

Commercial Real Estate Debt in the European Economy **2016**



Association of
Property Lenders



CREFC Europe

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Preface

This paper focuses on the role of commercial real estate in the real economy in Europe. A fundamental challenge has been the lack of a clear consensus regarding what, precisely, is included in the definition of commercial real estate. As a starting point, the term encompasses any real estate asset that is owned as an investment for the income it produces, typically in the form of rent. Where the relevant asset is used for commercial purposes by its occupier or occupiers (obvious examples are office, retail or industrial property), there is no doubt that it falls within the definition.

However, large multi-family residential properties share many of the income-generating investment criteria that are sought by investors in office, retail or industrial properties. Many institutional investors and industry observers therefore assimilate such residential rental portfolios to “commercial real estate”, despite the fact that the occupational use of the asset is residential rather than commercial. That is not the case for owner-occupied housing, of course; and even in the case of rental homes, there is no definitive consensus, including as regards how the line should be drawn between small scale private lettings (which few would regard as commercial real estate) and institutional multi-family portfolios.

For the purposes of this paper, the narrower definition has been preferred, so as to exclude real estate with a residential occupational use. It should however be noted that there is some unavoidable inconsistency (noted wherever possible), because data on commercial real estate do not always draw the boundary on a consistent basis, and sometimes include real estate held for investment property but used for residential purposes alongside more unequivocally “commercial” real estate.

Executive Summary

Commercial Real Estate (CRE) lending and its appropriate regulation is of great importance to the European economy. This paper sets out the contribution of CRE debt in Europe to the real economy. It considers the changing structure of the market, the characteristics of lending strategies, the impact of new regulation and its implications for the distribution of capital.

While the financial risk of over exuberant lending at the peak of the market is recognised, the economic risk of the undersupply of CRE debt capital is poorly understood. The research assesses the contribution of CRE debt to the economy in terms of productivity, consumption and investment, explaining its crucial role as a facilitator of commercial activity through the provision of business and social infrastructure.

The structure of the CRE debt market has changed following the global financial crisis (GFC), expanding the range of lending sources for CRE. Banks, the traditional source of CRE debt in Europe, reduced the availability of credit in the aftermath of the GFC as they focused on restructuring loan books, restoring balance sheets and increasing capital reserves to meet the requirements of Basel III. This created an opportunity for a range of alternative lenders to enter the market and build market share. This activity has also been influenced by new regulations seeking to reduce the potential build-up of systemic risk in the financial system. The research explores the current and evolving structure of the market, in particular how lending strategies vary across CRE debt providers in terms of loan characteristics and their customer base, with positive implications for market and financial system resilience. It also explores a number of unintended consequences of new regulations.

Using market-based loan-to-value ratios (LTVs) for regulatory purposes tends to promote the pro-cyclicality of CRE debt with the real estate cycle, as the dynamics of LTV through the cycle are not taken into account for risk weights. Although, CRE lenders focus on income metrics and long-term debt sustainability measures in their underwriting; differences in risk weightings and therefore capital cost impacts lending strategies, portfolio construction and ultimately, increase risk exposure for some lenders.

Different sectors of the financial market are subject to discrete sets of regulations, with little regulatory oversight of their interaction across the CRE debt market. This may reflect the high concentration of CRE debt within the banking sector at the time regulations were drawn-up, which tended to negate the need for an integrated regulatory perspective. Subsequently a more diverse market has emerged and inconsistencies in the treatment of CRE debt between regulations, applying to specific sectors, notably the banking and insurance sectors, has resulted in regulatory arbitrage. This is also the case for different treatment of debt products within sectors, specifically direct lending and securitised products. Similarly, the interpretation, application and/or implementation of regulations vary across jurisdictions and between different types of organisations. As a result, regulation has become a driver of lending strategies, rather than guiding safe lending practices from a systemic risk perspective.

Given the importance of the CRE industry to the EU economy and its structural reliance on debt as well as equity, sufficient access to sustainable, appropriately priced finance across the cycle is of critical importance. While a more diverse CRE lending market is beneficial for the industry and for reducing systemic risk, there may be important consequences for the distribution of capital to the regions and to SMEs. The need for appropriate and effective regulation to contain the systemic risk posed by the unconstrained build-up of CRE debt in the economy is not in contention. However, financial regulation must be designed to safeguard and promote the positive contributions that CRE debt makes while ensuring that unconstrained lending does not jeopardise economic stability. For that, policymakers need a more holistic approach to regulatory policy affecting the CRE debt market, the data and expertise to understand the structure of the industry and the metrics that measure risk most effectively.

Key findings of the research are:

CRE Debt and the Real Economy

- CRE debt enables CRE investment and development market to deliver and manage a major factor of production, built environment. The flexibility and agility of renting business premises is especially critical for the growth of SMEs. Leased space may remove a significant opportunity cost of tying up scarce and expensive business capital in CRE to meet occupational requirements. This allows companies to focus and invest in their core activities as well as be more responsive to growth opportunities. Generally promoting efficiency and productivity in the economy.
- On average, development and re-development of new and existing CRE amounts to €250 billion of capital investment per year, representing 10% of total capital investment in Europe. This regeneration of the built environment provides the framework for sustainable economic growth. It entices businesses to relocate and rejuvenates civic centres. Such capital investment often improves the quality of life for local residents and is accompanied by a real increase in residential property and land values, providing a stimulus for economic activity and consumption.
- CRE debt has also been an important enabler of access to affordable credit, especially for SMEs, with banks appreciating the collateral provided by CRE holdings as security for business finance.
- CRE debt benefits risk management for CRE owners who borrow, and those providing or investing in CRE debt, through portfolio diversification.
- The CRE sector directly accounts for an estimated 3.8 million jobs in Europe. Over a quarter of these are in transaction and real estate management activities and the construction sector accounts for over 2/3 of jobs. CRE debt is especially important to unlock construction activity, employment and economic growth in weaker local economies. In addition, CRE debt is an essential component of the capital efficiency of the CRE investment market and plays a vital role in delivering and managing Europe's economic and social infrastructure, fostering economic productivity and societal well-being. It is essential that the relationship between debt and equity is appropriately structured and that risks are correctly identified and priced accordingly, to protect important economic benefits. Some CRE investment takes place with no or very low debt levels, and some with very high debt ratios; but a sensible balance between equity and debt can be beneficial on a risk adjusted basis and is often necessary.

Changing Structure of the Market

- Pre-crisis, bank lending accounted for approximately 90% to 95% of European commercial real estate lending, contrasting sharply with the US where bank lending accounts for just over half of lending activity. The high concentration in one source of debt provision in Europe increased the fragility of the banking system. The dramatic downturn in CRE markets that followed created a credit drought that contributed to the GFC and created an opportunity for alternative lenders. Post-crisis, banks remain a major source of real estate debt finance, but their share of new lending has reduced in favour of insurance companies and other institutional investors underlying non-listed debt funds.
- Different underlying business objectives, internal processes, regulatory considerations, risk return appetite and lending criteria influence lending strategies. These may be skewed by intentional and unintentional consequences of new regulation. As a result different types of lenders may also focus on specific risk tranches of debt. Relationships between them are continuing to evolve, and are both competitive and collaborative.

CRE Lending Trends

- The availability, terms and cost of finance vary by country, across regional markets and by borrower (or sponsor)¹ type. To some extent, this divergence reflects the risks associated with lending into different markets and across a range of sponsors, but market failures and regulatory distortion may also play a role.
- There is an interaction between market size and sponsor type. Large institutions and companies are most active in principal cities and SME activity is strongest in the large regional cities and dominant in Europe's smaller cities and towns. This has important consequences for the supply of capital and investment beyond Europe's major cities and to SMEs.
- It is difficult to be certain whether the diversification of recent years is a response to a short-term cyclical opportunity or if it represents a more structural change in the segmentation of the market. The activity of insurers involved in direct lending is predominantly limited to principal cities and/or major assets and to large companies owing to the large loan sizes required to create management efficiencies.
- In contrast to other CRE lenders, clearing and savings banks have always had a large exposure to regional markets and to SMEs across countries. Availability of debt capital improves the quality of business and social infrastructure, stimulating investment and assisting the market recovery and the wider economy.
- Loans underwritten by institutional and corporate sponsors, in bank portfolios, are large in value but small in numbers. Conversely, interviews with banks suggest that at approximately 20%, lending to SMEs is a lower proportion of the loan book by value, but represents upwards of 70% of borrowers by number.
- Alternative sources of senior lending limit their customer base of borrowers based on the heightened risk and management of costs attached to smaller scale portfolios. This usually restricts lending to SMEs. Additionally, the underlying business models of both insurers and non-listed debt funds require loan capital of between €20 and €100 million to be deployed, with the quality of the sponsor being at least as important as the quality of the underlying asset.

Regulatory Impact

- Following the GFC, new regulations have been introduced with the objective of lowering systemic risk and safeguarding the economy from periods of market liquidity stress. All lenders support better regulation, a more diverse range of CRE debt providers and the differentiation of loans and debt products by their risk profile.
- Regulation seeks to flatten the CRE debt cycle, however lenders raised concerns that the lack of precision of risk weightings between assets and through the cycle reinforce cyclical behaviour. They stated that market value based LTVs underpinning regulatory risk models tended to impede counter-cyclical activity.
- Although LTV is an important metric for lenders given its impact on regulatory risk weightings and the cost of capital, in respect of underwriting a loan, it is secondary to a number of other stress tested measures including ICRs, DSCRs and debt yield.
- CRE lenders are also concerned about differences in the treatment of CRE debt within regulatory regimes across the financial sector. Contrasts in regulatory regimes, particularly Solvency II and Basel II/III have led to regulatory arbitrage. The first incentivises direct CRE lending and deters investing in securitised debt, while the latter is generally less friendly to CRE debt relative to other assets.

¹ Technically, "borrower" refers to the entity to which a loan is made, while "sponsor" refers to the corporate group or institution that owns and controls that entity. In some cases there may be no difference, but it is common (particularly in northern European markets) for a significant CRE asset to be held in a special purpose vehicle that has no other assets or activities. The sponsor may or may not stand behind liabilities of the borrowing entity.

- Many banks commented that contrary to the intention, regulation is resulting in banks taking riskier positions to maintain competitiveness. This was also impacting on the construction of portfolios and on effective diversification. Lenders are unable to provide very low risk lending due to the punitive capital charge relative to other lending opportunities and relative to that incurred by other lenders.
- Regulation itself is now a driver of the market rather than a moderator. The CRE debt market now warrants more holistic regulatory oversight across the broader financial sector.

1.0 Introduction

Commercial Real Estate (CRE) lending and its appropriate regulation is of great importance to the European economy. It is a principal component of the CRE investment market, which is a major driver of economic growth directly and also indirectly, being responsible for the delivery of a major factor of production in the form of the built environment. While the financial risk of over exuberant lending at the peak of the market is recognised, especially in the aftermath of a major financial crisis, the economic risk of the undersupply of CRE debt capital is not always so well understood.

CRE debt is a critical component of development activity and is crucial for regional economic development, fostering short- and long-term employment growth. A professional and sophisticated CRE industry provides a vital, quasi-financial service to the economy by allowing businesses to rent premises. Not only does this avoid the need for non-CRE businesses to invest capital in buildings that is better allocated to their main activities; it also allows them to scale up or down and to change their geographical footprint far more flexibly than if they owned their premises. These benefits are especially important for new and growing businesses and the most dynamic parts of the economy. The supply of this business infrastructure is financed by third party owners and its economic sustainability requires both equity and access to debt.

Traditionally, CRE debt is also an important source of business capital for small and medium enterprises (SMEs) that own their own premises, as they have been able to release capital by securing loans on their real estate holdings. CRE debt also provides important benefits for risk management through portfolio diversification. These diversification benefits are available to both CRE owners and debt investors. The emerging CRE debt asset class offers investors a low-risk, fixed income opportunity and the use of moderate levels of CRE debt for CRE investment reduces specific risk, thereby both directly and indirectly expanding the opportunity for long-term investors seeking to benefit from the illiquidity premium associated with CRE.

In addition, CRE debt is an essential component of the capital efficiency of the CRE investment market and plays a vital role in delivering and managing Europe's economic and social infrastructure, fostering economic productivity and societal well-being. To protect these important economic benefits, it is essential that the relationship between debt and equity is appropriately structured and that risks are correctly identified and priced accordingly. Some CRE investment takes place with no or very low debt levels, and some with very high debt ratios; but an appropriate balance between equity and debt can be beneficial on a risk adjusted basis and is often necessary.

This paper sets out the contribution of CRE debt in Europe to the real economy. First, the direct and indirect contribution of CRE debt to the European economy is examined. Second, the way CRE debt enables and supports CRE development and investment is explained and the characteristics of different kinds of CRE debt are illustrated. Third, the paper evaluates the size and structure of the European CRE debt market. Fourth, the analysis considers the implications of the global financial crisis (GFC) on the provision of debt across different sources of capital and product type. In particular, the paper explores lenders' risk mitigation strategies and identifies the range of metrics that they employ to measure and manage risk. Finally, the influence of new regulation on the provision and pricing of debt across different sources of lending is also considered. As well as evaluating where new regulation has made a positive impact on reducing systemic risk, a number of unintended consequences of new regulation are identified and potential remedies are proposed.

The research findings are based upon a desk-top analysis of existing literature and data, and structured interviews with CRE lenders. Currently, the CRE debt industry suffers from a lack of transparency. Data relating to the size, structure, composition and risk components of the European CRE debt market are largely based on modelled estimates, qualitative, aggregated survey data produced by real estate consultancies and academic centres specialising in the industry, and tend to be time-lagged. UK data are better, partly because of the generally higher levels of transparency and liquidity in this relatively large and sophisticated CRE market, and partly due to the depth and long time series offered by the qualitative survey based research undertaken by De Montfort University. More recently, the International Real Estate Business School (IREBS) of Regensburg University has developed survey based analysis for the German market which adds to the knowledge base. However, its time series is still relatively short. For these reasons, despite the European perspective of this report, it often relies on UK data.

There is a paucity of even this knowledge resource beyond the UK and Germany. It was therefore necessary to undertake detailed structured discussions with CRE lenders. Fifteen interviews were undertaken across a range of lenders and jurisdictions, including UK clearing banks, investment banks, Landesbanken, insurance companies and non-listed CRE debt funds. These proved instrumental in explaining how business models differ across lenders, how such lenders mitigate risk, the importance as well as the unintended consequences of new regulations, and consideration of measures that assist in minimising financial market risks.

2.0 Commercial Real Estate, Debt and the European Economy

CRE debt is a bedrock to the growth and sustainability of the EU economy and society, currently estimated at 47% of total invested CRE capital in Europe². As a principal component of CRE capital, CRE debt underlies the significant contribution that the CRE industry makes to the European economy. At 2.5% of total European GDP, CRE debt enables an industry that is almost twice the size of the automotive and telecommunication industries³. CRE debt is a pre-requisite for most development and refurbishment activity, and as a result, economic output is dependent upon its appropriate provision; even during the downturn construction activity accounted for some 2.8 million jobs.

The provision of CRE debt supports investment in the delivery, management and continuous rejuvenation of the built environment, thereby providing the infrastructure required for business and societies to thrive. CRE debt is essential to the proliferation and success of SMEs both within the CRE industry and in the wider economy⁴. It is also central to the distribution of capital to regional markets. The provision of the business and social infrastructure it supports is fundamental to local economic development and inward investment. The benefits to the economy are at least equal to the capital efficiency and enhanced risk management it generates for borrowers.

2.1 Financing Business and Social Infrastructure for the Economy

CRE debt finances the provision of efficient infrastructure to business and society in the form of appropriately located and suitable offices, retail outlets, industrial premises, leisure facilities and student accommodation, as well as hotels, educational and health facilities. This enabling characteristic of CRE debt means that it is fundamental to ensuring a productive and efficient economy and a built environment that suits the changing needs of business and society.

The stock of CRE equates to the value of plant and machinery in Europe and plays an equivalent role as a principal factor of production. Like plant and machinery, CRE needs to be renewed to enable it to respond to, and anticipate, structural change. On average, development and re-development of new and existing CRE amounts to €250 billion of capital investment per year, representing 10% of total capital investment in Europe.

Being a pre-requisite to the development and refurbishment of CRE and renewal of the wider built environment, development finance is essential for businesses to achieve productivity gains and maintain competitiveness. Major structural macro-economic trends are well established and include ageing society, depleting natural energy resources and climate change, urbanisation, wealth polarisation, technological revolution and the shift from a service to knowledge based economy. The CRE industry is a critical facilitator of such change, creating solutions that enhance economic productivity and quality of life. In turn, this enables policy makers to manage the change process, creating economic value while minimising economic dislocation. Ultimately, failing to maintain suitable levels of CRE investment across the cycle, including through the replacement, upgrading, retrofitting and repurposing of existing buildings, would pose a critical risk to Europe's ability to cope with, and benefit from, those trends.

The CRE industry, for example, has been responding to the digital revolution and advances in sustainability practices. As a result, modern, efficient digitally enabled office premises afford occupiers the opportunity to reduce the total occupancy cost per worker, yet command a premium rent per unit area for owners. This is due to space efficiencies generated by design innovation that better facilitate modern, knowledge-based working practices and embedded sustainability practices that reduce energy costs and carbon emissions. Similarly, in response to social change and a more digital consumer, shopping centres are being transformed into leisure, social and civic places that promote social community and better respond to the changing demand of both the omni-channel consumer and retailer.

This regeneration of the built environment provides the framework for sustainable economic growth. It delivers the factors of production required for businesses to re-locate (accessibility, appropriate

² CBRE, European Commercial Real Estate Debt, January 2015.

³ INREV/EPRA (2015), Real Estate in the Real Economy.

⁴ INREV, Real Estate as Long-Term Investment, April 2013.

business space, services), and rejuvenates civic centres (through the provision of retail, leisure, education and health facilities). They also bring capital investment to areas and often lead to an improved quality of life for local residents and a real increase in residential property and land values.⁵

This capital investment includes improvements to infrastructure, notably transport systems and services and facilities in the public realm. There is a considerable overlap and mutual interdependence between capital investment in CRE and transport and public realm infrastructure. CRE developers are usually responsible for the urban infrastructure immediately connected to their projects, including transport links, the provision of public space and associated amenities as well as affordable housing within mixed use and residential developments. Indeed, there is a blurring of the boundary determining what may be defined as CRE and infrastructure. CRE is itself business infrastructure, while the strong growth of many alternative CRE sectors such as healthcare, educational facilities and the private rented sector are effectively social infrastructure, with the pressure on public finances partly driving activity in these niche segments in the private sector.

More widely, the interdependence of CRE and infrastructure underlies the efficient management of the built environment. Infrastructure and CRE development also share the same development cash flow profile, relying on debt to help finance the capital-intensive site acquisition and construction phases, with returns not achieved until completion of the project. Moreover, they commit to development programmes in the knowledge that post-development, the standing investments offer institutional investors long-term, secure income streams.

2.2 A Factor of Production for Commerce

Excluding residential holdings, approximately 40% of CRE is held as an investment; in the sense that it is professionally owned and managed to deliver income and capital growth. The remainder is owner-occupied⁶. The provision of appropriate premises is equal in value, and in importance, to plant and machinery. The capital efficiency that even low levels of CRE debt generate for borrowers underpins the attractive risk adjusted returns that underlie investment in CRE.

This activity provides leased space and associated services to the economy, enabling greater flexibility and agility for European businesses. For new and growing businesses, it is especially important to be able to adjust their location, space requirements and associated costs more readily to their business needs, expanding for growth or accessing new markets. Moreover, the ability to lease rather than own real estate enables many businesses to release capital for investment in expansion, productivity gains and R&D.

These benefits are relevant to all firms, but scale is a significant factor. Large, stable firms may prefer to own at least part of their core occupational portfolios. The position of new, growing and innovative businesses is very different. Such dynamic SMEs are far more likely to need the flexibility and agility associated with renting premises and it is also likely to offer a more efficient use of capital than owner occupation. There may be a significant opportunity cost to the business of tying up scarce and expensive capital in CRE to meet occupational requirements.

A well-financed professional CRE investment industry allows businesses to focus on what they do best, by converting CRE from a constraint into a facilitator of SME business plans. CRE debt is a driver of success for European business and industry, providing a vital factor of production.

2.3 CRE Debt and the Capital Structure of SMEs

In addition to the quasi-financial service that the availability of leased space offers to SMEs, CRE debt underpins the capital base of SMEs in other ways. The CRE industry itself is largely comprised of SMEs. According to Eurostat data⁷ from April 2013, micro enterprises (those employing fewer than ten persons) dominated the “real estate activities” sector in 2010, accounting for 96.4% of the total number of enterprises, providing employment to 58% of the “real estate activities” workforce, and generating

⁵ ICSC, The Contribution of Shopping Centres to the EU Economy, July 2015.

⁶ INREV/EPRA (2015), Real Estate in the Real Economy.

⁷ See http://ec.europa.eu/eurostat/statistics-explained/index.php/Real_estate_activity_statistics_-_NACE_Rev_2. It should be noted that Eurostat data group real estate that is used for residential and commercial purposes together, while excluding construction and facilities management – so for present purposes these figures are strongly indicative rather than precisely matched to CRE.

56.7% of the sector's added value. CRE debt provides support across the spectrum of developers, from national house builders to SME developers, as well as large corporations. Interviews with lenders undertaken for this research indicate that in the UK, 20% to 30% of CRE loan books held by the major clearing banks are accounted for by lending to SMEs representing 70% to 85% of their customers by number.

In addition to lending to SMEs active in the CRE industry, SMEs in the wider economy that own CRE commonly use it as collateral to support their borrowings as banks often find it difficult to underwrite risks associated with their business cash flows. This has traditionally provided SMEs with access to credit at a reasonable price, as the underlying collateral provides more certainty for underwriting than historic or projected business cash flows. Indeed, a recent review of bank lending to SMEs in the UK found that 75% of firms borrowing from banks rely on CRE as collateral to support their borrowing⁸.

2.4 Driving European Employment

The CRE sector directly accounts for an estimated 3.8 million jobs in Europe. Employment in investment, fund and portfolio management accounts for a small proportion by number. However, they undertake exceptionally high value added activities, delivering output some six times greater than the average value added worker in Europe⁹. Just under a million workers are employed in transaction and real estate management activities and their expertise ensures that buildings and accommodation are maintained and continue to deliver the functionality required by the businesses operating within them. In addition, CRE debt is a significant employer, with those involved in the management of loan portfolios, origination, and syndication having a high value add. Loan processing and servicing generates the largest volume of jobs and includes jobs associated with the IT infrastructure that supports the business.

The economic fragility since the GFC has significantly impacted on the CRE industry. Both the volume of development and the level of employment fell more sharply than the EU economy in the immediate aftermath of the crisis and this was prolonged in peripheral European economies. In part, this has been driven by the low availability and high cost of debt for CRE investment and development up to 2014, with the pro-cyclical nature of the debt market reinforced not only by legacy loan books but also by the regulatory response. Pre-crisis, CRE lending was highly concentrated in European banks and the timescale required to first identify, categorise, and subsequently unwind, legacy portfolios resulted in a period of lending inertia until balance sheets were restructured. Construction activity was most affected.

The majority of direct employment is created through construction activities associated with the development, refurbishment and repair of buildings. This comprises construction workers, related professional and manufacturing sectors. Importantly, low skilled workers with limited transferable skills, often unable to find alternative employment, comprise a high proportion of the construction workforce. Research within the UK market indicates that lower skilled workers represent 62% of employment in the construction sector. This proportion is considerably higher in regions with above average unemployment rates. CRE debt has an especially important role to play in unlocking construction activity and thus employment growth in these weaker local economies.

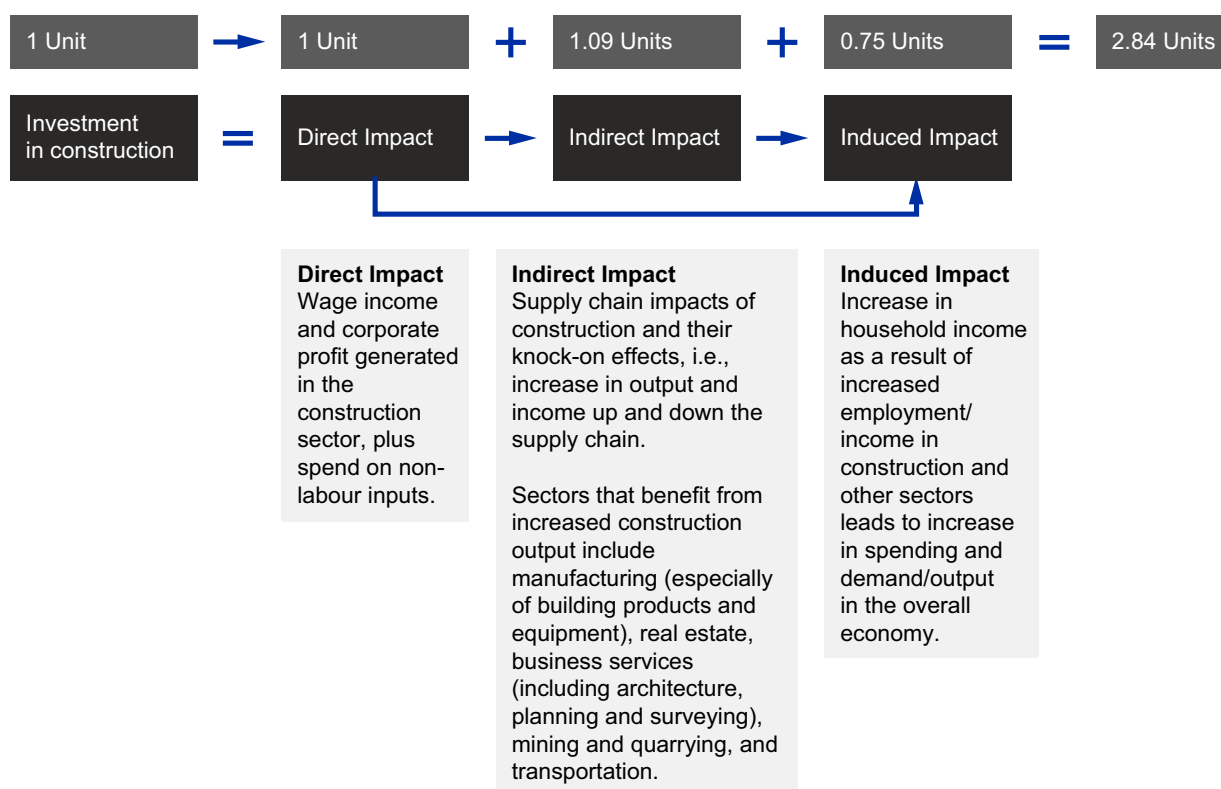
In addition, construction activity stimulates demand through the manufacturing and materials supply chain and in related business services. Together, the direct and indirect benefits create a value add of 2.09 units for every unit invested¹⁰. The induced impact of the higher employment of lower-skilled workers on private consumption accounts for 0.75 of the 2.84 value add for every unit invested in construction (Figure 1). Moreover, there is considerable improvement in standard of living and quality of life indicators including health, environment and educational attainment in addition to other wealth measures.

⁸ Bank of England (2015), Financial Stability Report, Issue No. 38.

⁹ INREV/EPRA (2015), Real Estate in the Real Economy.

¹⁰ L.E.K. Consulting on behalf of UK Construction Group, Construction in the UK Economy, October 2010.

Figure 1 CRE Investment is a Growth Accelerator



- The type I output multiplier is a measure of the direct and indirect effects associated with an additional 1 unit spent on a particular sector. The type I multiplier for construction in the UK was estimated by the ONS to be 2.09.
- The type II multipliers include the induced impacts associated with the increased economic activity and income in the economy. This has been estimated by L.E.K. based on income tax and National Insurance rates, indirect taxes, savings ratios and import share of disposable income.

Post construction, the inward investment and economic growth that the provision of appropriate business and commercial infrastructure stimulates, creates longer-term employment and is especially beneficial for regional economies. For example, smaller cities and towns can benefit by securing the relocation of back office functions and support services (as seen recently in the UK legal sector and previously in the banking sector, for example), or through the refurbishment or redevelopment of town centre retail and leisure facilities. European shopping centre development creates long-term employment with the European industry accommodating an estimated 4.2 million retail employees¹¹. The retail industry offers a high proportion of flexible and part time jobs and provides opportunities for younger workers and those with lower skills or educational qualifications. Over 16% of all employed 15-24 year olds work in retailing¹².

Development and construction activity is inherently riskier than ownership of income-producing assets, and tends to have a greater structural reliance on some level of debt finance. Heightened risk aversion and credit drought for CRE post crises are most acute for the development sector and given its high socio-economic value add, is deeply negative for the economy.

2.5 Underpinning Fixed Investment and Inviting Inward Investment

Buildings have a lifecycle and generally lose both functionality and value unless money is periodically spent maintaining, refurbishing and sometimes redeveloping them. Investment, development and refurbishment of existing buildings requires significant annual investment in European CRE and in recent years has represented approximately 10% of total fixed investment in Europe. A further 45% is

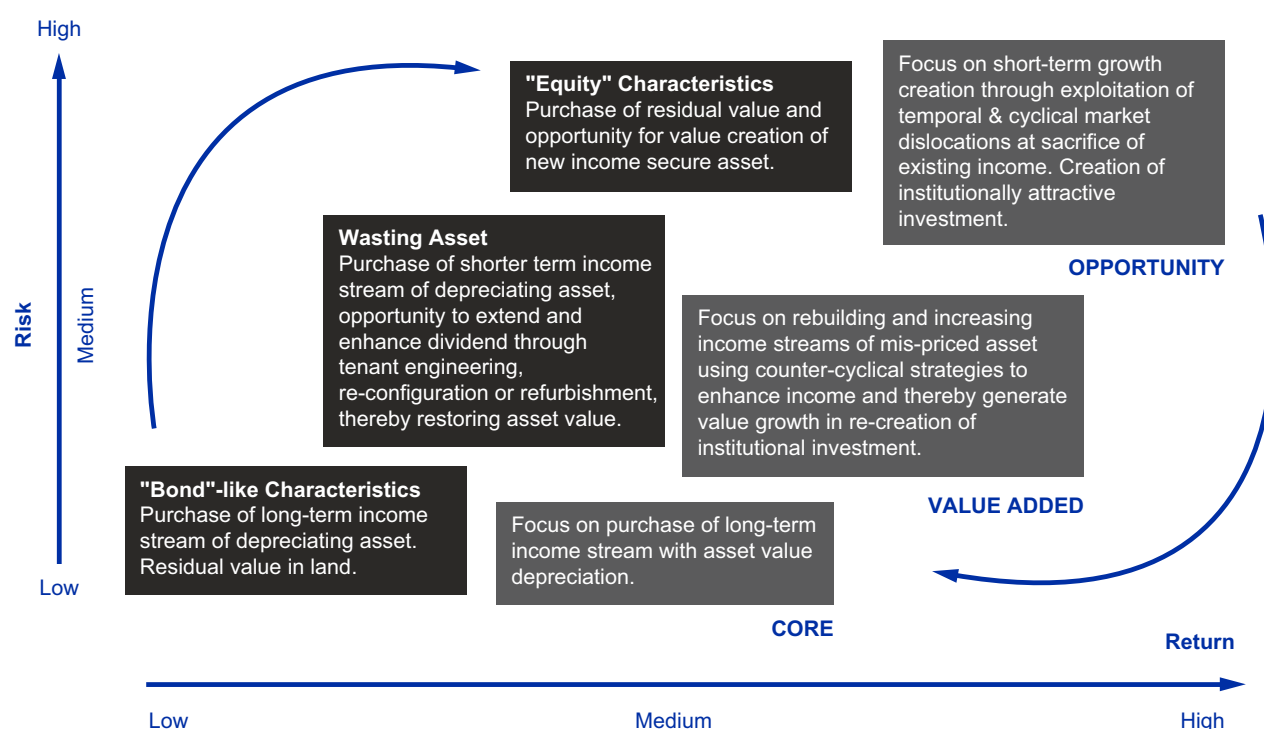
11 ICSC, The Contribution of Shopping Centres to the EU Economy, July 2015.

12 Eurostat (2015).

accounted for by investment in the inter-dependent housing and infrastructure sectors, totalling over €1.7 trillion. CRE debt and equity is also an important conduit for foreign direct investment from other regions, which has grown to 5% of all CRE investment and continues to increase.

As well as enhancing economic productivity this activity facilitated by CRE debt also protects the value of investments. Real estate is unique in that it is one of the only financial assets that can transform its risk profile over its lifecycle in both directions (Figure 2)¹³. The same asset can behave like a bond or an equity depending on its ownership and/or risk profile. The leasing profile of an asset, including lease length, rental terms and the tenant's covenant strength, are key determinants of value and will change over time. By its very nature, a lease is a wasting asset with its value deteriorating from lease start to expiry. The perceived quality of a building also changes over time, with new regulations, innovation and changing business practices all impacting building performance and functionality over its lifecycle. The counter-cyclical exploitation of real estate lifecycles represents an opportunity for investors and for wider business and society. This is funded by a combination of debt and equity, the proportions varying with the characteristics of the CRE owner, risk profile of the strategy, and availability and cost of capital components. Typically, some degree of debt financing is pivotal to achieving required returns that enable CRE owners to undertake this important activity for the economy.

Figure 2 Dynamic Lifecycle of Real Estate



Source: Adapted from Genesta, Property Nordic, 2012

2.6 Critical Source of Public Revenues

In addition to the payroll and corporate taxes paid by direct and indirect employees and organisations involved in the CRE sector, the industry also generates public revenues from real estate taxes. These are derived from acquisition duties and ongoing local taxation of CRE. These revenues can be used to support national and regional programmes for major infrastructure projects and the provision of local public services.

13 Genesta Property Nordic, The Duality of Mispricing, Nordic Insight, January 2013.

2.7 Spearheading Advances in Sustainability

Directly and indirectly, all buildings account for just under 40% of the EU's energy consumption and 30% of its emissions. CRE, excluding residential investment, accounts for 30% of the built environment's consumption and some 40% of its emissions. As such, increasing energy efficiency within CRE (as for housing) represents a major potential source of achieving sustainability targets and moving towards a low carbon economy. CRE in the form of income producing, multi-family residential investments represents 11% of institutional investors' European portfolios. This has increased sharply from 8.7% in 2011 as investors seek to respond to the housing demand challenge of urbanisation and respond to the growth of the private rented sector (PRS). The capital required to realise desired energy savings is estimated at €60 billion a year over the next decade. This investment is usually undertaken as part of asset refurbishment or redevelopment plans and is dependent on the availability of debt. Professional, large-scale ownership and management of buildings (whether used for commercial or residential purposes) offers an excellent opportunity for such retrofitting to be implemented on a systematic basis.

In funding the application of best practice, the CRE industry is also a major source of innovation in best practice. For example, Aéroville shopping centre in Paris, is the first geothermal shopping centre in Europe. Its innovative design allows Aéroville to consume 40% less energy than the average shopping centre, representing an annual energy saving equivalent to the consumption of 2,000 homes¹⁴. The design and management processes also encompass both materials and organic waste recycling initiatives for tenants and consumers. Water saving devices are embedded to control and monitor consumption, including an 80,000 litre rainwater recovery tank.

2.8 Income for Pensioners and Savers

As well as facilitating commerce, CRE debt provides a valuable source of secure, stable medium- and long-term income which is beneficial for institutions' asset liability matching requirements. It allows institutional investors to exploit the existence of a structural liquidity premium over the risk free rate, which compensates for the risk associated with lower transparency and perceived illiquidity. Post GFC, the inertia in bank lending and opportunity of unmet borrower demand in a historically low interest rate environment led to the rise of alternative sources of lending further influenced by regulatory change. This has resulted in a more diverse range of CRE lending sources. These alternative sources of lending account for an estimated 37% of annual CRE lending in Europe¹⁵.

Pension funds and insurance companies are the principal investors in these alternative lending sources, either directly through their newly created lending platforms or indirectly, through non-listed CRE debt funds and participation in syndicated loans. In essence, these long-term investors are purchasing fixed income assets within the alternatives asset class, with CRE debt providing an attractive illiquidity premium, inflation hedging characteristics and important portfolio diversification benefits. The low returns achievable on fixed income assets in the prevailing low interest rate environment have resulted in allocation to fixed income being diverted into CRE debt in the search for yield.

¹⁴ ICSC, The Contribution of Shopping Centres to the EU Economy, July 2015.

¹⁵ C&W Corporate Finance (2014); Curlow, J., Where next for Real Estate Lending in Europe, Axa Real Estate Investment Managers, Presentation to Association of Property Lenders and SPR 'The Future of CRE Lending in Europe', Seminar July 2015.

3.0 The Importance of CRE Debt to Development and Investment

The CRE investment universe comprises both debt and equity finance. Of the estimated €2.1 trillion of invested CRE stock at the end of 2014, an estimated €978 billion is financed by debt representing approximately 47% of the value of CRE holdings¹⁶. This estimate represents the value of loans across all sources of debt capital and includes the value of non-performing loans (NPLs) transferred to national asset management agencies and those NPL portfolios purchased by specialist funds. However, it represents standing investments and excludes development lending. It is also narrowly focused on assets occupied for commercial purposes and therefore excludes commercial lending to investors in the private rented residential sector. Using a wider definition of CRE in mid-2015, DTZ estimate invested CRE stock at 3.4 trillion, with estimates of the current debt to equity ratio slightly higher at 53%¹⁷.

The rapid accumulation of CRE debt between 2005 and 2007 accompanied and contributed to a real estate pricing bubble. This reflects the pro-cyclical relationship of CRE debt with the CRE cycle. The provision of CRE debt expands with CRE borrower demand in terms of both the number of loans and the ratio of debt to equity. This is exacerbated by CRE debt being at its most expansive when CRE values are magnified. In the aftermath of the collapse in values in the most inflated markets, including the UK, Ireland and Spain, there was a sharp rise in NPLs. The impairment to bank balance sheets exacerbated the GFC and the need for banks to gradually de-leverage and unwind their positions prolonged it. Banks in some countries have resolved or disposed of much of their legacy CRE exposure, either directly or through state-backed 'bad banks', with US private equity firms leading the charge to acquire NPL portfolios at discounts to their face value.

The availability of CRE debt contracted with the CRE cycle even though expected losses given default are lowest at the bottom of the cycle. The low availability of debt finance until 2014 became a contributory factor to the timing and slow pace of the recovery of real estate markets and indeed the economy more generally, as credit was only available to good quality sponsors on low risk assets in principal cities. The recovery of regional markets, investment in secondary assets and capital expenditure on new and redevelopment was severely constrained by constricted credit availability for SMEs both within the CRE sector and in the wider economy. Even after two years of strong recovery in major centres, investment in CRE perceived to have a higher risk profile or to be of lower quality remains challenged, not least because of continuing poor credit conditions.

The stock of CRE debt continues to be dominated by bank loans that are attributable to activity that occurred prior to the GFC. This is due to a number of inter-related factors. First, the higher ratio of debt as a proportion of invested capital in the years immediately preceding the crisis. Second, the slow recovery of real estate values beyond prime markets in tier 1 cities in Europe's core markets and the continued rollover, extensions as well as refinancing of legacy debt. Third, the scarcity and narrow focus of debt capital in the years following the GFC as bank lenders focused on repairing balance sheets, managing losses and preparing to meet the requirements of Basel III.

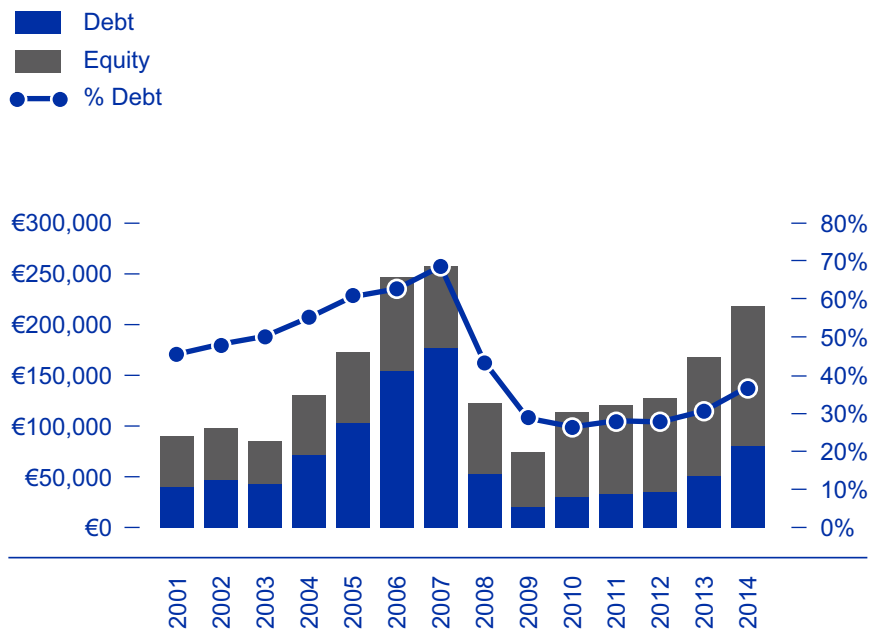
Following the reawakening of bank lending over 2014, new CRE lending increased absolutely and as a ratio of new CRE investment as the extreme risk aversion of the crisis years receded. However, CRE debt as a proportion of invested capital remains low and in absolute terms is less than half the volume allocated at the market peak (Figure 3). It also follows seven years of contraction and, thus, the improved availability of debt will enable vital improvements in the quality and affordability of commercial and social infrastructure that will stimulate economic, employment and productivity growth directly and indirectly.

The availability to leverage equity investment with lower-cost, moderate levels of debt stimulates economic activity through development, effective portfolio risk management of portfolios and providing value add through better capital efficiencies for CRE developers and investors. As such, its provision is a prerequisite to the CRE industry being able to contribute to economic growth.

¹⁶ CBRE, European Commercial Real Estate Debt, January 2015; INREV/EPRA (2015), Real Estate in the Real Economy.

¹⁷ DTZ, Money into Property, July 2015.

Figure 3 Breakdown of CRE Investment Volumes by Debt and Equity 2001 to 2014 (mn)

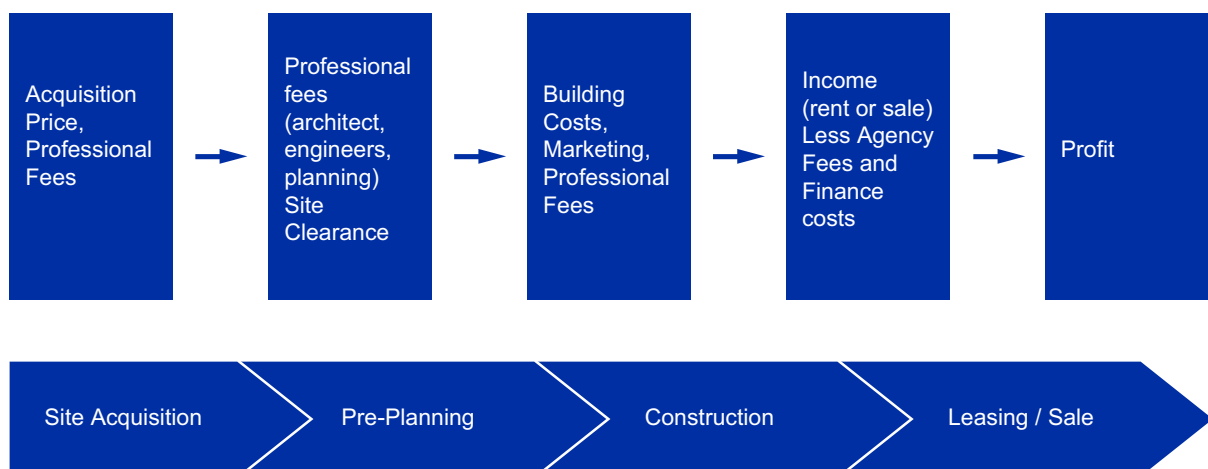


Source: CBRE (2015)

3.1 The Importance of CRE Debt to Development Activity

The nature of development projects requires considerable capital expenditure, with costs being front-loaded and returns being back-ended over the lifecycle of a project (Figure 4). The capital intensity and timing of cash-flows associated with CRE development means that most developments would not be viable without short-term finance to support the land acquisition, pre-planning and construction phases of individual projects. The availability of alternative development funding through the corporate bond market or through institutional joint venture capital is limited to publicly listed entities or large private development companies in respect of low risk developments¹⁸.

Figure 4 Development Finance



¹⁸ IPF, UK Development Finance Review, IPF Research Programme 2011-2015, September 2015.

Development lending is usually expressed as a proportion of gross development value or loan to cost. The ratio of loan to development value is usually in the range of 20% to 50% and will vary with the strength and track record of the borrower, and the degree of risk mitigation achieved. For example, the proportion of pre-letting achieved or the forward sale of the completed project.

Large REITs, other listed and non-listed companies with strong balance-sheets benefit from the opportunity to raise debt capital through corporate banking facilities and/or the corporate bond market. Although unsecured on the underlying CRE development or other collateralised assets, such finance is provided at a lower cost to development finance secured on the development project and associated assets. Underlying this pricing anomaly are differences in the regulatory treatment of corporate debt and CRE debt. The supervisory weights for corporate credit models are linked to the strength of the company and the resultant capital weights will usually be lower than the risk weight associated with a CRE loan to the same borrower on the same project and this is reflected in the price of the loan.

For those developers that require conventional CRE development finance loans, the cost of funding will be higher even for those organisations with the strongest credit ratings. The cost to SMEs will be higher still, reflecting the greater risk associated with less substantial sponsors compared to large listed and private companies.

The provision of CRE debt is in most cases a prerequisite to development activity and in turn, CRE development is pivotal to economic development.

3.2 CRE Debt and Risk Management

The use of debt can increase the risk adjusted return of a borrower's CRE portfolio through lowering the unsystematic risk, known as specific risk, and facilitating greater portfolio diversification, with moderate leverage increasing the number of assets that may be purchased with a given amount of equity. This will be particularly beneficial for small and medium sized investors seeking to invest in CRE.

The heterogeneity of CRE assets means that larger portfolios are required to reduce the specific risk associated with individual assets. Long-term investors including CRE as part of a multi-asset portfolio often seek to track the market, or systematic risk. The greater the number of assets held, the closer the performance of the portfolio to the market and the lower the specific risk.

The use of moderate leverage to increase the portfolio size also facilitates diversification benefits. That is, if the reduction in specific risk enables the returns to be explained by the market, diversification enables real estate portfolios to be constructed with the aim of tracking, or out-performing the real estate market. The use of leverage is particularly beneficial for diversification as relatively few assets are required to reduce specific risk, while a larger number of assets are required to achieve strong diversification benefits¹⁹.

The risk and return characteristics of CRE debt also aid risk optimisation from the lender's perspective. CRE debt is a hybrid asset class, offering a combination of fixed income and CRE exposure and thus offers lenders and debt investors from both a fixed income and CRE background the opportunity to invest in an alternative product. Fixed income lenders and CRE debt investors are attracted to the risk premium for liquidity and transparency that real estate debt commands, while CRE debt investors are attracted to a product that offers low risk exposure to the CRE market. This is reflected in the structure of real estate debt returns, which being based on a fixed or variable interest rate, share the same investment profile as other fixed income products such as government and corporate bonds.

3.3 CRE Debt and Capital Efficiency

The market value of an investment should not alter merely by the way it is financed. This has been long established in finance literature by Modigliani and Miller, although the theory does not account for the impact of tax²⁰. For tax exempt investors, it is possible to increase the return on equity by

19 Brown, G. and Matysiak, G. (2000), *Real Estate Investment: A capital market approach*, FT Prentice Hall.

20 Modigliani, F. and Miller, M.H. (1958), *The Cost of Capital, Corporation Finance and the Theory of Investment*, *American Economic Review*, 48:3, 261–97.

borrowing funds to finance investments, but this does not increase the aggregate investment return (Box 1). To the extent that financing costs are deductible for tax purposes, debt can also operate to reduce taxable profits, albeit that merely reflects business expenditure in the case of third party debt.

Box 1 Debt and Equity as Components of Return

The return on an investment is the sum of a return on debt and a return on equity. The return on each of these sources of funds will vary according to their risk.

$$r_{inv} = wr_d + (1-w)r_e$$

Where r_{inv} = the return on the investment, r_d the return on debt and r_e , the return on equity.

For an investment with an expected return of 6% annually, the return on equity increases with the proportion of debt. In this simplistic example we use a fixed interest rate of 3% for debt. As the source of capital does not impact on the return on the investment for tax-exempt investors, the returns are redistributed, with the use of debt increasing the return on equity at even low to modest levels. However, as the risk to the lender increases with the proportion of debt, the risk and associated returns will also be redistributed. The required margin on debt will also increase with the level of gearing, reducing the incremental return on equity.

Source of Capital Invested		Return on Debt	Return on Investment	Return on Equity
Debt	Equity	r_d	r_{inv}	r_e
10%	90%	3%	6%	6.3%
20%	80%	3%	6%	6.8%
30%	70%	3%	6%	7.3%
40%	60%	3%	6%	8.0%
50%	50%	3%	6%	9.0%
60%	40%	3%	6%	10.5%
70%	30%	3%	6%	13.0%
80%	20%	3%	6%	18.0%
90%	10%	3%	6%	33.0%

Of course, as the level of debt increases so does the lender's exposure to risk, especially at high levels of gearing where the risks are asymmetrically skewed to the downside. Equally, research also shows that downside risk for CRE lenders and investors is low, at low to moderate leverage levels²¹. For borrowers, the optimum ratio of debt varies from 20% to 70% depending on a broad range of factors, including their strategy, risk appetite, cost of funds and the structure of their multi-asset portfolio, as well as applicable tax rates.

Similarly, the optimum leverage level from the lender's perspective is variable with the quality of the asset and the sponsor. Low to moderate leverage levels provide the lender with certainty over the return of capital. At leverage levels up to 70% of an asset's lowest expected value based on historic rental cycles and yields, the underlying asset generally ensures capital repayment and compensates for the costs of foreclosure should a borrower default.

The incremental risk of higher leverage positions for lenders is subject to incrementally higher interest rates. In short, different tranches of debt and equity within any investment have distinct risk profiles and this is reflected in the priority of return and the rate of return (Box 2 and Figure 3). The lender's exposure to the asset is for a fixed term and on expiry the entire outstanding principal must be repaid either from refinancing the asset or through sales proceeds.

21 Van der Spek, M and Hoorenman, C. (2011), Leverage: Please Use Responsibly!, *Journal of Real Estate Portfolio Management*, December; Tyrell, N. and Bostwick, J. (2005), Leverage in Real Estate Investments: An Optimisation Approach. *Briefings in Real Estate Finance*, 5:3-4, 143-54.

Box 2 Priority of Return by Capital Interest

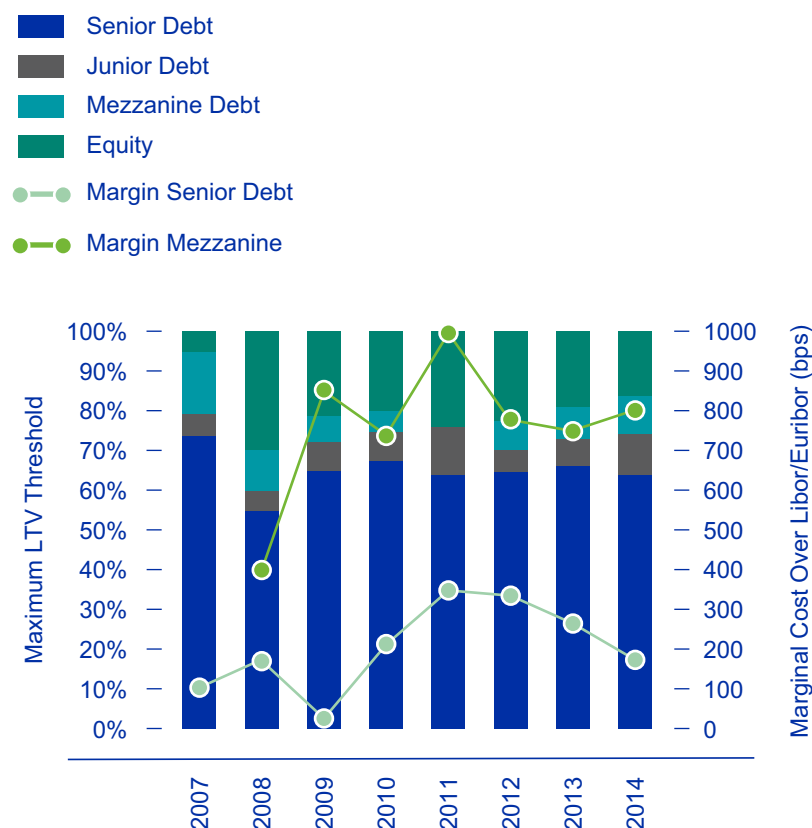
Debt tranches will have priority over equity and are therefore lower risk (Figure 5). The lowest risk tranche is called senior debt as it has a first priority of return. Additional tranches of debt may also be provided and these are subordinate to the senior debt, but have a higher priority of return to equity. This may take the form of junior or mezzanine finance. Having a lower priority of return and contributing to a higher loan to market value (LTV), these loans have a greater risk exposure of sales proceeds failing to meet principal repayments. They therefore warrant a higher return and carry a higher interest rate than senior debt and may be subject to additional sponsor/ borrower covenants, security and obligations.

Figure 5 Debt and Equity Tranches (Investment)

Priority of Return	5	Ordinary Equity	Ordinary Equity	Equity share and profit remaining after all other interests paid	Risk ↑ High Low
	4	Preferred Equity	Equity share with priority of return over ordinary equity	Percentage of profit and upside; share of upside variable with contract, maybe capped	
	3	Mezzanine Finance	LTV 70% to 90%, varying with risk	Usually capped return, margin++ over base rate; can include equity share for higher risk assets	
	2	Junior Debt	LTV 60% to 75%, varying with risk	Capped return, margin+ over base rate	
	1	Senior	LTV 20% to 70%, varying with risk	Capped return margin over base rate	

Senior CRE debt should represent a low risk, fixed income investment that can withstand the CRE cycle. With appropriate risk management, it can be an attractive investment for fixed income investors, offering an illiquidity premium but requiring modest levels of CRE expertise. The difficulty has been that the debt cycle tends to be pro-cyclical with real estate, with lenders (both banks and non-originating investors) expanding their willingness to lend as investor demand for borrowing increases among CRE owners. The total volume of debt increases towards the peak of the cycle both absolutely as the number of loans accelerates, as a proportion of total lending and as a ratio of LTV per investment (Figure 6). The increase in exposure is compounded by the real estate cycle, with underlying real estate values inflated above their long-term trend. As a result, the highest LTVs occur at the peak of the real estate cycle and are subsequently unsustainable during the downturn (see section 5.4.2). The pricing of risk is also pro-cyclical, such that required marginal returns on debt are highest when risk exposure is lowest at the bottom of the market and at their narrowest at the market peak when capital exposure is greatest.

Figure 6 Variation in Debt Tranche Thresholds through the Cycle



Source: INREV, DMU

If underlying values are not sufficient to repay capital or secure refinancing through the cycle, this greatly increases the probability of loss at the end of the loan. Research analysing securitised European CRE loans demonstrates that 100% of losses arose on loans originated towards the peak of the market from 2005 to 2007 and that while LTVs did not increase significantly difficulties arose because loans were based on real estate values that had risen substantially above their long-term trend²². As prices corrected, LTVs on existing loans increased commensurately, with the fall in market values revealing lenders' exposure to downside risk. Following the pricing correction of 2007 to 2009 which resulted in prices being substantially below their long-term value and therefore sustainable, the appetite and capacity for new lending collapsed, evident in both the low volume of lending and LTV ratio.

The issue is not the use of debt, but a failure to identify and appropriately price risks through the cycle. A senior debt holder should always be able to regard the underlying asset value as effectively securing the repayment of the principal loaned. Clearly, the CRE industry and the wider economy would benefit from the promotion of counter-cyclical lending and the introduction of measures to assist in flattening this cycle. Such an approach would discourage over-exuberant lending and systemic risk build-up in a boom, and encourage sensible lending to support recovery after a crash²³.

The post-crisis banking regulatory response has in many ways concentrated on ensuring that banks have higher capital reserves. While that is plainly a fundamental way of improving the resilience of individual banks and of the banking system as a whole, the approach adopted has two weaknesses where CRE exposures are concerned.

First, the post-crisis regulatory approach tends to raise capital requirements most substantially for low risk exposures. As regulatory costs have increased, banks have grown increasingly focused on the

²² Bank of America Merrill Lynch, The Drivers of CRE Loan Performance, May 2015.

²³ IPF, UK Development Finance Review, IPF Research Programme 2011-2015, September 2015.

return on regulatory capital that different uses of their resources can deliver. In this environment, while minimum capital requirements might seem to make banks safer, they can instead create an adverse selection problem. Banks find it difficult to compete for the lowest risk loans, and get no regulatory benefit for reducing risk, encouraging them to move up the risk curve.

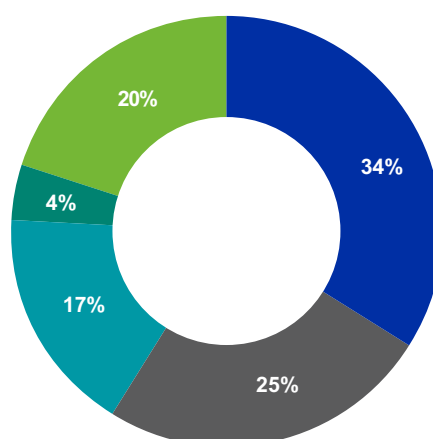
Secondly, the post-crisis regulatory framework affecting CRE debt exposures does not operate in a counter-cyclical way to maximise the economic contribution of CRE lending while minimising the risks it poses to financial stability. Regulation will likely cause banks to reduce the volume and increase the cost of their CRE lending without sensitivity to the CRE cycle itself or the risk of any loan exposure through the cycle.

Other financial institutions, including insurance companies, pension firms and the alternative investment fund industry are separately governed and subject to new regulation in the form of Solvency II, IORP and the AIFM Directive, respectively. As in the banking context, the broad goal of reducing risk that also characterises these regulatory developments has been pursued without oversight of the implications for CRE and CRE debt markets in mind. Again this results in unintended, distortive consequences within each regulatory silo, and importantly, from the interaction of these separate regulatory regimes.

4.0 Structure of the European CRE Debt Market

The volume of outstanding CRE debt was estimated at €978 billion at end 2014. Approximately 59% of this debt was secured on assets in the UK and Germany (Figure 7). While this suggests an over-weighting relative to their share of European GDP, it is broadly in line with their share of the CRE invested universe (estimated at 55%)²⁴. Similarly, the proportion of debt secured on assets in France and also the relatively lower proportions secured on assets in Spain and Portugal reflect the size and geographical distribution of the CRE investment market.

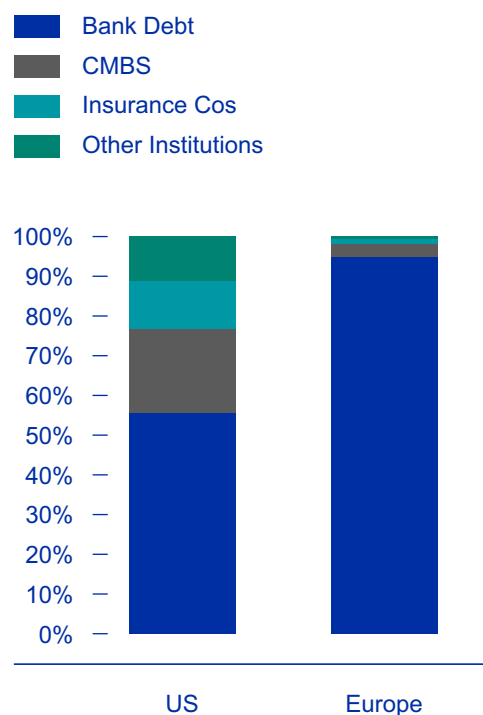
Figure 7 CRE Debt Stock by Country



Source: CBRE (2014)

Pre-crisis, banks accounted for approximately 90% to 95% of European real estate lending (Figure 8). This contrasted sharply with the US where bank lending accounted for just over half of lending activity owing to greater diversity in the sources of debt that included direct lending by institutions, a more evolved corporate bond market and a substantial securitised debt market. The high concentration in one source of debt provision in Europe increased the fragility of the banking system and following the downturn in CRE markets, created a credit drought that contributed to the GFC and slowed the recovery.

²⁴ CBRE, European Commercial Real Estate Debt - a Long, Unwinding Road, Emea Viewpoint, January 2014.

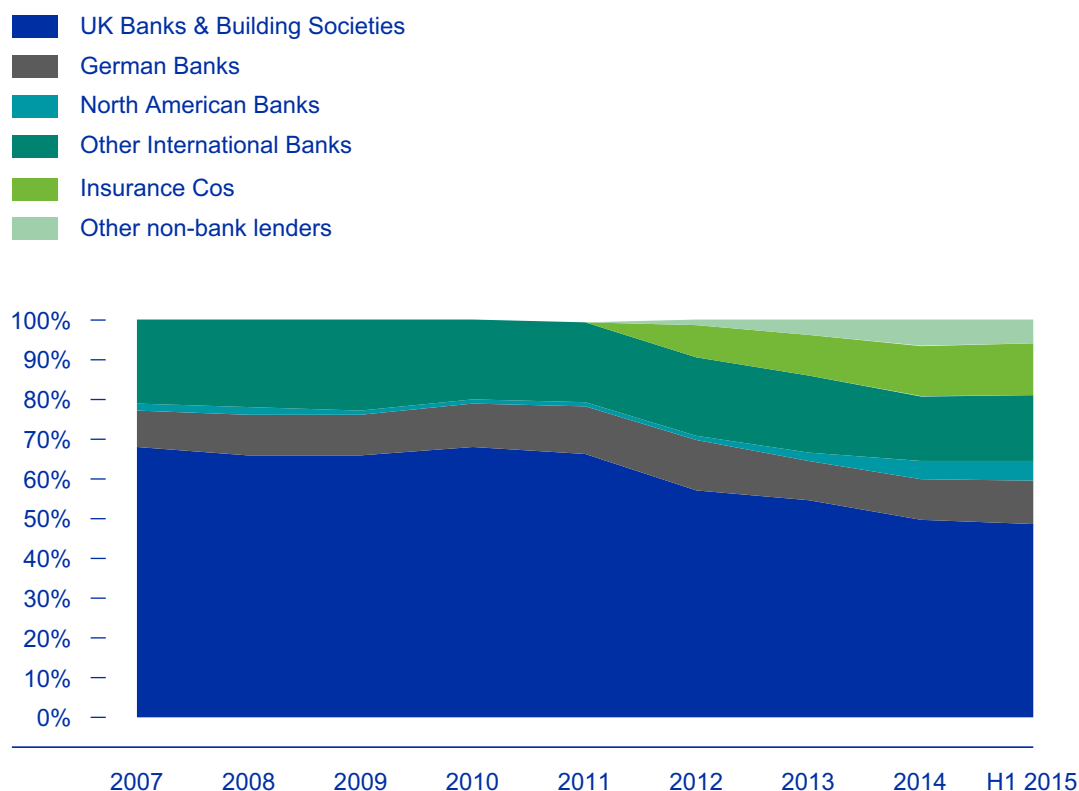
Figure 8 Historical Structure of CRE Market Europe v US

Source: INREV (2012); US Federal Reserve (2012)

The scarcity of CRE debt from traditional banking sources was sustained (in part because of the post-crisis regulatory focus on banks) in the years immediately following the GFC and given latent demand, this created an opportunity for a range of new lenders. Insurance companies increased their activity both directly and as third party managers of institutional capital, with a range of non-listed debt funds emerging to further enable institutional investors to access real estate lending opportunities indirectly. In addition to funds established for the purpose of lending, a range of more opportunistic debt funds emerged to exploit the opportunity in distressed debt, which have proved instrumental in helping European banks dispose of unwanted pre-crisis exposures and unlocking the availability of new bank lending. As new lending has gathered pace, the range of banks and non-banks willing to participate in a growing CRE loan syndication market has also expanded significantly.

As a result, the structure of the CRE debt market has changed significantly since the GFC. While banks remain a major source of CRE debt, their share of new lending has reduced in favour of insurance companies and non-listed debt funds. Analysis of the UK lending market for 2015 indicates that banks accounted for 75% of new CRE lending with insurance companies and debt funds comprising 16% and 9% respectively.

Figure 9 Outstanding Debt Secured on UK CRE Assets by Source of Lending 2007 to H1 2015

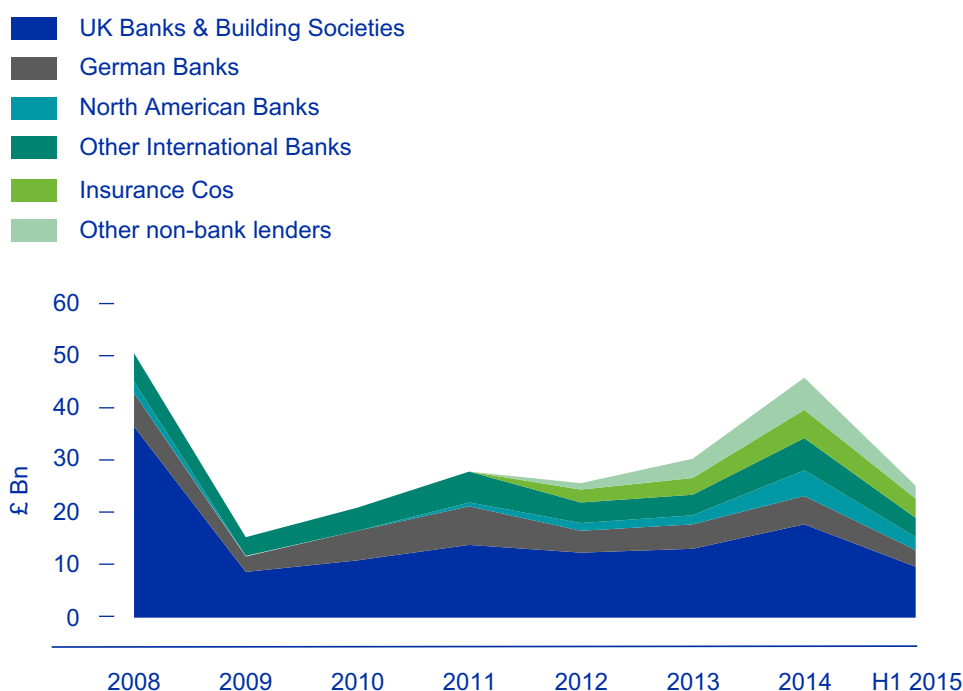


Source: INREV (2014); DMU (2015)

Although this illustrates the strength of increased appetite from alternative lenders, with insurance companies growing their share ten-fold, the shift in the market is even more evident when the source of new lending is considered (Figure 10). The banks' share of new originations decreases to 76%, while that of debt funds increases to 10%. Regulation has almost certainly played a role in the particularly sharp decrease in the market share of UK banks in particular (from 68% in 2007 to 48.6% of outstanding debt in mid-2015, and from 58% in 2007 to 39% in mid-2015 of new loan originations). Moreover, this data does not include the sale of NPL portfolios by banks, primarily to specialist debt investment platforms. If this transfer of some €30 billion of debt within the UK alone is included, the proportion of loans held by debt funds increases sharply²⁵. Taking this into account, the total share of all new CRE lending in Europe accounted for by all banks in 2014 is somewhat lower at approximately 55% (Figure 11).

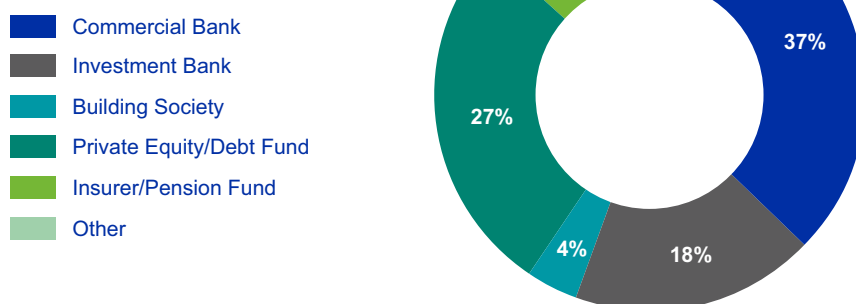
25 Cushman and Wakefield (2015), European Real Estate Loan Sales Market.

Figure 10 Volume of Loan Originations by Source of Lending 2008 to H1 2015



Source: INREV (2014); DMU (2015)

Figure 11 European CRE Originations by Source of Lending (%)



Source: C&W Corporate Finance, AXA IM – Real Assets (data as at 2014)

CRE debt is a good fit for long-term savings and it is appropriate that investors seeking to match their assets to longer-term liabilities are providing CRE debt. Moreover, their involvement is helpful for the overall diversification and resilience of the financial system as it dilutes the concentration of CRE debt held by banks, which are generally short-term funded and therefore undertake maturity and liquidity transformations when lending against CRE. The growing role of institutional capital and longer-term savings in the CRE debt market therefore serves to enhance financial stability more generally, as well as delivering stable long-term income and supporting the overall contribution of CRE to the economy.

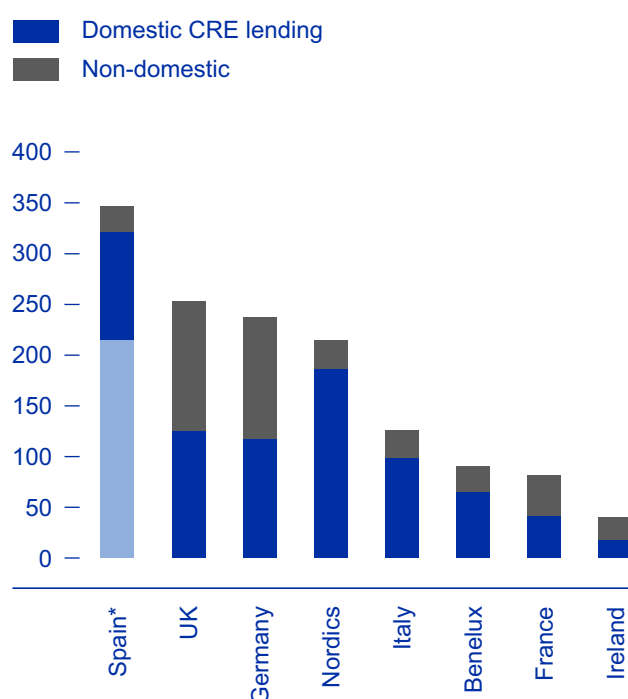
The underlying business objectives, internal processes and regulatory considerations diverge significantly across the range of lenders by type and between discrete segments within each type of lending source. These differences strongly influence lending strategies, with each lending source having a clearly defined risk return appetite and lending criteria, skewed by intentional and unintentional consequences of new regulation. As a result, different types of lenders focus on specific tranches of debt and relationships between them are both competitive and collaborative.

4.1 Sources and Segmentation of CRE Debt Post-Crisis

4.1.1 Banks

Banks remain the largest provider of CRE debt. In the years preceding the crisis European banks amassed an estimated €2.4 trillion of outstanding CRE loans. Estimates by the European Banking Authority (EBA) in 2011 indicated that the exposure was not evenly distributed across all markets. Although Spain had the largest accumulation of CRE debt it differed to other markets as it was highly concentrated in the residential development market. Indeed, there is little consistency in official data as to what constitutes CRE debt,²⁶ with most not distinguishing commercial real estate from the residential development of homes for sale. UK and German banks held large exposures to CRE debt and together with France, were also characterised by a high exposure to non-domestic real estate. Italy and notably Ireland amassed exposure to CRE debt that greatly exceeded their market size (Figure 12). Subsequently, banks have sought to reduce their exposure both absolutely and relatively as a percentage of total lending. This may be illustrated using the profile of UK bank lending, which demonstrates that outstanding debt decreased by 45% from Q4 2009 to Q2 2015. However, the pace of de-leveraging strategies varies across countries and organisations. The UK and Irish banks, perhaps reflecting the scale of distress within their legacy loan portfolios, made provision earlier and faster than in other European markets. The UK market, primarily London, also benefitted from greater liquidity and a relatively faster recovery than other CRE markets.

Figure 12 Domestic v Non Domestic CRE Lending by Country of Lender

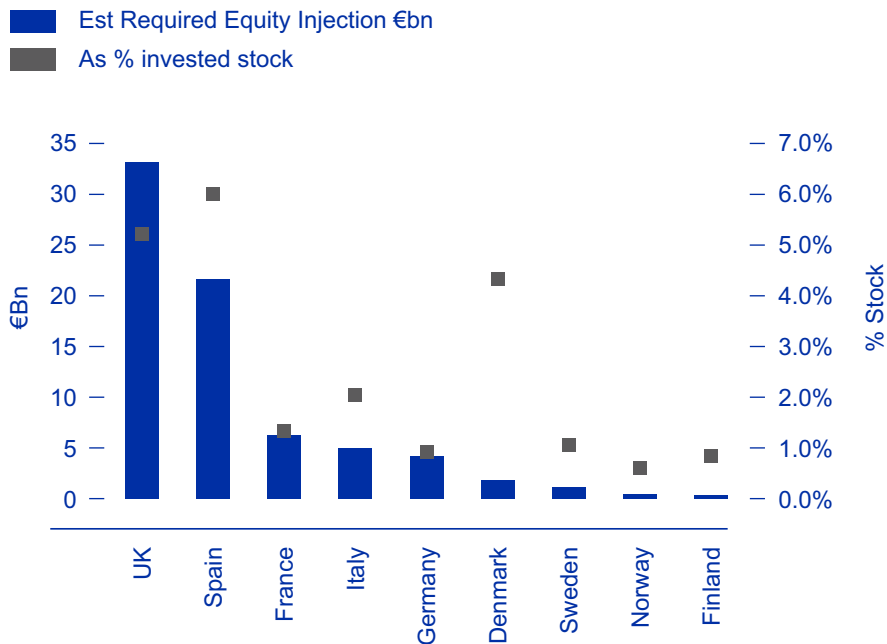


* Residential lending estimated at 2/3 of domestic lending; figures predate SAREB
Source: EBA, Morgan Stanley Research, AXA - IM Real Assets (data as of 2011)

Over-exuberance by some – but not all – bank lenders during the CRE boom resulted in lending at high LTVs and low ICRs (Interest Coverage Ratio) at the peak of CRE market pricing and rental levels. As real estate values collapsed as rental values fell, yields rose and the risk of tenant failure accelerated during the downturn, lending criteria tightened. This resulted in the emergence of what became known as the ‘debt funding gap’ which immobilised further bank lending. The absence of data recording the size of bank loan books makes it difficult to make an accurate assessment of loan book restructuring in other markets. However, estimates indicate that the capital shortfall stemming from excessive lending at the peak of the market was greatest in the UK, Ireland, Spain and Denmark (Figure 13).

²⁶ The data challenges relating to European CRE markets, specifically from the point of view of financial system resilience, were noted by the European Systemic Risk Board in its December 2015 report on CRE and Financial Stability. (see [here](#))

Figure 13 CRE Debt-Equity Gap by Country

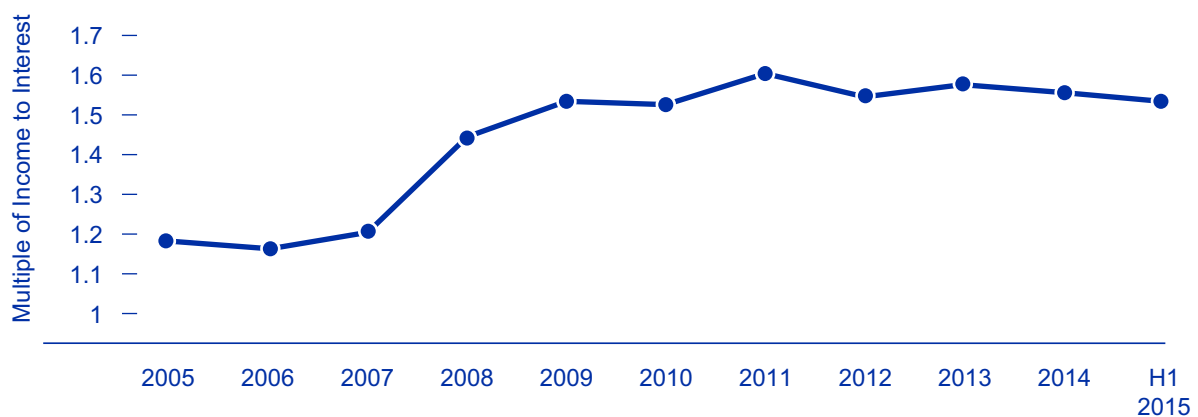


Source: DTZ (2013)

In essence, the funding gap represented a shortfall of equity rather than debt and stemmed from two components. As real estate values fell, maximum LTV covenants in loan agreements were breached, requiring an equity commitment to restore the covenant. However, given banks lent at the highest LTVs as values approached their peak, this led to a proportion of bank loans being larger than the post GFC value of the assets securing them. Even loans that avoided covenant breaches in many cases required a significant equity injection when they came to be refinanced in much more cautious lending markets after the crash.

Additionally, more restrictive lending criteria post-crisis resulted in a sharp reduction in prevailing loan-to-values for senior lending. Detailed historical data across and within markets is not available, however the De Montfort University (DMU) survey of lenders providing debt on assets in the UK illustrates these trends. The availability of stretched, junior or mezzanine finance for new lending from banks evaporated. In addition, the marginal cost of debt rose sharply and at the same time, the minimum ICRs and debt service coverage ratios (DSCRs) that banks were willing to accept increased (Figure 14).

Figure 14 ICR Multiple for New Loan Origination 2005 to 2014

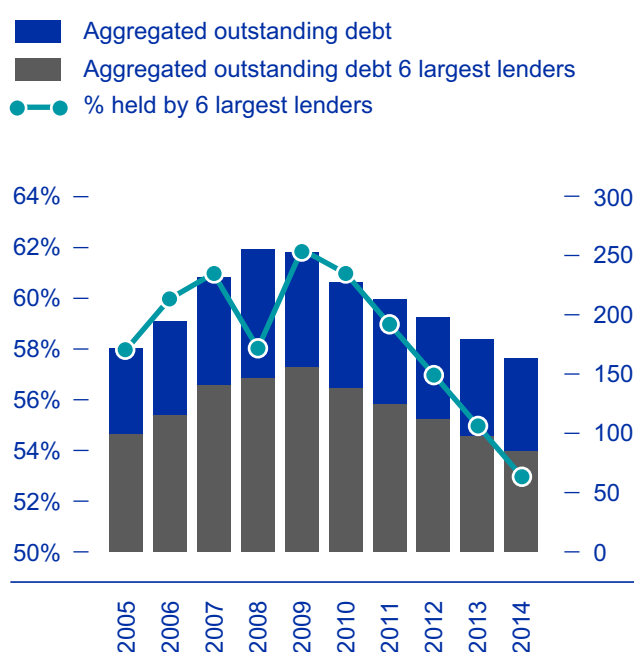


Source: DMU (2015 H1)

The economic downturn increased the probability of default as occupier markets came under pressure, posing risks to ICRs and DSCRs. Falling CRE values increased the loss given default as the underlying collateral was no longer sufficient to compensate for foreclosure. Although banks were exposed to a higher default risk, they pursued a policy of extending and amending loans that were still being serviced in the years immediately following the crisis with the aim of minimising losses through managed workouts and the anticipation of an eventual value recovery as markets revived. With capital tied up in managing legacy portfolios for such an extended period, there was little liquidity in the CRE debt market.

This was exacerbated by CRE lending being highly concentrated in one type of lending source, and within it, in a small number of banks. In the years preceding the crisis, real estate lending became increasingly concentrated and by 2009, six real estate lenders accounted for 62% of the £250 billion secured by commercial real estate in the UK. By the end of 2014, the aggregate loan book of the six largest lenders had shrunk by 56% to £68 billion, representing 53% of outstanding debt on balance sheets at year-end (Figure 15).

Figure 15 Concentration of Outstanding CRE Debt 2004 to 2014



Source: DMU (2015)

In an effort to safeguard the banking system from periods of market liquidity stress, Basel III increased bank liquidity and capital funding requirements. Basel III reinforces the requirement to risk weight assets introduced in Basel II. The Basel Committee on Banking Supervision sets out the guiding principles, with their interpretation and application determined in Europe at EU level, and again at national level. Under Basel II, banks are required to 'risk weight' every loan to determine the required regulatory capital buffer using a range of possible frameworks. One of these, the 'standardised approach', prescribes risk weights by asset class with little or no risk differentiation. A range of more sophisticated approaches are risk-sensitive, using either a basic model laid down by the regulator (slotting – discussed further below) or internal ratings-based models developed by individual banks.

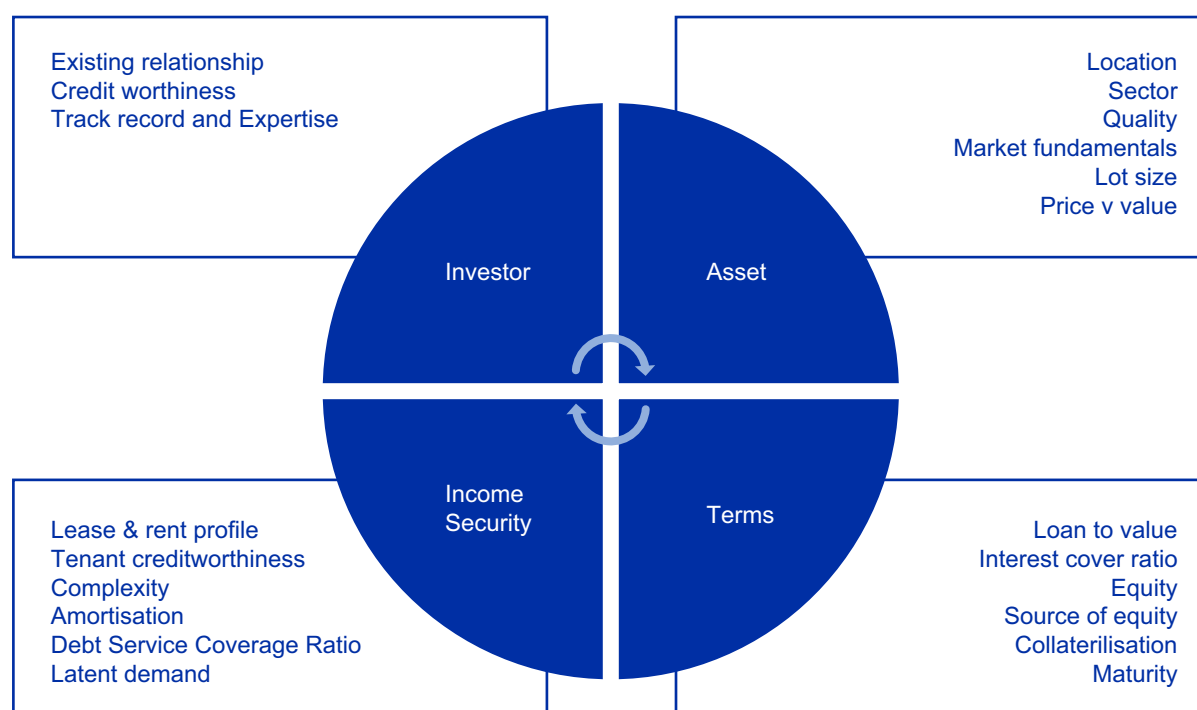
Most national regulators within the EU allow at least some of the banks they supervise which use IRB (Internal Rating Based) models also to gain approval for an IRB model for their income-producing real estate (IPRE) exposures. However, the Basel II framework also provides a fall-back approach for IRB banks to use when the regulator is not willing to approve an IRB model for certain, more complex and heterogeneous exposures (specialised lending exposures). IPRE is one type of specialised lending exposure. The fall-back approach is widely known as supervisory slotting, and it provides a crude and prescriptive mechanism for real estate loans to be allocated a risk weight. In the aftermath of the

financial crisis, the Prudential Regulatory Authority (PRA) in the UK introduced slotting for all UK IRB banks. International banks operating in the UK through a branch are regulated by their home domicile. As a result, banks subject to different supervisory regimes are likely to ascribe different risk weightings and therefore capital costs to an identical loan.

Reducing exposure to higher weighted real estate exposures has a disproportionately beneficial impact on balance sheets. In the aftermath of the GFC, banks focused on reducing their exposure absolutely, but also relatively by improving the quality of their loan books. A number of prominent UK, French and German lenders withdrew from real estate lending temporarily, while other previously dominant UK and Irish banks were transferred into state ownership and ceased new real estate lending activity entirely.

Banks that continued to lend from 2010 to 2013 increased the rigour of their due diligence and narrowed their lending criteria (Figure 16). As well as adopting more stringent loan terms including lower LTVs, higher DSCRs and ICRs, and higher margins, lending activity centred on prime, income secure assets in principal cities. Amid heightened risk aversion, lenders were keen to avail themselves of the low risk, high return lending opportunities that the scarcity of funding had created with strong sponsors in prime markets. For banks, the high margins on even low risk lending enabled them to achieve their returns from lending to good quality sponsors active in the prime market and at the same time, improve the quality of their lending portfolios in line with new regulation.

Figure 16 Expansion of Bank Lending Criteria



Source: Genesta (2013)

Bank lending activity in the regions was dominated by refinancing; the availability of new lending in regional markets shrank and where finance was notionally available, the higher marginal cost made it prohibitively expensive. Initially this was supply led, but a weak real estate market resulted in correspondingly low demand for CRE debt from investors. This became a vicious circle, with the low availability of debt in the regions acting as an impediment to CRE development and investment. The scarcity of CRE debt thus resulted in a deterioration in the quality of stock, with the low availability of modern, efficient space deterring inward investment from other sectors. This exemplifies the importance of a functioning and appropriately financed CRE sector to the economy.

Although lending to SMEs remained a high proportion of major banks' loan books, new lending was greatly diminished, except for refinancing of legacy loans. In part this was demand led as recessionary economic conditions and austerity measures further weakened real estate fundamentals. At the same time buildings costs remained inflationary as a result of strong emerging market demand for commodities.

Being focused on improving the quality of loan books, not merely reducing the total amount of outstanding debt, banks began to sell loan portfolios comprising non-core and/or non-performing loans to third parties, usually at a discount to par value. Banks with impaired balance sheets were assisted by the creation, in a number of European countries, of asset management agencies and/or 'bad banks', which enabled the ownership of non-core and non-performing loans to be transferred out of the mainstream banking system. There was increasing investor appetite for distressed debt and NPL portfolios, especially through the sharp growth of specialist hedge funds and private equity funds that closed from 2012 onwards. These distressed debt investment specialists proved instrumental for increasing the speed of bank loan book restructuring, thereby enabling the more systemically important lenders within the financial system to release and recycle capital tied up in problematic pre-crisis loans. The growth of non-listed NPL funds has also enabled state owned asset management agencies to unwind their positions at a faster rate.

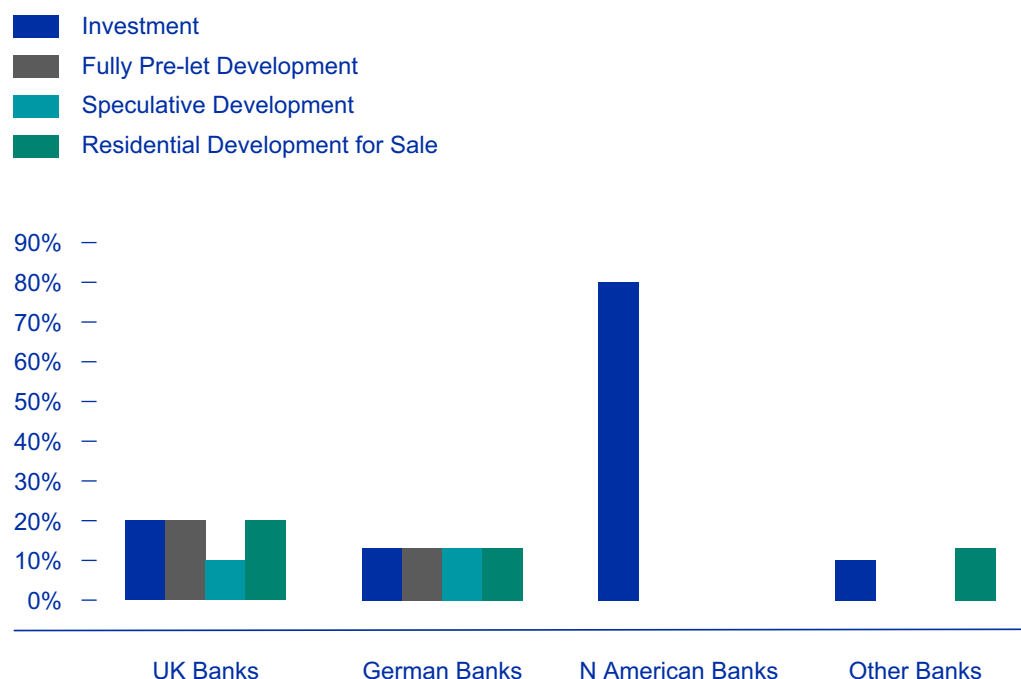
Following successful restructuring of balance sheets to meet the capital adequacy and reporting requirements of Basel II/III and as CRE markets began to recover, banks began to accelerate their lending activity. In the UK, the DMU survey indicates that the value of loan originations by UK and German banks increased by 29% in 2014. However, their share of loan originations in the market declined by 7.5% and their volume of outstanding debt fell by 8.5%. In Germany, data from IREBS indicates that loan books increased by 1.9% over 2014. With the balance sheets of German lenders repaired, the focus is on new lending and growing loan portfolios, with a continuing emphasis on loan quality²⁷.

The greater diversity of sources of CRE debt post GFC is a positive development that helps to reduce the risk of a credit squeeze reoccurring. Nevertheless, the resurgence of bank lending is of critical importance to the economy. In contrast to other CRE lenders, the sheer scale of bank lending means they remain the primary source of financial liquidity in the economy. The scale of lending enables their debt portfolios to have a wider market scope, range of products and a more diverse customer/ borrower base, including a high proportion of lending to SMEs in comparison to all other types of lenders. In this respect, bank lending plays an important role in the distribution of capital across regions and projects, and between large, small and medium-sized enterprises, and is pivotal to a distributed model of economic growth.

Equally, while senior loans account for the largest proportion of loan book activity, banks have traditionally been the largest provider of mezzanine finance. In the period following the GFC, many banks reduced or withdrew the provision of mezzanine finance. Some banks have renewed subordinated lending, with provision limited to situations where they have underwritten senior loans (Figure 17). In order to access business, some banks originate whole loans and immediately syndicate or sell down the mezzanine portion. This also allows banks to reduce specific risk through diversification. The growth of non-listed funds offers a conduit for banks to sell on subordinated loan portions and also profit from their ability to originate and underwrite new business. Many non-listed funds do not operate a lending desk, but originate loans indirectly through syndications and relationships with other lenders.

²⁷ IREBS (2015), German Debt Project.

Figure 17 Active Banks offering subordinated lending at mid 2015 (% of lenders)



Source: DMU (2015)

Banks are a major source of development finance and for many small developers they are the only providers of credit aside from the growth of peer-to-peer (P2P) lending. Development finance is critical for the real estate market and for the wider economy in a number of ways. First, development activity is a catalyst for urban regeneration. The rejuvenating of civic centres through the provision of economic, social, transport and communications infrastructure underpins new employment and investment, as well as improved quality of life indicators, creating an upward spiral of economic growth. Second, existing business infrastructure is redeveloped and refurbished with modern, efficient buildings enabling increased productivity for business and lowering carbon emissions. Third, the construction period provides a major source of employment to lower skilled workers. The high multiplier effect associated with such activity acts as a stimulus for the local economy with long-term improvements in quality of life indicators.

4.1.2 Insurance Companies

There is an obvious natural alignment between the long-term liability profile of life companies and the long-term nature of CRE, and this has made CRE an attractive asset class to which insurers can allocate capital. In the United States, insurance companies have long also been a significant source of real estate debt, which has similar long-term characteristics to CRE investment. However, their activity in the European market has been subdued until recent years. Post-crisis, insurers were attracted by the strong risk adjusted returns offered by senior debt secured on relatively low risk real estate assets. In some cases, CRE lending also offered advantages in terms of regulatory capital charges.

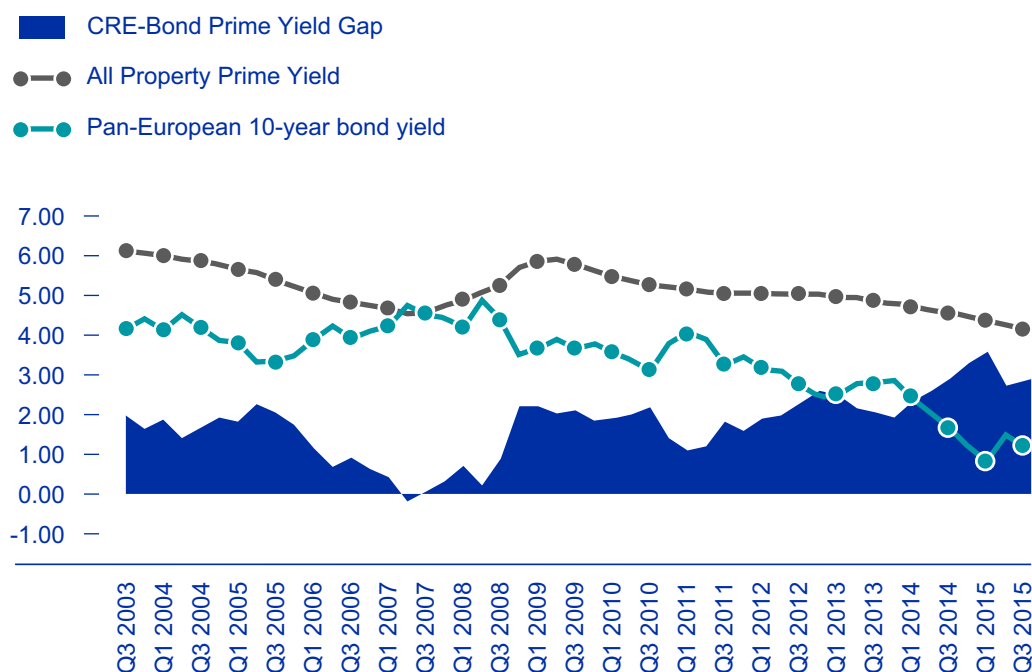
The asset-liability duration matching requirement for insurers focuses investment strategies on low-risk, long-duration, stable income producing investments. As a result insurance companies' assets under management (AUM) have a high weighting to fixed income debt products, with a preference for sovereign debt (45%) and, to a lesser extent, corporate debt (36%)²⁸.

In the low interest rate environment that has followed the GFC, insurers seeking to match long-term liabilities to fixed income products have been attracted to the higher spreads offered by secure, longer-dated CRE debt. In the search for yield, CRE debt also became attractive to general insurers

²⁸ Curlow, J. (2015), The Role of Insurers as Investors in REF Transaction, The Real Estate Loan Book.

seeking secure, shorter-term investments that offered an attractive risk adjusted yield relative to other fixed income products (Figure 18). This difference in required duration has also resulted in insurers developing separate investment strategies and products for these different investment objectives.

Figure 18 European CRE Prime Yield Spread with Bonds



Source: CBRE, PMA, DataStream, AXA IM – Real Assets (data as at October 2015)

From a fixed income perspective, senior CRE loans of a similar credit rating to corporate bonds offer investors a higher yielding alternative to compensate for less liquidity and transparency associated with CRE debt. The rise in CRE debt spreads against comparable corporate bonds for prime, income secure assets ranged from 200-300 bps in 2012/2013 due to the scarcity of bank finance rather than any escalation in the underlying credit risk. As such, this over-compensated for the additional risk. Since then, increasing appetite by alternative debt providers, including insurers, as well as the more recent re-emergence of banks, lowered this premium to 100-200 bps by early 2014. However, given the illiquidity and transparency risks, a spread over corporate bonds is warranted.

Similarly, from a real estate investment perspective, the available risk adjusted returns of providing real estate debt were comparatively more favourable than investing equity in real estate. Again, the scarcity of debt provided for an interest rate margin of 300 bps on prime, income secure assets with no escalation in the underlying credit risk. Given the low risk of default, recourse to the underlying asset in the case of non-performance and the more protected position within the capital stack that senior lending provides temporarily resulted in a superior risk adjusted return over real estate equity.

The recovery of Europe’s prime real estate markets (both occupational and investment) and increased competition from the growth in alternative lenders eroded margins significantly from 2014 and the first half of 2015. However, they remain significantly higher than during the credit boom of 2006/7.

Although the out-sized returns achievable from both a fixed income and CRE investment perspective have diminished, insurers’ appetite for CRE debt is still increasing. In part, this is due to regulatory pressures.

The European Commission adopted the Solvency II Delegated Acts in October 2014, which were published in the Official Journal on 17 January 2015. The regulatory framework continues to evolve, with the capital calibrations coming into force on 1 January 2016 already being revised as part of the European Commission’s Capital Markets Union initiative.

Solvency II increases the opportunity cost of investing capital in direct real estate. With broadly similar objectives to Basel II and III for the banking industry, Solvency II seeks to make insurance firms safer and reduce systemic risk in the financial system. The proposed regulations attempt to achieve this by requiring assets to be risk weighted in calculating capital adequacy requirements, with CRE equity investments subject to significantly higher-risk weightings than fixed income products, including most exposures to CRE debt. Different forms of CRE debt products held by EU insurers are subject to different capital charges under the standard model, with exposures to covered bonds backed by CRE loans attracting very low charges and progressively higher charges for highly rated CRE loans, unrated loans and lower rated loans.

Securitised debt products are the exception. Commercial mortgage backed securities (CMBS) are subject to a higher risk weighting than CRE equity, even for AAA rated tranches. Although the CMBS market offers greater liquidity and transparency than direct holdings, enabling portfolio diversification benefits, the classification of CMBS as 'Type 2' securitisation carries a much more punitive capital charge than other types of CRE lending and also CRE equity holdings²⁹. As a result, insurers have increased allocations to direct lending, syndicated positions and allocations to look-through debt funds at the expense of CMBS products.

Solvency II also allows longer-dated real estate debt investments to be eligible for the matching adjustment. The business of insurance generates long-term liabilities which are required to be matched against secure income from similarly long-dated assets. Where the duration of assets is sufficiently closely matched to that of liabilities, a matching adjustment is allowed, which provides for a higher discount rate and removes the requirement for risk weighting. As insurers are not subject to banking regulations, they benefit from a lower opportunity cost of capital than bank lenders who are subject to the risk weighting requirements of Basel II/III. This competitive advantage further incentivises insurers to increase allocations to real estate lending. Secure income from long-term real estate equity investments is not eligible for the matching adjustment.

Post-crisis, insurers have greatly increased their activity in direct lending. In the UK their share of new CRE lending had increased to 13% by mid-2015 and they have been similarly active in Germany and France, although they have been less significant outside Europe's core markets. Nevertheless, their share of total new European CRE lending over 2014 is estimated at 10%³⁰. In addition to market movements, these regulatory influences point towards European insurers increasing their total asset allocation to CRE debt towards 10% by 2020³¹.

The volume of capital to be invested requires large lot sizes and together with the objective of minimising risk, this has tended to limit insurer activity to the provision of large ticket sizes of low risk senior debt at relatively low LTVs, secured on prime assets owned by institutional grade borrowers. Insurers have been able to compete within the principal office and retail sectors, but tightening margins and limited lending opportunities are widening the sector mix to include hotels, student housing, the private rented sector and healthcare.

In addition to their direct involvement in the market, insurers are also accessing the market indirectly through their investments in non-listed debt funds. Indeed, some insurers have capitalised on their expertise in fixed income and CRE investment and invited third party investors (often smaller insurers and pension funds) to co-invest in CRE debt through developing their own non-listed debt funds. Such funds are typically focused on medium term durations compatible with the wider lending market and are not employed for duration matching.

CRE investments in debt and equity have not traditionally had a separate allocation within an institutional investor's multi-asset portfolio. CRE debt may be included as part of a broader fixed-income allocation or a portfolio's CRE equity exposure, in part depending on the risk profile of the CRE debt investment. Some insurers have been merging CRE equity and debt teams and holdings, recognising that added value may be extracted by leveraging combined knowledge and managing risk exposures across the capital stack and through the cycle.

²⁹ Ibid.

³⁰ Morgan Stanley, March 2014.

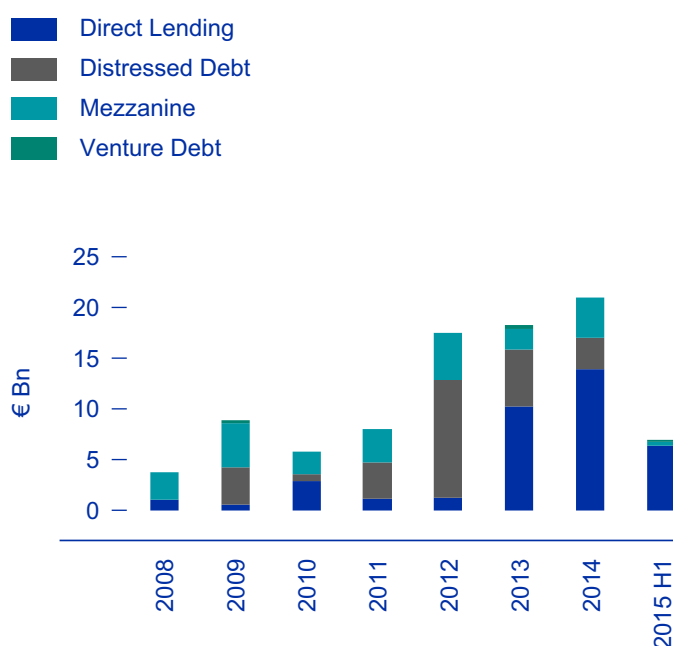
³¹ Morgan Stanley, March 2014; Curlow, J. (2015), The Role of Insurers as Investors in REF Transaction, The Real Estate Loan Book.

4.1.3 CRE Debt Funds

As regulatory developments and legacy loan books constrained the supply of debt from banks, investor appetite for the strong risk-adjusted return available through the provision of CRE debt increased sharply. This created an opportunity for private equity and hedge fund managers to raise funds specifically for CRE debt investment. Some of these managers have listed their CRE debt funds, or have access to permanent capital from listed US CRE debt vehicles, but the large majority of these funds are private, non-listed vehicles. The number and value of European real estate debt funds has grown rapidly over the past five years, with some 171 funds closing between end 2007 and H2 2015, representing over €100 billion of invested capital³².

While some funds have wide discretion, it is possible to classify most CRE debt funds by their strategy and risk profile. Most funds target specific debt tranches across the risk spectrum including senior, stretched senior, junior and mezzanine finance (Figure 19). In addition, distressed real estate debt funds emerged which differ from other real estate debt funds in that they specialise in extracting value from sub-performing and non-performing loans (NPLs) purchased at a discount and are generally not active in new lending. These NPL specialists have played an important role in allowing banks (and indeed national asset management agencies) to clear up their balance sheets by off-loading NPL and non-core loan portfolios, freeing up capital for new lending and resolving intractable historic positions. That, in turn, has allowed buildings that had been overburdened with debt once again to attract new equity investment. Together, CRE debt funds are estimated to have grown their share of annual European CRE debt origination from very low activity pre-crisis to 26% by end 2014³³.

Figure 19 CRE Debt Funds



Source: Preqin (2015)

To achieve returns pledged to investors in this more competitive market, most funds are refocusing on particular opportunities in the market rather than raising LTV thresholds. CRE debt funds have started to seek out premium opportunities, specialise or move up the risk curve. Strategies differ across fund managers. Different fund managers are able to exploit their wider experience, often in CRE equity investments, of particular regions or sub-sectors to achieve target returns. For example, a number of funds are focused on providing debt products to alternative real estate sectors such as student housing and are able to capitalise on specialist expertise gained through previous equity investing in the sector, other investors have a strong depth and experience of investing in particular regional

³² Preqin (2015), Private Debt in Europe.

³³ Curlow, J., Where next for Real Estate Lending in Europe, Axa Real Estate Investment Managers, Presentation to Association of Property Lenders and SPR 'The Future of CRE Lending in Europe', Seminar July 2015.

markets, while other investors' scale, knowledge and expertise of fixed income structured products allows them to capitalise on originating and syndicating whole loans involving stretched senior and/or junior and mezzanine tranches. Other fund managers have renegotiated target returns with investors, or returned capital.

(i) Senior CRE Debt Funds

Senior CRE debt funds represent the largest share of the European CRE debt fund market by number and by value and account for €34.4 billion of capital raised since the end of 2007. These funds initially emerged to exploit the scarcity of real estate finance in the wake of the GFC, which enabled debt capital providers to benefit from out-sized returns for relatively low risk lending. The market offered margins of circa 300 bps on loans secured on income secure assets in prime markets at LTVs of 50 to 60%. Early senior debt funds had a narrow focus on loans to strong sponsors, secured on prime, income secure assets which offered debt investors strong risk adjusted returns in the context of heightened market uncertainty and risk aversion. In exploiting this risk arbitrage opportunity in the paralysed markets of 2009-11, they provided a much needed source of credit to the economy, allowing transactional activity and equity investment to resume and helping to restore market confidence for larger and more conservative institutions.

Following the activity and success of these pioneering CRE debt funds, other lenders began to emerge and reawaken and the period of market disequilibrium passed for the prime end of the market. Another factor was the dominance of low-leverage and all-equity investors in the prime market. Nevertheless, senior lending continued to offer a strong risk adjusted return relative to alternative fixed income products until bank lending expanded from 2014, increasing competition in the senior debt market and driving margins for prime assets down from the levels reached at the height of the GFC. However, the mispricing of regional markets and/or secondary assets relative to prime increased until mid-2014 when it stabilised in Europe's core markets, with pricing corrections beginning in the strongest markets over 2015.

(ii) Junior and/or Mezzanine Debt Funds

Subordinated debt funds that may include junior or mezzanine finance, take a second (or, depending on the number of debt tranches, a third) lien on the underlying asset. Traditionally, subordinated lenders seek a higher rate of return for which they are prepared to take on more risk by providing a layer of debt above the more conservative threshold applied by senior debt lenders.

Immediately post GFC, the degree of risk aversion and scarcity of debt provided an opportunity for alternative lenders to capitalise on the sharp contraction in lending and evaporation of subordinated lending from traditional sources. Few bank lenders were prepared to offer subordinated terms and at the same time, thresholds for all debt tranches were lowered. At its extreme, maximum senior lending fell to LTVs of 55% in 2008 for prime, income secure office assets in the UK if stringent ICRs and DSCRs were met, and maximum LTVs for mezzanine finance shrank to 70%. Thus, mezzanine finance fell comfortably within the former range of senior lending. Moreover, prime real estate values had fallen sharply in many markets ensuring that the downside risk to further asset value falls was limited.

Immediately following the downturn over one hundred potential lenders, primarily debt funds, expressed interest in providing junior and mezzanine finance for returns in excess of 20%. The premise was based on the expectation of a market flood of borrowers seeking mezzanine finance to help bridge their financing/re-financing requirements given falling values and lower LTV thresholds for senior lending. However, that flood failed to materialise, partly because senior debt was either unavailable or too expensive for the combination of senior and junior debt to be affordable.

Although margins for mezzanine debt provided by funds have moderated they remain elevated and significantly higher than mezzanine debt margins offered by banks. The higher margin is warranted as it reflects a higher specific risk. Given the smaller scale of the loan books of debt funds in comparison to bank lenders, there is less opportunity to ameliorate risk through diversification and outcomes for higher risk lending tend to be more binary. Nevertheless, LTVs have increased and expected internal rates of return (IRRs) have been revised down to between 7.5% and 17%. The wide range of returns reflects differences in risk exposure according to the focus of funds and their position within the subordinated lending market.

CRE debt funds that are willing to go to higher LTVs than senior lenders are likely to remain an important source of capital for highly leveraged borrowers. Although some banks have reopened subordinated lending, their activity in this sphere remains limited in scale, scope and risk appetite. The blended cost of such borrowing will often be manageable, based on an appropriate base of low cost (low risk) senior debt and a slice of more expensive (higher risk) non-senior debt.

(iii) NPL / Distressed Debt Funds

The growth of funds targeting distressed debt and NPL portfolios accelerated from 2012 to 2015 and is estimated to account for 28% of CRE debt funds targeting Europe. The amount of capital they can deploy is greater than that, as these opportunistic funds are typically leveraged with loan-on-loan finance.

The volume of NPL deals increased from €82.1 billion to €85.9 billion in 2015³⁴ and activity levels are expected to continue through 2016³⁵. Excluding pure residential and REO bulk portfolios, non-listed funds represent 81% of NPL sales closed in 2014 by par value, totalling €49.2 billion, or 5% of the aggregate CRE debt that had been on European bank balance sheets. The funds are estimated to have acquired loans at an average discount of 44% to par value³⁶.

Most specialist NPL funds are not lenders providing new debt to the market. Their role is nevertheless crucial, providing a mechanism through which pre-crisis loans are resolved. They are the catalyst that frees banks from exposures they no longer want, while facilitating liquidity and new investment in Europe's real estate after a long period of stagnation. While activity has been strongest in the UK, Ireland and to a lesser extent Germany, activity in Spain is accelerating and 2014 and 2015 saw activity spread to new markets (Figure 20). Other markets, including Italy and Poland are expected to follow³⁷. However, there are important differences in legal structures across markets that impact on the viability of loan sales³⁸. NPL funds will only acquire loans where the law will allow them to manage out underlying positions within a reasonable time-frame through foreclosure.

34 Data represents face value of outstanding loans.

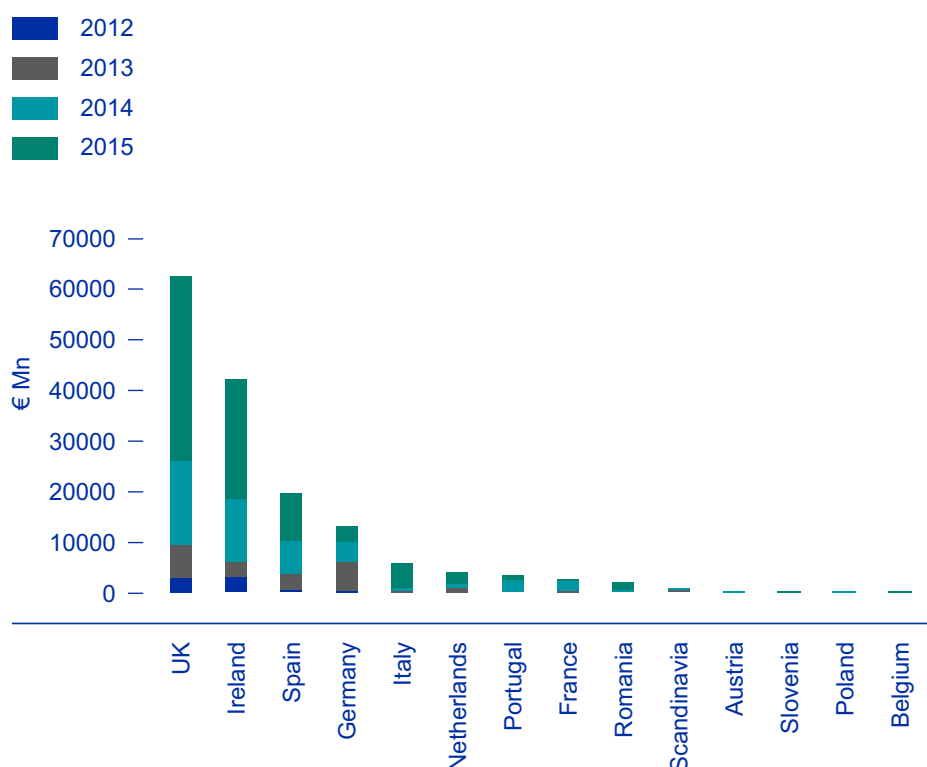
35 Cushman & Wakefield (2015), European Real Estate Loan Sales Market Q2; Cushman & Wakefield (2015), European Real Estate Loan Sales Market Q4.

36 CBRE, European Commercial Real Estate Debt, January 2015.

37 Ibid.

38 Ibid.

Figure 20 NPL Loan Sales By Country 2012-2015



Source: CBRE (2015); Cushman & Wakefield (2016)

4.1.4 CMBS

Commercial Mortgage Backed Securities (CMBS) are bonds typically backed by a number of CRE loans. The bonds are usually issued in different tranches, with external ratings obtained for most, if not all, tranches. Each tranche has a different rank for prepayment, and the interest, or coupon, payable to bondholders corresponds to the risk of their investment (with the most senior tranche paying a lower coupon than more junior tranches). As public bonds, CMBS greatly increase the liquidity, comparability and transparency of CRE loans by converting indivisible, illiquid loans into securities with differentiated risk and return characteristics that may be easily traded on a secondary market, providing portfolio management benefits.

The European CMBS market grew consistently from its beginnings in the late 1990s until the credit crisis. The performance of CMBS has largely reflected the performance of the underlying CRE loan market of which it is a component. European CMBS backed by loans originated prior to 2005 performed well, and suffered no losses. However, CMBS proved not to be immune to the poor lending that occurred across European CRE markets as the peak of the last cycle approached. Mirroring the problems that have afflicted bank balance sheets, CMBS investors have seen many loans default, some bonds have seen their ratings downgraded and some bondholders have suffered losses.

This experience deterred many CRE investors from investing in this asset class in the wake of the GFC. Post-crisis regulation has sought to address investors' concerns by better aligning the interests of the parties by requiring the issuing institution (or another suitable transaction party) to retain 5% of the bonds value on their balance sheet. In other respects, however, regulation is reinforcing investors' reticence. Under Solvency II, CMBS is automatically treated as a "Type 2" securitisation and as such attracts a relatively higher weighting than both direct debt and CRE equity investments, regardless of the credit rating of the bond or the characteristics of the underlying loans, assets and cash flows. As a result, activity within the CMBS market remains muted. Regulatory arbitrage has directed CRE debt investment capital from EU insurance firms towards direct lending, the syndication market and the non-listed CRE debt funds and deterred investments in CMBS products. Since the end of 2008, only €39 billion of CMBS have been issued, in comparison to the €62 billion issued in 2007 alone.

4.1.5 Pfandbrief Market

Pfandbrief is a German covered bond collateralised by long-term assets such as property mortgages or public sector loans under the Pfandbrief Act. They are issued by mortgage banks and are considered the safest non-government bond in Germany. Pfandbrief are sometimes associated with asset-backed securities but they are fundamentally different, because Pfandbrief loans remain on the bank's balance sheet. In contrast, CMBS are off-balance sheet and investors take asset risk, having no recourse to the issuing bank.

This difference means that Pfandbrief investors have recourse both to the security and to the bank itself and as a result, the German state would likely intervene to prevent a Pfandbrief-issuing bank from failing and Pfandbrief investors from losing money. Pfandbrief covered pools have lower disclosure, transparency and reporting in comparison to the CMBS market.

The Pfandbrief market and the property mortgage Pfandbrief segment, in particular, have proven to be resilient to the consequences of the credit and economic crisis. As the CMBS and other covered bond markets collapsed, German Pfandbrief issuance remained strong and was even higher than in the pre-crisis period. In part this reflects the strength of the German banking sector, but it is also due to the risk criterion associated with debt that qualifies for the Pfandbrief market.

The primary requirement is that LTVs must be 60% or less. However, for these purposes LTVs are not based upon market values. Rather, valuations are referenced to a long-term value (Beleihungswert, or mortgage lending value), the calculation of which is legally prescribed (BeWertV) and deliberately conservative. The rental level used to determine income is the lower of the rent passing or the long-term average rent and similarly the yield adopted will be either the current or long-term yield, whichever is the more conservative. Thus, the LTV of 60% is in reference to the sustainable value of an asset over the long-term and, in a strong market, will represent a significantly lower percentage of market value. Using long-term value as a reference point for real estate lending has also been put forward as a recommendation for better governance of real estate finance in Europe with a view to reducing systemic risk³⁹. In the UK, proposals for the adoption of an approach along broadly similar lines have been endorsed by the Bank of England⁴⁰.

The Pfandbrief provides a very cheap form of refinancing for German banks, resulting in strong competition in the German senior commercial loan market. Currently, pricing for senior loans against prime assets is circa 80 bps, offering a 200 bps spread over comparable lending in Madrid.

39 ESRB, Report on Commercial Real Estate and Financial Stability in the EU, December 2015.

40 Real Estate Finance Group and IPF, A Vision for Real Estate Finance in the UK, May 2014. Brazier, A., Strategy and Risk and Member of the Financial Policy Committee, 'Nurturing resilience to the financial cycle', Speech given at Property Investor's Banquet, Bank of England, 19 October 2015.

5.0 Characteristics of Loan Books

5.1 Variation in Debt Availability by Geography and Type of Borrower

The availability, terms and cost of finance vary by country, across regional markets and by borrower type. To some extent, this divergence reflects the risks associated with lending into different markets and across a range of borrowers. Lending secured on prime CRE in the principal cities of Europe's core markets has a lower associated risk than lending on assets in large, regional cities in those same core markets owing to the greater scale, liquidity and transparency of those principal markets. Equally, risk varies by type of borrower. The borrower type is of greatest significance in those markets, principally in southern Europe, where lending is against the borrower covenant, it also impacts upon the risk associated with lending secured on assets. Large institutions and companies are considered to offer the lowest risk. They may be credit rated and their solvency, resources and track record may be measured. They also offer opportunities of scale for lenders due to the scope of their business as well as the size of individual loans.

There is an interaction between market size and borrower type, with large institutions and companies being most active in principal cities and SME activity being strongest in the large regional cities and dominant in Europe's smaller cities and towns. This has important consequences for the supply of capital and investment beyond Europe's major cities and to SMEs.

Although a more diverse range of lending sources has emerged, the strategic scope and customer base of lender types differ. The activity of insurers involved in direct lending is predominantly limited to principal cities and/or major assets and to large companies owing to the large loan sizes required to create management efficiencies. CRE debt funds also require management efficiencies in loan size and while they are smaller than those targeted by insurers lending directly they remain large. The sponsor is also important owing to the relatively small pool of loans within each fund that increase the specific risk of each transaction.

In contrast to other CRE lenders, clearing and savings banks have always had a large exposure to regional markets and to SMEs, and this is evident across countries (Box 3).

Box 3 Clearing and Savings Banks Lending to Regions and SMEs

The UK

Interviews with UK clearing banks indicate that approximately 50% of their lending book is in the regions, with the remaining 50% in London and the South East. Lending in the regions has remained relatively stable since the GFC as a proportion of the loan book, although the concentration of activity in central London has increased. In part this reflects the heightened risk aversion that persisted in 2010 to 2012 coupled with a lack of market liquidity. This presented active banks with a short-term opportunity to achieve strong returns for loans underwritten by exceptionally strong sponsors, at low LTVs and secured on prime, income secure assets in Central London. Subsequently, the growth of alternative lenders and a broader reawakening of bank lending sharply reduced margins for senior lending as competition increased, with the regulatory risk weighting ascribed to these low risk opportunities either through internal risk models or the more prescriptive slotting regime in the UK rendering banks uncompetitive in this segment.

Interviews with banks in the UK indicate that lending to SMEs for CRE investment and development also varies, but falls in the range of 20% to 30% of the loan book by value. However, this masks the importance of lending to SMEs in CRE which represent 70% to 85% of business when considered by number of customers. While this includes lending to high net worth individuals (HNWIs), it also includes a high proportion of small loans (less than €7 million) to private house-builders and contractors. CRE lending, by one major clearing bank in the UK, accounts for 15% of loans for residential development, ensuring the delivery of 20,000 new homes per year and supporting 100,000 jobs. Although some non-listed funds will provide

debt capital for residential development and student housing, the provision is often limited to large ticket sizes and developments that are sold on to institutional investors. In contrast, bank lenders offer a wide spectrum of loan sizes, ranging from €330,000 to over €1.3 million.

Although the construction industry includes a large number of SMEs, CRE debt is also used to support the SME economy more generally. For SMEs that do not own their premises, particularly new and growing businesses, the ability to rent space amounts to a quasi-financial business input from the CRE industry, facilitated by the capacity for such landlords to finance the CRE they own. SMEs that own their premises, on the other hand, use CRE holdings as collateral for secured lending, which previously enabled them to lower their cost of capital. It is easier for a bank to underwrite a loan to a small business when it can do so by reference to the value of the premises the borrower owns and is willing to provide as collateral. As a consequence, not only is the importance of CRE in unlocking finance for the economy easily underestimated; it is also easy to underestimate the extent to which banks are exposed to the performance of the CRE market.

The Netherlands

In the Netherlands, the relatively small domestic market compared to the scale of capital available results in the largest banks having approximately 50% of their loan book in non-domestic markets. The non-domestic loan book is mostly limited to institutional borrowers investing in income producing prime real estate assets in the principal cities of major markets. The domestic loan book is further split between the prime markets in the Randstad area and the remaining regions. Again, lending to SMEs is an important component of the loan book.

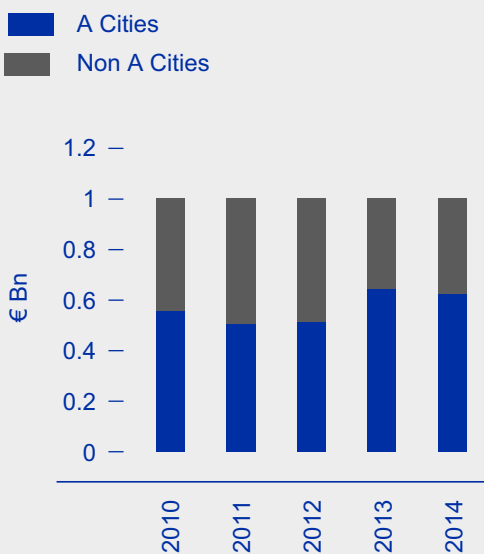
Germany

In Germany, the three tier structure of the banking sector has a major impact on the scope of lending and range of customers given the discrete function of each tier. Real estate lending is undertaken by the large private banks, the Landesbanken (which are part of the Sparkassen savings bank network) and cooperative banks. Private banks have an international focus and are able to diversify lending across markets, holding approximately a third of their loan books in international markets. This has proved an important advantage since mid-2014 as the strength of competition in the German lending market has narrowed the profitability and increased the risk of lending in prime markets within Germany. As a result, private banks are focusing on

originating loans in gateway cities in non-domestic markets as well as increasing allocations to development finance in prime markets within Germany. Importantly, these international banks have presence and experience in the markets they invest in and are focused on relative risk adjusted returns. Borrowers are limited to large institutional style customers.

Prior to the GFC, the Landesbanken had non-domestic and domestic portfolios. However, with regulatory constraints imposed since the crisis, new lending is generally limited to their home market. The largest cities in Germany are highly competitive and given the capital requirements of Basel III, the Landesbanken are finding it more difficult to compete with private banks and alternative sources of capital, notably insurers. Lenders not subject to the reporting and risk management requirements of Basel III are able to act faster and, with no capital

Figure 21 Growth in Lending Beyond Tier 1 Cities



Source: IREBS (2015)

adequacy requirement, offer a cheaper product. This has pushed the Landesbanken up the risk curve and resulted in increased activity in the regional secondary markets (Figure 21). Their increased activity is assisting economic growth in the regional markets by further stimulating investment, improving the quality of buildings and thus supporting higher economic productivity. The Landesbanken's customer base is primarily institutional and large corporates, although their collaboration with the more regional cooperative banks also extends lending to larger SMEs, particularly in respect of CRE development.

Excepting private investment banks, bank lenders in all markets were keen to stress that lending in the regional markets and to SMEs has always been an important element of their loan books and is counterbalanced by the significantly higher capital allocation to institutional and corporate customers. However, they also expanded on both the push and pull factors that have increased lending activity in the regions over the past 18 months. Lending to the regions is principally demand led, with a recovery in the local economy and real estate market a pre-requisite to lending. It is also evident that the availability of debt also stimulates investment, assisting the market recovery and also the wider economy as the quality of business and social infrastructure improves, itself enabling inward investment.

Banks across countries also stressed that new regulations were also pushing them towards regional markets and alternative sectors. The capital adequacy risk weightings attached to real estate stemming from Basel II/III either through revised IRB models or prescribed risk weightings under the UK's slotting requirement resulted in banks considering themselves to be at a disadvantage to alternative lenders. This was exacerbated for the lowest risk opportunities, for example new loan origination business for prime assets in principal cities, especially at low LTVs (sub 50%). This is because the risk models fail to differentiate low risk lending opportunities. In contrast, Solvency II incentivises insurers to invest in CRE debt (other than through securitisation), while most CRE debt funds are subject to AIFMD regulation, which does not make provision for risk-based capital requirements.⁴¹

Banks recognise that their exposure to CRE can pose a systemic risk and that their central position in the financial system warrants regulation. However, the quality of regulation is critically important and that which has emerged in the post-crisis environment has a number of unintended consequences. First, in the newly diverse competitive environment of CRE lending, differentiated regulation can increase the sense of an un-level playing field across different sources of lending and also within certain categories of lender. In particular, banks active in the same market and pricing the same risk maybe subject to different regulatory capital regimes. Second, cliff-edges under slotting and the standardised approach tend to push bank lenders to the riskiest end of each slot as the marginally higher risk carries the same regulatory capital cost allowing them to achieve higher returns and compete with other lenders, even though doing so exposes them to increased pro-cyclical risks. Only a small deterioration in market conditions will require reassignment of an exposure to a higher-risk slot. Third, it impacts on portfolio risk, with banks constrained in their ability to access low risk lending opportunities to counter-balance even moderately higher risk lending either by lot size, sub-sector, asset quality or sponsor strength, notably SMEs. Fourth, while recognising that debt funds principally backed by equity did not represent a systemic risk and should not be subject to the same regulation, some banks complained about the lack of transparency and measurement in the build-up of non-bank real estate debt and how it may be driving discrete sectors of the market.

Direct lending by life insurance companies is usually undertaken with the objective of duration matching. For a life insurance business this requires longer-term loan durations of at least ten years. For non-life business medium term durations are sufficient, circa five to eight years. Being focused on asset liability matching, life insurance companies are not managing a loan portfolio, rather they are asset led. They are seeking stability and are focused on senior lending at relatively low LTVs, secured on prime assets in principal markets of core countries.

⁴¹ Of course, the economic cost of capital also differs across different lender types, and can compensate for regulatory costs. Even following post-crisis interventions, banks are inherently highly leveraged, whereas CRE debt funds tend to be fully equity funded.

In contrast, CRE debt funds, including those set up by insurance companies to manage some combination of their own funds and third party funds, are building loan portfolios. They are also more sensitive to the level of returns required to satisfy their investors. While initially focused on lending on prime assets in Europe's core markets, the margin pressure resulting from increased competition from lenders and weight of equity capital in this segment has resulted in them moving up the risk curve. In doing so, many have also diversified their strategies. Some funds have focused on alternative real estate sectors, notably student housing, the private rented sector and hotels. Others have focused on regional markets while others have continued to focus on core markets, but are lending on assets requiring repositioning or strategic asset management, incurring leasing risk. The strategies followed are driven by the expertise of fund managers across the CRE investment platform, with insurers commonly abandoning a silo based approach and merging CRE fixed income and equity investment teams.

Compared to banks, alternative sources of senior lending have a more limited customer base of borrowers. Insurers and funds lend to institutional investors including insurers, pension funds, CRE funds, medium sized listed property companies, endowments, foundations and larger private companies. They do not generally lend to SMEs. For most CRE debt funds, the smaller scale of their portfolios heightens the specific risk of each loan and precludes lending against the kinds of assets more likely to be owned by SMEs and that therefore have a higher statistical risk of default. In addition, the underlying business models of both insurers and debt funds generally require loan capital to be deployed in relatively large lot sizes of between €20 and €100 million, with sponsor quality being at least as important as the quality of the underlying asset.

5.2 Loan Ticket Size

Bank portfolios are characterised by a high weighting of their loan books by value being to institutional and corporate borrowers that represent a low percentage of borrowers by number. Interviews with bank lenders suggest that, at approximately 20%, lending to SMEs is a lower proportion of the CRE loan book by value, but represents upwards of 70% of borrowers by number. The large scale of their portfolios enables banks to diversify the higher risk of default and profit from the higher marginal cost of lending to SMEs that their higher risk warrants. Only 39% of all lenders active in the UK market are prepared to provide loans under £10 million and this falls to 29% for loans under £5 million⁴².

Equally, the large scale of loan books enables banks to underwrite large loan ticket sizes in excess of €200 million. Although over 70% of lenders active in the UK are actively targeting lot sizes between €20 million and €100 million, the number of lenders prepared to underwrite larger loans decreases sharply. In Germany there has been strong growth in the number of lenders willing to lend at ticket sizes in excess of €50 million since 2010 and the growth in lot sizes exceeding €100 million within the market has been even stronger⁴³.

Pre-crisis, the banks that dominated CRE origination would often retain a portion of the debt and either syndicate the rest of the debt or sell all of it down through the public CMBS markets. During the GFC, heightened risk aversion coupled with the lack of available capital for new lending owing to the need for banks to restructure loan books resulted in very low availability of finance for large lot sizes. Other sources of debt lacked the capital base and expertise required to underwrite the risk, hold it and structure subsequent syndication. This was exacerbated by the evaporation of the CMBS market and impediments to institutional investors holding CMBS. This resulted in the growth of joint ventures, with debt providers jointly underwriting portions of the debt, either sharing the same risk or taking different tranches.

More recently, the resurgence of bank lending and CRE debt investment appetite from institutions with no origination platform has increased loan syndication activity. There are few sources of lending that are able to accommodate the risk associated with large lot sizes, and more limited competition is attractive to banks. Although they have difficulty in competing in the middle ground of lot sizes between €20 and €100 million in the competitive prime market, banks are able to profit from their balance sheet capacity and underwriting expertise for very large lot sizes due to the lack of alternative sources of capital.

⁴² DMU (2015).

⁴³ IREBS (2015).

The business models of insurers and funds require efficiencies of scale in the allocation of capital. Duration matching insurers often prefer to write loans in the €100 million to €300 million range, which they may source directly or through collaboration with banks that are syndicating larger lot sizes. Funds are balancing the requirement to limit their exposure to any one loan with the need for efficiency in management. The appropriate lot size varies according to the scale of the fund and its strategy, but will usually fall in the range of €50 million to €150 million. Although some funds and insurers have their own loan origination desks, accessing opportunities through close collaboration with banks and other lenders remains the principal route to new business for many debt funds. This may be through syndication of a large loan (for those investing in senior debt), or the syndication of specific tranches of risk underlying a whole loan (for those specialising in mezzanine finance).

5.3 Pricing of Debt

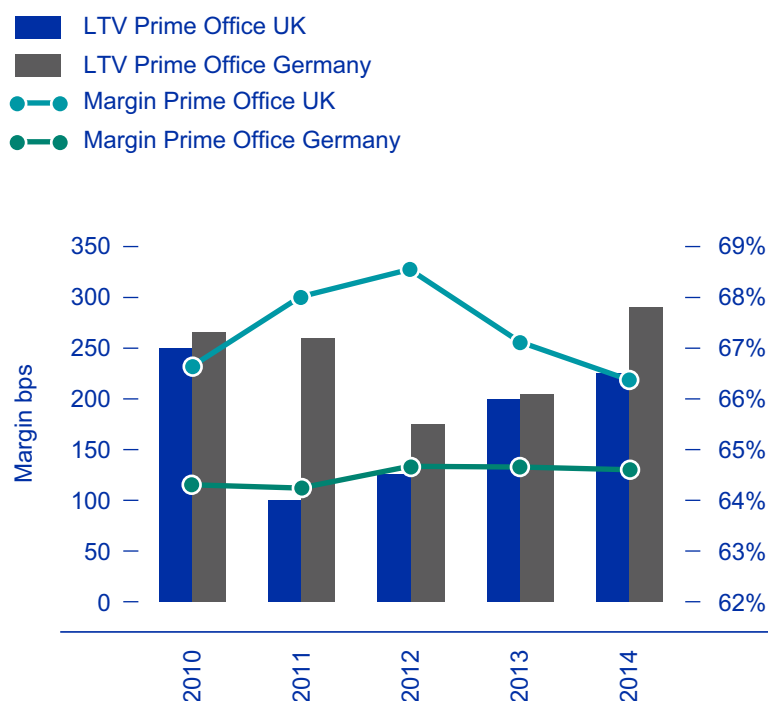
The CRE debt market continues to be characterised by low transparency, especially outside the UK and Germany. Relatively consistent and granular data exist only in relation to securitised CRE debt but the CMBS market has never represented more than a relatively modest fraction of the overall market and is much reduced since the GFC. While it is difficult to say how representative securitised CRE debt is of the wider CRE debt market, CMBS data provide a useful resource covering the period since the European CMBS market began in the late 1990s.

Under competition law and to mitigate against the risk of price fixing, banks are prohibited from sharing information on pricing. The absence of even a confidential central databank recording the number of loans, size of loans and cost of debt makes it difficult to make accurate assessments as to the pricing of risk within and across countries, real estate sectors and segments, and across loan terms such as duration, covenant strength and other sponsor characteristics, lot size and risk of capital as measured by ICR, DSCR, Debt Yield and LTV. The heterogeneous nature of CRE means that standardisation in CRE lending is difficult. The challenge that poses for market information would best be addressed through comprehensive data collection based on agreed and consistently applied definitions.

A number of industry initiatives seek to provide data about pricing as well as lending volumes and other matters of interest, but the better quality information is limited to the largest markets. The most important are the survey based UK commercial property lending research carried out by De Montfort University, and the German debt project conducted by the International Real Estate Business School at Regensburg University.

Utilising this data for the UK and Germany, it is evident that the cost of debt has reduced since the heightened risk aversion immediately post-crisis (Figure 22). Ultimately, debt costs vary across the cycle, so in many respects the decline in margins and fees since the depths of the GFC are indicative of improvements in confidence and market conditions. However, despite the strength of Europe's prime CRE markets, the pricing of risk has not fallen to the levels seen at the peak of the last cycle. Lenders have maintained a strong discipline in respect of risk management and the decline in the cost of debt should be viewed against a commensurate decline in risk exposure due to the adherence to a number of important risk metrics.

Figure 22 Average marginal cost of Debt and LTV, Prime Office UK and Germany 2010-2014



Source: IREBS (2015); DMU (2015)

5.4 Risk Mitigation and Underwriting

All underwriting considers the risk characteristics of the underlying asset and the quality of the borrower and sponsor. It is the combination of these two components that drive risk. In northern Europe loans are usually secured on the underlying asset with no recourse to the sponsor. In southern Europe, recourse loans dominate with loans underwritten by reference to the sponsor rather than the underlying asset. The contribution of each component to risk varies depending on the characteristics of each loan and the degree of exposure should a borrower default. Lenders vary in their approach to underwriting loans depending on their jurisdiction, the risk profile of loans and the wider objectives of their business.

For senior loans, lenders in northern European markets are focused on the income security of the underlying asset upon which the loan is secured and the risk to the loan capital against the probability of default. In other markets including France, Italy and Spain, underwriting is more heavily weighted towards the solvency of the sponsor. This reflects differences in legal structures. In northern Europe, legal frameworks allow lenders to foreclose on an asset in the case of default through processes that are time and cost efficient and have clear outcomes. This allows lenders to secure loans on the underlying asset and provide non-recourse loans. In France, Italy and Spain, the right to foreclose on the asset is more complex and lengthy legal processes are both time inefficient and costly, with less certain outcomes. As a result, bank loans are often made with recourse to the sponsor's wider financial assets.

As lenders move up the risk curve through the provision of subordinated loans their exposure to potential loss increases and may not be fully underwritten by the asset on which the loan is secured. Subordinated lending is usually provided for value added and more opportunistic investments rather than more stable and passive investments. That is, the sponsor will implement an underlying business plan to enhance income and achieve strong capital growth perhaps through refurbishing an asset, reducing leasing risk or strengthening the tenant profile of the asset. As outcomes tend to be binary, it is essential that the lender underwrites the sponsor's business plan, not merely the asset; and while always an important element of underwriting, the track record, experience and credibility of the

sponsor become critical. This requires lenders to have considerable specialist expertise in real estate markets, not merely finance. Most providers of this kind of debt recognise the need to marry finance structuring skills with real estate expertise and have been ensuring that the skills base of their lending teams includes experienced real estate professionals. However, there is no regulatory requirement to do that and no recognised professional standard that finance professionals are required to achieve before operating in this specialist market.

5.4.1 Strength of the Borrower/Sponsor

The credit worthiness and track record of the sponsor are of major importance to underwriting loans and mitigating risk. Indeed, having appropriate experience and a good track record in the industry is often a requirement for obtaining a CRE loan.

Prior to the GFC, direct real estate loans were not generally rated, and carried a generic 100% risk weighting under the standardised approach then applicable to most banks. Banking regulation then moved towards greater risk sensitivity based mostly on internal ratings or criteria laid down by regulation. Under Solvency II investment grade rated loans carry capital advantages over non-rated loans, which rather incongruously have a capital advantage over loans with a sub-investment grade rating. That encourages insurers to obtain ratings selectively. Moreover, under Basel II/III the calculation of the probability of default also favours borrowers with an investment grade rating. The probability of default (PD) and loss given default (LGD) are critical to the underwriting process, the decision to lend and the pricing of debt, as well as forming part of the calculation of regulatory risk weightings. Loans to listed companies, institutions and/or large corporates carry a capital advantage that reflects their perceived lower risk.

For example, listed housebuilders that may have an investment grade rating have a considerable capital advantage over private, smaller businesses, reflecting their greater solvency and stronger governance. Indeed, bank lenders commented that the PD rises sharply for small lot sizes under €2 million which is principally the domain of small private housebuilders and is classified by many lenders as high risk lending. Depending on their scale, investment grade entities may also benefit from a wider range of capital sources, while smaller private enterprises are limited to the small number of banks willing to lend at small lot sizes and, more recently, through the growth of unregulated and costly peer-to-peer lending.

In some circumstances, it may be possible for a lender to negotiate cross collateralisation that provides the lender with recourse to a sponsor's wider financial assets, as well as triggers for cash sweeping surplus income.

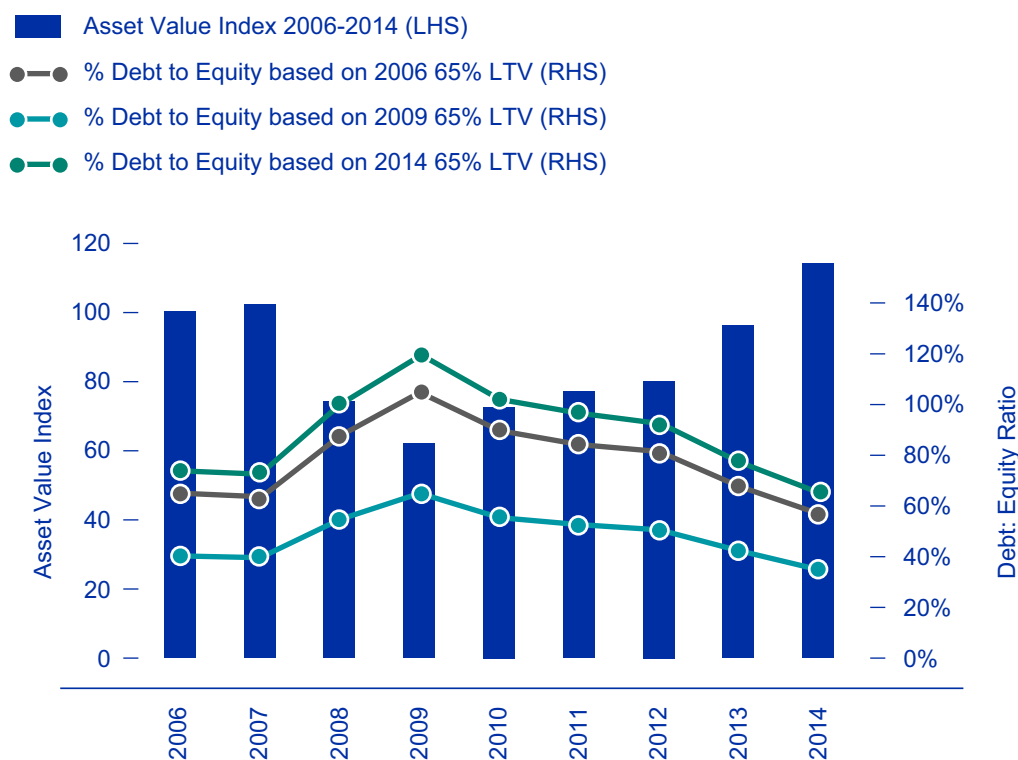
Lenders will also review the track record and behaviour of sponsors, and this was especially important during and following the GFC. Importantly, lenders are less concerned as to whether the sponsor held loans in breach of financial covenants or that were classified as non-performing loans, as many good sponsors found themselves in that position. Their due diligence focuses instead on how the sponsor behaved in relation to such loans. For example, whether the borrower cooperated with the lender in formulating an agreed workout strategy, or acted independently, unresponsively and in their self-interest only.

5.4.2 Underwriting the Asset

LTV is a commonly used metric for describing trends in the real estate lending market. It is widely used as a reference point not only by the industry but also for regulatory purposes. However, a market values based LTV metric can be misleading and even dangerous when it comes to risk assessment due to the cyclical volatility of the denominator, market value. In the post GFC era, lenders are particularly focused on income-based metrics, which are a pre-requisite to lending and may constrain the LTV at which they are prepared to lend. For example, although lenders have maintained discipline relative to the previous boom with LTVs for senior loans on prime assets not exceeding 70% and those on secondary assets at circa 60%, this masks the increased risk exposure given the growth phase of the real estate cycle. For example, a 65% LTV on a specific asset at the end of 2014 equates to a 110% LTV on the same asset at the market trough in 2008/9 due to changes in capital value, but remains a more conservative LTV than the 75% and upwards prevalent at the previous market peak

in 2006/7 (Figure 23)⁴⁴. In part, the discipline during the cycle reflects regulation and associated costs, but lenders also stressed that there was low demand for higher LTVs associated with senior lending due to the weight of institutional equity capital and the lack of alternative investment opportunities that could deliver a stronger risk adjusted return.

Figure 23 LTV is Dynamic with Asset Value Change through the Cycle



Source RHL Strategic Solutions, 2015; MSCI, 2014

A number of lenders commented that because regulation has remained linked to market value-based LTVs, risk weighting models whether internal or prescribed, tend to reinforce cyclical behaviour and impede counter-cyclical activity. The risk of loss given default is lower for loans originated in the early recovery phase following a market crash when market value is lower than long-term value (and likely to increase before loan maturity) and highest for loans granted towards the peak of a market cycle when market value is above long-term value (and liable to fall before loan maturity).

Although LTV is an important metric for lenders given its impact on regulatory risk weightings and the cost of capital, it is only one of a number of measures used when underwriting a loan and mitigating risks associated with the underlying asset, loan structure and sponsor. The underlying objective is to limit the PD and to minimise any LGD. First, lenders consider their exposure should the borrower fail to repay the principal outstanding at the end of the loan. They are evaluating the risk to the total capital loaned and wish to ensure that sales proceeds or capital from re-financing will be sufficient to allow repayment, including the associated costs should they be required to foreclose. In doing so, lenders stress that they consider the current value of an asset against the long-term historical average and undertake sensitivity analysis using historical peak to trough data for both rents and yields. The lease structure and tenant profile are also important considerations, with any risk to cash flow due to impending lease expiries or weak covenants assumed at a high or 100% probability. For German lenders intending to refinance through the Pfandbrief market, this reference to longer-term values is formalised in Beleihungswert or mortgage lending value, and it is used as the denominator for calculating LTVs subsequently.

44 Curlow, J., Where next for Real Estate Lending in Europe, Axa Real Estate Investment Managers, Presentation to Association of Property Lenders and SPR 'The Future of CRE Lending' in Europe, Seminar July 2015.

Second, lenders seek to minimise the PD by ensuring that the income from the asset will be sufficient to pay interest and any scheduled amortisation, under a range of possible stressed economic scenarios. Principally lenders will use either the ICR (Interest Coverage Ratio) or DSCR (Debt Service Coverage Ratio). This expresses the capacity of net income to cover, respectively, interest or interest and amortisation on the debt, as a multiple of the payment obligation. Pre-crisis, average ICRs and DSCRs were compressed and the spread of required ratios across sectors and different asset qualities narrowed, indicating a competitive market and reduced risk sensitivity.

Average coverage ratios increased sharply following the GFC and there was greater variation in the required coverage across sectors and asset quality, reflecting differences in perceived risk, and they remain elevated by historical standards. For example, the average ICR multiple required for a prime office investment in the UK was 1.16x in 2006, which fell from a peak of 1.24x in 2003. In 2010 the average ICR had risen to 1.52x and at the end of 2014 it was 1.54x⁴⁵. For secondary office investments, at 1.23x the required ICR in 2006 was only marginally higher than for prime having declined from a peak of 1.43x in 2002. At mid-2015, the average ICR required for secondary offices was 1.77x. These higher hurdle rates reflect the use of sensitivity analysis in the underwriting process, using peak to trough ranges for rents and also consideration of current interest rates against the longer-term trend. Interest rates are very low by historical standards and are likely to remain so for some time. However, it is accepted that interest rates must begin the process of normalisation at some point, and the timing and speed of this transition remains a major factor of risk and uncertainty. While interest rate hedging is very common where loans are floating rate, the current requirement for ICRs and DSCRs in part reflects the importance of income ratios remaining intact as interest rates revert to trend.

In addition to more stringent income metrics, lenders seek to reduce their capital value risk over the duration of the loan term through amortisation. Amortisation assists in lowering and/or stabilising LTVs by gradually reducing the outstanding principal through capital repayments. At mid-2015, 67% of lenders in the UK reported requiring amortisation of between 1% and 5% of the loan per year, while some lenders used full cash sweeps of surplus income over the duration of the loan to lower the principal outstanding⁴⁶. At the peak of the market, loans were primarily interest only and thus there was no reduction in the principal outstanding over the duration of the loan, compounding lenders' exposure.

Many lenders consider the debt yield to provide a more useful measure of an asset's income relative to a lender's risk exposure. This expresses the ratio of net operating income over the loan amount outstanding and thus provides a more stable metric than LTV, which is based on a fluctuating asset value. The appropriate minimum debt yield is inevitably partly a matter of judgment and depends on the collateral type, but many lenders consider that it provides a more appropriate measure of the repayment risk to the capital loaned.

For development finance, lending terms are even more stringent. Basel II/III regulation, either as expressed through IRB models or the more prescriptive slotting regime applied to banks regulated in the UK, generally imposes higher risk weightings for lending in the construction phase. Recent research in the UK development market finds that there is little differentiation between UK banks subject to slotting and other European lenders able to use IRB models in terms of risk pricing or lending terms⁴⁷.

Prior to the GFC, banks dominated the development finance market, with an even higher share of this section of the debt market than for the market as a whole. Yet, development finance is a low proportion of bank activity and their dominance in the market is a reflection of the scale of their balance sheets. Banks still active in the development market report that development lending represents 20% of their loan books and is an important source of future loan originations for standing investments in the post-development phase. Post-crisis, banks still dominate non-speculative, senior development lending, but their market share has been eroded due to the withdrawal of many smaller and medium sized banks from this segment and the growth of alternative lenders. As development lending is usually shorter-term than investment finance, this creates capital advantages for banks under the Basel II/III regulatory framework. In contrast, the higher risk and short loan tenure impedes duration matching

45 DMU (2015).

46 Ibid.

47 IPF, UK Development Finance Review, IPF Research Programme 2011-2015, September 2015.

insurers, while many non-listed CRE debt funds will also seek developments or investments that keep invested capital working over a longer time horizon.

Banking regulation has ensured that development risk is mitigated prior to loan agreements being executed. This is ensured through a number of loan terms and provisions. First, loan to cost (LTC) ratios remain conservative at 60% to 65% for senior debt. Although developers may be permitted to seek further mezzanine finance, senior lenders are focused on understanding the credibility of additional capital and whether the equity contribution the developer is providing is of substance and meaningful from the perspective of aligning interests.

The order of capital injections has also altered in the post-crisis era. Prior to the GFC, senior lenders forwarded funds side by side over the development period. However, as the market downturn ensued, developers' access to capital tended to evaporate as mezzanine finance was withdrawn and/or the developers' wider financial wealth came under pressure. Despite being the lowest risk contributor of capital as reflected in their fixed margin return with no upside, senior lenders found themselves carrying developments with full exposure to downside risk. As a result, senior lenders now require equity capital (and subordinated debt) to be invested upfront.

Regulatory requirements also make it imperative that project risk is mitigated in the pre-development phase. Bank lenders require developments to be substantially pre-let or, depending on the strategy, pre-sold. Pre-leasing requirements range from 50% to 100% and must be sufficient to meet debt service coverage requirements as a minimum threshold. The sponsor's strength and cross collateralisation on other assets also influence the degree of pre-leasing required, acceptable LTCs and requirement for upfront equity.

The availability of debt against speculative development is low. It is generally limited to institutional or large corporates and to very low risk developments involving refurbishment of existing offices in prime locations or residential developments where there is a strong imbalance of demand over supply.

Alternative sources of debt, particularly funds, are the major providers of debt for speculative and part-speculative development. However, the intrinsically higher risk of speculative development lending and the smaller scale of their portfolios means that they are focused on specific niches in the market by sector and/or location, which marry with their expertise. They generally lend to institutional investors and large corporates at larger ticket sizes to achieve management efficiencies.

Most banks also display a strong preference for large transactions due to their stabilising impact on balance sheets and efficiencies of scale. This often precludes lending to SMEs with the major clearing banks in the UK and the Netherlands, and the co-operative banks in Germany being the exceptions. This is partly driven by risk management and regulatory pressures as the time and costs associated with due diligence, underwriting and reporting can be as substantial for small transactions as for large ones. Only banks with a large capital base can create management systems that enable efficiencies to be generated from managing smaller lot sizes. For example, one UK clearing bank indicated that loans between £2 million and £5 million represented approximately one third of their development loan book and upwards of 80% of their developer customers by number. A number of banks commented that lending at even smaller lot sizes was particularly difficult due to the weakness of the borrower's covenant, the requirement for 35% to 50% upfront equity and the higher statistical probability of default characterising such borrowers. This results in a higher regulatory capital charge and a correspondingly higher cost of debt. As a result, small developers have limited access to development capital.

However, while the loan loss rate over the crisis was materially bigger for smaller borrowers this was partly driven by the weak structures surrounding lending decisions. The majority of small borrowers are in regional markets, while pre-crisis lending decisions were often centralised in tier 1 cities with little knowledge of the local markets they were lending into and/ or limited real estate expertise. Moreover, lending to small borrowers was not a principal driver of the GFC; the outcomes for these loans were determined by the wider economic downturn that ensued.

6.0 The Impact of Regulation and the Road Ahead

The GFC demonstrated the inadequacy of regulatory supervision in the years preceding the credit crisis. Subsequently, new regulations have been introduced alongside a new regulatory focus on financial stability, with the objective of lowering systemic risk and safeguarding the economy from periods of market liquidity stress. All lenders are supportive of the need for better regulation, a more diverse range of CRE debt providers and the objective of distinguishing different types of loans and debt products by their risk profile. However, CRE lenders are also concerned at a number of unintended consequences arising from the current framework. Many of these issues are also discussed in a report published by an independent UK industry group comprising members of the banking, insurance, pension fund and real estate industries. It sets out a series of recommendations for improving the resilience of the financial system in the face of the CRE cycle, while supporting the sustainable flow of credit to the CRE sector across the cycle⁴⁸.

New regulations impacting on the CRE debt market stem from a number of different and complex frameworks relating to individual components of the financial system (for example, banks or insurance companies) and different products (for example, asset backed securities). The urgency with which each framework was developed limited the extent to which regulators were able to maintain an overview of the interaction of separate regulatory changes; and none of these different regulatory silos had responsibility for ensuring that the outcome should make sense for CRE debt markets overall.

In part, this reflects the predominance of banks in European CRE lending before and during the crisis. This concentration of the problem may have suggested that the solution lay in regulation of the banking sector. The public nature of CMBS markets may also have led regulators to assume that the problems they revealed about the CRE debt market were somehow connected with securitisation. In the event, the credit crisis created new opportunities for new sources of lending to emerge from outside the banking sector. In turn, differences in the treatment of CRE debt within regulatory regimes across the financial sector have created regulatory arbitrage opportunities for different types of lender. Regulation itself is now a driver of the market rather than a moderator.

In the insurance industry, Solvency II regulation has correctly identified direct CRE loans as being lower risk than equity investments. Unjustifiably, however, capital charges for even the most senior investments in securitised CRE debt are higher than equity holdings in CRE. In the banking sector, Basel II/III considers CRE loans secured on underlying assets as a higher risk than unsecured debt such as corporate bonds or revolving credit facilities (RCFs). These considerations of relative risk are embedded in the risk weightings employed under each regulatory regime and results in the enigma of allocations to certain tranches of real estate debt having a capital advantage for insurance companies, while relatively, banks would be subject to a capital penalty on the same loan facility.

Moreover, within each regulatory silo, the risk weighting and capital charge on a given loan facility varies across banks subject to different regulatory regimes both inter- and intra-regionally. There is no oversight of the interaction of different regulatory regimes specifically on the CRE debt sector which spans financial quadrants and investment asset classes. Given its potential to cause financial system disruption and its importance to the real economy, the case for a more holistic and informed regulatory approach to CRE debt risk seems strong.

Many banks commented that while they were supportive of the overarching objectives of regulation to reduce systemic risk and foster financial market stability, they were concerned that in order to succeed in the market place they are forced to lend at the margins of risk categories. Contrary to the regulatory intention, banks are being driven to take riskier positions to maintain both market competitiveness and returns on regulatory capital. This was also impacting on the construction of portfolios and on effective diversification. Banks commented that allocations to development finance have been relatively unaffected as adherence to risk mitigation strategies enables them to manage the capital charge. However, they are unable to provide very low risk lending due to the punitive capital charge. For example, lending at an LTV of 30% on a prime, income secure asset to an institutional borrower is effectively a high rated bond, but carries the same risk weighting as lending at an LTV of 65%.

⁴⁸ Real Estate Finance Group and IPF, A Vision for Real Estate Finance in the UK, May 2014.

Currently, Basel II/III is impeding bank lenders from allocating capital to low risk loans as it fails to differentiate the risk associated with low LTV loans, exacerbated by a parallel regulatory arbitrage under Solvency II that is driving insurers to lend to low risk real estate. However, under Basel II/III it remains subject to a high capital charge, with no differentiation as to the difference in capital at risk from the low LTV. As a result, banks are unable to compete in this sector of the market with implications for portfolio diversification. Indeed, traditionally banks have been able to balance higher risk lending to SMEs and into the regions against holdings of very low risk loans. The inability to allocate to very low risk loans due to their high cost of capital increases the risk of their loan books.

This is also reflective of the fact that the instruments used to calibrate risk weights within IRB models and the specified slotting regime are too blunt to effectively discriminate between risk embedded in different loan structures. CRE lending is an umbrella for a wide range of risk exposures that range from being extremely low risk to high risk, with the individual characteristics of each loan determining the risk exposure. Moreover, regulatory weights do not account for changes in the risk profile of a loan through the cycle. For example, the calculation of risk weightings for a CRE loan with a 65% LTV granted towards the peak of the market when values were driven significantly above their long-term average is not identified as being of greater risk than a loan at the same nominal LTV ratio granted at the bottom of the cycle when real estate values were below their long-term trend. The risk weight attached to any loan should reflect its specific risk profile, and vintage is a key risk factor. Assigning risk weights by reference to spot value-based LTVs results in crudely assembled categories of loans and regulatory driven risk arbitrage.

Moreover, regulated banks are subject to different guidelines across Europe depending on the approach different banks are subject to under Basel II/III and due to the different rules set out by national regulators. As a result, the risk weighting and capital charge on a given loan facility varies across lenders subject to different regulatory regimes both inter- and intra-regionally, also creating regulatory arbitrage within the banking sector as well as between it and other financial sectors.

Historically, CRE debt markets have tended to move pro-cyclically with the CRE market. The regulatory response to the crisis has focused on requiring banks generally to hold more capital. However lenders raised concerns that the metrics underpinning regulatory risk models tended to reinforce the debt cycle, which is closely linked to systemic risk, rather than flatten it. This is due to the lack of precision of risk weightings either between assets or through the cycle. In particular, the over-emphasis on market value-based LTVs and on short to medium term, rather than long-term, performance data encourages lending to expand towards the peak of the market and contract in the period following a market downturn. In doing so it also fuels the CRE cycle. There are signs some regulators may be beginning to recognise this problem.⁴⁹

Of course, Basel III also empowers regulators to adjust specific macro-prudential tools to ensure that banks have an additional buffer of capital to absorb potential losses and as a means of subduing lending exuberance⁵⁰. Certainly, such powers have the capacity to limit systemic risk and improve the resilience of the banking system by increasing the marginal cost of lending when banks are tempted to over-exuberance. An incremental approach may allow the market to adjust more gradually and mitigate the scale and severity of a downturn. Macro-prudential tools include powers to increase the required countercyclical capital buffer (CCB) across all bank assets, or on a targeted basis towards specific sectors such as CRE. Again, unless the requirement is related to the specific risk characteristics of each loan and/or particular country, sector and/or sub-market, a regulatory arbitrage opportunity will be created that will tend to drive rather than guide, lending and investment decisions. This will be exacerbated if the implementation of such capital requirements gives rise to cliff-edges as opposed to a more gradual, sensitive and risk discriminatory approach. Moreover, a greater focus on income and long-term sustainable values as the basis for quantifying risk weightings should promote a more counter-cyclical approach amongst lenders.

49 See for example the second consultative document of the Basel Committee on Banking Supervision for revisions to the standardised approach for credit risk, issued in December 2015 for comment by 11 March 2016 – specifically, the second bullet at paragraph 52 in Annex 1. In addition, in the UK, the Bank of England has expressed its support for the development and use of a long-term value metric in LTVs, as recommended in the industry report, *A Vision for Real Estate Finance in the UK*; (see [here](#)) see also Brazier, A., Strategy and Risk and Member of the Financial Policy Committee, 'Nurturing resilience to the financial cycle', Speech given at Property Investor's Banquet, Bank of England, 19 October 2015, in this regard. (see [here](#))
50 Benford, J. and Burrows, O., *Commercial Property and Financial Stability*, Bank of England Quarterly Bulletin, Q1 2013.

Lenders stressed that while LTV is an important measure and hurdle, it is somewhat secondary to other risk metrics employed to underwrite an asset. Importantly, these risk metrics are subject to sensitivity analysis that considers the volatility of the asset value, emphasising the peak to trough fall and the long-term sustainable value. This also considers historical interest rate movements and the implications for value movements directly and indirectly given historic spreads between real estate and other asset classes. Effectively, this considers the performance of the loan through the cycle. In addition, most lenders also focus on the debt yield as this gives a more stable measure of risk through the cycle that is based upon the capital at risk.

A number of lenders commented that regulation did not take into account lenders' performance through the GFC and did not consider the governance and procedures that were followed by those lenders whose loan books were unimpaired. These stemmed from lessons learned in previous crises, principally in the early 1990s and these institutions benefitted from the earlier experience and knowledge gained during that period. Indeed, some lenders argued that a principal differentiator of performance over the past cycle for both CRE debt and equity was the experience and knowledge of both lenders and borrowers across the debt and real estate sectors. Currently, there is no requirement for banking professionals to hold any specific educational or professional qualification prior to working within the specialist real estate sector.

CRE debt funds are not required to risk weight and being principally equity backed, they do not present a systemic risk. However, it is noteworthy that it is institutional capital that underlies such funds. Moreover, while funds should not be regulated as institutions that carry a systemic risk to the wider financial economy, their activity in the lending market will have consequences for the build up of systemic risk in other financial institutions and the market as a whole. Regulators need, but do not have, suitably comprehensive market information, as well as the expertise to analyse it. Measuring the total provision of debt across all sources of lending is fundamental to understanding the build up of debt in the market.

Indeed, the European CRE debt market suffers from low transparency with no data available on CRE lending in most markets and where it is available, such data is either at the aggregate level, or submitted voluntarily to qualitative surveys. Official data is not sufficient to allow a clear understanding of the CRE debt market either at a moment in time or over time. In this respect, regulation is attempting to undertake a supervisory role in the dark. Steps towards consistent, comparable, timely data on European CRE debt would greatly improve market monitoring and regulatory decision-making⁵¹.

51 ESRB, Report on Commercial Real Estate and Financial Stability in the EU, December 2015.

7.0 Conclusion

CRE debt is a principal component of the capital structure of the CRE industry, currently accounting for 47% of the CRE investment market and a pre-requisite for most development activity. CRE debt provides capital efficiencies for CRE owners in three ways. First, it provides developers with the credit they need to undertake their capital-intensive activities. Second, by increasing available capital it has significant benefits for portfolio optimisation. Thirdly, even moderate use of CRE debt enhances returns for borrowers, attracting investment capital to the sector and is therefore, crucial for the real economy.

The CRE industry directly accounts for 2.5% of the EU economy, with growth contributed across all economic sectors, especially consumption and investment, making it a vital sector of the economy. It is also a major employer. Some 70% of the 3.8 million jobs within the CRE industry are construction related and many of those projects can only happen if credit is available to the sector. CRE debt underpins investment in the delivery, management and continuous rejuvenation of the built environment, thereby providing the infrastructure required for business and communities to thrive, stimulating local economic development and inward investment.

CRE debt is essential to the proliferation and success of SMEs. It enables investors in CRE to provide an essential component of social and business infrastructure in the form of commercial space that may be rented effectively on a pay as you go basis for short or long periods as determined by the lease agreement. While beneficial for the capital management, flexibility and agility of many types of business, regardless of scale, it is instrumental for fostering the growth of SMEs. The capital commitment required to acquire appropriate business premises would impede new business formation and development, hampering growth strategies if the option to rent were unavailable. The CRE industry itself comprises a high proportion of SMEs, directly and indirectly dependent on the flow of CRE debt to finance CRE investment and development. It is also essential to the credit flow to SMEs active in the wider economy that use their CRE holdings as security for credit facilities. SME activity is dominant in the regions and their funding is central to the distribution of capital to regional markets.

Pre-crisis, bank lending accounted for approximately 90% to 95% of European real estate lending, contrasting sharply with the US where bank lending accounts for just over half of lending activity⁵². The high concentration in one source of debt provision in Europe increased the fragility of the banking system and following the dramatic downturn in CRE markets, created a credit drought that contributed to the GFC and created an opportunity for alternative lenders. Post crisis, the structure of the real estate debt market has changed significantly. While bank lenders remain a major source of real estate debt finance, their share of new lending has reduced in favour of insurance companies and other direct and indirect sources of mostly institutional capital.

The greater diversity in the range of CRE lending sources post-crisis is a positive development for the industry. As the new CRE debt market matures, different lending sources are specialising in specific sub-sectors, geographies, tranches of debt and loan ticket sizes. They also vary in the breadth of their customer base. These differences strongly influence lending strategies, contributing to structural diversification and the distribution of CRE risk in the financial system. Banks remain the predominant lending source for SMEs and borrowers in the regional markets.

Following the GFC, new regulations have been introduced with the objective of lowering systemic risk and safeguarding the economy from periods of market liquidity stress. Separate regulations govern different sectors and products of the financial market and their implementation further varies by jurisdiction. The absence of sectoral regulatory oversight across the CRE debt market has resulted in the emergence of some unintended consequences, multiple regulatory pricing arbitrage opportunities have emerged. These stem from the same allocation of capital carrying the same embedded risk and return profile being treated divergently within distinct regulatory frameworks, across institutions and between different jurisdictions.

Regulatory arbitrage has become a facet of the market due to the absence of effective oversight of the interaction of different regulatory regimes that affect CRE debt. These regimes span financial quadrants, investment asset classes and vary across jurisdictions. When the regulations were being

⁵² INREV (2012), European Real Estate Debt Fund Study; US Federal Reserve (2012).

devised, the banking sector accounted for approximately 95% of the CRE debt market to some extent over-riding the need for oversight of the interaction of different regulatory regimes at that time. However, the structure the CRE debt market has transformed in the post-crisis era and is now considerably more diverse. A more holistic approach to the regulation of the CRE debt sector that spans financial sectors, products and jurisdictions is now required.

Given the significance of the CRE industry to the EU economy and its structural reliance on debt as well as equity, it is of critical importance that the CRE industry has sufficient access to appropriately priced finance. Equally, the systemic risk posed by the unconstrained build up of CRE debt in the economy is proven. Thus, financial regulation must be designed to safeguard and promote the positive contributions of CRE debt while ensuring that unconstrained lending does not jeopardise economic stability. For that, policymakers need the data and expertise to understand the structure of the industry, the relationships across sources of debt and the metrics that measure risk most effectively.

List of Contributors

We are most appreciative for the time and knowledge of individuals who agreed to participate in structured interviews. Their contribution greatly strengthens the research underlying this report.

Interviews drew upon individuals' knowledge and experience within CRE debt markets and do not necessarily represent the views of their employers. Of course, those contributing information are not responsible for the views expressed in this report.

A total of fifteen interviews were undertaken with European lenders. While we gratefully acknowledge the contribution of all participants here, those willing to have their company publicly acknowledged are listed here.

Aareal Bank
Allianz
Aviva Investors
Axa Investment Managers Ltd
Barclays
Deutsche Alternative Asset Management
Deutsche Hypothekenbank
DG Hypo
ING Real Estate
Lloyds Banking Group
The Royal Banks of Scotland
Wells Fargo Bank International

This research report was undertaken by Dr Brenna O'Roarty, RHL Strategic Solutions on behalf of the sponsoring organisations.



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