

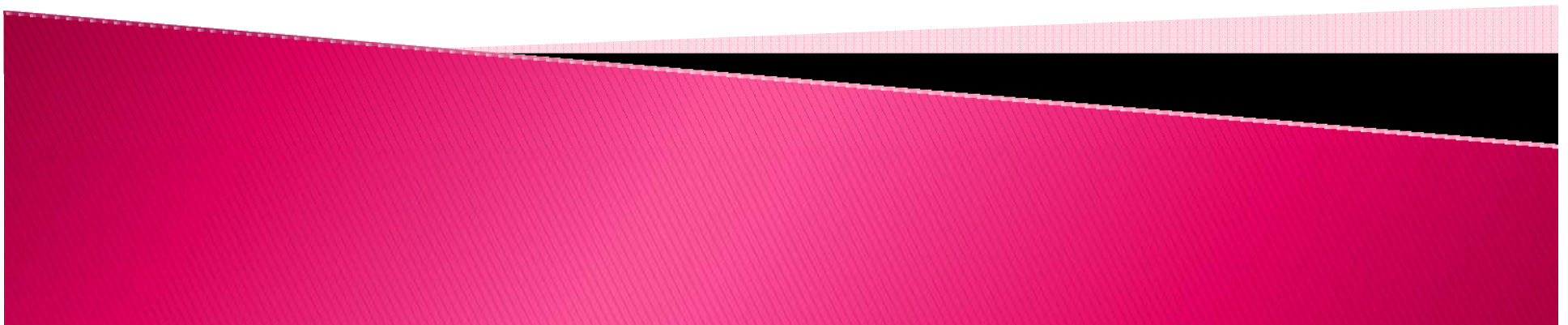


Lawrence Longua  
Clinical Associate Professor  
NYU Schack Institute of Real Estate  
October 29, 2009

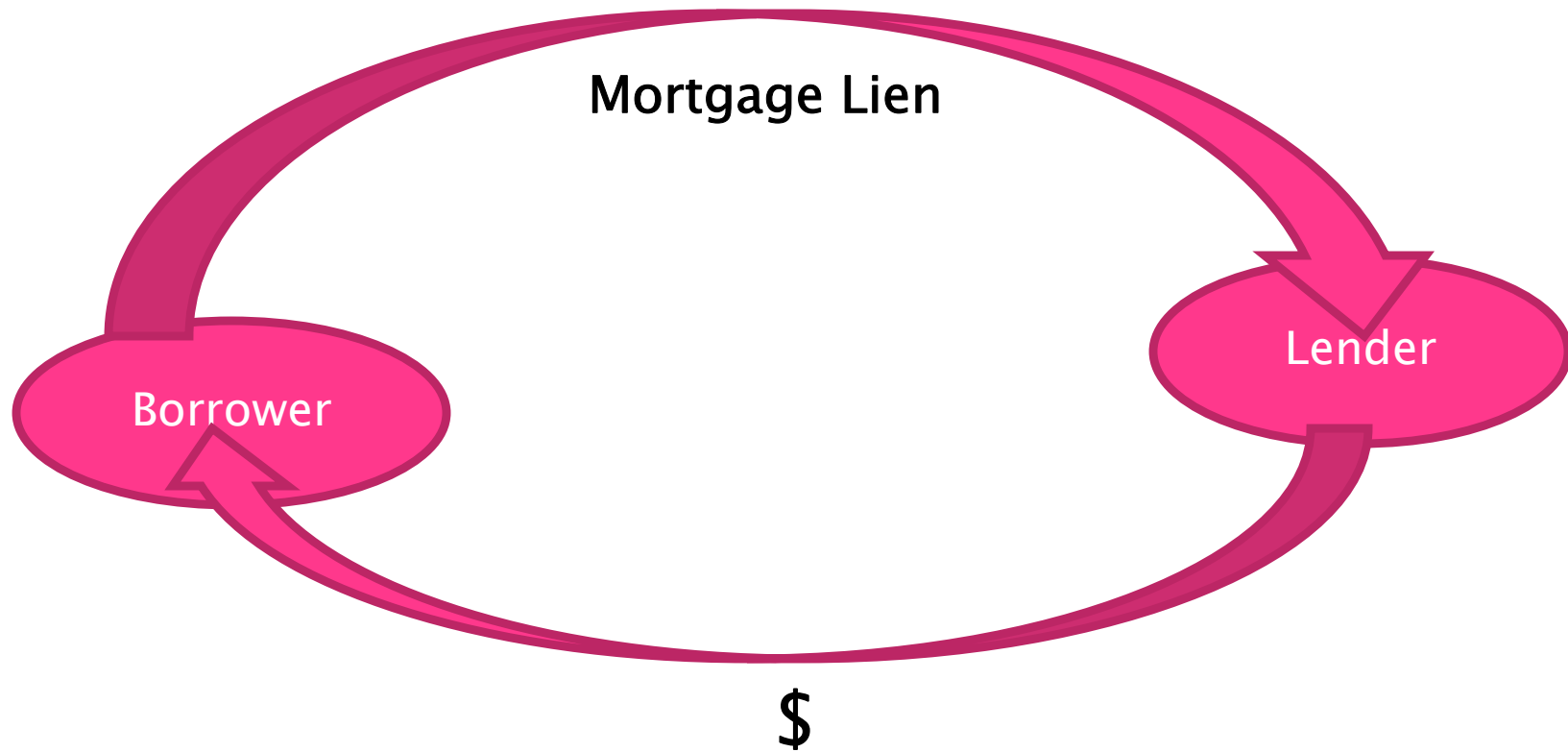


# Basics of Debt Financing

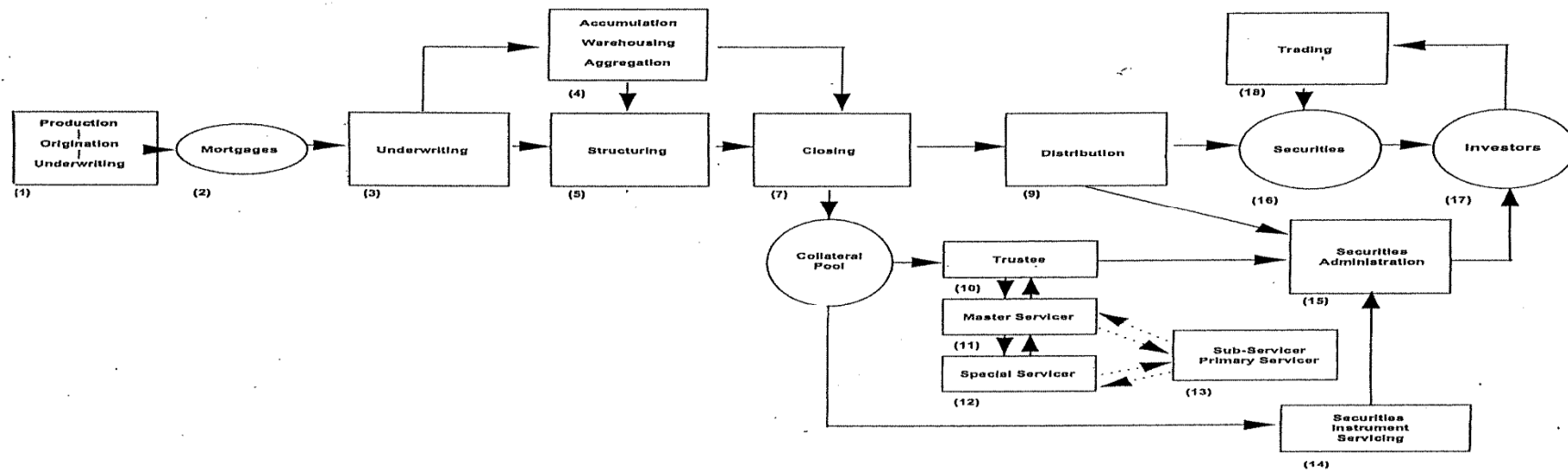
Making Sense of Today's Market



# Illustration of Portfolio Loan



# CMBS Structure (simplified)



# Providers of Debt to CRE

- ▶ Clearly defined and concentrated risk in a single property, based on local market knowledge.
- ▶ Instant information on property and market changes.
- ▶ Frequent and direct contact with borrower.
- ▶ Control of resolution of on-going issues.
- ▶ Investor (bondholder) has no direct borrower contact.
- ▶ Collateral is a diversified pool of loans – no market or asset type concentration.
- ▶ Pool performance information is delayed and second-hand.
- ▶ Reliance on third parties for problem resolution.
- ▶ Risk/return a function of place in the CMBS capital stack.

Portfolio/Balance Sheet Lenders

Public Capital Markets: CMBS

# The CMBS Process

1. Commercial mortgage loans originated by multiple lenders.
2. Loans aggregated into a REMIC (**R**eal **E**state **M**ortgage **I**nvestment **C**onduit) pool, that then becomes the owner of the loans and issuers of bonds. REMICs are pass-through entities granted tax exempt status by legislation.

3. In anticipation of selling bonds (tranches) collateralized by the pool of loans, a collaborative effort takes place to determine
- the assets that constitute the pool and
  - the tranche sizes (“sizing”). The parties to this “collaboration” are:
    - the issuer of the bonds
    - the rating agencies and
    - the purchasers of the “first loss” bonds

# Rating the Bonds

4. After review of each loan in the collateral pool, and assigning each loan an “**expected loss**”\*, the rating agencies assign ratings to each bond (tranch).
  - a. Most CMBS securitizations are rated by two agencies.
  - b. A very few rated by three agencies.
  - c. No securitization is rated by only one rating agency.

- o \* **Next two slides**



# Expected Loss

- ▶ Using the historic data of the performance of fixed-rate loans held by insurance companies in 1990–1994 recession, each pooled loan is determined to have
  - A “Default Probability” based on property type, LTV and DSCR, and measured as a percent, and
  - A “Loss Severity” measured as a percent of principal when the loan defaults
  - “Expected Loss” is the product of default probability and loss severity



# Expected Loss Example

- If a 70% LTV hotel loan has a default probability of 25%, and,
- If it were to default it would have a loss of 30% of principal (Loss Severity)
- Then the loan would have an “expected loss” of
  - $25\% \times 30\% = 7.5\%$
- ▶ *Each loan in the pool is assigned an expected loss -- even if the expected loss is zero*

5. The tranching bonds then publicly sold (investment grade) and privately placed (below investment grade).

Where's the profit in this??

# The Rationale of CMBS

- ▶ The arbitrage between
  - The blended rate of the collateral pool of mortgage loans and
  - The blended rate of the bonds issued against the collateral pool.

# Lumpy to granular

## ▶ Concept:

- A pool of loans in the aggregate amount of \$2 billion has a blended interest rate of 6.75%.
- Since a pool of “lumpy” mortgage assets has been converted into rated marketable securities (Value added by Wall Street!), the bonds generated by the pool have a blended interest rate of 5.75%, and . . .
- The arbitrage is monetized as a separate bond!

# Lumpy to granular = profit

- \$2 billion of loans at 6.75% = \$135mm of annual interest.
- \$2 billion of bonds at 5.75% = \$115mm of annual interest
- The difference of \$20mm of annual interest is sold as an 'Interest Only' (IO) bond
- Price of the IO is the P/V of the stream of cash flow depends on a number of factors
  - If buyer of IO uses a 6% discount rate, the “value” of the IO is \$147,000,000.

## Monetized arbitrage:

**\$2,147,200,000 of bonds generated by  
2,000,000,000 of mortgage loans.  
\$ 147,200,000 gross profit**



**INITIAL PRICINGS**

**ML-CFC Commercial Mortgage Trust, 2007-6**

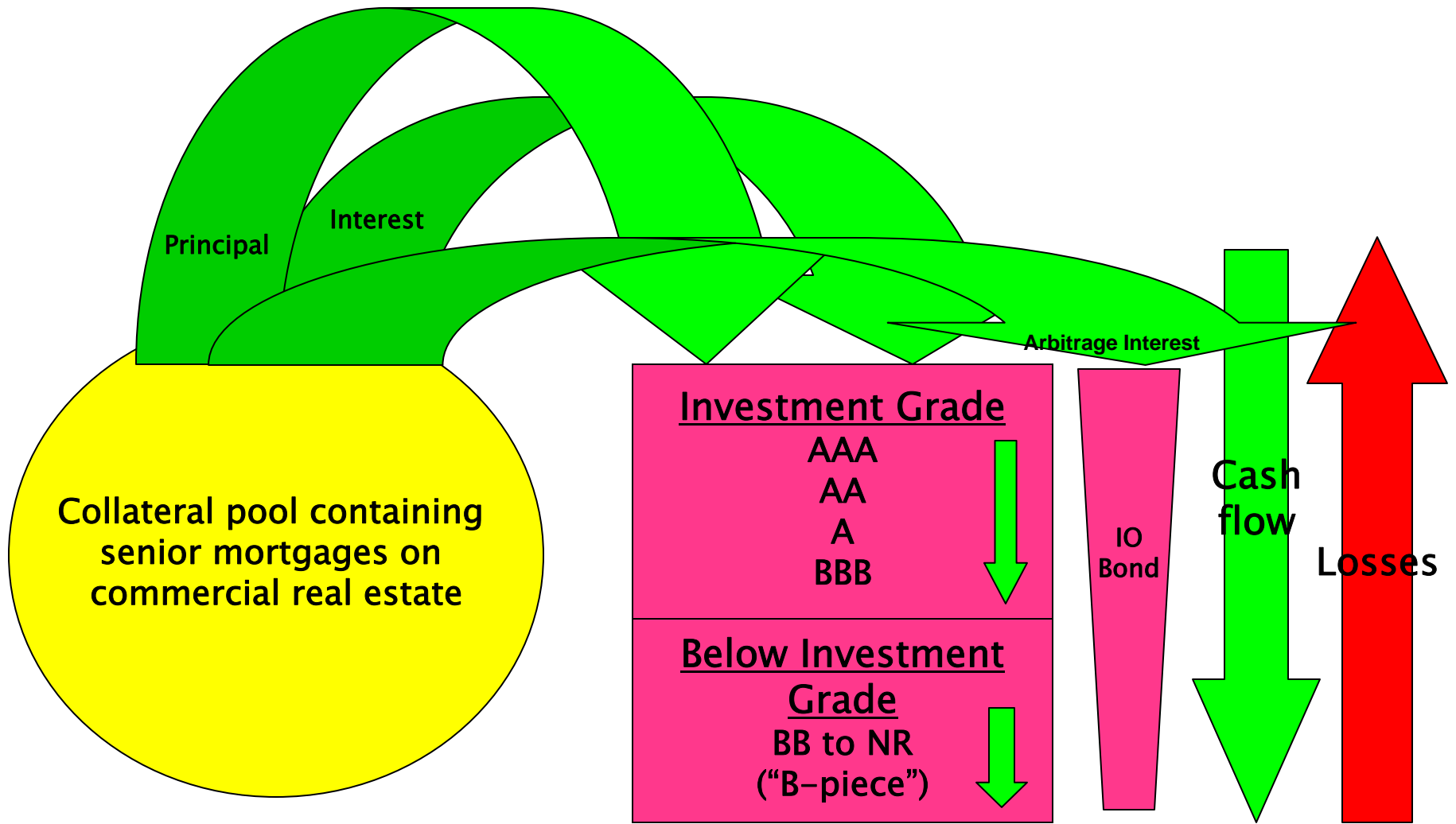
<b>Pricing date:</b>	March 30
<b>Closing date:</b>	April 12
<b>Amount:</b>	\$2,145.9 million
<b>Seller/borrowers:</b>	Merrill Lynch, Countrywide
<b>Lead managers:</b>	Merrill Lynch, Countrywide
<b>Co-managers:</b>	Credit Suisse, Morgan Stanley
<b>Master servicers:</b>	Wells Fargo, Wachovia
<b>Special servicers:</b>	LNR Partners, CWCapital Asset Management
<b>Trustee:</b>	LaSalle Bank
<b>Offering type:</b>	SEC-registered

**Property types:** Retail (48%), multi-family (16.8%), office (16.3%), industrial (6.9%), hotel (6.6%), self-storage (2.6%), mixed-use (2%), manufactured housing (0.7%) and other (0.1%).  
**Concentrations:** Florida (15.3%), California (13.6%) and New York (13.4%).  
**Loan contributors:** Merrill (64%) and Countrywide (36%).  
**Largest loans:** A \$223.4 million loan to Morgan Stanley Real Estate Fund 5 and Kitson-Evergreen on eight Florida shopping centers encompassing 1.3 million sf; a \$202.3 million portion of a \$3 billion loan to Tishman Speyer and BlackRock Realty Advisors on the 11,227-unit Peter Cooper Village and Stuyvesant Town apartment complexes in Manhattan; a \$150 million loan to Westfield America on the 1.6 million-sf Westfield Southpark mall in Strongsville, Ohio; the \$84.7 million senior portion of a \$91.7 million loan to Blackpoint Partners on six Puerto Rico shopping centers encompassing 855,000 sf; a \$72 million loan to Beacon Capital Partners on the 280,000-sf International Place office building in Arlington, Va.; a \$63.6 million loan to Stuart Investment on 10 industrial properties, encompassing 984,000 sf, in Virginia and Maryland; and a \$59.4 million loan to Morgan Stanley Real Estate 5 and Kitson-Evergreen on two Florida shopping centers encompassing 208,000 sf.  
**B-Piece buyer:** American Capital Strategies.  
**Notes:** Merrill and Countrywide securitized large loans and conduit mortgages that they had originated. **CMA code:** 20070027.

Class	Amount (\$Mil)	Rating (Moody's)	Rating (Fitch)	Subord. (%)	Coupon (%)	Dollar Price	Yield (%)	Maturity (Date)	Avg. Life (Years)	Spread (bp)	Note Type
A-1	27.682	Aaa	AAA	30.00	5.175	100.249	5.060	3/12/51	2.64	S+10	Fixed
A-1A	364.360	Aaa	AAA	30.00				3/12/51	9.03		Fixed
A-2	170.430	Aaa	AAA	30.00	5.331	100.548	5.221	3/12/51	4.85	S+24	Fixed
A-2FL	150.000	Aaa	AAA	30.00	L+14	100.00		3/12/51	4.85	L+14	Floating
A-3	60.689	Aaa	AAA	30.00	5.420	100.546	5.360	3/12/51	7.26	S+29	Fixed
A-4	728.987	Aaa	AAA	30.00	5.485	100.549	5.452	3/12/51	9.84	S+29	Fixed
A-M	214.593	Aaa	AAA	20.00	5.526	100.545	5.495	3/12/51	9.92	S+33	Fixed
A-J	107.403	Aaa	AAA	11.50	5.556	100.548	5.525	3/12/51	9.92	S+36	Fixed
A-JFL	75.000	Aaa	AAA	11.50	L+27	100.000		3/12/51	9.92	L+27	Floating
B	42.919	Aa2	AA	9.50	5.635	100.549	5.605	3/12/51	9.92	S+44	Fixed
C	16.094	Aa3	AA-	8.75	5.674	100.546	5.645	3/12/51	9.92	S+48	Fixed
D	34.872	A2	A	7.13	5.714	100.547	5.685	3/12/51	9.92	S+52	Fixed
E	18.776	A3	A-	6.25	5.866	100.548	5.785	3/12/51	9.92	S+62	Fixed
F	24.142	Baa1	BBB+	5.13	5.770	97.718	6.217	3/12/51	9.98	S+105	Fixed
G	24.142	Baa2	BBB	4.00	5.770	95.590	6.518	3/12/51	10.00	S+135	Fixed
H	26.824	Baa3	BBB-	2.75	5.770	92.512	6.968	3/12/51	10.00	S+180	Fixed
J	5.365	Ba1	BB+	2.50				3/12/51	10.00		Fixed
K	5.365	Ba2	BB	2.25				3/12/51	10.00		Fixed
L	5.364	Ba3	BB-	2.00				3/12/51	10.00		Fixed
M	5.365	B1	B+	1.75				3/12/51	10.00		Fixed
N	5.365	B2	B	1.50				3/12/51	10.00		Fixed
P	5.365	B3	B-	1.25				3/12/51	10.00		Fixed
Q	26.824	NR	NR	0.00				3/12/51	10.78		Fixed
X(IO)	2,145.926*	Aaa	AAA		0.297	2.412	6.008	3/12/51	8.84	T+140	Fixed

IO Bond





## Sequential-Pay Structure

6. **Pooled loans are then serviced by a Master Servicer who**

- **collects principal and interest and disburses to bondholders**
- **collects escrows for taxes and insurance**
- **collects escrows for capital expenses**
- **collects escrows for re-leasing roll-over space**
- **disburses escrows as needed**
- **collects and analyzes rent rolls, operating statements, budgets, etc.**
- **conducts periodic inspections of property**
- **approves leases where required by loan documents**
- **executes Subordination/Non-Disturbance Agreements (SNDA)**

# People who are special

- ▶ **Upon the default of a pooled loan, the administration of a loan is transferred from Master Servicer to Special Servicer, who acts to maximize the loan recovery on a net present value basis for the benefit of the bondholders.**

# “B–Piece Buyer”

1. The most junior tranches are referred to, collectively, as the “B–piece”, or the “First Loss” position.
2. The investor buying these junior bonds is the “B–piece buyer”.
3. The B–piece buyer is designated in the Pooling and Servicing Agreement as the “Controlling Class” of the securitization, and as such, has the right to be, or the right to select, the pool’s Special Servicer.

**INITIAL PRICINGS**

**ML-CFC Commercial Mortgage Trust, 2007-6**

<b>Pricing date:</b>	March 30
<b>Closing date:</b>	April 12
<b>Amount:</b>	\$2,145.9 million
<b>Seller/borrowers:</b>	Merrill Lynch, Countrywide
<b>Lead managers:</b>	Merrill Lynch, Countrywide
<b>Co-managers:</b>	Credit Suisse, Morgan Stanley
<b>Master servicers:</b>	Wells Fargo, Wachovia
<b>Special servicers:</b>	LNR Partners, CWCapital Asset Management
<b>Trustee:</b>	LaSalle Bank
<b>Offering type:</b>	SEC-registered

**Property types:** Retail (48%), multi-family (16.8%), office (16.3%), industrial (6.9%), hotel (6.6%), self-storage (2.6%), mixed-use (2%), manufactured housing (0.7%) and other (0.1%).  
**Concentrations:** Florida (15.3%), California (13.6%) and New York (13.4%).  
**Loan contributors:** Merrill (64%) and Countrywide (36%).  
**Largest loans:** A \$223.4 million loan to Morgan Stanley Real Estate Fund 5 and Kitson-Evergreen on eight Florida shopping centers encompassing 1.3 million sf; a \$202.3 million portion of a \$3 billion loan to Tishman Speyer and BlackRock Realty Advisors on the 11,227-unit Peter Cooper Village and Stuyvesant Town apartment complexes in Manhattan; a \$150 million loan to Westfield America on the 1.6 million-sf Westfield Southpark mall in Strongsville, Ohio; the \$84.7 million senior portion of a \$91.7 million loan to Blackpoint Partners on six Puerto Rico shopping centers encompassing 855,000 sf; a \$72 million loan to Beacon Capital Partners on the 280,000-sf International Place office building in Arlington, Va.; a \$63.6 million loan to Stuart Investment on 10 industrial properties, encompassing 984,000 sf, in Virginia and Maryland; and a \$59.4 million loan to Morgan Stanley Real Estate 5 and Kitson-Evergreen on two Florida shopping centers encompassing 208,000 sf.  
**B-Piece buyer:** American Capital Strategies.  
**Notes:** Merrill and Countrywide securitized large loans and conduit mortgages that they had originated. **CMA code:** 20070027.

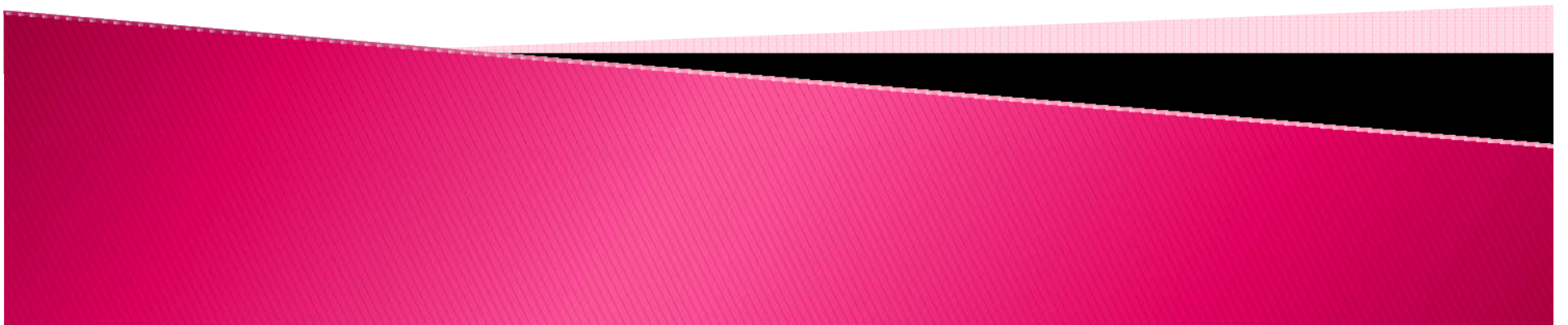
Class	Amount (\$Mil)	Rating (Moody's)	Rating (Fitch)	Subord. (%)	Coupon (%)	Dollar Price	Yield (%)	Maturity (Date)	Avg. Life (Years)	Spread (bp)	Note Type
A-1	27.682	Aaa	AAA	30.00	5.175	100.249	5.060	3/12/51	2.64	S+10	Fixed
A-1A	364.360	Aaa	AAA	30.00				3/12/51	9.03		Fixed
A-2	170.430	Aaa	AAA	30.00	5.331	100.548	5.221	3/12/51	4.85	S+24	Fixed
A-2FL	150.000	Aaa	AAA	30.00	L+14	100.00		3/12/51	4.85	L+14	Floating
A-3	60.689	Aaa	AAA	30.00	5.420	100.546	5.360	3/12/51	7.26	S+29	Fixed
A-4	728.987	Aaa	AAA	30.00	5.485	100.549	5.452	3/12/51	9.84	S+29	Fixed
A-M	214.593	Aaa	AAA	20.00	5.526	100.545	5.495	3/12/51	9.92	S+33	Fixed
A-J	107.403	Aaa	AAA	11.50	5.556	100.548	5.525	3/12/51	9.92	S+36	Fixed
A-JFL	75.000	Aaa	AAA	11.50	L+27	100.000		3/12/51	9.92	L+27	Floating
B	42.919	Aa2	AA	9.50	5.635	100.549	5.605	3/12/51	9.92	S+44	Fixed
C	16.094	Aa3	AA-	8.75	5.674	100.546	5.645	3/12/51	9.92	S+48	Fixed
D	34.872	A2	A	7.13	5.714	100.547	5.685	3/12/51	9.92	S+52	Fixed
E	18.776	A3	A-	6.25	5.866	100.548	5.785	3/12/51	9.92	S+62	Fixed
F	24.142	Baa1	BBB+	5.13	5.770	97.718	6.217	3/12/51	9.98	S+105	Fixed
G	24.142	Baa2	BBB	4.00	5.770	95.590	6.518	3/12/51	10.00	S+135	Fixed
H	26.824	Baa3	BBB-	2.75	5.770	92.512	6.968	3/12/51	10.00	S+180	Fixed
J	5.365	Ba1	BB+	2.50				3/12/51	10.00		Fixed
K	5.365	Ba2	BB	2.25				3/12/51	10.00		Fixed
L	5.364	Ba3	BB-	2.00				3/12/51	10.00		Fixed
M	5.365	B1	B+	1.75				3/12/51	10.00		Fixed
N	5.365	B2	B	1.50				3/12/51	10.00		Fixed
P	5.365	B3	B-	1.25				3/12/51	10.00		Fixed
Q	26.824	NR	NR	0.00				3/12/51	10.78		Fixed
X(IO)	2,145.926*	Aaa	AAA		0.297	2.412	6.008	3/12/51	8.84	T+140	Fixed

\*Notional amount

B-piece

# Mezzanine Financing

A Generic Term

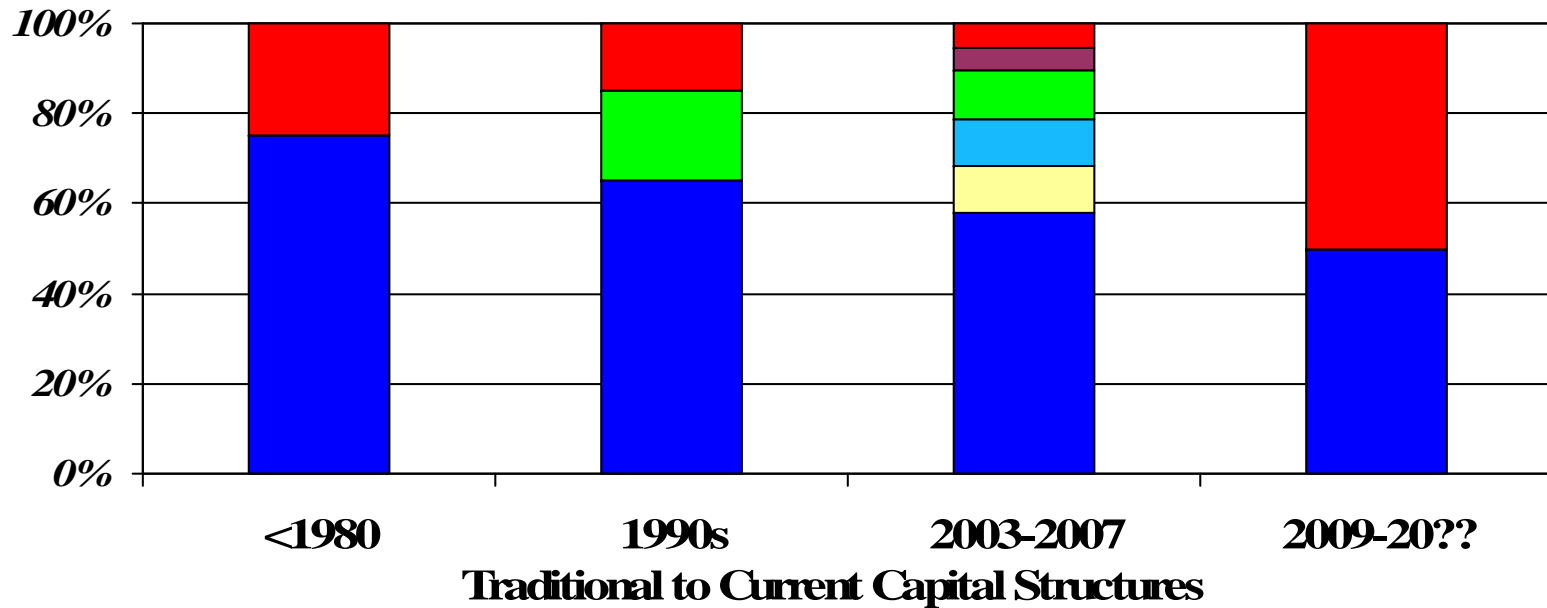




# Mezzanine Financing

- ▶ B–Note: the junior portion of an A/B note structured senior mortgage loan. A–note into the pool; B–Note goes “elsewhere”.
- ▶ Mezzanine loan: loan secured by borrower’s equity – not a lien on the property. Mezz lender’s right evidenced in Intercreditor Agreement with senior mortgage lender. Mezz loan can be in at inception of senior loan, or anticipatory.
- ▶ Preferred Equity: not a loan; equity return

# *Evolving Capital Stacks of Property Finance*



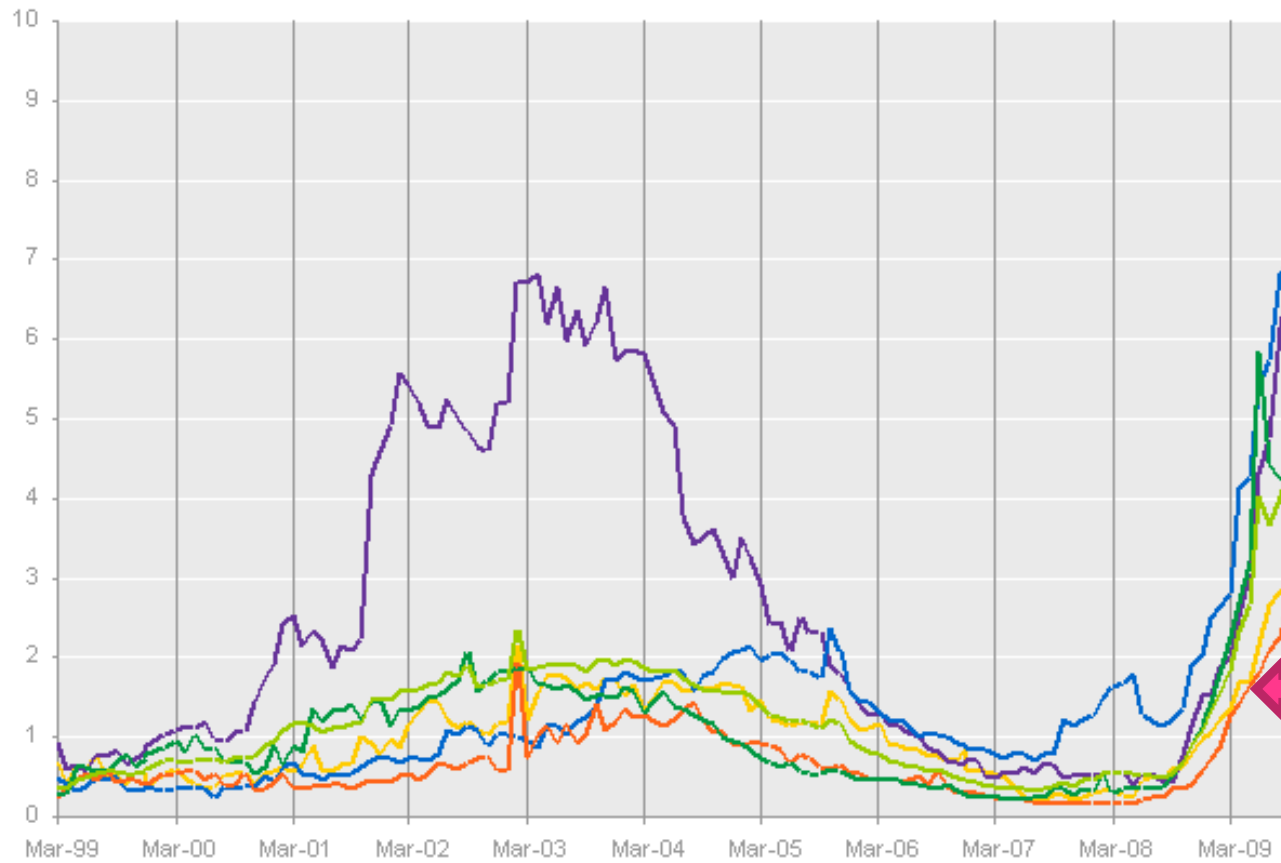
# CMBS Watchlist

## Bloomberg, July 2009

- ▶ One-fifth of all CMBS loans by balance (12,853 loans with a balance of \$158.6 billion), are on master servicer watchlists.
- ▶ The chief reason that they failed certain objective financial tests, primarily DSC levels.
- ▶ Loans originated in 2006 and 2007 account for an overwhelming share – nearly 65 percent – of the volume on watchlists.

<u>CMBS Loans on Watchlist</u>		
Year	Balance (\$mln)	% of Total on Watch
2003	6,731.46	4.24
2004	10,819.24	6.82
2005	20,552.42	12.96
2006	47,736.99	<b>30.09</b>
2007	55,290.66	<b>34.85</b>
2008	122.93	0.08

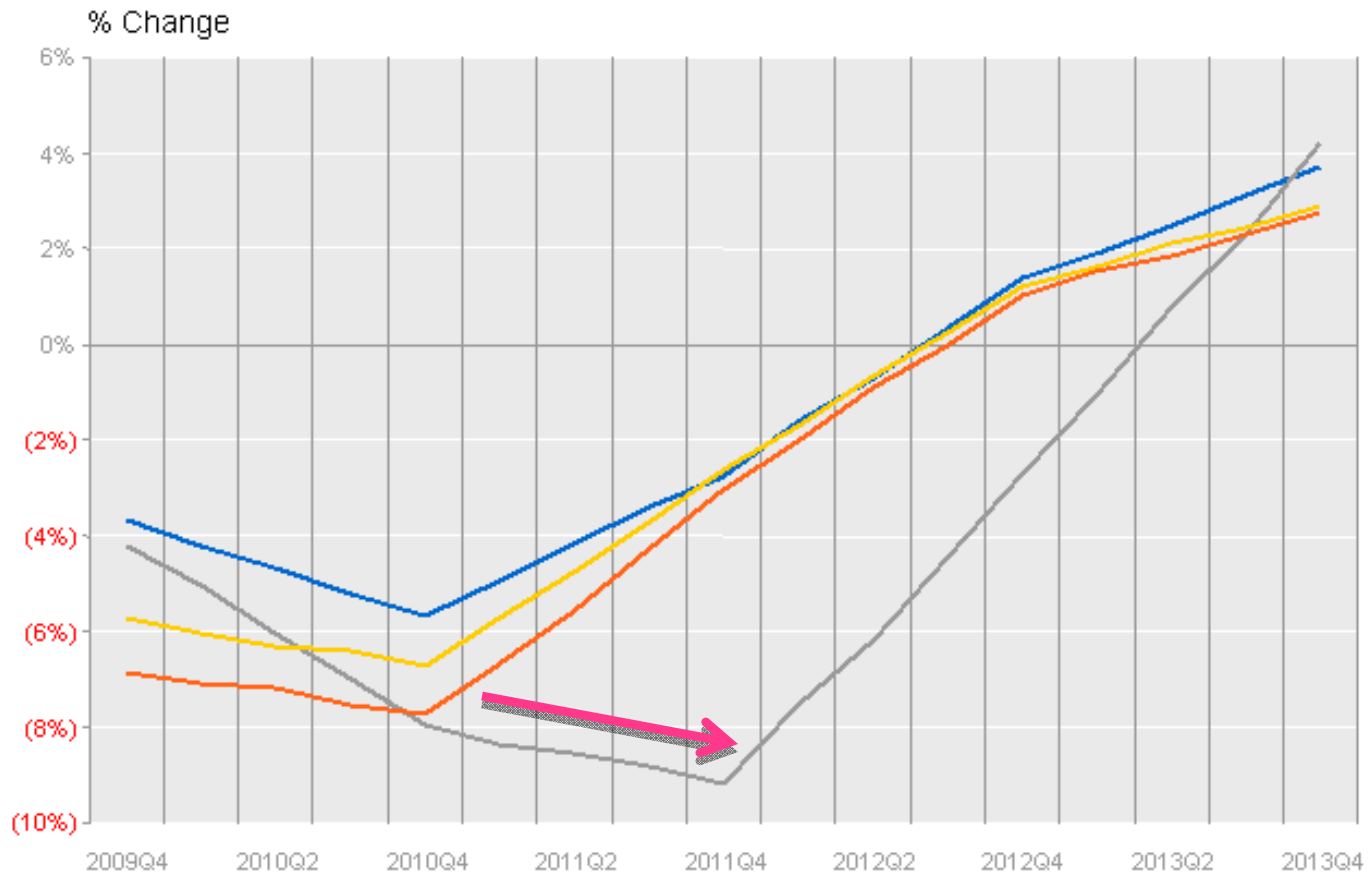
## EXHIBIT 1: CMBS DELINQUENCY



Source: Trepp

Industrial Lodging Multi-Family Office Retail All

## EXHIBIT 2: ANNUAL NOI GROWTH RATE



Source: PPR

— Apartment — Office — Retail — Warehouse

**“On a dark and stormy night, the largest single tenant, Bogus Electronics, filed for bankruptcy protection under Chapter 11 of the Bankruptcy Code . . . .”**

**“The Securitized Loan in Troubled Times: A Cautionary Tale”**

**by Richard D. Jones and William C. Stefko**

**© 2002 Dechert LLP**



