Chapter 16:

Commercial Mortgage Types and Decisions

McGraw-Hill/Irwin

"Commercial" Mortgage Loans vs. Home Loans

- Commercial mortgages & notes for existing properties not as standardized as home loans
- Documents are longer & more complex
- Often no personal liability:
  - Legal borrower often is a single asset entity (usually a LLC or LP)
  - Actual investors shielded from personal liability

When Do We See Recourse Loans?

- Nonrecourse loans dominate the lending practices of pension funds, life companies, and CMBS originators
- But…commercial banks are likely to require some form of credit "enhancement"
- Often a guarantee by organizer/sponsor of the investment to make lender whole in the event lender suffers a capital loss on loan

When Do We See Recourse Loans?

- Some lenders also unwilling to relieve borrowers from personal liability if a "willful" act of borrower cause a capital loss for lender
  - Examples: borrower fraud, environmental problems, unpaid property tax obligations
- How is this accomplished?
  - A "carve-out" clause is often included in the note
  - This "bad boy" clause holds borrower(s) personally liable for lender losses caused by such problems

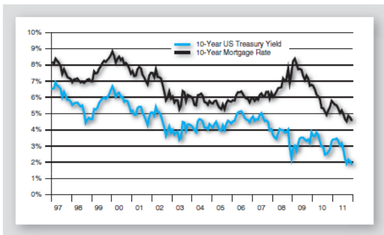
Fixed Rate Commercial Mortgage Loans

- Usually a partially amortized "balloon" mortgage
  - 25-30 year amortization of principal
  - 5-10 year loan maturity
  - Balance of loan at maturity must be
    - refinanced or
    - paid off with a "balloon" payment

Attractions of a Balloon Mortgage to Lender

- Reduces interest rate risk on "permanent" mortgages
- Reduces default risk
  - Default risk is generally much greater for commercial mortgage loans than home loans
    - Often no personal liability
    - No FHA/PMI insurance (as in home mtg. market)
    - Borrowers are more "ruthless" about exercising their default options than home owners
  - When is borrower's default option "in-the-money"?

Commercial Mortgage "Spreads" over Treasuries



Source: The yields on 10-year Treasury securities are from the Federal Reserve Board's H-15 Report. The monthly mortgage rates are based on the Giliberto-Levy Commercial Mortgage Performance Index (www.jblevyco.com/q2-2012-results-for-the-giliberto-levy-commercial-mortgage-performance-index).

Correlation between monthly rates/yields on 10-yr mortgages & 10-yr Treasury securities: 0.69 from 1997-2011

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Restrictions on Prepayment

- **Lock-out**: Prohibition against prepayment for up to, say, 5 years on permanent
- Prepayment penalties:
  - **Percentage of loan**: Say, 2-4% of loan balance
  - **Yield maintenance penalty**: Borrower must pay lender PV of losses due to prepayment

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Restrictions on Prepayment

- Prepayment penalties, continued:
  - **Defeasance penalty**: Borrower must replace mortgage loan with a set of U.S. Treasury securities that produce cash flows equivalent to those on the paid-off mortgage
    - Most common form of prepayment penalty on loans used for collateral in CMBS
    - see www.defeasance.com for a defeasance calculator

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Other Forms of Permanent Financing for Existing Properties

- Floating (i.e., adjustable) rate mortgage
  - Interest rate on loan changes periodically based on movement in an index rate
  - Index rate is typically LIBOR, but may be "prime" rate or other short term benchmark rate

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Other Forms of Permanent Mortgage Financing (continued)

- Joint Venture
  - Lender likely:
    - provides a mortgage loan to project
    - also provides some equity capital
    - receives mortgage interest plus share of equity cash flows
  - Borrower likely:
    - provides the project
    - provides local market expertise & management effort

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Joint Venture (continued)

- Often between a developer/organizer of a development/investment opportunity and a:
    - pension fund
    - life insurance company
    - REIT
- Institutional investor's share of operating & sale cash flows are negotiated

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Other Forms of Permanent Financing for Existing Properties

- Sale-leaseback
  - Owner-user (bank, restaurant, drug store, etc.) sells property to long-term RE investor such as a
    - pension fund
    - limited liability company
    - REIT
  - User then leases property back from the investor(s) & occupies it under a long-term net lease

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Sale-Leaseback (continued)

- Benefits to original owner (now tenant):
  - Lease payment is deductible for income taxes
  - Capital from sale can be invested in core business of company
- Investor benefits:
  - Can be relatively safe investment (depending on credit worthiness of tenant)
  - Often long term triple-net leases to "credit" tenants

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Second Mortgages & Mezzanine Financing

- Supplements underlying first mtg. loan
- Sometimes is a 2nd mortgage loan (i.e., secured by the property)
- In recent years, often is a non-mortgage loan secured by a pledge of borrower's equity ownership interest in property
  - If borrower defaults, mezzanine lender takes over borrower's ownership position…giving them more control

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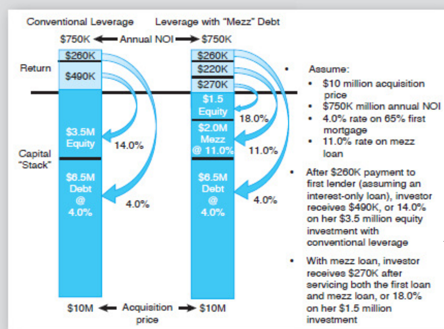
Adding a Mezzanine Loan or Second Mortgage to the Capital Stack



Why does increased leverage in this example increase expected first year return on equity?

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Other Forms of Permanent Financing for Existing Properties

- FHA insured loans for investment in low & moderate income multifamily housing
  www.hud.gov/local/shared/working/localpo/xmfhsgprograms.cfm?state=ak
- Freddie Mac & Fannie Mae multifamily lending programs
  - Many targeted to low & moderate income housing
  - See Fannie & Freddie websites (www.fanniemae.com and www.freddiemac.com)

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More on Multifamily Mortgage Finance

- Multifamily properties provide housing for ≈ 17 million U.S. families
  - There are ≈ 115 million U.S. households
- In 2012Q1, outstanding mtg. debt on U.S. multifamily properties totaled $844 billion
  (Board of Governors of the Federal Reserve System, June 7, 2012, page 104)
  - This is like a 3rd party taking out a $50,000 mortgage on behalf of the renter
- Fannie & Freddie held in portfolio, **or** had securitized, $352 billion (42%) of the $844 billion

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More on Multifamily Mortgage Finance

- ≈ 49% of multifamily units financed by Fannie Mae serve families earning < 80% of area median income (AMI)
  - Which meets Federal Housing Finance Agency's (FHFA) "special affordable" housing goal requirement for Fannie Mae & Freddie Mac
- 48% of multifamily units financed by Fannie Mae were in designated underserved markets

Typical Terms on Commercial Mortgages: from Exhibit 16-4

Permanent, Fixed-rate Financing: 2nd qtr 2012

	Apartments	Industrial	Office	Retail
Spread over 10-year Treasury (bps)	250	275	275	275
Debt coverage ratio	1.35	1.45	1.50	1.50
Loan-to-value ratio	75%	65%	65%	65%
Amortization term (yrs.)	30	25	25	25
Loan term (yrs.)	10	10	10	10
Lender reserve requirement	$300/yr	$0.15/SF	$0.20/SF	$0.20/SF

Debt Coverage Ratio

- Indicator of "cash flow cushion" from lender's perspective

$$DCR = \frac{NOI_1}{DS}$$

where:
NOI_1 is first year (next 12 months) NOI
DS is annual debt service (monthly payment x 12)

- Lender's want DCR to be as high as possible, but typically 1.35 or higher

Loan-to-Value Ratio

- An indicator of borrower's incentive to maintain the loan (i.e., not default)

$$LTV = \frac{Loan\ Amount}{Acquisition\ Price}$$

- Higher initial LTVs increase the probability of subsequent default, all else equal
- Typical LTV at origination on a first mortgage loan:
  - 65% for industrial, office, and retail properties
  - 75% for apartments
  - Mezzanine & second loans can increase leverage

Debt Yield Ratio

- Indicator of lender's mortgage "return"

$$DYR = \frac{NOI_1}{Loan\ Amount}$$

- Cash-on-cash return lender would enjoy if it foreclosed & took title to property on day of loan origination
- Does **not** consider contract interest rate or amortization period
- *DYR* only considers how large loan is relative to property's NOI
- Typical minimum *DYR* is 9.0% or higher

Borrower's Decision Making Process: Loan Size

- Reasons for use of debt by investors:
  - Limited financial resources/accumulated wealth
  - Debt alters risk & equity return of investment
    - "Magnifies" rate of return on invested equity
    - This magnification known as positive (or negative) leverage
  - Diversify investment portfolio (that is can buy more buildings)
  - Increase after tax return

When is Use of Leverage Expected to be Favorable?

- Increased leverage will **increase** expected return when….
  - the rate of return without leverage exceeds the cost of debt
  - This is called positive leverage
- MM Eqn:
- $R_L = R_U + D/E(R_U - R_D)$

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Borrower's Decision Making Process (continued)

- Financial risk:
  - Risk that NOI will be insufficient to cover ("service") the mortgage payment obligation
  - This negative cash flow may lead to default and foreclosure
  - This risk increases with leverage
- Leverage also increases variability of equity returns (more on this in Chapter 19)

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Borrower's Decision Making Process: Refinancing

- Refinancing involves a NPV decision
  - Even more focused on NPV than home mortgage refinancing
    - More sophisticated borrowers
    - Fewer non-financial considerations

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Borrower's Decision Making Process: Refinancing (continued)

- Must account for lockout periods and/or prepayment penalty
- NPV = PV of payment savings
  – Refi Cost – Prepay Penalty
  - Should discount monthly savings at current market mortgage rate
- Expected holding period after refinancing is important assumption
- Refinancing uncommon due to prepayment restriction (penalty or lockout)

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Borrower's Decision Making Process: Default

- For lenders, **default** is the signature risk of commercial mortgages
  - Borrower seldom can cover for long the loan payment for a crippled commercial property
  - Loan is often non-recourse (good for borrower, bad for lender)

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Permanent Loan Application and Approval Process

- Borrowers seeking to acquire or refinance an existing commercial property may submit loan requests directly to commercial banks, life insurance companies, or other direct lenders
- Informal discussions with loan officers in these firms can inform would-be borrowers of expected items in a loan submission package

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Permanent Loan Application and Approval Process

- Another channel for loan requests is through mortgage bankers & brokers
  - Mortgage brokers specialize in putting together loan application packages that meet requirements of both borrowers and lenders
  - They also assist borrowers in assembling the loan submission package
  - For these services, mortgage brokers receive a fee at loan closing that may range from 1/2 to 1 percent of loan amount

Permanent Loan Application and Approval Process

- Relative to home loans, underwriting process for commercial loans is more complicated & **more focused on property used as collateral for the loan**
- Primary reason?
  - Payments on commercial RE loans are expected to come from income generated by property
  - Result? The commercial loan underwriting process focuses first on the property being pledged as collateral for loan

Permanent Loan Application and Approval Process

- Borrowers, perhaps aided by mortgage broker, submit a loan package to a lender (or lenders)
- Purpose of loan submission package (executive summary)?
  - Provide lenders with information needed to quickly evaluate request
  - Package typically contains information on:
    - type, size, and location of property
    - maps and photographs
    - property age
    - purchase price
    - requested loan amount and other basic loan terms
    - recent operating history of property
    - current rent roll, and
    - estimated PGI over next twelve months

Permanent Loan Application and Approval Process

- Based on loan submission package and, perhaps, conversations with borrower or borrower's broker, lender either (1) rejects loan or (2) issues a preliminary quote
- Quote
  - contains basic terms of proposed loan
  - is sometimes referred to as a letter of intent (LOI)
- Borrower then choses to reject or accept quote
- Or, in some cases, attempt to negotiate better loan terms

Permanent Loan Application and Approval Process

- If lender & borrower are able to agree on the basic loan terms
  - lender will finalize loan application
  - which is then signed by borrower

Permanent Loan Application and Approval Process

- Length & details of loan application vary with
  - size of loan request
  - type of property being used as collateral (e.g., office, apartment)
  - whether loan will be held in lender's portfolio or sold in secondary market to be used as collateral for the issuance of a CMBS
- Loan applications typically contains a great deal of terms & language that will be included in final promissory note/mortgage

Permanent Loan Application and Approval Process

- When application is signed, borrower typically pays a non-refundable loan processing fee to cover lender expenses
- Fee is usually modest, often < $5,000 even on loans in excess of $15 to $20 million
- Lender will also require a "good faith" deposit, which can be 1-2% of loan amount
  - Required because lender will now proceed to secure the loan funds, complete loan underwriting process, and issue a loan commitment

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From Loan Application to Closing

- With signed application, loan processing fee, good faith deposit, and deposit for legal fees & third party reports in hand, the lender is confident borrower intends to close loan
- So…makes sense for lender to incur the additional expenses associated with moving loan forward to formal commitment and closing

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From Loan Application to Closing

- Lender's required "due diligence" begins once application is signed
- Due diligence process typically includes:
  - ordering appraisal, title report, and 3rd party inspection, compliance, and engineering reports
- This is also when lender evaluates property's income producing ability in detail
- Lender performs due diligence to make sure borrower did not misrepresent property in any way in original loan submission package

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From Loan Application to Closing

- If lender uncovers
  - an inconsistency or error in information provided by borrower or
  - an undisclosed problem with the land, building, title, borrower, etc.,
- lender may choose to (1) back out or (2) hold back on final commitment until issue is addressed to satisfaction of lender's staff
- If/when full resolution is obtained, staff prepares a package that is presented to a committee of top executives for final approval

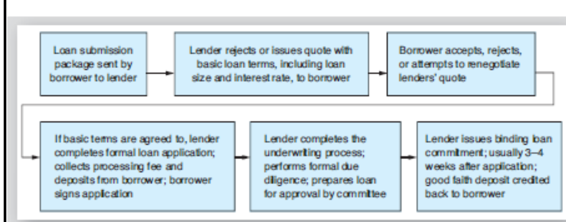
16-40

From Loan Application to Closing

- Once approved and issued to the borrower, loan commitment is a binding agreement between lender and borrower
- A typical permanent loan submission and approval process is summarized in Exhibit 16-5
- However, process can vary significantly by property type & size and across borrowers & lenders

16-41

Loan Submission, Application, & Approval: An Illustration



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So…How Long Does This Take?

- A commercial loan may take 90 days from signing of purchase & sale contact until loan closing
- But…some loans can be processed in < 45 days
- Time depends on numerous factors
- Loan application is nonbinding
- But…loan commitment is a written agreement that commits lender to make the loan to the borrower provided borrower satisfies terms and conditions of commitment

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Loan Underwriting: Crunching the Numbers

Input	Assumption
Number of units	296 units with average monthly rent of $534.91
Purchase price	$13,375,000
Vacancy and collection losses	6% per year
Operating expenses	$610,000 in year 1
Reserve for Capital expenditures	$88,800 in year 1. Expenditures are reserved for in calculation of *NOI* (i.e., an above-line treatment)
Financing:	
Loan amount	$10,000,000 (equals 74.7664% of price)
Interest rate (annual)	5.25%
Amortization schedule	25 years, *monthly* payments
Loan term	10 years
Annual payment	$719,097 ($59,924.77 × 12)*

*The calculator keystrokes for finding the monthly payment are $N = 300$; $I/YR = 5.25/12$; $PV = 10{,}000{,}000$; $PMT = ?$; and $FV = 0$. Loan payment calculations are discussed in detail in Chapters 14 and 15.

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Gatorwood Before-Tax Cash Flow from Operations

Potential gross income (PGI)	$1,900,000
− Vacancy and collection loss (VC)	114,000
= Effective gross income (EGI)	1,786,000
− Operating expenses (OE)	610,000
− Capital expenditures (CAPX)	88,800
= Net operating income (NOI)	1,087,200
− Debt service (DS)	719,097
= Before-tax cash flow	$ 368,103

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Gatorwood Debt Coverage Ratio

$$DCR = \frac{NOI_1}{DS} = \frac{\$1{,}087{,}200}{\$719{,}097} = 1.51$$

- NOI in first year of operations is expected to be half again as large as mortgage payment
- Thus, there appears to be sufficient protection against a deterioration in the property's operating performance

16-46

Debt Yield Ratio

- Indicator of lender's mortgage "return"

$$DYR = \frac{NOI_1}{Loan\ Amount}$$

- DYR = 1,087,200/10,000,000 = 10.87%
- Cash-on-cash return lender would enjoy if it foreclosed & took title to property on day of loan origination
- Does **not** consider contract interest rate or amortization period
- *DYR* only considers how large loan is relative to property's NOI
- Typical minimum *DYR* is 9.0% or higher

16-47

Cash on Cash for Investor

- Cash on Cash is the cash the investor receives divided by the cash the investor invested
- The cash received is the BTCF = NOI – Annual Debt Service
- BTCF = 1,087,200 – 719,097 = 368,103
- The cash invested is the Down Payment plus points: 3,375,000 + 0 (No points were specified)
- C on C = 368,103/3,375,000 = 10.91%

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What is the overall return to investor (as an IRR)?

- We now need to add some additional assumptions:
  - Assume a 5-year holding period
  - Assume a 2% pre payment penalty at 5-years
  - Lets say the lender charges 2 points.
  - Assume the NOI grows at 3% per year
  - Assume the exit cap rate is .25% higher than the purchase cap rate
  - Assume 5% selling expenses at time of sale.
  - What is the NPV for a 10% equity discount rate?

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Gatorwood: Determining Maximum Available Loan

$$\textit{Maximum debt service} = \frac{NOI_1}{\textit{Minimum DCR}} = \frac{\$1{,}087{,}200}{1.35} = \$805{,}333$$

- Implies a maximum monthly payment of $67,111 ($805,333/12)
- With a 5.25% interest rate and 25-year term, implies a maximum loan of $11,199,208 (or 83.7% LTV)

N	I	PV	PMT	FV
300	5.25	11,199,208	67,111	0

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Gatorwood: Determining Maximum Available Loan

- It appears the property's NOI can support an $11,199,208 loan
- However, maximum loan will be determined by lender's maximum allowable LTV if it is less than 83.7% (which is likely)

16-51

Construction and Development Financing

- Land acquisition financing
  - To finance purchase of raw land, often on urban fringe
- Land development loan
  - To finance installation of improvements to the land (sewers, utilities, etc.)
- Construction loan
  - To finance vertical construction
- Mini-perm loan
  - Provides financing for development phase, plus a short-term permanent loan upon completion of project

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Construction and Development Financing

- Land acquisition financing
  - VERY risky; most traditional lenders will not touch
- Land development loan
  - If land is ready for development, demand for the expected finished product is less uncertain
- Construction loan
  - Arguably, collateral securing a construction loan is more valuable than collateral securing land acquisition & development loans

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