

CHAPTER THREE

THE EUROPEAN CMBS MARKET

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INTRODUCTION

The European CMBS market has experienced impressive growth in recent years and has matured into a diverse and robust arena for innovative and sophisticated financing of real estate assets and receivables. It is one of the most dynamic and fastest growing sectors in the capital markets. European CMBS issuance levels reached €46bn in 2005, compared with only €14bn in 2004, and are forecast to reach €55bn+ in 2006. It has become both an integral part of the European commercial real estate debt market (directly influencing lending terms across Europe) and the European structured finance market (accounting for 14 per cent of the total funded structured finance market in 2005).

The issuers in the market are diverse and varied and include sovereigns, private and public property companies, corporate owner occupiers (such as retailers and telecom companies) and investment and commercial banks. The reasons for utilising CMBS are equally diverse and include regulatory capital arbitrage, risk exposure management, cost-efficient financing, conduit funding arbitrage, off-balance sheet financing and diversifying an investor base. In addition, funding structures reflect the innovation and diversity of players, with term bond funding up to 35 years (particularly in the UK), revolving commercial paper funding; part-bond, part-commercial paper structures; synthetic structures; part-cash, part-synthetic; and with the huge growth of the B note market we are now seeing an abundance of part-

¹ The views and opinions contained in this article are those of the author and do not reflect in any way the views of Merrill Lynch.

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bond and part-bank/fund driven lending. In recent times, issuance has been dominated by conduit programmes established by investment banks and other multi-borrower transactions, single borrower issuances by large property companies and sovereign transactions relating to government disposal of real estate (in particular Italy).

This chapter will begin with a brief history of the emergence of CMBS in Europe and will then look at various aspects of European CMBS including, key participants, why CMBS is used, CMBS spreads, CMBS issuance, ratings transition, transaction types, transaction motivation, property types and valuations, legal issues peculiar to the European market and the impact of Basel II.²

ORIGINS AND EARLY DEVELOPMENT OF THE EUROPEAN CMBS MARKET

The European CMBS market developed for very different reasons to the US CMBS market, where it developed and grew as a result of distress in the commercial real estate market, financial regulatory changes and retrenchment of traditional lenders, as a result of which, borrowers and financial institutions turned to the capital markets to raise funds by issuing CMBS. Whilst the initial impetus for CMBS transactions in the US came from the Resolution Trust Corporation (“RTC”)³ (the federal agency responsible for clearing up the savings and loans (thrift) institutions), this was complemented very quickly by private sector issuance especially as the commercial real estate market improved.

Whilst the very first real estate capital market transactions in Europe were developed at a time of distress in the UK market, such as the £150m Kings Cross House PLC (1989), the number of transactions were very limited and short-lived as the immense liquidity and relationship-based lending practices, which epitomise the real estate lending arena in Europe, came back to the forefront. Consequently, many of the deals that followed tended to be opportunistic and, with the development of all new markets, were focused on the easier jurisdictions and collateral types and typically with only one rating agency involved. In the early 1990s, a number of agented single-borrower deals, secured against Central London offices, and credit tenant leases were completed, including the £120m 135 Bishopsgate Funding (1991) and the £42.3m Grays Inn Road transaction (1992). This pattern was fol-

² Basel Committee on Banking Supervision: *International Convergence of Capital Measurement and Capital Standards: A Revised Framework*. June 2004, available at <http://www.bis.org/publ/bcbs107.htm>.

³ See Ch.1.

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lowed by subsequent deals such as the £40m Solar transaction (1995) secured against a Central London office building let to the UK Government.

The initial multi-borrower deals were driven by balance sheet/capital management, risk transfer and funding requirements. The very first multi-borrower CMBS was completed in the UK in 1993 by UCBH, in a securitisation of a nursing home loan portfolio in the £183m Hog 1 transaction (1993), and similar deals were completed by Citibank under the Sonar programme in 1994 and 1995. Bristol & West Building Society completed the £145.5m UK CLIPS CMBS in 1994 and the United Bank of Kuwait commenced the popular Acres programme in 1995, completing three multi-borrower CMBS deals including a separate sell-down of the pooled residuals (£109m Acres 1 (1995), £121.3m Acres 2 (1996), and £118m Acres 3 (1997)).

The late 1990s saw a number of landmark deals which were to shape the European CMBS market for many years to come with innovative structuring and increased deal sizes. These included the £555m Canary Wharf Finance securitisation in 1997, the largest transaction to have been completed to date, which tapped into both the floating rate market and a unique feature of the UK market, the long dated fixed rate sterling bond market. The £343.2m CIT transaction in 1997, also secured on offices with credit tenants, was the first single-borrower deal to have exposure to refinancing risk as well as being funded partly in the commercial paper market (senior tranches), with the junior tranches being structured for placement in the banking market (not dissimilar to the AB structures very common today). In 1996 and 1997, the first non-UK CMBS transactions were completed, with several transactions being completed in France including the Ffr1.5bn Belenus for UIC-Sofal and the Ffr2bn La Defense transaction, which secured office buildings in Paris. The first European conduit programme was established by Morgan Stanley in 1998, with the pioneering £168.9m ELOC 1 transaction. Anglo Irish Bank Corporation, shortly thereafter, completed the first deal in its Monument CMBS programme of highly granular commercial mortgages in the UK, which was driven by capital management requirements. 1999 witnessed the first jumbo CMBS transaction in the form of the £1.5bn Broadgate securitisation, a trophy asset securitisation with a highly innovative security structure driven by compliance with restrictions in the borrower's existing corporate bonds/debentures. In 1999 one of the first synthetic CMBS transactions was completed by Deutsche Hypothekenbank in relation a pool of second lien commercial rate mortgages (€267m Deutsche Hypothekenbank, Hannover).

Examples of some key European CMBS transactions since 2000 include the following:

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- Europa 1 (2000)—one of the first multi-jurisdictional synthetic CMBS in Europe.
- Global Hotel 1 (2001)—first synthetic CMBS secured on global hotel portfolio.
- Pan European Industrial Properties 1 (2001)—one of the first multi-jurisdictional cash CMBS in Europe (UK, Holland and France).
- SCIP Series—€2.3bn SCIP 1 (2001) sovereign securitisation by Italian Treasury backed by commercial and residential property followed by €6.6bn SCIP 2 (2002) (refinanced April 05) being one of the largest CMBS transactions to date.
- Imser Securitisation S.r.l. (2002)—first performing Italian CMBS.
- Eiger Trust (2003)—first Swiss CMBS.
- ELOC 17 (2003)—first multi-jurisdictional conduit CMBS.
- Business Mortgage Finance 1 (2004)—first non-conforming small commercial loan CMBS in Europe.
- Self Storage Securitisation B.V. (2004)—first self storage CMBS in Europe.
- Land Securities (2005)—quasi corporate/CMBS flexible financing structure.
- Taurus 1 CMBS (2005)—first co-pooled conduit CMBS in Europe.
- Fleet Street Finance 1 (2005)—first securitisation of predominantly operating real estate assets to apply CMBS analysis in order to achieve superior rating levels.
- Taurus 2 CMBS (2005)—first multi-borrower conduit CMBS in Italy.
- Real Estate Capital 3 (Foundation) (2005)—one of the most flexible CMBS transactions to date including securitisation of blind pool of assets.
- Forest Finance (2005)—first CMBS in Austria.
- Opera Finance (CMH) (2006)—first CMBS in Ireland.

KEY PARTICIPANTS IN EUROPEAN CMBS

Issuers

The issuers are varied and encompass most entities that own real estate assets or some form of direct or indirect real estate risk including corporates (publicly listed and private real estate companies, publicly listed and private

KEY PARTICIPANTS IN EUROPEAN CMBS

companies that own real estate (such as retailers and telecom companies), investment banks, commercial banks, mortgage banks, sovereigns, funds and individuals.

Motives

- All: cost efficient financing, diversification of funding sources, access to a deep investor base, capacity for much larger deal sizes, enhanced market profile, innovative and flexible structuring techniques, strategic funding tool.
- Financial institutions: also includes regulatory arbitrage, off balance sheet financing, risk exposure management, improving return on equity, conduit funding arbitrage.
- Sovereigns: also includes improving sovereign balance sheets and fiscal credibility.
- Corporates/Funds: also includes access to longer funding maturities (particularly in the UK), maintain existing banking relationships through B notes.

Rating agencies⁴

The dominant three rating agencies in Europe, Fitch Ratings (acquired Duff & Phelps in 2000), Moody's Investor Service ("Moody's") and Standard & Poor's, are all active in rating CMBS transactions in Europe. The analytical approach followed by these agencies is varied in relation to modelling methodology, qualitative analysis and legal and structural analysis and it is not unusual to see split ratings or certain parts of the capital structure where not all rating agencies on a deal participate. In the early years of the CMBS market, it was not uncommon for rating analysts to focus on a number of asset classes, however, with the huge growth of the structured finance market and the increased specialisation and sophistication of the market, each have product teams that specialise in CMBS and, in some cases, country teams (rather than London based) that specialise in CMBS only in their respective jurisdiction. Moody's and Standard & Poor's globally have the largest market share in the structured finance market and benefit from many investors such as CP conduits, SIVs and CDOs requiring both a Moody's and Standard & Poor's rating. The notching requirements, in many cases, make it difficult for such investors to invest in bonds without a Moody's and Standard & Poor's rating. Fitch Ratings has sought to differentiate itself through increased focus on customer service and investor education. The estimated market share by volume of these three agencies on European CMBS in recent years has been:

⁴ For details of the ratings process within Standard & Poor's, see Ch. 4.

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- Fitch Ratings: 80–90 per cent.
- Moody's: 70–90 per cent.
- Standard & Poor's: 85–90 per cent.

In recent months, the Canadian-based Dominion Bond Rating Service has announced plans to enter the European CMBS market and is in the process of establishing a team in Europe.

Investors

The CMBS investor base is diverse and comprises numerous types of financial institutions including banks, building societies and fund managers, CP Conduits, SIVs, CDOs, insurance companies, pension funds, opportunistic/hedge funds, corporates and in the case of sub-investment grade debt even high net worth individuals.

The arguments for CMBS investment relative to other asset classes include:

- yield pick compared to consumer finance asset classes;
- the capital structure of deals is conservative—credit enhancement for AAA in the region of 25 to 30 per cent on many deals;
- many deals have exposure to investment grade tenants—which are a superior credit to B leverage loan CLOs; and
- portfolio granularity can be found in some deals—for example large shopping centres with a wide range of tenants, business finance deals with a large number of SME-like borrowers, and even portfolio office deals with a range of properties, tenants and re-letting options.

Many deals are pricing around the recently established benchmark levels because of:

- novelty—the first deals from a certain country or property sector;
- supply levels; and
- analytical complexity for investors to get comfortable with deals.

Servicers⁵

The servicer administers the loan or loans secured on the underlying real estate. The administration of the underlying real estate is typically undertaken by managing agents on behalf of the underlying borrower. This administration includes payment collections, maintaining systems and undertaking data management, maintaining a dialogue with borrowers and dealing with their day-to-day administration requirements (including col-

⁵ For details of servicing CMBS, see Ch. 10.

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lateral changes), checking covenant compliance, insurance renewals, providing payment instructions to the paying agent and other parties to the securitisation and investor reporting and, in some instances, cash management duties on the securitisation. The servicers duties also include controlling the workout of defaulted loans, although in recent years more structured servicing practices have been adopted in Europe which follow the more mature US market in the form of primary servicing and special servicing. The primary servicer performs the general servicing duties, however, on a loan default or a pre-defined trigger breach, a special servicer takes over negotiations with the borrower to remedy the breach or liquidate the assets. A key point of debate in the European market is the level and ranking of special servicing fees, which are considered high compared to European standards, although these are mainly designed to encourage the maximisation of recoveries and are indirectly borne by the most junior debt holder in the securitisation structure, who also, in many cases, has the ability to change the appointment of the special servicer.

Many issuers in the CMBS market, which are financial institutions, will undertake their own servicing and special servicing. The key third party primary servicers in the market are Capmark Services Ireland, Hatfield Philips International and Crown Mortgages Management. Recently the in-house servicing teams of certain banks, such as Morgan Stanley (Morgan Stanley Mortgage Servicing), have started to offer their services to third parties. The key third party special servicers are Capmark Services UK and Hatfield Philips International/LNR Partners.

CMBS SPREADS

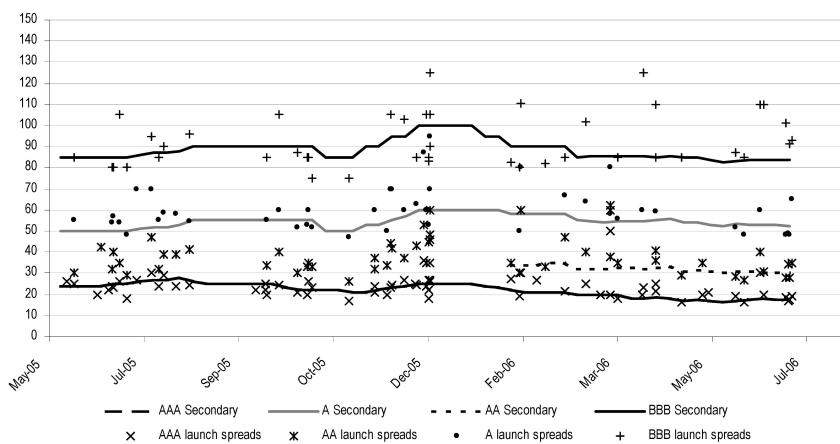


Figure 1: CMBS Spreads 2005–06.

Source: Merrill Lynch; Primary spreads reflect weighted-average where more than one similar-rated tranches from a transaction.

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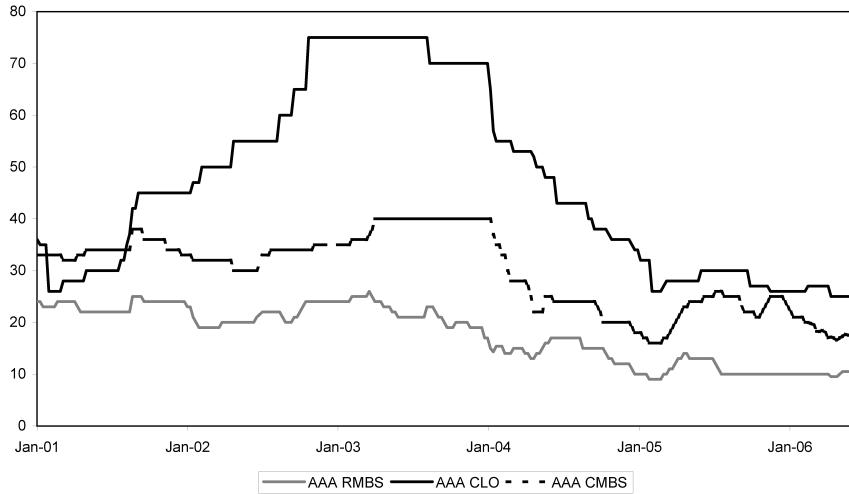


Figure 2: Triple-A Spreads.

Source: Merrill Lynch.

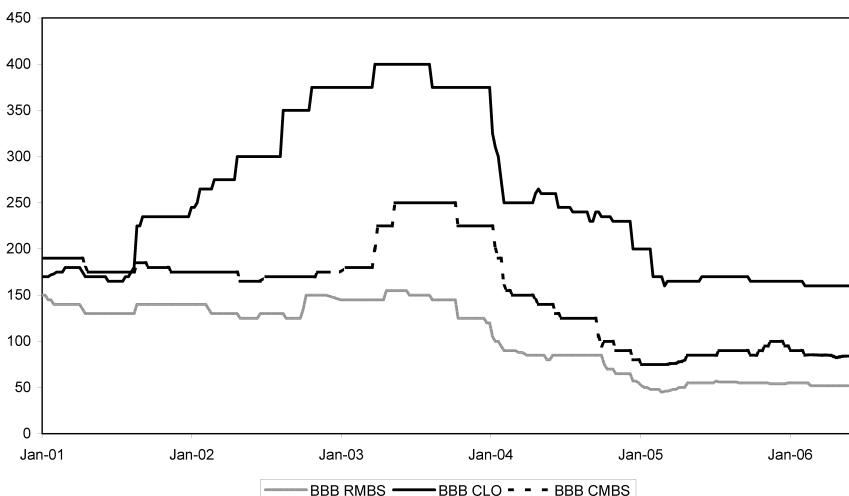


Figure 3: Triple-B Spreads.

Source: Merrill Lynch.

One of the key factors for the rapid growth in the European CMBS market in recent years has been the spread tightening, as shown in Figures 1, 2 and 3, above, witnessed across the whole structured finance market as a result of general trends in the credit market but also increased appetite from structured finance investors. Although the recent spread tightening began in late 2003/early 2004, due to the lead time that CMBS transactions take the surge

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in volume of issuance came through in 2005. Notwithstanding this significant reduction in funding costs through CMBS, the benchmark pricing levels we are now witnessing are not dissimilar to the pricing levels pre-1998 although supply and the sophistication of the market in those years was more limited.

CMBS ISSUANCE

Securitisation techniques are often used to package disparate exposures together, allowing for diversification. However, the range of commercial real estate securitisations available is even wider than for traditional MBS or ABS: from single-loan or single-borrower transactions to multiple-loan portfolio transactions. Such transaction diversity requires different analytical approaches and investor considerations. Nevertheless, one can always begin with an assessment of debt-service coverage, tenant quality, lease types, and property valuation.

Unlike other types of securitised collateral, European CMBS are not homogeneous asset pools that are automatically suited to statistical analysis. In fact, CMBS transactions in Europe come in a variety of shapes and sizes, and often different property types and geographic locales are packaged together to enhance diversification benefits for investors.

Issuance by issuer type

Figure 4, below, shows issuance by issuer type with the two largest components being single borrower issuances and conduit and multi-borrower

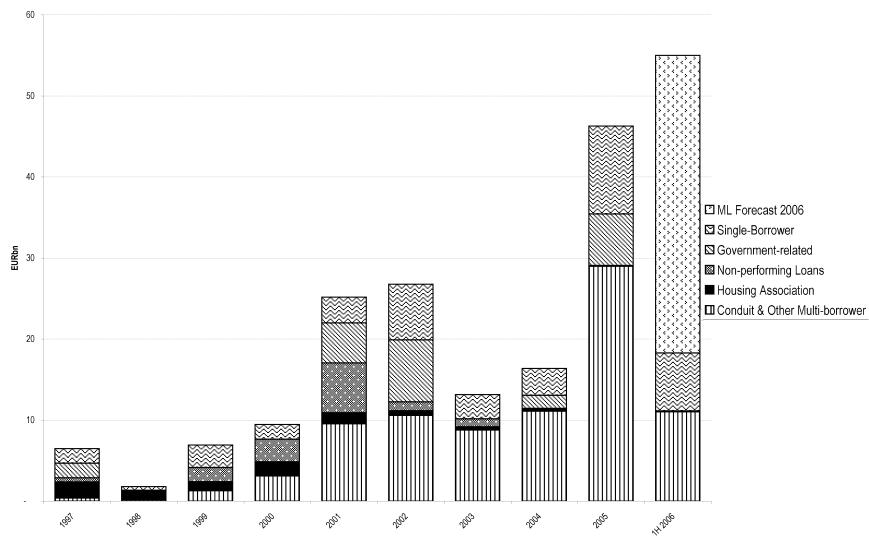


Figure 4: CMBS issuance by issuer type (EURbn).

Source: Merrill Lynch.

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issuance. The largest component of the market has tended to be the single borrower deals, although in recent years we have seen a significant increase from conduit issuers and sovereigns such as the State of Italy. In Europe, however, conduit terminology has not always followed the principal and multi-borrower nature of the conduit market in the US and many issuers such as Eurohypo, RBS and NM Rothschild have branded single borrower agented deals under their respective conduit branding. These agented “conduit” transactions have tended generally to be less profitable than more traditional “principal” conduit transactions. If one takes into account this branding approach then single borrower deals continue to form the largest component of the CMBS market in Europe.

Issuance by country

As Figure 5, below, shows the source of collateral for CMBS transactions has traditionally been dominated by the UK, which has the most developed CRE investment market, a very creditor friendly legal regime, and is where structuring techniques were adopted early on as the securitisation markets developed. In 2005, partly due to the expansion of conduit lending outside the UK and the lack of activity of domestic German real estate lenders, Germany has emerged as a major source of loans for conduit lenders whose traditional international customer base have been aggressively acquiring assets in Germany. In addition, Italy has also produced some purely private sector CMBS transactions, sovereign deals and more recently conduit deals. CMBS transactions have recently been completed in Austria and Ireland and the growth of and demand for multi-jurisdictional transactions will

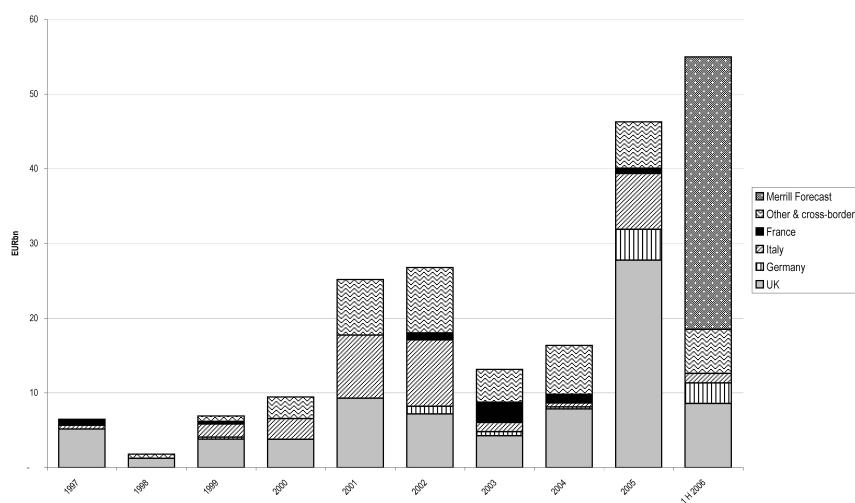


Figure 5: CMBS issuance by country (EURbn).

Source: Merrill Lynch.

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ensure that issuance increasingly is derived from a broad range of European jurisdictions. Central and Eastern Europe remain difficult jurisdictions as sources of collateral for CMBS mainly due to legal impediments.

Issuance by property type

Offices have been the most popular source of asset class for CMBS deals which is not surprising bearing in mind its dominance of the commercial real estate asset base. There have been a significant numbers of deals monetising retail assets in all its forms from large regional shopping centres and secondary shopping centres to high street retail and retail warehouse parks. As can be seen in Figure 6, below, the market has witnessed a significant growth in non-traditional real estate asset classes such as hotels, hospitals, public houses, self-storage and nursing homes. Multi-family especially now out of Germany (traditionally from Sweden and France) has become a major source of collateral for CMBS deals in the last 18 months.

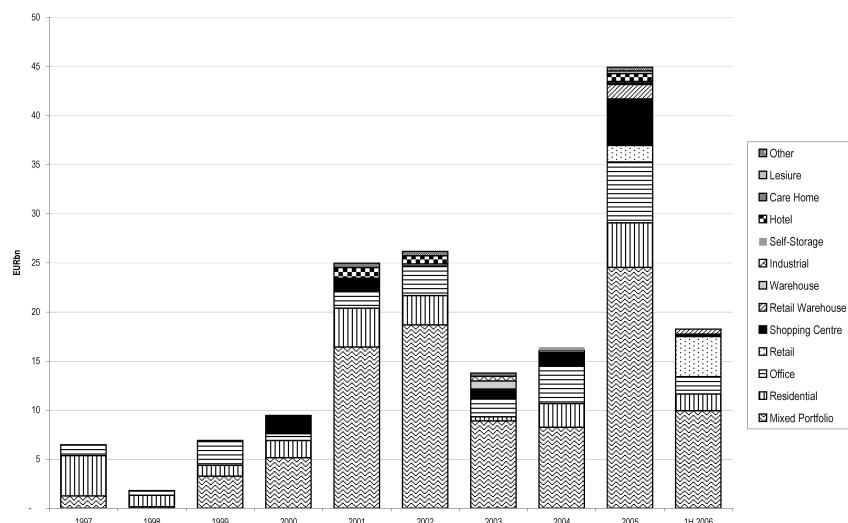


Figure 6: CMBS issuance by property type (EURbn).

Source: Merrill Lynch.

Issuance by currency

Figure 7, below, demonstrates that Sterling has dominated the European CMBS market reflecting the dominance of the UK as the source of collateral for most CMBS deals. However, with increased issuance from continental Europe and the depth and importance of the € investor base its dominance is expected to decline in coming years.

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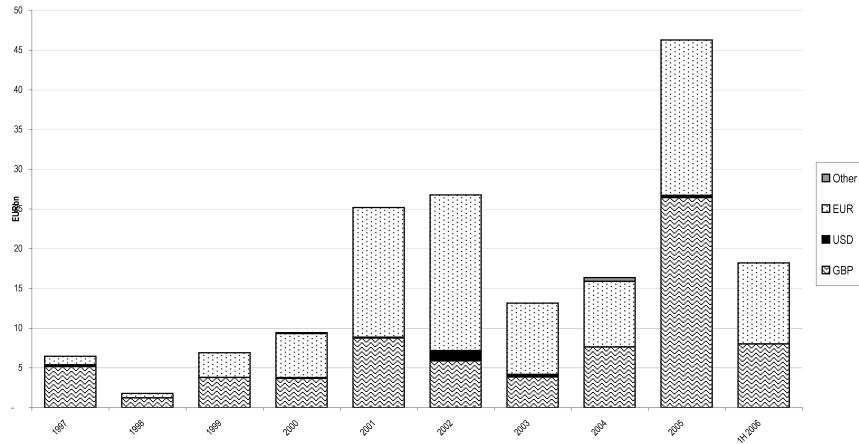


Figure 7: CMBS issuance by currency (EURbn).

Source: Merrill Lynch.

RATINGS TRANSITION

As European CMBS issuance has grown, the asset class can be looked at independently from other structured finance asset clauses. The case for the stability of the asset class is set out in recent rating agency transition data. Perhaps European CMBS is considered a more volatile asset class, more exposed to single-tenant or event risk. However, ratings transition studies place CMBS quite well relative to other structured finance asset classes.

Moody's calculated a downgrade rate for CMBS of 2.9 per cent in 2005, and average 3.6 per cent over the period from 1998 to 2005, see Figure 8, below. This compares to a 4.7 per cent rate for European Structured finance as a whole over the same seven-year period, with CDOs at 11.4 per cent and ABS at 1.6 per cent.

Looking at upgrades, CMBS averaged 4.9 per cent rate compared to 3.7 per cent for all structured finance. The upgrade rate in 2005 was 12.2 per cent—largely driven by high prepayment. Calculating a downgrade to upgrade ratio, CMBS come out at 0.73 per cent, similar to the 0.64 per cent for ABS, but well below the 2.71 per cent for CDOs. Compared with US CMBS, European CMBS also comes out well. Weighting ratings changed by notches, Moody's calculated rating volatility for European CMBS at 11.8 per cent, but 28.4 per cent for US CMBS. To put that in context European RMBS had a rating volatility of 9.1 per cent and European CDOs of 39.7 per cent.

RATINGS TRANSITION

	Downgrade Rate				Upgrade Rate			
	2005	2004	1998–05	1998–05 (US)	2005	2004	1998–05	1998–05 (US)
Overall SF	2.0%	4.0%	4.7%	4.4%	7.3%	1.8%	3.7%	3.8%
ABS	0.7%	1.8%	1.6%	5.4%	2.9%	2.4%	2.5%	1.9%
CDOs	3.8%	7.5%	11.4%	9.9%	8.1%	1.9%	4.2%	0.8%
CMBS	2.9%	4.6%	3.6%	3.6%	12.2%	3.6%	4.9%	8.8%
RMBS	0.3%	0.7%	0.4%	1.0%	8.0%	0.8%	3.9%	5.2%
Global SF	1.9%	5.0%	4.3%	n/a	6.2%	4.4%	3.9%	n/a
Global Corporate	8.3%	8.1%	14.3%	n/a	13.8%	13.3%	9.5%	n/a

* common to Europe/US.

Figure 8: Moody's European structured finance rating transitions, 1988–2005.

Source: Moody's.

Standard & Poor's ratings show a similar picture. Of 430 CMBS ratings, in 2005 the downgrade transition rate was 2.3 per cent compared to 0.3 per cent for RMBS and 3.9 per cent for CDOs. The upgrade rate was 6.5 per cent compared to 6.3 per cent for RMBS and 3.4 per cent for CDOs. The downgrade to upgrade ratio is again low for CMBS, given upgrades balance out the downgrades.

A further source of comfort for CMBS investors can be had from Fitch Ratings reporting that of the CMBS transactions rated by Fitch Ratings, 100 per cent of all investment grade tranches in 2005 maintained their rating or moved to a higher category with just one downgrade of a tranche at speculative level.

Perhaps relative to RMBS, CMBS is more volatile and does not always benefit so much from the structural de-levering seen in RMBS. However, this is against very benign economic circumstances for the consumer and high residential mortgage refinancing and prepayment, which may not always be the case. A selection of ratings change in 2006 can be seen in Figure 9, below.

Relative to CDOs, the same level of downgrade activity is not seen. CDOs seem to suffer from credit events with major names, which then affect a wide number of deals. CMBS have little of this cross-deal exposure and, in that way, offer a diversification opportunity. One point to note is that Standard & Poor's recognised that only one downgrade in 2005 was related to a problem with a corporate tenant—perhaps indicating that concern over tenant risk is exaggerated.

High loan prepayment rates in the CRE market translate to high prepayment activity in CMBS bonds. Over the period from 2004 to 2005, this

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Deal	Issue Date	Agency	Class	New Rating	Previous Rating	Portfolio Repaid
Coronis (ELoC No. 8)	Nov 01	Standard & Poor's Fitch Ratings	D	AAA	A +	75%
			C	AAA	A	
			D	AA -	A -	
			F	CCC +	B	
Nereus (ELoC No.20)	Aug 04	Moody's	D	A1	Baa1	53%
Whiter Tower 2004-1	Mar 04	Standard & Poor's	C	AA	A +	50%
Real Estate Capital No.2	May 04	Standard & Poor's	B	AAA	AA	71%
			C	AAA	A	
Victoria Funding	Oct 05	Standard & Poor's	B	AAA	AA	61%
			C	AAA	A	

Source: Rating Agencies.

Figure 9: Selected CMBS ratings changes January–February 2006.

has had a beneficial effect on ratings transition, as many transactions have been upgraded as sequential structures de-lever on receipt of prepayment principal. This strongly positive effect may recede, either as prepayment activity slows as more recent deals have been originated at tight loan margins, and as some recent deals have been structured with less conservative modified pro-rata payment structures. As a result, future ratings transition tables may reveal lower upgrade rates, although downgrade performance should not be significantly affected.

The vast majority of upgrades have been due to prepayments in sequential pay structures and by improved ratings of corporates in credit-linked deals. Downgrades have predominantly been due to declines in ratings of corporates in credit linked deals or ratings assigned to supporting financial institution debt collateral on partly funded synthetic structures. Whilst there have been some notable downgrades for other reasons in the European CMBS market, such as the HOTELOC PLC transaction (loan default) and on the Coronis (ELoC No.8) PLC (loan default) transaction, to-date no investors in European CMBS have suffered a loss due to credit reasons although interest may not have always been met on the most junior bonds predominantly due to available fund cap type issues (e.g. Heritage (Mortgage Securities PLC)). Based on recent Standard & Poor's reports, however, it appears that a loss is increasingly likely on the Coronis (ELoC No.8) transaction.

MAJOR TRANSACTION TYPES

In creating European property securitisations, there are three major types of transactions employed, each of which require a somewhat different analysis:

MAJOR TRANSACTION TYPES

- portfolio transactions;
- property transactions; and
- single-property transactions.

With each type of transaction, a different risk is contemplated, and each transaction type may include one or more property types.

Portfolio transactions

Whilst it is difficult to clearly categorise, portfolio transactions generally refer to multi-borrower, multi-property diversified loan pools with 30+ loans. Multi-borrower diversified loan portfolios (UK balance sheet, German and Italian transactions to-date) best employ a similar analysis to that of US conduit transactions—primarily an actuarial analysis.

Property transactions

Property transactions generally refer to multi-borrower loan pools with less than 15–20 loans (in many cases less than 10) with a potentially wide or narrow range of properties. These transactions are often classified as “conduit” transactions. Although as mentioned above many European conduit transactions are not principal transactions but are agented transactions branded as conduits where the underlying borrower gets the direct benefit of the bond margins.

European conduits, despite their moniker, in many ways, do not resemble the US-style CMBS conduits, which are more akin to the portfolio-type transactions, above. European conduits warrant instead a large-loan, or fundamental, analysis. These large-loan transactions may be further broken down into two sub-groups, based upon whom the cash flows of the loan and, hence, the notes rely:

- those containing properties with a diversified tenant base; and
- those with a few tenants.

The former group requires predominately a property analysis, whereas the latter requires both a property and a tenant analysis.

Multi-borrower pools with between 20 and 50 loans require a hybrid approach, both an examination of the large and/or riskier loans, as well as scenario analysis to determine portfolio impact of loan delinquencies and defaults. Tenant transactions generally refer to sale-leaseback, single-borrower single-property loans and single-borrower multi-property loans with long tenancies.

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Single-property transactions

Single-property transactions resemble traditional securitisations even less, and are really more of an investment in a particular property, particular tenant or group of tenants and precise property market (or business district). Although risk is tranches, the normal benefits of property diversification seen in most securitisations are not present. These transactions do, however, vary considerably if the property in question is an office building, retail establishment, industrial warehouse or hotel property, each of which has a different cycle, expenses and tenant mix.

Finally, due to an emergent trend of European corporations and governments (particularly on the Continent) shifting from owner-occupants to tenants, sale-leaseback CMBS have become increasingly common. Sale-leasebacks are effectively secured bonds of the property tenant—again, very different from other CMBS transactions.

TRANSACTION MOTIVATION

Not only do the risk profiles differ among the three exposure types, but the motivation behind the transactions and often the ongoing servicer commitment also vary. Transaction motivation is differentiated, by originator, among:

- Conduits—these are programmes operated by investment banks and more recently commercial banks, which originate loans to investors or companies holding commercial real estate. Loans are structured for securitisation, but may vary widely in terms of structure and underlying collateral. Loans may also be acquired from, or originated in partnership with other lenders. In many cases the loan is bifurcated and only the senior tranche is securitised with the junior tranche (typically known as the B Note) being sold into the banking or specialist fund investor market.⁶
- Commercial Banks (balance sheet lenders)—diversified multi-borrower portfolios generally represent part of the commercial property book of a financial institution seeking to transfer risk from its balance sheet to the capital markets.
- Developers/property companies—these often employ large-loan “property exposure” CMBS in order to achieve lower financing costs than in the traditional bank lending market.

⁶ See Ch.8 for more detail.

TRANSACTION MOTIVATION

- Corporates and Governments—these often become the sole and long-term tenants of properties within a “tenant-type” CMBS transaction. In these cases, such institutions have sought to divest of non-core assets, restructure the balance sheet, or have desired a source of long-term financing.

Conduits

In Europe the term conduit is loosely applied to a variety of “brand name” transactions and originators. Compared with programmes in the US, European conduits vary widely in terms of transaction scale and standardisation. Prior to 2003, most conduit issuance came from Morgan Stanley’s ELoC programme. In 2004, nine names were counted in the market. Over the 18 months to June 2006, 49 transactions were counted (from conduit programmes or branded issuers) with a total value of €30bn. Only 10 programmes have issued more than twice (see Figure 10, below), and 18 transactions have come from the leading four.

Arranger	Programme	# Deals
Eurohypotheken	Opera	7
CSFB	Titan	6
Deutsche Bank	DECO	6
Barclays Capital	Eclipse	5
ABN Amro	Talisman	3
Lehman Brothers	Windermere	3
Merrill Lynch	Taurus	3
Morgan Stanley	ELoC	3
Royal Bank of Scotland	Epic	3
Societe Generale	White Tower	3

Figure 10: Conduit programmes issuing more than twice.

Profitability amongst conduit programmes vary based on different priorities which as well as revenue generation include profile and league table status and defensive positioning to retain clients.

One of the benefits of the expansion of conduits should be better ability to price risk in CMBS transactions. To achieve this, transactions should offer a more homogenous exposure to property markets and to mitigate risks appropriately—something which has not always been available in Europe to date. With the development of the European conduit market, there is expected to be improvement and innovation in these areas.

Currently, European CMBS conduits do not consistently offer the same level of diversification and standardisation as US structures. Starting with

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size, average US conduit deal size in 2005 was around \$1.8bn; in Europe average deal size is lower although rising, €668m in 2005 compared with €467m in 2004. Granularity is also often a problem: while US investors commonly seek uniform loan size of around €50 to 100m, many European deals may contain one or two very large loans or be backed by a single borrower. Diversification may also be limited in European transactions to one country, property type or industry. On a positive note, some transactions have offered exposure to several countries, and loans backed by multiple tenants do increase diversification.

Turning to transaction structure, conduits should offer a variety of means to eliminate unwanted risks and create a more standardised product for the investor. Critical issues are payment priority between tranches (particularly for prepayments), interest rate hedging,⁷ liquidity support and limiting interest payment to available funds. Again European transactions have varied widely in their approach to these risks.

CORE PROPERTY TYPES

Commercial property is generally divided into four major types: office, retail, industrial and hotel. Although tenant quality, property management and location impact all sectors, each property type is also influenced by a range of distinctly different factors that necessitate a more nuanced analysis and differentiation among the property types and the bonds they support through securitisation.

CMBS transactions are backed by one or more properties, representing one or more types of commercial property. The market broadly characterises these property types into the same four types listed above (and multi-family, in Germany and the US). Although, overall, issues such as economic factors, location/accessibility and supply and demand affect all types of properties and their performance as an investment, a number of issues are property-type specific.

Office

Office properties are generally located in a central business district of a medium or large city, or in suburban areas. The looser the planning regime and the more dependent an area is upon service industries, the more cyclical the market is likely to be. Office properties are susceptible to planning regime restrictions, in part due to lengthy construction periods. Each major

⁷ For further details, see Ch. 7.

CORE PROPERTY TYPES

European property market has very different office supply and demand dynamics.

Office properties require significant capital expenditure and improvements to avoid obsolescence when attempting to re-lease. Depending on the state of obsolescence, or lack thereof, office properties are generally classified as Class A, Class B or Class C:

- Class A properties are generally less than 15-years-old, have up-to-date amenities, more than 10,000 square meters of leaseable area, and are located in a prime area.
- Class B properties are older, well-constructed and managed, but have not been renovated recently.
- Class C properties are generally smaller, and often functionally obsolescent.

The average property in a diverse multi-property “portfolio” CMBS transaction is Class B or C, whereas the average property in a large-loan or single-property CMBS transaction is Class A or B.

The key considerations when investing in an office property include:

- proximity to service industry businesses;
- employment trends in the service sector (such as financial and insurance);
- competing properties or business districts;
- structure and flexibility of design;
- tenant quality and leases, and
- management and service track record.

Retail

Retail properties include regional malls, strip centres and free-standing stores. Outside of major cities, retail properties rely on automobile traffic to allow customers access to the property. Hence, proximity to one or more major thoroughfares is among the primary credit concerns of an investor. For large shopping malls, a good location may also be determined based upon the size and quality of the residential base surrounding the property, or “catchment”. Quality is typically assessed based upon household income levels and property values of the catchment.

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In a transaction backed by a single-property retail loan, the property must dominate its location, and opportunities for new competition should be mitigated by planning restrictions and/or a limited amount of nearby developable land. In retail properties, turnover, occupancy costs per square meter and “zone A” rents (rents in the prime trading space of a store) are the chief indicators of a property’s performance relative to its peers.

Management also plays an important role. While in the UK and Germany, retail shopping centres are owned and managed by a single entity, other jurisdictions may have more than one owning entity. In France, it has been common to engage multiple parties to develop a large retail shopping centre. This kind of arrangement, although suitable for capital raising, can result in a weakened management structure as consensus must be obtained for any refit expenses. In France, a few centres are overdue for refurbishment, as a result of the inability of the multiple owners to agree.

The key considerations when investing in a retail property include:

- accessibility and proximity to residential developments and major roads;
- outlook for retail sales growth;
- planning restrictions and ownership structure;
- area population growth, density and disposable income;
- tenant mix, including presence and quality of anchor tenants;
- parking availability; and
- management and servicer track record.

Industrial

Industrial properties are generally single-story buildings located in either a city warehouse district or suburban area. Industrial properties include storage and distribution warehouses, R&D facilities, light manufacturing (or “light industrial”), and “flex space”—buildings that tend to be smaller than warehouses, with lower ceilings, optional loading docks and more attractive facades making them flexible for use as a warehouse, office, or even a retail centre. Flex space properties can exhibit characteristics resembling office properties, and likewise, the associated risks.

Due to the less rigorous design requirements and larger potential range of desirable land on which to build, industrial properties demonstrate the shortest construction times of the major property types. Due to this, industrial properties are generally built into a market for which demand doesn’t differ significantly from that under which it was originally envisaged.

CORE PROPERTY TYPES

Industrial buildings are generally built to specification for one to five tenants. This has the impact of minimising speculative development, but also limits the alternative use potential for a given property. Light industrial properties are, however, less customised and have the advantage of appealing to a broad tenant mix. Nevertheless, the credit quality of light industrial tenants is generally weaker than that of a warehouse property, and hence, more susceptible to a downturn in the area economy.

Key considerations when investing in an industrial property include:

- access to transport (rail, road and air);
- tenant quality and lease term;
- proximity to labour sources;
- column spacing, floor thickness, ceiling heights, and general flexibility (or lack thereof, e.g. custom fit);
- area employers, proximity to suppliers; and
- employment trends in the manufacturing sector.

Hotel

Hotel properties differ significantly from other commercial property types as they are subject to a high degree of operating leverage, or fixed costs. In addition, a large portion of hotel occupants change every day, making hotel occupancy heavily dependent on tourist and business travel, and the ability of the management to react quickly to seasonal and cyclical volatility. Hotels are, hence, far more susceptible to the ups and downs of the regional, national and, in large cities, international consumer and business cycles. That said, regional hotel cycles are often more muted than their city counterparts. As hotel properties must “re-lease” nightly, they are strongly correlated to tourism and the business economy.

Key considerations when investing in a hotel property include:

- franchise strength, market penetration;
- economic growth;
- seasonality;
- source of demand; and
- of crucial importance, management.

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Operating costs

On the most basic level, the costs to operate and maintain each type of property differ, see Figure 11, below. Hotel properties, for example, exhibit the highest “operating leverage” or expense-to-income ratios, and hence, are the most volatile type of property investment. Not only do hotel properties have high fixed costs, but also hotel management must effectively re-lease the property on a daily basis.

Property Type	Range
Office	40–55%
Retail	20–40%
Industrial	20–35%
Hotel	65–80%

Figure 11: Operating expense ratios for European commercial property.¹

¹ Operating Expenses ÷ (Gross Income—Vacancy and Collection Allowances).

Source: Moody's Investor Service, Merrill Lynch.

Industrial properties have the lowest expense ratios, but may require greater management for secondary properties, for which lease terms are often shorter in term, requiring more frequent re-leasing. The low expense ratios of industrial properties are a result of tenant improvements that are often only necessary on a much smaller proportion of the leaseable area than that which a modern office building requires. As a result of the relative expense bases as well as the nature of planning and property development, industrial and retail properties exhibit less performance volatility than the other two major property types.

PROPERTY VALUATION

The key factor to determining the quality of valuation is market liquidity. Liquidity is imperative when determining comparison values and appropriate capitalisation rates for properties similar to those within a selected portfolio. Liquidity may be assessed by the frequency of commercial properties changing hands within a given jurisdiction. This ranges broadly across Europe, from London and Paris, with the most liquid commercial property markets, to Italy and Scandinavia, with the least liquid markets. Although less liquid than Paris and London, the key German markets, including Berlin and Frankfurt, exhibit a fair degree of transaction evidence, as does Amsterdam and, increasingly, Spain. Professional organisations provide for consistent valuation methodology in the UK, Ireland, the Netherlands and Germany.

PROPERTY VALUATION

Some European countries offer greater impartiality (and frequency) in the appraisal process than others, see Figure 12, below. Most Continental appraisers use initial yields and recent prices of similar properties to value a property. The UK, Ireland, the Netherlands, and Germany have national professional organisations of which a valuer must be a member. On the other end of the spectrum lies Italy, where the appraisal process is far more subjective and national guidelines are not present. Spain and France fall somewhere in the middle.

In Spain, although valuation companies are independent, they lack a professional association to ensure uniform practices. In the absence of a professional association, valuers may market themselves based upon relatively aggressive valuations.

Country	Responsibility for Appraisal
UK	Valued by surveyors who are members of the Royal Institute of Chartered Surveyors
Ireland	Independent valuers from Irish Association of Valuers
Germany	Federal Office for Supervision of Credit Sector verifies appraiser's expertise
France	Appraisal non-standard, varies by region
Italy	Surveyors may be in-house, pre-selected, or selected by borrower
Netherlands	Dutch Association of Estate Agents (NVM) and lenders determine foreclosure value
Spain	Several large independent valuation companies
Sweden	Independent valuation companies, discounted cash flow driven

Figure 12: Appraisal varies by country.

Source: Merrill Lynch.

These discrepancies in valuation methodologies are of particular import when analysing Continental bank portfolio transactions, often containing loans from more than one European locale. For continental transactions where the originator of the commercial loan is a developer or a conduit, internationally recognised agents and their approved appraisers are used almost exclusively. These property appraisers typically use valuation techniques established by the UK Royal Institute of Chartered Surveyors, without regard for the location of the property.

SECONDARY TRADING

The vast majority of European CMBS investors tend to be “buy and hold” investors, although they typically all require the ability to trade CMBS positions should the need ever arise. Hence the liquidity of a transaction is a

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very important feature to many investors and is influenced by deal size, tranche sizes, number of rating agencies, actual ratings of tranches, underlying collateral and transaction structure, programme branding and, more importantly in recent years, the quality and availability of investor reporting and ongoing cashflows.

The vast majority of secondary trading is in AAA rated bonds, as these tend to be easier to analyse and with most mezzanine and junior investors being spread hungry or placing their investments into funds, SIVs or CDOs, they tend to be less likely to trade such positions. It is estimated that approximately €40m of European AAA CMBS trades on a weekly basis. CMBS tends to trade less than more generic asset classes, such as RMBS, as deal sizes tend to be smaller and there is a smaller investor base.

The secondary market is driven by four principal ABS brokers, as well as approximately 15 secondary ABS trading teams within the investment and commercial banks which most actively issue structured finance products. The latter are generally required to make a market in bonds they lead manage as well as trading products on their own account.

The ability to trade on the secondary market has improved significantly over recent years. Increasing pressure has been applied by investors on issuers for information flow as supply levels have increased dramatically and there has been a shift in bargaining power to the investor base. Other important developments have included the issuance of CMSA reporting standards, software programmes by the likes of Trepp and Bloomberg, providing the ability to model cashflows on an ongoing basis, increased sophistication of the investor base, use of third party servicers with enhanced systems capabilities (such as Capmark and Hatfield Philips), increase in investor reporting websites (such as CTSLink) and investor reporting grading by Fitch Ratings.

LEGAL ISSUES PECULIAR TO THE EUROPEAN MARKET

Understanding of the legal framework of one European commercial property market does not transfer directly to that of another, except perhaps in terms of the questions that an investor must ask. The answers will differ according to the structural differences in lease terms, tenant rights, planning regulations, valuation methodologies, and asset security and enforcement procedures. These also influence the timing and nature of commercial property cycles between countries and cities and consequently impact the appropriate timing of investments. Understanding these features allows

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investors to properly compare the plethora of European CMBS transactions, their underlying properties and to make adequate investment decisions.

In analysing CMBS, experience in one European country's property market does not transfer directly to that of another. The most fundamental tenet, that of fully understanding location desirability and competition, remains applicable regardless of the country in which a property resides. However, the next few major concerns of a credit investor may be influenced by the statutory environment in which the property resides, including:

- security of the rental stream;
- projected growth of rental flows (DSCR); and
- maintenance or improvement of property value (LTV).

Commercial implications of different legal systems must therefore be borne in mind in order to ensure that rental income flows, loan security and the structural protections of similar CMBS investments in different jurisdictions are comparable.

Lease terms vary

Lease terms range from landlord-friendly in the UK and Ireland to tenant-focused in the southern European countries. Commercial leases across Europe vary as to the balance of property rights and costs allocated between the tenant and landlord. Lease terms and tenant rights also vary between office or industrial tenants, and retail tenants, the latter of which may have greater rights in some jurisdictions. All leases other than UK and Irish leases are generally indexed to inflation, in the form of a proportion of the cost of living index in the respective country. In any case, the basic factors determining the strength of a lease include:

- term;
- rental rate;
- rent review;
- landlord obligations and tenant rights; and
- tenant quality.

Lease terms range from considerably landlord-friendly in the UK and Ireland, to more tenant-focused as one moves south across the Continent.

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Customary and statutory recovery procedures vary

Unlike the US, there are very few non-performing commercial property specialists in Europe. Those that do exist usually have an element of US ownership or management. As such, commercial mortgage originators, as in the residential market, are vertically integrated, managing all aspects of the property loans. As most bank originators felt the pain of the last commercial property recession, many are now well equipped to handle (or avoid) problem loans. In fact, as vacancies trend upwards in a number of jurisdictions, LTVs on new financings have declined, as lenders required additional equity in the properties. Originating lenders typically service both performing and non-performing loans.

Regardless, in most CMBS transactions, it is crucial that an investor understands the likely recovery value of the property upon loan default. Three key elements determine this value:

- procedure to obtain the property;
- time from property possession until sale; and
- costs associated with the property sale.

The right to obtain the property lies in the insolvency framework of the relevant jurisdiction. The extent and duration of the possession process

Country	Foreclosure Process
UK	Legal repossession process commences, with court order required, and lasts 12 months, on average. Eviction and sale in open market. No government mandated auction system.
Ireland	Period of beginning of arrears status to forced sale no longer than 18 months. Presentation of civil bill, notice of trial/court hearing, order for repossession, execution order, repossession by county sheriff.
Germany	one to two-year recovery period.
France	Foreclosure, 50 percent more than one year, 33 per cent more than two years. Creditor must have court decision to seize property.
Italy	Lengthy court process with a period of as long as eight years from time of default to recovery.
Netherlands	Foreclosure process usually within three months.
Spain	Regulated, new law reduces number of required auctions from three to one to speed up process. However, foreclosure or auction is rare, normal course of action renegotiation of rate or term of debt. Typically three years to foreclose.

Figure 13: Foreclosure periods vary by country.

Source: Merrill Lynch.

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varies by legal jurisdiction, ranging from a lengthy court-driven process in Italy (as much as several years in length), to creditor friendly foreclosure environments in the UK and the Netherlands, see Figure 13, above. Depending on the length of the foreclosure process, potential losses relating to accrued interest could be substantial. In jurisdictions where long foreclosure and recovery periods are possible, the maturity date on underlying loans should be several years earlier than those on the issued securities.

The costs of selling the possessed property depend on loan size and cost of carry, as well as legal fees, commissions, improvement expenses, and management fees. As an example, stamp tax payable upon property transfer in the event of a possession, differs by jurisdiction and ranges from 3 per cent of the property value in Sweden to 10 per cent in Italy.

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The main focus of this section is to:

- consider the relative change in capital required against assets pre- and post-BIS2 implementation for both originators and investors involved with commercial mortgage-backed securitisation; and
- consider the relative difference in capital required under BIS2 to hold commercial real estate (CRE) assets either on balance sheet or in a securitisation structure.

There are some issues not covered by this section, as there are more than a few grey areas concerning the implementation and interpretation of the new rules. This section does not address liquidity facilities, but focuses on the capital requirements for assets. On top of that, the new rules give rise to a range of possibilities as to how assets are held, and what capital will be required against them—at this stage only a suggestion as to some of the potential trends can be offered.

- Under BIS2, banks which use the internal ratings-based (IRB) approach and are able to perform portfolio analysis may hold significantly less capital compared to most CRE exposures, but particularly low-risk ones, than under BIS1 or under the BIS2 standardised approach. This may encourage IRB banks to increase lower-risk CRE lending and off-load higher-risk real estate assets.
- Under BIS2, under both IRB and standardised approaches, like-for-like, less capital may be required for the full CMBS capital structure than for holding the whole portfolio on balance sheet. This

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may incentivise banks with identical CRE loan portfolios to securitise the loans into a CMBS and trade all tranches to each other.

- For both IRB and standardised banks considering originating a CMBS transaction, the capital charge for retaining the first-loss piece may be significantly lower than the charge for retaining the whole CRE loan portfolio on balance sheet—particularly if the tranche can be rated BB or higher. This may further stimulate securitisation of CRE loans.
- The sharp “cliff” in capital charge between BBB and BB+ may encourage all banks to sell-off non-investment grade tranches to non-bank investors. Despite this, standardised banks have an advantage relative to IRB banks in holding BB/BB- tranches. Under the standardised approach itself, investor banks have an advantage relative to originator banks in holding BB tranches.
- Separate mezzanine or B note lending may attract lower capital requirements than BB-rated CMBS tranches. As a result CRE loan origination may change to facilitate full CMBS funding without any equity or tranche rated below BBB.

Capital requirements for originators and investors

BIS capital requirements apply to most banks worldwide and are implemented by national banking supervisory authorities. It is estimated that about 60 per cent of all structured finance issuance is held by bank investors, hence the importance of the BIS2 new regulatory capital guidelines for the securitisation market. The proportion of CMBS investors formed by banks may be similar, although this is difficult to estimate; with the rise of CDOs buying CMBS alongside institutional investors, the proportion may decline. On the origination side, bank lending remains a prime source of CRE finance and securitisation origination, and it is very likely to continue to do so. In the UK alone, bank CRE lending has risen to £130bn. Therefore, on both sides of the origination/investor equation BIS requirements have a large impact.

The capital a bank is required to hold against a particular loan is usually expressed as percentage risk weight (RW) of a fixed percentage (usually at 8 per cent, but it can be greater at the supervisory authority’s discretion) of the loan amount. Currently, under BIS1, commercial property loans attract a RW of 100 per cent in most countries—that means that for every \$100 of loan, $100 \text{ per cent} \times 8 \text{ per cent} \times \$100 = \$8$ must be funded by capital. Germany is a notable exception which generally applies a 50 per cent RW, i.e. $50 \text{ per cent} \times 8 \text{ per cent} \times \$100 = \$4$ of capital is required for \$100 of loan; the UK usually requires the full 100 per cent. Holding CMBS rated

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notes also attracts a 100 per cent RW; although holding non-investment grade junior tranche from a transaction, or a first-loss reserve, would require a dollar-for-dollar deduction from capital.

BIS2 rules will completely overhaul this simple regime, with the aim of setting a more credit-focussed system. In general, BIS2 will be implemented by banks in most European countries. However implementation in the US is limited, although it is expected that similar rules will be adopted for securitisation exposures. The US is planning to implement BIS2 rules to the top international UK banks, starting the transition period one year after the rest of the world, that is, as of January 1, 2008. This gives rise to the so-called “gap year”, during which non-US banks will be using BIS2 and the major international US banks will not. The implementation schedule started in January 2006, with banks performing parallel BIS1 and BIS2 calculations for their capital base. From 2007, depending on the type of BIS2 rules adopted, banks can benefit from a reduction in capital under BIS2, subject, broadly-speaking, to a floor set as a ratio of the BIS1 requirement, see Figure 14, below.

	From year-end 2005	From year-end 2006	From year-end 2007	From year-end 2008
Foundation IRB Approach	Parallel Calculation	95%	90%	80%
Advanced Approaches for credit and/ or operational risk	Parallel calculation or impact studies	Parallel calculation	90%	80%

Figure 14: Transition to BIS2.

Source: BIS.

Under BIS2, RWs for CRE loans and CMBS bonds will be calculated on a more graduated basis depending on the perceived credit risk of the asset. Credit risk is determined by referring to the rating agency credit ratings for the asset, a bank's own calculation based on its historical portfolio performance, or, if neither of the former is possible, a blanket assumption for the asset class. The treatment for securitisation bonds is only applied where the securitisation achieves “significant risk transfer”, which is difficult to define. If an originating bank retains a securitisation structure on the balance sheet it cannot benefit from the regulatory capital relief.

Banks have the option of two different methodologies for doing this depending on their level of sophistication, known as standardised and the

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IRB approaches. Banks must select which one to use and apply it to all assets of a certain sector, for example, CRE. The IRB methodology is then split into two options, foundation and advanced, which differ in the degree to which a bank is allowed to use its own data to determine the inputs in the regulatory capital calculation. Surveys carried out by the market suggest 80 per cent of European banks may become IRB banks. There is little clear information, but it is believed a similar proportion of those banks involved with CRE and CMBS may implement IRB.

The standardised approach uses a fixed RW of 100 per cent for CRE lending, and for investing in a securitisation structure sets a RW depending on the rating of the tranche. For holding securitisation tranches, a distinction is made between a bank as an originator of a transaction and as a third party investor in a transaction. The IRB approach for CRE lending requires a statistical analysis of the loan portfolio to form estimates for default probability (PD), loss given default (LGD), exposure at default (EAD), and effective maturity (M). These are then used as the basis of a calculation of the expected loss (EL), and unexpected loss (UL), of the portfolio. Capital is required to cover UL and is comparable to the capital determined by the $RW \times 8$ per cent, as under BIS1 or the BIS2 standardised approach. Foundation IRB banks are only expected to assess PD, their national supervisor will supply standard LGD and other factors. Advanced IRB banks will be able to estimate all the factors. Depending on the risk profile of the portfolio, capital required can vary widely—in Figure 15, below, column 7 sets out some estimates Fitch Ratings recently published based on historical performance data for portfolios backing CMBS. There is a further exception. Where an IRB bank is unable to produce the PD and other estimates for a loan, then, as a fall-back option, RWs for “specialised lending”, are used, see Figure 15, columns 3–5. Since many CRE portfolios may have limited performance history, for example, where banks move into new areas of property finance, the use of specialised lending RWs may be quite commonplace.

RWs depend on an assessment of the risk level of the loan, and whether the CRE is fairly standard, leased, income-producing real estate (IPRE); or high volatile real estate (HVRE) which includes more specialised lending, such as development or infrastructure, which may exhibit highly volatile losses. RWs for loans deemed strong or good range between 70 to 120 per cent; those for satisfactory and weak loans between 115 to 250 per cent. BIS 2 proposes a specific set of criteria to differentiate between IPRE and HVRE. Under this approach, IRB may require more capital under BIS2 for higher-risk CRE loans than under BIS1. This may encourage banks to either sell-off these loans, or securitise them depending on the size and rating of the junior/equity tranches retained.

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As indicated above, there are specific guidelines regarding the regulatory capital treatment of specialised lending and regarding securitisation under BIS2. For most real estate exposures, the distinction between specialised lending and securitisation is fairly straightforward. In some cases, however, that distinction is, at best, unclear. Typical examples include: securitisations of a single real estate exposure or senior/subordinated (AB) commercial real estate loans. Regulatory clarification is needed regarding the capital treatment in such situations and that may be left to national discretion, suggesting subjective decisions and potential divergence in treatment among national regulators. The IRB approach for investing in a securitisation structure, or for an originator retaining some tranches of a CMBS, sets RWs by referring to the bonds' external credit ratings. Unlike the standardised approach, the RBA does not distinguish between originator and investor banks, but does have a much more graduated set of RWs referring to ratings' notches, see Figure 15, columns 13–16. The RBA system also has a separate, lower set of RWs for the senior-most tranche in a transaction, see Figure 15, column 14. For transactions backed by a concentrated portfolio, where the "effective number of loans" (based on a specific calculation) is less than six, there is a more punitive set of RWs, see Figure 15, column 15. There is a definition for the effective number of loans in a portfolio, which is meant to address portfolios with a mix of granular and concentrated exposure. The resulting capital under the product of the RBA approach cannot be greater than the requirement for the same portfolio of loans under the IRB approach. In other words, a securitising bank cannot hold more capital after securitisation than before securitisation, although the capital held in the banking system as a whole may be more after securitisation.

This leaves the issue of how unrated securitised tranches would be treated. For these, under IRB, a supervisory formula (SF) may be used which calculates the capital requirement based on the IRB factors and tranche specifics, such as thickness, size, enhancement level and pool diversity. Figure 15, below, sets out the current BIS1 and future BIS2 capital requirements for holding unsecuritised CRE assets on balance sheet, and for holding securitisation tranches, either as an investor or originator. The table can be used to compare the RWs on-balance sheet portfolios and rated CMBS bonds attract. For comparison purposes, the Fitch Ratings estimates of capital required for UL for low-, medium- and high-risk CRE portfolios are also shown. These ratios are the first examples of what capital levels on-balance sheet CRE portfolios might be expected to attract. These have been used for the basis of the conclusions as to the relative impact of BIS2 on banks' decisions whether or not to securitise loans. With regard to RWs, the table sets out the RW required for: the whole loan on-balance sheet (BIS1 and BIS2 Standardised); the whole loan by portfolio risk level (IRB "specialised lending"); or by rating of a securitised tranche (Standardised and IRB RBA). The RW would then be multiplied by the standard 8 eight per

On-Balance Sheet Commercial Mortgage Loans										Securitisation Tranches					
BIS 1	BIS 2 Standardised	BIS 2 RW IRB Specialised Lending			IRB Unexpected Loss Estimate	BIS1	BIS 2 Standardised Approach			BIS2 IRB RBA Approach for rated Securitised Tranches			BIS2 IRB Approach for unrated Unrated Securitised Tranches		
Column 1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
RW Applied to all commercial mortgages	RW Applied to all commercial mortgages	Risk Category	RW for IPRE	RW for HVRE	Portfolio Risk Level	*Capital Level Required	Applied to all investment grade CMBS bond tranches	Rating of CMBS bond	RW for Originator Bank	RW for Investor Bank	Rating of RW for CMBS Senior Bond Tranche	Base RW for Non-Guaranteed Tranches	RW for CMBS Non-Guaranteed Tranches	**Supervisory Formula by Portfolio Risk Level	
100% for all CRE loans, or 50% if loan LTV is < 50% (or 60% of mortgage value), and losses less than 0.3% pa, and 0.5% for whole CRE pool	Strong BBB- or better	70%	95%	Low	4.57%	100%	AAA to AA-	20%	20%	AAA to AA-	7%	12%	20%	Low: 6.41%	
Satisfactory BB- or B+	Good BB+/BB	90%	120%	High	7.17%	Medium	A + to A -	50%	50%	A + to A -	8%	15%	25%	Medium: 8.70%	
Weak B to C		250%	250%	Default	0%		BBB+ to BBB-	100%	100%	BBB+ to BBB-	AA+	10%	18%	35%	
											A	12%	20%	35%	
											A-	20%	35%	35%	
											BBB+	35%	50%	50%	
											BBB-	60%	75%	75%	
											BBB+-	100%	100%	100%	
											BBB+-	250%	250%	250%	
											BB-	425%	425%	425%	
											BB-	650%	650%	650%	
											BB-	Deduction	Deduction	Deduction	
											BB-	Deduction	Deduction	Deduction	
											BB-	Deduction	Deduction	Deduction	
											BB-	Deduction	Deduction	Deduction	

* Capital Level Required under IRB Unexpected Loss Estimate is an example level calculated by Fitch Ratings for various CMBS portfolios in its report "Basel II: Bottom-Line Impact on Securitisation".

** Capital Level Required under Supervisory Formula is an example level calculated by Fitch Ratings, for the same portfolio as for the above, Unexpected Loss Estimate. Deductions from capital results in a dollar-for-dollar reduction of the bank's capital.

Figure 15: Comparative table for treatment of on-balance sheet CRE lending and securitisation tranches.

Source: BIS, Fitch Ratings, Merrill Lynch.

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cent capital ratio to determine per cent capital required against the exposure amount.

Conclusions as to the relative impact of BIS2 on originators and investors

Using this table, some assessments have been made of where treatment varies either pre- and post-BIS2, between on-balance sheet lending and securitisation, or where treatment varies between standardised and IRB banks post-BIS2.

- Under BIS2, compared with BIS1, both standardised and IRB banks gain a large reduction in capital in holding securitisation tranches rated A- and above. IRB banks also gain on tranches rated BBB and above. The effect of this may be for spreads on these tranches to tighten.
- Under BIS2, both approaches may require less capital for holding securitised tranches vs. holding CRE loans on balance sheet (less so for CRE loans below 50 per cent LTV). Although for IRB banks, the capital requirement for CRE loans on-balance sheet is dependent on the IRB calculation (unlike the 100 per cent RW required for standardised banks) it appears that this calculation is more conservative than the RBA approach for securitised tranches. The effect appears to be greatest for low-risk loans. Since an originator cannot retain the full capital structure of a CMBS and hold less capital than that for the portfolio on balance sheet, banks with similar portfolios may be incentivised to securitise and trade CMBS transactions.
- IRB banks have an advantage over standardised banks in holding all tranches rated BB+ and above, see Figure 15, columns 9–16.
- Similarly standardised banks have an advantage over IRB banks in holding BB and BB- tranches. This may have the effect of encouraging IRB banks to sell junior-most tranches in CMBS structures to standardised banks.
- Under the standardised approach, investor banks have an advantage over originator banks in holding BB-rated tranches, see Figure 15, columns 11–12. This may encourage standardised originating banks to sell/transfer the most junior-rated part of a CMBS capital structure to other standardised banks.
- Under the IRB approach, RBA also seems to require less capital against a securitisation structure, than the supervisory formula (SF) method for an unrated securitisation structure. Fitch Ratings' analysis, referred to above, shows SF is much more punitive than RBA for tranches which would be rated BBB and below, although less is

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required by SF at the A rating level. Overall, RBA and SF appear aligned for senior and junior tranches but vary widely for middle tranches.

Assessing the capital requirement across a CMBS capital structure

Figure 16, below, sets out the capital calculations for the full capital structure of a recently issued CMBS transaction, Cornerstone Titan 2005–1. The capital requirement is calculated based on the assumptions that the capital charge is 8 per cent multiplied by the RW for the tranche. The total capital required for the whole structure is expressed as a ratio of the total note value, based on the given proportion for the note tranches. This shows that the total capital required in the banking system for holding all of this rated structure would be 2.88 per cent under the IRB approach and 3.57 per cent or 5.95 per cent under the standardised approach depending on whether the originator holds the most junior tranche, which is quite a wide variation.

Note Class	Ratings-Based Approach		Standardised Originator		Standardised Investor			
	% of Total Amount	Rating	Risk Weight	Capital Required	Risk Weight	Capital Required	Risk Weight	Capital Required
A1	54.0%	AAA	7%	0.30%	20%	0.86%	20%	0.86%
A2	14.0%	AAA	12%	0.13%	20%	0.22%	20%	0.22%
B	6.5%	AA	15%	0.08%	20%	0.10%	20%	0.10%
C	8.0%	A	20%	0.13%	50%	0.32%	50%	0.32%
D	13.0%	*BBB–	100%	1.04%	100%	1.04%	100%	1.04%
E	1.2%	BBB	75%	0.07%	100%	0.10%	100%	0.10%
F	3.3%	BB	425%	1.12%	**1250%	3.30%	350%	0.92%
Total	100.00%			2.88%		5.95%		3.57%

* Assumed ratings meet BIS2 criteria, in this example use of different agencies has produced a lower rating on Class D than the more junior Class E. Use of the same rating agency for the whole capital structure would be required under BIS2.

** Equivalent to the actual capital deduction which would occur.

Figure 16: Example of capital calculation for a CMBS transaction (Cornerstone Titan 2005–1).

Source: Merrill Lynch.

More interestingly, this example also shows the capital charge an originating bank would attract if it securitised a portfolio and retained just the most junior, or equity, piece-rated BB here. For an IRB bank using RBA, the capital charge would be 1.12 per cent and for a standardised bank, 3.30 per cent. Even with additional charges for any reserves of liquidity facilities provided to the transaction, this looks attractive against an estimated capital charge for holding the entire portfolio on balance sheet of around 4 per cent

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under IRB, or 8 per cent under standardised. On this basis, it would appear that banks wishing to use capital efficiently will be encouraged to securitise portfolios of CRE loans. In all cases, it can be seen that the junior BB-rated tranche is relative to its size the biggest contributor to the capital requirement. This may encourage banks originating CMBS, particularly standardised banks, to minimise the size of the first loss piece retained, and to sell-off a senior-ranking double-B rated tranche.

One issue arises concerning the treatment of CMBS junior tranches, which frequently have available funds cap (AFC) features. AFC restricts payment of interest under certain portfolio events. BIS2 generally requires that ratings used for RWs must not be principal-only ratings and must address timely payment of interest. If junior CMBS tranches cannot meet BIS2 rating requirements, then these exposures may attract a full deduction from capital. This may encourage banks to sell such tranches to non-banks, however pricing for such tranches may be more costly. Overall the impact of this treatment of AFC will marginally reduce the capital saving under securitisation as outlined above.

The “Cliff” in capital requirements between BBB and BB-rated bonds will impact the CRE mezzanine lending and B note market. As noted above, it is relatively costly for banks to hold tranches rated BBB and below. Therefore, it may be likely that banks will start to originate loans for CMBS that are of sufficient credit quality (that is, low enough LTV) to fully fund a CMBS structure without any BB-rated or non-rated junior/equity tranche. This may increase the volume of separate mezzanine lending or B note lending which occupies the band in property lending between 70 to 85 per cent LTV. What is not entirely clear is what the RW or IRB capital charge would be for this type of lending. Without sufficient portfolio history it will be difficult to perform either the foundation or advanced IRB calculation. In which case IRB lenders could benefit by attracting 90 to 250 per cent under “specialised lending” rules. Standardised banks might just get a 100 per cent RW.

Either way there may be an advantage in separating the mezzanine area of CRE lending from conventional bank lending suitable for CMBS. This could further tighten spreads for non-rated B notes lending relative to BB-rated CMBS tranches.

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