

Pfandbrief-style products in Europe

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Abstract

The Pfandbrief bond market is the biggest segment of the euro-denominated private bond market in Europe and rivals in size the individual European government bond markets. The fact that it developed mainly in a single country as a purely domestic product until the mid-1990s obscured the strong growth of this market segment, regarded as illiquid and arcane by international investors. Following the strong development in issuance of, in particular, the German “Jumbo”, a number of jurisdictions in Europe (including many eastern European countries) have now established the regulatory framework for Pfandbrief-style products or are preparing to do so in the near future. This note describes the nature and the main characteristics of Pfandbrief-style products in a number of European countries and concentrates the analysis in particular on Jumbo products, which were launched within a relatively short period of time in Germany, France, Spain and Luxembourg. The existing differences in the national jurisdictions, and the fact that their further harmonisation in the near future is unlikely, should not prevent a successful establishment of the Pfandbrief as an asset class in its own right, both within and outside the European Union. In this respect, the application of Article 22(4) of the EU UCITS Directive, which sets out criteria for defining a common class of assets, could provide the basis for ensuring a minimum level of homogeneity of this type of assets.

1. Introduction

Government securities have played and continue to play an important role in the development and functioning of financial markets. They are deemed an attractive investment for a number of reasons: they have a high level of homogeneity and “fungibility” (ie substitutability between issues);² they are perceived as having a negligible credit risk (reflecting the taxation power of governments); and they have a high degree of liquidity compared to other types of assets. In addition, government bonds act as liquid underlying for derivatives and repo markets,³ and yields on government bonds are used as a reference to price other debt and derivative instruments.⁴ Government bonds also perform a “safe haven” role at times of unstable conditions in financial markets.⁵ A reduction in the availability of government debt could therefore affect the functioning of bond markets, unless private financial markets develop sizeable and liquid markets for a number of asset classes that enable private

¹ The author wishes to acknowledge the very helpful contributions and comments made by Francesco Papadia, Denis Blenck, Marco Laganà, Sergio Grittini and Arnaud Mares to a previous version of this note prepared in autumn 2000. The author nevertheless remains responsible for the opinions and errors included in this most recent and substantially changed version. The views expressed in this article are not necessarily those of the European Central Bank.

² Government securities have only one issuer, which ensures that the bond features are standard across issues. This implies a high substitutability between issues and a higher degree of liquidity (high turnover and lower spreads) compared to private securities.

³ Futures and options are written mainly on government bonds, as the valuation of these assets requires a large, active and well arbitrated market in the underlying security.

⁴ Market participants tend to use (central) government debt as well as swap rates to calculate prices of other debt and derivative instruments; such a “benchmarking” feature is considered to be an important reference for pricing in corporate bond markets. See also Brookes (2000).

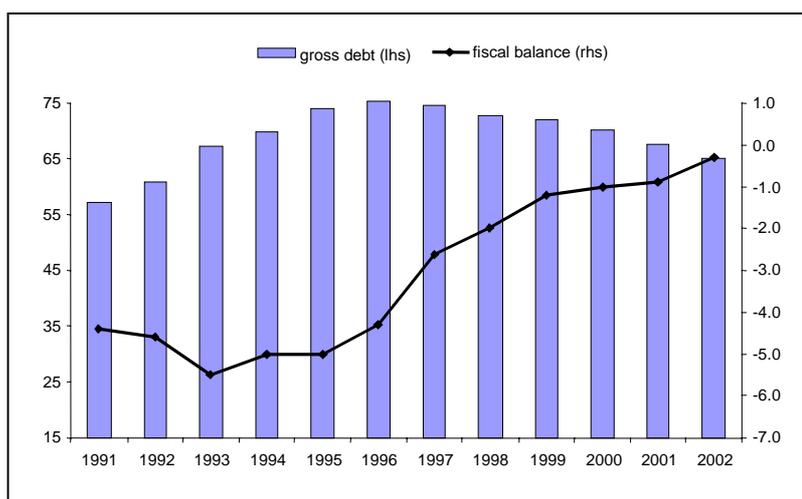
⁵ In addition, government debt securities are still the main (but not necessarily the only) eligible assets to access central bank credit; they have up to now been the only underlying assets for general collateral repo trades; in many countries, guidelines and/or direct quantitative regulations of private pension funds specify minimum compulsory investment shares in government securities; only government debt securities bear an attractive 0% risk weighting for the purpose of capital adequacy requirements.

securities to assume some of the roles presently fulfilled by government securities. The improved financial position of governments in Europe and the United States in the late 1990s and 2000 has led to a reduction in the net supply of government securities in some countries (Chart 1). Financial markets are adjusting to reduced availability of government debt through increased issuance of securities by the private sector, both financial institutions and corporates.

In order to achieve the same level of attractiveness as government bonds in terms of credit risk and liquidity, certain characteristics of non-government securities have to be addressed. A risk status for private bonds similar to that of government bonds can be achieved, for example, through collateralisation or some other form of guarantee. Examples already present on the markets include bonds backed indirectly by private mortgages or public sector loans (eg Pfandbriefe and other asset-backed securities), while an implicit government guarantee such as that enjoyed by Fannie Mae and Freddie Mac in the United States increases the credit quality of private sector collateral. To enhance liquidity, private issues could be given increased “fungibility”, ie through issuance of bonds with a limited set of maturities and in relatively large issue sizes (with reopenings of issuance on existing maturities in order to increase the issue size).⁶ In addition, quotation on an electronic trading system could improve transparency and liquidity. The development of derivatives and repo markets based on these assets would also help enhance the attractiveness of these private bond segments, allowing for hedging strategies and ultimately supporting efficient market-making. This would promote the development of market benchmarks that would facilitate pricing, also in other market segments.

The scope of this paper is to present some selected facts on a particular segment of the European bond market that has witnessed a very strong development recently, namely that of “Pfandbrief-style” products, in particular the so-called “Jumbo” segment. This particular instrument seems to offer a very high level of “quality” for investors, due to its built-in characteristics that enhance investor protection, thus enabling these products to obtain an issue rating comparable to those of government bonds and higher than the rating of the individual issuer of this type of asset. After briefly describing the securitisation mechanism, the paper presents an overview of some established and nascent funding instruments currently issued in Europe based on Pfandbriefe. It then describes in some depth the main characteristics of the four Jumbo-type products currently being issued in the euro area (the German *Pfandbrief*, the French *obligation foncière*, the Spanish *cédula hipotecaria* and the Luxembourg *lettre de gage*).

Chart 1
General government gross debt and fiscal balance in the euro area
 As a percentage of GDP



Source: ECB.

⁶ These reopenings would very likely be at more irregular intervals than for government borrowings.

2. On-balance sheet vs off-balance sheet securitisation

Pfandbriefe are covered bonds obtained through a process of securitisation. This can be defined as the technique of converting a credit claim or a pool of claims into negotiable securities, a process that can typically be achieved either “off-balance sheet” (this is the type of securitisation most often referred to as “asset-backed”) or “on-balance sheet” (nowadays referred to as “Pfandbrief-style”), or even through “synthetic securitisation” - a technique that has developed more recently.⁷

Off-balance sheet securitisation implies the sale by a bank of a portfolio of assets to an entity (typically a so-called special purpose vehicle (SPV), separate from the issuer), which finances the acquisition of the assets by issuing debt instruments (eg bonds or commercial paper) or shares. The assets are considered securitised insofar as it is the initial assets that serve to secure the ability of the issuing entity to honour its obligations. The generic designation of asset-backed securities (ABS) derives from this direct relationship. Off-balance sheet securitisation is a relatively recent development in Europe, and the amounts involved are still relatively low compared to on-balance sheet securitisation.

On-balance sheet securitisation consists in the issuance of securities backed by securities that remain on the balance sheet of the issuer. The typical (and probably oldest) example of this type of securitisation is provided by the German Pfandbrief, where assets are ring-fenced on the balance sheet of special banks subject to a specific legal regime. The bank then issues bonds, which provide the holders with a priority right to the ring-fenced assets in the event of default by the issuer. The holder therefore benefits from a double protection: the solvency of the issuer and the solvency of the debtors of the original assets. This type of securitised product will be analysed in more detail in the next sections (Table 1).

Table 1
Comparison between Pfandbriefe and asset-backed securities (ABS)

	Pfandbriefe	ABS
Level of standardisation	Very high for Jumbos: this makes the bonds very transparent to the investors and favours liquidity in general. Relatively low for traditional Pfandbriefe.	None: the main feature of ABS is their flexibility in relation to issuers' and investors' needs.
Nature of securities	Pfandbriefe are bank securities, where the debtor is the issuer bank. The security is guaranteed by underlying public sector or mortgage loans.	ABS are issued by SPVs based on loans that are transferred from their originator; the risk is also taken off the balance sheet of the originator.
Bankruptcy remoteness	Pfandbriefe are guaranteed by the whole amount of mortgage or public loans issued by the bank (there is a continuous turnover of the loans underlying the Pfandbrief).	ABS are guaranteed by specific pools of assets, which represent only part of the assets of the originator bank.

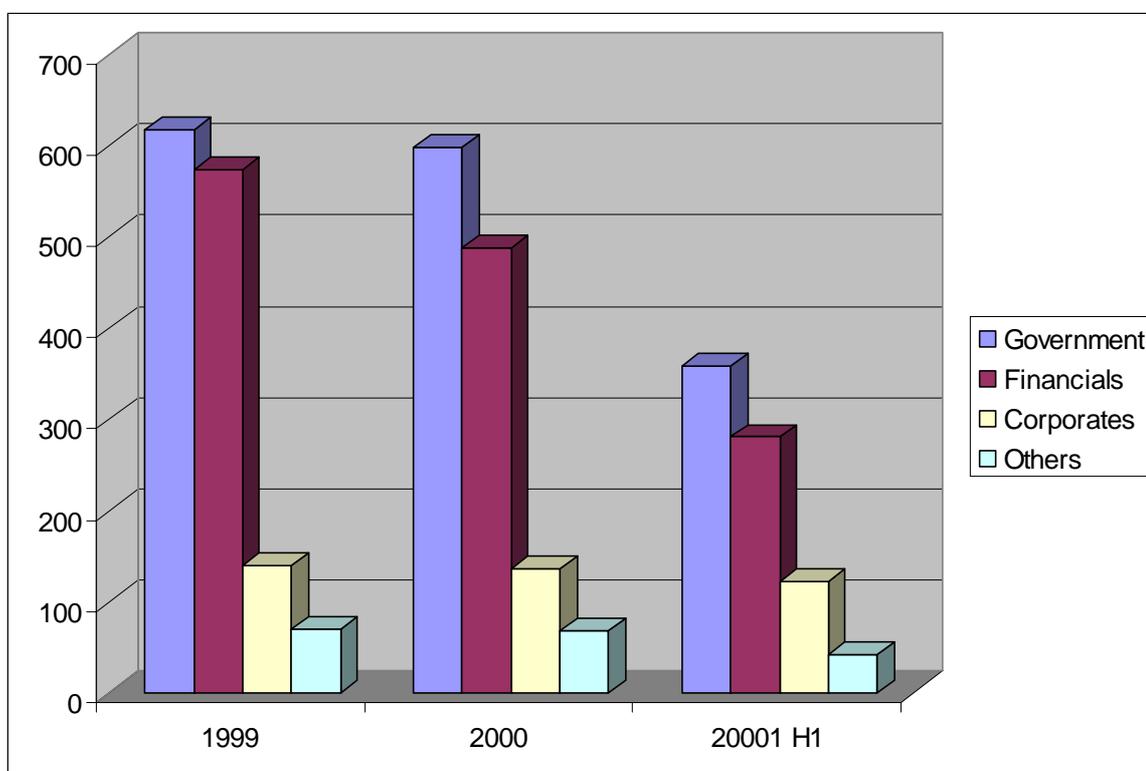
Sources: Peppetti-Rinaldi (2001); ECB.

⁷ “Synthetic securitisation” refers to structured transactions in which a party uses “credit derivatives” to transfer the credit risk of a specified pool of assets to third parties. The best known and most developed type of synthetic securitisation is the *credit default swap*, a bilateral financial contract aiming at buying financial protection on underlying assets or generating exposure to credit risk without actually selling or buying the related assets.

3. Pfandbrief-style products in Europe

In the euro area,⁸ private debt markets have grown substantially since the introduction of the euro. The share of outstanding government bonds has fallen from 52% at the start of monetary union to 49% as at April 2001. On the supply side, there has been a large wave of mergers and acquisitions in the wake of the single currency. On the demand side, the introduction of the euro has created a large pool of “domestic” investors with a common currency, which has led to an increasing internationalisation of euro-denominated bond markets in the European Union. These events have fostered strong issuance in private bond markets.⁹ While attention has naturally tended to be focused on the corporate bond sector, a substantial share of new issuance has been by financial institutions, with 70% of total issuance in the first half of 2001 (Chart 2); financial institutions accounted for around 73% of total outstanding amounts of private bonds as at April 2001.

Chart 2
Euro-denominated gross bond issuance in the European Union
(EUR billions, 1999 to the first half of 2001)



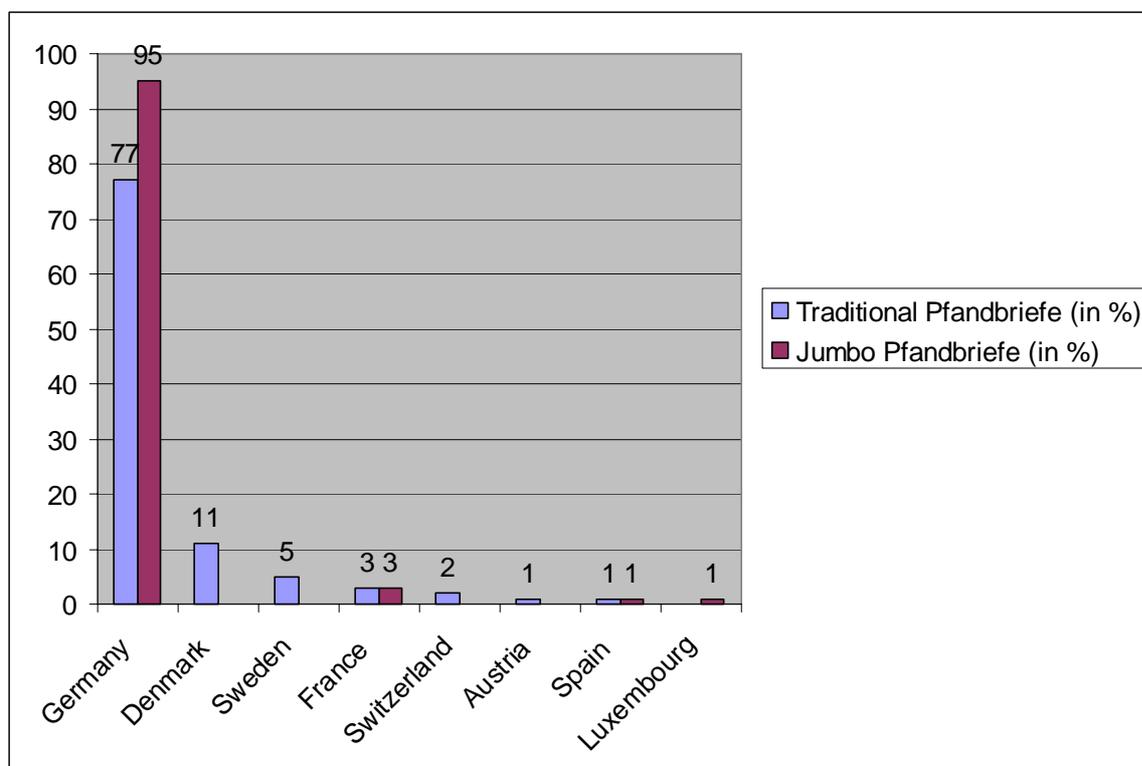
Source: European Commission.

Among the products issued by financial institutions in Europe, one has established itself as an asset class in its own right and has been a flourishing segment of the euro-denominated bond markets. This is the class of Pfandbrief-style products. At the level of the euro area, Pfandbriefe and similar instruments account for approximately 20% of all outstanding fixed income assets (Chart 3).

⁸ Currently Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain.

⁹ For an extensive description of the developments in euro area bond markets, see ECB (2001a, 2001b) and Santillan et al (2000).

Chart 3
Outstanding Pfandbriefe in selected EU countries and Switzerland
 (as a % of total outstanding amounts in these countries, October 2000)



Source: WestLB.

Legislation on Pfandbrief-style products is already in place in most countries in Europe (including some eastern European countries). Some of these products have been around for a long time: in Germany, Spain, Denmark and Sweden, laws providing a framework for the issuance of these products were passed around the start of the last century or even before.¹⁰ In other countries (with the exception of the United Kingdom, which appears to favour the off-balance sheet type of securitisation), introducing or updating the legislative framework is under discussion. This is the case in Sweden, Belgium, Italy and especially Ireland, where a bill introducing the Irish Pfandbrief (very similar to the German Pfandbrief) is already at a very advanced stage and is expected to be approved during 2001. The legislative innovation that has recently taken place in many European countries aims at enabling national financial institutions to specifically issue Pfandbrief-style products, in recognition of the fact that these products have established themselves as a leading financial asset class beyond national borders. To mention but a few of the revisions, in France the law governing *obligations foncières* was revised in 1999. In Luxembourg a substantial revision of the law on *lettres de gage* of 1993 was passed in 1997, whereas Spanish banks started to issue a maxi-version of *cédulas hipotecarias* as from 1999. In Finland legislation on Pfandbriefe was introduced in 2000.

¹⁰ The German Pfandbrief (literally "letter of pledge") is said to be traceable back to a decree of Frederick II of Prussia in the 18th century. However, it was only in 1899 that the Pfandbrief took its present form, when the Mortgage Bank Law was passed. The oldest law on Pfandbrief-style products was issued in France in 1852 with the *Loi sur l'obligation foncière et communale*. The oldest mortgage credit market can be traced to Denmark, where it was generated by a vast demand for housing finance after the Great Fire of 1789. In Sweden, where a mortgage market has existed at least since 1860, there is no specific mortgage legislation; the activities in this field are governed by the more general Law on Credit Companies and there is very close supervision by the Swedish Financial Supervisory Authority.

Table 2
Pfundbrief-style products in the EU

Austria	<i>Pfundbriefe</i> : these bonds are issued on behalf of the <i>Landeshypothekenbanken</i> by a centralised issuing institution and three separate banking groups. Loans to borrowers in the EEA and Switzerland may be used as backing collateral for these bonds. The bonds have a 10% solvency weighting. The authorities are currently working on a revision of the relevant law.
Belgium	Legislation to allow mortgage bond issuance is being prepared.
Denmark	<i>Realkreditobligationer</i> : these mortgage bonds are issued by recognised mortgage institutions, which are responsible for 90% of mortgage bond issuance. The relevant laws are currently evolving, and these bonds may come to resemble <i>Pfundbriefe</i> more closely. At present mortgage bonds are backed only by mortgage loan collateral and are not insulated from the bankruptcy of their issuers.
France	<i>Obligations foncières</i> : are backed by mortgages and public sector loans, located anywhere in the EEA. They are issued by <i>Sociétés de Crédit Foncier</i> (SCFs), whose sole purpose is to make mortgage and public loans and refinance them through <i>obligations foncières</i> . SCFs are normally owned by the parent bank, which acts as the servicer of the loan. Real estate collateral is marked to market. There is an effective “bankruptcy remoteness” as holders of <i>obligations foncières</i> rank ahead of all other creditors. SCFs are supervised by a professional auditor, who reports to the Banking Commission. There are detailed disclosure requirements on asset quality, prepayments and interest rate sensitivity of the collateral pools. <i>Obligations foncières</i> must be listed on at least two exchanges and have at least two ratings.
Finland	<i>Kiinteistovaakuudellinen joukovelkakirjalaina/julkisyhteisöva-kuudellinen joukovelkakirjalaina</i> : a new law came into effect in January 2000, closely based on the German model, which fulfils the requirements of Article 22(4) of the UCITS Directive. Only specialised institutions are permitted to issue mortgage bonds. There are set rules for valuing mortgageable property. The loan-to-value ratio is up to 60% of the mortgageable value. There is no requirement for an independent trustee. Collateral from the EEA is acceptable. Eligible assets include public sector and mortgage loans, requiring two separate registers. There is currently a limit on substitution of collateral. Mortgage bondholders have a preferential status in any liquidation of the issuing institution.
Germany	<i>Pfundbriefe</i> : this is a general term encompassing <i>Hypotheken-Pfundbriefe</i> and <i>Öffentliche Pfandbriefe</i> . The former are issued to fund loans which are secured by first ranking residential and commercial mortgages or land charges; the latter are issued to fund loans to the public sector (eg federal government, regional governments, municipals and other agencies). Public <i>Pfundbriefe</i> amount for about 80% of the outstanding amount, mortgage <i>Pfundbriefe</i> for the remaining 20%, reflecting the difficulty involved in pooling the necessary EUR 500 million in mortgage loans, within a short time, whereas this is far easier in the case of public sector loans. The collateral of all outstanding <i>Öffentliche Pfandbriefe</i> and <i>Hypotheken-Pfundbriefe</i> of any mortgage bank must be kept in two separate pools. Investor protection is guaranteed at two levels: through the very clear legislation defining which institutions are privileged by law to issue <i>Pfundbriefe</i> ; and through the conservative guidelines determining the quality and size of the collateral backing. The total volume of all <i>Pfundbriefe</i> of a mortgage bank in circulation may not exceed 60 times the amount of its own capital. Loans eligible as pool collateral may not count for more than 60% of their value, regardless of the type of loan. The Federal Banking Supervisory Authority (Bundesaufsichtsamt für das Kreditwesen - BAKred) ensures that the issuers' activities comply with these regulations. They have a 10% solvency risk weighting and qualify for Eurosystem repo operations.
Ireland	A law creating the <i>Irish Pfandbrief</i> is currently being discussed and is close to approval. According to the proposal, these assets will be modelled on the existing <i>Pfundbrief</i> legislation in Germany, France and Luxembourg. Only approved “designated credit institutions” will be able to issue these bonds, which will be secured by mortgage loans or public loans. Assets will have to be segregated in the balance sheet of the issuer. The loan-to-value ratio will be 60%. Substitution of assets must not exceed 20% of the total pool value. Holders of bonds will have a priority claim over the cover assets in case of default. Assets from the EEA, Canada, the United States and Switzerland will be allowed, as will certain types of hedging derivatives. There will be rules for asset and liability matching.

Table 2 (cont)

Luxembourg	<p><i>Lettres de gage</i>: at present three institutions have the specialised issuing licence required for issuing these bonds; the first few issues are on the market. The establishing law of 21 November 1997 is closely modelled on the German precedents. The backing collateral for <i>lettres de gage publiques</i> is public sector loans, and for <i>lettres de gage hypothécaires</i> is mortgage loans. As in Germany, there must be separate public sector and mortgage asset pools. There is a requirement for an independent trustee. A register of the collateral assets must be kept. There are requirements with regard to substitution collateral, which is limited to 20% of all collateral. There are set rules for valuing mortgage property. The loan-to-value ratio is up to 60% of the mortgageable value. Collateral from all OECD countries is eligible to back <i>lettres de gage</i>. They have a 10% solvency risk weighting and qualify for Eurosystem repo operations.</p>
Spain	<p><i>Cédulas hipotecarias</i>: these can be backed only by mortgage loans and not by public sector loans. They are collateralised by the issuing entity's entire mortgage pool rather than by a specific pool of mortgage assets. Holders of <i>cédulas hipotecarias</i> enjoy a privileged status and have priority over the mortgage book of the issuer in the event of bankruptcy. Only the State or the issuer's employees have higher priority over the proceeds arising from liquidation in case of bankruptcy. Early amortisation is not possible. Mortgage valuation is subject to conservative valuation rules (70% loan-to-value ratio) and mortgage certificates can be issued only up to 90% of an individual issuer's eligible mortgages ("overcollateralisation"). The principle of matching maturities is not covered in Spanish law, which gives Spanish institutions some leeway for taking on interest rate risk arising from maturity transformation.</p>
Sweden	<p>Securitisation of mortgage lending is only just starting. At present, mortgage bonds differ quite materially from the Pfandbrief model, but new legislation is planned. Around 60% of mortgage loans are funded by means of mortgage bonds but these do not enjoy the preferential status of German-style Pfandbriefe. Two institutions currently dominate the issuance of mortgage bonds. The bonds do not qualify for a 10% solvency risk weighting.</p>

Source: Fitch IBCA (2000).

In all countries, the new laws aim at guaranteeing the quality of covered bond instruments with a view to reproducing the popularity and attractiveness to investors of the German Pfandbrief, also at the international level. The adaptation of national laws to the German model is being pursued in the light of the fact that the strong characterisation of Pfandbrief as a quality product has allowed it to obtain a unique, almost privileged, position at the European level compared to other high-quality non-sovereign assets. For example, the Pfandbrief's capital risk weighting is only 10%, compared to the 20% weighting normally required for other bank bonds.¹¹ In addition, Pfandbriefe issued in the European Union in accordance with the UCITS Directive¹² are not subject to certain limits on investments

¹¹ Article 11(2) of the EU Solvency Directive.

¹² Council Directive 85/611/EEC as amended by Council Directive 88/220/EEC (the "UCITS Directive") aims at governing collective investment undertakings with a view to approximating the conditions of competition between undertakings at Community level while at the same time ensuring effective and more uniform protection for unit holders, removing the restrictions on the free circulation of the units in the Community and helping bring about a European capital market. The Directive defines the relevant criteria that bonds must satisfy in order to be included in this EU-wide list of assets which ensure particular protection for the bondholders. This Directive tends to limit the number of potential issuers and ensures that sufficient protection is in place to ensure sufficiently homogeneous instruments and a sufficient degree of transparency. In particular, Article 22(4), which is considered crucial to the essence of the Pfandbrief-style model of mortgage bond issuance, states inter alia that member states may raise the limit laid down in paragraph 1 (ie no more than 5% of its assets may be invested by a UCITS in transferable assets issued by the same body) to a maximum of 25% in the case of certain bonds, when these are issued by a credit institution which has its registered office in a member state and is subject by law to special public supervision designed to protect bondholders. In particular, sums deriving from the issue of these bonds must be invested, in conformity with the law, in assets which, during the whole period of validity of the bonds, are capable of covering claims attaching to the bonds and which, in the event of the failure of the issuer, would be used on a priority basis for the reimbursement of the principal and payment of the accrued interest. These general criteria imply that: (a) the issuer must be a credit institution domiciled in the European Union; (b) the issuer country exercises special state supervision to protect bondholders, eg through state-appointed trustees, special collateral checks or special valuation rules; (c) the sums deriving from the issue of these bonds must be placed in assets which provide sufficient cover for the liabilities deriving from the bonds for their entire duration; (d) in the event of bankruptcy of the issuer, these assets are intended to be used to repay the capital and interest becoming due. The mortgage bank creditors thus have a preferential claim in the case of bankruptcy of the issuing institution.

prescribed for institutional investors (for example, investment companies and insurance companies may buy double the amount of Pfandbriefe and mortgage bonds compared with other securities).¹³ Finally, Pfandbriefe and mortgage bonds that comply with the UCITS Directive satisfy the “financial soundness” requirement for assets to be eligible for refinancing operations with the Eurosystem and for TARGET¹⁴ payment system purposes (Table 4).

Table 3
Pfandbrief-style products in other European countries

Switzerland	<i>Pfandbriefe/Lettres de gage</i> : at present, Swiss mortgage bonds deviate quite materially from the Franco-German model. The two centralised mortgage bond-issuing institutions have been active for decades and are increasing issuance volume. Mortgage and asset-backed securitisation is also quite widespread.
Czech Republic	<i>Zastavni list</i> : the relevant law (July 1995) fulfils the requirements of Article 22(4) of the UCITS Directive. There are only mortgage bonds. These have priority in the event of the bankruptcy of the issuer. Licences to issue these bonds are limited. There are no set rules for valuing mortgageable property. The loan-to-value ratio is up to 60% of the market value. There is no requirement for a register of the collateral assets to be kept: “independent evidence” of their existence suffices. There is no requirement for an independent trustee. There are requirements in regard to substitution of collateral, which is limited to 10% of all collateral.
Hungary	<i>Jelzaloglevel</i> : the relevant law (June 1997) fulfils the requirements of Article 22(4) of the UCITS Directive. There are public sector and mortgage bonds. These have priority in the event of the bankruptcy of the issuer. There is a requirement for an independent trustee. There are set rules for valuing mortgageable property. The loan-to-value ratio is up to 60% of the market value. There are requirements in regard to substitution of collateral, which is limited to 20% of all collateral. A register of the collateral must be kept.
Latvia	<i>Kilu zime</i> : the relevant law (September 1998) fulfils the requirements of Article 22(4) of the UCITS Directive. There are only mortgage bonds. These have priority in the event of the bankruptcy of the issuer. Licences to issue these bonds are limited. There is no requirement for an independent trustee. A register of the collateral assets must be kept. There are requirements in regard to substitution of collateral, which is limited to 20% of all collateral. There are set rules for valuing mortgageable property. The loan-to-value ratio is up to 60% of the market value.
Poland	<i>List Zastawny</i> : the relevant law (January 1998) fulfils the requirements of Article 22(4) of the UCITS Directive. There are public sector and mortgage bonds. These have priority in the event of the bankruptcy of the issuer. There are specialised mortgage bond-issuing institutions. There is a requirement for an independent trustee. There are set rules for valuing mortgageable property. A register of the collateral assets must be kept. There are requirements in regard to substitution of collateral, which is limited to 10% of all collateral. The loan-to-value ratio is up to 60% of mortgageable value.
Slovakia	<i>Zalozny list</i> : the relevant law (March 1996) fulfils the requirements of Article 22(4) of the UCITS Directive. There are public sector and mortgage bonds. These have priority in the event of the bankruptcy of the issuer. Licences to issue these bonds are limited. There is a requirement for an independent trustee. There are set rules for valuing mortgageable property. A register of collateral assets must be kept. There are requirements in regard to substitution of collateral, which is limited to 10% of all collateral. The loan-to-value ratio is up to 60% of mortgageable value.

Source: Fitch IBCA (2000)

¹³ Another example of preferential treatment in Germany is that investment companies can invest up to 20% of total assets in Pfandbriefe of a single issuer, whereas the normal limit is 10%.

¹⁴ The TARGET (Trans-European Automated Real-time Gross settlement Express Transfer) system was developed by the European System of Central Banks. It consists of 15 national real-time gross settlement systems plus the ECB payment mechanism, all of which are interlinked so as to provide a uniform platform for processing cross-border payments. It is intended mainly for the settlement of monetary policy operations and large-value interbank payments, but can also handle customer payments including smaller cross-border retail transactions.

Table 4
Overview of the legal status of Pfandbriefe in Europe

Country	Special law at the national level	Specific supervision	Complies with Article 22(4) of UCITS Directive
Germany	Yes	Yes	Yes
France	Yes	Yes	Yes
Luxembourg	Yes	Yes	Yes
Spain	Yes	Yes	Yes
Austria	Yes	Yes	Yes
Finland	Yes	Yes	Yes
Sweden ¹	No	Yes	No
Denmark	Yes	Yes	Yes
Switzerland	Yes	Yes	Yes

¹ Special rules apply for mortgage banks.

Source: AGMB (2000a).

Pfandbrief-style products have built-in mechanisms in order to ensure “bankruptcy remoteness” ie ensuring repayment of the bondholder in the event of default either of the bank issuing the Pfandbriefe, or of the underlying issuer of collateral. Although the working of these mechanisms depends very much on the special legislation enforced in each country, for practical purposes three specific situations of protection can be described:

- (a) In the case of German Pfandbriefe there are no special purpose vehicles but there is *segregation* into separate asset pools in the issuing bank’s books of the loans collateralising *Hypotheken-Pfandbriefe* (mortgage loans) and of those collateralising *Öffentliche Pfandbriefe* (public loans). If the issuing bank goes into liquidation, Pfandbriefe holders will not suffer any untimely repayments or redemption (in fact, no defaults have been recorded for Pfandbriefe in the last 100 years).
- (b) The issuance of *obligations foncières* requires creating a special purpose vehicle, a *Société de Crédit Foncier* (SCFs), which is a registered credit institution that does not originate the loans collateralising its *obligations foncières* but rather buys them from another originator - normally the parent bank setting up the SCF. In case of a default, the holders of *obligations foncières* will have a *preferential claim* over all the assets of the issuing SCF so that these preferential creditors will remain fully remunerated and will be paid off in a timely manner.
- (c) Issuance of *cédulas hipotecarias* is possible for any financial institution recognised by the Bank of Spain; there are no restrictions on the activities of the issuer, which also originates the loans backing the *cédulas*. Although the instrument is not secured by a separate pool of collateral, the safety is based on the principle of *overcollateralisation* of loans. In case of default, the bank’s whole mortgage loan portfolio provides cover and the holders of *cédulas* are granted preferential treatment (though after claims from the State and from employees have been satisfied). Although holders of *cédulas* would be very unlikely to suffer any loss, they could suffer temporary interruption of remuneration and redemption as the liquidation procedures are carried out.

4. The Jumbo Pfandbrief

It was only with the launch of the Jumbo Pfandbrief by the German mortgage banks in mid-1995 that domestic covered bonds crossed domestic boundaries to become a better known instrument internationally. The move of the German banks has been followed by the French, Spanish and

Luxembourg regulatory authorities, which have revised and updated their existing legislation on covered bonds in order to enable the national financial institutions to better compete with other European financial institutions able to attract international investors investing in high-quality bonds. *Obligations foncières* and *lettres de gage* have been issued successfully in Jumbo format and spreads vis-à-vis German Pfandbriefe have always been very tight. However, the three new Jumbo instruments hardly present an immediate threat to the Pfandbrief market in terms of volumes issued (Table 5). A more in-depth description of these four market segments where issuance of Jumbos has occurred is presented in the following sections, and the main characteristics are summarised in the table in Annex 1.

Table 5
Outstanding amount of Jumbo Pfandbrief-type products in the euro area
(at 31 July 2001)

Type of bond	Outstanding amount (EUR billions)	Number of issues
Pfandbriefe	393	284
Obligations foncières	21.2	12
Cédulas hipotecarias	10	7
Lettres de gage	3.5	4

Sources: DG-Bank; PBI Luxembourg; AGMB.

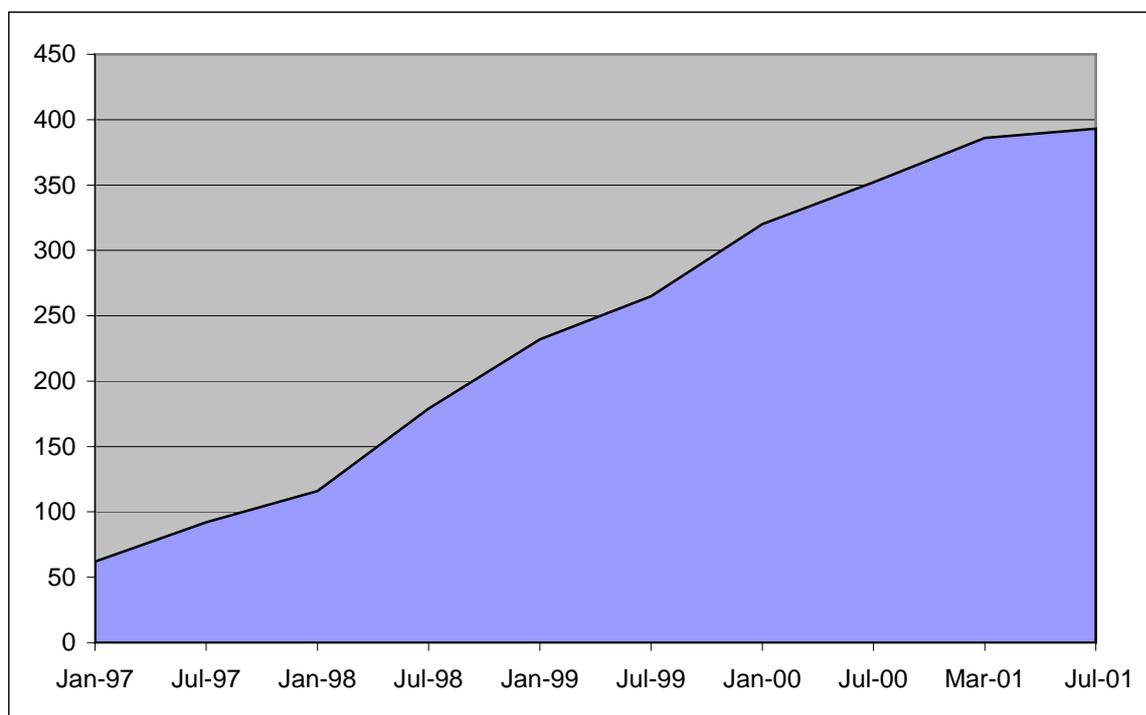
4.1 The German Pfandbrief

The German Pfandbrief market is the largest individual bond market in Europe. With an outstanding amount of over EUR 1.1 trillion as at in July 2001, the Pfandbrief is the largest single non-government asset class in Europe and ranks sixth among fixed income markets in the world in terms of outstanding amounts, bigger than that of the Italian, German or French government bond markets taken individually (Chart 4). Most of the increase in outstanding amounts of Pfandbriefe is due solely to the increased issuance of Jumbo Pfandbriefe, whose outstanding amount increased from EUR 190 billion at the beginning of 1999 (when the euro was introduced) to EUR 393 billion at the end of July 2001, whereas the volume of “traditional” Pfandbriefe in the same period of time only rose by approximately EUR 30 billion. The average size of a Jumbo issue is around EUR 1.3 billion and there is a fairly evenly distributed maturity profile.

About 20% of the outstanding issues are estimated to be held by non-German residents. The predominant Jumbo to be issued has been and is the “public” Pfandbrief, with a share of over 90% of all Jumbos issued. This can be explained by the fact that it is easier to accumulate the cover collateral needed to achieve the minimum volume required for Jumbos by resorting to public sector loans rather than to mortgage loans.

The Jumbo Pfandbrief was first launched by the German mortgage banks in 1995. Originally a security aimed at domestic investors, the new type of instrument was developed to deliver an increased level of standardisation and enhanced liquidity characteristics in order to attract the interest of international investors wishing to access liquid and secure instruments carrying competitive yields. The introduction of this new instrument reflected the desire of German issuers to ensure an expansion of their refinancing base and to promote the internationalisation of a liquid and secure instrument whose issuing volumes were growing constantly. Jumbos currently represent about 36% of all outstanding Pfandbriefe issued by German residents.

Chart 4
Outstanding amount of Jumbo Pfandbriefe
 (EUR billions)



Sources: AGMB; DG-Bank.

Central to the expansion of the Jumbo is the high credit quality of the instrument, as witnessed by the large number of triple-A ratings assigned to the individual issues (which are almost always higher than the rating of the issuer). In the light of their financial soundness, Jumbos (as well as traditional Pfandbriefe) are eligible for Eurosystem repo operations. Furthermore, they carry only a 10% solvency risk weighting. Another very important feature is the high liquidity, which is ensured by the very big issue sizes as well as the existence of a market-making mechanism, ie the commitment by at least three syndicate leaders to quote two-way prices with fixed bid-offer spreads on a continuous basis during normal trading hours.¹⁵ Transparency is achieved by providing quotes on Reuters. Concerning the issue size, the Jumbo Pfandbrief market was introduced by setting minimum requirements for issue size in order to ensure liquidity: initially this was DEM 1 billion, which was then converted to EUR 500 million when the euro was introduced in 1999. Nevertheless, issue sizes of EUR 2-3 billion are not uncommon, and even issues of EUR 5 billion have been made in the recent past. Following the advent of the euro, the average issue size of Jumbos doubled, from EUR 0.6 billion to 1.3 billion.

Aside from the high credit standing and modern issuing practices, Jumbo Pfandbriefe (together with *obligations foncières*) were the first to trade on the EuroCredit MTS electronic trading system for credit products in May 2000.¹⁶ There are currently 25 Pfandbrief plus three *obligation foncière* issues traded

¹⁵ Additional standards for Jumbo Pfandbriefe are that tapplings for outstanding issues must have a minimum size of EUR 125 million; the normal trading lot with guaranteed quotations is EUR 15 million, with a minimum of EUR 1 million.

¹⁶ EuroCredit MTS is the new division of EuroMTS, an electronic trading platform initially designed for trading Italian government bonds in Italy that has since been chosen in other European countries for trading selected government securities. EuroCredit MTS is dedicated to the trading of non-sovereign benchmark bonds in the euro zone markets: the first non-government sector bond to be assessed and included on the platform was the Jumbo Pfandbrief. It started trading on 22 May 2000. EuroCredit MTS provides competitive prices and tight bid-offer spreads on all the securities traded. It currently has 22 market-makers and a total of 25 participants.

on EuroCredit MTS, for a total of approx EUR 94 billion nominal value.¹⁷ Average aggregate daily turnover on these products is currently around EUR 500 million.¹⁸

To give an idea of how the Pfandbrief market compares with the government bond market in terms of liquidity, data on bid-ask and turnover were collected for bunds and Jumbo Pfandbrief issues, both in the German Pfandbrief OTC market-making scheme and on EuroCredit MTS (Table 6). *Bid-ask spreads* on Pfandbriefe compare favourably and show a degree of tightness similar to that of bunds. The *turnover ratios*, however, differ markedly (as could be expected). German government paper has a substantially higher turnover than Pfandbriefe. In particular, the lower turnover ratio recorded for EuroCredit MTS seems to point to the fact that market participants tend to continue to trade on the OTC market proportionately more than on the electronic platform. One explanation is that not all Jumbos traded on EuroCredit MTS are owned by the participants in this electronic trading platform and therefore have to be traded OTC. It may also indicate that traders actually tend to prefer to some degree the opacity of the OTC segment, so as to be able to avoid revealing their activity on the market.

The availability of the Jumbo Pfandbrief has spurred the development of connected market segments trading this product and allowing hedging strategies by market participants. The sustained turnover recorded for Pfandbriefe can be ascribed, among other things, to the existence of two repo market-maker arrangements on Pfandbriefe, which have contributed to an improvement of liquidity in the Jumbo market. In fact, a liquid repo market is a necessary condition to guarantee a liquid secondary cash market, especially when it is characterised by active market-making. The first repo market-making scheme, which is an extension of the market-making commitment seen on cash deals on Pfandbriefe, originated in 1998 on the initiative of 17 market-makers (the lead managers which typically guarantee the market-making in the cash market). They are committed to quoting bid-ask prices for liquid issues with a volume of at least EUR 1.25 billion and a two-year residual maturity. Repo maturities range from one week to one month.¹⁹ In terms of volume, Pfandbrief repo trading volumes presently average between EUR 6 and 8 billion per day.²⁰ The second repo market-making activity started in January 2001, when the Jumbo Pfandbrief was accepted (together with Freddie Mac and EIB Reference Notes) as underlying for repo trades on the electronic "Repo Trading Facility" managed by EuroCredit MTS.

In addition to the repo market, a futures contract on the Jumbo Pfandbrief started to be traded - even if only for a short time - on the Eurex futures exchange in July 1998. However, the low volumes recorded after a few months of existence led to a discontinuation of this contract.²¹

¹⁷ In order to be listed on EuroCredit MTS, non-government bonds must be:

- (a) collateralised with either mortgages or public sector loans, or a combination thereof;
- (b) euro-denominated;
- (c) in excess of EUR 3 billion in terms of outstanding size;
- (d) issued by an institution with total outstanding debt in excess of EUR 10 billion in respect of the asset class of the bond in question (including that issue);
- (e) given a triple-A rating by at least one of Standard & Poor's and Moody's.

¹⁸ By comparison, according to EuroMTS sources, the turnover on German government bonds traded on EuroMTS fluctuates between EUR 300 and 600 million per day. However, this amount is only the "cash" part of the trading for the government bonds traded there and is estimated at 30% of all the turnover on the specific government bonds, whereas another 70% is traded over the counter and is related to "basis" trading connected to the trading of futures contracts.

¹⁹ Market-makers have to quote two-way prices for up to EUR 15 million with a 25 bp bid-offer spread. Depfa has a special arrangement with the market-makers for four of its Global Jumbo Pfandbriefe to quote a 20 bp bid-offer. Jumbos trade around Euribor flat if they are general collateral. There is no particular sector of the curve which is most likely to be special in the repo market. The bigger Jumbo Pfandbrief benchmark issues are typically used for hedging purposes and trade more actively in the repo market. Jumbo Pfandbriefe are mostly made available for repo borrowing by investment funds and the mortgage banks themselves.

²⁰ This compares with an estimated EUR 400 to 500 billion daily turnover for repos on government securities denominated in euros (AGMB (2000a)).

²¹ The timing of the introduction of the futures contract was probably unfortunate, as it coincided with a period of high instability and volatility in the world financial markets in conjunction with the emerging markets crisis, which possibly hindered the development of new types of instruments because of the "flight to quality" that occurred during this period.

Table 6
Patterns of liquidity for government securities and Jumbos
(as at July 2001)

Bunds (central government bonds)		Pfandbriefe		
Bid-ask spread	In cents	Bid-ask spread	German Pfandbrief market-maker scheme ¹	EuroCredit MTS: five-year and 10-year segments ¹
Remaining life: 1 yr	1	Remaining life: <4 yrs	5	...
1-3 yrs	2-3	4-6 yrs	6	4
4-6 yrs	5	6-8 yrs	8	...
7-10 yrs	5-6	8-15 yrs	10	10
>10 yrs	7-10	15-20 yrs	15	...
		>20 yrs	20	...
Outstanding amount (as at end-July 2001) ² (a)	EUR 790 bn ³		Jumbos: EUR 393 bn	Jumbos: EUR 94 bn
Yearly trading volume (b)	EUR 5,925 bn ⁴		EUR 1,250 bn ⁵	EUR 112.5 bn ⁶
Turnover ratio (b/a)	7.50		3.18	1.19

¹ In cents. ² For German government paper, as at May 2001. ³ Includes all public debt. See Bundesbank, *Monthly Report*, July 2001, Chapter 7: Capital Markets, Table 3. ⁴ No official statistics exist on the turnover of German government bonds. The figure was estimated by taking the available average daily turnover data on the government bonds settled in Clearstream-Deutsche Börse (see *Market data*, 16 September 2000). The average daily government bond turnover was estimated at 3% of the total amount outstanding (this was judged to be a realistic assumption, given that some of the most traded government bonds can reach up to 30%, but many others were not traded at all on a single day). ⁵ As no official statistics exist, the volume was estimated assuming a EUR 5 billion per day turnover as reported by some banks. See AGMB (2000a), Chapter 5. ⁶ The figure is calculated by multiplying the known daily turnover by the number of business days in a year (250).

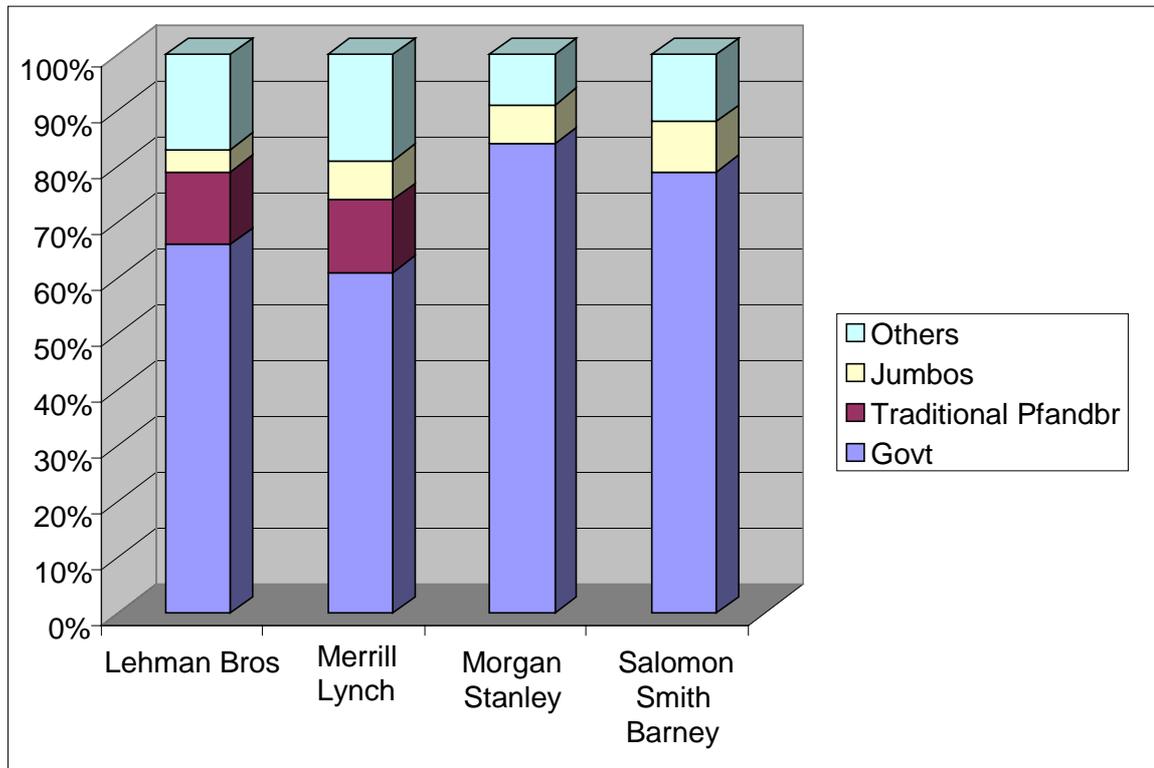
Sources: Deutsche Bundesbank; EuroMTS; Clearstream.

With the introduction of the euro in 1999, the Jumbo Pfandbrief was included as an asset class in a number of European bond market indices (Chart 5).²² Depending on the index provider, Pfandbriefe account for between 40% and 60% of the non-sovereign segment in Euroland. The substantial weight in such indices implies that the Pfandbrief is an instrument that index-tracking fixed income investors and fund managers cannot overlook. This fact has generated sizeable acquisitions by institutional investors: it is estimated that currently about 20% of Jumbo issues are held by investors outside Germany. Aside from these "world indices", the market for Jumbos is also captured by Reuters' PFANDTOP index (calculated on the basis of market-makers' quotations and published daily) which covers all Jumbos issued in the European Union and tracks their performance.

After the continued growth in issuance recorded in the last five years, the Pfandbrief market appears to be going through a period of consolidation. In the second quarter of 2001 net issuance of Pfandbriefe slowed down substantially, following a deterioration in market conditions. The intention announced by the biggest German mortgage bank to launch in 2001 the first 30-year Jumbo Pfandbriefe ever has not materialised so far. This would have been the first non-sovereign security denominated in euros outstanding on this maturity (only some American corporates have issued in dollars on the 30-year maturity).

²² These indices are Salomon's Euro Broad Investment-Grade Bond Index, which has a 9% weighting of Pfandbriefe; Merrill Lynch's EMU Broad Market index with 7% (in addition to traditional Pfandbriefe with 12.5%); Lehman Brothers' bond index with 4% of Jumbos (and 13% in traditional Pfandbriefe) and Morgan Stanley's bond index with 7% in Jumbos. The JP Morgan Aggregate Index Europe and the Bear Stearns indices will also include Pfandbriefe.

Chart 5
The Pfandbrief in European bond indices



Source: AGMB.

On the supply side, the substantial widening of yield spreads vis-à-vis government bonds, together with increasingly tighter margins caused by competition, have raised the funding costs for issuers, and caused some of them to hold back from new issuance. Some more structural changes in the markets are also affecting new issuance. New lending to domestic public authorities, which provides the underlying collateral for the vast amount of Pfandbriefe issued, is witnessing lower growth rates because of the ongoing fiscal consolidation in the European Union. Some changes in the tax deductibility rules for housing and a weak property market have reduced the amount of mortgage loans available as underlying. The tighter margins currently characterising issuance require banks to issue higher volumes of Pfandbriefe to ensure profitability. This requires developing lending business outside the traditional lending markets. In this respect, the innovations included in new legislation on Pfandbriefe, which extend the geographical area for mortgage banks' lending activities to a wider area than the EEA, aim at removing some of the bottlenecks that have limited the lending business in recent periods.²³

On the demand side, a challenge to the Pfandbrief market is coming from corporate issuance, which in 2001 for the first time exceeded Pfandbrief issuance in the European Union.²⁴ The relative increase in economic growth experienced in this period has favoured the former, whose higher yields vis-à-vis Pfandbriefe have made them interesting in terms of yield-pick-up for those investors with a higher appetite for credit risk.

²³ See for example the innovations included in the Pfandbrief legislation of Luxembourg and Ireland.

²⁴ According to the European Commission (2001), corporate securities issued in the European Union in the first quarter of 2001 were 14% of the total volume issued, while Pfandbriefe stood at 15%; in the second quarter of 2001 they were 16% and 9% respectively.

4.2 The French *obligations foncières*

Although the legal framework for mortgage-backed bonds has existed in France since 1852, it is only recently that the existing laws were updated (1999). Among the reasons that prompted the French government to review the law on mortgage-backed assets is the success achieved by German mortgage banks in issuing and marketing Pfandbriefe, which allows them to refinance themselves at competitive rates. Other reasons are the introduction of the single currency and the ensuing disappearance of currency risk, which abolished the segmentation between domestic markets and exposed domestic participants to the full force of competition.

Prior to the reform, de facto there was only one mortgage bank on the French market, *Crédit Foncier de France* (CFF), that was authorised to issue mortgage bonds. The reform of 1999 abolished the monopoly that the CFF had enjoyed and allowed all credit and financial institutions to establish their own mortgage institutions. A very detailed definition of the role and responsibilities of mortgage banks was achieved with the reform, as was a strengthening of prudential rules and closer control by the supervisory authorities (Banking Commission).

Central to the new structure is the “bankruptcy remoteness” of issuing vehicles in the French mortgage bond markets: issuance of *obligations foncières* is restricted to specific companies, *Sociétés de Crédit Foncier* (SCFs), that have the sole purpose of acquiring and granting secured loans refinanced through *obligations foncières*. The holders of these bonds enjoy privileged rights ranking even above those of salaried employees and the State itself. Following the enactment of the law, two new mortgage banks issuing *obligations foncières* were created in France.²⁵

Although SCFs have the legal status of a bank, they are not allowed to engage in traditional banking activities or to hold equity stakes in any subsidiaries, which effectively makes these vehicles closely resemble a special purpose vehicle in asset-backed securitisation. The bankruptcy remoteness is reinforced through their relationship with their parent company: the law requires SCFs not to be operational but to be managed by another financial institution, which is normally the parent bank. The strength of this legal framework has been recognised in the level of the ratings assigned to these bonds by international rating agencies (normally a triple-A)

Issuance mechanisms are designed to enhance liquidity and transparency; the market-making schemes reflect very closely those adopted for the German Pfandbrief. Issuers and market-makers agreed to set the minimum issue size to EUR 500 million, and to have all issues rated by at least two of the internationally recognised rating agencies. Furthermore, all *obligations foncières* must be assisted by a market-making commitment from at least three banks, which are required to promote liquidity in the market by quoting continuous prices with bid-offer spreads of between five and 20 cents. Currently, only three of all *obligations foncières* qualify (in terms of issue size) to be quoted on the EuroCredit MTS.

4.3 The Spanish *cédulas hipotecarias*

Cédulas hipotecarias have been around for more than 130 years,²⁶ but it was only after the amendment of the law governing these products in 1981 that issuance of *cédulas* took off, and in 1999 the first international issue was launched on the market. As with *obligations foncières*, in the last few years the main reason for issuers to tap this market has been the prospect of improving their funding costs and widening the investor base, in particular to non-resident investors. *Cédulas* are considered Jumbos if they have an issue size of at least EUR 1 billion; traditional issues are normally between EUR 1 and 10 million.

In contrast to the French, German and Luxembourg products, *cédulas* can be backed only by mortgage loans and not by public sector loans. Compared to the German Pfandbrief, their essential difference lies in the fact that they are collateralised by the issuing entity’s entire mortgage pool rather than by a specific pool of mortgage assets. In line with Article 22(4) of the UCITS Directive, credit

²⁵ These are *Dexia Municipal Agency* and *Compagnie de Financement Foncier*, to which all mortgages of the CFF have been transferred.

²⁶ The *Ley del Mercado Hipotecario* was first introduced in 1869.

institutions wishing to enter the mortgage market have to specify this in their by-laws, be authorised by the Ministry of Economic Affairs and be subject to specific supervision by the Bank of Spain. Holders of *cédulas hipotecarias* enjoy a privileged status and have a priority claim on the mortgage book of the issuer in the event of a bankruptcy. Only the State (if the institution owes taxes) or the issuer's employees (limited to 30 days' wages) have higher priority over the proceeds arising from liquidation in case of bankruptcy. Early amortisation is not possible. Mortgage valuation is subject to conservative valuation rules (70% loan-to-value ratio) and mortgage certificates can be issued only up to 90% of an individual issuer's eligible mortgages ("overcollateralisation").²⁷

It is worth mentioning that *cédulas* are the most strongly collateralised of the four instruments considered, given that they are covered by the entire pool of assets of the issuer. The principle of matching maturities is not covered in Spanish law, which gives Spanish institutions some leeway for taking on interest rate risk arising from maturity transformation. Domestic *cédulas* are quoted on the Spanish fixed income market (AIAF), whereas the bigger international issues are also marketed outside Spain (Luxembourg, France). Currently, no *cédulas* qualify (in terms of issue size) to be quoted on EuroCredit MTS.

4.4 The Luxembourg *lettres de gage*

The legal framework for Luxembourg's Pfandbrief was created at the end of 1997 and is, in many respects, taken from the German Mortgage Act governing German Pfandbriefe, in particular for those elements that provide the high standards of bondholder protection typical of the German Pfandbrief. This high level of protection means that *lettres de gage* have the same privileges, namely they have a lower risk weighting required by the Solvency Directive, they are eligible for repo operations with the ECB, and they are not subject to certain limits on investments for institutional investors. However, there are some interesting differences compared to the German Pfandbrief law that have attracted the attention of issuers and investors alike. These differences enhance the flexibility of *lettres de gage* compared to Pfandbriefe, although they require some analysis of the potential implications for the overall risk of the instrument.²⁸ These differences are:

- (a) enhanced international diversification is provided for inasmuch as the underlying public loans can be from issuers in the OECD area, where 97% of public sector debt is rated AA or better (the collateral underlying the German Pfandbrief has to be located in the EEA or Switzerland);
- (b) issuers are allowed to use hedging instruments (eg derivatives) in the cover pool (a feature present also in the French law on *obligations foncières*, but not in the German Pfandbrief);
- (c) some additional safety clauses are included in *lettres de gage*; the trustee of the *lettres* must be specifically qualified (an auditor by profession) and there is a detailed regulation for the unlikely event of default, which foresees that in such a circumstance the cover pool is separated from that of the issuer and the administration taken over by the banking supervisory authority (CSSF - *Commission de Surveillance du Secteur Financier*), which implies that this authority in practice needs to closely monitor events relating to these products. Currently no *lettre de gage* qualifies (in terms of issue size) to be included for trading on EuroCredit MTS.

²⁷ If this limit is exceeded, the issuer must offset the exceeding amount either by depositing cash or sovereign bonds with the Bank of Spain, or redeem/repurchase mortgage certificates until the limit is met, or add new mortgages to the collateral pool. In practice, Spanish banks have issued *cédulas* for much smaller amounts than the value of the eligible loan portfolio (eg 30%). This ratio is currently around 30-40% in the case of big issuers of *cédulas*.

²⁸ Incidentally, the fact that *lettres de gage* appear to be more flexible than German Pfandbriefe may explain why the three existing Luxembourg Pfandbrief issuers are newly founded subsidiaries of German bank groups. Currently, there are three institutions permitted to issue the Luxembourg Pfandbrief: Eurohypo Lux (a subsidiary of Deutsche Bank), Erste Europäische Pfandbrief und Kommunalkreditbank (owned by Düsseldorf Hypothekenbank, Hypothekenbank in Essen and Schuppli Group) and the Pfandbrief Bank International (owned by a consortium of German banks, the biggest of which is HypoVereinsbank).

5. Conclusions

Launching the Pfandbrief as an international investment asset was an initiative led mainly by the German institutions, but recently legislation regulating Pfandbrief-style products has been adopted in many other European countries, also outside the European Union. After a period of sustained growth, when Jumbos were being issued at the rate of one per week, the Jumbo market appears set for a period of consolidation. National legislators are using this chance to upgrade their legal frameworks and allow a domestic market for covered bonds to develop.

Notwithstanding the progress made in individual countries, and the boost given to this asset class by the introduction of the single currency, this lack of uniformity between the different Pfandbrief-style products is still perceived as being a drawback: the international investor wishing to invest in Pfandbriefe has to comb through different laws and regulations that characterise separate European covered bond markets. So far there has not been any concerted action at the European level to create a common legislation specifically for covered bonds and in particular for Pfandbriefe. National laws are therefore expected to continue to prevail for some time to come.

Despite the disparities in the national legal frameworks and the fact that a further harmonisation of these regulations appears to be unlikely, this should not prevent a successful establishment of the Pfandbrief as an asset class in its own right, within and outside the European Union. In this respect, the application of Article 22(4) of the UCITS Directive, which sets out criteria for defining a common class of assets, may provide the basis for ensuring a minimum level of homogeneity for covered bonds.

Annex 1

Comparison of the main characteristics of Jumbo Pfandbrief products in the euro area

	Pfandbriefe	Obligations foncières	Cédulas hipotecarias	Lettres de gage
Authorised issuer	German mortgage banks, whose activity is limited by law, and Landesbanken.	French Sociétés de Crédit Foncier (SCFs) whose activity is limited by law.	Spanish banks.	Specially authorised mortgage banks, for the purpose of issuing mortgage bonds or public sector bonds (lettres de gages hypothécaires ou publiques).
Supervisory body	Bundesaufsichtsamt für das Kreditwesen (BAKred)	Commission Bancaire (COB)	Banco de España (BdE)	Commission de Surveillance du Secteur Financier (CSSF)
Direct supervision	An independent trustee is proposed by the mortgage bank and approved by the BAKred. The trustee must ensure that the prescribed cover for Pfandbriefe exists at all times. Landesbanken are not obliged to have a trustee.	At the individual SCF level, a specific controller and substitute are appointed to monitor compliance and report to the COB. Controllers are drawn from the list of auditors and must be approved by the COB.	BdE, which has the power of performing inspections and has the responsibility of ensuring that assets exist and have been valued in accordance with regulations by recognised surveyors. BdE may prevent issuance of cédulas if guidelines have been breached.	Independent supervisory body appointed by the CSSF.
Collateral type	Preferential claim on separate pools of mortgage loans (mortgage Pfandbriefe) and public sector loans (public sector Pfandbriefe).	Preferential claim on a single pool of eligible mortgages and public sector loans on the SCF's books.	Preferential claim on first ranking commercial and residential mortgages on the issuer's books.	Preferential claim on mortgage or public loans, and mortgage or public sector bonds.
Collateral location	EU, EEA and Switzerland. Banks can also make real estate loans to other European states that are OECD members, but these loans cannot be included in the cover pool.	EEA and French overseas territories.	Spain. All mortgages must be registered with the Spanish register of property.	OECD, theoretically no limit.
Valuation guidelines	Valuation cannot exceed the prudently assessed market value. Only permanent characteristics of the property and yield are taken into account. The mortgage bank must publish instructions on valuation that must be approved by the BAKred. Land and uncompleted buildings may not exceed 10% of total cover mortgages or double the own capital.	Conservative evaluation which excludes any element of speculation. Based on the lasting long-term characteristics of the building, the local market conditions, current use and other possible uses. Valuation carried out by an expert who is not accountable to the lending department.	Property valuation to be carried out in compliance with Ministry of Finance and Economics criteria by a registered surveyor who may, or may not be, an employee of the issuer.	Independent prudent professional valuation of the real estate required, made by a special supervisor; active valuation based on real estate characteristics and revenues generated.

Comparison of the main characteristics of Jumbo Pfandbrief products in the euro area (cont)

	Pfandbriefe	Obligations foncières	Cédulas hipotecarias	Lettres de gage
Loan to value limit	60% for all mortgage loans.	60% or 80% if all loans in the SCF are residential mortgages. SCFs may lend up to 100% if the loan is covered by a qualifying guarantee, or up to 80% if the portion above 60% is financed by funds not covered by the statutory lien.	70% for commercial mortgages, 80% for residential mortgages.	60% for real estate sector, 100% for public sector.
Asset coverage of secured bonds	100% legal minimum, although in practice higher levels of cover are maintained to ensure AAA ratings.	Obligations foncières and other liabilities benefiting from the statutory lien must be at least covered 100% by eligible assets.	Cédulas cannot be issued for amounts greater than 90% of the unamortised amount of all the qualifying loans.	No overcollateralisation required by law but rating agencies will require it.
Mark-to-market collateral	No formal requirements to revalue property.	All building valuations must be reassessed at least annually, either individually or statistically.	No formal requirement to revalue property. Lenders may force borrowers to provide additional collateral for mortgages where the mortgage property has fallen in value by more than 20%. Maximum loan-to-value requirements do not have to be adhered to on an ongoing basis.	
Matching principle	The total value of mortgage bonds in circulation must at all times be covered at their nominal value by mortgages of at least the same amount and with at least the same interest earned. The currency of the mortgage bonds can only diverge from currency of cover assets if exchange risk is precluded by appropriate measures.	SCFs must have a risk management system capable of managing asset/liability risks. Regulatory disclosure must be sent to the specific controller, who must notify management and the COB of insufficient asset/liability matching.	No requirements to match maturities. Size (at 90% limits) is matched.	Interest and maturity matching are required under the Law of 3 April 1993, amended by the laws of 21 November 1997 and 8 May 2000. Use of hedging products allowed to reach this objective.
Prepayment of underlying loans	The right to prepay the mortgage may be contractually suspended for up to 10 years.	Mortgage prepayments are possible and no penalty is due if the borrower moves house due to a change of location in professional activity.	There are no rules relating to prepayment of underlying loans.	No limit. The prepayment risk has to be covered by the use of derivative products.
Disclosure requirements	Mortgage banks must publish information on the number, type and location of mortgages; arrears and repossessions.	SCFs must publish asset quality information, prepayment data and information on interest rate sensitivity.	Reporting of eligible loan portfolio to BdE once a month.	

Comparison of the main characteristics of Jumbo Pfandbrief products in the euro area (cont)

	Pfandbriefe	Obligations foncières	Cédulas hipotecarias	Lettres de gage
Insolvency ranking	Pfandbrief holders rank ahead of all other creditors. In the event that cover assets are insufficient to repay Pfandbrief holders, they also have a claim against the non-cover assets of the bank.	Holders of OFs rank before all other SCF creditors.	Holders of cédulas are accorded the status of privileged creditors, ranking ahead of all other creditors with respect to all mortgage loans registered in favour of the issuer with only two exceptions: employee salaries up to the amount of twice 30 days' salary for the lowest paid employee, and the Spanish tax authority.	Holders of lettres de gage rank ahead of all other creditors. If the asset pool is not large enough, pari passu with other senior, unsecured creditors.
Bankruptcy remoteness	Since April 1988 the collateral pools have been accorded the status of "special assets" and would not be included in the insolvency of the related mortgage bank.	Insolvency of the owner of an SCF cannot be extended to the SCF. Insolvency of the manager of an SCF leads to immediate termination of the management contract.	Default on cédulas directly linked to default by issuing bank.	Default on lettres de gage linked to the issuer, but as soon as the mortgage bank defaults, the CSSF will make timely payments of the lettres de gage as long as there are sufficient funds in the collateral pool.
Prepayment in insolvency	Insolvency proceedings against a mortgage bank do not make Pfandbriefe due for payment. The BAKred may institute separate bankruptcy proceedings against the cover pools if required.	The judicial winding-up of an SCF does not make OFs due for payment.	In the event of issuer insolvency, cédulas would default. Because of the security provided to cédulas, the recovery rate should be higher than unsecured debt.	
Default history	No German mortgage bank has defaulted since the introduction of the German Mortgage Bank Act in 1900. There has never been a case of principal default over the entire 225 years of history of Pfandbriefe. However, nine mortgage banks became insolvent following the 1873-75 recession, resulting in several instances of interest default.	OFs existed before Law 99-532 of 25 June 1999 and were issued by Crédit Foncier de France and Crédit Foncier et Communal d'Alsace et de Lorraine under existing legislation dating back to 1852. There has been no default on OFs during this period.	Prior to 1981 issuance of cédulas centred on a single issuer: Banco Hipotecario, which monopolised Spanish mortgage lending from 1869-1981. There have been no defaults of cédulas during this period, or since then.	Very short history and few issues.
Liquidity factors	One of the largest European debt markets, more than 5,000 issues outstanding and a large number of market participants. The market is dominated by small structured deals aimed primarily at domestic investors. The Jumbo sector is much more liquid.	Liquidity for existing OFs has been somewhat mixed in the past. The new legal structure combined with a larger group of issuers is expected to improve liquidity.	Cédula issuers must contribute to the "Public Regulation Fund" operated by the BdE to ensure liquidity. Institutionally targetted cédulas are also exchange-traded. They are not directly comparable to the German Pfandbrief market due to the much smaller market size.	Few issues available. There are market-makers to ensure liquidity.

Comparison of the main characteristics of Jumbo Pfandbrief products in the euro area (cont)

	Pfandbriefe	Obligations foncières	Cédulas hipotecarias	Lettres de gage
Investment eligibility	Pfandbriefe are eligible Tier 1 collateral for ECB credit operations.	OFs are eligible Tier 1 collateral for ECB credit operations.	Cédulas are eligible Tier 1 collateral for ECB credit operations. In Spain they are eligible for investing the technical reserve of insurance companies, mutual funds, and the reserve funds of entities belonging to the Spanish social security system.	Lettres de gage are eligible Tier 1 collateral for ECB credit operations.
Risk weighting	Pfandbriefe are 20% risk-weighted for the Basel solvency ratio; 10% for the European solvency ratio in Germany, Belgium, Luxembourg, France, Italy and Spain; 20% in the United Kingdom.	OFs are 20% risk-weighted for the Basel solvency ratio; 10% for the European solvency ratio.	Under Basel rules, cédulas have a 20% risk weighting. Bank of Spain assigned a 10% for the European solvency ratio.	Under Basel rules, lettres de gage have a 20% risk weighting. 10% in Germany, Belgium, Luxembourg.

Sources: Morgan Stanley Dean Witter; Dexia Capital Markets.

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