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Managing risk amid uncertainty with commercial real estate debt

Darren Rawcliffe
Director of Research, Real Estate, Europe

Jayanth Ganesan
Research Associate, Real Estate, Americas

As the commercial real estate (CRE) sector enters a second year of the global pandemic, it's no surprise investor surveys report a continued interest in CRE debt vehicles. Not a single investor wanted to reduce their exposure to debt according to the 2020 INREV/ANREV/PREA survey covering CRE debt vehicles. It also reported that more investors were spreading their exposure by using a combination of debt funds across North America, Europe and Asia Pacific.

In a marketplace where managing risk has become increasingly important, that makes perfect sense. With uncertainty over the economic outlook remaining high, the appeal of private commercial real estate debt should continue to increase as investors pivot to investments that offer reliable cash flows and downside risk protection.

PERFORMANCE FEATURES OF CRE DEBT

Our analysis shows that private CRE debt funds deliver solid and reliable returns over the cycle with much lower volatility than equity funds. This gives private CRE debt funds better risk-adjusted returns, even though their nominal returns will often be lower.

Performance is not always easy to track given data limitations in many of the most popular countries for CRE debt. But available data in the U.S. show a history of debt products performing strongly (see Figure 1).

Figure 1: Average annual returns, standard deviations and Sharpe ratios, 1996-2020

	Average return	Standard deviation	Sharpe ratio	Return per unit risk
Commercial mortgage-backed securities	5.83%	6.38%	0.35	0.91
Commercial mortgages	6.70%	4.63%	0.68	1.45
Corporates (aggregate)	5.22%	3.60%	0.46	1.45
Equity real estate	9.09%	7.89%	0.72	1.15
Equity REITs	9.09%	18.77%	0.29	0.48
High yield corporates	6.94%	14.93%	0.22	0.46
Intermediate corporates	5.41%	4.28%	0.41	1.27
Mortgage-backed securities	4.91%	3.35%	0.44	1.47
Mortgage REITs	3.68%	28.60%	0	0.13
Stocks	9.03%	17.92%	0.3	0.5

Source: LifeComps, NCREIF, Bloomberg/Barclays, 2021

This data spans from 1996 to 2020 and shows that commercial mortgages provided one of the highest risk-adjusted returns compared with other asset classes due to their low volatility. In addition, core mortgage loan returns are a source of portfolio diversification due to their low correlation with those of stocks, equity real estate and REIT returns. Core mortgage loan returns are cyclical in nature and priced in relation to U.S. Treasuries, so they are often considered correlated with corporate bond returns, but have delivered superior risk-adjusted returns as Figure 1 indicates.

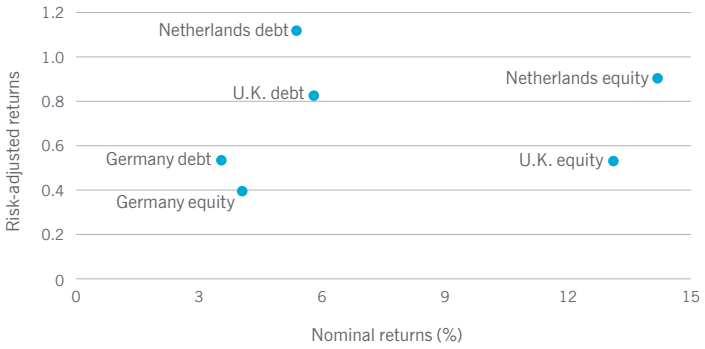
Modelling portfolio returns in Europe suggests CRE debt returns have also outperformed on a risk-adjusted basis. We modelled these returns by replicating a typical market portfolio in each of Germany, the Netherlands and the U.K., financed with a 75% loan-to-value (LTV) rolling loan facility. The portfolios were assumed to achieve average market returns over history and we calculated the subsequent returns to both debt and equity holders. Risk-adjusted returns were calculated by dividing nominal returns by their standard deviations.

The results in Figure 2 show that while equity investments have tended to deliver a higher nominal return, debt investments outperform equity investments on a risk-adjusted basis.

At the portfolio level, these advantages are enhanced by the low correlation between the returns to CRE debt and equity investments. One of the main reasons for this low correlation is that capital value movements pass through fully to the equity investment, but not to the debt investment. This means that adding debt investments to a traditional equity portfolio can effectively diversify the portfolio, reducing its overall volatility.

The loan-to-value ratio of a debt instrument plays a crucial part in this mechanism, preventing most value declines from affecting the returns to debt holders. It generates downside protection to the lender by effectively creating an equity cushion that increases as the LTV ratio falls. This downside protection helps explain why debt funds can deliver expected returns even if capital values are falling. Lenders can insulate themselves from a weak market if their portfolio has been protected.

Figure 2: Nominal and risk-adjusted returns to CRE debt and equity investments 1995-2020



Source: MSCI, Nuveen Real Estate

Note:Returns derived from MSCI market data on asset values and income returns. Debt assumed at 75% LTV with rolling 5-year terms at floating rates. Debt default rates assumed at 25% in any market downturn.

HOW IS LENDING RISK DISTRIBUTED ACROSS SECTORS?

The focus of debt investment is resilience rather than growth, based on solid income flows and low volatility of capital values. But capital volatility differs between CRE sectors over the course of the cycle, and between countries, creating differences in lending risk.

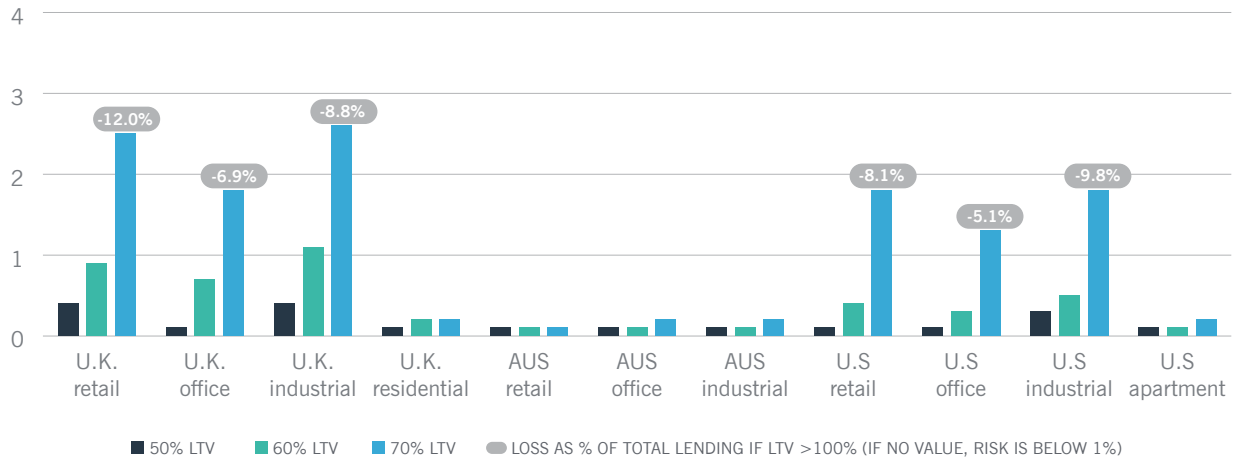
Keeping LTVs significantly below 100% dampens these differences, but doesn't eliminate them. We investigated the impact of LTVs on loan resilience by using Monte Carlo simulations to model the risk of a loan's LTV ratio exceeding 100% in the final year of the loan. This is different from default risk, but we expect an increase in this probability to be associated with higher default risk. We ran two versions of these simulations: The first was based solely on the historic performance of the main CRE sectors in the U.S., U.K. and Australian markets since 1995 (Figure 3); the second incorporated our current five-year forecasts of capital growth (Figure 4).

Based solely on historic returns, our simulations showed that for a 50% LTV 5-year loan, the risk of LTVs exceeding 100% at the end of the loan was less than 1% in all of the country sectors we

studied. Increasing the LTV to 60% produced the same conclusion, even though capital volatility was significantly different across our sample. This suggests that an equity cushion of 40% to 50% of asset value has tended to dampen the impact of capital volatility at the market level on lending risk in the country sectors we studied. When we increased the LTV ratio to 70% and reduced the equity cushion to 30%, we began to see some evidence of differential risk between markets, but at very modest levels. The risk of LTV ratios moving above 100% was around 2% in office, industrial and retail portfolios in the U.S. and U.K., but remained below 1% in U.S. residential, U.K. residential and in all the Australian sectors.

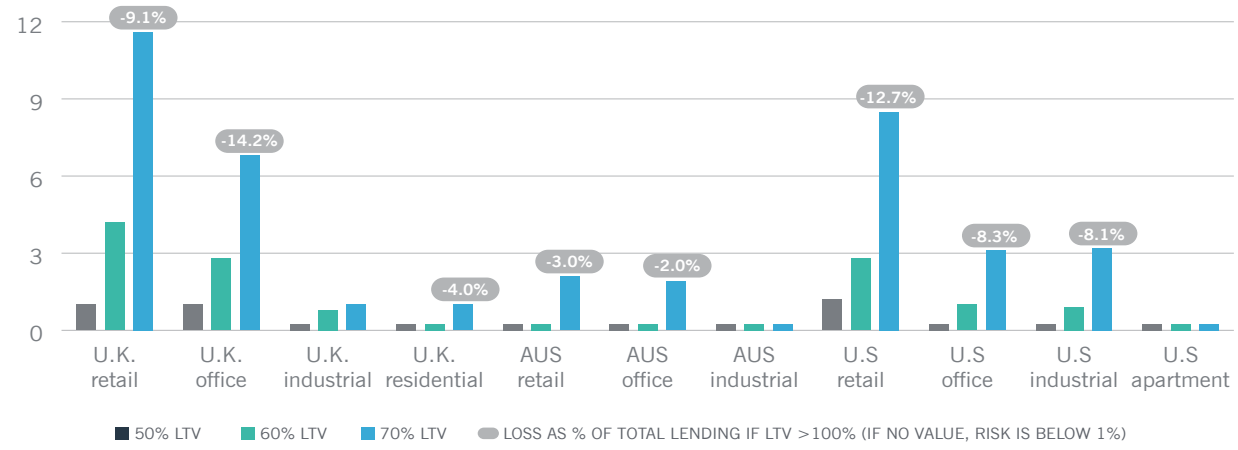
We have estimated the losses that lenders could expect to incur when loans exceed 100% LTV by calculating the median LTV for these simulation outcomes and assuming the excess above 100% is lost. Where the initial LTV was 50%, none of the country/sectors had a high enough level of risk to reliably estimate a median. Where the initial LTV was 60%, only the U.K. retail sector had a high enough risk to calculate a loss, and this was 17% of the whole loan at a 1% probability. Where the initial LTV was 70%, the risk was high enough to

Figure 3: Probability of LTV exceeding 100% for 5-year loans over 1995-2020



Source: MSCI, NCREIF, PCA, Nuveen Real Estate

Figure 4: Probability of LTV exceeding 100% for 5-year loans originated in 2021



Source: MSCI, NCREIF, PCA, Nuveen Real Estate

calculate a loss for U.K. and U.S. sectors excluding residential/apartment. The estimated losses reported in Figure 3 ranged from a 1% probability of a 5% loss to the whole loan for U.S. office to a 3% probability of a 9% loss to the whole loan for U.K. industrial.

These results suggest that over the last 25 years on average, the additional risks for debt funds of increasing LTV ratios and reducing the equity cushion were relatively small and could have been compensated by small increases in lending margins.

In our second set of simulations, we replaced historic capital growth estimates with our current forecasts. Once again, we found that the modelled risk for 5-year loans with a 50% LTV ratio was always extremely low, at 1% or less. When we increased the LTV to 60%, some differences in risk did emerge: Retail and office loans in the U.K., together with retail loans in the U.S., showed moderately higher risk at 2%-4%. When we increased LTV ratios further to 70%, our simulations suggested that the risk of LTVs going above 100% at the end of the loan increased to the range 6%-11% in U.K. and U.S. retail, and in U.K. office. The industrial/logistics sector remained low-risk in all versions of our simulations, as did residential/apartment sectors in the U.K. and U.S. An interesting feature of the results was that Australia showed the lowest risk across all sectors in the forecast exercise, even though our forecasts assume relatively low growth over the next five years.

We also estimated likely losses for lenders in this second set of simulations. At initial LTVs of 50% and 60%, very few of the country/sectors had enough risk to be able to reliably calculate a loss. At an initial LTV of 50%, we did find a 2% probability of a 14% loss to the whole loan for U.K. office lending. At an initial LTV of 60%, there was enough risk to estimate losses for U.K. retail (4% probability of a 12% loss), U.K. office (3% probability of a 15% loss), U.S. industrial (1% probability of a 3% loss) and U.S. retail (3% probability of a 9% loss). At an initial LTV of 70%, there was enough risk to calculate losses for all country/sectors except U.K. industrial, Australia industrial and U.S. apartment.

These typical losses are reported in Figure 4. The very low risk identified for the Australian CRE market is partly the result of rapid population growth and robust economic performance that has generated low volatility for real estate values. The sustainability of growth has supported the general market perception of a lower-for-longer interest rate environment that is contributing to ample debt capital liquidity from the banking sector. Over the medium term, structural change in the Australian debt market will support private CRE debt as the marketplace shifts towards alternative lenders and away from banks with high capital ratio requirements.

INSIGHTS FOR INVESTORS

Our research suggests that lenders need to identify where loans are at greater risk due to market volatility and ensure margins are high enough to compensate for that risk. They should also manage risk through sponsor selection, real estate asset analysis and mortgage design. Experienced CRE lenders from all platforms may have developed sponsor relationships and contract features that have been reliably shown to reduce risk. A key differentiator between banking teams and alternative CRE lenders is often the level of CRE expertise of the alternative lenders, including the ability to manage the underlying real estate assets in the event of default. Lenders who are active in the real estate market themselves can leverage their own knowledge and experience, as well access to proprietary and market data, to better analyse and underwrite risk.

CONCLUSION

The continued appetite for CRE debt from investors around the world reflects the important role debt can play in delivering higher risk-adjusted returns and diversifying portfolios. Our analysis shows that it delivers impressive risk-adjusted returns across a range of markets. A key feature of the debt product that delivers these returns is the LTV ratio that creates an equity cushion to reduce downside risk. Our simulations exercise suggests that market volatility has made a relatively small contribution to lending risk in the U.S., U.K. and Australia over the last 25 years on average. In the current market environment, we expect risk to remain low in most of the countries and sectors we have studied. But where risk is higher, it is crucial that lenders manage their risk profile and adjust margins to compensate.

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Endnotes

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A word on risk

All investments carry a certain degree of risk and there is no assurance that an investment will provide positive performance over any period of time. Investing in municipal bonds involves risks such as interest rate risk, credit risk and market risk, including the possible loss of principal. The value of the portfolio will fluctuate based on the value of the underlying securities. There are special risks associated with investments in high yield bonds, hedging activities and the potential use of leverage. Portfolios that include lower rated municipal bonds, commonly referred to as "high yield" or "junk" bonds, which are considered to be speculative, the credit and investment risk is heightened for the portfolio. Bond insurance guarantees only the payment of principal and interest on the bond when due, and not the value of the bonds themselves, which will fluctuate with the bond market and the financial success of the issuer and the insurer. No representation is made as to an insurer's ability to meet their commitments.

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