

Refinancing of mortgage loans:
An international comparison

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1 Introduction

Real estate credits are by their very nature long-term credits. The institutions which grant such credits are thus dependent on long-term refinancing possibilities. One can regard the presence of a refinancing market for long-term credit capital as a prerequisite for the bare existence of a market for mortgage loans and thus for the possibility of financing real estate investments with outside capital. Hence the importance of the refinancing market for the property markets and the national economy can hardly be underestimated.

For the organisation of the refinancing market two fundamental alternatives are at hand. The continental-European mortgage bond system („Pfandbriefsystem“) places special credit institutions as risk-taking emitters of mortgage bonds and offerers of mortgage loans between capital supply and demand for capital. The anglo-saxon securitization system in contrast forms a direct connection between the two market sides.

2 Classic refinancing with the „Pfandbrief“

2.1 Functions and importance of German type mortgage banks (Hypothekenbanken)

Hypothekenbanken operate the long-term „**real loan business**“ (Realkreditgeschäft). Real loans are secured by pledging of properties. They are considered as particularly fail safe. The second column of the business of the Hypothekenbanken is the **state credit**. The assumption of a small loss risk of the credits applies here also.

The mortgage banks are the most important bank group among the **specialised bank groups** in Germany. Different from universal banks these special banks are limited in their business activity. According to the German mortgage bank legislation the business activity of the Hypothekenbanken is limited on the land credit (mortgage credits for residential and commercial real estate) and the state credit (community loan business). A special competence and a

strong market position are associated with the specialist bank principle due to specialisation advantages of the Hypothekenbanken.

The Hypothekenbanken **refinance** their lendings by the emission of a special type of mortgage bond (Pfandbriefe) at the capital market. They transform the absorbed capital into long-term investment loans for the real estate industry and the state.

The Pfandbrief market is a very important segment of the German and the international capital market. From the total circulation of fixed income securities at the German bond market in the second quarter 2002 (2.769 billion Euros) 40 per cent (1.108 billion Euros) were mortgage bonds, thereof 670 billion Euros emissions of the Hypothekenbanken. The Pfandbrief market is the largest segment of the German bond market. In the non-government segment it is also the largest bond market segment in the world outside of the USA.

2.2 Hypothekenbanken as brokers between capital supply and capital demand

From the perspective of an investor the direct granting of real loan could be an investment alternative to the mortgage bond. But the advantages of the engagement of a mortgage bank as an intermediary are quite obvious.

First the investor does not have to make the **due diligence assessment of the loan**. On top of that the Pfandbrief different from an individual loan is a **fungible** security, i.e. the investor can liquidize his investment at any time at the secondary market. Furthermore mortgage banks exert the function of **lot size transformation**. Even small amounts of capital can be bundled and made available as mortgage loans. Also the task of **risk transformation** performed by the Hypothekenbanken is of great importance for the investors. The diversified credit portfolio of the Hypothekenbank is much more adequate to the risk preferences of most investors than the individual credit, which always bears the risk of a partial loss of the granted capital.

2.3 Measures safeguarding the Pfandbrief creditor

Pfandbriefe are fixed rate bonds (usually) for the refinancing of loans pledged by real property (Hypothekendarlehen) or for the refinancing of loans to public authorities and institutions (Öffentliche Pfandbriefe).

The designation „Pfandbrief“ points to the fact that apart from the promise to pay of the emitting institution a pledge („Pfand“) as an additional security guarantees the security of their grants to the creditors. A Pfandbrief is a „covered bond“ („gedeckte Schuldverschreibung“).

The Kreditwesengesetz (KWG) and the Hypothekendarlehenbankengesetz (HBG) contain an abundance of regulations which all have the same purpose, i.e. the safeguarding of the claims of the Pfandbrief creditors. First to be mentioned is the restriction of the business activity of the emitters (due to the specialist bank principle) on a few low-risk main, secondary and auxiliary businesses.

A decisive role for the reduction of the risk exposition of the mortgage banks plays the „coverage principle“ („Deckungsprinzip“).

The emission of Pfandbriefe may only take place if a covering is guaranteed by mortgage or state loans of the same amount and with at least the same interest yield (fig. 2.1). The substitute collateral values (liquid assets such as cash and bank deposits) may not count for more than 10 per cent of the outstanding Pfandbrief bond volume.

The covering values get registered into the „cover register“ („Deckungsregister“). Thus the preferential right of the Pfandbrief creditors in case of bankruptcy of the issuer to be satisfied out of the covering values is formally secured. According to § 29 HBG the cover registers are examined in regular intervals by a trustee nominated by the state banking supervision. In the case of insolvency the claims of the Pfandbrief creditors on the values registered in the cover register have absolute priority over all other creditors' claims (§ 34a HBG). The other creditors cannot execute into the cover register.

A	balance	P
regular collateral values		Hypothekendarlehen
mortgage loans		
state loans		Öffentliche Pfandbriefe
substitute collateral values (< 10%)		
other assets		equity capital
		other refinancing funds

Fig. 2.1 Stylized balance sheet of a Hypothekendarlehenbank

Also the requirement of „congruent coverage“ („Refinanzierungskongruenz“) serves as a safety device in favour of the Pfandbrief creditors. It aims at minimizing the risk of interest rate changes and hence the probability of insolvency of a Hypothekendarlehenbank. An accordance of the term structure on the asset and on the liabilities side of the balance sheet is required here (no term transformation). Interest or foreign exchange rate risks which can result from different terms and currencies of covering values and mortgage bonds need to be eliminated by appropriate measures (e.g. swap businesses).

A further safety device of the Pfandbrief creditors is the **quality of the covering values**. Apart from the real security the regulations on the loan to value ratio and the lending value are relevant here. The HBG demands that the lending value of the real property (realisation value) does not exceed the „market value“ („Verkaufswert“) determined by careful inspection (value at freehand sale). The market value is a **sustainable** value which includes neither inflationary price increases nor temporary price peaks at the property markets nor expected future increases in the value of the property. This value is only determined by the lasting characteristics (sustainable investment cost value) of the property and the lasting yield it may bear to every owner under conditions of duly management (sustainable discounted cash flow value). The careful determination of the market value is not at least an instrument to prevent speculative bubbles at the property markets.

The lending value shouldn't be mixed up with the **loan to value ratio**. This ratio (expressed as percentage of the lending value) represents an upper limit for the individual lending volume. This upper limit is fixed at 60 per cent of the market value of the pawned property (§ 11 HBG). Thus the risk of a degradation of the economical conditions on the property market during the termtime of the loan is taken into account. Above financings of the mortgage banks need to be refinanced by other means in particular by the emission of uncovered bonds.

Another component of the security system working in favour of the Pfandbrief creditors is the higher equity capital requirement for Hypothekenbanken. Also the circulation of the Pfandbriefe is limited to the liable equity capital times 60 (circulating limit - Umlaufgrenze).

2.4 Internationalisation of the Pfandbrief

The former segmentation of the Pfandbrief market into many small emissions with different formats did not correspond to the liquidity expectations and transparency needs of internationally oriented investors. As a reaction a new liquid market segment was created with the so called „**Jumbo-Pfandbrief**“.

Jumbo-Pfandbriefe are solely fixed interest finally due papers with annual interest payment („**straight bond format**“). They have an emission volume of at least 500 million Euros and must fulfill certain **minimum standards**. They are emitted by a **consortium** of emitting banks. The consortium commits itself to the acquisition and marketing of the Jumbo bonds. Moreover the members of the consortium provide for the liquidity and fungibility of the emission. Liquidity-impairing measures and the reduction of the circulating emission volume by premature repayments are inadmissible.

2.5 Amendment of the mortgage bank law

With the amendment of the mortgage bank legislation (HBG) which entered into force July 1st 2002 important improvements of the legal basis for the business activity of the German mortgage banks were implemented. The amendment considers the intensified re-

quirements of the global competition at the financial and property markets. Particularly the arising of products similar to the Pfandbrief in the European neighbour countries is a challenge for the Hypothekenbanken. The most important changes of the HBG can be summarised as follows:

- expansion of the range of business within and outside Europe,
- acceptance of derivatives as covering values,
- permission to operate additional businesses (e.g. administration and brokerage of mortgage and state loans, real estate agent activity, valuations and location analyses).

2.6 Opening up of the Pfandbrief market?

The draft of the law for the re-organisation of the mortgage bond law envisages an omission of the emission monopoly of the special banks and the public credit institutions. The emission monopoly of the specialist banks shall be replaced by certain minimum requirements for the protection of the Pfandbrief. In the future the Pfandbrief business is to be opened up to every credit institution which fullfills the minimum requirements and possesses a license of the Federal Bureau for the Supervision of Financial Services (Bafin).

It is intended that this permission can only be assigned if a core capital of 25 million Euros is proven, if the bank operates the Pfandbrief business regularly and lastingly and if it proves that it has suitable instruments for the control, monitoring and check of the risks incorporated in the covering masses. Well proven instruments from the existing mortgage bank legislation are to be taken over (f.e. loan to value ratio, trustee principle and regular covering mass examinations by the Bafin administration).

2.7 Comparison of the Romanian and the German mortgage bank regulation

	Germany	Romania
Entered into force	1.1.1900	9.12.1999
Specialist bank principle	yes	unclear
Term protected by law	Yes (Pfandbrief)	Unclear (obligatiunile ipotecare)
Refinancable through mortgage bonds	Mortgage and public sector loans	Mortgage loans
Cover register	yes	No
Legally anchored preferential right in bankruptcy	yes	No
Valuation regulations	yes	No
(relative) lending limit for funding through mortgage bonds	60 % of mortgage lending value	60 % of value of portfolio
Absolute lending limit	Basically no (100 % of market value)	No
Limit for lending beyond the cover (volume above the relative lending limit)	20 %	Unlimited
trustee	yes	no
Substitute collateral	yes	no
Limit for substitute collateral	10 %	no
Public-sector bond	Yes	no
Special ranking of cover mortgages	No	no
Specialist public supervision	Yes	no
Art. 22 (4) UCITS directive fulfilled	yes	no

Table 2.1 Comparison of Mortgage Bank and „Pfandbrief“ laws in Romania with German legislation (24.9.2002)
Quelle: Verband Deutscher Hypothekenbanken

3 Alternative refinancing by securitization of claims

Mortgage backed securities (MBS) are covered bonds which securitize real estate credits. With such collateralized bonds the ability to repay the debt within the termtime results from the (regular and prognosticable) stream of principal and interest generated by the underlying assets and not from the development of the ability to pay of the emitter of the MBS. Compared with the established German Pfandbrief system substantial differences are to be ascertained regarding the distribution of risks and the regulation intensity.

In the U.S. approximately two thirds of all private mortgages are refinanced by the emission of MBS today. This is a fundamental change of the very function of banks. They have developed from risk takers to mere mediators between capital supply and demand for capital (financial intermediaries). The U.S. mortgage market experiences an indirect subsidization by means of the federally promoted institutes Freddie Mae and Fannie Mae which purchase mortgage debts on a large scale and became the most important emitters of MBS.

In Europe the MBS refinancing instrument was used from the 80's on with increasing frequency. The securitizations originating from the real estate sector constitute the largest part of this market in Europe with approximately 60 per cent of the total market. Until today however the Pfandbrief system remained prevailing at least in continental Europe. Some regard it as a kind of European „Gegenmodell“ to the anglo-saxon securitization system.

3.1 The basic structure of the securitization of claims

In the act of securitizing credit claims are consolidated and offered as securities to the public or privately. The claims are brought into a „**special purpose vehicle**“ (or SPV) which gets owner of the loans and emits the securities. The bonds are emitted in different tranches according to the requirements of the different groups of investors.

The initiative for the emission of MBS is with a real estate financing institution (**originator**, e.g. bank, insurance, building society). The originator needs to have a favourable credit rating and a widespread portfolio of homogeneous mortgage credits. The originator defines a bundle of mortgage credits for the purpose of outsourcing the whole bundle from his balance. For the seller of the claims this has two substantial advantages. On the one hand the capital bound in the credits is liquidized with the consequence of a release of regulatory equity capital. On the other hand the risks contained in the outsourced credits are passed on to the capital market with the consequence of an improved risk allocation on the originators' side (risk transfer).

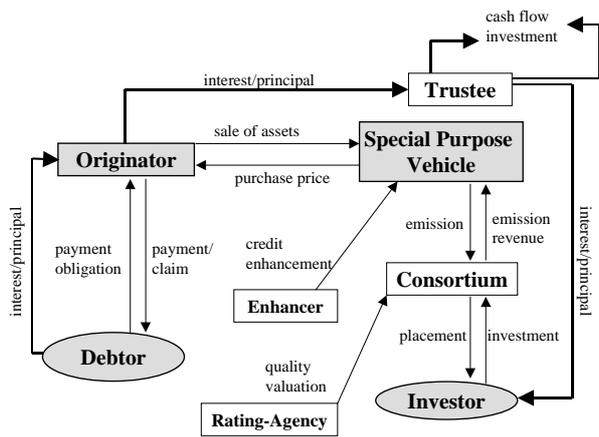


fig. 3.1 basic structure of an MBS-transaction
source: Leta Bolli: "Asset Securitization", presentation at Seminar Finanzinter-mediation, Zürich University, summer semester 2002

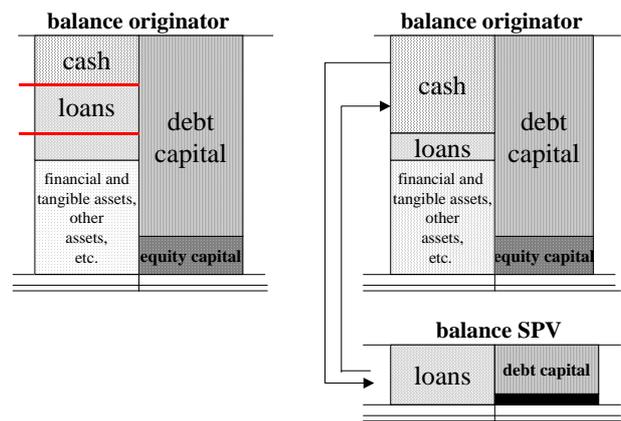


fig. 3.2 consequences of an MBS-transaction on the balance sheet
source: Leta Bolli: "Asset Securitization", presentation at Seminar Finanzinter-mediation, Zürich University, summer semester 2002

3.2 The role of the rating agency

The seller of the claims is subject to numerous restrictions in designing the covering credit portfolio. A first-class rating of a considerable rating agency is indispensable for the successful marketing of a mortgage backed securities emission. The chosen rating agency examines whether the issuing price of the bond corresponds to the present value of the expected repayments from the credit portfolio underlying the emission. In principle the emitter will set the issuing price low enough to receive a first-class rating for the outsourced credit bundle. It is thus easily possible to receive an outstanding emission rating for a portfolio with a larger number of doubtful credits if only the issuing price is set low enough. Apart from the expected value of the repayment stream also its statistical deviation is of importance for the discount on the nominal value of the credit bundle. The better the repayment process is prognosticable the higher the issue price can be set – ceteris paribus. The rating can be improved by credit enhancements.

3.3 Costs und treatment in the balance sheet

The costs of such securitization transactions are not to be neglected. Apart from the costs for the preparation and structuring of the transaction other non-recurring costs f.e. for emission and listing of the bonds incur. Current costs arise for trustees, guarantees, rating agencies and the bank consortium charged with the placement of the mortgage bond emission.

The German accounting laws permit an outsourcing of claims from the balance of the seller only if certain preconditions are given. The law requires the transition of all credit risks („clean break“). The sales contract may not contain a buy back payment, a failure guarantee or a purchase price adjustment. Because of these high requirements German sellers mostly resort to **synthetic securitization** procedures using credit derivatives.

3.4 The investors' perspective

From the point of view of an investor the following arguments make an investment in MBS particularly attractive:

- attractive rate of return,
- estimation of the failure risk by rating procedures,
- access to a diversified portfolio,
- fungibility because of securitization (but secondary markets still underdeveloped).

MBS so far are usually only offered to institutional investors (credit institutions, insurances, pension and investment funds) but not to private investors. There are however already offers in the form of specialised investment funds for private customers available.

3.5 Comparison with the German Pfandbrief system

The act of credit securitization using mortgage backed securities differs substantially from the refinancing of

mortgage credits with a Pfandbrief emission. We have to deal with **two competing refinancing instruments**. One can interpret the increasing spread of the anglo-saxon system in Germany as a form of **supervision arbitrage** (f.e. limits for large credits, mortgage bank legislation). With the subsequent or parallel securitization of mortgage loans a real estate financing institution can improve its competitive position (e.g. vis à vis to the Hypothekenbanken) without to be afraid of appropriate regulatory consequences. These developments can impair the stability of the financial system.

In the course of a real estate financing by a Hypothekenbank bonds „covered“ by real estate loans are emitted, too. The entire credit risk is however with the mortgage bank (apart from the case of emitter bankruptcy). The whole portfolio of mortgage credits of the emitter serves the mortgage bond creditors as so-called „Deckungsmasse“ for their claims whereas in an MBS transaction a bundle of credits is cut out from a larger credit portfolio according to the interests of the seller and only this specific bundle serves as a collateral for the outstanding bonds.

The ones who invest in MBS need to rely upon the rating for their risk estimation. On the other hand we have the widely recognised high quality standard of the Pfandbrief ensured by numerous regulatory safeguard instruments. The intransparent market for MBS emissions is lacking such legal safeguard instruments. Control is exercised by the capital markets and the rating agencies and not by laws and the state supervision of the banks. In the end the rating agencies define the requirements on the credit bundles to be outsourced.

All in all the mortgage backed securities are more flexible and closer to the market requirements. But as far as the failure risk is concerned they do not reach the high standard of the Pfandbrief. The German mortgage bank legislation ensures a high quality standard of the individual covering credit. Mortgage backed securities on the other hand are also appropriate for the securitization of credits which do not full-fill such high standards.

Apart from the smoothly working secondary markets the best arguments for the Pfandbrief system are its homogeneity and its transparency. The habituation of

the investors to it saves information costs to a degree not to be underestimated. MBS on the other hand are complex and need explanation. The typical private „Kleinanleger“ usually is overcharged with such a monitoring-intensive investment.

For the future a division of labour between the two refinancing systems is imaginable. The segment of the private investors would remain a reservation of the Pfandbrief while the MBS could be placed primarily among institutional investors.