Real Estate

Commercial & multifamily mortgage loan investments:

An integral part of a fixed income asset allocation strategy

Potential key benefits:

- Appealing current income returns
- Limited correlation of returns with fixed income alternatives
- Call protection
- Ability for investors to tailor their portfolio to meet specific durational needs

Past performance is not necessarily indicative or a guarantee of future return. Real estate investment options are subject to risks inherent in real estate including general and local economic conditions. The potential for profit is accompanied by the possibility of loss.

In an era of low returns and high financial market volatility, core commercial and multifamily mortgage loan investments provide fixed income investors an appealing mix of strong relative value, low credit risk, and diversification benefits within a larger fixed income portfolio.

Moreover, these investments may offer high current income returns, limited correlation of returns with other fixed income alternatives, call protection, and the ability for investors to tailor their portfolios to meet specific durational needs.

It is essential for investors to select a well-qualified asset manager to help them reap the potential benefits of investing in commercial and multifamily mortgages, since the asset class can be difficult to navigate.

This paper provides an overview of how these investments serve today's fixed income investors, and an assessment of mortgage loans' potential to provide excess returns over traditional corporate bond yields. It also includes a review of commercial and multifamily mortgage loans' historical credit performance and an assessment of other benefits associated with these investments.

Defining the asset class

Core commercial and multifamily mortgage investments are private mortgage loans secured by first liens on well-leased office, retail, industrial, and multifamily residential properties. Investment sizes range from less than $10 million to more than $100 million per transaction, with terms ranging from less than three years to 30 years or longer. Value-added investments in subordinate debt, and bridge loans secured by commercial and multifamily real estate are also available, although in this paper we will focus primarily on core, senior investments. According to the U.S. Federal Reserve (Fed), the total balance of commercial and multifamily real estate debt outstanding in the United States was approximately $4.37 trillion at the end of first quarter 2019[1], an increase from $4.11 trillion at the end of the first quarter of 2018.[2] Investors in the market include commercial banks, asset-backed security issuers, life insurance companies, government-sponsored enterprises, finance companies, pension funds, and others. Each investor type targets risk-return profiles appropriate to their needs.

[1] "Flow of Funds Accounts of the United States: Flows and Outstanding First Quarter 2019," Board of Governors of the Federal Reserve System.

[2] "Flow of Funds Accounts of the United States: Flows and Outstanding First Quarter 2018," Board of Governors of the Federal Reserve System.

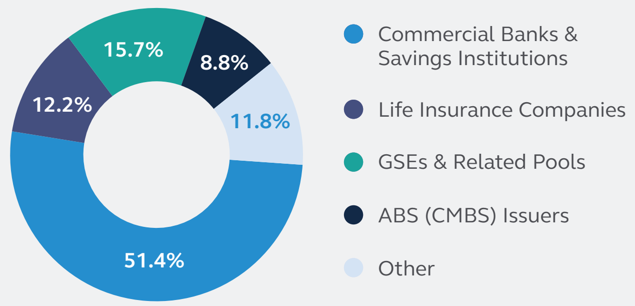
Focusing on market segments

Although several types of lenders frequently compete to provide the same loans, some lenders focus only on specific segments of the market. Life insurance companies tend to focus on high-quality properties in major metropolitan areas, seeking properties with durable cash flow streams and values. As a result, the credit loss experience of life insurers has been among the most favorable in the industry. Later, we will examine life insurers' historical credit experience with commercial mortgages. Regardless of whether an investor is an insurance company or other type of institutional investor, Principal Real Estate Investors can offer an investor core commercial and multifamily mortgage loan investments with these types of appealing attributes.

Insurance companies held over US$532 billion of U.S. commercial and multifamily residential mortgage loans as of March 31, 2019. Data from the American Council of Life Insurers revealed that holdings varied by size of insurer, with larger companies more likely to hold a greater share of mortgages in their portfolios, perhaps due to economies of scale associated with mortgage loan origination. Despite the current low interest rate environment, many life insurers find mortgage investments compelling today, based on favorable risk parameters from an historical perspective, and strong relative values compared to other asset classes. Consequently, life insurers have increased their recent allocations to commercial mortgages and today hold a greater exposure to the asset class than ever before.

Exhibit 1: U.S. commercial & multifamily mortgages

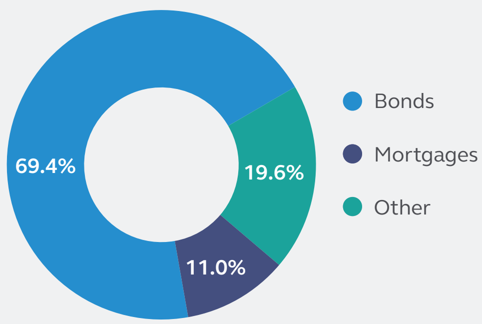
Total balance of outstanding commercial and multifamily debt was approximately $4.37 trillion at the end of first quarter 2019 — an increase from $4.11 trillion at the end of 2018.



Source: U.S. Federal Reserve
As of 31 March 2019

Exhibit 2: Average portfolio composition of insurance companies

As of year-end 2017, data revealed that life insurance companies held an average of 11.0% of their investment portfolios in commercial and multifamily mortgages.[3]



Source: The American Council of Life Insurers
As of 31 December 2017

Exhibit 3: Commercial and multifamily mortgage loan exposure of select large companies

Today, insurers hold a greater exposure to the asset class than ever before.

Mortgage loans as % of total assets

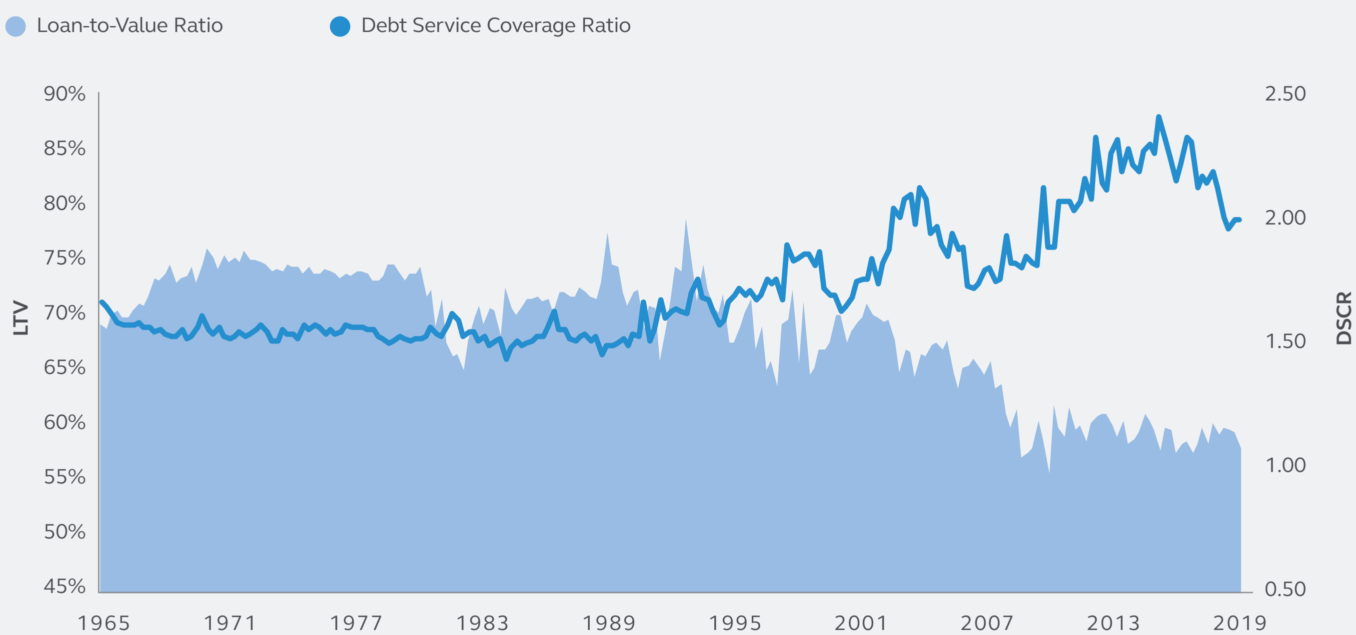
Metropolitan Life Insurance Company	23.9%	Prudential Insurance Company of America	16.8%
Principal Life Insurance Company	19.7%	American International Group	15.9%
Massachusetts Mutual Life Insurance Company	18.3%	Manulife Financial Corporation	15.2%
Pacific Life Insurance Company	18.2%	New York Life Insurance Group	13.3%
Northwestern Mutual Life Insurance Company	17.0%	Lincoln National Corporation	12.1%
		Teachers Insurance and Annuity Association of America	11.6%

Source: J.P. Morgan Asset Management
As of April 2019

There has been a very favorable trend in two key underwriting metrics: loan-to-value (LTV) ratio and debt service coverage ratio (DSCR). The first quarter 2019 average LTV ratio of 57.9% compared quite favorably to the historical industry average of 68.4%. The first quarter 2019 average DSCR of 1.86 also materially exceeded the historical average of 1.53. Renewed competition has placed some pressure on underwriting metrics for new loans, but credit standards among life insurance company lenders remain excellent.

Exhibit 4: Average Credit Metrics for Newly-Originated Life Insurance Company Loans

The first quarter 2019 average LTV ratio of 57.9% compared quite favorably to the historical industry average of 68.4%. The first quarter 2019 average DSCR of 1.86 also exceeded the historical average of 1.53.



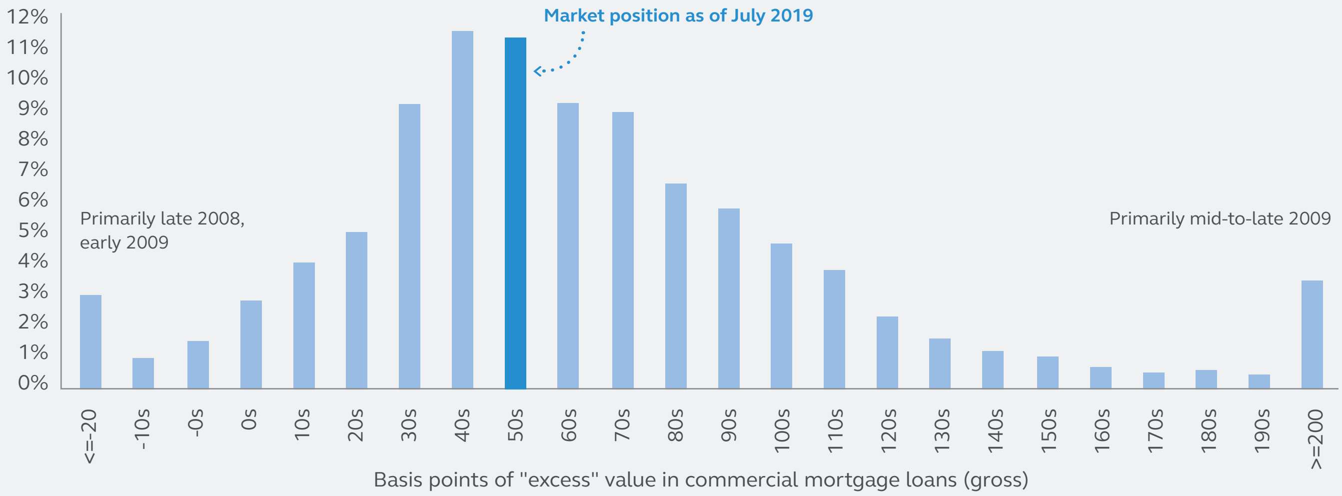
Source: American Council of Life Insurers
As of 31 March 2019

Exhibit 5: Relative value at market-clearing: CML spread premiums observed since 2000

Mortgages have delivered varying spread premiums over corporate bonds with comparable terms and credit risk.

CML market-clearing spread estimates less corporate bond composite index

5 & 10-year terms, BBB+ equivalent and better and times weighted equally, annual effective yield basis



Source: Barclay's and Principal Real Estate Investors
As of July 2019

Providing excess returns

From a relative value perspective, mortgage spreads have historically provided excess returns compared to similarly rated corporate bonds. To showcase this difference, we examined the differential between Principal Real Estate Investors' market-clearing spread estimates for core commercial and multifamily mortgages and Barclay's corporate bond spread indices. When considering 5- and 10-year terms and a range of credit ratings between AAA and BBB+, on average mortgages offered approximately 68 basis points (bps) of excess returns relative to comparably rated corporate bonds since the beginning of the year 2000.[4] The attractive spread differential offsets the higher administrative costs and lower liquidity of mortgages compared to corporate bonds, and we believe the differentials make core commercial and multifamily mortgage investments compelling from a risk-return perspective.

Other portfolio management considerations

Although current measures of risk and return feature prominently in an evaluation of the asset class, other factors also merit consideration. Investors should carefully consider historical and projected future performance in terms of credit quality, investment returns, and portfolio diversification. Other considerations for investors include volatility of returns, asset-liability matching considerations, income potential versus price appreciation, call protection, and risk-based capital implications. It is essential for investors to select a well-qualified asset manager to help them reap the potential financial rewards, since commercial and multifamily investing can be an area of investing that is difficult for them to navigate on their own, and relationships with key market participants matter in this private asset class.

[4] Using Principal Real Estate Investors' proprietary credit risk rating system, a 60% LTV loan for a property with a highly durable cash flow stream and favorable property, market, and sponsor attributes might be rated A+/A. A 68% LTV loan for the same property might be rated BBB+.

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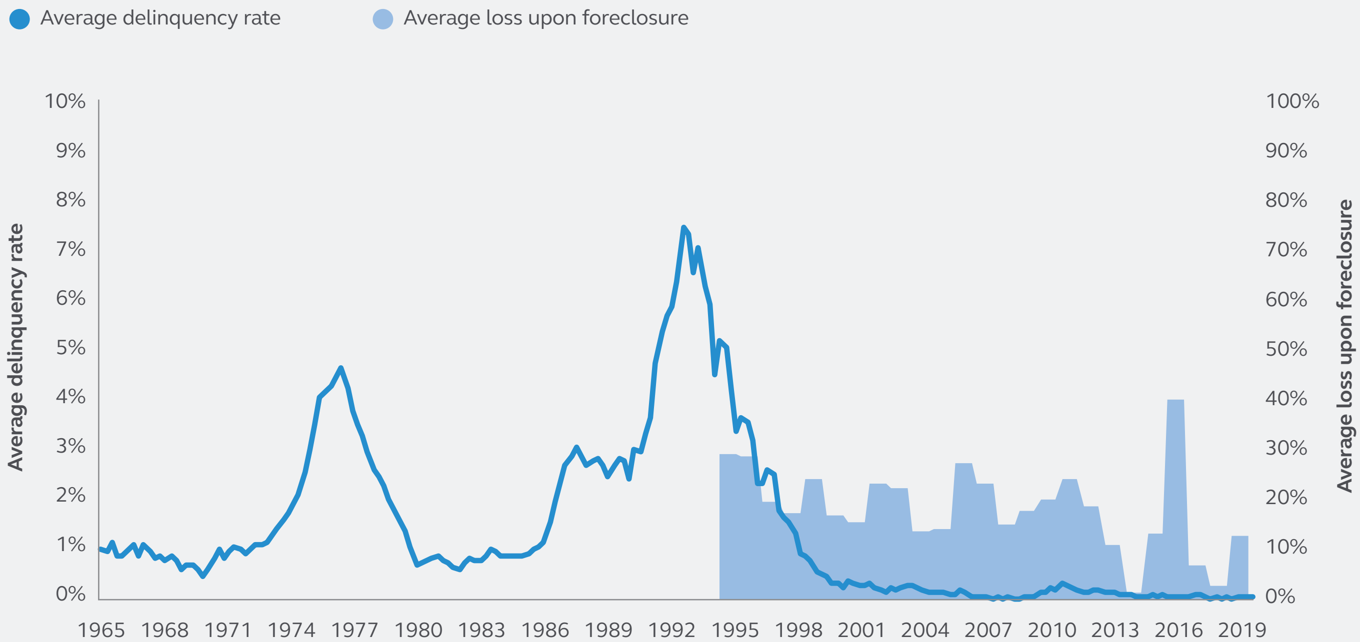
Proprietary model output is based upon certain assumptions that may change, are not guaranteed and should not be relied upon as a significant basis for an investment decision.

Looking at credit risk from an historical perspective

The American Council of Life Insurers (ACLI) collects and reports key measures of credit risk for mortgage portfolios, including mortgage delinquency data dating back to 1965 and mortgage loss data dating back to 1994, providing insights regarding historical delinquency and loss experiences of mortgage portfolios owned by life insurance companies. Recent mortgage portfolio delinquency rates below 0.20% are significantly lower than the historical average of 1.4%.[5] However, today's delinquency rates do not reflect the impact of substandard loans sold by life insurers prior to the loans' delinquency. Since this has become a common practice over the past several years, delinquency rate data provided by the ACLI may be less reflective of default risk. ACLI's loss rate data is a more reliable indicator of potential loss given default. However, the severity of actual losses may be modestly muted by note sale economics.

> **Exhibit 6:** Historical mortgage credit loss experience among life insurers

Recent mortgage portfolio delinquency rates are significantly lower than the historical average of 1.43%.



Source: American Council of Life Insurers
As of 31 March 2019

[5] "Mortgage Loan Portfolio Profile – Historical Database," second quarter 2017, American Council of Life Insurers.

Credit risk case study: Gauging portfolio performance

To supplement the analysis of historical credit loss data from the ACLI, we studied the performance of 29 commercial mortgage loan portfolios that Principal Real Estate Investors created and managed. The data set included mortgage investments originated for each of Principal Real Estate Investors' core commercial mortgage clients. However, the study excluded Principal Life Insurance Company data so that the results might better reflect a broad range of strategies employed for various clients. Consisting of loans originated between 1988 and 2017, the data set included 1,315 loans with an original principal balance of $9.08 billion. At year-end 2018, loans with an aggregate balance of $3.54 billion remained outstanding. The key findings of the study included:

Of the 1,315 loans studied, **25 experienced losses totaling $41.73 million**, or 0.46% of the original aggregate principal balance.

Based on an approximate outstanding term of seven years, **the average annual portfolio loss rate was 0.066%**, or roughly 7 bps.

For the 25 loans that incurred losses, **the loss severity relative to the principal balance averaged 27.60%**.

When assessing the potential future credit performance of core commercial mortgage portfolios, consider that underwriting structures today remain more lender-friendly than was common 12-15 years ago. Although past performance cannot be deemed predictive of future results, many investors speculate that future mortgage portfolio credit performance will remain strong based on historical observations and recent trends in underwriting standards.

Historical total returns and current income returns

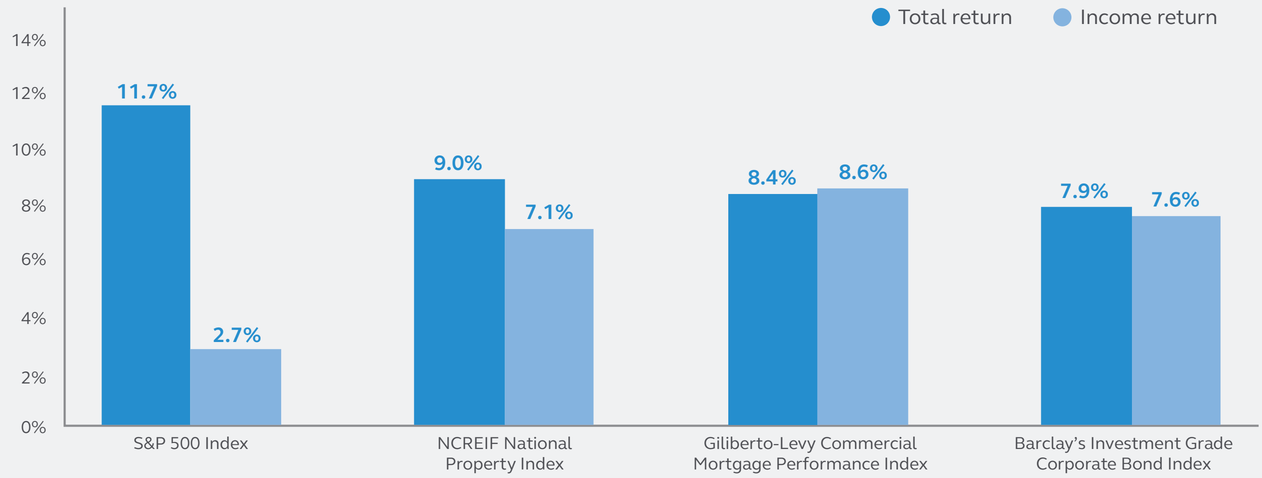
The S&P 500 Index, the NCREIF National Property Index (NPI), Barclays Investment Grade Corporate Index, and the the Giliberto-Levy Commercial Mortgage Performance Index were used to look at the difference in returns for corporate and real estate equity, and corporate and real estate debt. For those unfamiliar with this last measure, the Giliberto-Levy Index has tracked more than 75,000 loans, with an aggregate original principal balance of approximately $762 billion.[6] Over the past 40 years, commercial and multifamily mortgages delivered total returns approaching those of real estate equity, and exceeded those of corporate bonds. When the analysis focused only on the most recent 20-year time period, total returns for real estate equity exceeded those of mortgages by a larger margin. However, mortgages continued to provide a meaningful yield advantage over corporate bonds.

An analysis of the same data set also revealed that commercial mortgages provided a consistently high level of current returns over time, which is an attribute of the asset class particularly appealing to investors with significant current liabilities.

[6] "Giliberto-Levy Commercial Mortgage Performance Index." JB Levy & Co., jblevyco.com/index/. Case study is as of 31 December 2018. Principal Real Estate Investors became registered with the SEC in November 1999. Activities noted prior to this date above were conducted beginning with the real estate investment management area of Principal Life Insurance Company and later Principal Capital Real Estate Investors, LLC, the predecessor firm to Principal Real Estate Investors, LLC. Core commercial mortgage loans exclude loans originated for securitization, construction loans, high yield loans (subordinate debt, bridge loans), credit tenant loans and loans under management but not originated by Principal Real Estate Investors.

Exhibit 7: Average annual returns: Total return vs. income return, 1978 Q4-2019 Q1

Over the past 40 years, commercial and multifamily mortgages delivered total returns approaching those of real estate equity, and exceeded those of corporate bonds.



Source: Barclay's and Principal Real Estate Investors
As of 31 March 2019

Period shown is 1978 Q4 through 2019 Q1.

Exhibit 8: Average annual returns: total vs. income

Commercial mortgages have consistently provided a high level of current returns (interest, dividends, and other cash flows) over time.[7]

	Full Comparable Data Series (1978 Q4 — 2019 Q1)		Past 30 Years (1989 Q1 — 2019 Q1)		Past 20 Years (1999 Q1 — 2019 Q1)		Past 10 Years (2009 Q1 — 2019 Q1)	
	Total Return	Income Return	Total Return	Income Return	Total Return	Income Return	Total Return	Income Return
S&P 500 Index	11.67%	2.74%	10.16%	2.14%	6.12%	1.91%	15.64%	2.07%
NCREIF National Property Index	8.99%	7.14%	7.76%	6.92%	8.93%	6.34%	8.51%	5.46%
Giliberto-Levy Commercial Mortgage Performance Index	8.43%	8.63%	7.14%	7.33%	6.08%	6.14%	5.93%	5.22%
Barclay's Investment Grade Corporate Bond Index	7.93%	7.61%	6.89%	6.41%	5.54%	5.52%	6.66%	4.55%

Source: Giliberto-Levy, Barclays, NCREIF, Standard & Poors
As of 31 March 2019

[7] Based on data from Standard & Poor's, Barclay's, the National Council of Real Estate Investment Fiduciaries, Giliberto-Levy,and Principal Real Estate Investors Research.

For illustration purpose only, not to be taken as investment advice. It is not possible to invest in an index.

Past performance does not guarantee future returns.

Correlation and volatility

Commercial mortgages can provide correlation benefits with many common asset classes used by institutional investors. The price appreciation of various fixed income asset classes is driven largely by interest rate levels. To gauge the excess value provided by commercial mortgage investments over bond investments, the primary focus should be on spread differentials and credit loss expectations. However, it is interesting to note that the total returns of these fixed income asset classes are not perfectly correlated (only a 0.8004 correlation since the third quarter of 1978). Therefore, institutional investors who use commercial and multifamily mortgage investments as a component of their fixed income portfolios may reap the benefits of portfolio diversification.

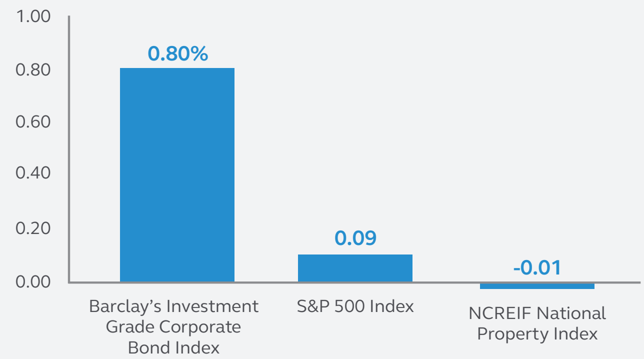
Investors whose portfolios contain a mixture of fixed income and equity investments may recognize even greater diversification benefits. Historically, mortgage total returns have shown low correlation with the total returns of real estate equity (-0.0085 correlation) and corporate equity (0.0946 correlation).[8] Lagging real estate equity returns by three years does result in a slightly greater correlation with commercial mortgage returns, but still only 0.0995.

Since late 1978, one standard deviation of annual total returns for the S&P 500 Index has been a significant 15.86%. By comparison, the same measure for corporate bonds, real estate equity, and commercial mortgages has been just 9.0%, 7.5%, and 7.2%, respectively. Historically, the highest total returns have been generated by corporate equities, but with significant volatility.

Calculations of various risk-return ratios, such as the Sharpe ratio, suggest that the relationship associated with commercial mortgage investments has been highly favorable when combining fixed income and equity investments in investors' portfolios. Such considerations ignore the fact that nominal yields on commercial mortgages are quite low from an historical perspective today, with core investment-grade mortgages typically offering nominal note rates between the low 3% and mid 3% range in the current market environment. However, the analysis suggests that core mortgage investments could also be beneficial to most institutional investors rather than just to those who are focused primarily on asset-liability matching. Total return focused investors may also find commercial mortgage investments appealing in certain interest rate environments or to meet portfolio diversification goals.

Exhibit 9: Correlation of quarterly total returns: Gilberto-Levy commercial mortgage performance index vs. other indices

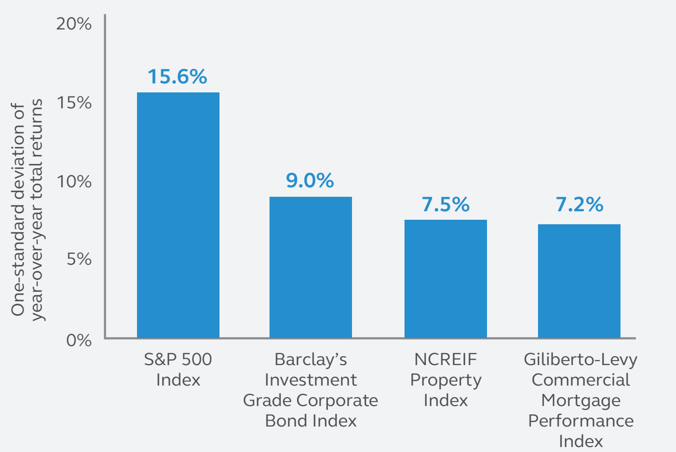
1978 Q4 through 2019 Q1



Source: Barclay's and Principal Real Estate Investors
As of 31 March 2019

Exhibit 10: Volatility of total returns

The highest total returns have historically been generated by corporate equities, but the volatility associated with those returns has been significant.



Source: Giliberto-Levy, Barclays, NCREIF, Standard & Poors
As of 31 March 2019

[8] Based on data from Standard & Poor's, Barclay's, the National Council of Real Estate Investment Fiduciaries,Gilberto-Levy, and Principal Real Estate Investors Research as of 31 March 2019.

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Past performance does not guarantee future returns.

Risk-based capital

In 2013 a new methodology for calculating risk-based capital (RBC) requirements replaced the widely criticized prior methodology. The new methodology rates each asset independently, and is consistent with RBC requirements for fixed income assets like corporate bonds. Each loan is assigned to a risk category based on loan-to-value and debt service coverage ratios, which are updated over time to reflect changing market and property conditions.

Life insurance companies often consider RBC requirements for each loan at the time of loan approval, and managers monitor the performance of individual loans over time to assess the impact that changes in property or market performance have on capital reserving requirements. The changes to reserving methodology require greater emphasis on portfolio oversight, but allow life insurers to better manage RBC associated with their mortgage portfolios.

Other considerations

Most commercial and multifamily mortgage investments feature a high degree of call protection, which reduces risk to the investor for a specific amount of time during which the borrower cannot prepay any and/or all of the principal. In the event a borrower prepays a fixed rate loan prior to the final three months of the loan term, most loans require that the borrower pay a yield maintenance prepayment premium to the lender. However, in certain instances, lenders will negotiate more flexible prepayment provisions at the time of loan origination, in exchange for a higher interest rate.

Because of the private nature of the commercial mortgage market, lenders can tailor loan terms to meet their portfolio's average life and duration needs. Lenders may also specify investment criteria that are suited to their particular credit risk tolerance and yield requirements. For example, many life insurance companies select core senior mortgage programs as foundations to their real estate debt portfolios. Those investors who can tolerate slightly higher risk-return profiles may also consider construction lending, subordinate debt, or bridge lending strategies.

Exhibit 11: Risk-based capital charges by rating for life insurance companies

The base RBC charges for corporate bonds (NAIC Rating), commercial mortgages (CM Rating), and the related RBC charges.

NAIC Rating	CM Rating	Base RBC
1		0.40%
	1	0.90%
2		1.30%
	2	1.75%
	3	3.00%
3		4.60%
	4	5.00%
	5	7.50%
4		10.00%
	6	18.00%
5		23.00%
	7	23.00%
6		30.00%

Source: National Association of Insurance Commissioners
As of 30 June 2019

Conclusion

Commercial real estate debt appeals to many investors in today's market environment as a means of enhancing yields and mitigating portfolio level risks associated with their fixed income portfolios. However, the private market nature of core commercial mortgage investments creates both challenges and opportunities for investors. Investors who take affirmative steps to overcome the challenges have the potential for a mix of strong relative value, minimal credit losses, appealing current income returns, and diversification benefits from their commercial mortgage investments. The management-intensive nature of the asset class requires specialized knowledge, expertise, and relationships with the right borrowers and intermediaries. While these may serve as material barriers to market entry, investors can select an investment advisor with the right people, tools, and relationships to help them meet their investment goals.

Risk Warnings

Potential investors should be aware of the many risks inherent to investing in real estate, including: value fluctuations, default risk, liquidity risks, leverage, credit risk, occupancy risk, legal risk, lending and direct ownership of commercial real estate mortgages risk. All these risks can lead to a decline in the value of the real estate, a decline in the income produced by the real estate and declines in the value or total loss from investments in real estate. Terms, conditions, fees, expenses, pricing and other general guidelines and provisions are subject to change. Commercial mortgage investments are also very dependent on the financial health, operational expertise, and management skills of the borrower. As a general matter, commercial mortgage lending entails a degree of risk that is typically only suitable for sophisticated institutional and professional investors for whom such an investment is not a complete investment program and who fully understand and are capable of bearing the risks associated with such strategy.

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