



## EUROPEAN COMMISSION

Directorate-General for Financial Stability, Financial Services and Capital Markets Union

RESOURCES AND COMMUNICATION

**Internal and external communication**

## APPENDIX

### **ECONOMIC ANALYSIS ACCOMPANYING THE CONSULTATION PAPER ON COVERED BONDS IN THE EUROPEAN UNION**

June 2015

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## I. General description and market trends

Covered bonds (CBs) are secured on-balance-sheet debt instruments which give a preferential claim to the covered bond investors against a ring-fenced pool of collateral (cover pool) and the proceeds arising from the collateral. Although there is no formal widely accepted definition for this type of instrument, its main characteristics are:

- the covered bond and the underlying asset pool remain on the issuer's balance sheet;
- the issuer must ensure that the value of the cover pool dynamically backs the financial obligations generated by the covered bond;
- the investor has recourse to both the cover pool and the issuer in the event of default, (dual recourse).

Covered bonds are perceived as low-risk yield-bearing products (see Appendix I) due to the absence of default events and losses borne by covered bond investors. This is due both to the inherent characteristics of covered bonds as a financial product as well as the support that has been provided at times to their issuers by the Sovereign state backing it. For example, as the table below indicates, during the crisis, defaults of certain covered bonds were prevented by the bail-out of their issuers.

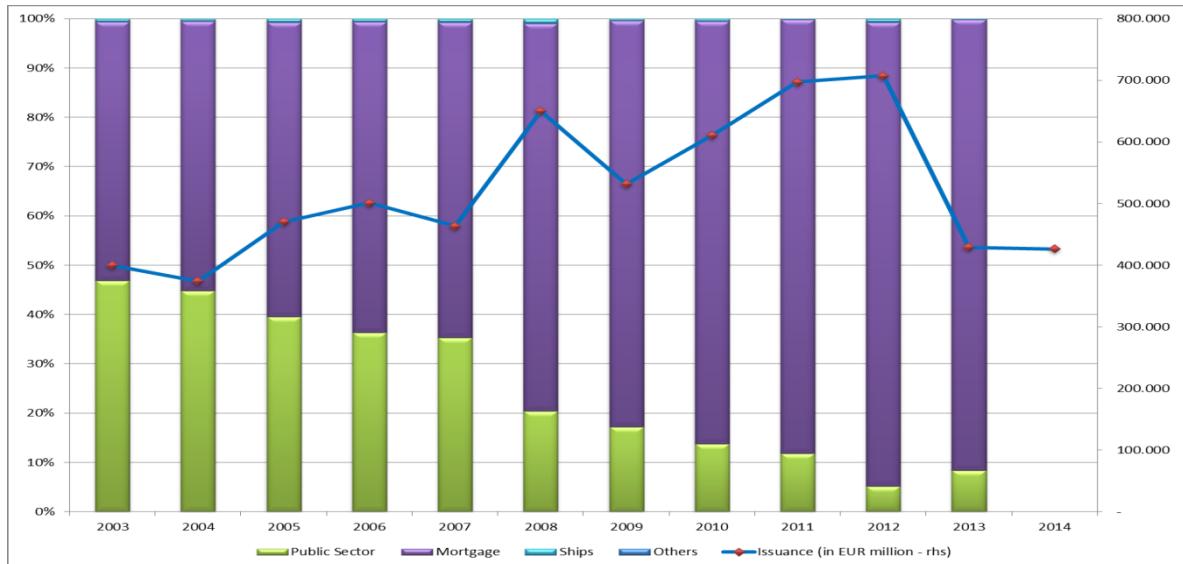
**Table 1.** List of large covered bond issuers subject to a bail-out to safeguard the financial stability and well-functioning of the covered bond market

<u>List of large covered bonds issuers that were subject to a bail-out to safeguard the financial stability and well-functioning of the covered bonds market</u>
<ul style="list-style-type: none"><li>• Düsseldorf Hypothekenbank (April 2008)</li><li>• Hypo Real Estate / Depfa ACS bank (October 2008)</li><li>• Dexia (October 2008/October 2011)</li><li>• Kommunalkredit Austria (November 2008)</li><li>• Crédit Immobilier de France (September 2012)</li><li>• SNS Reaal (February 2013)</li></ul>

Source: EBA

Cover pools in the EU usually consist of residential and commercial real estate mortgages, and public sector and shipping loans (figure 1). Other types of collateral met in the market are SME loans, infrastructure loans and aircraft loans. In most Member States, eligible assets for inclusion in the cover pool are prescribed by legislation and are usually mortgages and private sector obligations (Table 2).

**Figure 1.** Cover pool composition and new issuance 2003 - 2014



Source: ECBC, Dealogic, own calculations

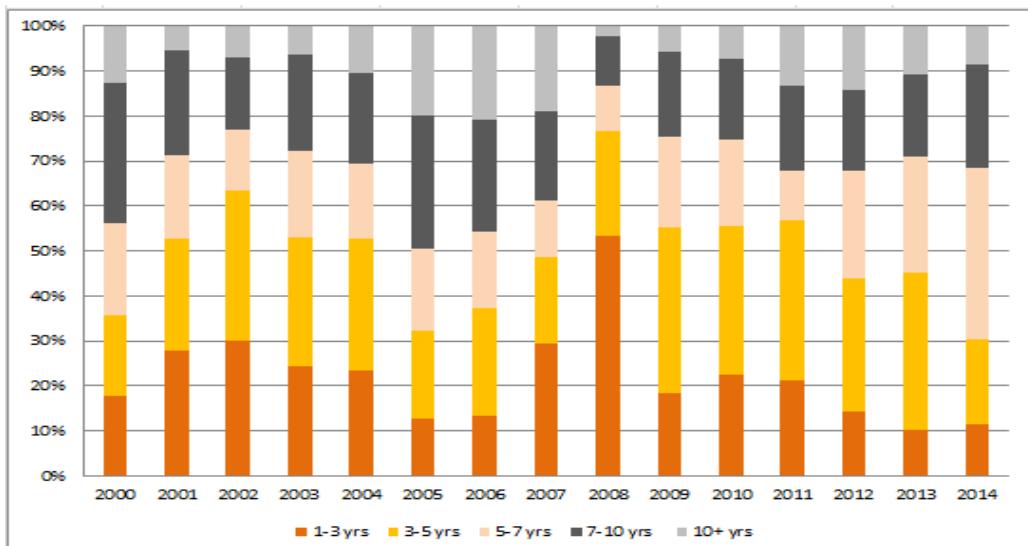
**Table 2.** Legal framework for selected European countries regarding cover pool's asset eligibility

Member State	Assets eligibility – requirement by law
Denmark	Loans secured by real estate (80% or 75% max LTV); exposures to public authorities (SDROs also include exposures to credit institutions (15%) and collateral in ships).
France	OF -First-rank residential and commercial mortgages (max LTV 80%); state and third party guaranteed real estate loans; public sector exposures; securitization of the above. OH – Residential mortgages and securitization of them.
Germany	Mortgages, public sector loans, ship, aircraft (max LTV 60% for all). Credit institutions exposures (max 10% nominal value of the bond), derivatives (max 12% of cover assets).
Norway	Residential (max LTV 75%) and commercial mortgages (max LTV 60%); public sector loans; derivative agreements; substitute assets.
Spain	Cédulas Hipotecarias(CH): secured by the entire mortgage loan book (excluding securitizations or loans securing mortgage bonds).
Sweden	Residential (max LTV 75%) and commercial (max LTV 60%, max 10% of cover pool) mortgages; public sector assets; substitute assets.

Source: ECBC, Banco de España (data as of Jan. 2013)

Covered bonds are generally medium-term financial instruments. Currently, the average maturity of new issues is around 5-7 years with 70% of all new issues maturing within 7 years. The inception of the financial crisis significantly shortened maturities but this was a one-off market reaction; in 2008 more than 50% of all new issuance was maturing between 1 and 3 years - almost twice as much than the year before or the year after (figure 2). Recent observations for 2015 show a renewed tendency towards longer maturities, justified by the search for higher yields.

**Figure 2.** Maturity profile of CB issuance in the EU (public and private placement)



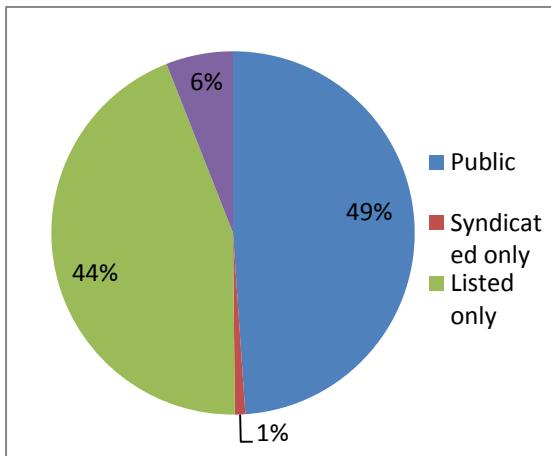
Source: Dealogic

Almost all EU Member States have active covered bond markets<sup>1</sup>. Nevertheless, covered bond issuance is dominated by a few: approximately 80% of global covered bond issuance is represented by six EU Member States alone (Denmark, France, Germany, Italy, Spain and Sweden).

Issuers of covered bonds are mainly credit institutions subject to prudential oversight. Public placements account for about half of the total covered bond market (figure 3). Fixed coupon covered bonds make up for more than 75% of the total new issuance (figure 4).

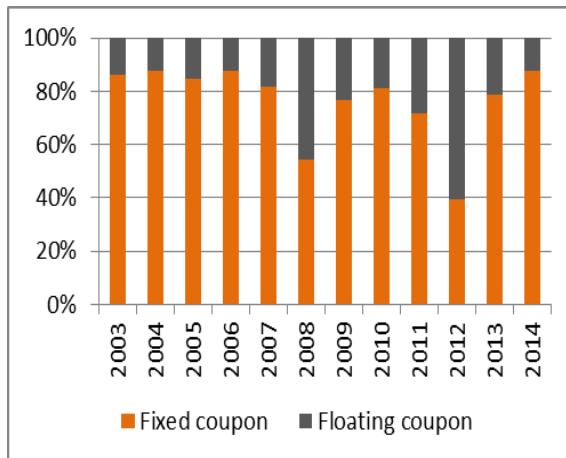
<sup>1</sup> Other than Croatia and Estonia

**Figure 3.** Proportion of public versus private issuance



Source: ECBC statistics. Data Jan 2015

**Figure 4.** Breakdown between fixed and floating coupon for new issuance (public placements only)



Source: 2014 ECBC Statistics, Dealogic

There is no specific legislation at EU level which governs all specificities regarding covered bond issuance<sup>2</sup>. As Table 3 shows, specific domestic legislation on issuance usually exists but varies among Member States.

**Table 3:** Legal framework on Issuance for selected EU Member States

Member State	Issuing entity	Issuance limit	Over-collateralization limit
Denmark	Commercial (SDOs) and mortgage banks (SDROs)	none	108% minimum coverage ratio (mandatory for mortgage banks and not for commercial banks)
France	Specialist credit institution - Sociétés de crédit foncier (SCF) and Sociétés de Financement de l'Habitat (SFH)	none	102% minimum coverage ratio
Germany	Universal credit institution with an special license	none	102% minimum coverage ratio
Spain	Credit institutions entitled to participate in the mortgage market (traditionally commercial, cooperative and savings banks)	none	125% for Cédulas Hipotecarias (143% for Cédulas Territoriales (CH whose cover assets are public administrations exposures)
Sweden	Credit institutions with a special license	none	102% minimum coverage ratio

Source: ECBC, Banco de España (data as of Jan. 2013)

Moreover, such legislation applies mainly to public placements. In contrast, issuers use private placements in order to include non-eligible assets under specific national legislations. One recent example is the small and medium-sized enterprises (SMEs) structured covered bond issued by Commerzbank in February 2013, which replicates exactly the structure of German legislative covered bonds framework with loans to SMEs used as collateral assets (non-eligible under German covered bond legislation).

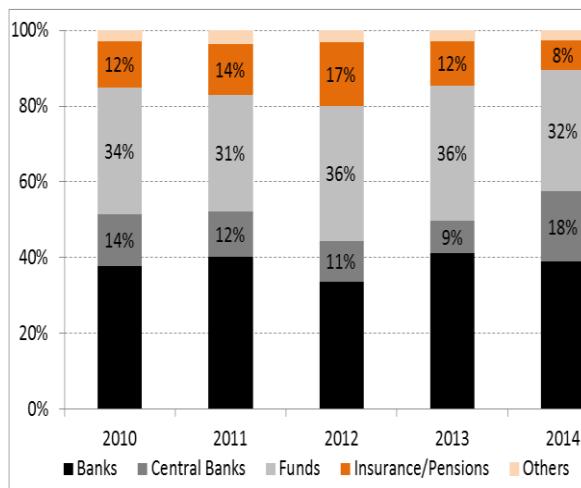
Although there is no dedicated legislation at EU level which governs the operation of covered bonds, there are various EU provisions affecting investment in this asset class. More specifically:

<sup>2</sup> Covered bond trading is subject to the normal MiFID II rules

- The Undertakings for Collective Investment in Transferable Securities (UCITS Directive), which sets limits and provides exceptions for the assets in which a UCITS can invest.
- The Capital Requirement Directive (CRD IV) which, inter alia, modifies the risk-weighting approach for covered bonds
- The Solvency II Directive which addresses many different sources of risks that interact with each other and allow for the calculation of a solvency capital requirement.
- The Bank Recovery and Resolution Directive (BRRD) which, in principle, exempts covered bonds from being written down following a bail-in intervention of the national authorities and provides that the assets of the cover pool must remain segregated and well-funded.
- A Delegated Act on the liquidity coverage ratio (LCR) adopted by the Commission on 10 October 2014, under which covered bonds are classified as one of the relevant liquid assets.

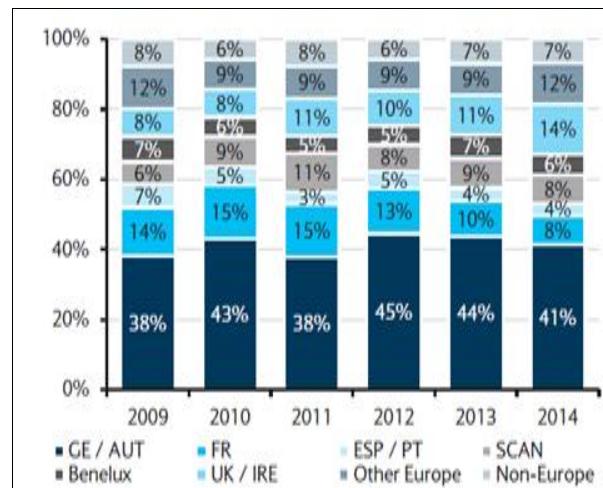
The typology of covered bond investors is diverse. Main investors are credit institutions, investment funds, pension funds, insurance companies and central banks. In particular, credit institutions and investment funds account for more than 70% of total market. Insurance companies and pension funds' investment in this market accounts roughly for 10%.

**Figure 5.** Typology and share of covered bonds investors in the EU by financial institution



Source: Natixis, own calculations

**Figure 6.** Geographic distribution of covered bond investors – aggregate figures



Source: Barclays Research

In terms of investors' geographical distribution, large cross-border investment and financial flows have characterised the covered bond market since the development of the single market and the introduction of the euro. However, the number of Member States that accounts for the holding of the majority of the total outstanding cover bonds is small (figure 6).

For an investor's perspective, the benefits from investing in covered bonds are mainly the dual recourse to the issuer and the cover pool, the covered bonds higher ratings which

also remain over time more robust than these of other financial instruments and their favourable EU legislative treatment when it comes to assessing a financial institution's liquidity.

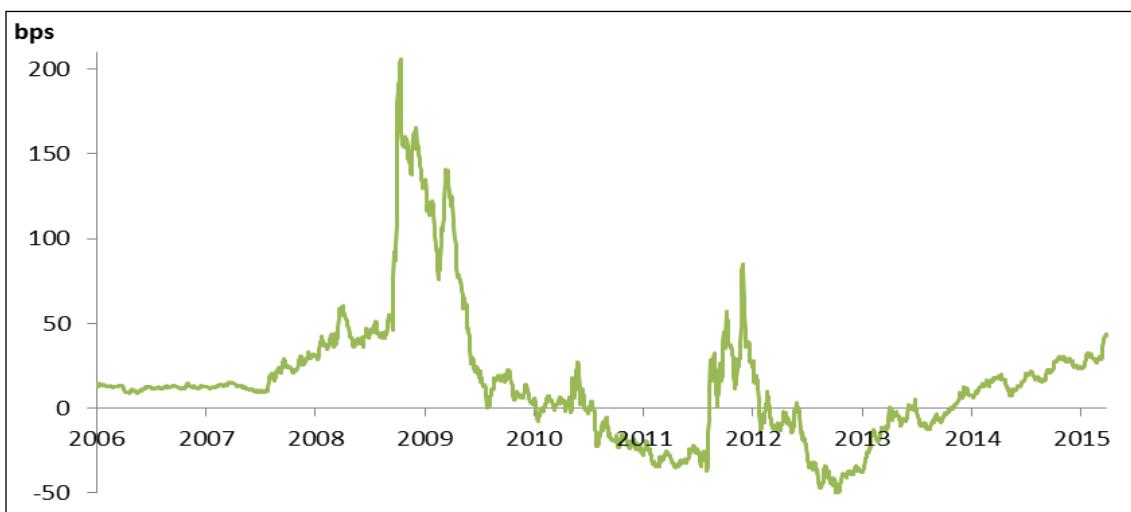
**Table 4.** Pros & cons of covered bonds versus senior unsecured debt from an investor's perspective

Advantages of Covered Bonds	Advantages of Senior Unsecured Debt
<ul style="list-style-type: none"> <li>&gt; double recourse to issuer and cover pool</li> <li>&gt; higher rating than unsecured debt</li> <li>&gt; lower risk weighting for CRR-eligible Covered Bonds bought by EEA banks</li> <li>&gt; favourable treatment under Solvency II</li> <li>&gt; generally better liquidity through larger issue size</li> <li>&gt; favourable repo treatment at ECB and other central banks</li> <li>&gt; Certain covered bonds (likely) to be eligible as liquid assets under CRR</li> <li>&gt; no risk of bailing-in of the secured claim</li> </ul>	<ul style="list-style-type: none"> <li>&gt; higher yield (although 'spread give up' is currently at low levels)</li> <li>&gt; less benchmark supply at the moment (but plenty of non-benchmark issuance)</li> <li>&gt; often high turnover despite smaller deal sizes (due to lower portion of buy-and-hold investors)</li> </ul>

Source: RBS

On the downside is that covered bonds investors usually have to accept lower yields when buying covered bonds relative to senior unsecured debt (figure 7). And although this price difference was even more apparent during the midst of the financial crisis, the observed spread compression in the market could, among other things, also imply an increasing risk appetite of market participants.

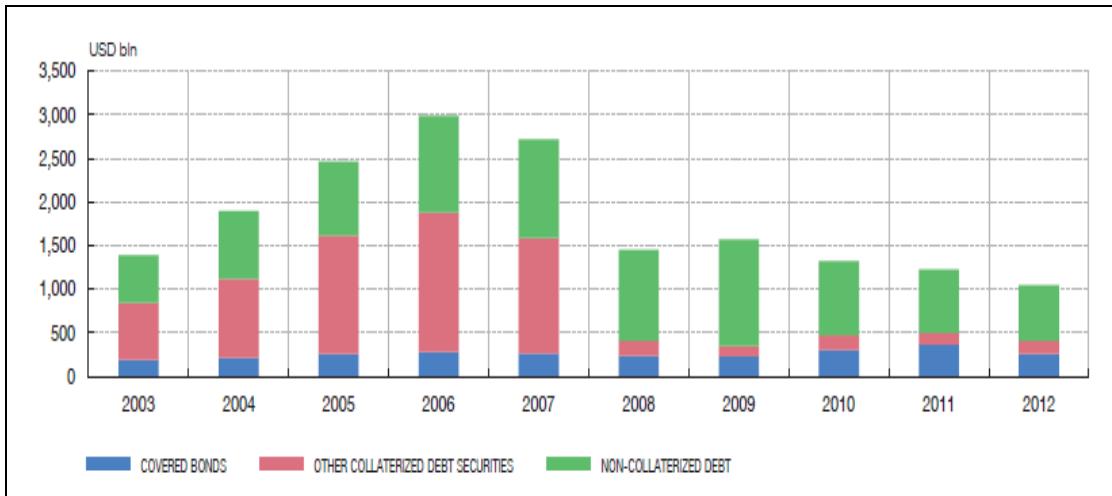
**Figure 7:** Asset Swap Margin Difference between iBoxx EUR Bank Senior and iBoxx EUR Covered



Source: Thomson Reuters Eikon

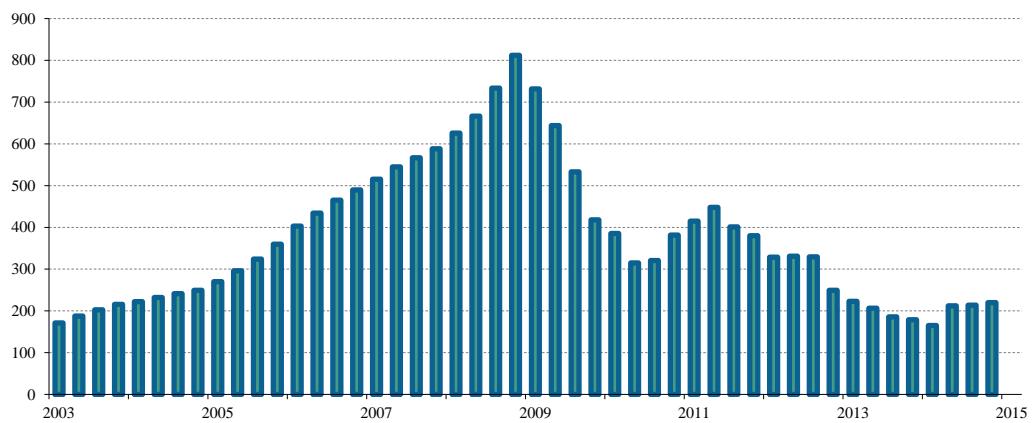
Covered bonds issuance throughout the crisis remained remarkably resilient (figures 1 and 8a) in comparison to other collateralised debt securities in Europe, whose issuance fell more than 75% since 2008 (figure 8b). At the same time, banks were able to continue diversifying their funding bases through senior unsecured debt while their funding needs decreased as they have been deleveraging and/or restructuring. During this period, the collateral backing of new covered bonds issuance was shifted largely to mortgages. The significant decline in 2013 in both issuance and outstanding volumes may reflect the ongoing contraction of banks' balance sheets, the improved availability of alternative sources of funding, the cancellation of retained deals that had been used as collateral with central banks and publicly issued deals reaching their maturity with no need for new issues.

**Figure 8a.** Issuance of private bank debt 2003-2012



Source: Banco de España publications<sup>3</sup>

**Figure 8b.** Issuance of other collateralised debt securities<sup>4</sup> 2003-2014 (€ bn)



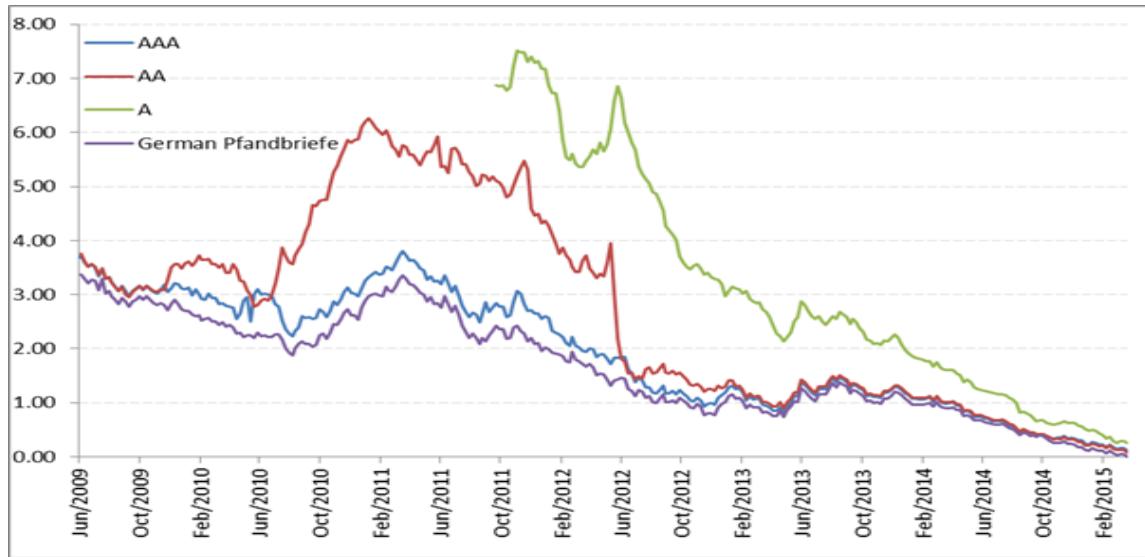
Source: European Financial Stability and Integration, April 2015

Since the onset of the sovereign debt crisis, there has been a 'flight to safety', with German Pfandbriefe seeing higher demand (and thus lower yields) compared to similarly rated covered bonds in other jurisdictions. Figure 9 shows that until Sep 2012 the 'safety' of the German Pfandbriefe resulted in lower yields compared with other AAA ranked covered bonds issued in the euro area. Thereafter the ECB asset purchasing programs seemed to have smoothed yield differentials even among AAA and AA rating categories.

<sup>3</sup> R. Martín, J. Sevillano and L. González, 2013, Banco de España Estabilidad Financiera, No. 24. Only banks of those countries that have issued at least one covered bond since 2003, according to Dealogic, are included in the sample.

<sup>4</sup> ABS: asset-backed securities; CDO: collateralised debt obligations; MBS: mortgage-backed securities; CMBS: commercial mortgage-backed securities; RMBS: residential mortgage-backed securities; SME: small and medium enterprises; WBS: whole business securitisation.

**Figure 9.** Covered Bond yields by type of rating (Euro area, 5-year maturity)



Source: Bloomberg

### 1.1. II. A Benchmark for further EU standardization

#### *Similarities between US and EU frameworks*

Government securities play an important role in financial markets. Their attractiveness for investors lies, among other aspects, on the homogeneity and substitutability between issues, the normally low credit risk perception compared to private issues (reflecting the taxation power of governments) and the importance of their yields (as a reference to price other debt).

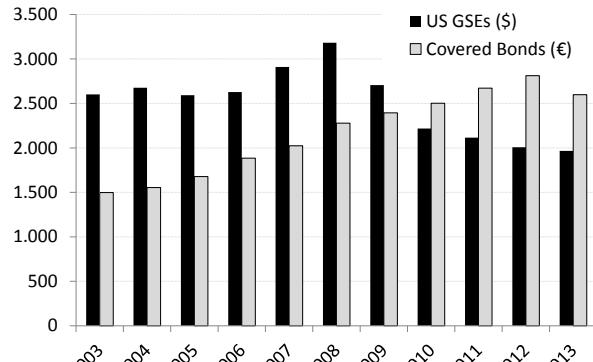
To assimilate the low risk status normally conferred to government bonds, non-government securities have developed characteristics to make them have (or make them seem as having) lower risk. For instance, they have established (over)collateralization or other forms of guarantees. In this regard, in Europe covered bonds were developed; bonds backed indirectly by private mortgages or public sector loans. In the United States, the government sponsored enterprises<sup>5</sup> (GSEs) were established to support and increase the credit quality of private sector collateral (through implicit or explicit government guarantees).

To further enhance liquidity, government and non-government issuance is further standardized / made substitutable by issuing bonds with limited sets of maturities and relatively large issue sizes (benchmarks). This includes the possibility of re-opening existing maturities. In addition, quotation can improve transparency and liquidity. In essence, the measures are meant to achieve the objective of facilitating market participation and pricing.

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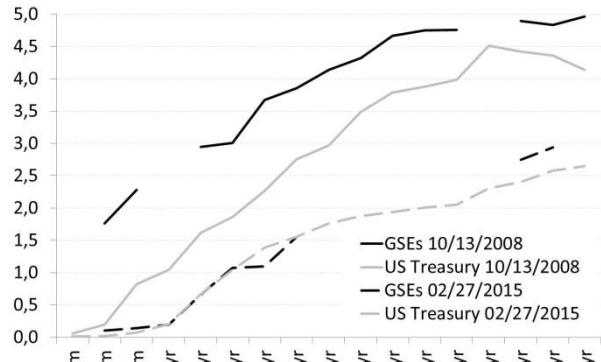
<sup>5</sup> Student Loan Marketing Association (Sallie Mae), Federal National Mortgage Association (Fannie Mae), Federal home Loan Mortgage Corporation (Freddie Mac), Federal Home Loan Banks and Federal Farm Credit Banks.

**Figure 10.** Outstanding liabilities. US GSEs and Covered Bonds



Source: U.S. Federal Reserve, European Covered Bond Council

**Figure 11.** US Treasury and US GSEs yield curves



Source: Bloomberg

Figures 10 presents the extent to which the alternatives mentioned above have been successful in developing a market for non-government securities: the total amount of outstanding (EU) covered bonds and (US) GSE issued bonds. The graph makes evident the similar size of both markets. It also presents the divergent trend in their respective evolution as a result of the crisis: US GSE-outstanding liabilities have diminished. Instead, globally, the volume of outstanding covered bonds, including EU and third countries, has increased.

### Differences

The extent of the success of these markets for non-government securities is not limited to quantities, however. The impact as a price reference of some of them is probably more significant. Figure 11 presents the US Treasury (secondary market) yield curve. It also presents evidence of a yield curve for GSE debt. In particular it presents evidence that GSE debt:

- Covers a large spectrum of maturities (and, consequently, pricing points).
- Is comparable, to a large extent, to the breadth of US Treasury debt.
- Is resilient (counter-cyclical) under stressed market conditions (for instance, as experienced in Autumn 2008)<sup>6</sup>.

The literature has generally recognized several reasons for the breadth and resilience of GSE debt. Two of them stand out in comparison with the EU covered bond experience:

- The standardization of structured debt achieved by the GSEs.
- US Treasury implicit or explicit support behind the GSEs.

With regards to the second point, no common EU backstop exists or is expected to exist to support covered bonds, covered bond frameworks or covered bond issuers<sup>7</sup>. That is, the support presented in Table 1, for instance, refers to individual EU Member State (Treasury) support. Instead, the possibility of further standardizing EU covered bond frameworks is analyzed below.

<sup>6</sup> In particular, on October 2008, considered the peak of the US financial crisis, the spread between 10 year US Treasury and GSE guaranteed debt stood at 80 basis points.

<sup>7</sup> The implicit support was rendered explicit in September 2008.

### *Towards further standardization*

Whilst there are five US GSEs, the market is dominated by two of them (Fannie Mae and Freddie Mac<sup>8</sup>). These utilize a variety of issuance formats for their securities. Liquidity of GSEs is enhanced by having established a regular program of debt issuance<sup>9</sup>, with broad investor distribution; and having been accompanied by active repo and securities lending markets for many of these issues. Almost all of the programmed issues are quoted. Secondary market prices are provided by many domestic and foreign dealers.

However, what is probably most significant of the structured debt market in the United States is the ability of mortgage lenders across the United States to obtain financing through primary or secondary purchases of mortgages by the GSEs irrespective of their place of origin. Conforming loans across the United States that satisfy the conditions stipulated in GSE asset purchases or securitizations can rely and benefit from the GSE activities irrespective of the US state where they take place. US GSEs only purchase or securitize mortgages that "conform" to their established guidelines. Guidelines include measures of (i) minimum requirements of loan borrowers, including income, debt and credit score measures; (ii) minimum requirements for loans, including size of the loan, loan-to-value considerations; etc. Guidelines apply across the US and the single difference directly considering US geographic differences are considerations driven by differences in US house prices across counties<sup>10</sup>. Collectively these different elements have allowed the market for GSE debt to flourish and supported the establishment of a GSE yield curve by markets.

This is far from being the case in Europe and is probably the most important characteristic of GSE debt vis-à-vis covered bonds in Europe. Covered bond legislation differs across the continent and the ability for mortgage providers to benefit from wholesale market funding is very reliant on it. Thus, no similar instrument is hitherto available in the EU. Covered bonds are a different, wider and altogether much more heterogeneous asset class than GSE debt. Whilst figure 10 could give the impression that there is a similar US and European asset class, this is far from being the case. The figure makes no distinction whether the underlying covered bond debt is considered substitutable, homogenous, etc. In this regard, figure 12 gives a sense of how covered bonds are fragmented along observable characteristics, including geographic boundaries, within and between EU Member States and other third countries.

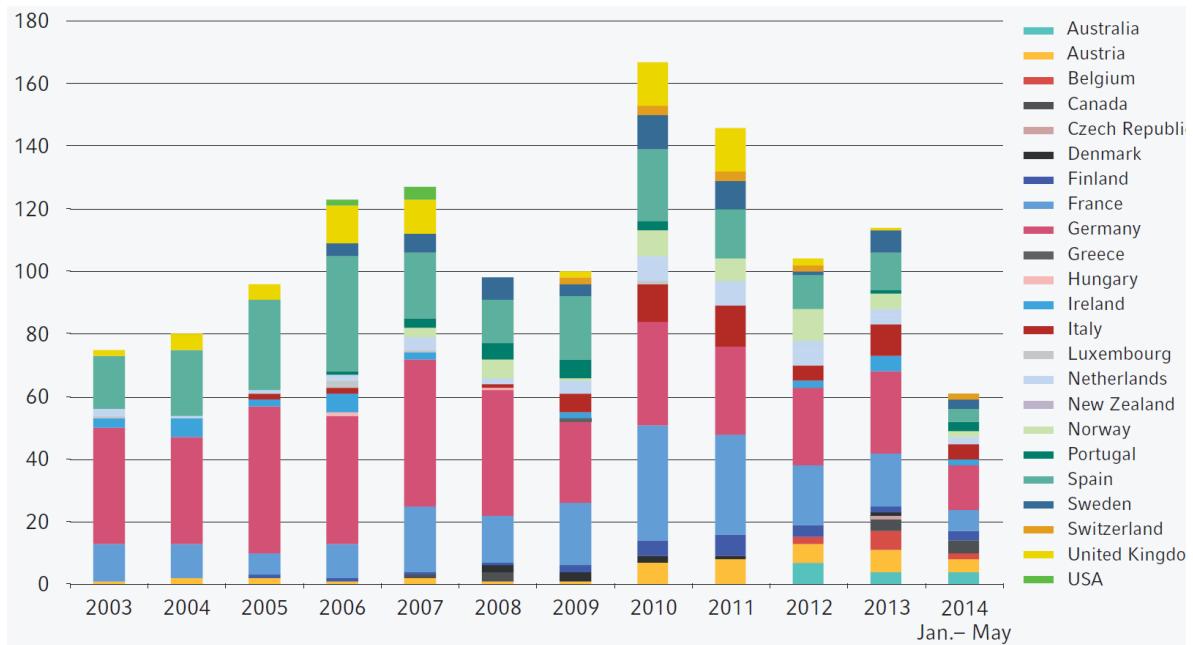
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<sup>8</sup> Indeed the term GSE is indistinctively applied to just them two, an aspect which is done in this text too.

<sup>9</sup> For instance, most long-term debt is issued in public monthly security sales through designated dealer groups using both syndicated and auction pricing methodologies.

<sup>10</sup> Limits are driven by median home prices estimated by the Federal Housing Administration (FHA) of the Department of Housing and Urban Development (HUD) and take into account the size of the home.

**Figure 12.** Benchmark issues by country/year (number)



Source: Unicredit research, Association of German Pfandbrief Banks.

Figure 12 also makes evident the extent to which countries issue more or less covered bonds depending on idiosyncratic characteristics (for instance, their business cycle). Finally, the lead of a small number of EU Member States (France, Germany and Spain) in the past, representing most of covered bond issuance, is falling, giving room to more heterogeneity: they now represent 45% of a much more atomized market (2014 European Covered Bond Fact Book, with data referred to 2013).

The large differences characterizing covered bonds are further analyzed in the Consultation Paper and the next sections. The analysis recognizes that differences raised by the risk exposure that investors face should be priced-in. However, changes driven by regulatory and legislative differences across the EU that can be ironed out should be addressed. Whilst there is no inherent conflict in pricing risk according to the geographic exposure the investors face, the risk should not be driven by the underlying legislation characterizing and differentiating covered bond frameworks across EU Member States.

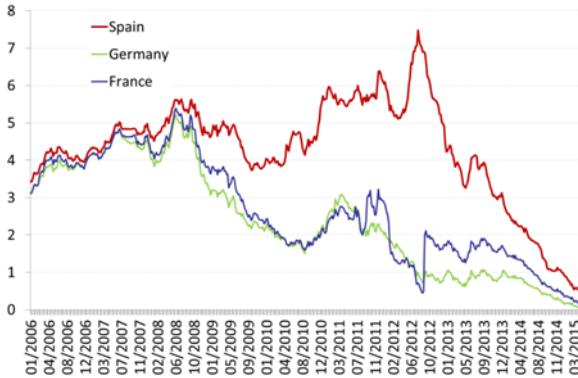
## 1.2. III. Potential Risks and Vulnerabilities

Covered bonds are not a homogenous product. Differences that arise between them can be driven by several factors. For instance, the different legislative framework defining covered bonds in Member States is one of them. Another is the different supervisory approaches and practices present across the EU. Finally, it is possible that common elements of the regulatory and supervisory frameworks present in the EU interact with Member States' idiosyncratic characteristics and salient features to generate different outcomes. This section presents these factors in the context of the risks and vulnerabilities characterizing covered bonds. In particular, it focuses on three of them: market fragmentation; transparency and barriers worries to investor entry and participation; and asset encumbrance.

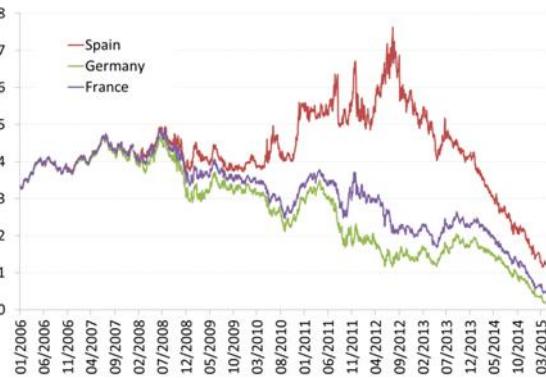
### 3.1. Market fragmentation

Since the Autumn of 2007, covered bond markets experienced an increased dispersion of yields. Figure 13 presents Covered bond pricing references available for a number of Member States whose currency is the Euro. Figure 14 presents the same price reference with respect to Sovereign yields. The comparison between both figures makes evident a number of similarities between the behavior of the underlying Sovereign and the covered bond issued in its jurisdiction.

**Figure 13. Covered bond yields**



**Figure 14. Sovereign bond yields**



Source: Bloomberg, European Commission services

Prior to 2007, there was a yield contraction between the various European covered bonds indicating that investors viewed those as fundamentally homogeneous assets, hence of very similar risk characteristics and high credit quality regardless of the Member State of issuance. Country factors do not appear to have played a decisive role in investors' decisions, probably on the assumption that covered bonds were backed by substantially similar legal frameworks and, in any event, assisted by the strength of European sovereigns most of which were very highly rated at the time.

The dynamics that existed in covered bond markets changed completely after 2007 by the significant yield dispersion between the financial instruments of various Member States. European covered bond markets fragmented along jurisdictional lines and between stronger and weaker Member States, in the sense that secondary market pricing became dominated by country factors and favoured covered bonds issued from Member States viewed as safer jurisdictions.

There are several ways in which perceived EU Member States differences, directly or indirectly related to covered bond frameworks, can interact and impinge into covered bond pricing and subsequently cause such yield behaviour.

#### *Hypothesis 1: Price differences due to different fiscal positions of Member States*

Covered bonds are asset-backed financial instruments which include a preferential claim against a dedicated pool of collateral including overcollateralization (the Covered bond's cover pool). In fact, issuers must ensure that the pool consistently backs the covered bond and, in the event of default, the investor has recourse to both the cover pool and the issuer. This is known as the double recourse of covered bonds. Such features can interact with the fiscal position of Member States in the following sense. The positive track record behind covered bonds means that public authorities have a significant incentive to support them and implicitly stand behind them: the fact that no covered bond has ever defaulted is an obvious quality mark with respect to other financial assets. In fact, the

willingness by authorities to support covered bonds from defaulting has come to be known as the triple recourse of covered bonds.

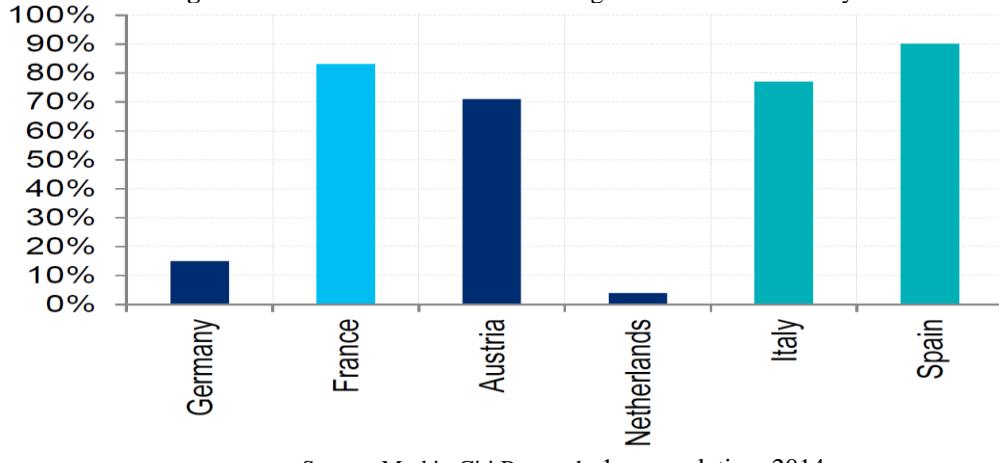
Unfortunately, public authorities need to support covered bond frameworks via supporting the credit institutions which have issued covered bonds. Still, the ability to provide such support (to support the positive covered bond trait of never having defaulted) differs across Member States. Countries with strong fiscal positions can back their banking sectors to support covered bond issuers without necessarily exposing their fiscal position. However, this is not true for all Member States. Instead, so-called stressed Member States are, for a variety of reasons, more vulnerable in case of extending such level and degree of support, either because of the state of their public finances or the size of the support the banking sector would require.

Therefore, if we assume that a single definition for a covered bond were to exist and that the legal frameworks governing covered bond markets across Member States were the same, then a reason behind the observed price differences of Figure 13 could be the fiscal position of a Member State and/or the redenomination risk of a Member State especially during the peak of the crisis in 2012.

More specifically, the comparison between Figures 13 and 14, clearly indicate that the European covered bonds, due to the implicit public support for these markets, became a proxy for sovereign risk. In other words, one could argue that at a point in time, the pricing of covered bonds became driven predominantly by the Member States' financial strength and their banking sectors as a whole, rather than the intrinsic credit quality of the assets in the cover pool and the financial soundness of the issuer. Moreover, currency re-denomination fears at the height of the Euro crisis in mid-2012 seems to have affected markets in the same way.

An additional consideration is that, the interaction between a Member State's fiscal position and its covered bonds pricing can be almost mechanistic. Notice that figures 13 and 14 differ in one important respect: price changes seem more volatile with respect to covered bonds. This could be due to several aspects. One of them is the fact that Sovereign bonds are considered a risk free asset by regulators, unrelated to credit rating evaluations, except under extreme circumstances. Instead, the perceived risk of covered bonds by regulators (and, therefore, banks) is driven by credit rating agencies' reports. In this regard, when covered bonds fall under ECAI 2 ratings, the sovereign rating becomes a key defining trait of the covered bonds, as credit agencies seem to establish their ratings by relying on that of the sovereign and not on the individual issuer or issuance rating (figure 15).

**Figure 15.** Correlation between Sovereign and Covered bonds' yields



Source: Markit. Citi Research, 1-y correlation, 2014

For all these reasons it is believed that fiscal factors have impinged on covered bond pricing and have ultimately lead to introducing a distortion in covered bond markets.

*Hypothesis 2: Price differences due to differences in covered bond regulatory and/or supervisory frameworks.*

#### *i. Differences in regulatory frameworks*

The observed price differences among Member States may have also been generated by the lack of a widely-accepted definition for covered bonds and /or the lack of a similar or comparable regulatory framework governing their key characteristics. Tables 5 and 6 present evidence of significant regulatory differences in covered bond frameworks and treatment between Member States.

For example, there are significant differences in the legislative treatment of the legal segregation of the cover assets from the issuer in the event of insolvency or resolution. Although such circumstance remains untested, given that no issuers were allowed to fail, it is possible that it creates doubts among investors in the effectiveness of the dual recourse mechanism and it reinforces the expectation from the market that covered bond issuers will be bailed-out.

Other examples of significantly different legislative treatment among Member States can be observed in the requirements regarding the eligibility of cover assets, the type of reporting to the supervisor, the national transparency requirements, the limitation on covered bond issuance, etc. (Schedule II, III and Table 6).

**Table 5.** Legal and Supervisory frameworks in main European Countries

Factor	France	Germany	Italy	Spain
Name	Obligations Foncieres	Hypotheken-Pfandbrief	Obbligazioni Bancarie Garantie	Cedulas hipotecarias (CHs)
Specialist bank principle	Yes	No	No	No
Issuer	Specialized Bank	Originator	Originator but guaranteed by a special entity	Originator
Cover assets structure	Registered and remain on balance sheet	Registered and remain on balance sheet	Transferred to a special entity	No designated cover pool. All eligible assets serve as cover <sup>1</sup>
Max. LTV of the mortgage pool (residential)	80%	60%	80%	80%
Max. LTV of the mortgage pool (commercial)	60%	60%	60%	60%
Pool monitoring	Independent trustee appointed by the regulator	Independent trustee appointed by the regulator	Bank of Italy (special supervision)	No
Bankruptcy remoteness of cover pool	Cover assets are segregated in case of insolvency	Cover assets are segregated in case of insolvency	Transfer to a special entity remote	No, but CH investors have priority to all eligible pool in balance sheet <sup>2</sup>

<sup>1</sup> The Spanish mortgage law determines that only the mortgages originated with the characteristics described below can be considered eligible, and therefore used as cover pool for the issuance of CH.

<sup>2</sup> Excluding those mortgages used in Asset Backed Securities or Bonos Hipotecarios.

Source: AFI, FUNCAS Spanish Economic and Financial Outlook 2012

**Table 6.** Limitations to Covered bond issuance from a global perspective

Country	Limitation of covered bond issuance
Australia	Value of cover pool must not exceed 8% of total assets
Austria	None
Belgium	Value of cover pool must not exceed 8% of total assets
Canada	Outstanding covered bonds must not exceed 8% of total assets
Denmark	None
Finland	None
France	None
Germany	None
Greece	20% of assets (unclear whether cover pool or covered bonds)
Italy	"No limitations for banks with: Tier 1 capital ratio $\geq$ 7% & total capital ratio $\geq$ 11% up to 60% of total eligible assets can be used as cover assets for banks with: Tier 1 capital ratio $\geq$ 6.5% & total capital ratio $\geq$ 10% up to 25% of total eligible assets can be used as cover assets for banks with: Tier 1 capital ratio $>$ 6% & total capital ratio $>$ 9%"
Ireland	None
Luxembourg	None
Netherlands	Case-by-case limit determined by the Dutch Central Bank (DNB)
New Zealand	Value of cover pool must not exceed 10% of total assets
Norway	None
Portugal	None
Spain	None
Sweden	None
Switzerland	None
UK	Case-by-case limit determined by the FSA

Source: ECBC 2014 Factbook

### *i. Differences in supervisory frameworks*

Price differences between Member States may have also been generated because of differences in Member States' supervisory approaches to covered bonds. Table 5 and Schedule III show for instance that some competent authorities monitor directly the cover pool, whilst others monitor the issuing bank, while others exercise an altogether different approach to monitoring. Moreover, there are also competent authorities that exercise no monitoring. Hence, differences in the supervisory approach of cover pools between Member States may create an unintentional market distortion which is ultimately reflected on covered bond prices. This is besides the possibility that different supervisory practices, including perceived qualitative practices differences, could also generate distortions.

To the extent that the crisis revealed institutional weaknesses (for instance in banking supervision), one could argue, that investors have become unwilling to rely, rightly or wrongly, on the institutional and legal setting that through special public supervision and asset segregation was to deliver effective protection to bondholders. They may also have had – justified or unjustified – doubts about the quality of the assets that credit institutions held in the cover pools, in particular in Member States undergoing mortgage market downturns and insufficient transparency on those cover pools would have exacerbated loss of confidence and the tendency to rely on implicit public support as described before.

Thus one could argue that a set of common high quality standards for all covered bonds in the EU, provided that such standards sought to enforce market discipline, could have been proved useful in mitigating the need of investors to rely on public support and could protect the covered bond brand.

The need for a minimum common framework that protects the covered bond instrument has been pointed out previously and, as a result, has led to market initiatives to try to remedy such situation. In particular, the European Covered Bonds Council (ECBC) established recently the Covered Bond Label Convention, with core characteristics required for a covered bond programme to qualify for its quality Label. As of end 2014, thirteen countries (Austria, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden and United Kingdom) have implemented this initiative which covers a market share of approximately more than 50% of the total covered bonds outstanding.

However, the German Pfandbrief is not part of the initiative. Moreover, it is worth noting that ECBC's coverage can only go as far as 70% of the total market since for covered bonds to qualify for the Label they need to be eligible under either the CRD or UCITS frameworks.

## **3.2 Transparency and barriers to investor entry**

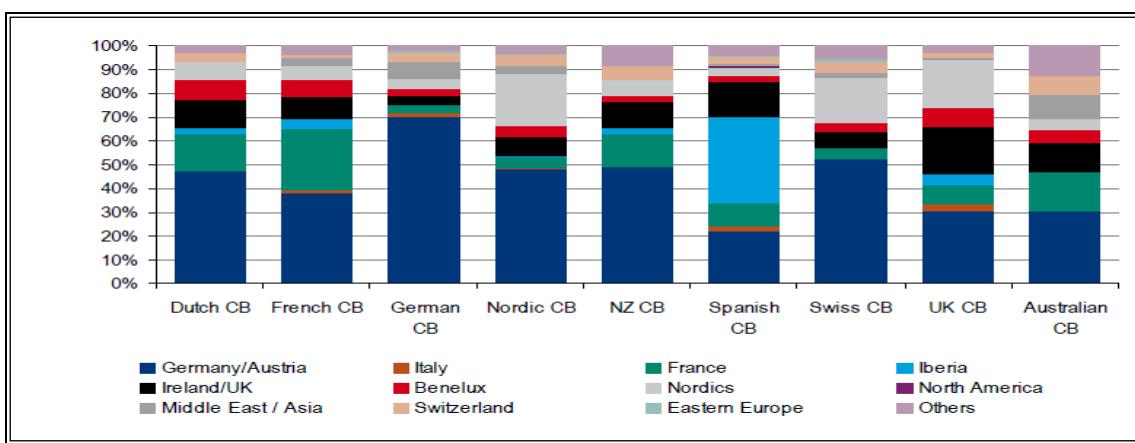
*Hypothesis: differences in covered bond regulatory frameworks and legislation limit information and transparency.*

Rules applying to covered bonds vary significantly across Member States. As a result, this generates a need for investors to undertake separate analyses for each country and for each structure to understand its unique features. Thus, from an investor perspective,

barriers to entry are likely created by the lack of a harmonised regulatory regime as well as the lack of national transparency requirements. Thus, while domestic investors in covered bond primary markets are important across most EU jurisdictions, only a limited number of investors from other Member States (German, French) are active cross-border, as figure 16 shows.

In this regard, ICMA Covered Bonds Investor Council (CBIC) has raised concerns about the issue of limited transparency across the EU covered bond markets. The minimum transparency requirements established as a response have been seen as a starting point to address such concerns, but the CBIC has called for more standardisation of reporting at European level to help investors compare information. This includes investors from third countries, as the absence of a concrete framework to facilitate comparison and with which to establish equivalence assessments with third country covered bonds regimes has also restricted cross-border investment flows. As a consequence, third country investment in the European covered bond markets remains limited (see figures 16, 17 and Schedule IV).

**Figure 16:** Breakdown of investors by country for each CB market (new benchmark issues)



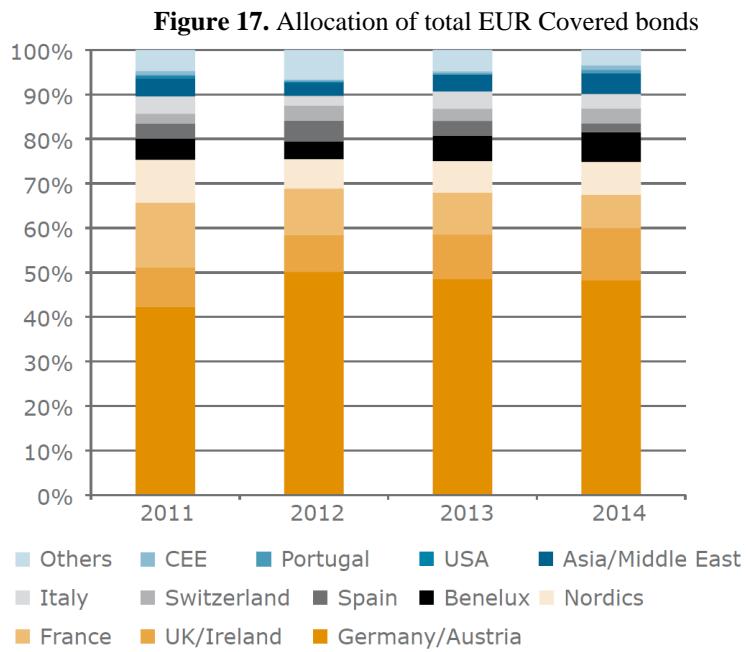
Source: BofA Merrill Lynch, 2014

Why investors from some specific Member States invest across the EU could be due to several reasons. One could be that, only economies such as France and Germany, with large investor bases, can look through the barrage of rules and legislative differences to invest. Another could be that the development of covered bond frameworks in some particular economies has made their investor bases particularly welcoming to such financial products. Investors have become supportive of covered bonds, for the safety they are expected to represent and have led such demand. Differences in legislation are perceived as a nuisance but considered minor in comparison to the benefits provided by covered bonds across time, including the expectation that Member States' public authorities will do their utmost to protect the covered bond label. In this regard, a move towards further standardisation and harmonization would benefit investors but particularly public authorities to limit the existing wedge present between the benefits expected from covered bonds (close to being a risk free asset) and the (implicit) need by public authorities to support them.

Relatedly, in the context of the financial crisis, the benefits derived from the security provided by covered bonds have justified the proliferation of covered bond frameworks beyond the EU to markets which did not have CB legislation or were banks did not traditionally rely on covered bonds to obtain financing. This evolution can be positive, in a context where cooperation and understanding between different authorities does not

undermine the covered bond label. However, there is a parallel evolution which could challenge the covered bond label and its perceived benefits.

Instances of new financial assets marketed as covered bonds have developed in some jurisdictions. Financial innovation may blur the lines between what are covered bonds and look-a-like covered bonds. In this regard, they could very well eventually undermine investors' confidence in covered bonds as an asset class. For instance, some programmes for structured "covered bonds" have been developed, in which a pool of SME financing provides collateral for one bond. The protection provided by the collateral is not legislative-based, but arising from a pure contractual arrangement made by the issuer. Whilst such evidence is small and scattered to represent a challenge, it is nevertheless revealing. Such could very well challenge covered bond markets. To this end there may be merits in harmonising national transparency requirements for investors to be fully aware of the product they are purchasing.

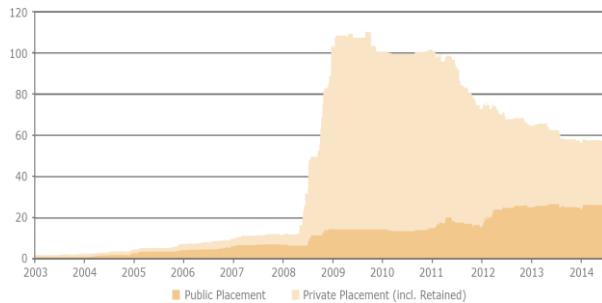


Source: ECBC 2014 Factbook

Finally, there could be benefits from further transparency, including to public authorities. Well-developed and functioning financial markets are characterised by the capacity of investors to access information to understand the exposure they take if they purchase a financial asset. But transparency can also help and benefit public decision-making.

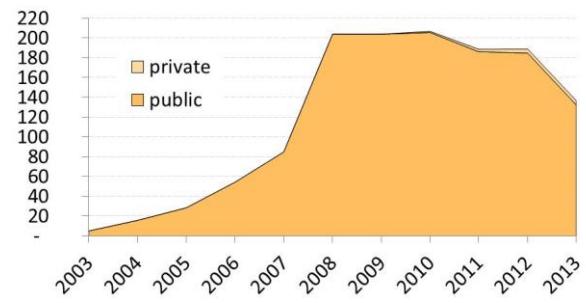
During the financial crisis the ability to issue covered bonds in primary markets by listing them and gathering a sufficient number of banks to syndicate an issue become more restricted. Hence the remedy known as private placements, whereby a limited number of investors purchase a covered bond not necessarily intended to be actively traded. However issuers also retained covered bonds for themselves, with the objective of using them to obtain financing from central banks as collateral, instead offinding willing investors to purchase them.

**Figure 18.** Outstanding volume of GBP denominated covered bonds over time in GBP bn



Source: ECBC

**Figure 19.** Outstanding volume of GBP denominated covered bonds over time in EUR bn



Source: ECBC, Banks' annual reports

The above practice obviously affects the liquidity and transparency in financial markets. Figures 18 and 19 present the level of public versus private placement depending on whether one relies on banks' annual reporting (figure 19) or analysis undertaken by analysts (figure 18). The differences are, obviously, striking. And the lack of transparency can work to the detriment of private and public interests. For investors benefit from having a clear idea of what and where to invest. But public authorities also benefit from understanding how and to whom are covered bonds being issued, particularly if there is an explicit third recourse.

In general, encouraging greater transparency and disclosure could be seen as a first and cautious step to improve covered bond market functioning in Europe.

### 3.3 Asset encumbrance

Any bank's issuance is heavily dependent on the underlying legislative framework defining the liability. However, some bank business models have been specifically conceived to rely almost exclusively on covered bonds; for covered bond issuers include what are known as universal banks, but also specialized mortgage banks and special purpose vehicles. In this regard, the heavy reliance in some Member States on specific business models has been seen as a concern. For reliance on covered bonds can trigger significant amounts of what is known as asset encumbrance.

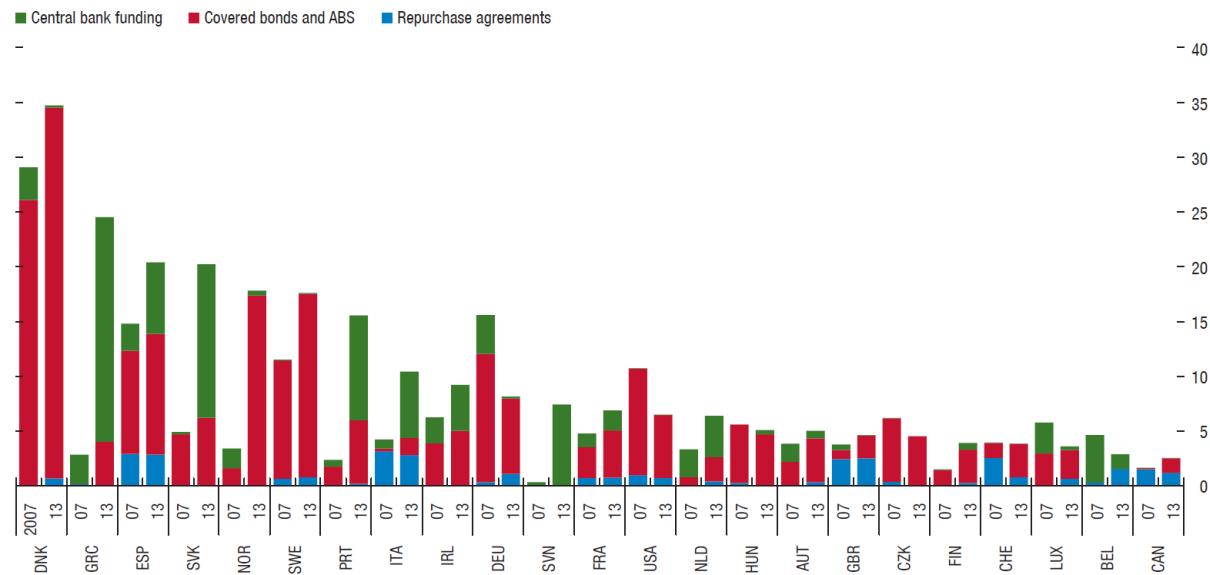
Covered bonds play an important role in supporting domestic financial stability: issuers retain the credit risk of underlying loans and, hence, issuance disincentives moral hazard. Investors benefit from establishing a cover pool of assets. However, such pools of assets, also known as "encumbered", can come at the expense of issuers (and public authorities backing them). And, during the crisis, covered bond issuance exceeded senior unsecured issuance in the EUR markets for the first time in history. As a result, asset encumbrance became a concern: a large amount of bank assets, pledged to support specific creditors, would not be available in insolvency, making banks more vulnerable. This was particularly relevant in Europe, given the preponderance of banks in its financial system.

Member States' supervision on asset encumbrance or new covered bond issuance levels is primarily designed and focused on domestic financial stability. On the other hand, Directive 2014/59 (Bank Recovery and Resolution Directive) can act as an indirect limit on asset encumbrance<sup>11</sup>. Still, the differences in the framework of new covered bond issuance levels among Member States (see Table 6) and the cumulative importance of

<sup>11</sup> Directive 2014/59 (the "BRRD") requires that all credit institutions, including covered bond issuers, meet a minimum requirement in terms of liabilities available for bail-in.

these markets for financial stability beyond the domestic borders probably need to be thoroughly addressed.

**Figure 20.** Asset encumbrance (evolution between 2007 and 2013 per national banking sector and expressed as a percentage of total assets)



Sources: European Central Bank; European Covered Bond Council; Haver Analytics; and IMF staff estimates.

Note: ABS = asset-backed securities; AUT = Austria; BEL = Belgium; CAN = Canada; CHE = Switzerland; CZK = Czech Republic; DEU = Germany; DNK = Denmark; ESP = Spain; FIN = Finland; FRA = France; GBR = United Kingdom; GRC = Greece; HUN = Hungary; IRL = Ireland; ITA = Italy; LUX = Luxembourg; NLD = Netherlands; NOR = Norway; PRT = Portugal; SVK = Slovak Republic; SVN = Slovenia; SWE = Sweden; USA = United States.

Source: IMF Global Financial Stability Report October 2013

Figure 20 presents the increase in asset encumbrance that has taken place due to several bank funding patterns. Asset encumbrance through covered bonds has been increasing and is particularly high in Denmark, reaching 35% of total assets of DK banks<sup>12</sup>. Levels of asset encumbrance could rise further if a broader scope of assets were allowed in the cover pools, a trend largely resisted so far by covered bond laws but which could take off in the market with structured products using the "covered bond label" on the back of currently ineligible asset classes. Moreover, whilst concerns related to asset encumbrance are related to transparency concerns and the ability to understand bank balance sheets and exposures, they are a separate issue: transparency encompasses a wider set of points, but it cannot address asset encumbrance fears by itself.

### 1.3. IV. Summary

Covered bonds were far less affected than other financial markets by the crisis and remained for the most part a resilient and reliable source of funding for credit institutions throughout significant stressed conditions. Covered bonds performed better in this respect relative to unsecured debt and also to other forms of collateralized lending.

Key to such good performance is the perception that covered bonds are very low risk instruments, which is indeed backed by the absence of credit losses for investors

<sup>12</sup> Danish mortgage credit institutions, some of which are classified as systemically important financial institutions, do not take deposits and cannot access money markets. They only grant mortgage loans, which are funded through the issuance of covered bonds.

throughout the whole history of this instrument although the bail-out of certain issuers in financial distress undoubtedly contributed to preserving such unblemished record.

The undisputed strengths of European covered bonds should not, however, mask certain underlying vulnerabilities and challenges:

- a) Market fragmentation: Prior to 2007, yield contraction between the various European covered bonds showed that investors viewed those as fundamentally homogeneous assets, hence of very similar risk characteristics and high credit quality regardless of the Member State of issuance. However, the dynamics that existed in covered bond markets changed completely after 2007 by the significant yield dispersion between the financial instruments of various Member States. Arguably, European covered bond markets fragmented along jurisdictional lines and between stronger and weaker Member States, in the sense that secondary market pricing became dominated by country factors and favoured covered bonds issued from Member States viewed as safer jurisdictions, regardless of the actual credit quality of cover assets or the financial strength of individual issuers.
- b) There is insufficient homogeneity in legal and supervisory frameworks which forces investors to incur in higher costs to undertake separate analysis for the covered bonds of each Member State and which may partly explain why the covered bond investor base remains relatively home-biased and concentrated in a few large Member States.
- c) The lack of a truly integrated European covered bond model may also be hampering investment from third countries, as investors there do not have a comprehensive basis for comparison with the covered bond framework of their home jurisdiction. Third country investors may be particularly prone to indiscriminate retrenchment in the event of suffering losses, with the risk that losses in relation to the covered bonds of a Member State may become a stigma associated to the covered bonds of other or all Member States.
- d) Reporting to investors is subject to inconsistent transparency requirements, not only among Member States but also asset classes and the overall levels of disclosure in relation to the cover pool are deemed in general very poor by many market commentators when compared to the disclosures required for other structured financial instruments (e.g. ABS). As a matter of fact, efforts to enhance transparency and standardisation in covered bonds may encounter difficulties in the future resulting from the market trend towards increased private placements and tailor-made structures noted above.

Finally, the benefits of covered bonds as a source of funding have the flip side of encouraging asset encumbrance in credit institutions' balance sheets. Asset encumbrance raises concerns among supervisors and policy makers for two main reasons:

- it leads to the unavailability of assets to support the resolution of credit institutions and has the potential to inflict costs on unsecured creditors and taxpayers; and
- it reduces the pool of assets available to the issuer to obtain liquidity in the event of unforeseen stresses.

Levels of asset encumbrance could rise further if a broader scope of assets were allowed in the cover pools, a trend largely resisted so far by covered bond laws but which could

take off in the market with structured products using the "covered bond label" on the back of currently ineligible asset classes. Still, covered bonds are only one source of asset encumbrance, which needs to be considered holistically taking into account other forms of asset-backed and secured funding and taking into account the relative importance of unsecured funding of any given credit institution.

#### 1.4. V. Schedules

##### SCHEDULE I – COVERED BONDS ARE LOW RISK YIELD-BEARING INSTRUMENTS

Annualised volatility by sector: 2010 -2014 (april)

		2010-2014 YTD				
		CB	Bank	Sovs	AAA RMBS	A RMBS
United Kingdom 3-5 years	UK	0.8%	2.4%	1.1%	1.6%	4.9%
France 3-5 years	France	1.1%	2.7%	2.0%	-	-
Germany 3-5 years	Germany	0.4%	0.8%	1.1%	-	-
Netherlands 3-5 years	Netherlands	0.7%	1.1%	1.4%	1.3%	4.5%
Spain 3-5 years	Spain	2.9%	5.3%	7.4%	5.8%	10.1%
Sweden 3-5 years	Sweden	0.4%	1.6%	1.2%	-	-
Italy 3-5 years	Italy	2.4%	4.2%	6.5%	3.8%	7.0%

Source: BoFA Merrill Lynch Global research

##### SCHEDULE II –LEGAL FRAMEWORK FOR SELECTED EU MEMBER STATES REGARDING ASSET ELIGIBILITY (AS OF JANUARY 2013).

Member State	Assets eligibility – requirement by law
Denmark	Loans secured by real estate (80% or 75% max LTV); exposures to public authorities (SDROs also include exposures to credit institutions (15%) and collateral in ships).
France	OF -First-rank residential and commercial mortgages (max LTV 80%); state and third party guaranteed real estate loans; public sector exposures; securitization of the above. OH – Residential mortgages and securitization of them.
Germany	Mortgages, public sector loans, ship, aircraft (max LTV 60% for all). Credit institutions exposures (max 10% nominal value of the bond), derivatives (max 12% of cover assets).
Norway	Residential (max LTV 75%) and commercial mortgages (max LTV 60%); public sector loans; derivative agreements; substitute assets.
Spain	Cédulas Hipotecarias(CH): secured by the entire mortgage loan book (excluding securitizations or loans securing mortgage bonds).
Sweden	Residential (max LTV 75%) and commercial (max LTV 60%, max 10% of cover pool) mortgages; public sector assets; substitute assets.

Source: ECBC, Banco de España

### SCHEDULE III – SUPERVISORY PRACTICES IN SELECTED MS

<b>Member State</b>	<b>Supervisor</b>	<b>Supervisor's involvement in the monitoring of the cover pool</b>	<b>Type of reporting to the supervisor / national transparency requirements</b>
Denmark	Danish Financial Supervisory Authority (FSA)	The issuer monitors the cover pool continuously. Mortgage banks – internal auditor. Commercial banks - report directly and quarterly to the FSA (verified by an external auditor). Issuers must prepare quarterly reports on asset-liability management for the FSA.	Investor reports, trading venues and investor relations websites. National transparency template (complements the ECBC label).
France	French Banking supervisory authority	Specific controller appointed by the issuer and agreed by the supervisory authority. Duties: control eligibility, composition and valuation of assets; compliance with minimum coverage ratio (quarterly report); control management of risks on assets (liquidity, interest rate, currency and maturity mismatch risks).	Issuer should issue periodic financial information (quarterly asset report, semi-annual report on coverage ratio and other legislative limits, annual reports on assets and methods of valuation and a report on risk management).
Germany	BaFin, German Federal Financial Supervisory Authority	Certified auditor appointed by BaFin. BaFin must monitor the cover pool on average every 2 years. Pfandbierdbanks must carry weekly over collateralization stress tests & daily calculation of 180-day.	Legal requirement: Quarterly disclosure of CBs outstanding and characteristics. Information about their legal structure.
Spain	Bank of Spain	Issuer must monitor the cover pool (as part of its risk management and auditing).	Monthly CB report to the Bank of Spain. Annual accounts contain the details of the register of loans. National transparency template consistent with ECBC label.
Sweden	Swedish Financial Supervisory Authority (SFSA)	Independent cover pool trustee (appointed by the SFSA). Duties: monitor the register and compliance with market and matching risks. It must submit an annual report to the SFSA.	Quarterly information about the cover pool and outstanding CBs (issuer website). Steps toward national transparency template.

Source: ECBC, Banco de España (data as of Jan. 2013)

## SCHEDULE IV - Geographic distribution of covered bond (CB) investors in selected European markets

Figure I: Geographic distributors of CB investors – France  
Germany

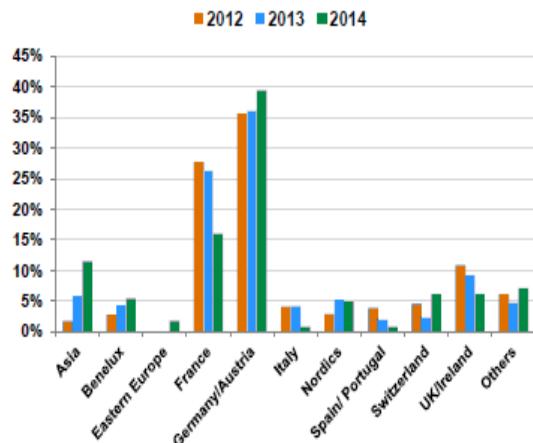


Figure II: Geographic distributors of CB investors –

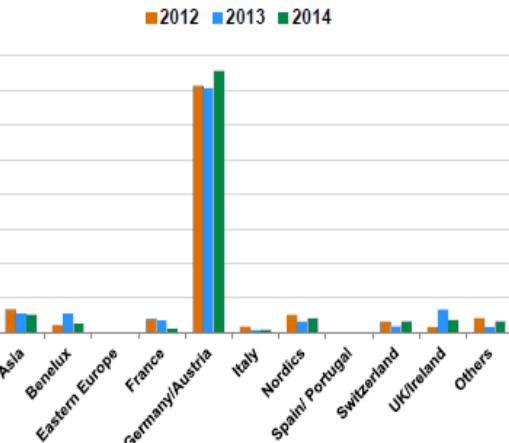


Figure III: Geographic distribution of CB investors – Ireland  
- Italy

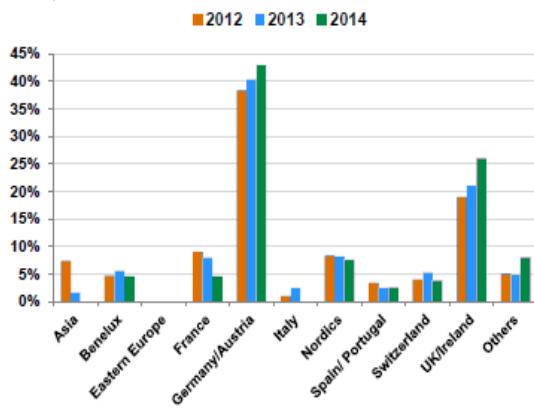


Figure IV: Geographic distribution of CB investors

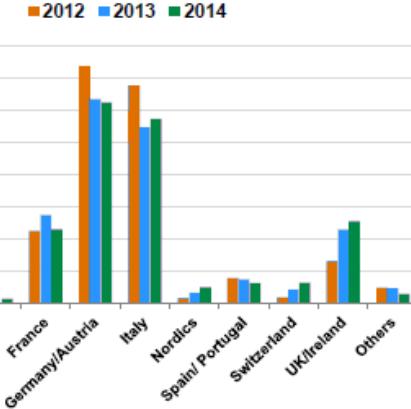


Figure V: Geographic distribution of CB investors – Portugal  
Spain

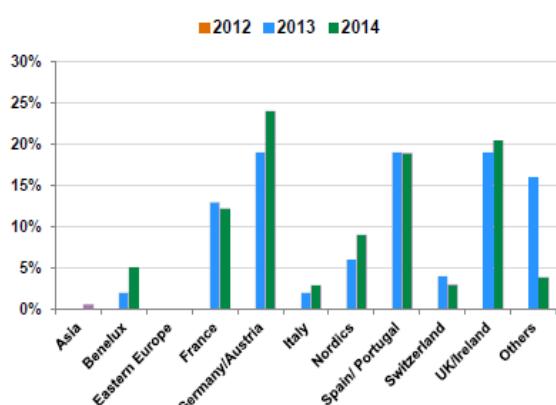
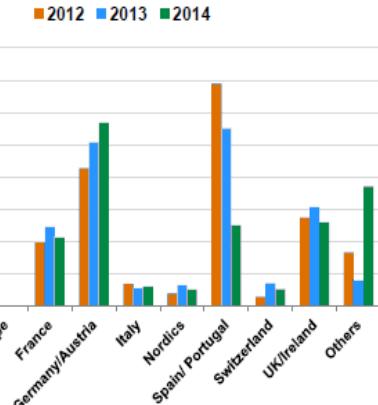


Figure VI: Geographic distribution of CB investors –



Source: Natixis