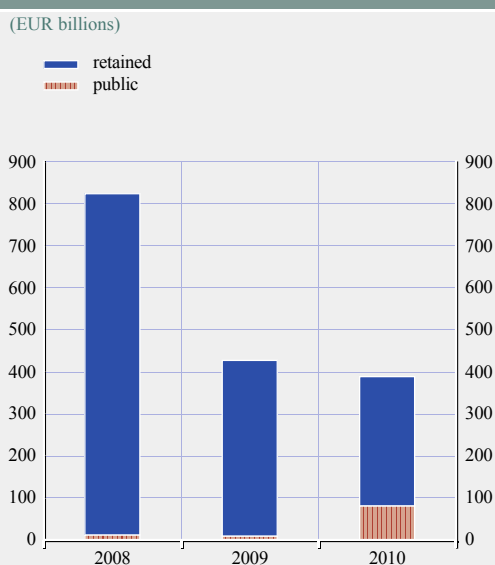
2010 – Total: €68.04 billions



Source: JP Morgan.

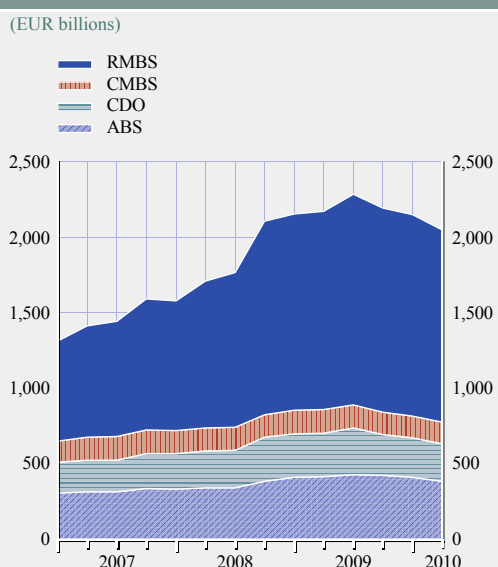
Note: A floorplan loan is a loan for financing products with a high unit value sold by specialised retailers, such as cars, furniture, electrical goods, boats, etc. Consumers often finance these purchases through consumer loans.

Chart 4 Retained and placed issuance in Europe



Source: JP Morgan.

Chart 5 Outstanding volumes, Europe



Source: JP Morgan.
Note: "CDOs" here include CLOs and especially SME CLOs, which have been quite dynamic in southern Europe.

various ABSs in the United States. The share of auto loans has notably increased at the expense of the share of credit card loans.⁸

As regards the importance of public support for the demand for securitised products, Chart 4 shows that securitised products in Europe were mainly retained in banks' balance sheets between 2008 and 2010, most likely in order to be used as collateral for Eurosystem credit operations. Although the proportion of retained tranches remained very high in 2008 and 2009 (99% and 98% of total issued volumes respectively), it decreased in 2010 to 79% (see Chart 4).

2.1.2 AMOUNTS OF OUTSTANDING SECURITISED PRODUCTS REMAIN HIGH

As the peak of securitisation issuances (2006-2007) occurred just before the period under investigation, large volumes issued in this peak period are still outstanding. Given that RMBS issuance has remained dynamic, this product accounts for a large proportion of the total outstanding in Europe (see Chart 5).

As regards short-term funding, the asset-backed commercial paper (ABCP) outstanding have evolved differently. The ABCP market has traditionally been more developed in the United States than in Europe, even if both markets have seen their outstanding volumes decrease. In the United States, volumes went from USD 842 billion in January 2008 to USD 396 billion in October 2010, and in Europe from €125 billion to €38 billion. Thus, although this market has remained active to a small extent in the United States, it has nearly disappeared in Europe. There is currently almost no SIV active in the market. In addition, as the US market is livelier and investors are more interested in its products, some European banks currently target the US market and choose to issue mainly in US dollars.

⁸ Note that some ABS products have vanished completely from the market, such as home equity loans (HELs).

2.2 SECONDARY MARKETS

This sub-section examines the evolution of spread levels and securitisation ratings. In general, the impact of worsening economic conditions on the performance of collateral and of increased sovereign risk in some countries on both the demand for, and the supply of, securitised products has resulted in spreads that reveal major differences between asset classes and countries. Rating downgrades complement the picture.

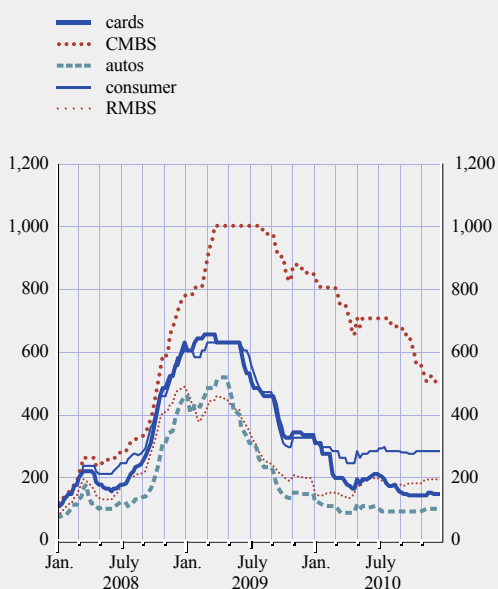
2.2.1 SPREADS

The very high spread levels from the end of 2008 until the second half of 2009 reflect the widespread uncertainty and high levels of market risks (such as liquidity risk) in the acute phase of the crisis. Spread levels peaked in the United States just after the Lehman bankruptcy

and a few months later in Europe. Spreads have decreased since in Europe and in the United States, returning to levels that arguably better reflect the economic fundamentals (see Charts 6 and 7).

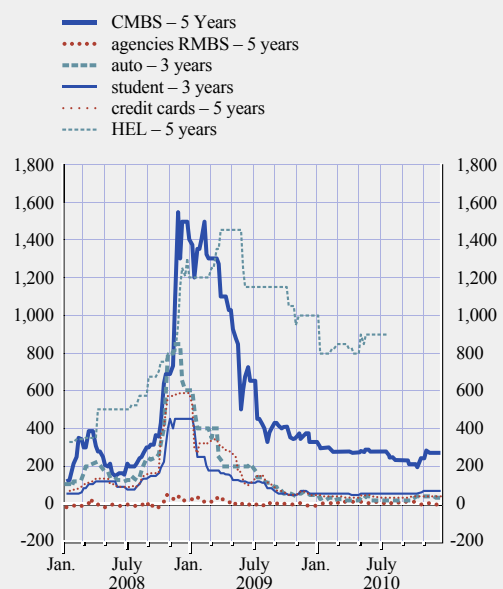
The return to fundamentals was accompanied by a clear differentiation of spreads across asset classes for various reasons. Spreads of RMBSs and most ABSs have decreased both in Europe and in the United States, supported by collateral use in refinancing operations with central banks and stimuli provided by EU Member States but also as a result of the robust economic fundamentals of the underlying products. In contrast, spreads have remained high for products that exhibit high risk due to very weak economic fundamentals and/or weak lending standards, such as CMBSs and home equity loans (HELs).

Chart 6 Spreads versus the Euribor in Europe for maturities of three to five years (AAA tranches)



Source: JP Morgan.
Note: The RMBS spread is the average of spreads in various countries, weighted by volume issued in each country. The card segment consists entirely of UK assets.

Chart 7 Spreads versus swaps in the United States (AAA tranches)



Sources: JP Morgan and Barclays Capital.
Notes: The RMBS spreads refer to agency RMBSs. A specific characteristic of the US RMBS market is that a large part of RMBSs is backed by GSEs. This public support explains the low and sometimes even negative RMBS spread. HEL (home equity loan) denotes a second-hand loan that uses the home equity of a house (value of the property less the amount borrowed that still has to be repaid) as collateral. The swaps are mid-swaps at the relevant maturity.

2.2.2 RATING CHANGES

Chart 8 shows that the bulk of the rating changes in 2008-2010 were downgrades. While downgrades focused mainly on ABSs and RMBSs in 2007, they spread to all securitised products in 2008 and 2009, and this trend has continued in 2010. For example, S&P downgraded 43 of the 62 European CMBSs it was following in the fourth quarter of 2009. During the same period, Moody's downgraded 63% of CMBS tranches of its rated CMBSs and upgraded only 1% of them. Volatility in ratings was particularly strong for CMBSs issued in 2006 and 2007 and backed by properties built in continental Europe. These products represent

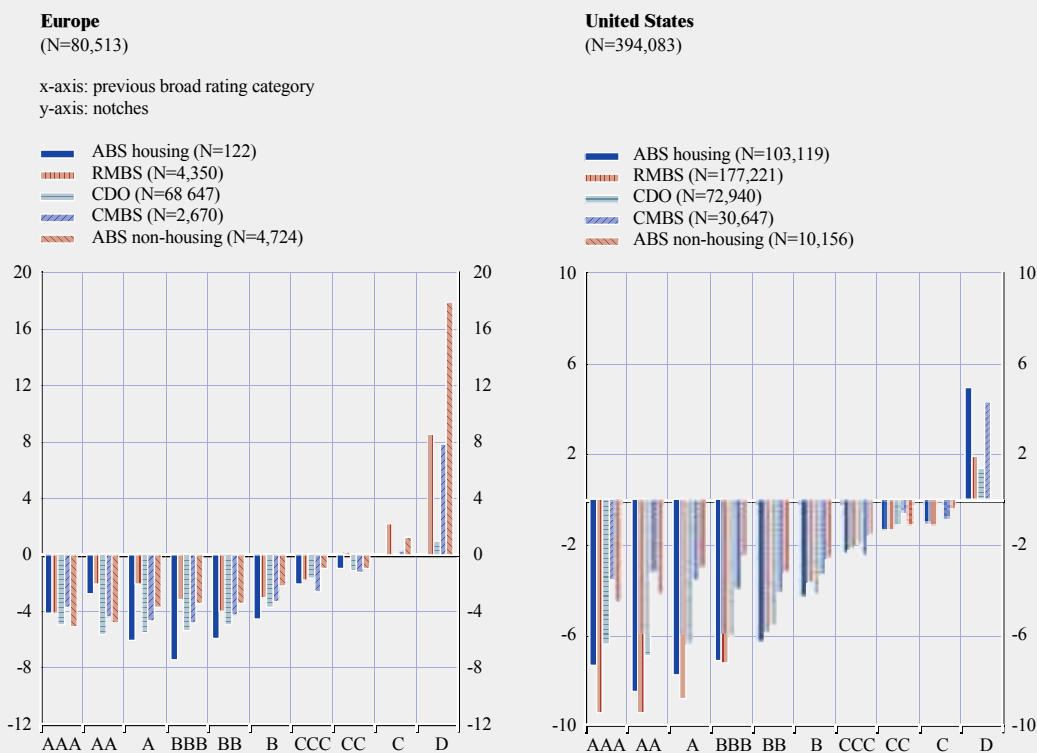
83% of CMBS tranches downgraded since May 2009.

The average size of downgrades has also increased for all products. The collapse of ratings for RMBSs and housing ABSs reflects the crisis in real estate and the consequent lower confidence in structured products.

Downgrades may be attributable to poorer than expected collateral performance, revised expectations as regards collateral performance, or changes in the rating methodology to address underestimated risk factors (such as concentration and correlation risk). Downgrades

Chart 8 Evolution of ratings, 2008-2010

(previous broad rating category)



Source: Bloomberg.

Note: These charts show the action taken by the three main agencies (S&P, Moody's and Fitch) in the period from 2008 to 2010. For example, 2,670 CMBS tranches were upgraded or downgraded between January 2008 and December 2010. The size of the bars shows the average evolution in notches from the initial rating of the security. For example, the agencies upgraded or downgraded 122 tranches of housing ABS during the period of observation. The average downgrade was four notches for papers initially rated AAA, between two and three notches for papers rated AA, and six notches for papers initially rated A. For each product and initial rating, the result was obtained by weighting the average upgrades or downgrades by each agency with the number of ratings by each agency within the tranche considered.

Main reasons for downgrades

(in percentages)

	RMBSs	ABSs	Total
Weak performance	76	44	64
Counterparty risk	9	16	12
Methodology	4	30	14
Sovereign risk	8	5	7
Monoline	2	2	2
Other	0	2	1

Source: Moody's.

may also be a result of a combination of all these factors. Consequently, new and old ratings cannot be directly compared and rating transitions cannot be easily interpreted.⁹ The table shows that downgrades are more indicative of weak performance in the case of RMBSs, whereas downgrades of ABS products are often also motivated by changes in rating methodology.

⁹ See "European securitisation outlook 2010", Barclays Capital, January 2010.

3 ELIGIBLE COLLATERAL IN ECB MONETARY
POLICY OPERATIONS¹⁰

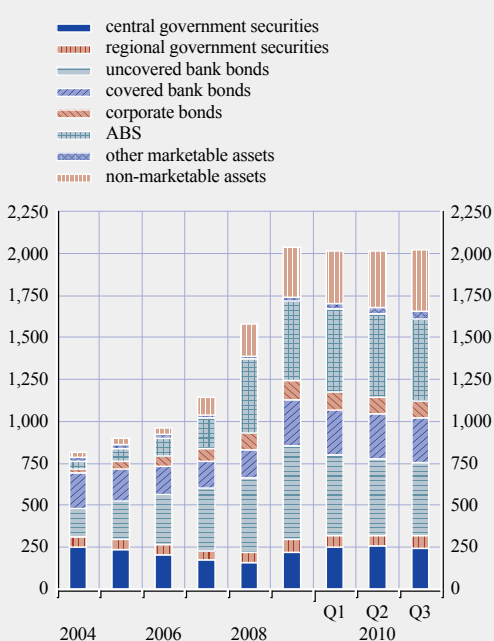
While the securitisation markets practically froze in the EU during the crisis, the possibility of using senior tranches as Eurosystem collateral has spurred demand for securitised products. This additional incentive for banks to continue issuance has thereby also helped ease the funding pressures that banks faced in this period. Since the outbreak of the crisis, ABSs have become the largest single asset class in the composition of the collateral posted with the Eurosystem (see Chart 9).¹¹ Their average share increased from 11% in 2006 to 28% in 2008, decreasing slightly to around 24% in the first three quarters of 2010. The increase of ABSs in Eurosystem collateral may indicate that counterparties are using less liquid assets with the Eurosystem, while directing more liquid assets towards the private repo and interbank markets. This hypothesis is also supported by the

simultaneous decrease in the use of government securities from around 21% in 2006 to around 12% in 2009 and 2010.

In the context of regular reviews of the risk control framework the Eurosystem has tightened eligibility criteria for ABSs as collateral on several occasions. Among other things it has narrowed the geographical scope and increased required credit rating levels for the eligibility of ABSs and the valuation haircuts applied.¹² The share of ABSs has nevertheless increased, despite higher haircuts and tighter rating requirements. The need to increase transparency in this market has become particularly clear during the crisis. Following the significant support received from market participants at a public consultation early in 2010, the Eurosystem started the final preparatory work for the establishment of loan-level information requirements for ABSs in its collateral framework in April 2010. In December 2010, the Governing Council of the ECB decided to establish loan-by-loan information requirements for ABSs in the Eurosystem collateral framework. The Governing Council intends to introduce the loan-by-loan information requirements within roughly 18 months from that date, first for RMBSs and thereafter gradually for other ABSs. The objective of this initiative is to enable better risk assessments to be made and to increase confidence in the securitisation markets.¹³

Chart 9 Posted collateral in Eurosystem monetary policy operations by asset type

(EUR billions)



Source: ECB.

10 See also the Euro Money Market Study 2010 published on 21 December 2010.

11 Please note that asset-backed securities are defined here in line with the Eurosystem definition in its collateral framework and includes e.g. RMBSs. See e.g. Appendix 2 of *The implementation of monetary policy in the euro area – general documentation on Eurosystem monetary policy instruments and procedures*, ECB, November 2008, available at http://www.ecb.europa.eu/udl.html?doc_id=gendoc_en

12 See e.g. the ECB press releases of 4 September 2008, 20 January 2009, 20 November 2009 and 9 October 2010.

13 For more information about the initiative, see e.g. “Results of a public consultation on the provision of ABS loan-level information in the Eurosystem collateral framework”, ECB, April 2010, available at <http://www.ecb.europa.eu/pub/pdf/other/consultationabsloanlevelinformationen.pdf?0c68562378ef8c8599d8d2b6746fa66e>

4 COVERED BONDS

Covered bonds have gained in importance as a funding source in recent years. Despite common features they are distinct from securitised products. However, covered bond markets may indirectly have a strong impact on securitisation markets, and hence tracking developments in these markets is important for assessing developments in securitisation markets. Covered bonds provide investors with two layers of protection: recourse first to the underlying assets (mainly composed of good quality instruments which offer a sufficient degree of over-collateralisation) and second to the other unsecured assets of the issuing bank. By issuing covered bonds, banks retain the assets on their balance sheet or provide guarantees on dedicated structures to which the assets are transferred.¹⁴

As regards demand for securitised products, covered bonds are potentially an important competitor, especially for RMBSs. Covered bonds and RMBSs in principle share the same types of investors, namely banks and large institutional investors.¹⁵ From a supply perspective, covered bonds may limit the supply of mortgages available to the securitisation process if issuers of mortgages regard those bonds as the preferred funding option.¹⁶

Covered bonds are typically regarded as particularly safe instruments because of the double layer of protection and the fact that in almost all European countries most covered bonds are subject to specific covered bond regulation and supervision.

Covered bonds also form an important part of collateral used for Eurosystem operations. Covered bonds are in principle eligible collateral for Eurosystem credit operations. In addition, the Eurosystem has purchased covered bonds in the context of its covered bond purchase programme.¹⁷

4.1 THE EVOLUTION OF COVERED BOND MARKETS

The role of covered bonds as a funding source is shown in Chart 10, which depicts funding revenues by year and distinguishes between market placements and issuance solely for the purpose of creating eligible collateral for Eurosystem credit operations (self-funded issuance). The increase in covered bond funding during the last ten years is particularly evident once the aggregate figure is netted of the German contribution which has traditionally been high: for non-German banks, overall issuances already surpassed the peaks of 2006 and 2007 in 2010 (€210 billion, and €245 billion including self-funded deals).

The main factors behind the increase in covered bond funding in the second half of the last decade in Europe may include:

- the introduction of national legislation in a number of countries where no such legislation was previously in place (the Netherlands, Greece) or the substantial revision of national legislation (e.g. Portugal). While *Pfandbriefe* (Germany and Austria), *obligations foncières* (France) and *cedulas hipotecarias* (Spain) had a well-established market well before the advent of the financial crisis, a number of countries show almost no issuances before 2007;

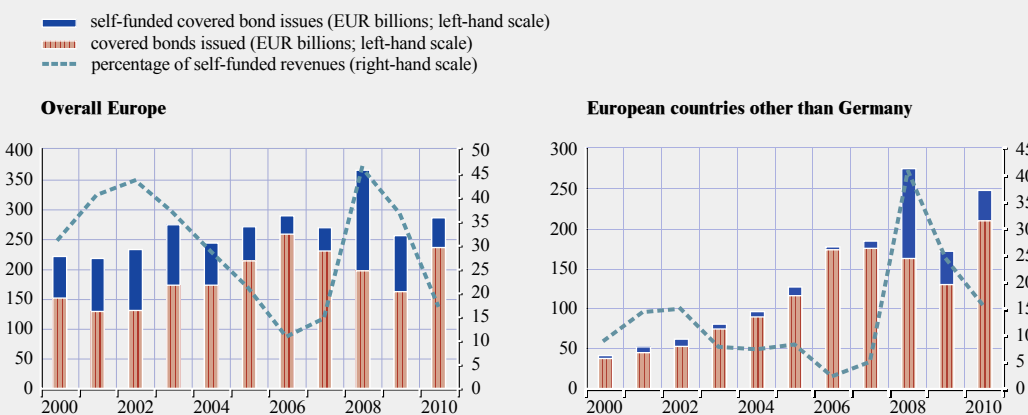
14 From the perspective of bank regulation, covered bonds involve a higher value of assets than securitised products, which may lead to a higher degree of subordination of depositors of the issuing bank.

15 See “European securitisation outlook 2010”, Barclays Capital, January 2010. However, specific investors may also specialise in either securitised products or covered bonds and not have the knowledge necessary to invest in the other product in the short run. Thus, substitution effects may occur only in the long run.

16 “RMBS versus covered bonds: different but similar?”, Bank of America Merrill Lynch, 19 July 2010.

17 Between June 2009 and June 2010, the ECB purchased covered bonds for EUR 60 billion. See for the final monthly report of the programme <http://www.ecb.int/pub/pdf/other/monthlyreporteurosystemcoveredbondpurchaseprogramme201007en.pdf>

Chart 10 European covered bonds issued, by year



Source: Dealogic.

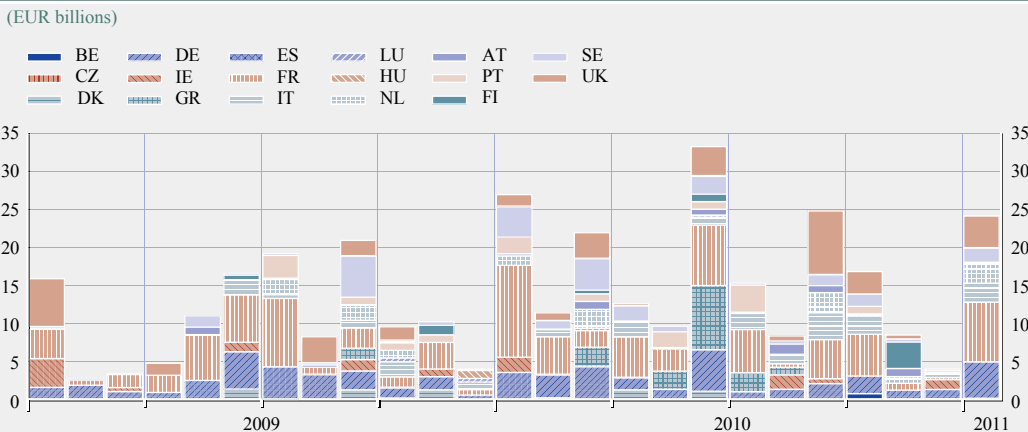
- the reaction to the foreclosure of other markets for asset-backed funding;
- the increase in the pricing of the credit risk of banks, which covered bonds address through double-guarantee schemes.

While in the past and especially in some national environments self-funding may have indicated retention for further private placement operations, over the past few years banks seem to have retained a large part of their issuance to increase their reserves of eligible collateral for central bank credit operations.

A closer look reveals that covered bonds regained strength after the ECB announced its covered bond purchase programme in May 2009 (see Chart 11).¹⁸

¹⁸ More precisely, the ECB announced the programme in May 2009 and published the specifications thereof in June 2009. Implementation started in July 2009. The latter two dates coincided with an increase in covered bond issuance.

Chart 11 Issuance of jumbo covered bonds



Source: Dealogic.

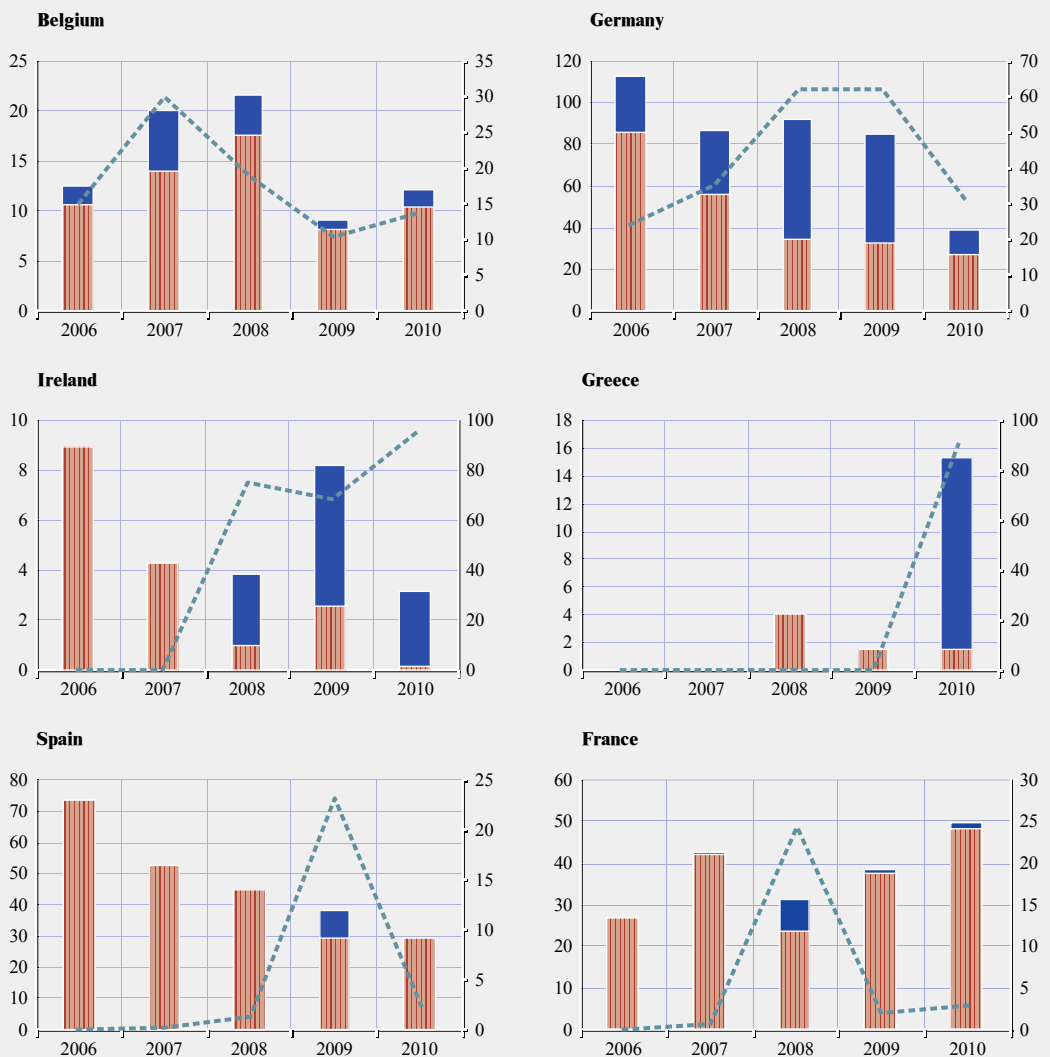
The self-funding phenomenon is particularly evident once the aggregate figure is broken down to national levels (see Chart 12). The 2008 outlier in self-funded deals refers to UK banks, while similar spikes for 2008 also apply to France and Italy. Self-funded deals

currently account for almost 100% of the market in Greece and Ireland. A reason for the decline in the issuance of German *Pfandbriefe* in 2010 might be a drop in public-sector *Pfandbriefe* that cannot be compensated for by other sectors. In addition, issuance during

Chart 12 Covered bonds issued, by year and country

(scales differ according to country)

— self-funded CB issues (EUR billions; left-hand scale)
 ■ covered bonds issued (EUR billions; left-hand scale)
 - - - percentage of self-funded revenues (right-hand scale)

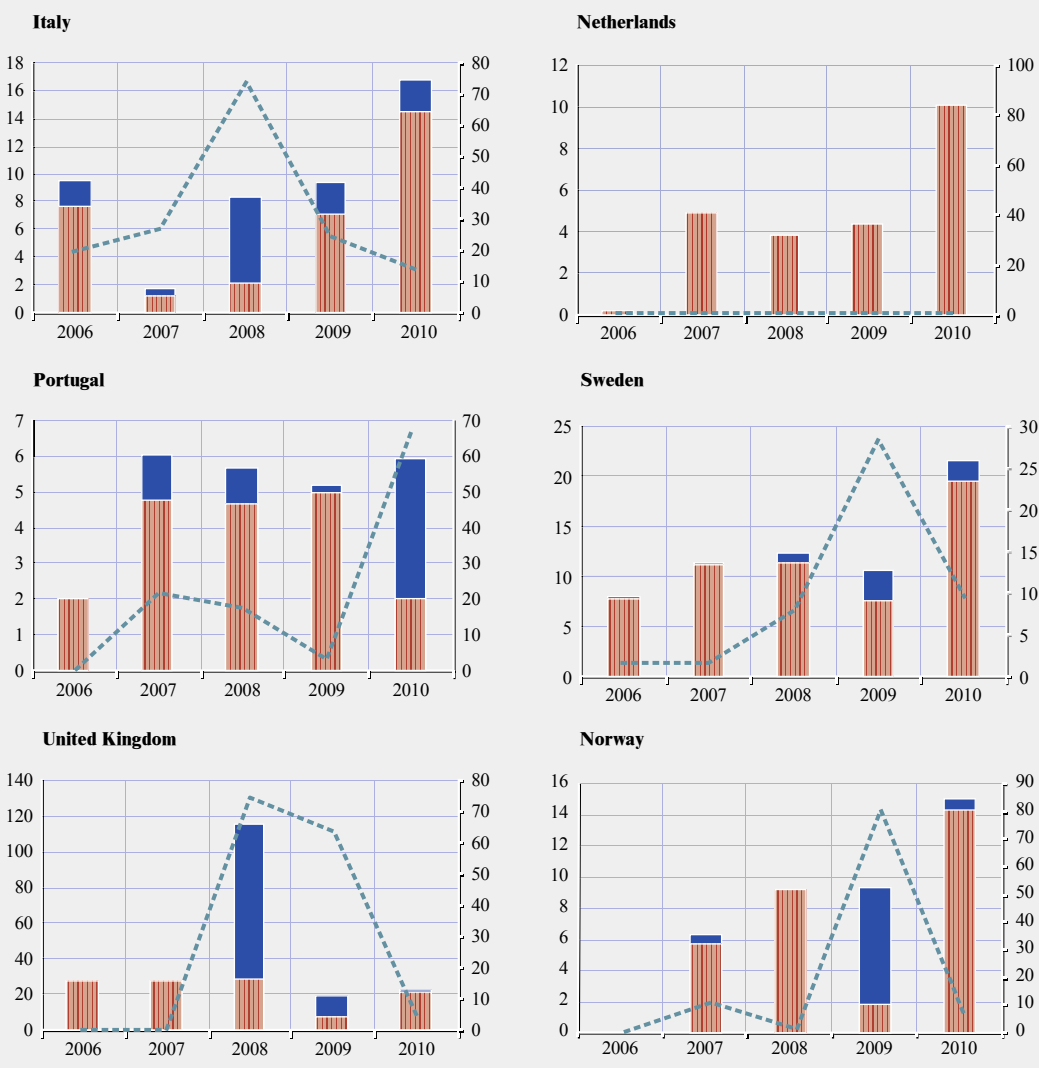


Source: Dealogic.

Chart 12 Covered bonds issued, by year and country (continued)

(scales differ according to country)

■ self-funded CB issues (EUR billions; left-hand scale)
■ covered bonds issued (EUR billions; left-hand scale)
- - - percentage of self-funded revenues (right-hand scale)



Source: Dealogic.

summer, particularly in August, was lower than expected, but is forecast to have been compensated for by the end of this year, according to the *Verband deutscher Pfandbriefbanken* (vdp – Association of German Pfandbrief Banks).

Furthermore, Dealogic data does not include *Namenspfandbriefe*, which accounted for an additional €31 billion in 2008 and €29 billion in 2009 (€13 billion up to September 2010) in German covered bond issuances.

4.2 THE IMPACT OF SOVEREIGN RISK ON COVERED BOND PRICING

In the euro area, there has been an unprecedented appreciation of the sovereign risk in some countries relative to Germany throughout 2010, in particular in Portugal, Ireland, and Greece. The evolution of market perception of sovereign credit risk is often evaluated by looking at spreads over the German Bund for a given maturity (see Chart 13).

The euro swap curve is an alternative benchmark rate. Chart 14 compares the one-year to 20-year government yield curves in terms of swaps over the corresponding euro mid-swap rates at two different dates. The increase is clear for Ireland and Portugal, and intermediate for Italy and Spain, while it is negligible or minor for France, the Netherlands and Belgium, among others. The premium increases with maturity length.

Covered bonds are a good instrument for investigating the spill-over of the increase in sovereign risk volatility into banks' funding conditions and costs. They have been the main

Chart 13 Spreads of ten-year national government bonds vis-à-vis the German Bund

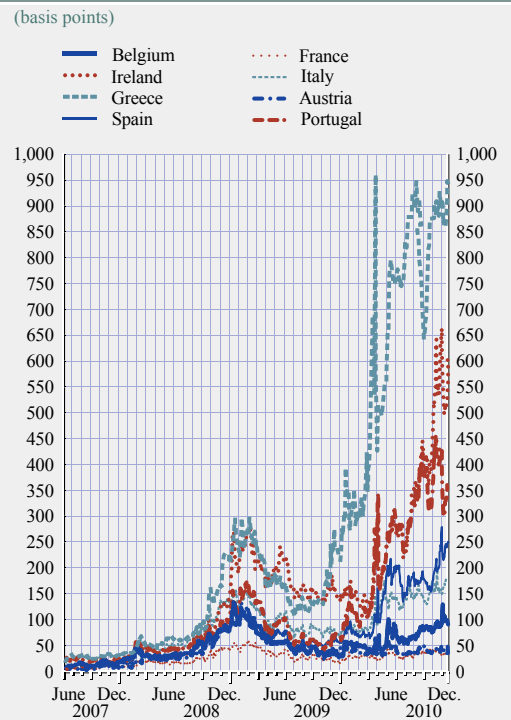


Chart 14 Evolution of government yield curves – one-year to 20-year spreads over mid-swap euro rate on 4 January and on 3 November 2010

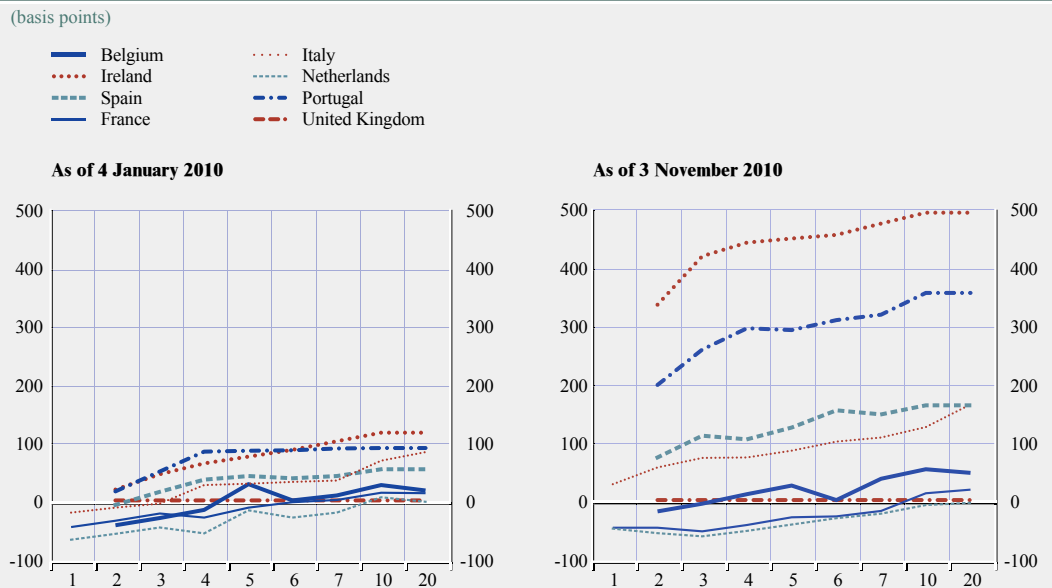
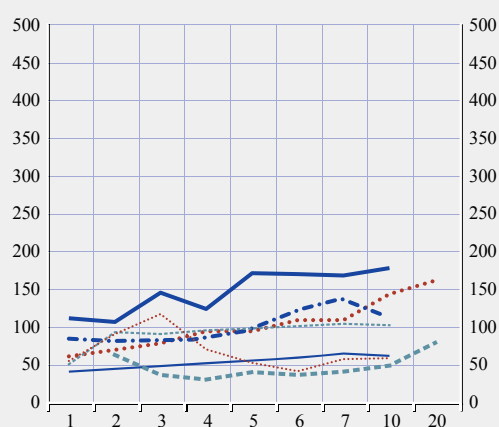


Chart 15 Evolution of covered bond yields – one-year to 20-year spreads over mid-swap euro rate on 4 January and on 3 November 2010

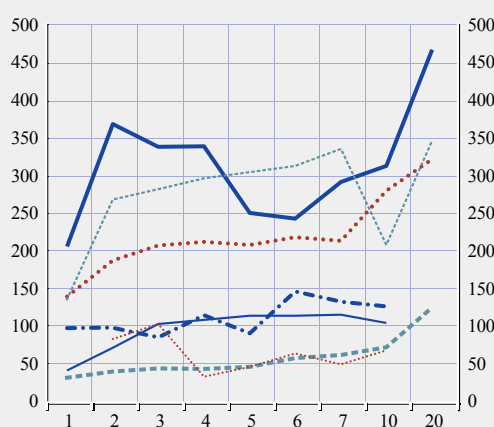
(basis points)

Legend:
 Ireland (solid blue line)
 Spain (dotted red line)
 France (dashed green line)
 Italy (solid blue line)
 Netherlands (dotted red line)
 Portugal (dashed green line)
 United Kingdom (dashed blue line)

As of 4 January 2010



As of 3 November 2010



Sources: Calculation based on Bloomberg and Dealogic data.

Note: In Italy, the Netherlands and the United Kingdom, covered bonds with a maturity of 20 years are not issued.

source of banks' new long-term wholesale funding over the past two years and underlying cover pools are normally identifiable by nationality. Chart 15 shows the yield curves of covered bonds deals from various countries. These national yield curves can be compared to the yield curves of government debt.¹⁹

The direction and magnitude of the displacement of country-level yield curves closely resemble those for sovereign yield curves, supporting the assumption of a positive correlation between sovereign and bank risk.²⁰ The increase in the spread on outstanding covered bond deals and, hence, in the cost of funding is the largest for Irish and Portuguese banks. Spreads also almost doubled for Italian and Spanish banks. In contrast, the displacement is not really material in the case of France, the Netherlands and the United Kingdom.

¹⁹ Covered bond deals are used to construct a number of national yield curves similar to government debt curves. At each date, the Bloomberg mid-yield-to-maturity of each security has been compared with the euro swap rate of the corresponding maturity. The data have been filtered to include euro deals, outstanding deals maturing in more than a year from now, deals for which a liquid price is available (bid and ask prices are reported on top of a model-calculated mid-price), and non self-funded deals.

²⁰ The question arises of whether government guarantees might lead to a more direct link between sovereign risk and covered bond spreads, as would be the case with purely market-related sovereign risk spillovers. According to Dealogic, only two Irish covered bonds with an obviously strong positive correlation are backed by the government. Thus, the positive correlation appears to stem mainly from sovereign risk considerations that have been channelled through various market factors rather than from a direct impact of government guarantees.

5 DIFFERENCES ACROSS EU MEMBER STATES

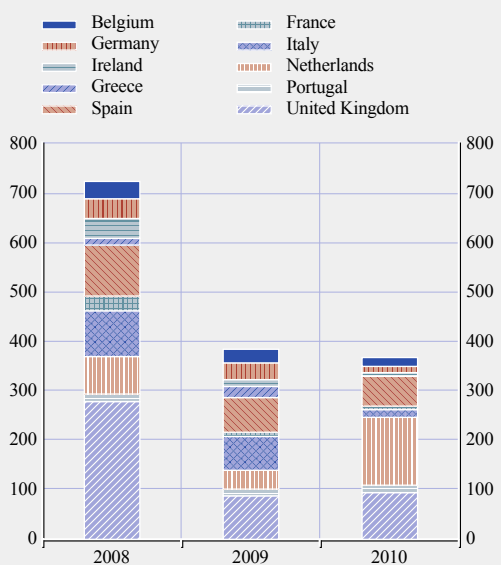
This section briefly compares securitisation and covered bond markets across a sample of EU Member States and enumerates some common factors that may be behind recent successful public placements, signalling re-emerging market demand, in certain countries. The annexes give a more detailed overview of the markets in the sample.

5.1 ISSUANCE AND SPREADS ACROSS EU MEMBER STATES

In Europe, issuance is mainly concentrated on a few markets (the United Kingdom, Spain, the Netherlands and Italy), as can be observed in Chart 16. The Netherlands has become one of the main European markets for securitisation in 2010, although some of the issuance is a result of resecuritisations.

Chart 16 New securitisation by main countries in Europe

(EUR billions)



Source: JP Morgan.

Chart 17 shows the development of securitisation markets in the sample of EU Member States by asset classes. Clearly, RMBSs are the dominant asset class in all countries except Germany and Greece. In Spain, SME loan securitisations (part of the CDO segment in this report) play a major role as well. The general fall in interest rates helped improve the financial capacity of borrowers and thus may have contributed to the relative dynamism of real estate loans. However, according to credit rating agencies, the deterioration of economic conditions, high levels of unemployment, decreases in real estate prices and competition from safer products such as covered bonds may bring corrections in the RMBS market, both in the United Kingdom and in continental Europe.

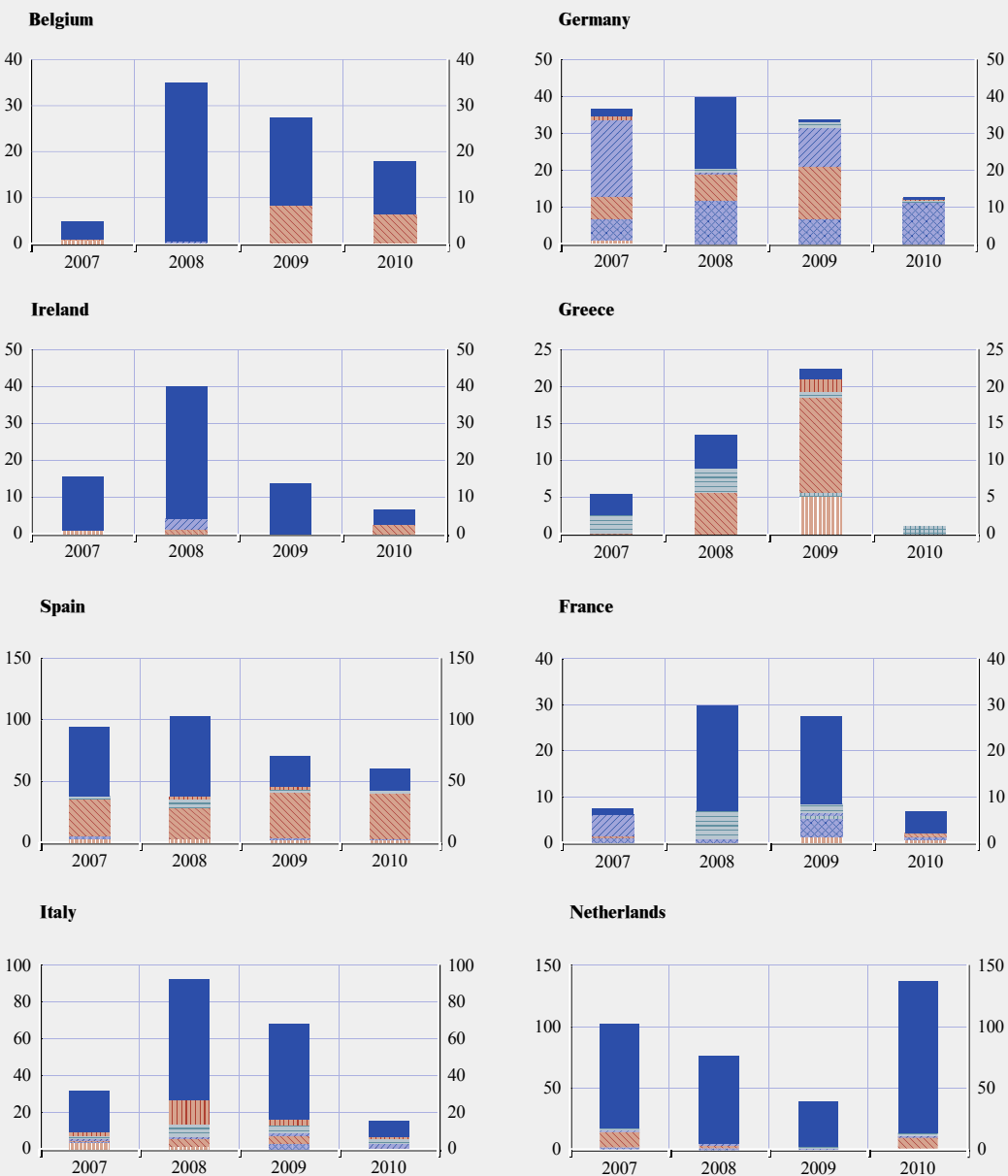
In most markets, issuance peaked in 2008 and/or 2009. As discussed above, issuance in these years was almost entirely retained. The Netherlands is the only country where issuance has increased significantly in 2010. In all the other countries, it has been at best similar to 2009 levels, but mostly significantly lower. This may be because of the reduced supply of loans and, hence, lower demand for securitised products as eligible collateral, but may also point to a return of market investors, although at a low level and only for certain countries. Issuance in Greece and Ireland, both affected by the sovereign crisis, is very low (see the sub-section on Greece in Annex 1).

With regard to spread levels, Chart 18 shows that sovereign risk and national specificities of real estate markets have to be taken into account by investors to the extent that they are reflected in spreads. Since the beginning of the sovereign crisis it has been possible to divide RMBS spreads into two groups: they have increased sharply in Greece, Spain, Portugal and Ireland, while in the Netherlands, the United Kingdom and Italy they have remained more stable.

Chart 17 New securitisation in selected EU Member States by asset class

(EUR billions; scales differ according to country)

■ RMBS ■ CMBS ■ auto
■ leases ■ CDO ■ other
■ consumer ■ cards



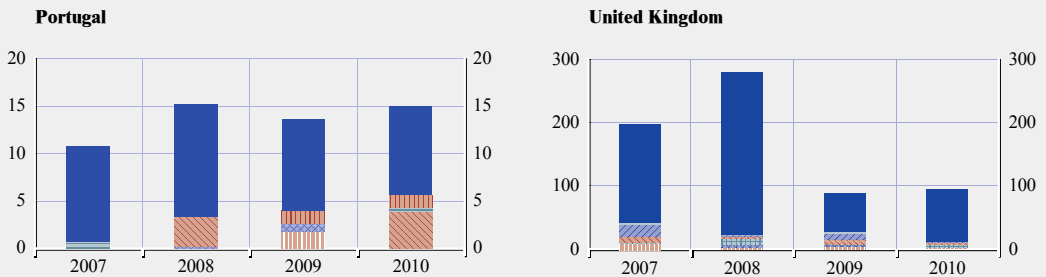
Source: JP Morgan.

Note: As mentioned above, JP Morgan's classification of CDOs includes SME loan securitisation. For Spain, the issuance marked here as CDOs are SME loan securitisations with public guarantees which are in actual fact ABS products (securisation of granular and homogeneous pools of loans). The high issuance volume in the Netherlands is partly due to resecuritisations, for example Rabobank's BEST 2010 transaction (€50 billion, €30 billion of which consisted of a resecuritisation of an older (BEST 2007) transaction).

Chart 17 New securitisation in selected EU Member States by asset class (Cont'd)

(EUR billions; scales differ according to country)

■ RMBS ▨ CMBS ▩ auto
▨ leases ▨ CDO ▩ other
▨ consumer ▩ cards



Source: JP Morgan.

Note: As mentioned above, JP Morgan's classification of CDOs includes SME loan securitisation. For Spain, the issuance marked here as CDOs are SME loan securitisations with public guarantees which are in actual fact ABS products (securitisation of granular and homogeneous pools of loans). The high issuance volume in the Netherlands is partly due to resecuritisations, for example Rabobank's BEST 2010 transaction (€50 billion, €30 billion of which consisted of a resecuritisation of an older (BEST 2007) transaction).

Despite these sovereign-crisis-related wobbles, some market participants have recently seen the beginning of a slight shift in investors' risk appetite, as they move away from more traditional prime assets to high-yield "exotic" asset classes, such as CMBSs and UK non-conforming RMBSs.

5.2 THE "OUTLIERS": EXAMPLES OF MARKET DEMAND IN 2010

This final sub-section attempts to identify common factors that could lie behind the recent re-emergence of market-driven demand in some European countries. The analysis of the common factors sheds some light on whether investors have learnt from the crisis and on whether they are avoiding excessively complex or risky products. Specifically, there has been successful publicly placed issuance in 2010 in Germany, the Netherlands, the United Kingdom and, very recently, Italy.²¹

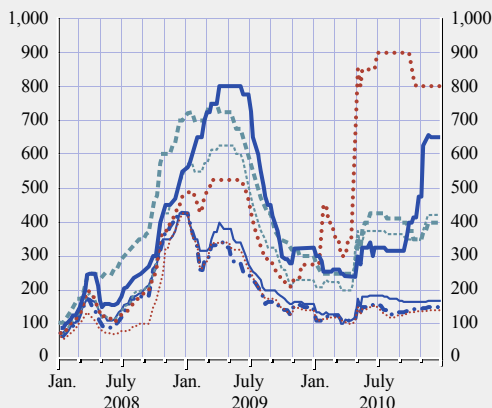
Annex 2 gives more details of the evidence that has been collected on European public placements in 2010. Judging from the evidence, common factors behind market demand include:

- **Benign economic environment and good collateral.** Market-driven demand has come back in 2010 only for collateral with a low

Chart 18 Spreads versus the Euribor for European AAA-rated RMBSs

(basis points; maturity between five and seven years)

— Ireland - - - Netherlands
- - - Greece - - - Portugal
- - - Spain - - - United Kingdom
— Italy



Source: JP Morgan.

21 In the United States, "esoteric" asset-backed securities (such as securities backed by a franchise fee, patents on drugs or timeshare receivables) have also recently attracted investors as a consequence of the limited supply of conventional ABSs (see "Esoteric' Bonds Stage a Comeback", *Wall Street Journal*, 24 November 2010).

risk profile and mainly from countries with low sovereign risk. Only the best quality auto ABSs (Germany) and UK and Dutch prime RMBSs have been able to unlock the public market.

- **Simple and transparent structures.** The structures which have been used are well-tested and relatively simple. In all countries, there is evidence that the deals have been structured in a more conservative way than before the crisis (higher credit enhancement / “thicker” equity tranche, sequential rather than pro-rata allocation of asset cash flows). In Germany, originators with a good reputation have in particular been able to market their products.
- **Covered bonds** issuance has not entirely supplanted RMBSs in the United Kingdom and the Netherlands. Thus, they seem to offer investors an opportunity to diversify rather than a substitute product, and may cater for different investor groups.

6 CONCLUDING REMARKS

The following section draws conclusions from the analysis and briefly describes the outlook for securitisation markets in view of the possible impact of ongoing regulatory reform, before proposing topics for future work.

6.1 SUMMARY OF RESULTS

The issuance of securitised products has continued in Europe and the United States despite the crisis, albeit at significantly lower levels. However, issuance has been massively supported by non-market-related factors or government-related action. In Europe, most issuance has been retained as collateral to be used for central bank (Eurosystem) credit operations. Further evidence, such as the GSE-supported issuance of RMBSs in the United States or the Spanish Government's guarantee programme for certain securities highlights the role of public authorities in bolstering demand.

RMBSs are by far the most important asset class in Europe. Other securitised products, such as CMBSs, CDOs and most ABS asset classes play a lesser role in the aggregate but may be important for individual countries.

The primary and secondary market review over time and across countries reveal that there has been significant differentiation among assets and EU Member States since the wake of the crisis. RMBSs from the Netherlands, the United Kingdom and Italy, but also auto ABSs, exhibit a low level of risk and appear to have again attracted investor demand in 2010. However, cross-country differences and sovereign risk do matter: market-based activity in securitisation markets seems to have occurred mainly in countries with limited sovereign risk and relatively robust economic conditions, notably in Germany, the Netherlands and the United Kingdom, and most recently also Italy. In other countries, securitisation markets have remained much quieter and issuances levels tend to be low.

The evidence of market-based demand in 2010 suggests that transparency, simple and tested structures as well as low collateral risk are key factors for investors; a reputation as a high-quality originator appears to be important as well. This is an indication that investors have learnt some lessons from the crisis and are now scrutinising products more carefully, preferring simple and transparent structures. Demand should be expected to expand gradually to other robust asset classes if justified by the economic fundamentals of the underlying products and to the extent that investors are able to assess a deal structure and to evaluate the collateral.

Covered bonds have gained ground in several European countries and constitute an important complementary funding tool to the most prominent securitised product in Europe, namely RMBSs.

It appears that investors value the diversification benefits conferred by the presence of both covered bond and securitisation markets: although covered bonds may have gained in importance at the expense of some RMBS issuance, RMBSs still appear to be a viable product, as suggested by the evidence relating to market-based demand. Nevertheless, investors and originators/banks are likely to examine the relative costs and benefits of each product carefully, and there will probably be some degree of competition.

6.2 FUTURE REGULATION AND SECURITISATION MARKETS

Ongoing regulatory reform, notably the Basel III agreement, amendments to the Capital Requirements Directive (CRD) and Solvency II, are likely to affect securitisation markets directly and indirectly, through the costs of originators and investor demand.²²

²² For a more thorough analysis of the impact of regulatory reform, see also work done by the Joint Forum.

With regard to originators, the CRD amendments stipulate a retention rule that requires originators to hold a minimum of 5% of a portfolio.²³ It is not clear how this rule will impact on originators, but some observers suggest that retention requirements will deter sponsors who have acquired a portfolio of assets, such as CDO/CLO managers, from fully distributing the tranches.²⁴ However, innovative structures may emerge to comply with the rule, such as an originator special purpose vehicle (SPV) structure.²⁵ In other cases, originators may have already held a portion of the portfolio in the past, in which case the impact may not be material.

Banks and investment advisors are currently the most important investors in securitised products.²⁶ As investors, EU banks must comply with the new proposals contained in CRD 2 and CRD 3 in order to benefit from lower capital charges.²⁷ CRD 2 and CRD 3 impose ongoing due diligence requirements on banks when they invest in securitised products and require both originator and investor to disclose information. Specific rules for securitised products held in the trading book also stipulate higher capital charges, although these will not be implemented until the end of 2011 (CRD 3). Future liquidity ratio regulation may also shift some demand from securitisation markets to covered bond markets, as the latter receive a more favourable treatment for liquidity purposes than the former.

Insurance companies and pension funds, in so far as they invest on general account and not on behalf of third parties, will also have to comply with Solvency II capital charges. Market commentators argue that the higher capital charges on ABSs in Solvency II may make it less attractive for insurers and pension funds to invest in them than in covered bonds, bank floating rate notes or senior unsecured bonds.²⁸ The extent to which Solvency II will actually deter investors from investing in ABS products is still unclear. For example, issuers may adapt a deal structure to create tranches that command

capital charges that are similar to those of comparable bonds under Solvency II.²⁹

6.3 TOPICS FOR FOLLOW-UP WORK

Investor base. What changes are necessary to increase investor demand sufficiently to sustain securitisation markets without the help of government support measures? If securitisation is to play a role in the future not only as a funding but also as a risk transfer tool, there must be viable demand for all tranches, including the equity tranche and mezzanine tranches. What might be the effect on the volume and price of aggregate credit if private sector demand for securitisation remains depressed? It appears that current demand is concentrated on the most senior tranches, and higher capital charges imposed by regulation on holdings of these tranches should not be expected to reduce this demand drastically. At the same time, transactions that provide higher credit enhancement for senior notes do so at the expense of the proceeds available to more junior note holders. This raises the question as to whether spreads are sufficient to provide the credit enhancement demanded by senior note holders and returns to junior note holders that would meet market expectations. What are the potential sources of market demand for the riskier tranches? Is there a future for securitisation as a risk transfer tool? Will banks look for new ways to transfer risky tranches off balance sheet? For instance, there is evidence of some innovative funds buying the riskiest

23 Similarly, the Dodd-Frank Wall Street Reform and Consumer Protection Act contains a risk retention requirement of at least 5% for US originators of ABSs and CDOs, but not RMBSs.

24 See Citi Global Structured Credit Strategy, 27 October 2010.

25 See Citi Global Structured Credit Strategy, 27 October 2010.

26 *2009 Review & 2010 Outlook Report*, Deutsche Bank, February 2010.

27 CRD 2: Directive 2009/111/EU and Directive 2009/83/EU amending the CRD. CRD 3: Proposed directive amending CRD (in relation to trading book activities). CRD comprises the Banking Consolidation Directive (Recast) 2006/48/EC and the Capital Adequacy Directive (Recast) 2006/49/EC.

28 "European Securitised Products Weekly", Barclays Capital, 11 October 2010.

29 "Solvency II and European ABS", *Special Report*, Deutsche Bank, 11 November 2010.

portion of a securitisation deal to allow banks to transfer risk and benefit from capital relief.³⁰

Regulatory and accounting treatment of securitisation. In addition to the issues suggested in the previous sub-section regarding the impact of new regulations on securitisation markets, there is the question of whether accounting changes allow for an appropriate mapping of issuers' risk exposure. Ongoing standard-setting efforts, notably by the International Accounting Standards Board (IASB), centre on the accounting rules for SPVs which originators and issuers use to issue securitised products. Depending on cash flow rights and where control lies, investment entities may be treated as off-balance or on-balance sheet entities. The accounting treatment of securitisation exposure may give rise to measurement and reporting issues, such as in the case of transactions undertaken to achieve a desired accounting result close to the end of a financial period.³¹ Accounting issues are potentially quite important, as they have consequences for the effect of new regulatory measures, such as the requirement for originators to retain a portion of the portfolio.

Covered bonds. To what extent will covered bonds become a substitute for securitisation? Are there significant risks in covered bond markets that are not yet fully understood? In the early phase of the crisis market observers focused on the shortcomings and complexities of the securitisation process and highlighted the robustness of traditional covered bond products (such as German *Pfandbriefe*). As a result, covered bonds have become much more important in recent years. However, there are some signs that newer and more innovative covered bond structures (such as covered bonds with RMBSs as collateral) can be relatively opaque and difficult for investors to evaluate.³² In contrast, some securitisation structures appear now to be simpler and more transparent. It would be therefore useful to analyse the characteristics of covered bonds and securitised products in parallel, together with the risks and benefits

associated with each. In the end, transparency is key for any product and allows investors to choose among products in an informed way.

30 See e.g. "Fund to help banks meet Basel rules", *The Financial Times*, 27 October 2010. The new fund is designed to help banks reduce the amount of capital set aside, while satisfying the regulatory requirement that there is a significant transfer of risk regarding the risky assets they hold. As the fund will buy a small amount of the riskiest slice of bank assets, it will cushion the bank against the losses that emerge first.

31 See IFRS, Disclosures – Transfers of Financial Assets (Amendments to IFRS 7).

32 These covered bonds are otherwise standard and provide the usual additional layer of protection to investors, namely recourse to the issuers' other assets. The fact that the collateral consists of RMBSs means that investors have to conduct additional analysis to evaluate a structure. Deutsche Bank, "Further RMBS backed covered bonds tap the market", *EUR Liquid Credit Weekly*, 21 October 2010.

ANNEXES

I MARKET DEVELOPMENTS IN SELECTED EU MEMBER STATES

GERMANY

Securitisation

There have been signs of the market reopening in Germany. The great majority of securitised transactions in 2010 have been publicly distributed (€4.5 billion) or privately placed (€2.5 billion). One transaction (€0.3 billion) was retained at first and marketed later. However, the reopening of the securitisation market is still limited to very few asset classes.

Most securitisations were backed by automobile sector assets (auto ABSs). Only a very small number of other transactions, such as SME CLOs and leasing-backed transactions, have been securitised.

Investors have been interested in the upper parts of the capital structure only (AAA/AA, occasionally A). Hence, securitisation is more a funding than a risk transfer tool at the moment. According to an analysis of selected German transactions (sample of five transactions) it was mainly investment funds (47%) and banks

(37%) that were investing in non-retained securitisations. Insurance accounts for only a little more than 10% of the direct investment in German securitisations in the sample. However, it can be argued that insurance has a higher market share, since it is likely that some insurers prefer to invest in securitisations via their investment funds.

In regional terms, most of the German securitisations examined were bought by investors from Germany (40%) and the United Kingdom (23%). French investors accounted for approximately 14%. The remaining countries accounted for less than 10%. Hence, in terms of market participants there is a sizeable interest among foreign investors in German securitisations.

In general, it seems that credit enhancements have not materially changed, although the structure of the transactions has. According to market participants, the first loss piece tends to be up to 8-11% for current securitisations. This is approximately three times the pre-crisis level, which makes securitisation unattractive for certain asset classes. Market participants consider that changed credit rating methodologies are the main reason for this increase.

Table A1 Analysis of investors in selected transactions in 2010

(percentages)

Transaction	Month	Asset class	Country	Investors					Country distribution						
				Funds	Banks	Insur.	Other	Number of accounts	DE	ES	FR	IT	UK	BeNeLux	Other
Bavarian Sky 2	Jan.	Auto ABS	DE	47	42	7	4	50	20	5	15	-	37	13	10
Driver Seven A	Mar.	Auto ABS	DE	45	46	n/a	9	40	27	4	21	-	29	4	15
B				n/a	n/a	n/a	n/a	-	-	-	-	-	-	-	
Storm 2010 A1	Mar.	RMBS	NL	58	27	5	10	>30	-	-	26	5	39	26	4
A2				37	42	12	9	40	6	-	21	-	24	30	19
Valhalla I	Mar.	CLO	DK	8	49	29	14	n/a	54	3	-	4	3	-	36
Valhalla II	July	CLO	DK	54	24	11	11	n/a	44	-	-	-	-	2	54
SC German															
Auto 10-1	July	Auto ABS	DE	61	34	1	4	n/a	55	11	12	-	7	12	3
Fosse 2010-4	Sep.	RMBS	UK	n/a	n/a	n/a	n/a	40			11 jurisdictions				
VCL 12	Sep.	Auto ABS	DE	26	33	33	8	34	55	-	8	-	24	6	7
Saecure 9 A1	Sep.	RMBS	NL	66	32	n/a	2	30	4	-	18	-	48	16	14
A2				33	60	7	0	3	-	16	-	46	29	6	
A-Best Five	Sep.	Auto ABS	DE	57	31	7	5	n/a	45	-	12	8	19	7	9

Source: DZ Bank, 2010.

In Germany, new issuances are not related to bilateral agreements. Bilateral repos, tri-party repos, and switch trades were used for existing trade throughout the crisis. Tri-party repos in particular are currently more often debated. However, they are not related to the primary market and their main purpose is to lower the capital charge.

Covered bonds

In Germany the *Pfandbrief* is almost exclusively used as a covered bond instrument. According to market participants, the outstanding volumes as of 30 September 2010 are €231.4 and €426.4 billion for mortgage and public *Pfandbriefe* respectively.

The volume of claims used to cover mortgage *Pfandbriefe* totals €247.6 billion, of which €124.2 billion (50.2%) is residential and €123.4 billion (49.8%) commercial property. Most real estate property is located in Germany (78.9%). The volume of claims used to cover public *Pfandbriefe* amounts to €483.7 billion, of which €47.0 billion (9.7%) is against countries, €174.4 billion (36.0%) against regional authorities, €75.7 billion (15.7%) against local authorities, and €186.6 billion (38.6%) against “others”. Most borrowers are again located in Germany (78%). The volume of claims to cover ship *Pfandbriefe* accounts for €9.7 billion, the whole amount being in sea-going vessels. 55.4% of the ships are registered Germany.

Self-retention in 2009 and in 2010 so far is considerably above 10% of the amount of new issues in the years concerned. New issuance amounted to about €110 billion and €71 billion in 2009 and 2010 (as of 30 September) respectively.

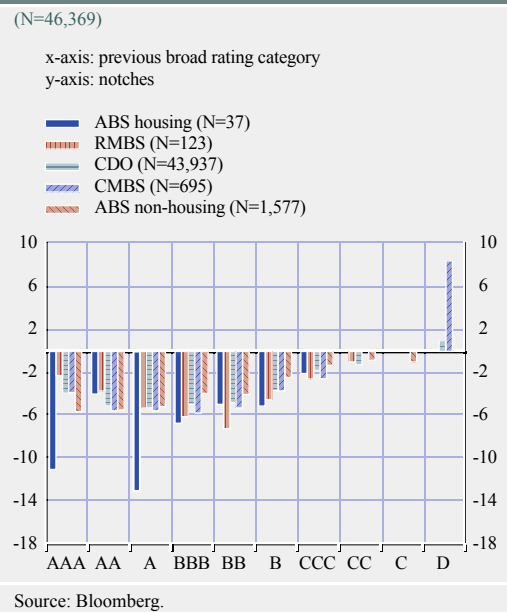
Investors are mainly insurance companies, funds, asset managers, banks and central banks.

IRELAND

Macroeconomic overview

House prices are expected to decline further, given the oversupply of properties and continued economic deterioration. The Dublin area is the

Chart A1 Ratings evolution in Ireland, 2009-2010



most affected. Indeed, Irish house prices are continuing to fall and were 1.3% down in the third quarter of 2010 compared to the previous quarter. Despite the fact that this is the smallest quarterly fall since the second quarter of 2008, it brings the total peak-to-trough fall to 36% (year-on-year prices are down 15%).

Such a situation, coupled with the sovereign risk issue, helps keep spreads at a high level, even for the most senior tranches (the tranche examined in the following chart is rated AAA) (see Chart A1). As far as ratings are concerned, credit rating agencies consequently also expect significant stress for transactions with large exposures to buy-to-let investors.

GREECE

Macroeconomic overview

The very sharp rise in spreads from spring 2010 onwards is obviously linked to the sovereign risk crisis (see Chart 18). The deterioration in macroeconomic conditions has tracked the sovereign issue. Thus, for example, Greek house prices in metropolitan

Table A2 Ratings of covered bond issues in Greece

Issuer	Moody's	Fitch	S&P
Alpha Bank	Baa2 (15/06/2010)	A+ (-) (06/05/2010)	A- (28/07/2010)
National Bank of Greece	Baa3 (15/06/2010)	A-(-) (11/05/2010)	
EFG Eurobank Ergasias	Baa3 (15/06/2010)		
Marfin Egnatia Bank	A3 (16/07/2010)	A-(4/08/2010)	

Source: Bloomberg.

and rural areas continued to fall clearly in the second quarter of 2010 (e.g. prices of apartments fell by 5.7%, year on year).

To date, rating agencies have taken a rather conservative approach and most outstanding tranches of Greek RMBSs have been downgraded. Moody's used the example of Argentina's banking and sovereign crisis to run an updated extreme stress scenario, which unsurprisingly resulted in large increases in potential required credit enhancement for RMBSs. Although the current crisis will have a negative impact on the future performance of Greek RMBSs, such extreme scenarios remain tail events, as European and international authorities have proved willing to take substantial measures.

Recent developments regarding securitisations and covered bond issues in Greece

In the aftermath of the Lehman Brothers collapse and the severe deterioration of the international economic environment in 2008, Greek commercial banks considerably increased their reliance on ECB funding. Until end-2009 this was partly motivated by the relatively high cost of raising funds as a result of the impact of

the crisis on investor confidence and the Greek macroeconomic environment. From end-2009 until September 2010 the international interbank and capital markets virtually closed for Greek banks owing to the continuing downgrades of the sovereign rating, which in turn led to downgrades of the banks' securities issues and increased uncertainty about economic developments in Greece. Banks therefore turned to the retention of securitisation and covered bond issuances in order to raise liquidity from the Eurosystem. Initially, Greek covered bonds received an AAA rating, but they were downgraded after the fiscal crisis. Table A2 above gives indicative ratings of recent covered bond issues.

Securitisation

Securitisation markets have not yet reopened for Greek banks (see above). Furthermore, the Eurosystem collateral policy has been amended, resulting in higher haircuts for securitisation tranches used as collateral. That explains the limited activity of Greek banks during 2010, as shown in Table A3 below.

In recent deals (i.e. in 2009 and 2010) the main types of collateral have been consumer and business loans.

Table A3 Securitisations of Greek financial institutions in 2010

Issuer Parent	Name of securitisation	Tranches	S&P rating	Issue date	Coupon	Face value of deal (EUR millions)	Amount retained by the bank (EUR millions)
Alpha Bank	Pistis Plc	A Class	AA	25.02.2010	Fixed rate	602.40	602.40
		B Class	-		250 basis points	353.90	353.90
					One-month Euribor		
						956.30	956.30

Source: Bank of Greece.

The main investors in these securities have been institutional investors, such as pension funds, banks, insurance companies and asset management companies. However, these securities have been retained in their entirety by the banks since 2008 and thus currently there are no investors.

Over-collateralisation has been increasing recently. The level depends on three factors:

- The quality of the portfolio of assets securitised. Thus, the more a bank securitises, the lower the quality of the remaining portfolio of assets and the higher the over-collateralisation level in order for the issued security to have a high rating.
- The Eurosystem collateral policy amendments, as all issues have been retained for Eurosystem lending.
- The changes in the rating agencies' methodologies.

Covered bonds

Mortgage loans have been used to date as collateral for covered bonds. However, eligible assets for the cover pool comprise domestic residential mortgages (max. 80% loan-to-value), domestic commercial mortgages (max. 60% loan-to-value), ship loans (max. 70% loan-to-value until the end of 2010), government securities and derivatives (only for hedging purposes).

As regards the collateralisation rate, according to the Bank of Greece Governor's Act 2620/2009 the nominal value of issued covered bonds may not exceed 95% of the value of the cover pool of assets. However, in reality, the over-collateralisation rate considerably exceeds the minimum rate of 5%. In general, a negative trend in over-collateralisation rates has emerged during the last year as covered bonds receive lower ratings due to the limitation of sovereign low rating and the Eurosystem continues to accept covered bonds with a rating of at least BBB- as collateral.

Between January and September 2010 banks executed a series of covered bond issues worth €13.75 billion, which have all been retained for Eurosystem refinancing. It is notable that since 2008, when Greek banks started issuing covered bonds for the first time, all covered bonds – apart from one worth €1.5 million – have been retained by banks in order to increase eligible counterbalancing capacity.

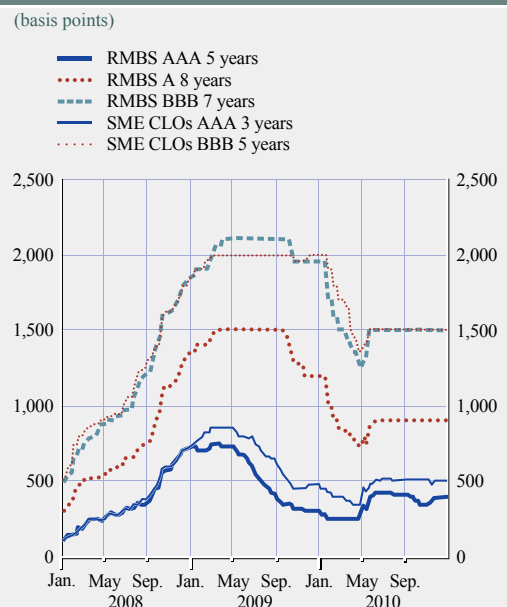
SPAIN

Macroeconomic overview

The Spanish securitisation market is affected by several macroeconomic factors, including difficulties in the real estate market (according to official sources, house prices have fallen by 16% since the beginning of 2008) and an unemployment level which reached 18% in 2009. The sovereign risk concerns have also contributed to an increase in spreads of government debt since April 2010.

Spanish RMBS deals and tranches continue to demonstrate heterogeneous performance that is

Chart A2 Spanish spreads versus the Euribor



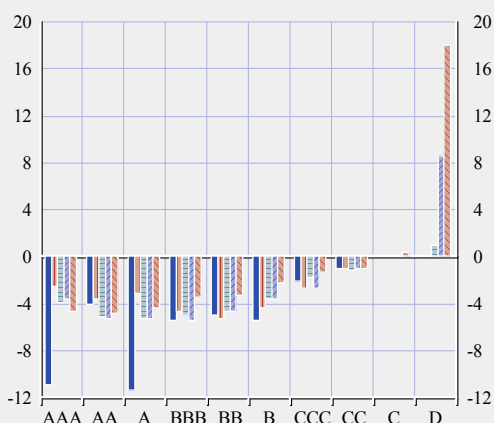
Source : JP Morgan.

Chart A3 Ratings evolution in Spain, 2009-2010

(N=49,284)

x-axis: previous broad rating category
y-axis: notches

■ ABS housing (N=68)
 ■ RMBS (N=570)
 ■ CDO (N=44,243)
 ■ CMBS (N=970)
 ■ ABS non-housing (N=3,433)

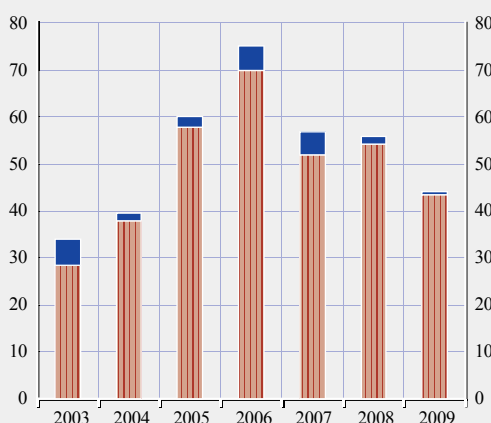


Source: Bloomberg.

Chart A4 New issues of covered bonds in Spain

(EUR billions)

■ backed by public sector
 ■ backed by mortgage



Source: European Covered Bond Council.

reflected in ratings and spreads. While traditional mortgage products with more traditional risk profiles continue to perform within expectations, recent vintage deals with riskier attributes (high LTV, for example) have performed considerably less well.

The spreads of senior tranches of SME loan securitisation (Fondos de Titulización de Pequeñas y Medianas Empresas (FTPME), in this report classed as CDOs but that can be considered as ABS due to the granularity and homogeneity of the loan pools) have remained low owing to support from the Spanish government.

Securitisation

Spanish issuance in the year to date has been almost entirely retained as collateral for Eurosystem refinancing. The types of collateral most commonly used during the last four years are mortgages and loans to SMEs.

In the past, a large part of these securitisations were bought by non-residents, mainly institutions, including insurance companies

and pension funds, from other EU countries as well as other jurisdictions (i.e. United States, Japan, etc.).

Collateralisation levels are currently higher than in the past. It appears that there are no public placements at present.

Covered bonds

Under the Spanish legal framework for covered bonds, the only eligible loans for covered bonds are those secured by residential or commercial real estate, and public sector exposures.

In this case, the underlying collateral consists of the entire mortgage loan book registered in favour of the issuer. The special privileged claims of the holders of Spanish covered bonds are guaranteed by the cover asset pool and, where they exist, by the substitution assets which back up these products and the economic flows generated by the financial instruments linked to each issue. Covered bonds collateralised by real estate constitute the bulk of covered bond issuance.

As regards over-collateralisation, minimum rates of 25% and 43% have been established for mortgages and for public sector exposures respectively.

In 2009 there was a substantial increase in the issuance retained by banks as collateral for raising liquidity from the Eurosystem. However, in 2010 the proportion of retained issuance fell again.

ITALY

Macroeconomic overview

Aggressive, high loan-to-value (LTV) lending is rare in Italy, and real house price appreciation before the crisis was less marked than in other developed countries. Arrears and defaults, mitigated by the traditionally low level of indebtedness of Italian households, remain in the range of rating agencies' expectations. However, the expected slow recovery of the economy and increase in unemployment could feed through to defaults and negatively affect RMBS ratings on the most junior classes of notes. Finally, the sovereign crisis also has to be mentioned. It helps explain the rise in spreads that occurred in spring 2010. Nevertheless, the fact that Italy does not seem to be the immediate

focus of investors' concerns helps to limit the increase in spreads.

LUXEMBOURG

Covered bonds

Luxembourg covered bonds are known as *Lettres de Gages* (LdG). Five banks issue LdGs, namely Dexia LdG Banque, Erste Europaeische Pfandbrief und Kommunalbank (EEPK), Hypo Pfandbrief Bank International SA, Eurohypo Luxembourg SA, and Nord/LB Covered Finance Bank SA. At the end of October 2010, the outstanding volume of LdGs was almost €2,626 billion, only a small share of which was accounted for by Jumbo (benchmark) covered bonds. All collateral of the outstanding LdGs is public sector debt.³³ The issuance of LdGs increased from €4.5 billion in 2003 to €10 billion in 2007. Issuance in 2008 (€4 billion) and 2009 (€3 billion) was more subdued.³⁴

The size of the LdG market is remarkable in comparison with that in other countries. From 2005 to 2009, the proportion of covered bonds outstanding of GDP was around 80-90%. This percentage is significantly lower for other countries (around 40% for Germany, 20-40% for Spain, and below 20% for France).

NETHERLANDS

Macroeconomic overview

Dutch macroeconomic conditions are rather positive compared to many countries in Europe. Thus, unemployment has remained low in the Netherlands during the crisis, and has now stabilised at just over 5% (5.3% in September) after peaking at 5.8% earlier in the year.

The Dutch housing market has not suffered as dramatic a correction as other European markets, thanks, among other things, to a more moderate period of appreciation prior to 2007. Indeed, Dutch house prices have increased at a much lower rate than those in other European

Chart A5 Italian spreads versus the Euribor



Source: JP Morgan.

³³ European Covered Bond Council.

³⁴ European Covered Bond Council.

jurisdictions over the past decade, leading to a less overheated market. House price growth seems to have bottomed at -5.6% on an annual basis in the second half of 2009 and had improved to -2.2% year on year by April 2010. While still in negative territory, the slow but steady recovery of the market suggests a relatively comfortable medium-term outlook and makes a double dip in the near future less likely.

The underlying asset quality in the housing market is reinforced by public support. For example, the *Nationale Hypotheek Garantie* (a national mortgage guarantee scheme) offered to some residential borrowers helps to maintain the good quality of the assets underlying RMBSs. The robustness of the underlying real estate market helps keep spreads at a rather low level compared to other countries, especially in the case of the most senior tranches.

Covered bonds

In the Netherlands, there have been issuances under four regulated covered bond programmes and one structured covered bond programme. All use retail mortgages which can serve as collateral vis-à-vis the covered bond holders and all use retail mortgages governed by Dutch law, while one programme uses retail mortgages governed by both Dutch and German law.

As far as De Nederlandsche Bank is aware, there is no evidence and no sign of covered bond self-retention aimed at increasing Eurosystem-eligible counterbalancing capacity. Dutch issuers claim that all their notes have been sold to external investors. In general, large institutional investors are the typical and most common covered bond investors.

PORTUGAL

Macroeconomic overview

In the course of 2010 Portugal has also been subject to elevated sovereign risk. The Portuguese economy has not experienced the strong growth enjoyed by most of its European counterparts in

the last ten years, with GDP contracting in 2003 and in 2009. Unlike some of the other peripheral economies, at the time of writing the Portuguese economy is expected to grow in 2010 by 1.2%. The growth prospects for the next few years are lower than in the rest of euro area and in the European Union. Unemployment has continued to increase and reached a new high of 10.9% in the third quarter of 2010.

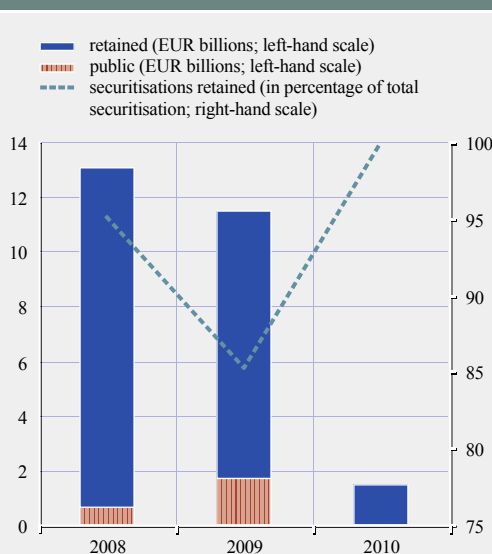
However, and in contrast to other European jurisdictions, there is no evidence of the existence of a price bubble in the Portuguese residential real estate market over the last decade.

Securitisation

Since late 2007, there have been only residual new issuances that have not been self-retained. Securitised products are being retained by the originator credit institution for use as collateral in Eurosystem credit operations.

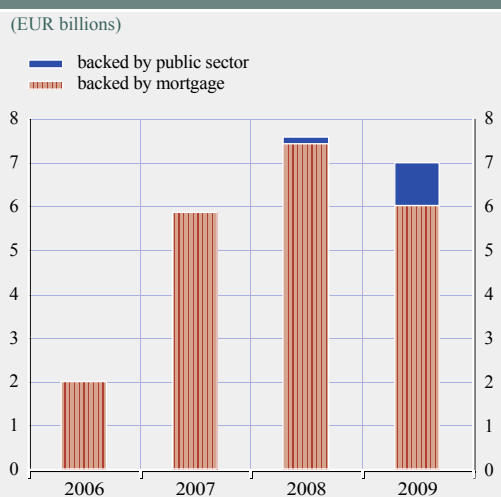
The types of collateral most commonly used have remained constant. Thus, mortgages, consumer loans and SME loans continue

Chart A6 Securitisations by banks in Portugal



Source: Dealogic.
Note: Data for 2010 only comprises single lease ABS.

Chart A7 New issues of covered bonds in Portugal



Source: European Covered Bond Council.

to be the types of assets most securitised in Portugal, irrespective of the purpose of the securitisation.

As the purpose of securitisation has changed and securities are now used as collateral with the Eurosystem, over-collateralisation levels have been adjusted in line with what the rating agencies require for rating at the highest level.

Covered bonds

Under the Portuguese legal framework for covered bonds (Decree-Law No 59/2006 of 20 March 2006), the only eligible loans for covered bonds are those secured by residential or commercial real estate, and public sector loans (in the case of public sector covered bonds).

Since the revision of the legal framework, in 2006, covered bonds collateralised by residential real estate constitute the bulk of covered bonds issuance in Portugal (there has as yet been no issuance of covered bonds collateralised by loans secured by commercial real estate). There has also been some issuance of public sector covered bonds, but the amount is still residual.

As regards collateralisation, the law provides for a minimum over-collateralisation rate of 5.26%.

The three international rating agencies have increased the over-collateralisation required for Portuguese mortgage (residential) covered bonds to be rated at the highest level (i.e. AAA), especially in 2010.

This development resulted from new asset analysis assumptions for Portuguese mortgages, and, in the view of the Central Bank of Portugal, is largely related to the macroeconomic and fiscal conditions and the structural weaknesses of the Portuguese economy (e.g. unemployment, limited prospects for economic growth).

Covered bond self-retention by Portuguese banks increased substantially in 2010 as conditions in the covered bond market tightened significantly in mid-year, mainly due to Portugal's sovereign crisis. There are signs of the market reopening, but as market and investor sentiment has recently been highly volatile, it is difficult to estimate the final impact on the Portuguese covered bond market of the recent announcement of further fiscal austerity measures for 2011.

The information available indicates that the main categories of investors in Portuguese covered bonds are banks and fund managers or asset managers, followed by pension funds and insurance companies. These investors are from Europe, a relevant proportion being from the European Union.

UNITED KINGDOM

Macroeconomic overview

In terms of 2010 issuances (year-to-date), the UK market can mainly be divided into four categories: RMBS (€75,101 million), cards (€2,854 million), CMBSs (€1,163 million) and CDOs, especially SME CLOs (€2,859 million).

RMBS dynamism is also visible on the secondary market. Indeed, spreads have remained relatively low since January 2008, especially for senior tranches. This type of product has been supported by the Asset-backed

Securities Guarantee Scheme³⁵ that was introduced at the beginning of 2009 and may have contributed to the decrease in RMBS spreads.

However, the situation in the real estate market remains very uncertain.

- On the one hand, the recent slight rise in house prices should be considered as a positive sign. Some figures also seem to show that an appetite for buy-to-let lending is returning, with rates offered on new mortgages falling and the number of lenders and mortgage products increasing. Indeed, as would be expected with an increasing number of lenders offering buy-to-let mortgage loans, the competition between lenders has also increased, providing better deals for borrowers;

- On the other hand, credit rating agencies expect further house price falls because of economic conditions, especially unemployment.

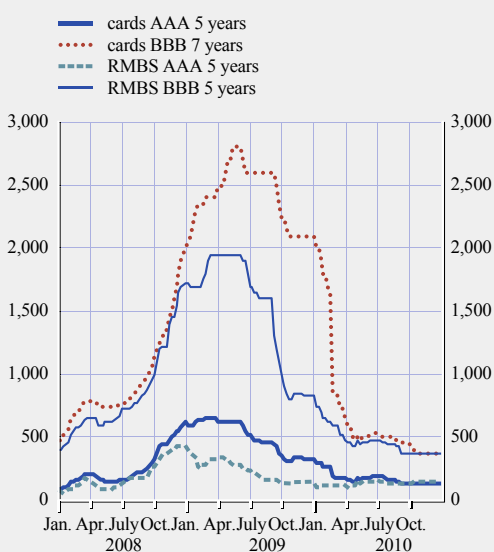
Covered bonds in the United Kingdom

The United Kingdom did not have a legislative framework for covered bonds until March 2008; covered bonds therefore provided only a small proportion of mortgage and other asset funding. However, the introduction of covered bond legislation made using covered bonds for funding more attractive, and since mid-2009 there has been robust and sustained growth in volume for this asset class.

³⁵ This programme is part of the UK Government's measures to deal with the crisis. It offers a guarantee against the non-reimbursement of a part of the interest or of the capital relating to a security backed by UK residential mortgages.

Chart A8 Developments in the United Kingdom

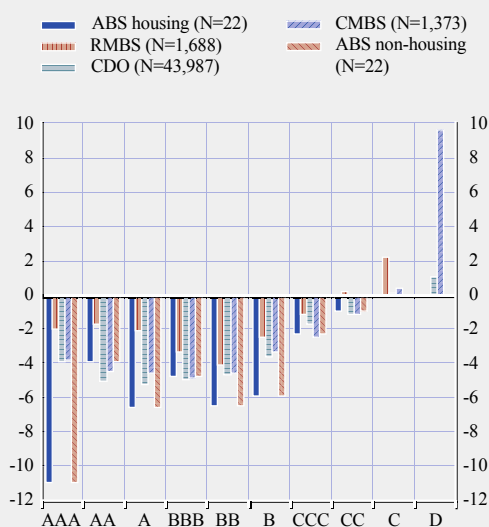
UK spreads versus the LIBOR (basis points)



Sources: JP Morgan and Bloomberg.

Ratings evolution, United Kingdom, 2009-2010 (N= 48,695)

x-axis: previous broad rating category
y-axis: notches



Assets being financed currently via covered bonds in the United Kingdom are mostly prime residential mortgages with a small proportion of non-conforming mortgages, similar to the ABS market. As the covered bond structure provides some additional security features on top of those present in securitisation, covered bonds are typically seen as complementary to RMBSs, especially in periods of concern about credit quality and collateral performance. Several UK financial institutions (Abbey National Treasury Services, Bank of Scotland, Barclays Bank, Bradford & Bingley, Lloyds TSB Bank, Nationwide Building Society and Northern Rock) are involved in both covered bonds and RMBSs. It is felt that both funding instruments could be necessary and complementary in the years ahead for the functioning of the mortgage markets.

On the structural side, the main development over the past year was an increase in the maturity of the instruments. The maturity profile is driven by investor demand and investors' focus shifted from risk aversion to search for yield and filling long-term duration gaps. As a result, the covered bond market witnessed a change from short-term three-to-five year to medium to longer term, five-to-ten year maturities.

Investors in covered bonds in the United Kingdom consist of asset managers, pension funds, banks, insurance companies and central banks. However, the investor base is still not as developed as in the rest of Europe and many of the covered bond issues in the United Kingdom are euro or US dollar denominated, with UK pound denominated bonds being placed mainly through special liquidity schemes. Given that the regulated covered bond is a new product for the UK market, it might take some time to develop a solid and wide investor base in the United Kingdom. This process is further slowed by the marketing disadvantage suffered by covered bonds: ABSs have historically been marketed aggressively both in the United Kingdom and the United States, while covered bond issuers typically targeted an investor base outside the United Kingdom.

2 EXAMPLES OF MARKET-DRIVEN DEMAND

GERMANY

To date publicly distributed German transactions account for a total volume of EUR 4.5 billion, made up primarily of auto ABSs and lease ABSs. With regard to the structure of these transactions, there does not seem to have been a dramatic change in the structuring of the products in Germany compared to the period before the crisis. According to market participants, the structure of European transactions has not become much simpler. In fact, for most German transactions, market participants do not see any great need to simplify the structure or enhance transparency, mainly because most German transactions were already transparent and structured in a relatively simple way before the crisis.

However, investors do make strong distinctions on the basis of the reputation of an issuer and the previous performance of its securitisations.

ITALY

In recent weeks, one bank has reopened the wholesale securitisation market for an Italian issuer. The deal was structured in such a way as to meet market preference for an easy to understand, plain-vanilla structure. A significant portion of the overall deal (EUR 1 billion of a total of some EUR 2.5 billion) was successfully sold to third-party investors, the remainder being retained for ECB refinancing purposes. Maturities ranged from two to five years and pricing was close to the market valuation of single-name covered bonds.

NETHERLANDS

Recently, several financial institutions were again able to place issuances in the market. Besides public issuance, the amount of private placements has also increased. It should be noted that some Dutch RMBS issuance results from terminating old securitisation positions and securitising the underlying values in new constructions.

In total, approximately EUR 21 billion has been issued and either publicly or privately placed. Nearly all non-retained issuances have Dutch RMBS as collateral and are AAA rated. The buyers of these RMBS are probably mainly foreign institutional investors, although no precise information is available. The over-collateralisation levels have increased since 2007, but not dramatically (possibly by 2-3 percentage points).

All deals in the Netherlands for both securitisations and covered bonds have residential mortgages as underlying assets. All transactions are “plain vanilla” securitisation and covered bond programmes. Collateral performance is key for securitisation, and Dutch residential mortgages are still perceived as solid. Their high LTV ratios, far above the European average, are compensated for by an attractive fiscal regime for home owners and low unemployment. For some deals an increase in the spread paid by the issuer through a cash flow swap has been observed.

Payment arrears of Dutch RMBS are approximately 0.5%, which is the lowest in Europe (see Charts A9 and A10 below). Moody’s writes in a recent report:

- The Dutch RMBS market continued to demonstrate stable performance in August 2010.
- 60-plus delinquencies stopped increasing in August, standing at 0.68%. Both new and old transactions show the same trend.
- The outlook for Dutch RMBS is stable. House prices continued to increase, rising 1.4%, quarter on quarter, in the second quarter of 2010. So far, Dutch households have coped well with the recession. As the economy improves, Dutch households are expected to have fewer reasons to default on their mortgages.

For covered bonds, the underlying assets, the quality of the issuing institution and the history

of the national covered bonds market are key characteristics. The levels of credit enhancement for covered bonds have gone up dramatically (from 5-10% to 20-30%), mainly after credit rating agencies had reviewed their methods.

UNITED KINGDOM

In the past several months, the UK securitisation market has shown signs of a comeback in the RMBS sector. In September, Royal Bank of Scotland (RBS) placed the largest global residential mortgage securitisation since before the financial crisis (GBP 4.6 billion – equivalent). Further recovery of the RMBS market was demonstrated in October by the first non-conforming mortgage RMBS (Residential Mortgage Securities No25) since the financial crisis. Albeit small in size at GBP 183 million, the launch of RMS 25 might open the door for other asset classes to come back to the markets. The GBP 2 billion Lloyds RMBS issue in October, placed with no road show or pre-placement, provided additional proof that the

RMBS market is recovering. There is still some way to go: most issuance has come from known large originators, who already had an RMBS programme in place. There were no new deals from small or new originators.

September also saw the first UK whole business securitisation outside core infrastructure since 2008. The GBP 48.65 million Dignity Finance transaction securitised cash flows from crematoria operators. Bankers commented that there is now a fair chance that other non-infrastructure whole business issuance could follow, especially for companies from sectors that performed well throughout the business cycle. In general, however, the preference is for vanilla credit and structures. The absence from the UK market of other asset classes, such as credit cards, is mostly driven by investor demand for yield (and the currently more attractive USD denominated yield curve).

The market is dominated by robust, clean and conservative structures, with significant credit

Chart A9 Payments arrears in various European countries, by date

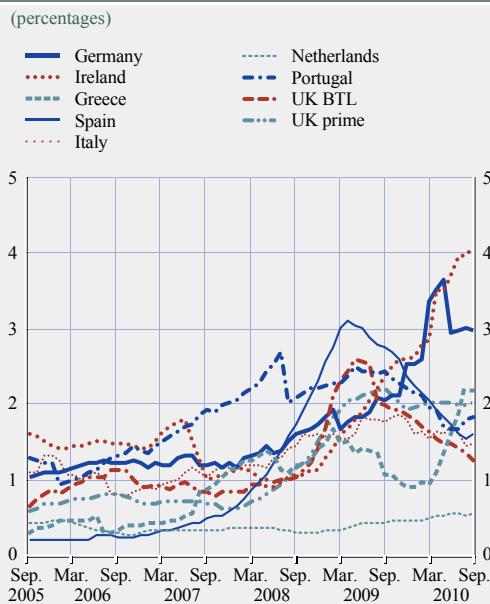
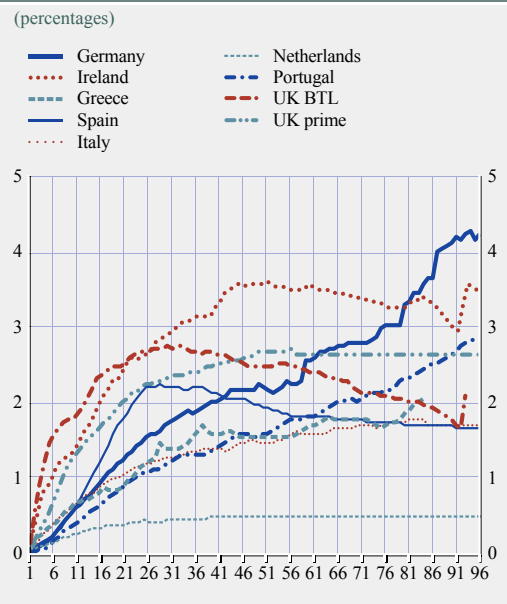


Chart A10 Payment arrears in various European countries, by months since issue



enhancement (compare for example, the RBS securitisation enhancement of 18% at AAA level with the approximately 5% level of RBS pre-crisis deals). All the new deals feature sequential structures where the senior classes are paid first. This contrasts with the pro-rata features of transactions prior to the crisis, where some of the asset cash flows were allocated to the junior classes while the senior securities were still outstanding. Post-crisis transaction structures also predominantly feature a non-amortising reserve which grows as a percentage of the outstanding bonds as the bonds pay down.

The current investor base in UK ABSs comprises predominantly banks, asset managers and insurance companies. In a departure from the past, the post-crisis buyers of structured finance paper are a more select pool of astute specialists and they demand more deal information as a result. The investors are clearly more focused on asset characteristics, performance (static pool information) and weighted average life sensitivities and engage in rigorous due diligence. Rating agencies provide more data and stress scenarios in their pre-sale reports. As a result, disclosure and transparency in the market are improving.

