

Investing in U.S. Commercial Real Estate Debt Products



CRE Finance Council®

The Voice of Commercial Real Estate Finance



WHO WE ARE

CRE Finance Council (CREFC) is the global trade association for over 300 companies and 8,000 individuals throughout the \$3.5 trillion commercial real estate finance industry. It is the only trade association exclusively devoted to CRE finance. Our mission is to promote liquidity and strong capital markets globally through industry best practices and standards, policy advocacy, education, marketplace information and professional connectivity.

CREFC Members include all of the leading portfolio, multifamily, and commercial mortgage-backed securities ("CMBS") lenders; issuers of CMBS including banks, insurance companies, Government Sponsored Enterprises (GSEs), and private equity funds; loan and bond investors such as insurance companies, pension funds, specialty finance companies, Real Estate Investment Trusts ("REITs"), and money managers; servicers; rating agencies; accounting firms; law firms; and other service providers.

CREFC is the voice of the commercial real estate finance industry and the platform for promoting capital formation and encouraging commercial real estate finance market efficiency, transparency and liquidity. Our industry plays a critical role in the financing of office buildings, industrial complexes, multifamily housing, shopping centers, hotels, and other types of commercial real estate.

WHAT WE OFFER

Industry Connectivity

CRE Finance Council provides high-quality connectivity with decision makers from leading commercial real estate finance companies around the world including networking at the highest level for industry leaders and for aspiring professionals.

Conferences & Seminars

CREFC hosts two major industry conferences each year (January and June) that are the meeting place for leading industry participants representing every market sector. We also host frequent regional conferences and After-Work Seminars in locations around the country that cover the breadth of commercial real estate finance issues including best practices, transactions and trends.

Industry Sector Specific Forums

CREFC offers our Members the opportunity to participate in one or more sector-specific Forums. These Forums provide Members with the platform to address specific issues and needs unique to participants in the various sectors of the industry such as investors, lenders, issuers and servicers.



Government Relations & Advocacy

As the recognized leading voice of commercial real estate finance, CREFC is the primary advocate for federal policies affecting our industry. We continually educate lawmakers and regulators about the commercial real estate finance industry and its importance to the overall economy. This allows us to effectively advocate policies that promote the ongoing strength and liquidity of the markets.

Industry Standards & Best Practices

CREFC facilitates the development of best practices and industry standards that enable the commercial real estate finance market's efficiency, transparency and liquidity worldwide. We educate lenders, investors, servicers, rating agencies, borrowers, and other market participants on the benefits derived from such standards and practices.

Global Initiatives

CREFC is global with trade association affiliates in Europe, Japan and Canada. We provide conference programming about the U.S. markets to investors and industry professionals across the globe.

Member Communications – Magazine & Industry News

CRE Finance World® is the industry's premier magazine, available to our Members. Written by leading participants in commercial real estate finance, CRE Finance World is considered the best source available for the market. The magazine complements other ongoing Member communications provided on a daily and weekly basis.

Research & Surveys

CREFC offers research and insightful information developed by our Members. We also conduct periodic surveys that provide specific sectors of the industry with performance benchmarking and trend analysis.

Education & Young Professional Programs

CREFC provides quality and innovative educational content, programming and collaboration to the commercial real estate finance industry. Through live programming, video replays and webinars, we offer case studies, panel discussions and workshops that address the most relevant industry topics. We also host mentor/mentee events to counsel and connect young professionals within the industry.



CRE Finance Council®
The Voice of Commercial Real Estate Finance

CRE Finance Council
900 7th Street, NW, Suite 501
Washington, DC 20001
28 West 44th Street, Suite 1205
New York, NY 10036
www.crefc.org



CRE Finance Council®
The Voice of Commercial Real Estate Finance
CANADA

CRE Finance Council
Canada
88 Queens Quay W
Toronto, ON M5JOB8



JAPAN

CRE Finance Council®
The Voice of Commercial Real Estate Finance

CRE Finance Council-Japan
Ochanomizu Motomachi Bldg.
2-3-7 Hongo, Bunkyo-ku
Tokyo 113-0033 Japan



CRE Finance Council
EUROPE®

CRE Finance Council Europe
46 New Broad Street
London EC2M 1JH
United Kingdom

Subordinated Debt

U.S. Subordinated Debt



CRE Finance Council®
The Voice of Commercial Real Estate Finance

U.S. Subordinated Debt

- I. Description of U.S. Subordinated Debt and Market Overview
 - A. What is Subordinated Real Estate Debt
 - i. Description and Illustrative Examples
 - ii. Benefit to Investors (Why the Market Exists)
 - B. How is Subordinated Debt Structured (Types of Investment)
 - i. Subordinated “B” Notes
 - ii. Mezzanine Loans
 - iii. Preferred Equity
 - C. Risks Associated with Subordinated Debt
- II. Investment Opportunity in U.S. Subordinated Debt
 - A. Spectrum of Risk and Available Yields
 - B. Flow of Capital Into the Sector and Pricing Trends
 - C. Why the Strategy May Be Appealing to Investors

What is Subordinated Real Estate Debt?

Commercial real estate loans that are subordinated in interest and rights to more senior debt positions.

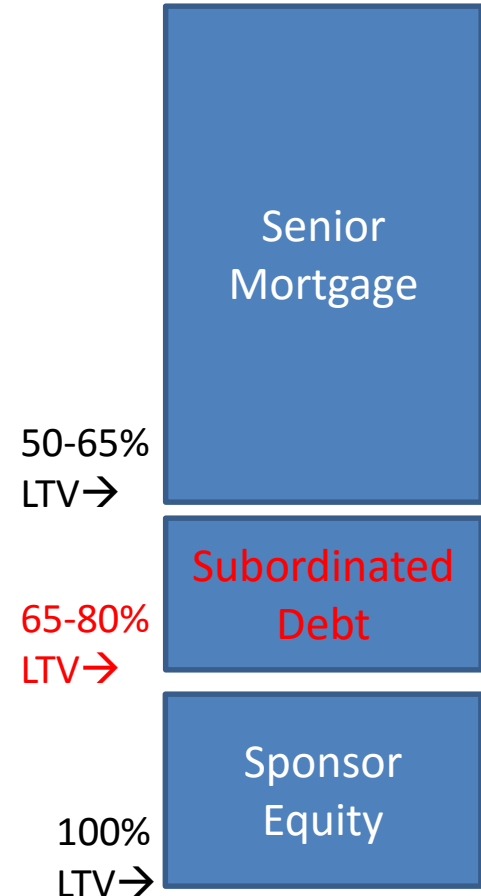
Subordinated debt can be structured in various forms, the most common are the following:

- Subordinated B Notes
- Mezzanine Debt
- Preferred Equity

Annual volume of subordinated real estate debt origination in the U.S. is estimated at **\$12-\$20 billion** (*consensus of the panel members*)

Subordinated debt investors include: Pension Funds, Insurance Companies, Mortgage REITs, Sovereign Wealth Funds, plus Endowments, Foundations, and Other Investors, primarily through Funds

Subordinated debt exists as the result of leverage constraints of traditional lending sources (Banks, Insurance Companies, CMBS Conduit Lenders) and the capital needs of borrowers



Borrowers desiring higher leverage are implementing either: “De-Leveraging” or “Up-Leveraging” Strategies

Example of “Up-Leveraging” Strategy

Example of “Up-Leveraging” Strategy by a Borrower

Normal Capitalization

60% LTV Senior
Mortgage

4.0% Interest
Rate

Property
Acquired at a
5.5% Cap Rate

40% Equity

(Levered Equity
Return of 9.0%)

Higher
Leverage
Amount
Enhances a
Property
Owner's
Return

Capital Stack with Subordinated Debt

60% LTV Senior
Mortgage

4.0% Interest
Rate

Property
Acquired at a
5.5% Cap Rate

Subordinated Debt
Up to 70% LTV at 8%
Interest Rate

30% Equity
Levered Equity
Return of 9.3%

Use of Subordinated Debt Increases the Borrower's Levered Return from 9.0% to 9.3% While Requiring Less Equity Investment

Example of “De-Leveraging” Strategy

Example of “De-Leveraging” Strategy by a Borrower

Original Capitalization

Loan Acquired in 2006-2007 Time Frame

\$70,000,000 Debt
(70% LTV)

\$30,000,000 Equity

Property Value Declines 25% in the “Great Recession” and Has Yet to Recover

Debt Maturity

2016 (Today)

\$75,000,000
Value at Loan Maturity
Resulting in a 93% current LTV

\$70,000,000 Debt
Outstanding
(93% LTV)

\$5,000,000 Original
Equity Remaining

\$75,000,000
Property Value
at Loan Maturity

Recapitalization

Combined 80% Last Dollar LTV Including New First Mortgage and Subordinate Debt Loan

\$48,750,000
Take-Out Debt
(65% LTV)

\$11,250,000 “Capital Gap”
(80% LTV)

\$10,000,000
New Equity

\$5,000,000
Original Equity

Need for Subordinate Debt to address “Capital Gap” in the debt stack

- **Capital market void has created opportunity for solution-based lending**
- **Investment opportunity in subordinated debt**
 - Attractive current return (5.0% to +10.0%) derived from existing property cash flows
 - These returns can be obtained on stabilized, institutional quality real estate held by well-capitalized institutional ownership
 - Equity cushion is a buffer against future market volatility and downside in values
- **Investments have**
 - Real estate “equity-like” returns under a loan structure
 - Significant risk adjusted premiums versus other fixed income alternatives
- **Investor considerations**
 - The subordinate financing market is well-established in the U.S., and is expected to expand as first mortgage lenders come under increased regulatory and market pressures
 - Investor options includes direct lending/separate accounts, funds, mortgage REITs/other
 - Important to select advisors with experience and resources.

- **Subordinated “B” Notes**

- Notes or participation interests in first mortgage loans secured by underlying property
- Payment priority and lender rights are subordinated to those of any senior note holder
- Mortgage foreclosure process is a well established path in the United States

- **Mezzanine Financing**

- Portion of the capital stack between secured mortgage loans and owner equity
- Secured by pledge of 100% of ownership interests
- Offers expeditious foreclosure process in the event of a default
- Payment priority and lender rights are subordinated to those of any senior note holder

- **Preferred Equity**

- Investment is made as preferred contributions with transaction specific terms and conditions between the property owner and preferred equity investors
- Granted a preferred return which is paid after all debt payments are satisfied, but prior to distributions to common equity
- Preferred equity investor protections and remedies are comparable to those of a mezzanine lender

Advantages and Disadvantages of Each Form of Subordinated Debt

Subordinated “B” Notes

Main Advantage

Subordinated debt position is typically secured by the same mortgage that secures the senior “A” note. B Note is generally not terminated through foreclosure and can often participate in liquidation proceeds after more senior positions have received payments in full.

Main Disadvantage

Foreclosing on the mortgage loan documentation will often require more time than for a mezzanine loan (timing is dependent upon the State where the asset is located). Holder of the B Note generally does not have the right to independently exercise remedies.

Mezzanine Loans

Main Advantage

Potential for lender to execute an expedited foreclosure of pledged ownership interests and gain full control of an asset from a borrower (provided a Senior Mortgage Lender is either acceptably cured or fully repaid).

Main Disadvantage

If not acceptably cured or repaid, the Senior Mortgage Lender can execute a foreclosure and terminate the mezzanine lender’s interests.

Preferred Equity

Main Advantage

Preferred equity commonly receives a premium in pricing relative to mezzanine loans and B note financing structures. Potential for the lender to rapidly step into a control position over the common equity after certain events have occurred.

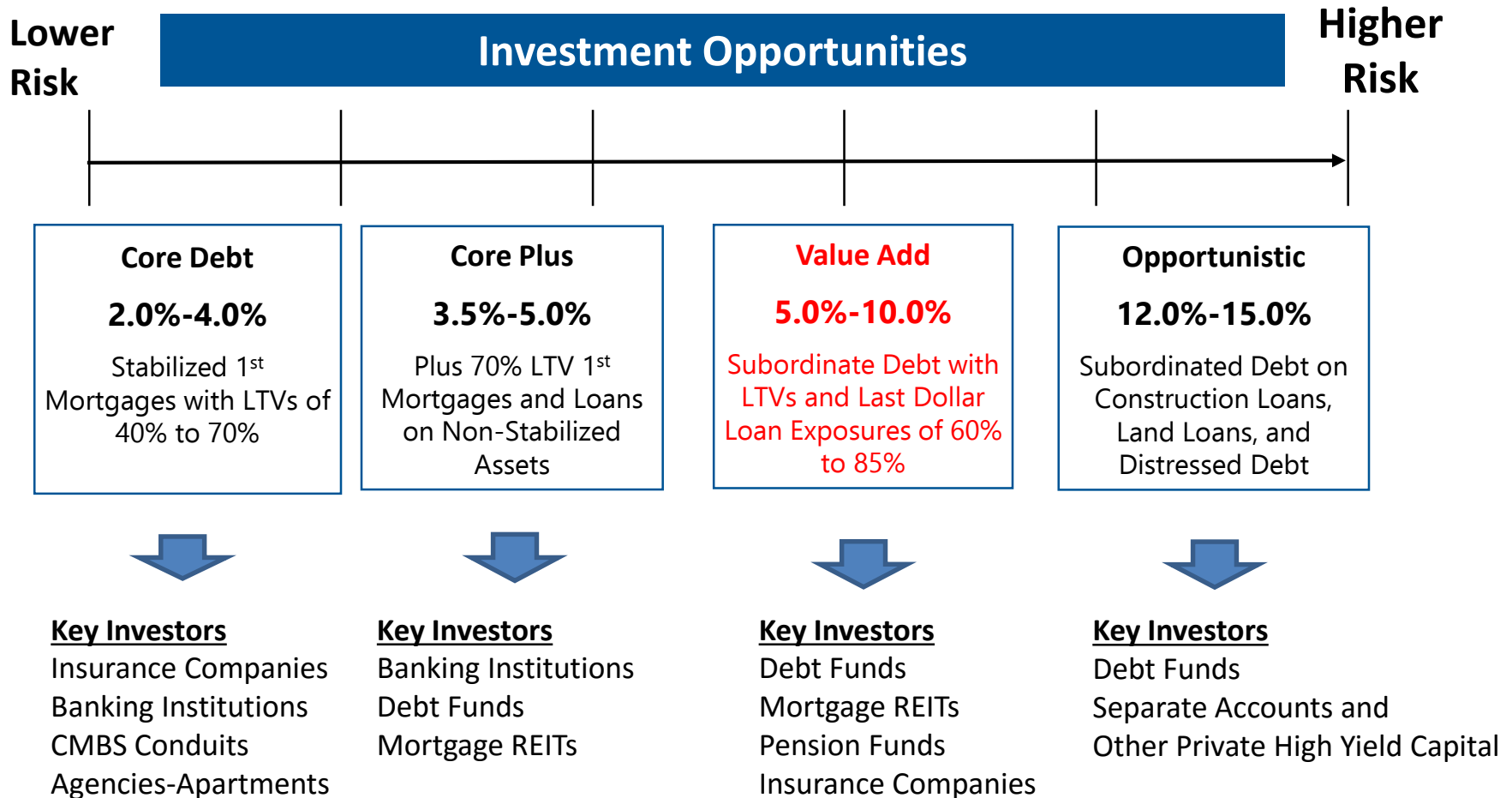
Main Disadvantage

Foreclosure by any secured debt tranches will terminate the preferred equity interests. Also, failure to receive the preferred return is not a loan default since there is no loan; however, the preferred equity investor typically have certain rights such as “change of control” triggers comparable to mezzanine loan events of default.

Risks Involved with Subordinated Debt

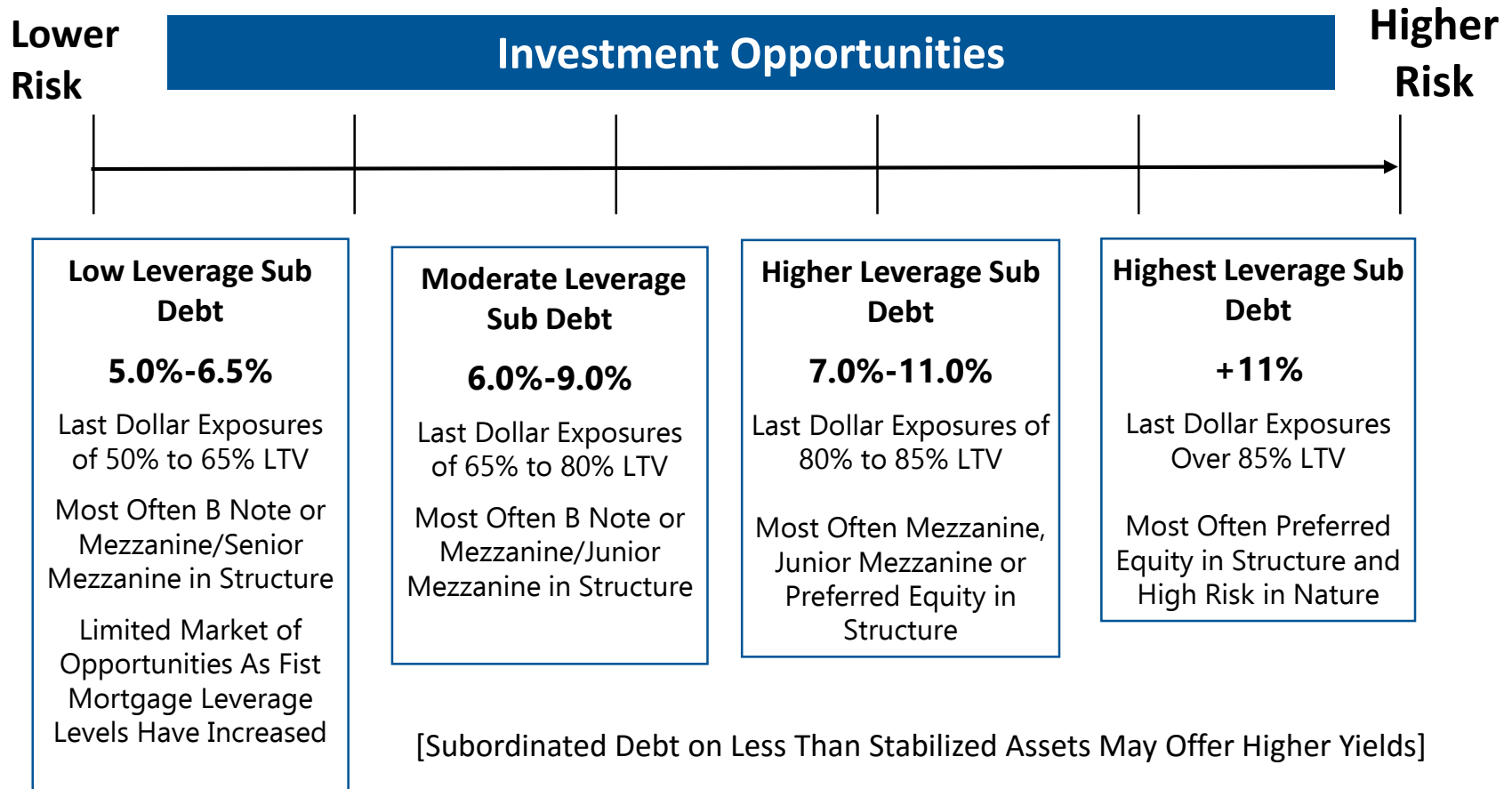
- Subordinated debt investment positions are inherently leveraged by the priority of the senior mortgage lending source(s) → “internal leverage”
- Upon a senior mortgage loan default, interest payments may cease to be paid to the subordinated debt position
- To prevent a foreclosure by a senior mortgage holder, a mezzanine or preferred debt investor may find it necessary to cure or prepay senior debt positions
- In complex capital stacks (with multiple subordinated debt tranches or multiple investors in a single tranche), disputes may occur between subordinated debt investors
- Simpler capital structures with fewer debt classes are preferred

Spectrum of Risk and Available Yields In The U.S. Market



Note: The returns and associated risks above are only the opinion of the various panel members for shorter-term financing structures. There is no guarantee an investor will achieve the returns outlined above.

Spectrum of Risk and Available Yields For Subordinated Debt



Note: The returns and associated risks above are only the opinion of the various panel members for shorter-term financing structures. There is no guarantee an investor will achieve the returns outlined above.

Trends in The U.S. Subordinated Debt Market

Demand for subordinate debt is expected to grow in 2016 and into the future:

- **U.S. Banking Sector** — portfolios and lending activities under increased regulatory scrutiny; banks will be pressured to lower LTVs and reduce portfolios
- **CMBS** — floating-rate CMBS* is a structurally inefficient product for securitization and is becoming harder for Wall Street due to increased volatility in the floating-rate securities markets

*floating-rate finance has historically been the biggest source of subordinate debt financing opportunities

Supply and Demand for U.S. Subordinated Debt Product

Are “financing gaps” in the U.S. real estate capital markets set to increase again?

- **How large could the market need become?**
- **Views on new inflows into high yield real estate debt investment strategies?**
- **Future direction of spreads and investment yields?**
- **Where are the best risk adjusted return opportunities today?**
- **How will these strategies perform in a recession?**
- **Recent changes in panel member approach to the market or investment strategies?**

Why the Strategy May Appeal to Investors

- **An opportunity to invest in the highly transparent U.S. commercial real estate market**
- **Ability to achieve current returns that are equity real estate like (but in a debt structure)**
- **Relative investment values appear strong relative to other fixed income alternatives**
- **A number of investment options and structures are available**

Commercial Mortgages

Direct Investments in U.S. Commercial Mortgage Loans



CRE Finance Council®
The Voice of Commercial Real Estate Finance

Direct Investments in U.S. Commercial Mortgage Loans

- I. What and Why of Commercial Mortgages
 - A. What are Whole Loan Commercial Mortgages
 - B. Investment Advantages of Commercial Mortgage Loans
 - C. Whole Loans vs. CMBS
 - D. Ability to Invest Directly or *Pari-Passu*
 - E. Servicing Responsibilities and Fees
- II. Investment Approach
 - A. Investment Landscape
 - B. Core Plus and Value-Add Initiatives
 - C. Property Sector Characteristics
 - i. Apartments
 - ii. Industrial
 - iii. Office
 - iv. Retail



CRE Finance Council®
The Voice of Commercial Real Estate Finance

I. What and Why of Commercial Mortgages

What are Whole Loan Commercial Mortgages?

- Whole Loan Commercial Mortgages are debt instruments collateralized by a first mortgage or deed of trust that encumbers an income producing property
- The primary property types are: retail, office, industrial, and multi-family properties
- Revenue source is rent paid by tenants that occupy commercial properties
- Rents often increase with inflation, providing some measure of inflation hedge
- Interest and principal payments are made monthly, enhancing yield relative to other fixed income products and reducing risk relative to core equity income
- Mortgages generally provide yield protection through make-whole covenants
- Fee and servicing income adds to the profitability of commercial mortgage investment
- Two key ratios to illustrate mortgage asset risk include:
 - Loan-to-value (leverage), and
 - Debt service coverage (cashflow in excess of debt payment)
- Whole Loan Commercial Mortgages are non-securitized products that are subject to book value under accounting for non Investment Companies (not mark-to-market) and those that have not elected fair value accounting

Investment Advantages of Commercial Mortgage Loans

- Portfolio diversification
- Attractive risk-adjusted returns
- Low historical volatility relative to traditional fixed income investments
- Ability to target short, medium or long duration asset
- Higher recoveries in the event of default
- Stable monthly income
- Call protection
- Favorable risk based capital treatment relative to other fixed income assets
- Subject to book value accounting

Whole Loans vs. CMBS

Whole Loans

- Higher yield as direct lender
- Increased control
- Diversification via portfolio
- Ability to invest in 3 to 30 year terms
- Superior track record through economic crisis*
- No mark-to-market volatility

CMBS Investment

- Higher liquidity
- Lower quality of underlying loan
- Diversification per investment
- Limited tranches over 10 years' term
- Included in many fixed income total return benchmarks

*Note: Based on REF proprietary account performance since 2001

Ability to Invest Directly or Pari-Passu

Direct Investment

- We can acquire commercial mortgage loans to be held 100% by a third party investor
- Loan documents including a mortgage or deed of trust, promissory note, title policy, insurance certificates, UCC filings and other would be directly in the name of the investor
- Costs or losses associated with foreclosure or problem resolution could be borne by the investor (until or unless reimbursed from the property or borrower)

Pari-Passu Participation

- A Pari-Passu Participation allows a third party investor to co-invest on a shared risk basis with another lender. Participations comply with regulatory requirements for qualified mortgage investments
- Lead lender's economic interests are aligned with those of the participant as any losses or costs would be borne pro-rata
- Participations are evidenced by Participation Certificate and Participation and Servicing Agreement ("PSA")
- The PSA Sets forth Loan servicing and Loan administration obligations of lead lender and designated servicer

Servicing Responsibilities and Fees

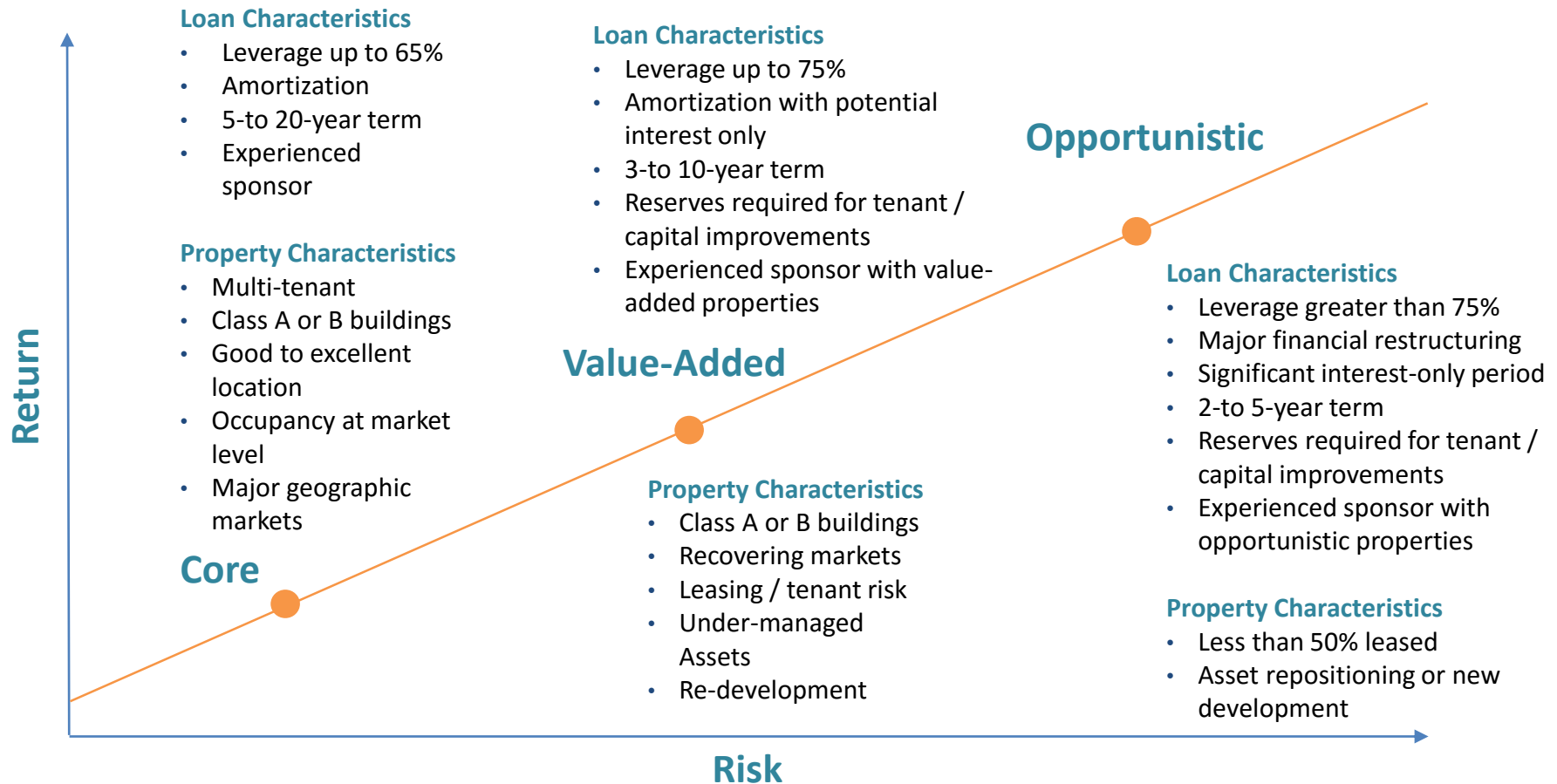
- Duties:
 - New loan set-up
 - Billing, collection and application of payments
 - Investor reporting and remittances
 - Determination, collection and disbursements of impounds
 - Administration of insurance, property taxes and UCCs
 - Collection, input and preliminary analysis of operating statements and rent rolls
 - Coordination and review of property inspections
 - Monitoring other collateral level risks (e.g. deferred maintenance)
 - Monitoring post-closing obligations
- Servicing fees typically range between 2 and 10 basis points, depending on loan size and other factors
- Investment opportunities are typically quoted net of the servicing fees, but gross of asset management fees (usually 25 – 50 basis points according to our market analysis and feedback from the consulting community)



CRE Finance Council®
The Voice of Commercial Real Estate Finance

II. Investment Approach

Investment Landscape



Core Plus and Value-Add Initiatives

Value-add initiatives are designed to provide enhanced yields in a highly capital efficient manner

Construction Lending

- Construction-to-permanent loan structure
- Typically 60-70% of cost (50-60% LTV)
- Over \$750MM originated
- Construction period plus 5 to 20+ year permanent loan
- Yield premium of 25-50bps over term of the loan vs. stabilized properties
- Enables the financing of premier assets before stabilized assets are bid to the market

Bridge Loans

- 3 to 5 year term
- Fixed or floating rate (L + 400-500)
- Typically 1% fee up front and 1% exit fee
- Target developed properties not yet stabilized or in need of re-positioning/re-capitalization
- Focus on:
 - Apartments for Freddie/Fannie take-out
 - Maturing higher-leverage CMBS loans

Participating Loans

- Typically tied to construction loans
- Up to 90% of cost (75% LTV)
- Construction period plus 3 to 5 year financing
- Lender receives 0.5-1.0% point plus 40-45% property cash flow and capital gain upon sale
- Target 8-12% IRR

Mezzanine Loans

- From 65% to 80% aggregate LTV
- Target yields of 7-14%, unleveraged
- Able to provide additional leverage behind originated life company or CMBS loans
- Target under \$20 million market with pricing premium
- Exit strategy to hold, provide pari passu participation or aggregate and sell to a fund

Property Sector Characteristics

Apartments

- Three main types: garden style, low-rise, and high rise
- Historically higher occupancy rates compared to other core properties
- Relative short development time and ability to develop in phases enables sector to be highly responsive to changes in demand
- Require a high degree of active management
- Relatively low capital intensive

Industrial

- Generally categorized as warehouse, research and development (R&D) facilities, flex space, and manufacturing
- Leases typically three to five years
- Short construction timelines of six to nine months enable greater responsiveness to market conditions
- Less volatile returns as measured by the NCREIF index than other core properties
- Require little active management
- Relatively low capital intensive

Office

- Generally categorized based upon location, quality, and size
- Leases are typically five to ten years
- Construction timelines are very long and markets are susceptible to over-building
- Require a high degree of active management
- Capital intensive, requiring large financial outlays for purchase, renovations, and tenant improvements

Retail

- Five main formats: neighborhood retail, community centers, regional centers, super-regional centers and single-tenant stores
- Location, convenience, accessibility and tenant mix are key criteria for successful investments
- Leases tend to range from three to five years for small tenants and ten to twenty years for large anchor tenants
- Require a high degree of active management
- Can be significantly more capital intensive higher than other sectors

U.S. Commercial Mortgage-Backed Securities (CMBS)



CRE Finance Council®
The Voice of Commercial Real Estate Finance

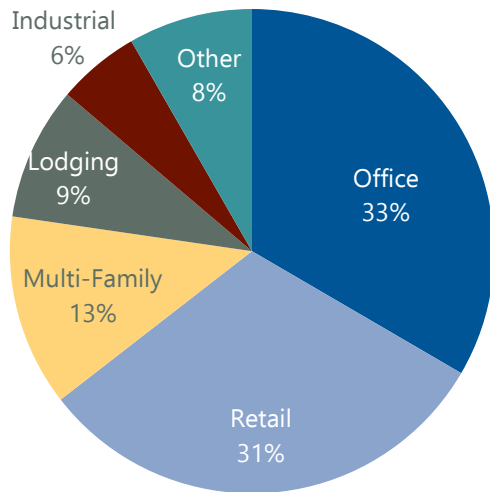
U.S. CMBS

- I. CMBS Overview
- II. Bond Structure
- III. Property Types
- IV. Credit Metrics
- V. CMBS Market Update
- VI. CMBS Today
- VII. CMBS New Issue Market

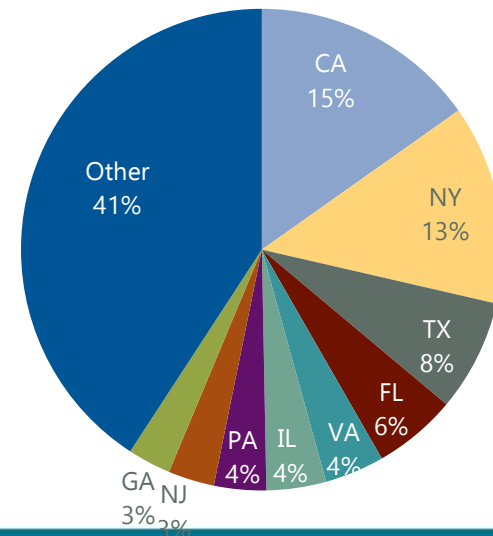
What is CMBS (Commercial Mortgage-Backed Securities)?

- CMBS are bonds collateralized by pools of first mortgages on commercial real estate properties
- Commercial mortgage loans typically require a 25-35% borrower down payment at loan closing (in the form of cash or borrower equity)
- On average, legacy¹ issuances are collateralized by 100-200 loans (CMBS 2.0¹ average 65-100 loans)
- Issuances are diversified by property type and geography (see below)
- Majority of loans are fully call protected up to 3-6 months prior to maturity

Property Type Diversification



Geographic Diversification



CMBS Bond Structure

CMBS Structural Example

\$1-\$3 Billion in
Commercial
Mortgages

Losses and Shortfalls	Bond Class (Original Ratings ¹)	Typical Original Subordination	Typical Original Subordination	Payments and Recoveries
		Legacy CMBS ²	CMBS 2.0 ²	
	Super Senior AAA	30%	30%	
	Mezzanine AAA (AM/AS)	20%	20% - 25%	
	Junior AAA (AJ)	12% – 14%	n/a	
	AA	9% – 12%	14% – 18%	
	A	6% – 9%	10% – 14%	
	BBB	4% – 6%	6% - 8%	
	BB	2% – 4%	4% – 5%	
	B	1% – 2%	2% – 3%	
	Unrated CMBS	0%	0%	

Key Points:

- *Losses* impact the lowest rated bonds first.
- *Payments and recoveries* are applied to the highest rated bonds first.
- Lower rated bonds provide a loss cushion to higher rated bonds (*subordination*)

CMBS offers loss protection through a combination of:

- Borrower's initial equity
- CMBS bond structure
- Discount market prices (select bonds)

Bond Structure

CMBS transactions are comprised of various types of classes that appeal to different investors

- Bond class can be segmented into 4 general categories
 - Super Senior: classes rated AAA with credit support (usually 30%) exceeding the natural AAA credit support level for the deal and time tranching to shorten principal window of 5- and 10-year classes
 - Mezzanine: classes rated AAA thru BBB- with natural credit support required by rating agencies and short principal windows
 - B-Piece: classes rated below investment grade that are pre-placed with a sophisticated real estate investor which investor plays a significant role in determining the final pool composition
 - Interest-Only: classes that pay interest that is stripped off of certain bond classes based on the pool's weighted average coupon and the coupons on each of the individual bond classes

Class	Rating	Class Type	Balance	Credit Support	Weighted Average Life	Expected Principal Window	Coupon Type	Certificate to Value	NOI DY
A-1	AAA	Super-Senior	27,667,000	30.00%	2.67	1 – 59	Fixed	41.6%	16.0%
A-2	AAA	Super-Senior	158,816,000	30.00%	4.95	59 – 60	Fixed	41.6%	16.0%
A-3	AAA	Super-Senior	130,000,000	30.00%	6.93	83 – 83	Fixed	41.6%	16.0%
A-4	AAA	Super-Senior	154,507,000	30.00%	9.89	118 – 119	Fixed	41.6%	16.0%
A-SB	AAA	Super-Senior	37,660,000	30.00%	7.52	60 – 118	Fixed	41.6%	16.0%
A-S	AAA	Mezzanine	47,232,000	23.50%	9.93	119 – 119	Fixed	45.4%	14.7%
B	AA-	Mezzanine	49,957,000	16.63%	9.93	119 – 119	Fixed	49.5%	13.4%
C	A-	Mezzanine	36,332,000	11.63%	9.93	119 – 119	Fixed	52.5%	12.7%
D	BBB-	Mezzanine	33,607,000	7.00%	9.97	119 – 120	Fixed	55.2%	12.1%
E	BB	B-Piece	17,258,000	4.63%	10.01	120 – 120	Fixed	56.6%	11.8%
F	B	B-Piece	11,808,000	3.00%	10.01	120 – 120	Fixed	57.6%	11.6%
G	NR	B-Piece	21,799,594	0.00%	10.11	120 – 123	Fixed	59.4%	11.2%
X-A	AAA	Interest-Only	555,882,000	N/A	N/A	N/A	Variable	N/A	N/A
X-B	AA-	Interest-Only	49,957,000	N/A	N/A	N/A	Variable	N/A	N/A
X-C	NR	Interest-Only	33,607,594	N/A	N/A	N/A	Variable	N/A	N/A

Property Types

The CMBS universe is dominated by the five major property types, although most transactions contain some exposure to other property types as well

	Multifamily	Retail	Office	Hotel	Industrial
Description	Rental buildings with four or more units Garden-style, high rise	Neighborhood, community centers, and regional malls Freestanding stores	Downtown and suburban Class A, B, C	Budget to Luxury	Warehouse, manufacturing, distribution, mixed use
Lease Term	1-year	5/7/10 year for smaller stores. Major anchors 10-year +. Percentage rents. Neighborhood centers 3/5/7yr	5-10 year plus	24-Hour	5-10 year plus
Tenant Profile	Household profile: 2.6 people, USD 54K average HH income.	Department stores, national chains, grocery stores and local operators	Various industries and corporate credits (rated/unrated, public/private)	Business and leisure travelers Retail food/beverage	Manufacturing and industrial

While various credit metrics are crucial to analyzing CMBS transactions, DSCR and LTV are the most fundamental and critical

DSCR

- Net Operating Income / Mortgage Debt Service
 - > 1.00 means the borrower motivated to make mortgage payments
 - < 1.00 means the borrower has no motivation to make mortgage payments
- 1.20 is considered to be a "safe" number as allows for a dip in property income
- Property Income dips due to a loss of tenants at the property
- Rule of thumb #1 about riskiness of cashflow is length of contract for tenants
 - Hotels considered risky as contract is usually 1 day
 - Office/Retail/Industrial considered less risky as contract is usually for 10 years
- Rule of thumb #2 about riskiness of cashflow is motivation of tenants to honor contract
 - Hotels considered risky as very little recourse vs cancelling a room
 - Multifamily considered less risky as people highly motivated to protect their homes

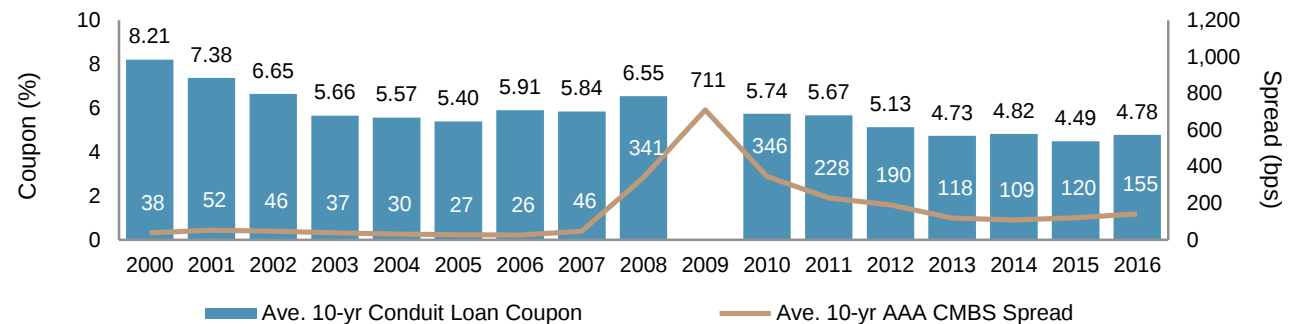
LTV

- Loan Amount / Value of property
- < 100% means the borrower motivated to make mortgage payments
- > 100% means the borrower has no motivation to make mortgage payments
- LTV calculations
 - Appraised LTV - Value as measured by the appraiser
 - LTV of 75% is considered to be a "safe" number as allows for a dip in property valuation
 - LTV is based upon current market conditions and replacement cost
 - Rating Agency LTV (RALTV) - Value as measured by rating agencies
 - RALTV based upon long term capitalization rates
 - RALTV varies depending on the state of real estate markets vs. historical standards
 - In bull real estate markets, RALTV is high (i.e. =>115%)
 - In bear real estate markets, RALTV is low (i.e. 80–90%)
 - Current RALTVs are around 100-105%
- Properties with risky cashflow tend to have lower LTV's (hotels tend to have LTVs of no more than 70%)
- Properties with stable cashflow tend to have higher LTVs (multifamily properties tend to have LTVs of up to 75%)

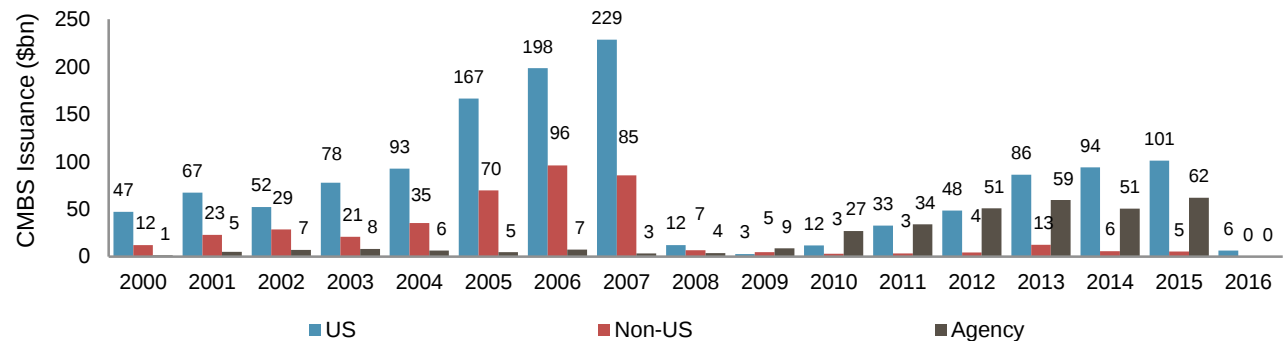
Securitized loans continue to be a compelling product to borrowers

- Despite relatively wide current CMBS spreads relative to CMBS 1.0, historically low treasury rates have kept CMBS borrowing costs low
 - Attractive all-in rates compared to prior years portend continued borrower demand for CMBS loans

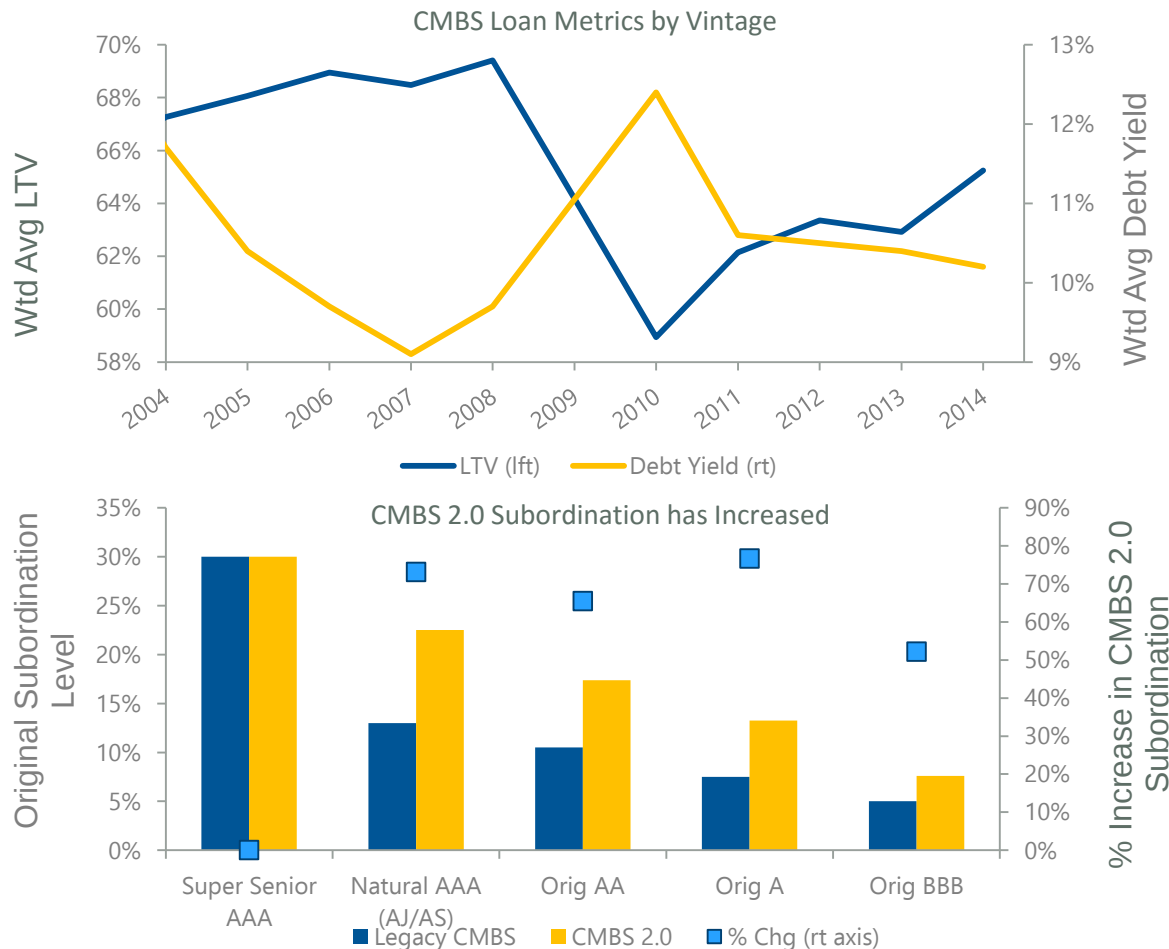
CMBS Borrowing Rates are Attractive



CMBS Issuance has Returned with 2015 Issuance the Highest Since 2007



New Issuance Landscape

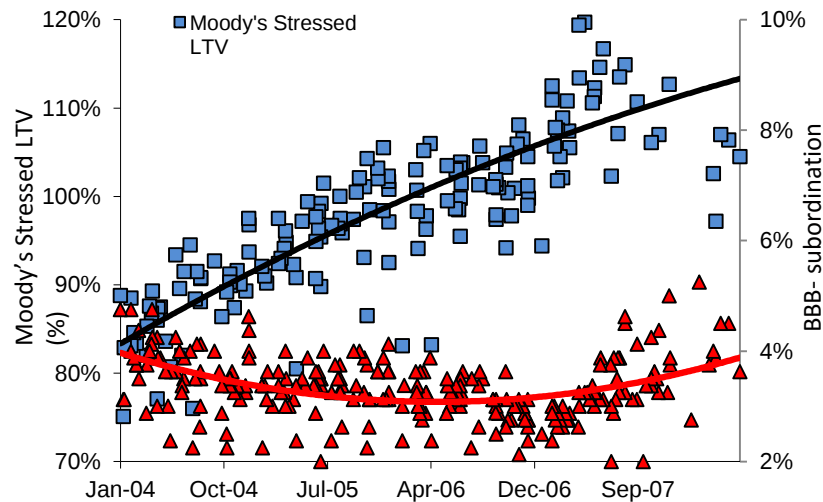


- CMBS loans originated post-crisis exhibit lower loan-to-value (LTV) and higher Debt Yields
- Relatively less aggressive underwriting standards and practices are positive for CMBS 2.0
- Rating agencies implemented more conservative ratings criteria post-crisis
- CMBS 2.0 carries higher subordination levels across the entire bond structure
- Original subordination levels for CMBS 2.0 bonds are ~50-75% higher than those of legacy bonds

Higher Subordination Levels Offsetting Looser Underwriting Standards – For Now

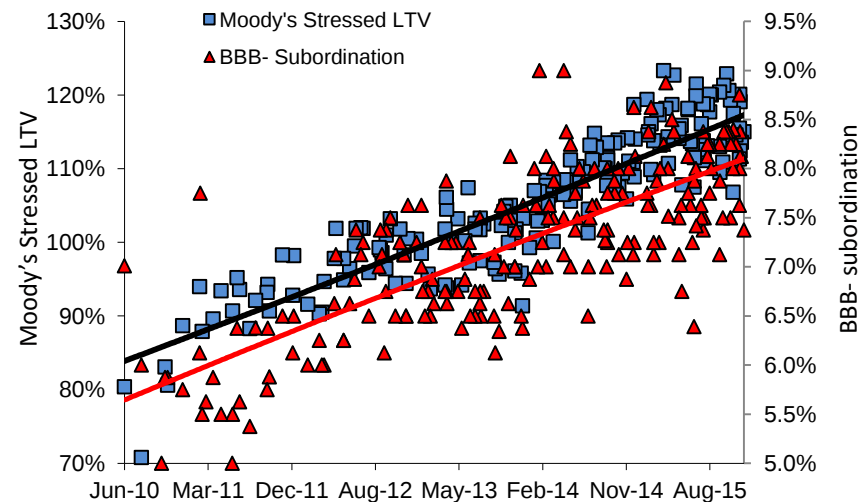
- Stressed LTV levels for peak-market vintages reached more than 120%, while BBB-minus subordination levels decreased to the 2% range.
- Although stressed LTV levels have risen, use of pro-forma underwriting is almost non-existent and BBB-minus bonds have considerably more subordination than they did in 2006-2007.
- It is unclear at this time, however, the extent to which adversely selected loans may have fundamental problems if economic growth remains soft.

BBB- subordination vs. Moody's Stressed LTV: 2004-2008



Source: BofA Merrill Lynch Global Research, Commercial Mortgage Alert, Moody's

BBB- subordination vs. Moody's Stressed LTV: 2010-2015 YTD



Source: BofA Merrill Lynch Global Research, Commercial Mortgage Alert, Moody's

Single-Asset/Single-Borrower Transactions

Market Snapshot:

- Single-asset/single-borrower transactions accounted for \$30.4 billion (30.7%) of the over \$101.0 billion of U.S. CMBS Issuance in 2015.¹

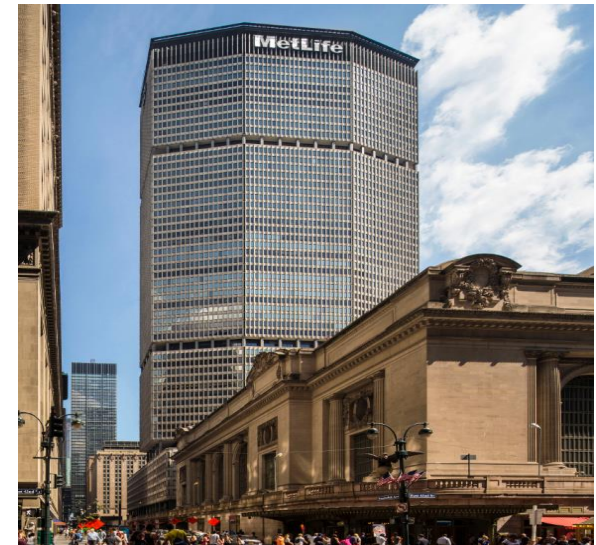
Representative Transaction: 200 Park Avenue

\$1.4 billion commercial mortgage secured by 200 Park Avenue (MetLife Building) in New York City

Losses and Shortfalls	Bond Class Rating (Fitch/KBRA/S&P)	Balance	Loan-to-Value (LTV) Ratio	Payments and Recoveries
	AAAsf/AAA(sf)/AAA(sf)	\$773,000,000	26.7%	
	AA-sf/AA-(sf)/AA-(sf)	\$177,000,000	32.8%	
	NR/A-(sf)/A-(sf)	\$130,500,000	37.3%	
	NR/BBB-(sf)/BBB-(sf)	\$138,000,000	42.0%	
	NR/NR/BBB-(sf)	\$23,500,000	42.8%	
	NR/BB-(sf)/BB-(sf)	\$158,000,000	48.3%	

Key Points:

- Single-asset/single-borrower transactions have been offered across all major property types throughout the United States.
- Properties are generally concentrated in major markets with strong, institutional sponsorship.
- Offerings can include AAA through B- classes (mortgage) and non-rated mezzanine tranches.



¹ Commercial Mortgage Alert.

Floating Rate Transactions

Market Snapshot:

- Floating rate transactions accounted for \$2.0 billion (2.0%) of the over \$101.0 billion of U.S. CMBS Issuance in 2015.¹

Representative Floating Rate Transaction: 2015-BXRP

\$796.6 million commercial mortgage secured by 45 anchored-retail, grocery-anchored, and grocery shadow-anchored properties located throughout the U.S.

Losses and Shortfalls	Representative Floating Rate Transaction: 2015-BXRP			Payments and Recoveries
	Bond Class Rating (S&P/Fitch)	Balance	Loan-to-Value (LTV) Ratio	
	AAA(sf)/AAAsf	\$410,050,000	38.4%	
	AA-(sf)/AA-sf	\$87,950,000	46.6%	
	A-(sf)/A-sf	\$62,000,000	52.4%	
	BBB-(sf)/BBB-sf	\$68,000,000	58.8%	
	BBB-(sf)/NR	\$18,500,000	60.5%	
	BB-(sf)/NR	\$118,340,000	71.6%	
	B+(sf)/NR	\$31,747,500	74.6%	

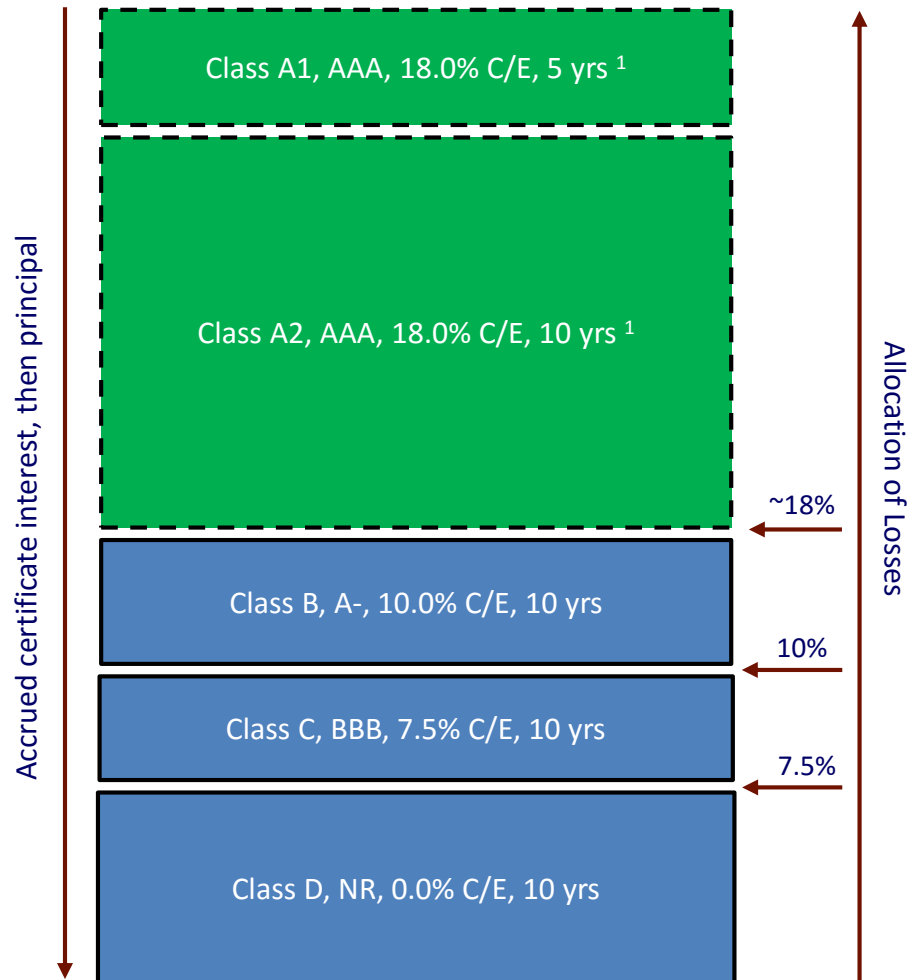
Key Points:

- Floating rate transactions have been offered across all major property types throughout the United States.
- Properties are generally concentrated in major markets with strong, institutional sponsorship.
- Offerings can include AAA through B- classes (mortgage) and non-rated mezzanine tranches.
- Allows for maximum prepayment flexibility.



¹ Commercial Mortgage Alert and Citi Research

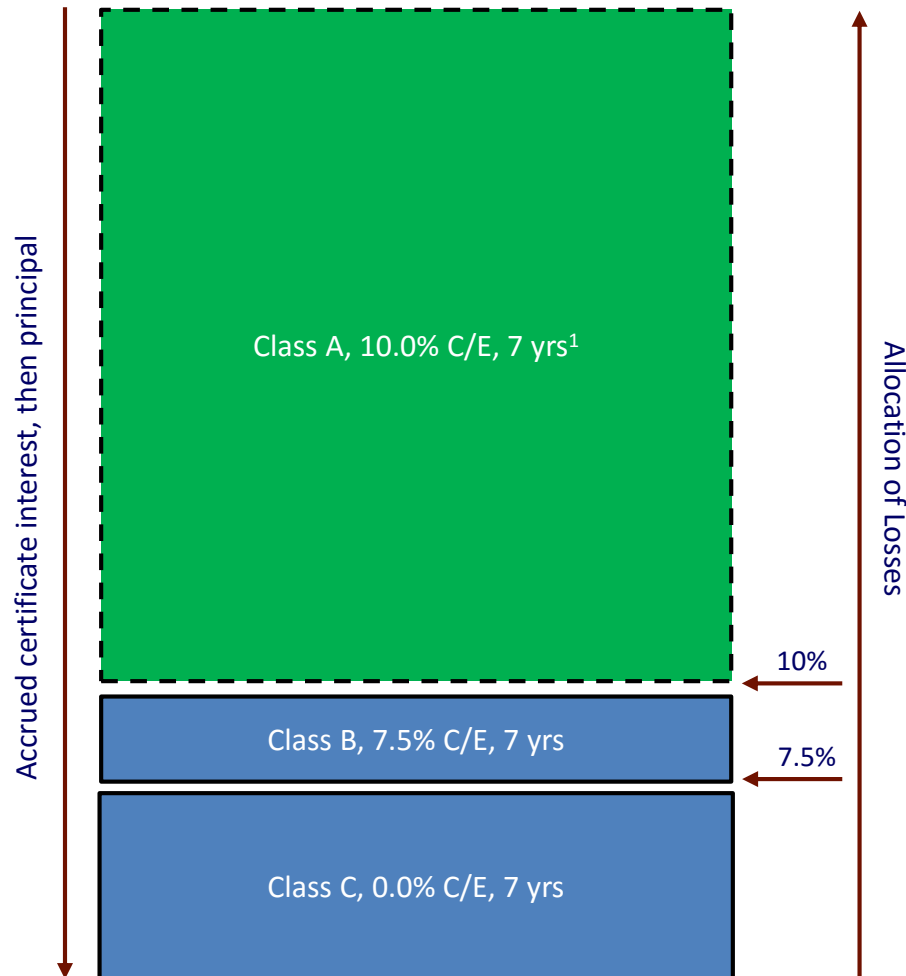
Freddie Mac “K” Series Overview



- Freddie Mac “K” Series transactions are frequently issued, rated securitizations backed by stabilized multifamily properties. The primary and secondary market for such issuances have been highly liquid
 - Collateral consists primarily of “conventional” multifamily properties
- Freddie Mac guarantees timely payment of interest and ultimate payment of principal, as well as reimbursement against any losses on the A1 and A2 classes
 - Classes B and C do not have a guaranty, but are rated
- Interest and principal flows in order of seniority (i.e., first to the A1 and A2 classes)
 - Classes B, C and D provide credit enhancement to the senior guaranteed certificates, similar to a CMBS conduit transaction
- Although not illustrated here, similar to non-Agency CMBS, multiple “Interest-Only” classes are issued in each transaction
- All underlying mortgages are originated by Freddie Mac’s Program Plus® Seller/Servicer network of lenders and re-underwritten by Freddie Mac prior to purchasing

¹Denotes Freddie Mac Guaranteed Certificates

Freddie Mac “K” Series Overview



- Freddie Mac “K” Series floating rate issuances are similar in size, collateral, and Freddie Mac senior certificate guarantee as with the fixed rate transactions, however the structure differs in certain ways:
 - Pro rata principal repayment subject to Waterfall Trigger Events
 - One senior principal & interest class (no “time-tranching”)
 - None of the classes are rated
 - Generally requires underlying borrowers to purchase interest rate protection in the form of a cap from an approved counterparty
- A Waterfall Trigger Event occurs when (i) the number of non-specially serviced loans remaining in the pool falls below the designated threshold as defined in the Pooling & Servicing Agreement or (ii) the total outstanding principal balance of the non-specially serviced loans is less than 15% of the initial total pool balance
- Floating rate “K” series transactions have typically been backed by seven year collateral, however, Freddie Mac securitized its first floating rate ten-year securitization in 2015

¹Denotes Freddie Mac Guaranteed Certificates

Participating U.S. Companies:

Apollo Global Management
Bank of America Merrill Lynch
CCRE
Citigroup Global Markets
Deutsche Bank Securities
KeyBank Real Estate Capital
MetLife Real Estate Investors
Morgan Stanley
Pine River Capital
Principal Real Estate Investors
Related Companies
Square Mile Capital Management
Talmage, LLC
UBS Investment Bank
USAA Real Estate Company
Wells Fargo Securities



CRE Finance Council®
The Voice of Commercial Real Estate Finance

www.crefc.org