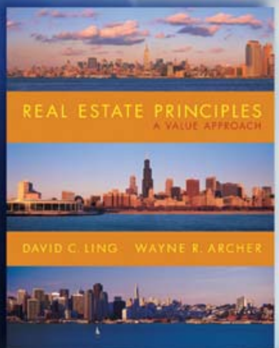


Fin 5413

Commercial Mortgage Types and Decisions

"Commercial" Loans vs Home Loans

- Commercial mortgages and notes are not as standardized as home loans
  - Although this is changing with growth in commercial mortgage-backed securities market
- Documents are longer and more complex.
- Often no personal liability:
  - Legal borrower often is a single asset corporation.
  - Actual persons are shielded from liability.
  - Credit enhancement sometimes is required.

17-2

Commercial Mortgage Loans

- Usually a partially amortized "balloon" mortgage.
  - 25 to 30 year amortization of principle.
  - 5 to 10 year maturity
  - Balance of loan at maturity must be refinanced or paid off with a "balloon" payment
- **Bullet loans** are non amortizing for with a fixed term at which point the principal is repaid

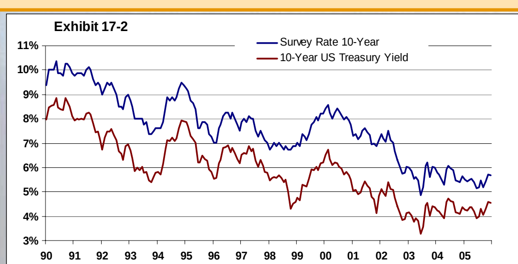
17-3

Attractions of Balloon Mortgage to Lender

- Reduces interest rate risk.
- Reduces default risk.
  - Default risk is much greater for commercial mortgage loans than for home loans.
  - As with residential lending, default risk varies over time
    - 7% delinquent in late 1992
    - 0.1% delinquent in 2004
    - 1.05% in 3rd quarter of 2005
  - Actual yield to lender will generally be lower than scheduled yield due to defaults

17-4

Commercial Mortgage "Spread" over "Treasuries"



Mortgage rates highly correlated with 10-Year Treasury Securities

17-5

Restrictions on Prepayment

- *Lock-out*: Prohibition against prepayment for up to 5 years.
- Prepayment penalties:
  - *Percentage of loan*: Say, 2-4% of loan balance.
  - *Yield maintenance penalty*: Borrower must pay lender PV of losses due to prepayment.
  - *Defeasance penalty*: Borrower must replace mortgage loan with a set of U.S. Treasury securities producing equivalent cash flows
    - Recently has become most common form of prepayment penalty
    - This replaces a risky promised set of CF's with a risk free set of CF's so its good for a lender

17-6

Other Forms of Commercial Mortgage Financing

- Floating (i.e., adjustable) rate mortgage
  - Index rate most commonly is LIBOR
- Installment sale financing
  - Buyer makes installment payments.
  - Seller only pays capital gain taxes over time in proportion to amount of the price received.

17-7

Other Forms of Commercial Mortgage Financing - continued

- Joint Venture
  - Lender:
    - Provides a mortgage loan
    - Provides additional equity investment.
    - Receives mortgage interest plus equity cash flows.
  - Borrower:
    - Provides the project.
    - Provides expertise and management effort.
    - Provides some of the equty

17-8

Joint Venture - continued

- Usually between a developer of a large project and a:
    - Pension fund.
    - Life Insurance company.
    - REIT
- Institution provides construction financing and/or long-term mortgage, in addition to some of required equity capital
- Institution's share of operating & sale cash flows are negotiated

17-9

Other Forms of Commercial Mortgage Financing - continued

- Land Sale-leaseback:
  - Investor owns land and mortgage on building. User owns building subject to mortgage and p pays a land lease (both deductible for taxes)
- Sale-leaseback
  - User sells property to a long-term investor.
    - Pension fund.
    - Trust.
    - Life insurance company.
  - User leases property back from the investor and occupies it under long-term net lease.

17-10

Sale-Leaseback - continued

- User benefits:
  - Lease payment is deductible for income taxes.
  - Equity capital is freed up to invest in core business of company.
- Investor benefits:
  - Can be safe investment (depending on credit worthiness of tenant).
  - Inflation hedged (especially if lease payments increase with inflation).

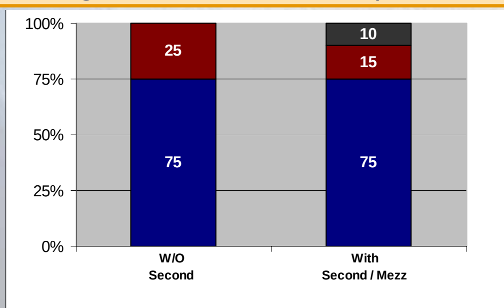
17-11

Other Forms of Commercial Mortgage Financing - continued

- Mezzanine Debt (growing in popularity):
  - Supplements underlying first mortgage debt.
  - Sometimes is a second mortgage loan (i.e., secured by the property)
  - More often is a non-mortgage loan secured by a pledge of ownership shares
    - If borrower defaults lender takes over the borrower's ownership position rather than having a lien on the real estate (which the first mortgage holder has)

17-12

Adding Mezzanine to the Capital Stack



Implications: Equity capital decreases from 25% to 10% of total required

Other Forms of Commercial Mortgage Financing - continued

- Participation loan:
  - Lender receives interest payments on loan plus:
    - Share of the cash flow from operations and/or
    - Share of the proceeds from sale.
  - Lender gets equity-like interest in property
  - Borrower gets higher loan-to-value ratio and/or lower interest rate in exchange for giving lender a percentage of the cash flows

Other Forms of Commercial Mortgage Financing - continued

- FHA insured loans for low and moderate income multifamily housing.
- Freddie Mac and Fannie Mae multifamily lending programs
  - Many targeted to low and moderate income housing.
  - See Fannie and Freddie websites (www.fanniemae.com and www.freddiemac.com)

Important "Underwriting" Ratios

- Debt coverage ratio: indicator of "cash flow cushion" from lender's perspective

  DCR = NOI÷DS

  where:

  NOI is first year NOI

  DS is annual debt service (12 monthly payments)
- Lender's want DCR to be as high as possible, but certainly greater than 1.20

Important "Underwriting" Ratios

- Loan-to-value ratio: indicator of equity incentive to maintain the loan.

  LTV = Loan ÷ Value
- The higher the LTV, the greater the probability of default, all lese equal

Average Terms on Commercial Mortgages–RealtyRates.com

Permanent, Fixed-rate Financing: 4th Qtr 2005

	Apartments	Industrial	Office	Retail
Spread over 10-year Treasury	2.29%	2.40%	3.01%	2.56%
Debt coverage ratio	1.51	1.47	1.55	1.43
Loan-to-value ratio	74%	71%	70%	73%
Amortization term	26	25	25	25
Maturity term	21	12	8	6
Lender reserve requirement	$300/yr.	$0.20/SF	$0.25/SF	$0.25/SF

The Leveraging Question (How much debt?)

- Reasons for use of debt by investors:
  - “Magnify” equity returns.
  - Diversify the use of one’s equity.
- Financial risk: Risk of default on mortgage loan.
  - Risk of negative cash flow.
  - Increases with greater leverage.
- Leverage increases variability of equity returns.

17-19

When Will Leverage Increase NPV and Going-in IRR?

- Increased leverage will increase the estimated NPV when….
  - opportunity cost of equity capital (discount rate) exceeds the effective borrowing cost
- Increased leverage will increase the going-in IRR when….
  - unlevered going-in IRR exceeds the effective borrowing cost

17-20

Leverage “Bottom Line”

- In a typical cash flow forecast, increased leverage will increase the estimated NPV and going-in IRR
  - Why must this be true?
- However, this increased NPV/IRR comes at a price…..increased riskiness of the equity investment
  - The more leverage used, the more the equity resembles an option

17-21

Refinancing and Default with Commercial Mortgage Loans

- Refinancing involves a NPV decision.
  - Even more focused on NPV than home mortgage refinancing.
    - Bigger finance issues.
    - Fewer non-financial considerations.
  - $NPV = PV_{OLD} – PV_{NEW}$ – Refi Cost – Prepay Penalty
    - PV_{New} is presumably smaller due to lower pmts.
    - The prepay penalty is often so large that it negates any advantage to refinancing.

17-22

Refinancing and Default with Commercial Mortgage Loans

- Default is the signature risk of commercial mortgages.
  - Borrower seldom can cover the loan payment for a crippled commercial property.
  - Borrower often is in a non-recourse position (good for the borrower, bad for the lender).

17-23

Financing Income-Producing Property: Borrower Perspective

	Straight Debt	Joint Venture	Land Sale-Leaseback	Complete Sale-Leaseback
Property Asset Price Risk	*High* ⟷		*Moderate*	*Low*
Influence on Management of Property	*Strong* ⟷			*None*
Depreciation Deductions	*Full*	*Share*	*Full*	*None*
Priority of Claims to Cash Flow	*Second to Lender’s*	*Partners with Lender*	*Claim Junior to Lender’s and Landowner’s*	*No Ownership Interest*
Maximum Leverage	*75-80% of Value* ⟷			*100% of Value*

17-24

Obtaining a Commercial Mortgage Loan

- The Loan Submission Package
  - Loan application with the exact terms proposed.
    - Financial statement
    - Credit report
    - Borrower experience resume
  - Property description
    - Legal description
      - Easements and encroachments
      - Environmental concerns
    - Detailed physical description
      - Photos and aerial photos
      - Survey
      - Site plan
      - Structure drawings and specifications

17-25

The Loan Submission Package - continued

- Cash flow pro forma
  - Existing cash flows and rent rolls (leases) if available
  - DCF analysis
- Appraisal – independent and state certified

17-26

Obtaining a Commercial Mortgage Loan

- Sources of loans (direct submission)
  - Larger commercial bank
  - Large thrift institution
  - Other direct sources including pension funds and life insurance companies

17-27

Sources of Commercial Loans- continued

- “Correspondent” lender
  - Mortgage banker
  - Mortgage broker
  - Presents loan “package” to:
    - Life insurance companies
    - Pension funds
    - Trusts
    - Large banks
    - Credit companies (GE Capital, Ford, other)
  - Receives fee of one-half to one percent of loan.

17-28

The Lender’s Decision: Loan Underwriting

- “Qualitative” considerations
  - Property type
  - Location
  - Tenant quality
  - Lease terms
  - Property management
  - Building quality (Age, class, deferred maintenance?)
  - Environmental issues
  - Borrower quality

17-29

Loan Underwriting: Crunching the Numbers

Exhibit 17-6

Assumptions for a Loan on Gatorwood Apartment Complex

Input	**Assumption**
Number of units	296 units with average monthly rent of $534.91
Purchase price	$13,375,000
Vacancy and collection losses	10% per year
Operating expenses	$400,000 in year 1
Capital Expenditures	$37,500 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	7.625%
Amortization schedule	30 years, *annual* payments
Loan term	10 years
Annual Payment	$857,037.69*

* The calculator keystrokes for finding the annual payment are: N=30; I/YR= 7.625, PV=10,000,000; PMT=?; and FV=0. Loan payment calculations are discussed in detail in Chapter 15.

17-30

Gatorwood Before-Tax Cash Flow from Operations

Exhibit 17-7

Gatorwood Apartment Complex
Before-Tax Cash Flows From Annual Operations

		1
	Potential Gross Income (PGI)	$1,900,000
-	Vacancy and Collection Loss (VC)	190,000
=	Effective Gross Income (EGI)	1,710,000
-	Operating Expenses (OE)	400,000
-	Capital Expenditures (CAPX)	37,500
=	Net Operating Income (NOI)	1,272,500
-	Debt Service (DS)	857,038
=	Before-Tax Cash Flow	$415,462

17-31

Loan Underwriting: Crunching the Numbers

- Focus on first-year NOI
- Debt coverage ratio:
  - DCR = NOI÷DS
  - For Gatorwood:

    DCR = $1,272,500÷$857,038 = 1.5
- Maximum loan:

  Max debt service = NOI÷ Required DCR
  - For Gatorwood:

    Max debt service = 1,272,500÷1.25

    = $1,018,000

17-32

Loan Underwriting: Determining Maximum Loan

- Maximum Loan - continued
  - Assume the lender's terms would be
    - Term for amortization: 30 years
    - Interest rate: 7.625 (Annual)

30	7.625		$1,018,000	0
n	i	PV	Pmt	FV

$11,878,124.05

17-33

Loan Underwriting: Determining Maximum Loan

- Maximum loan continued (monthly pmt)
  - Monthly debt service:

    MDS = DS÷12

    = $1,018,000÷12 = $84,333.33
  - Assume the lender's terms would be
    - Term for amortization: 30 years
    - Interest rate: 7.625

360	7.625		$84,333.33	0
n	i	PV	Pmt	FV

$11,914,958.34 / 13,175,000 = 90.4% LTV

17-34

Loan Underwriting: Break-Even Ratio

- Break-even Ratio: when income = expenses
  - BER * PGI = (OE + CAPX + DS)
  - Gives Required occupancy level (approx.)
  - Gatorwood example:

    BER = (400,000 + 37,500 + 857,038)

    ÷ 1,900,000

    = 0.681 or 68%

17-35

Loan Underwriting: Lender's Decision

- *Due-diligence*: review and verification of the facts and analysis in the loan submission package.
  - Verify facts (check for credibility and consistency).
  - Check for missing or undisclosed information.
  - Verify computations and analysis.
- Loan commitment
  - 45 to 90 days after receipt of "package"
  - Lender often offers buyer/borrower a "rate lock" option for a fee.
    - This protects borrowers from a rise in interest rates before the loan is actually closed
    - Lenders can hedge their lock agreements if they wish (called "pipeline" hedging)

17-36

Construction and Development Financing

- Land acquisition financing
  - Finance the purchase of raw land
- Land development loan
  - Finance the installation of improvements to the land (sewers, utilities, etc.)
- Construction loan
  - Finance the vertical construction
- Mini-perm loan
  - A permanent loan with a short term

17-37

Summary

- For commercial lending, the building produces the income that is used to pay off the lien
- The ability of the building to produce cash flows is what the lender evaluates
- Priced off the 10 year Treasury Securities (2-3% average spread)
- Loans typically are balloon loans with a 5-7 year term and 25-30 year amortization
- Prepayment penalties common
- Underwriting focuses on DCR and LTV
- CMBS is a growing source for placement of commercial mortgages

17-38