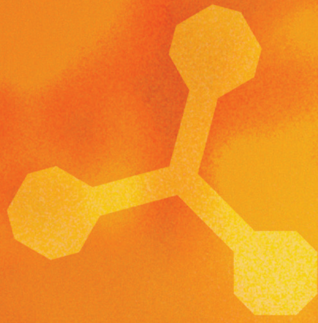

Commercial Mortgage Loans

White Paper | April 2015

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Executive Summary

This paper explores the features, advantages and benefits of investing in commercial mortgage "whole" loans — debt instruments secured by income-producing commercial buildings such as offices, apartments, industrial properties and shopping centers. A pillar of insurance company portfolios for many years, the asset class is less well understood outside the insurance industry. Among other compelling characteristics, we find:

- Commercial mortgage loans have historically offered attractive and stable income, efficient diversification, favorable risk-based capital treatment, yield protection and tax efficiency.
- Commercial mortgage loans have had a strong return-to-risk ratio, historically producing returns similar to commercial mortgage-backed securities (CMBS) — with less than half the risk.
- The U.S. commercial real estate and mortgage loan markets remain healthy; the moderate but steady growth generated in 2014 can potentially continue in 2015.
- Life insurers are the leaders in commercial mortgage loan resources, with many years of experience, extensive loan origination networks and sophisticated servicing systems.
- Commercial mortgage loan portfolios managed by insurance companies have tended to perform better than the overall market, due in part to conservative underwriting standards.
- Historical simulations show the potential of commercial mortgage loans to expand the attainable efficient frontier for institutional investors.

Commercial Mortgage Loans in Perspective

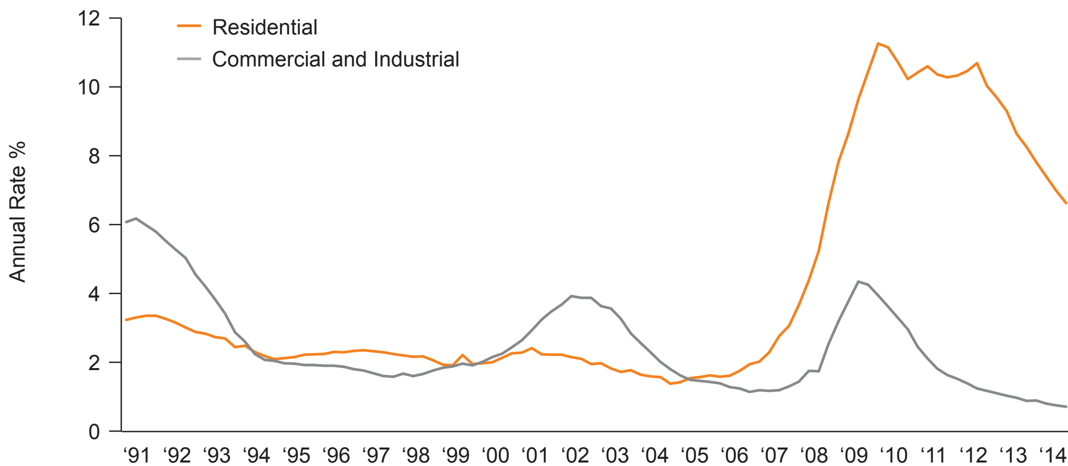
A commercial mortgage loan (in contrast with a residential mortgage loan) is secured by a mortgage on a commercial property such as an office building, multifamily apartment complex, industrial warehouse or shopping center. Directly negotiated commercial mortgages ("whole loans", as distinct from securitized CMBS pools) may be tailored to suit the needs of both the borrower and underwriting criteria of the lender; to this end, an extensive underwriting and due diligence process will precede the actual funding.

The mortgage underwriting process will typically include, among other things, a financial analysis of the prospects for the property and the property owner, as well as various third-party reports, such as appraisals, environmental reports and engineering reports. In terms of the underwriting criteria, loan-to-value (LTV) ratios, debt-service coverage and net operating income are paramount, but numerous metrics are employed, depending on the location, property type and economic environment. According to the National Association of Insurance Commissioners (NAIC) website, commercial mortgage underwriting tends to be more conservative than for residential properties; for example, (LTV) ratios will typically fall between 55% and 70%, while residential LTVs may be 80–90% or more.

Conservative underwriting practices are reflected in the differences in financial experience between the commercial mortgage loan market and the residential mortgage market, as illustrated in Figure 1.

Figure 1. Commercial and Home Loan Delinquencies Decoupled During and After the Credit Crisis

Mortgage Loan Delinquencies, 1991–2014



Source: Federal Reserve (Federal Financial Institutions Examination Council Report), Freddie Mac, FactSet

U.S. Commercial Real Estate and Mortgage Market Overview

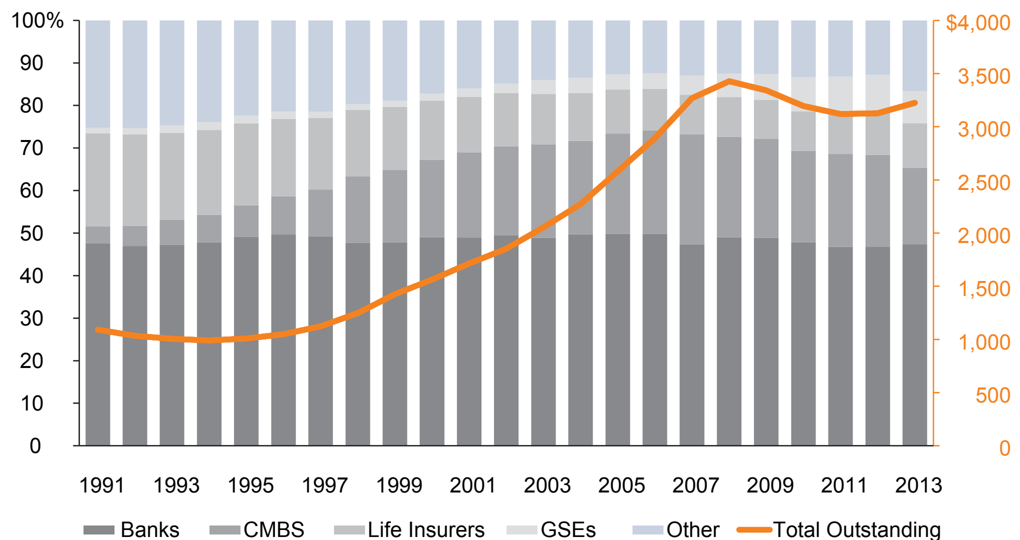
The health and prospects for the commercial mortgage loan market depend on the condition of the U.S. economy and the real estate market in general. As measured by gross domestic product, the U.S. economy continues to show signs of moderate but steady growth. Meanwhile, the U.S. Department of Labor (DOL) reported that steady growth in nonfarm payrolls over the past several years has brought the unemployment rate to about 5.5% as of March 2015.

U.S. commercial real estate transaction volume increased 17% in 2014 over 2013, as reported by Real Capital Analytics. Multifamily construction was up sharply from the previous year, due in part to the relatively low supply of multifamily housing combined with an aging population, according to the CFA Institute. In another report, commercial real estate company CBRE reported year-over-year office vacancy rates dropping 100 basis points in the past year — to 13.9% at the end of 2014 — completing the tenth consecutive quarter of decreasing vacancy rates.

The Federal Reserve pegs the U.S. mortgage market at approximately $13.2 trillion, a figure that includes residential, commercial and farm mortgages. Of the entire mortgage market about $3.2 trillion — or 24% — is comprised of commercial mortgages, including those on multifamily properties. Of these, about 50% were held by banks (in 2013), 18% were held by issuers of commercial mortgage-backed securities, 12% were held by government-sponsored enterprises and GSE-backed mortgage pools, and 10% were held by life insurance companies.

Figure 2. Banks and Insurance Companies Dominate the Commercial Mortgage Loan Market

Commercial and Multifamily Mortgage Loans



Source: PREA, Federal Reserve Flow of Funds Accounts of the United States

Note: “Other” includes pension funds; finance and mortgage companies; REITs; and federal, state and local governments.

U.S. Commercial Real Estate and Mortgage Market Outlook

Returns on U.S. real estate remain attractive relative to other asset classes, the cost of leverage remains low, and owners appear to be optimistic about overall economic conditions. Commercial real estate total returns as measured by the NCREIF Property Index were 11% in 2013 and 11.8% in 2014. Strengthening market fundamentals, an abundance of equity capital flowing into the sector, historically low cap rates and low-rate debt financing continue to support strong returns.

High-quality properties in primary markets have experienced the strongest demand; however, properties in non-major markets have benefitted as investment capital sought higher yields beyond gateway cities.

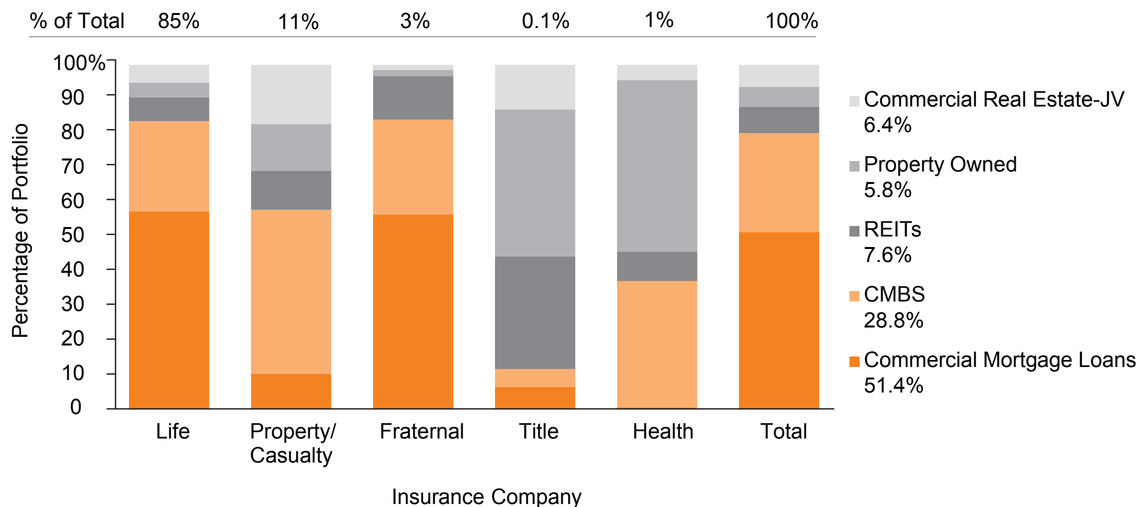
Growth prospects for the commercial mortgage loan market are high. The Mortgage Bankers Association (MBA) projects that 2015 originations of commercial and multifamily mortgages will increase slightly over 2014's estimated volume of $387 billion. Part of the increase will be driven by the continuing recovery of the CMBS market, which stalled in 2011 amid global financial market concerns before mounting a 2014 revival. Life insurance companies are anticipated to sustain their strong demand for mortgages after lending activity for the sector achieved a record high of $52.5 billion in 2013, as reported by the American Council of Life Insurance (ACLI). Fannie Mae and Freddie Mac have traditionally dominated originations in the multifamily sector and are expected to continue their strong demand.

Characteristics of Commercial Mortgages in the Insurance Industry

Given its appealing characteristics, commercial real estate has always represented a significant component in the portfolios of U.S. insurance companies; as a result, insurers are among the leaders in commercial mortgage loan management. As of December 31, 2013 — the latest data available — insurers reported book value of $342 billion, which represented more than 50% (see Figure 3) of investments in commercial real estate in the insurance industry. Life insurers — as distinct from property and casualty, health, fraternal and other companies — held about 85% of the insurance industry's total.

Figure 3: Life Insurers Dominate Insurance Industry's Exposure to Commerce Real Estate

Insurance Industry Year-End 2013 Commercial Real Estate Exposure



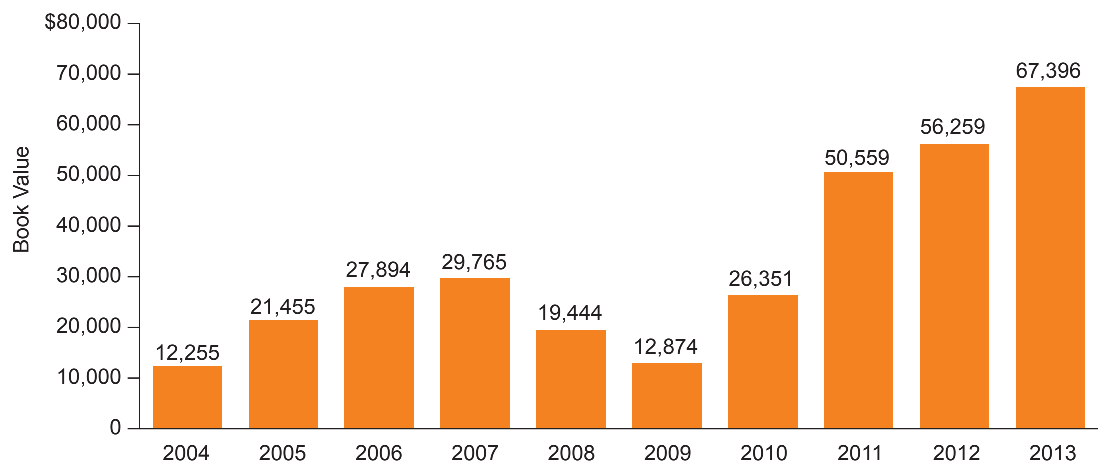
Source: National Association of Insurance Commissioners

Note: December 31, 2013, reflects the latest data available.

Indicative of the concentration among the largest life companies, the top 10 life insurers accounted for 45% ($154.5 billion), according to the NAIC, while the top 25 accounted for 69%. Insurers reported new loan acquisitions of about $67.4 billion in 2013 compared with $12.8 billion new loans in 2009, a dramatic 400% increase (see Figure 4).

Figure 4. U.S. Insurers Dramatically Increased Commercial Mortgage Investments Since 2009

Book Value of Commercial Mortgage Loan Investments by Year of Acquisition



Source: National Association of Insurance Commissioners

Loan Origination

Large life insurance companies have been among the leading commercial mortgage lenders for a number of reasons. On average, major insurance company participants have the resources to place several billion dollars of business annually through direct relationships with property owners, including pension plans, insurance companies, public and private REITs, and high net worth individuals, as well as through their extensive networks of U.S. mortgage banking firms.

Insurance company loan originators are geographically focused within their respective markets and have long-term relationships with mortgage bankers, brokers and borrowers active in their local areas, placing their representatives on the ground in almost every state and every primary and secondary property market in the U.S.

Property Diversification

The commercial mortgage loan market is commonly classified into the following primary property types: office buildings, retail, industrial, apartments, hotel/motel, mixed use, and others. The vast majority of the average life insurer's mortgage holdings are comprised of office, retail, industrial and apartments, as shown in Figure 5 below. Like any prudent investor, insurance companies favor mortgage loan portfolios that are diversified by property type and geography and are in accordance with credit risk assessments that vary across property types and locations.

Specific credit quality and underwriting criteria can vary significantly by property type, reflecting risk disparities and the objective of adequate portfolio diversification. For instance, a property with longer-term leases and a diverse mix of tenants will tend to be less exposed to cyclical fluctuations and, accordingly, may bear less credit risk. Using the lease term as one example, the effective lease period may range from one night (a hotel) to many years (offices and retail properties). Hotels' cash flow volatility, capital intensity and high fixed operating costs make them inherently higher risk.

Figure 5. Life Insurers Are Focused on Office, Retail, Industrial and Apartments

Life Insurer Commercial Mortgage Holdings by Property Type as of September 30, 2014

	Principal		Average Loan	
Property Type	**Outstanding ($)**	**# of Loans**	**Outstanding ($)**	**Allocation (%)**
Office Building	84,642,718	6,825	12,402	30.33
Retail	68,824,626	11,319	6,080	24.66
Apartment	55,617,722	4,369	12,730	19.93
Industrial	45,232,236	8,433	5,364	16.21
Hotel/Motel	11,826,456	503	23,512	4.24
Other	10,102,047	1,983	5,094	3.62
Mixed Use	2,835,204	280	10,126	1.02
Total	**279,081,009**	**33,712**	**75,308**	**100.00**

Source: American Council of Life Insurance

Office buildings were life insurers' largest property type, comprising 30% of their commercial mortgage loan holdings as of September 30, 2014. Retail real estate, such as regional malls and neighborhood centers, was the second-largest exposure, at 25%. Apartments consist of multifamily buildings offering primary residencies to tenants. Industrial properties — typically warehouses and distribution centers, not factories — are often subject to lower ongoing capital needs compared to other asset types.

According to the NAIC, lenders are particularly active in gateway markets such as New York City, Washington DC and San Francisco, among other leading cities with large, liquid, diversified economies and commercial and residential real estate markets. Insurer lending tends to be concentrated in major metropolitan areas, mainly on the U.S. East and West Coasts. NAIC published data show that loans on properties located in California alone accounted for 20% ($69.7 billion) of commitments in 2013. New York and New Jersey accounted for 12%. The top 10 states accounted for about 65% of commercial mortgage loan exposure.

Mortgage Servicing and Portfolio Management

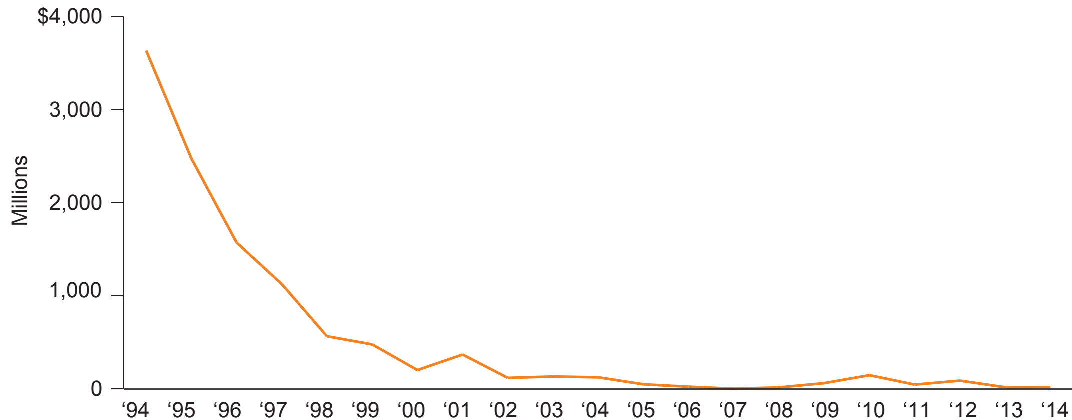
Unlike portfolios of securities, commercial mortgage loans require hands-on management after closing. Standard servicing includes collection of updated rent rolls and operating statements, property inspections, and confirmation of paid taxes and insurance premiums as well as other items. Properties also encounter non-standard issues requiring lender review and analysis, such as loan assumptions, eminent domain issues, lease approvals and tenant agreements, management of escrows and transfer of ownership interests. Asset managers must develop and maintain extensive systems, technology platforms, policies and procedures to meet industry standards and effectively manage the risks and the assets in the portfolio. It has become increasingly cost prohibitive for smaller investors to invest in the technology and human capital required.

Commercial Mortgage Loan Delinquency and Foreclosure

Data and reports published by the NAIC indicate that insurer commercial loan portfolios have tended to perform better than the overall commercial mortgage market, presumably due in part to more conservative underwriting standards. In 2013, commercial mortgages held by U.S. insurers mainly consisted of performing loans, with more than 99% of the $342.1 billion classified as "current" — reflecting increasing values and decreasing vacancies in real estate markets. The risks of delinquency and foreclosure in commercial mortgage loans have historically been extremely low. As shown in Figure 6, the annual rate of life insurer commercial mortgage loan foreclosures has been extremely low for virtually all of the past 15 years.

Figure 6. Life Company Mortgage Foreclosures Have Been Very Low for Many Years

Annual Rate of Completed Foreclosures in Life Insurer Portfolios, 1994–2014



Source: American Council of Life Insurance

Mortgage Loan Portfolio Profile
The Mortgage Loan Portfolio Profile report is a quarterly publication that reports on life insurers' delinquency experience on mortgage loans. It includes number and principal of outstanding loans, restructured loans, delinquent loans, loans in foreclosure and foreclosed loans by type of property and geographic region. Currently, the survey participants include both member and non-member companies and the coverage is about 85% of the whole industry.

Commercial Mortgage Loan Portfolio Performance

Commercial mortgage loans historically have provided steady returns above comparable public bonds. There is no universally accepted index for commercial mortgage loans, but investors track total returns versus public benchmarks of their own choosing. As industry data for this asset class is limited, illustrated below are the historical return and risk data for the proprietary Voya Real Estate Finance portfolio. Over every measurement period, the commercial mortgage loan portfolio has outperformed a comparable public bond index with less risk as measured by standard deviation.

Figure 7. Commercial Mortgage Loans Have Outperformed a Public Credit Index with Lower Risk

Annualized Total Returns as of 12/31/2014 (%)

Period	Voya REF CML Gross	Voya REF CML Net	Barclays Corporate "A" Index	Excess Return (Gross)
1 Year	9.03	8.93	7.23	1.80
3 Years	6.20	6.00	4.86	1.34
5 Years	7.41	7.21	6.21	1.20
10 Years	6.12	5.92	5.05	1.07

Annualized Standard Deviation as of 12/31/2014 (%)

Period	Voya REF CML Portfolio	Barclays Corporate "A" Index	Variance
3 Years	1.86	3.99	-2.13
5 Years	1.93	4.06	-2.13
10 Years	2.57	6.45	-3.88

Past performance is no guarantee of future success. Please refer to the Performance Disclosures on page 16.
Source: Voya Investment Management, Barclays

Commercial Mortgage Loans in Insurance Portfolios

While insurance companies are among the foremost investors and managers of commercial mortgage loans, the practice is not universal within the industry. To examine the effect of investing insurance portfolios in commercial mortgage loans, we assumed two different hypothetical situations, one for an average life insurance company and one for an average property and casualty (P&C) company. The portfolio allocation data were sourced from the National Association of Insurance Commissioners (NAIC) as of year-end 2013, described in detail in the Appendix. The historical monthly return and risk data from 2004 to 2014 were based on the published NAIC average asset allocations using the indexes in Figure 8 as proxies for each asset class. The published allocations were adjusted to eliminate assets (such as receivables) that could not be modeled in a historical investment simulation. For purposes of the back-test, we maintained the 2013 allocations for the entire ten-year period.

Figure 8. Assets and Indexes Used in the Historical Simulations

Asset Class	Index/Proxy
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index
Commercial Mortgage Loans	Voya Real Estate Finance ("REF")
Municipal Bonds	Barclays U.S. Municipal Index
U.S. Government	Barclays U.S. Government Index
RMBS/Mortgages	Barclays U.S. MBS Index
CMBS	Barclays CMBS Index
ABS	Barclays ABS Index
Stocks	Russell 1000 Index
Real Estate	Barclays Investment Grade REITs Index
Cash	U.S. Treasury Bill 3 Month

Source: National Association of Insurance Commissioners, Voya Investment Management

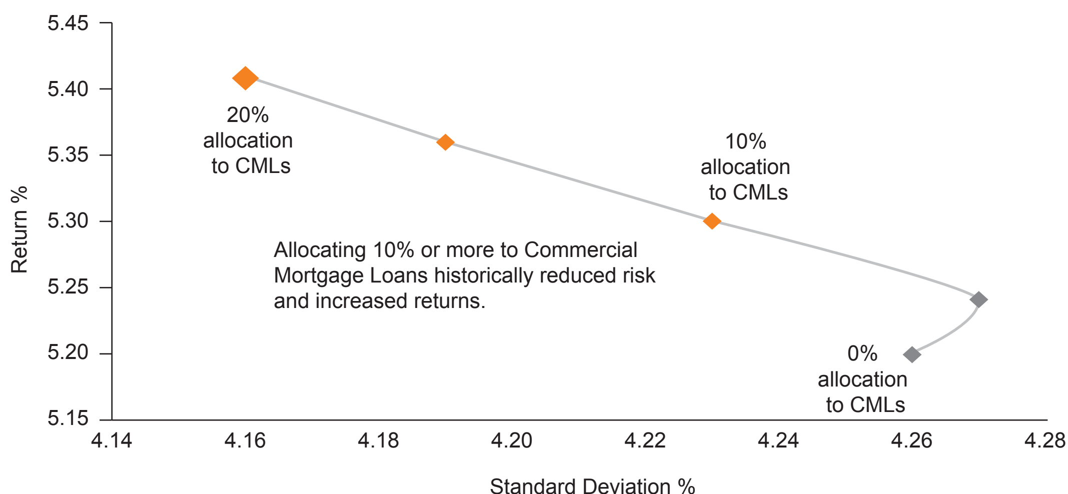
In each scenario, an assumed baseline portfolio based on the NAIC data was used to determine the initial allocations. We then made a series of allocation adjustments to incorporate the commercial mortgage loan (CML) investments. The initial portfolio assumed a 0% allocation to CML. We then increased the allocation in 5% increments up to a maximum of 20%. For the life insurance portfolios, the first 5% of the CML allocations were financed by a reduction in the assumed mortgage-backed securities allocation; thereafter, additional allocations were funded by pro rata reduction of all other asset types in the portfolio. For the P&C portfolios, only the first 10% allocation to CML was funded by reductions from the municipal bond allocation. Beyond the 10% CML allocation level all asset types were reduced on a pro-rated basis. This approach produced five hypothetical portfolio allocations for each of the two insurance portfolio types, the details of which can be found in the Appendix.

Simulated Life Insurance Company Portfolio Performance

The data we analyzed showed that at allocations of 10% or higher, the investment in commercial mortgage loans reduces overall portfolio risk while at the same time increasing returns. When looking at the top 50 life insurance companies, the average allocation to CMLs is about 9% of their portfolios but can go as high as 17%. Our analysis shows that investing 10-20% in CMLs can potentially increase returns and reduce portfolio risk. Allocating a portion of the portfolio to CMLs would have increased returns by about 20 basis points annually over the period from 2004-14.

Figure 9. Simulation Shows Favorable Return and Risk Effects of Commercial Mortgage Loans

Effect of Adding CML Exposure to Life Insurer Portfolios, 2004–14



For illustration purposes only. Simulated historical performance is no guarantee of future results. Actual performance may vary significantly from the results shown.

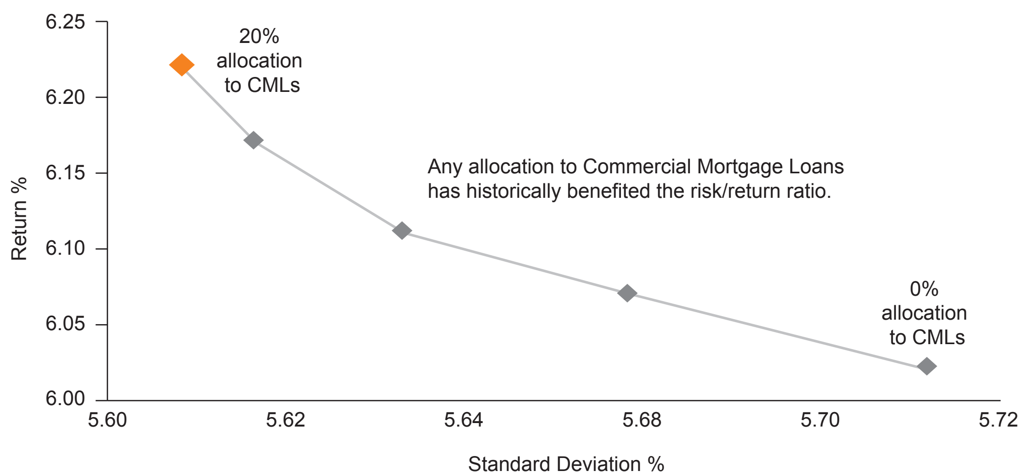
Source: Barclays, FactSet, Voya Investment Management

Simulated Property & Casualty Company Portfolio Performance

The data we analyzed showed that investment in commercial mortgage loans — at any allocation — can potentially reduce overall portfolio risk and increases returns. Although the typical P&C company has smaller allocations to CMLs than do life insurers, the impact was similar, a beneficial effect given P&C companies' tendency toward larger equity allocations.

Figure 10. Favorable Return and Risk Effects on Simulated P&C Company Portfolios

Effect of Adding CML Exposure to P&C Company Portfolios, 2004–14



For illustration purposes only. Simulated historical performance is no guarantee of future results. Actual performance may vary significantly from the results shown.

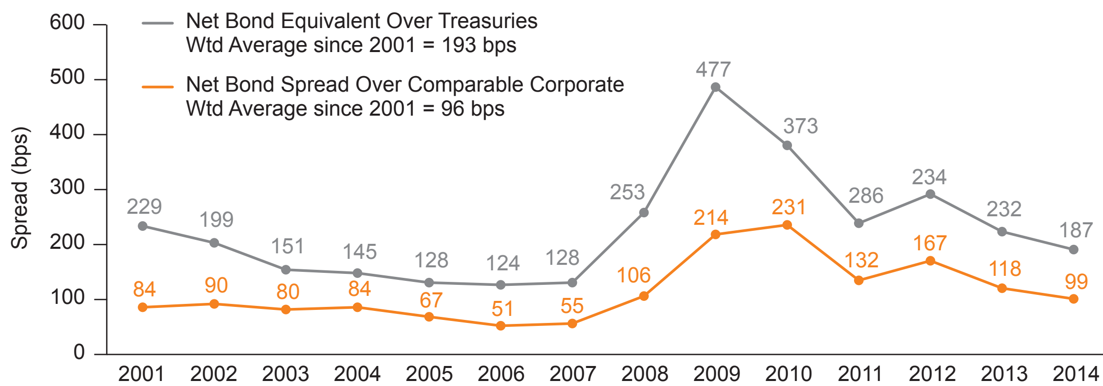
Source: Barclays, FactSet, Voya Investment Management

Potential Benefits of Commercial Mortgage Loans in Diversified Portfolios

- **Superior risk-adjusted income.** A commercial whole loan investment strategy seeks to provide investors with attractive and stable monthly cash flows at yields exceeding comparable term fixed income alternatives, that is, corporate bonds of similar quality rating and average life.

Figure 11. Voya Mortgage Yields Averaged 193 bps in Excess of Comparable U.S. Treasuries Since 2001

Yield Spread Over U.S. Treasury and Comparable Securities, 2001–14



Past performance is no guarantee of future results.
Source: Voya Investment Management

- **Asset class diversification.** Real estate mortgages have been shown to be an efficient diversifier, allowing improved return-risk possibilities in the context of the mean-variance framework of modern portfolio theory. Real estate mortgages have tended to show lower correlations with other assets, including stocks and bonds. In Figure 12 the Voya REF commercial mortgage loan portfolio return history is used as a proxy for commercial loan market returns.

Figure 12. CMLs Historically Have Exhibited Low to Moderate Correlations with Other Asset Classes

Total Return Correlations, 2000–14

	Voya REF CML Portfolio	Barclays U.S.Aggregate	Barclays U.S.MBS	Barclays U.S. High Yield	Barclays U.S. Corp Inv Grade	Barclays U.S. Municipal	Barclays U.S. Treas 7-10 yrs	Russell 1000	MSCI EAFE	U.S.Treasury Bill 3 Month
Voya REF CML Portfolio	1.00									
Barclays U.S. Aggregate	0.74	1.00								
Barclays U.S. MBS	0.63	0.90	1.00							
Barclays U.S. High Yield	0.11	0.17	0.01	1.00						
Barclays U.S. Corp Inv Grade	0.60	0.83	0.62	0.55	1.00					
Barclays U.S. Municipal	0.49	0.68	0.55	0.28	0.65	1.00				
Barclays U.S. Treas 7-10 yrs	0.64	0.90	0.83	-0.18	0.58	0.53	1.00			
Russell 1000	-0.04	-0.08	-0.15	0.66	0.22	0.01	-0.30	1.00		
MSCI EAFE	0.02	0.03	-0.07	0.68	0.34	0.06	-0.24	0.87	1.00	
U.S. Treasury Bill 3 Month	0.12	0.11	0.18	-0.15	-0.04	0.01	0.09	-0.13	-0.10	1.00

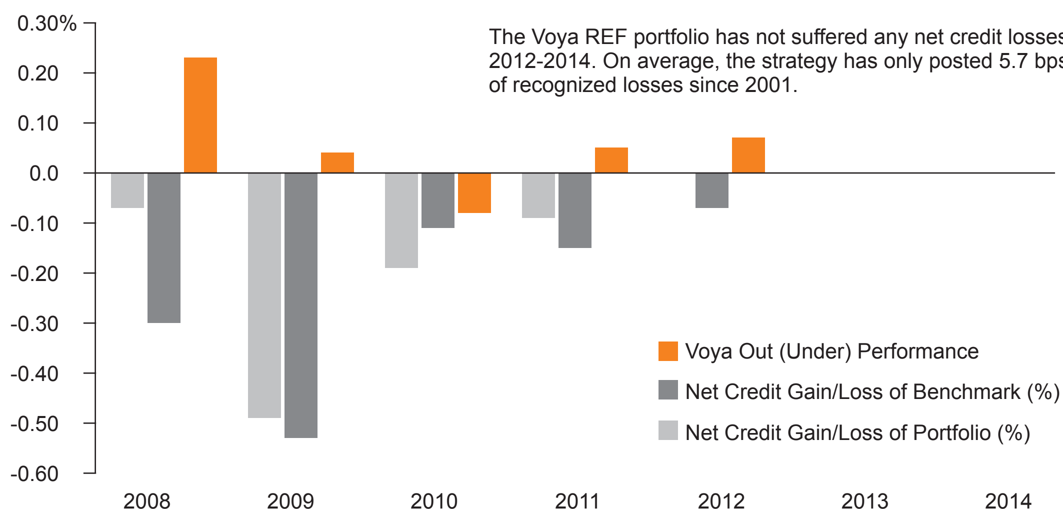
Past performance is no guarantee of future results.
Source: Barclays, Voya Investment Management

- **Yield protection.** Fixed rate commercial mortgages typically include yield protection in the form of make-whole pre-payment provisions, which enhance the portfolio management and asset-liability characteristics of the asset class. The make-whole pre-payment conditions, in effect, assure that in the event of prepayment, the lender will receive the same amount of income as would have been paid if the loan were still in effect.

- **Multiple Sources of Income.** Commercial mortgages have shown high relative risk-adjusted returns compared to other major asset classes. Commercial mortgages typically exhibit low volatility due to a number of factors, including diversification (geographically and by product type), relatively low loss rates and the fact that income to pay mortgages is ultimately derived from multiple tenants in many businesses. As an example (illustrated in Figure 13) Voya REF's statutory portfolio has averaged realized losses of about 5.7 bps per year since 2001.

Figure 13. Auspicious Loss Experience Exemplifies Commercial Mortgage Loan Advantages

Voya REF Loss History as a Percentage of the Portfolio



Past performance is no guarantee of future results.
Source: Barclays, Voya Investment Management
Note: Loss history is compared to a Voya proprietary benchmark based on a select bond portfolio of similar rating, vintage and average life.

- **Favorable risk-based capital treatment.** In 2013 a new framework was adopted for assigning life insurance company risk-based capital (RBC) for commercial mortgages in good standing. The new framework has five risk cohorts, each with an assigned RBC factor. Each loan in a portfolio of mortgages is assigned to one of the risk cohorts based on debt-service coverage and loan-to-value ratio. Commercial mortgage investments require low absolute capital compared to real estate equities and relatively low risk-based capital charges in relation to comparable fixed income alternatives. Given this background, U.S. commercial mortgage loan investments may allow investors to generate attractive income yields in a capital efficient manner.

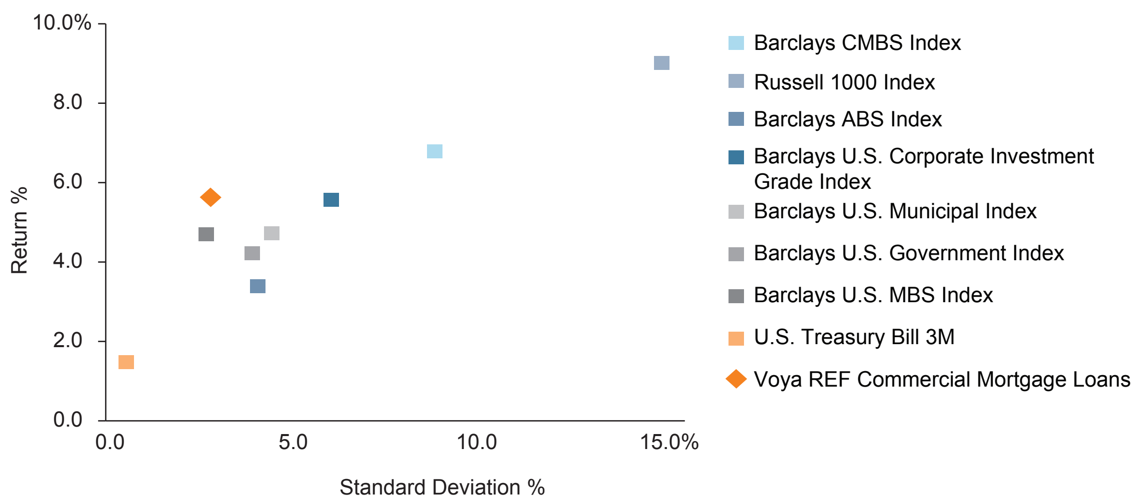
- **Customization based on specific needs.** The availability of individually managed separate accounts — and in some cases, direct co-investment alongside a professional manager and other investors — allows the flexibility to position a commercial mortgage portfolio to effectively complement other asset classes in accordance with each investor's specific investment needs.

- **Tax efficiency for international investors.** U.S. commercial mortgages potentially can provide international investors with a tax-efficient income stream as a result of investment returns from interest income in contrast to U.S. equity real estate strategies.

- **Attractive historical rates of return and risk.** Figure 14 illustrates the historical risk and return data for various asset types included in insurance company portfolios. Given the lack of a standard index or benchmark for commercial mortgage loan investments, the Voya REF historical return series is used to represent the asset class. Seen in this context, the potential advantages of its risk/return profile are evident; for instance, CMLs offer higher returns than mortgage-backed securities and lower volatility than investment grade corporate bonds.

Figure 14. The Favorable Return-to-Risk Profile of Commercial Mortgage Loans Is Evident

Risk and Return, 2004–14



Past performance is no guarantee of future results.
Source: Barclays, FactSet, Voya Investment Management.

Conclusion

Commercial mortgage loans provide attractive opportunities to realize incremental yield spreads and other benefits for investors whose objectives make their distinctive characteristics suitable.

- Commercial mortgage loans can potentially offer attractive and stable income, efficient diversification, favorable risk-based capital treatment, yield protection and tax efficiency.
- Commercial mortgage loans are relatively low risk fixed income investments, historically offering returns similar to commercial mortgage-backed securities — with less than half the risk (as measured by standard deviation).
- Among those active in the commercial mortgage loan markets, life insurance companies are the leading managers, offering experience, resources and an enviable record of past performance.
- The U.S. commercial real estate and mortgage loan markets remain healthy; the moderate but steady growth generated in 2014 can potentially continue in 2015.
- In terms of delinquencies and foreclosures, commercial mortgage loans managed by insurance companies have tended to perform better than the overall market, due in part to conservative underwriting standards.
- Historical simulations show the potential of commercial mortgage loans to expand the efficient frontier for institutional investors.

Appendix: Historical Simulation Portfolio Data

	Life Insurance Portfolio	(%)
Bonds		80.5
Stocks		5.0
Mortgages		10.9
Real Estate		0.7
Cash		2.9
Total		**100.0**
Bond Allocation		
Corporate Bonds		62.8
Municipal Bonds		6.5
US Government		5.4
RMBS		11.7
CMBS		6.2
ABS		7.4
Total		**100.0**

	Property & Casualty Portfolio	(%)
Bonds		61.7
Stocks		31.5
Mortgages		0.5
Real Estate		0.6
Cash		5.6
Total		**100.0**
Bond Allocation		
Corporate Bonds		33.8
Municipal Bonds		37.5
US Government		8.9
RMBS		11.2
CMBS		4.0
ABS		4.6
Total		**100.0**

	Life Insurance Portfolio 1	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	50.6
Municipal Bonds	Barclays U.S. Municipal Index	5.2
U.S. Government	Barclays U.S. Government Index	4.3
RMBS/Mortgages	Barclays U.S. MBS Index	20.3
CMBS	Barclays CMBS Index	5.0
ABS	Barclays ABS Index	6.0
Stocks	Russell 1000 Index	5.0
Real Estate	Barclays Investment Grade REITs Index	0.7
Cash	U.S. Treasury Bill 3M	2.9
Total		**100.0**
	Life Insurance Portfolio 2	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	50.6
CML	Voya REF Product	5.0
Municipal Bonds	Barclays U.S. Municipal Index	5.2
U.S. Government	Barclays U.S. Government Index	4.3
RMBS/Mortgages	Barclays U.S. MBS Index	15.3
CMBS	Barclays CMBS Index	5.0
ABS	Barclays ABS Index	6.0
Stocks	Russell 1000 Index	5.0
Real Estate	Barclays Investment Grade REITs Index	0.7
Cash	U.S. Treasury Bill 3M	2.9
Total		**100.0**
	Life Insurance Portfolio 3	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	50.6
CML	Voya REF Product	10.0
Municipal Bonds	Barclays U.S. Municipal Index	4.5
U.S. Government	Barclays U.S. Government Index	3.7
RMBS/Mortgages	Barclays U.S. MBS Index	13.2
CMBS	Barclays CMBS Index	4.3
ABS	Barclays ABS Index	5.1
Stocks	Russell 1000 Index	5.0
Real Estate	Barclays Investment Grade REITs Index	0.7
Cash	U.S. Treasury Bill 3M	2.9
Total		**100.0**

	Property & Casualty Portfolio 1	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	20.9
Municipal Bonds	Barclays U.S. Municipal Index	23.2
U.S. Government	Barclays U.S. Government Index	5.5
RMBS/Mortgages	Barclays U.S. MBS Index	7.4
CMBS	Barclays CMBS Index	2.4
ABS	Barclays ABS Index	2.9
Stocks	Russell 1000 Index	31.5
Real Estate	Barclays Investment Grade REITs Index	0.6
Cash	U.S. Treasury Bill 3M	5.6
Total		**100.0**
	Property & Casualty Portfolio 2	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	20.9
CML	Voya REF Product	5.0
Municipal Bonds	Barclays U.S. Municipal Index	18.2
U.S. Government	Barclays U.S. Government Index	5.5
RMBS/Mortgages	Barclays U.S. MBS Index	7.4
CMBS	Barclays CMBS Index	2.4
ABS	Barclays ABS Index	2.9
Stocks	Russell 1000 Index	31.5
Real Estate	Barclays Investment Grade REITs Index	0.6
Cash	U.S. Treasury Bill 3M	5.6
Total		**100.0**
	Property & Casualty Portfolio 3	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	20.9
CML	Voya REF Product	10.0
Municipal Bonds	Barclays U.S. Municipal Index	13.2
U.S. Government	Barclays U.S. Government Index	5.5
RMBS/Mortgages	Barclays U.S. MBS Index	7.4
CMBS	Barclays CMBS Index	2.4
ABS	Barclays ABS Index	2.9
Stocks	Russell 1000 Index	31.5
Real Estate	Barclays Investment Grade REITs Index	0.6
Cash	U.S. Treasury Bill 3M	5.6
Total		**100.0**

	Life Insurance Portfolio	(%)
	Life Insurance Portfolio 4	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	50.6
CML	Voya REF Product	15.0
Municipal Bonds	Barclays U.S. Municipal Index	3.8
U.S. Government	Barclays U.S. Government Index	3.1
RMBS/Mortgages	Barclays U.S. MBS Index	11.0
CMBS	Barclays CMBS Index	3.6
ABS	Barclays ABS Index	4.3
Stocks	Russell 1000 Index	5.0
Real Estate	Barclays Investment Grade REITs Index	0.7
Cash	U.S. Treasury Bill 3M	2.9
Total		**100.0**
	Life Insurance Portfolio 5	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	50.6
CML	Voya REF Product	20.0
Municipal Bonds	Barclays U.S. Municipal Index	3.0
U.S. Government	Barclays U.S. Government Index	2.5
RMBS/Mortgages	Barclays U.S. MBS Index	8.9
CMBS	Barclays CMBS Index	2.9
ABS	Barclays ABS Index	3.5
Stocks	Russell 1000 Index	5.0
Real Estate	Barclays Investment Grade REITs Index	0.7
Cash	U.S. Treasury Bill 3M	2.9
Total		**100.0**

	Property & Casualty Portfolio	(%)
	Property & Casualty Portfolio 4	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	20.9
CML	Voya REF Product	15.0
Municipal Bonds	Barclays U.S. Municipal Index	11.1
U.S. Government	Barclays U.S. Government Index	4.6
RMBS/Mortgages	Barclays U.S. MBS Index	6.2
CMBS	Barclays CMBS Index	2.1
ABS	Barclays ABS Index	2.4
Stocks	Russell 1000 Index	31.5
Real Estate	Barclays Investment Grade REITs Index	0.6
Cash	U.S. Treasury Bill 3M	5.6
Total		**100.0**
	Property & Casualty Portfolio 5	
Corporate Bonds	Barclays U.S. Corporate Investment Grade Index	20.9
CML	Voya REF Product	20.0
Municipal Bonds	Barclays U.S. Municipal Index	9.0
U.S. Government	Barclays U.S. Government Index	3.7
RMBS/Mortgages	Barclays U.S. MBS Index	5.0
CMBS	Barclays CMBS Index	1.7
ABS	Barclays ABS Index	1.9
Stocks	Russell 1000 Index	31.5
Real Estate	Barclays Investment Grade REITs Index	0.6
Cash	U.S. Treasury Bill 3M	5.6
Total		**100.0**

Performance Disclosures

Voya REF historical returns are based on the performance of the Voya Real Estate Finance proprietary portfolio through December 31, 2014. The performance presented is based on portfolios managed for our proprietary insurance assets. These assets fall outside of our GIPS firm definition and therefore not subject to the input, calculation, presentation, and disclosure requirements of GIPS. Gross-of-fees returns are calculated on a monthly basis by taking market values which use a spread pricing process and contain cash flows that are inclusive of regular principal and income payments, loan advances, loan payoffs, new loans, payment reversals, late charges, curtailments, and prepayment premiums and then geometrically linking the results to produce annual returns shown. Net-of-fees returns are calculated by deducting a hypothetical management fee (20 bps) from the gross return on a monthly basis and geometrically linking the results to produce annual returns shown. The hypothetical management fee is equal to the highest fee from any fee schedule currently offered for the strategy shown. While fee schedules can change over time, any amended fee resulting from a change will not be retroactively applied to performance history, but will rather be applied on a prospective basis from the point of change. The annual management fee will vary according to the size of the account, and will depend on the type of investment vehicle selected. The performance data is offered as supplemental information only. Performance shown for less than one year is not annualized. Further information regarding applicable fee schedules is available upon request. **Past performance is no guarantee of future results.**

The Barclays Corporate A Index includes both corporate and non-corporate sectors. The corporate sectors are Industrial, Utility, and Finance, which include both U.S. and non-U.S. corporations. The non-corporate sectors are Sovereign, Supranational, Foreign Agency, and Foreign Local Government. The Index does not reflect fees, brokerage commissions, taxes or other expenses of investing. The Barclays Corp A index is the "A"-rated component of the Barclays U.S. Corporate Investment Grade public bond index. The index does not contain commercial mortgages and is not a typical performance benchmark for a commercial mortgage loan portfolio. The credit quality and loss profile of our Commercial Mortgage Loan portfolio is viewed as being similar to that of a single-A rated corporate bond portfolio. As such, the Barclays Corp A index was negotiated with a proprietary client after years of experimentation with various other indexes in an effort to compare the contribution of a portfolio of commercial mortgages to a portfolio of similar quality public corporate bonds over the same investment horizon. Investors cannot invest directly in an index.

Diversification and Past Performance

Commercial mortgage loan portfolios are typically diversified by property type and geography, but there are no guarantees a diversified portfolio will outperform a non-diversified portfolio. Diversification does not guarantee a profit or ensure against loss. Historical returns are useful as indicators of general trends and relationships; however, past performance is no guarantee of future results.

General Fixed Income Risks

The principal risks are generally similar to those attributable to bond investing. All investments in bonds are subject to market risks as well as issuer, credit, prepayment, extension, and other risks, and their values may fluctuate. Market risk is the risk that securities may decline in value due to factors affecting the securities markets or particular industries. Bonds have fixed principal and return if held to maturity, but may fluctuate in the interim. Generally, when interest rates rise, bond prices fall. Bonds with longer maturities tend to be more sensitive to changes in interest rates. Issuer risk is the risk that the value of a security may decline for reasons specific to the issuer, such as changes in its financial condition.

General Risks Associated with Commercial Mortgage Loans

Investments in commercial mortgage loans are subject to risks associated with general economic conditions, national, regional and local market risks and direct ownership risks, which may impact the ability of a borrower to meet its obligations on the loan because cash flows and value are derived from the performance of the underlying commercial real estate. These risks include:

- Changes in economic conditions, interest rates and tax laws
- Declines in the real estate values, rental or occupancy rates
- Changes in zoning laws and other governmental regulation
- Overbuilding and resulting high vacancy rates for extended periods
- Lack of available credit to refinance mortgage loans at or before maturity
- Inability to attract and retain tenants
- Financial inability to adequately maintain or improve a building
- Expenses related to environmental problems, tenant defaults or bankruptcy
- Casualty losses, terrorist threats and attacks, social unrest and civil disturbances
- Weather, floods, earthquakes or other natural disasters

Specific Risks Associated with Commercial Mortgage Loans

The value of commercial mortgage loans will be influenced by the rate of delinquencies and defaults experienced on the commercial mortgage loans and by the severity of potential losses incurred. The factors influencing delinquencies, defaults, and loss severity include: (1) economic and real estate market conditions by property type (e.g., office, multifamily, retail, and hotels); (2) the terms and structure of the mortgage loans; and (3) limitations on legal and financial recourse in the event of default.

Commercial mortgage loans may expose a lender to potentially greater risk of loss through delinquency and foreclosure than residential mortgage loans. Repayment of a loan secured by income-producing property typically is dependent upon the ability of tenants to make lease payments, the ability of a property to attract and retain tenants, and the ability of the owner to maintain the property, control operating expenses, and comply with applicable laws, rather than upon the existence of independent income or assets of the borrower. Most commercial mortgage loans provide recourse only to the property and not against the borrower's other assets or personal guarantees.

Some commercial mortgage loans do not fully amortize, which can necessitate a sale of the property or refinancing of any terminal "balloon" payment or payments at or prior to maturity. Investors in commercial mortgage loans bear the risk that the borrower will be unable to refinance or otherwise repay the mortgage loan at maturity, possibly increasing the likelihood of a default.

The liquidity of commercial mortgage loans will fluctuate with, among other things, general economic conditions, political events, developments or trends in particular industries or economic sectors. Credit markets have periodically experienced reduced liquidity during periods of extreme market volatility, such as during the global credit crisis, and similar conditions could re-occur and impact the valuations of properties, debt instruments and securities.

When making investments in commercial mortgage loans Voya Investment Management will conduct a due diligence process to evaluate factors believed to govern the success of those investments. There may be little publicly available information about the prospective investments other than what is developed on a proprietary basis by the Voya Real Estate Finance Division. Voya cannot provide any assurances that these due diligence processes will uncover all relevant facts of the mortgage loans or that any investment will be successful.

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Past performance is no guarantee of future results.

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