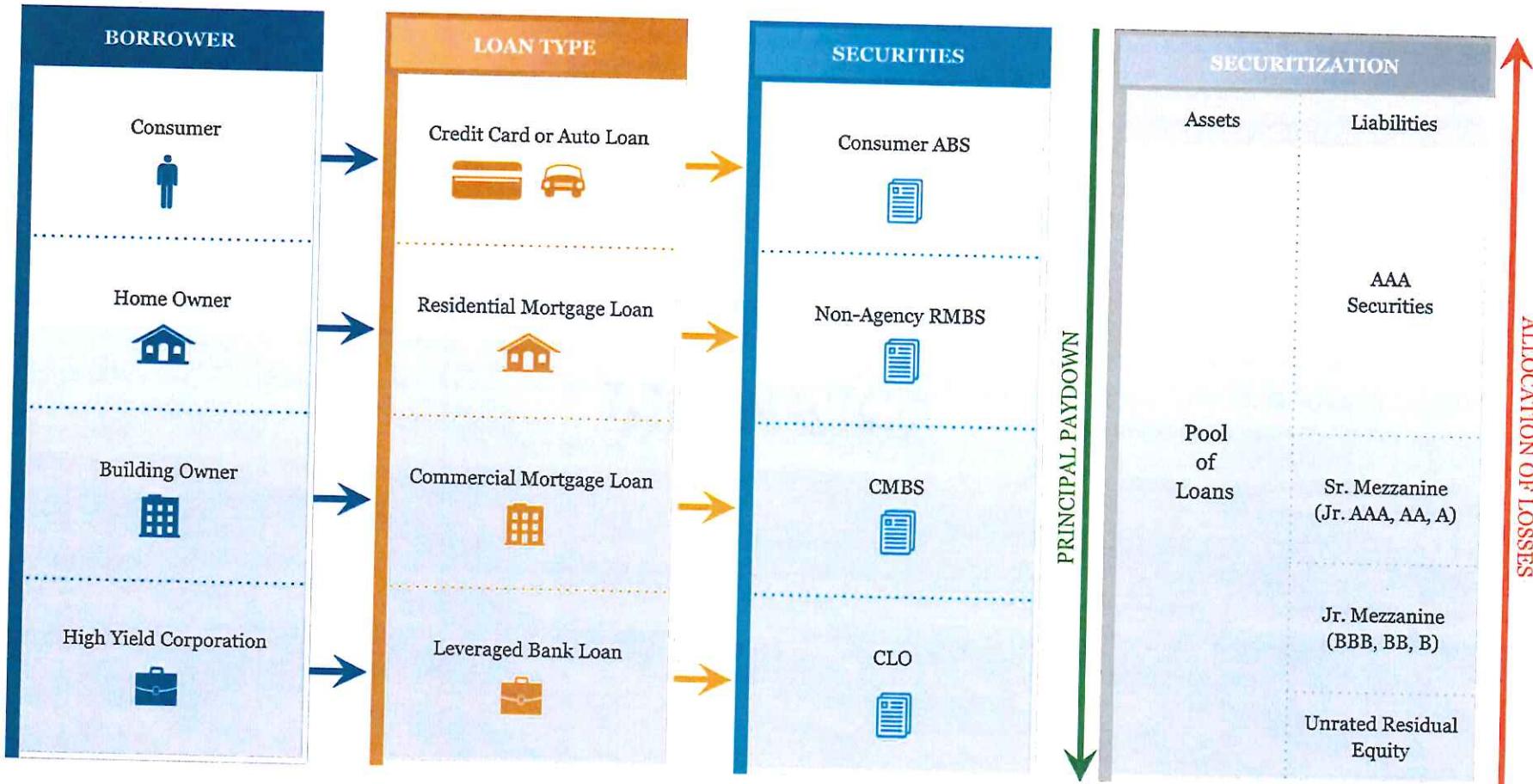




# PRIMERS

## Securitization Primer

The securitization process uses internal credit enhancement to convert pools of loans into senior and subordinated securities.

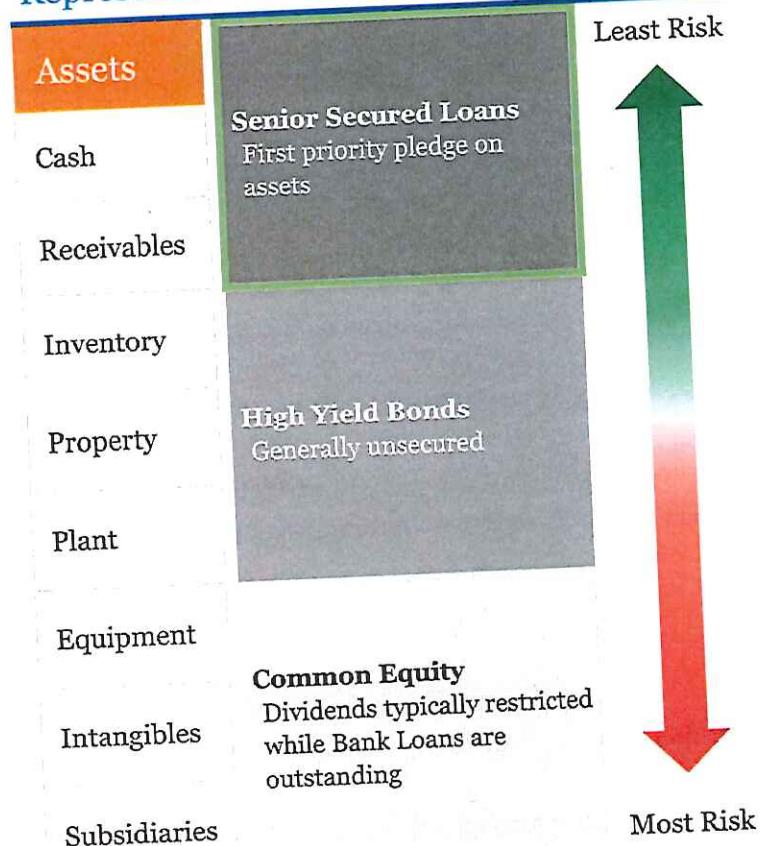


## CLO Primer: What are Leveraged Loans?

### Bank Loan vs. High Yield Bond Characteristics

	Typical Senior Secured Bank Loan	Typical High Yield Bond
Asset type	Senior-most asset	Senior or subordinate asset
Secured by	Secured by all operating and other critical assets	Generally unsecured
Covenants	Maintenance test covenants	Light covenants – Incurrence tests
Recovery Rates	High recovery rates	Lower recovery rates
Type of Rate	Floating	Fixed
AVG Duration*	2.8**	4.2
AVG Maturity*	Term Loan A-Revolver Term Loan B- 5yr Term Loan C- 7yr	6.6
AVG Price*	98.3	102.5
AVG Spread*	440	440
Price Volatility	Lower price volatility	Higher price volatility
Liquidity	Less liquid	More liquid

### Representative Borrower Capital Structure



\*Source: Barclays US HY index and US HY Loans  
 \*\*Source: Citi Research. Duration in a sell off is ~5 and duration in a rally ~0.6 due to callability.

## CLO Primer: Key Terms for Understanding CLOs

1st and 2nd lien

The right to keep possession of property belonging to another person until a debt owed by that person is discharged. If the borrower defaults, the 2<sup>nd</sup> lien does not collect a recovery until after the 1<sup>st</sup> lien has been paid.

Call

When a CLO is called, the manager sells the underlying loans and uses the proceeds to retire the debt. The equity collects any residual proceeds.

Control

The ability to direct a CLO manager to call a deal. Typically a simple majority of the equity is required to obtain control.

Covenant lite

A type of loan with less restrictions on the borrowers' behavior.

DM

The return earned in addition to the index underlying the floating rate security.

Excess spread

The net amount of interest payments from the underlying assets after bondholders and expenses are paid and after all losses are covered.

Key man

An employee of a CLO management company whose employment is required for the management of a CLO. If a key man leaves, the manager of the CLO can be replaced.

Libor floor

A feature sometimes used in pricing debt instruments whose interest payments are linked to Libor, especially loans. If Libor falls below the floor, the interest rate is the floor level plus the applicable margin.

Manager

The company responsible for selecting and trading the assets backing a CLO.

Overcollateralization

The process of posting more collateral than is needed to obtain or secure financing.

Ramp

The period of time during which the assets of the CLO are initially purchased.

Reinvestment spread

The spread of the assets that the manager purchases during the reinvestment period typically because certain existing assets have paid off and need to be replaced.

Senior and sub fees

The CLO manager on a running basis typically collects both a senior fee prior to paying interest on debt and a sub fee after the debt. Fees on a CLO tend to range from 20 to 50 basis points running.

Underwriting fee

The upfront fee paid to the investment bank that puts together a CLO. Underwriting fees tend to range from 1/2% to 1% of the size of the deal.

Warehouse

A facility established during the initial phase of a CLO to purchase assets prior to the closing of the deal.

WARF

Weighted Average Rating Factor. Each of Moody's ratings are assigned a number that can be averaged together to help judge the average amount of risk in a pool of assets.

WAS

Weighted average spread.

## CLO Primer: Rating Agency Mandated Loan Portfolio Restrictions

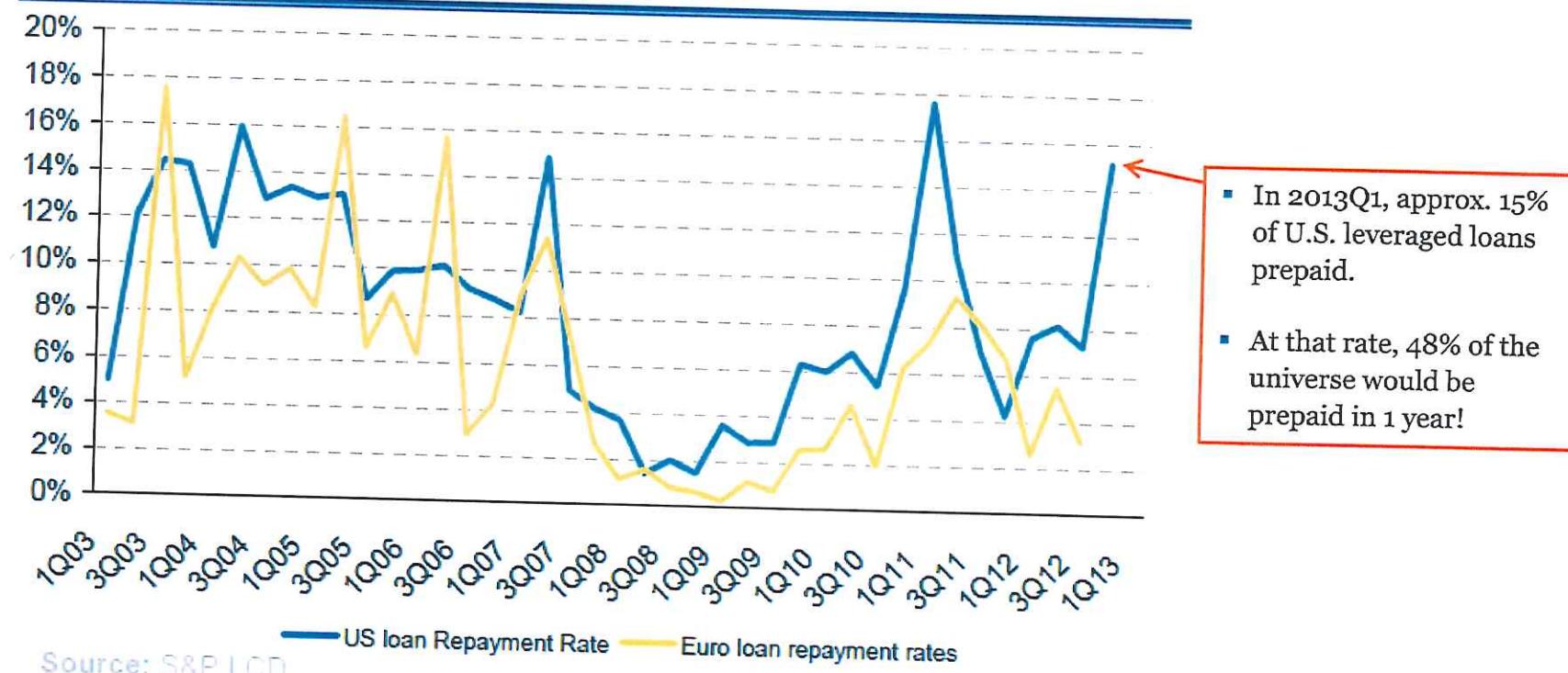
*Asset restrictions are designed to limit the amount of risk a manager may take and provide ample protection to the debt.*

Weighted Avg Spread Test	the portfolio must have sufficient spread to cover interest payments to the debt
Max Rating Factor Test	the average rating of the portfolio cannot be too high or there could be too much risk of defaults
Min Weighted Avg Recovery Rate Test	the average recovery rating cannot be too low or losses could be too high in the case of defaults
Weighted Avg Life Test	the average life of the portfolio is capped so that the debt is only exposed to losses for a capped period of time
Diversity Test	the portfolio must be diverse enough in terms of individual names and sectors because the debt is at risk to a high number of correlated defaults
% Rated CCC+ or Below	CCC and below assets are at higher risk of default and are therefore capped usually in the 5-10% range
% Second Lien or High Yield Bond	second lien loans and high yield bonds tend to have lower recovery rates are therefore typically capped at 5-10% of the portfolio
% CDO	CDOs in the underlying portfolio dramatically increase correlation and are therefore usually banned in CLO 2.0 deals
% Single Issuer	single issuer concentration is typically limited to 1-3% position sizes to limit correlation
% Same Industry Category	same industry concentration is typically limited to 15-20% per industry to limit correlation
% Fixed Rate Securities	only 5-10% of the portfolio can be fixed rate because the debt is floating rate and in a rising interest rate environment a mismatch could lead to losses

## CLO Primer: Historical Loan Prepayment Rates

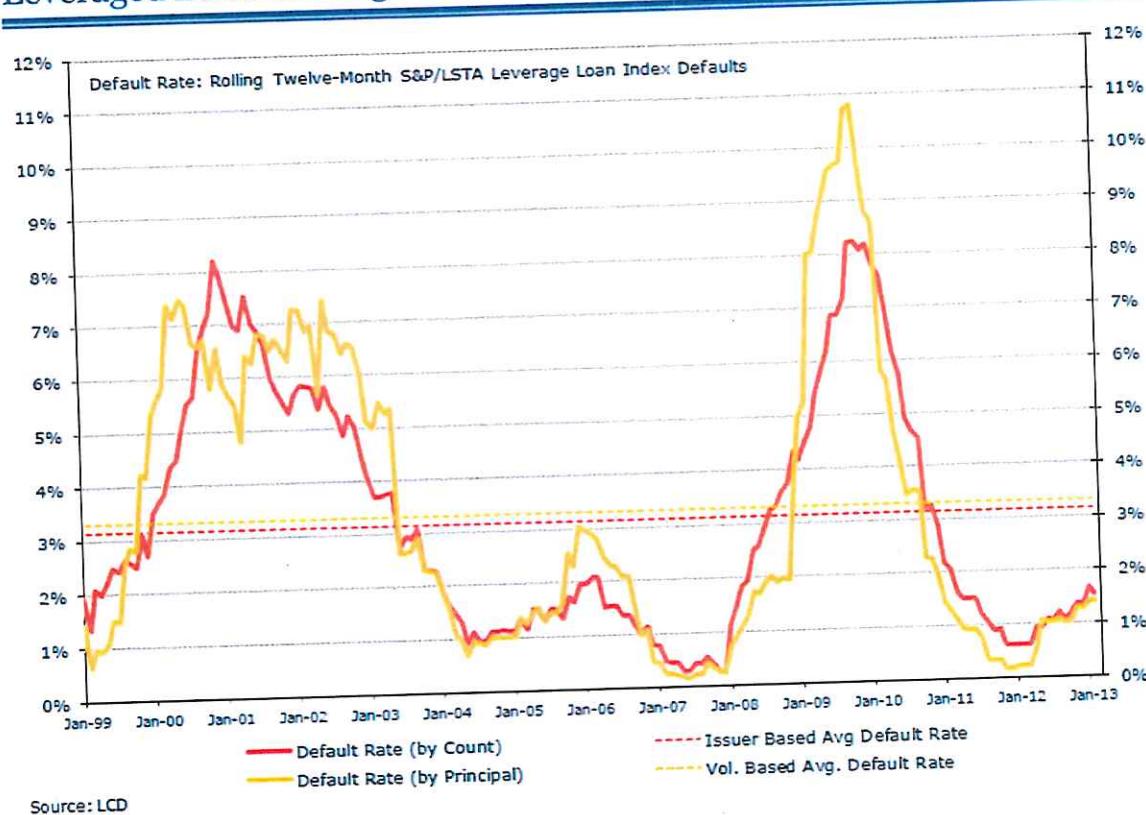
- Leveraged loans frequently prepay before their final maturity – especially when borrowers can obtain financing at lower costs.
- When spreads tighten enough to put borrowers “in the money,” prepayment rates spike.
- When spreads widen to where they are once again “out of the money,” prepayment rates slow back down – yet still tend range between 10% to 25% per annum.

Quarterly Prepayments Rates – US and Euro Loans



## CLO Primer: Historical Loan Default Rates

### Leveraged Loan and High Yield Bond Default Rates



- Average default rate from 1999 to 2013 was approximately 3%
- Default rates when economy was not in recession approximately 1%
- Default rates spiked to north of 6% in both of the recent recessions and stayed at that level for 2 to 3 years

## CLO Primer: Historical Loan Recovery Rates

*There is a long historical data set available to help inform the question of senior secured loan recoveries.*

### U.S. High Yield Bond vs. Institutional Loan Recovery Rates

Recovery: Ultimate Recovery: the PV of the cash and/or securities that the creditors actually receive when the issuer exits bankruptcy, typically 1-2 years following the initial default date

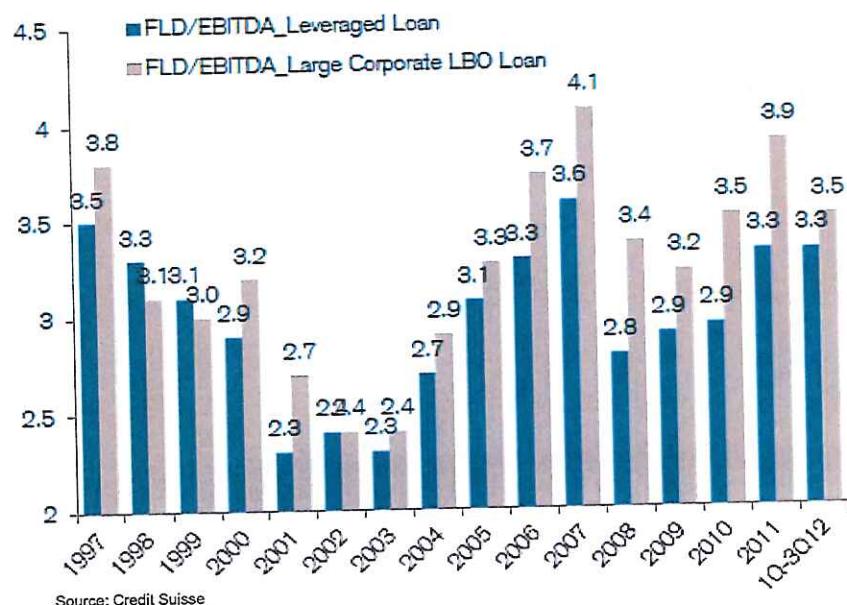
Lien Position	Emergence Year				Default Year			
	2012	2011	2010	1987-2012	2012	2011	2010	1987-2012
<b>Loans</b>	87.3%	73.2%	79.7%	80.6%	76.8%	89.5%	75.8%	80.6%
<b>Bonds</b>								
Sr. Secured	79.8%	53.4%	65.1%	63.7%	73.1%	65.3%	62.6%	63.7%
Sr. Unsecured*	42.4%	13.0%	44.2%	48.6%	69.6%	27.7%	67.0%	48.6%
Source: Moody's								

- Ultimate recoveries on senior secured loans averaged approximately 80% from 1987 to 2012
  - First lien
  - Usually backed by some of “real asset” collateral package
  - Value of the business franchise
- Ultimate recoveries on senior unsecured bonds has averaged approximately 49% from 1987-2012
  - Unsecured
  - Often sufficient asset value in the company to deliver a meaningful recovery
  - Often have a place at the table in bankruptcy proceedings which creates some recovery value

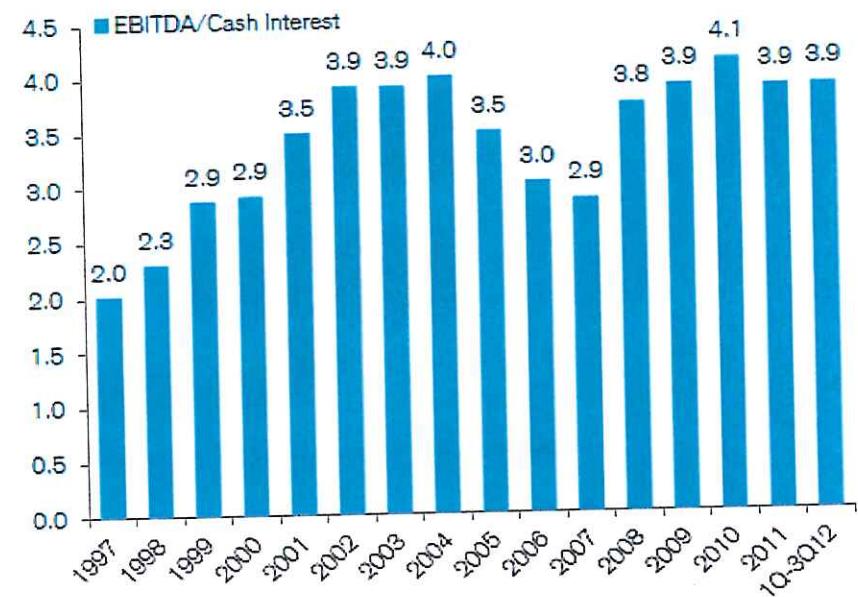
## CLO Primer: Leveraged Loan Fundamentals

Corporate credit underwriting is inline with historical standards. Using EBITDA from 1Q2012, the average borrower had 3.5x more first lien debt than annual cash flow and 3.9x as much annual cash flow as cash interest expense.

Average debt multiples of highly leveraged loans as of 9/28/2012



Average cash flow multiples of highly leveraged loans as of 9/28/2012

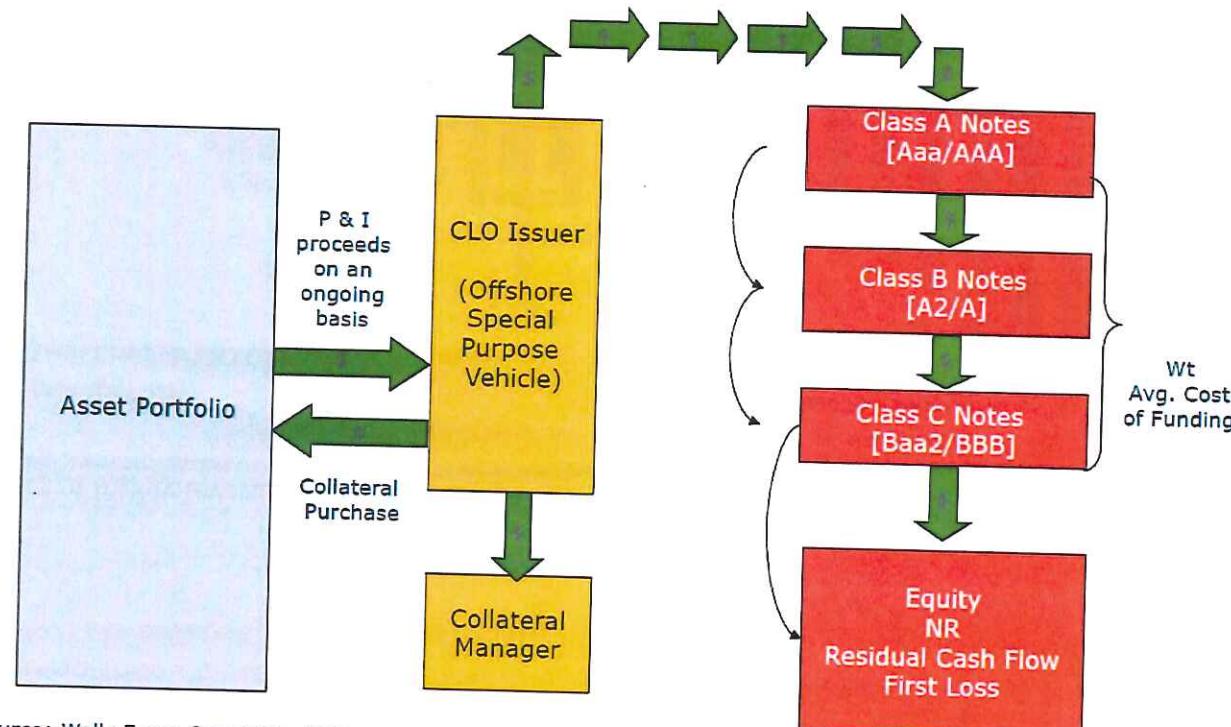


\* Criteria: L+225 and Higher; Prior to 2011, media and telecom deals were excluded.  
Source: S&P LCD/Capital IQ

## CLO Primer: Deal Diagram

The elements comprising a CLO deal are typical to any securitization: the formation of a special purpose vehicle with assets, liabilities, and equity – combined with a collateral manager who maintains an investment management contract with the SPV.

### Basic Structure



Source: Wells Fargo Securities, LLC

## CLO Primer: How Do Overcollateralization (OC) Tests Work?

- If a test is failing, cash flows are diverted to senior notes until the test is in compliance.
- Test cures by paying down senior notes (reducing the par amount).
- This deleverages the deal and cuts off cash flows to all classes below the failed test.

Test	Outstanding Bal.	Numerator	Denom.	Current	Trigger	P/F
Class A OC Test	358,000	426,230	358,000	119.1	113.5	PASS
Class B OC Test	43,000	426,230	401,000	106.3	104.5	PASS
Class C OC Test	15,000	426,230	416,000	102.5	102.8	FAIL
Equity Tranche	34,000	N/A	N/A			

### OC Ratio Numerator

Agg. Prin. Value of Underlying Assets	451,000	→ Non Adjusted Asset Balance
Cash & Eligible Investments	5,400	
<b>456,400</b>		

### Less

Prin. Bal. Defaulted / Def. Int. PIK	-38,000
Prin. Bal. of Caa/CCC Excess Amt	-5,000
Prin. Bal. of Discount Obligations	-80
<b>-43,080</b>	

- Defaulted Assets Carried at Lower of Recovery Value or Market Price, not Principal Balance
- Excess CCC Assets are Haircut to Market Value
- Assets Purchased Below a Specified Price are Carried at Purchase Price

### Plus

Defaulted Asset Recovery Value	10,320
Caa/CCC Excess Amt	2,529
Purch. Value Of Discount Obligations	61
<b>12,910</b>	

### TOTAL

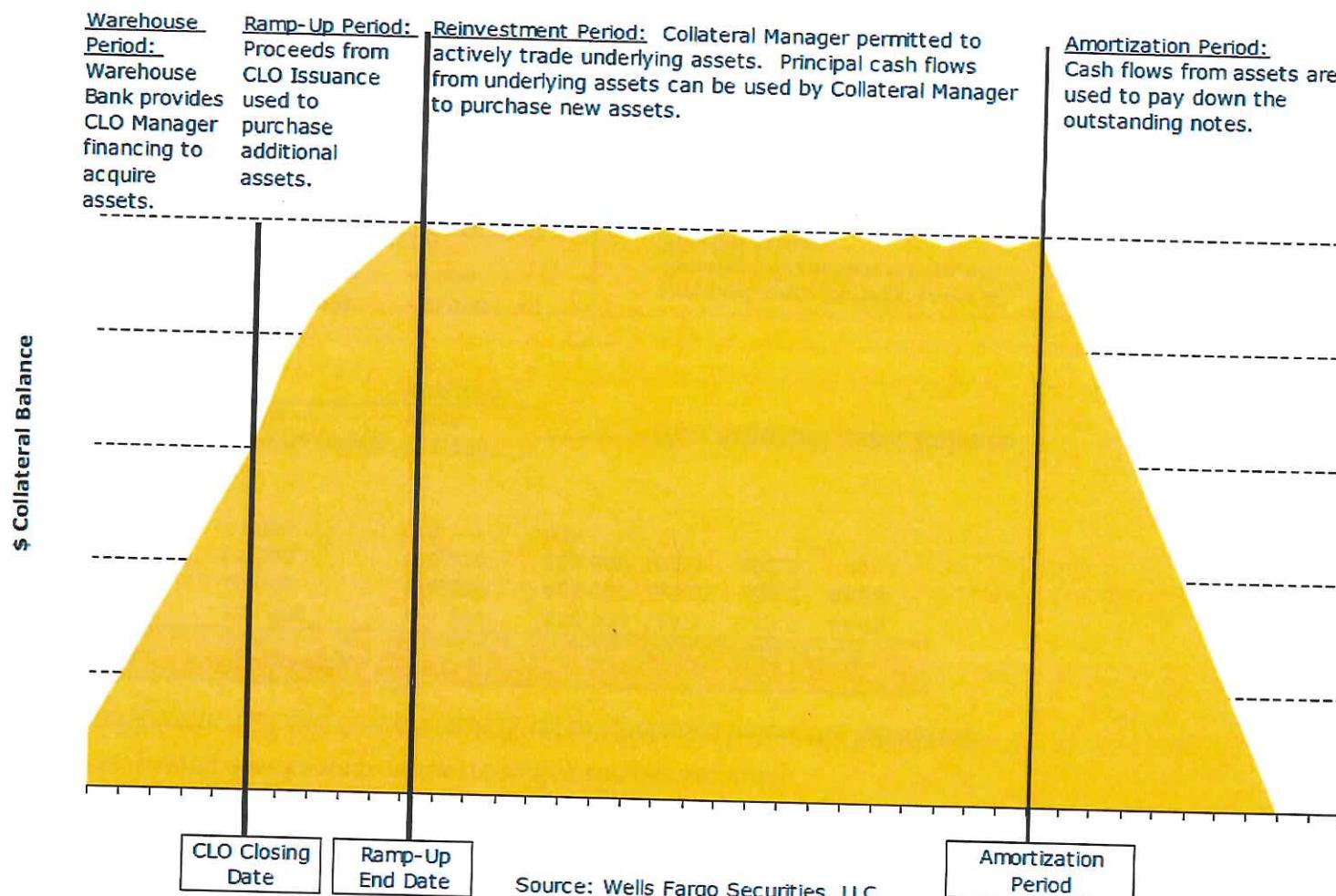
**426,230**

→ Adjusted Asset Balance

Figures are \$ 000

Source: Wells Fargo Securities, LLC

## CLO Primer: The Different Phases in the Life of a CLO



## CLO Primer: Anatomy of a CLO Equity Cash flow

- Equity receives excess interest generated by the collateral after paying debt and fees each quarter.
- Annualized cash flow can be in the 15%-25% range.
- This cash flow can be interrupted if:
  - the collateral doesn't generate sufficient cash flow, or
  - the deal becomes distressed and failed triggers force the deal to pay down the debt instead of the equity.
- Upon calling the deal, the collateral is sold and any excess principal value after repaying the debt goes to the equity
- If the deal is not called, the debt is paid down as the underlying loans mature.
- Whatever is left after repaying the debt, flows to the equity.

### KVK CLO 2013-1 Ltd\*

#### Cash Flow Sheet

CADR	2.0%	2.0%
Cumulative Defaults	8.88%	13.40%
Recovery Rate (Loans)	70.0%	70.0%
Prepayment Rate (Loans)	20.0%	20.0%
Call Date	5.00 Years	12.00 Years
Liquidation at Call	100.0%	100.0%

\* Does not represent an investment of a Fund. This example presents hypothetical investment performance results under different scenarios. Investors should be aware that hypothetical investment performance results have inherent limitations, and, in fact, there are frequently substantial differences between hypothetical performance results and the actual performance results. Further, these results do not reflect the net effect of expenses and fees that will apply to an investment in the Funds.

Period	Payment Date	Sub Notes	Sub Notes
		Total Cash Flow	Total Cash Flow
1	03/15/13	-\$59,008,500	-\$59,008,500
2	10/15/13	\$3,718,816	\$3,718,816
3	01/15/14	\$3,523,337	\$3,523,337
4	04/15/14	\$3,397,622	\$3,397,622
5	07/15/14	\$3,351,276	\$3,351,276
6	10/15/14	\$3,291,787	\$3,291,787
7	01/15/15	\$3,177,003	\$3,177,003
8	04/15/15	\$2,998,086	\$2,998,086
9	07/15/15	\$2,909,331	\$2,909,331
10	10/15/15	\$2,823,706	\$2,823,706
11	01/15/16	\$2,674,135	\$2,674,135
12	04/15/16	\$2,498,383	\$2,498,383
13	07/15/16	\$2,374,409	\$2,374,409
14	10/15/16	\$2,320,215	\$2,320,215
15	01/15/17	\$2,285,248	\$2,285,248
16	04/15/17	\$2,224,738	\$2,224,738
17	07/15/17	\$2,325,717	\$2,325,717
18	10/15/17	\$2,319,032	\$2,319,032
19	01/15/18	\$2,314,965	\$2,314,965
20	04/15/18	\$36,484,467	\$2,243,700
21	07/15/18	\$0	\$2,236,330
22	10/15/18	\$0	\$2,242,949
23	01/15/19	\$0	\$2,171,344
24	04/15/19	\$0	\$2,057,086
25	07/15/19	\$0	\$2,000,074
26	10/15/19	\$0	\$1,938,033
27	01/15/20	\$0	\$1,744,436
28	04/15/20	\$0	\$1,546,865
29	07/15/20	\$0	\$1,376,494
30	10/15/20	\$0	\$1,280,951
31	01/15/21	\$0	\$1,060,184
32	04/15/21	\$0	\$929,535
33	07/15/21	\$0	\$518,493
34	10/15/21	\$0	\$345,272
35	01/15/22	\$0	\$296,067
36	04/15/22	\$0	\$267,978
37	07/15/22	\$0	\$316,184
38	10/15/22	\$0	\$11,773,208
39	01/15/23	\$0	\$8,224,697
40	04/15/23	\$0	\$3,407,951
41	07/15/23	\$0	\$0
42	10/15/23	\$0	\$0
43	01/15/24	\$0	\$0
44	04/15/24	\$0	\$0
45	07/15/24	\$0	\$0
46	10/15/24	\$0	\$0
47	01/15/25	\$0	\$0
	04/15/25	\$0	\$0

# RMBS Primer: What Happened to Subprime RMBS in the Crisis?

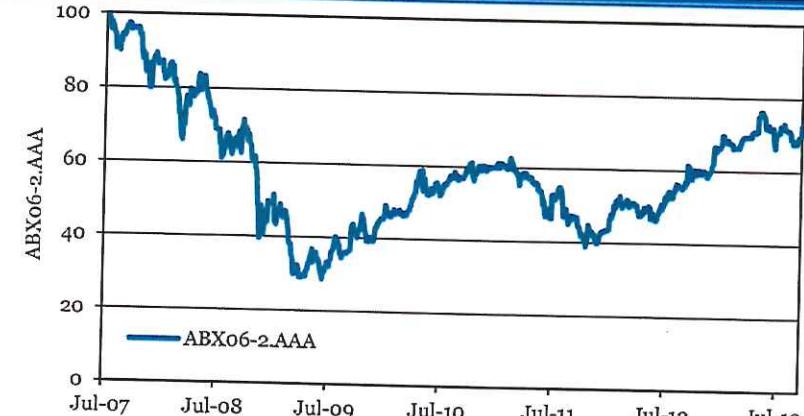


*The collapse of the mortgage, housing, and commercial property markets drove the global financial system into crisis.*

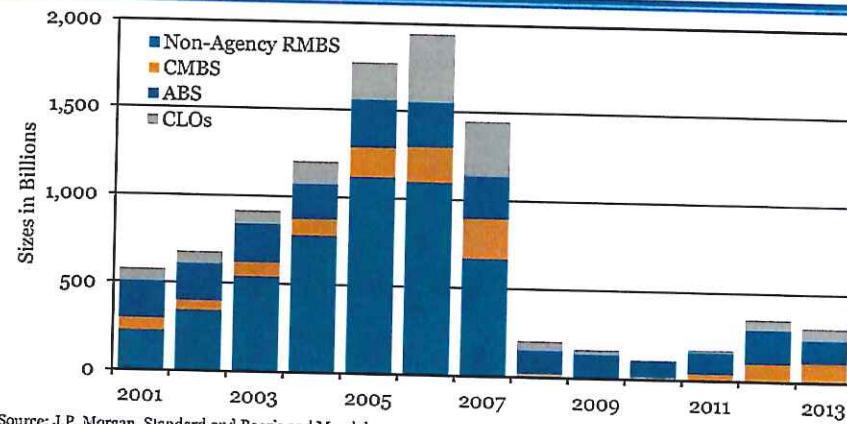
The Property Bubbles Burst



Subprime RMBS Prices Collapse



The New Issue Market Collapses



Source: J.P. Morgan, Standard and Poor's and Moody's

CMBS Credit Prices Collapse

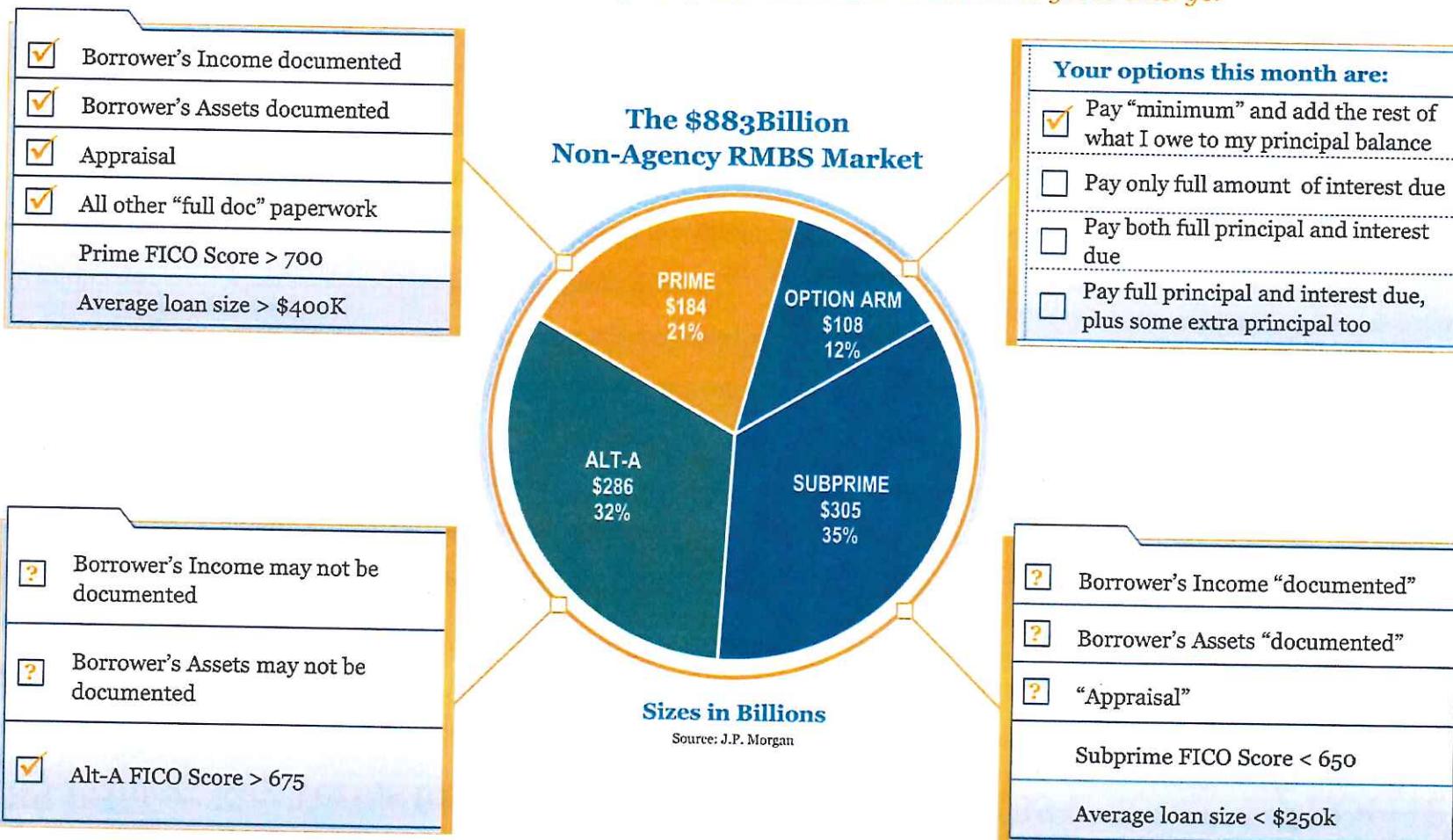


## RMBS Primer: Key Terms for Understanding Subprime RMBS

Loss Severity	When a foreclosed property is sold, the liquidation proceeds are used to first pay liquidation fees (servicer, trustee, legal, broker, taxes, insurance, etc), then to the servicer to recoup outstanding P&I advances. The remaining proceeds pay down the outstanding balance of the loan. Changes in housing prices, which are the primary driver of liquidation proceeds, do not lead to a one for one change in severity. In fact, a good rule of thumb is that a 10% change in housing prices leads to a 5 point change in severity.
Loss Causation	Does the breach need to cause a default or just increase the risk of a default?
Loss Realization	Can loans with breaches that have not defaulted be eligible for repurchase?
Modification	When a servicer changes the terms of a mortgage to make the mortgage more affordable. Common examples are forbearance (making a loan current by allowing missed payments to be added to the loan balance), extending the term, reducing the coupon, or forgiving principal.
“Mortgage Loan”	Once a defaulted loan has been discharged, is it still a loan? Can it still be repurchased?
P&I Advancing	When a servicer comes out of pocket to make principal and interest payments to a trust on behalf of a delinquent borrower.
Recidivism	When a modified loan becomes delinquent again.
Responsible Party	Can the burden be deflected from sponsor to originator or from solvent entity to bankrupt entity?
Servicing	The act of collecting, processing, and distributing mortgage payments.
Shortfall	When there are not enough interest proceeds to make full coupon payments to a bond holder as a result of delinquencies and losses.
Sole Remedy	Can a R+W breach on a loan be settled with a cash payment or does it need to be substituted, cured, or repurchased?
Statistical Sampling	Does every loan need to be re-underwritten or can a subset of a pool be sampled?
Statute of limitations	Does the statute begin when the R+W are made or when the repurchase demand is not met?
Transition	When a loan switches from one state (current, delinquent, modified current, foreclosure, real estate owned) to another.
Underwater	When mortgage debt exceeds the value of property backing it. Also known as "having no equity". Underwater borrowers are much more likely to default or demand a modification.

## RMBS Primer: What are the Different Types of Non-Agency RMBS?

The \$883 billion Non-Agency RMBS market consists of securitizations that are backed by loans which do not conform to Agency credit, underwriting, or loan size standards. A robust post-crisis "RMBS 2.0" market has yet to emerge.



## RMBS Primer: Only a Few Loans Are Being Repurchased Voluntarily

*While it is true that some loans are being repurchased, it is a very small amount relative to the enormous volume of loans that likely contain R+W beaches.*

Loss Reversals Across Deals with/without R+W Lawsuit Over the Past 12 Months

Deal	No Litigation	After Lawsuit	Before Lawsuit
FFML 2007-FF2	27,984,245		
SVHE 2006-WF1	23,488,733		
ZUNI 2006-OA1	18,530,177		
BSMF 2007-AR2		16,591,416	
BSMF 2007-AR4		8,211,268	
SAMI 2007-AR4	8,181,309		
BSMF 2006-AR1		7,867,149	
JPMAC 2006-RM1	7,726,173		
SAMI 2007-AR6	6,558,267		
OOMLT 2007-HL1	5,022,608		
MANA 2007-A1	4,481,964		
HASC 2007-WF1	3,920,965		
BSABS 2006-AQ1	3,234,776		
HVMLT 2006-12	3,155,334		
HVMLT 2006-1	3,106,638		
ABSHE 2006-HE7		3,097,913	
HEAT 2007-2			2,855,953
FFML 2006-FF18	2,843,226		
WMALT 2006-AR5	2,761,838		
FFML 2006-FF15	2,691,312		
HEAT 2007-1			2,548,152
BALTA 2006-5	2,308,911		

Source: Loan Performance, Trustee Reports, Nomura

Top five repurchasers between 2010 and 2013 YTD by responsible party

Responsible Party	Repurchases		Current Bal (\$bn)	Original Bal (\$bn)	Accumulated Losses (\$bn)
	By Dollar Amt (\$)	As % of Orig Bal			
Nomura	89.8	0.33%	6.6	27.4	6.3
RFC/GMAC	87.1	0.04%	58.6	227.7	33.6
Wells Fargo	78.2	0.04%	52.5	190.6	7.8
Bank of America	288.2	0.03%	233.5	862.3	112.0
Deutsche Bank	18.3	0.02%	25.2	94.7	19.0

Note. Only financial institutions that have repurchased at least \$10mm of loans between 2010 and 2013 are included. Source: Intex, remittance reports, Barclays Research



## RMBS Primer: When Banks Refuse to Repurchase, Litigation Follows

*Cited breach rates are very high across a variety of responsible parties.*



The responsible parties and breach rates are cited in R+W lawsuits on the following shelves:

Shelf	2005	2006	2007	Responsible Party	Breach Rates
Long Beach/WAMU		All deals in the DB National Trust		WAMU	62-88%
ACE		12	9	DB Structured Products	60-100%
HEAT		4	3	DLJ Mortgage/CS	79-99%
SABR		3	4	Barclays/Related Originator	
MSM		4	2	Morgan Stanley	84-100%
BSMF		2	3	EMC	98%
MSAC		2	2	Morgan Stanley	96-97%
SACO		3	1	EMC	100%
MABS		3	1	UBS	46-77%
HEMT		4		DLJ Mortgage/CS	94-99%
LXS		4		Related Originator	82%
HVMLT	1	3			
OOMLT		2	1	Option One	
CWIDE/CWALT/CWL				Country wide/Bank of America	N/A - loan files not investigated as part of the suit

Source: Court filings, Nomura

## RMBS Primer: What is the Size of the Liability?

Estimated rep and warranty payout potential across non-agencies (2004-08 issued deals)

	Amount (\$bn)	% of Current Balance
Total Original Balance	3,465	N/A
Total Current Balance	886	N/A
Losses Already Realized	507	N/A
Projected Losses	256	28.9%
Adjusted Recoveries (60% of Countrywide ratio)	32	3.6%
Adjusted Recoveries (100% of Countrywide ratio)	46	5.2%
Adjusted Recoveries (100% of ResCap claims ratio)	83	9.3%

Largest estimated rep and warranty payout potential by issuer

	Payout amount (\$bn)			Payout as % of current face		
	Downside	Base Case	Upside	Downside	Base case	Upside
Bank of America	12.9	15.5	22.6	5.9%	7.2%	10.4%
JP Morgan	6.2	10.3	21.2	4.4%	7.3%	14.9%
Deutsche Bank	1.5	2.6	5.3	6.3%	10.5%	21.4%
Credit Suisse	1.4	2.3	4.7	5.3%	8.8%	17.9%
Goldman Sachs	1.3	2.1	4.4	6.6%	11.1%	22.7%

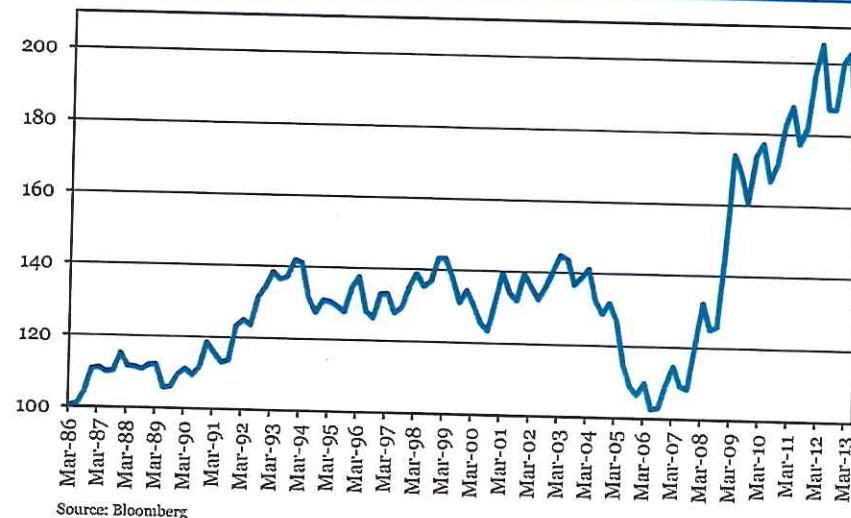
Note: Bank of America includes, Countrywide, Merrill Lynch/First Franklin and BoA deals. For simplicity, we assume that JPM has rep and warranty exposure on the WaMu deals that are currently in litigation. All statements and assertions related to current and possible litigation outcomes are speculative and Prophet makes no guarantee as to future results. Outcomes of pending litigation are always uncertain and cannot be predicted.

Source: 101odata, Loan Performance, Intex, Barclays Research

# RMBS Primer: How Buy-to-Rent Saved the Subprime Housing Market

*With housing affordability the highest its been in decades, large scale “buy and rent” schemes have appeared.*

## Housing Affordability Composite Index



- When housing prices stabilize:
  - Borrowers with equity in their homes who have been making their payments are likely to eventually pay off their loans and avoid default.
  - Loss severities on the loans that do default will likely be better than expected.
- Changes in servicer behavior can help a lot too:
  - Embracing principal forgiveness modifications should increase the number of these current borrowers with positive equity.
  - Embracing short sales can significantly reduce loss severity.

\* Does not represent an investment of a Fund. This example presents hypothetical investment performance results under different scenarios. Investors should be aware that hypothetical investment performance results have inherent limitations, and, in fact, there are frequently substantial differences between hypothetical performance results and the actual performance results. Further, these results do not reflect the net effect of expenses and fees that will apply to an investment in the Funds.



## Rental Economics\*

### BUBBLE PRICE

- House cost \$150k to build, worth \$275k at its peak.
- Loan amount \$220k. Mortgage rate 6.5%.
- Borrower pays \$1,677 per month mortgage payment.

### CURRENT PRICE

- House worth \$100k today.
- Borrower pays \$1,200 per month in rent.
- Landlord collects \$14k per year for a 14% gross rental yield and a net yield of 8% after expenses.

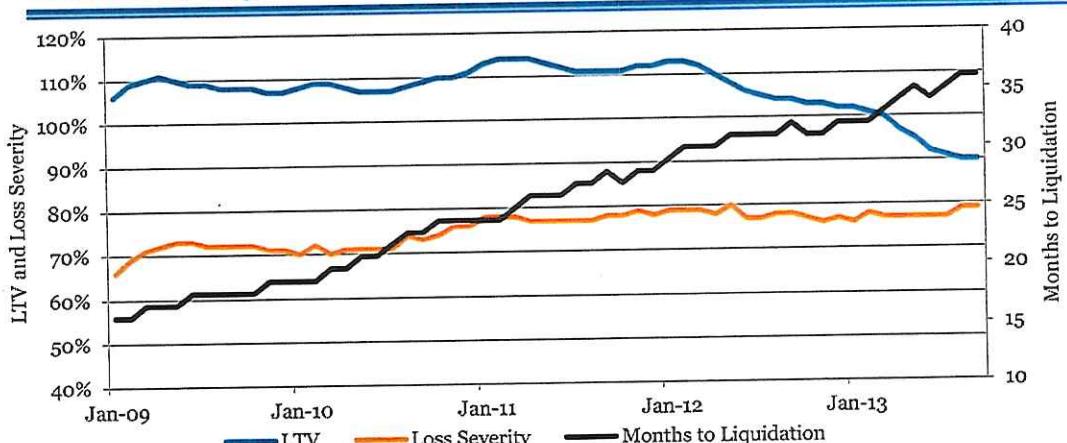
### FUTURE PRICE

- Assume house is worth \$150k in 7 years.
- Loan amount = \$120k. Assume mortgage rate 6.5%.
- Borrower pays \$875 per month mortgage payment.
- Renter has incentive to buy the same house at a price more than 50% higher than today's price once his credit score has finally repaired.

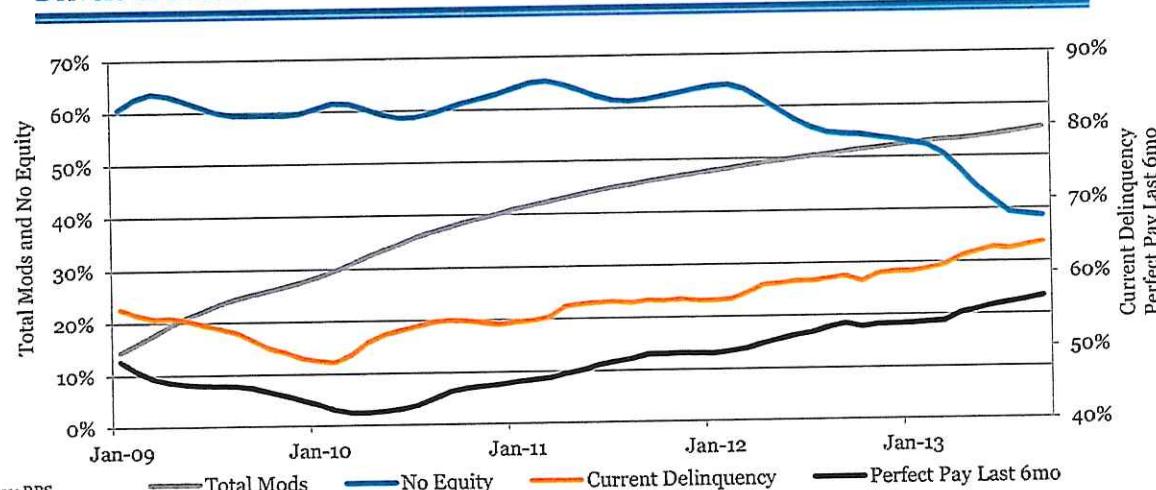
- Landlord earns a current yield of 8% per annum, with the potential to earn another 7% per annum from housing price appreciation, for an all-in yield of 15% on an unleveraged basis.
- Subprime housing segment typically consists of homogenous homes in planned developments – lends itself nicely to large scale rental schemes.
- Banks have begun to lend against “bulk buy and rent” portfolios – using leverage raises investment yields even further
- Nascent “buy and rent” investment schemes have evolved to an institutional scale, including involvement by new and existing REITs, and they provide a strong backbone of support for the subprime housing market

## RMBS Primer: The Performance of Subprime Loans has Rebounded

Drivers of Severity



Drivers of Default



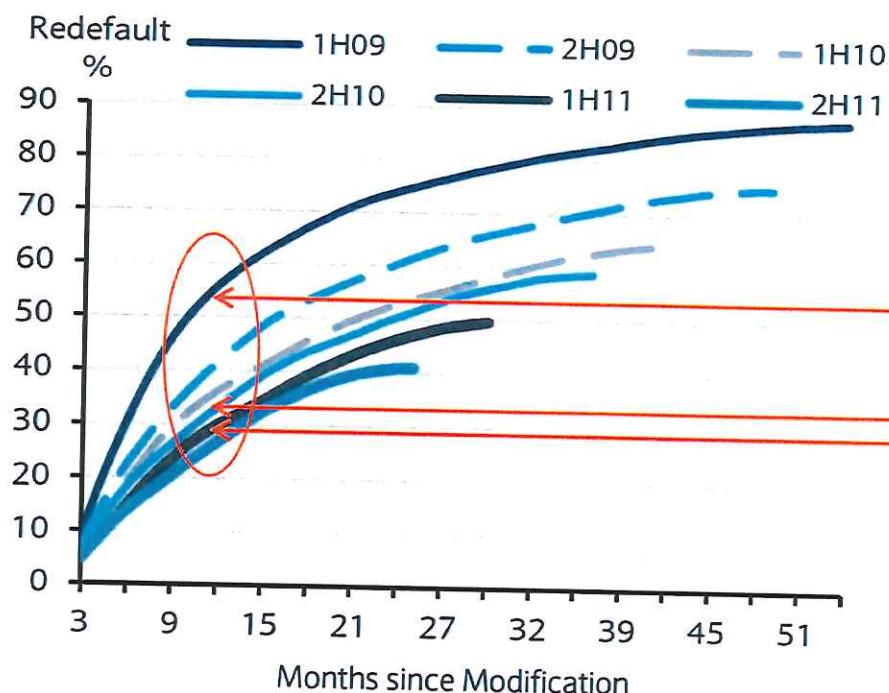
Source: RBS

- LTVs are falling as housing prices rise and high LTV distressed loans are liquidated
- Although it is taking longer to liquidate distressed loans because their LTVs are falling severities have been unchanged
- Going forward we expect LTVs to continue to drop and timelines to steady as modified loans begin defaulting. This scenario should eventually lead to falling severities

- Fewer borrowers have no equity as housing prices rise and high LTV distressed loans are liquidated. Borrowers with equity are less likely to default
- Modifications have also been increasing and borrowers with more affordable modified terms are less likely to default
- The percent of loans that made a payment in the previous month or for the previous 6 months has been increasing

## RMBS Primer: Recently Modified Loans are Performing Better

*It is well known that modified loans tend to default again – but recidivism rates are showing signs of material improvement for loans modified in 2011 versus loans modified in 2009 and 2010. This trend may continue to improve with the increased use of principal reduction modifications.*



According to Barclays research:

- Re-default rate after 12 months on loans modified in 1H09 was around 55%
- Re-default rate after 12 months on loans modified in 1H10 was around 35%
- Re-default rate after 12 months on loans modified in 1H11 was around 30%

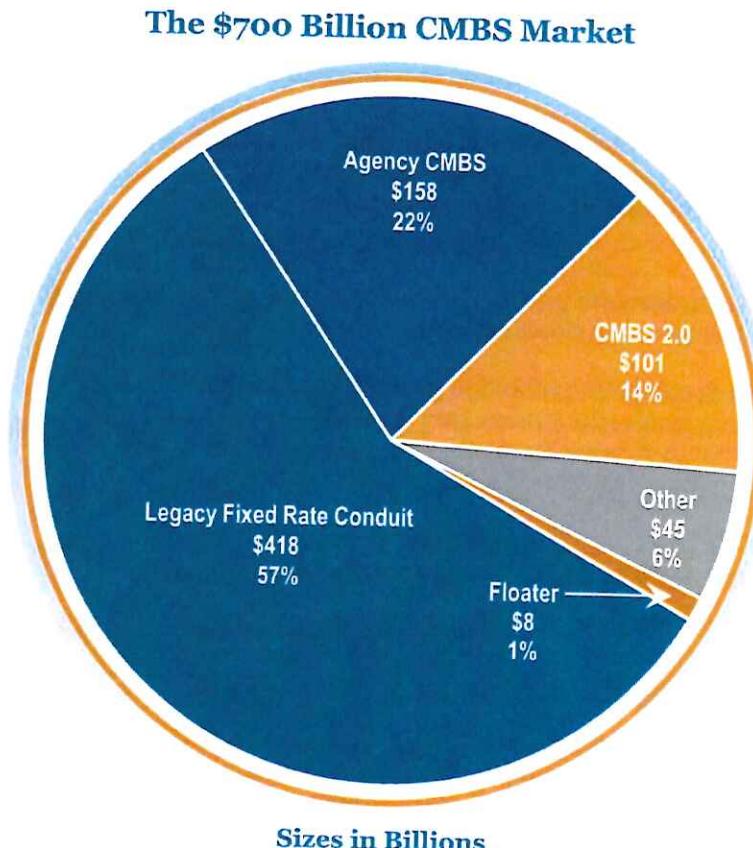
Source: Corelogic LoanPerformance, Barclays Research

## CMBS Primer: Key Terms for Understanding CMBS

ASER	Appraisal Subordination Entitlement Reduction. When a special servicer exercises the right to advance P&I based on a current appraisal rather than on the full balance of the loan. This action protects servicers and senior debt holders from having to advance more cashflow than may ultimately be recovered.
Cap Rate	Capitalization Rate. NOI divided by the market value of the property.
Debt Yield	NOI divided by debt balance.
DSCR	Debt Service Coverage Ratio. NOI divided by mortgage debt service. A higher DSCR can withstand a greater shock to NOI and still be able to make mortgage payments.
Loss Severity	When a foreclosed property is sold, the liquidation proceeds are used to first pay liquidation fees (servicer, trustee, legal, broker, taxes, insurance, etc), then to the servicer to recoup outstanding P&I advances. The remaining proceeds pay down the outstanding balance of the loan. Loss severity represents the amount of loss incurred as a percentage of the balance of the loan whereas "recovery" represents the amount of proceeds recouped as a percentage of the balance of the loan.
Modification	When a servicer changes the terms of a mortgage to make the mortgage more affordable. Common examples are forbearance (making a loan current by allowing missed payments to be added to the loan balance), extending the term, reducing the coupon, or forgiving principal.
NOI	Net Operating Income. Income produced by rents less non-interest expenses such as maintenance.
P&I Advancing	When a servicer comes out of pocket to make principal and interest payments to a trust on behalf of a delinquent borrower.
Recidivism	When a modified loan becomes delinquent again.
Servicing	The act of collecting, processing, and distributing mortgage payments.
Shortfall	When there are not enough interest proceeds to make full coupon payments to a bond holder as a result of delinquencies and losses.
Transition	When a loan switches from one state (current, delinquent, modified current, foreclosure, real estate owned) to another.
Underwater	When mortgage debt exceeds the value of property backing it. Also known as "having no equity". Underwater borrowers are much more likely to default or demand a modification.

## CMBS Primer: What are the Different Types of CMBS?

The \$626 Billion CMBS market is dominated by 10 year fixed rate “conduit” loans. A new issue CMBS market dubbed “CMBS 2.0” is alive and well having restarted in the middle of 2010 – a new issue RMBS market is likely to finally return soon.



Source: J.P. Morgan

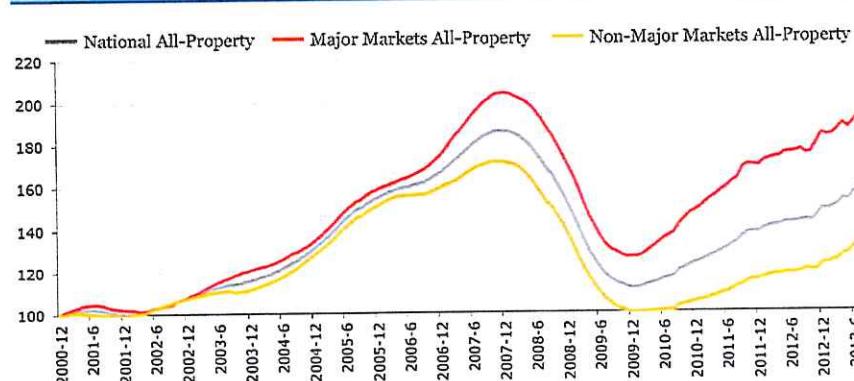
### Deal Types

	MTM LTV	# OF LOANS	% OF POOL IN TOP TEN LOANS
Legacy Fixed Rate Conduit	100 – 150	100 – 400	50%
Legacy Floating Rate Large Loan	80	< 15	> 90%
CMBS 2.0 Fixed Rate Conduit	65	50 – 100	50%

## CMBS Primer: Higher Property Prices but Valuations Still Cheap

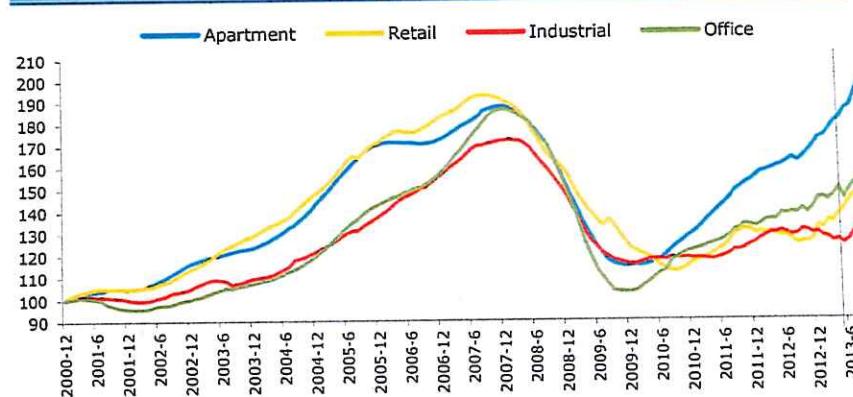
*The absolute value of Cap Rates has fallen but not as much as treasury rates have fallen.*

Property Price Indices by Size



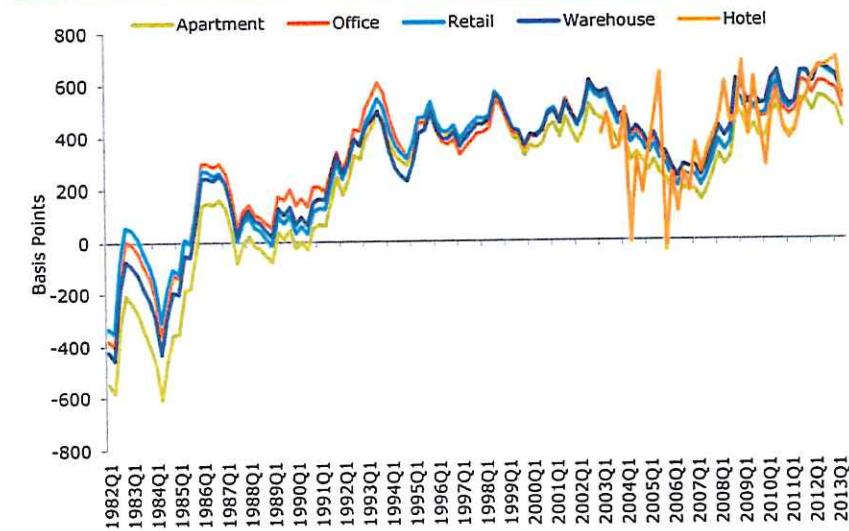
Source: Moody's Investor Services, Wells Fargo Securities, LLC.

Property Price Indices by Industry



Source: Moody's Investor Services, Real Capital Analytics, Inc., Wells Fargo Securities, LLC.

Spread Between 10-Year U.S. Treasury and Property Cap Rates



Source: Bloomberg, Property & Portfolio Research, Inc., Wells Fargo Securities, LLC.

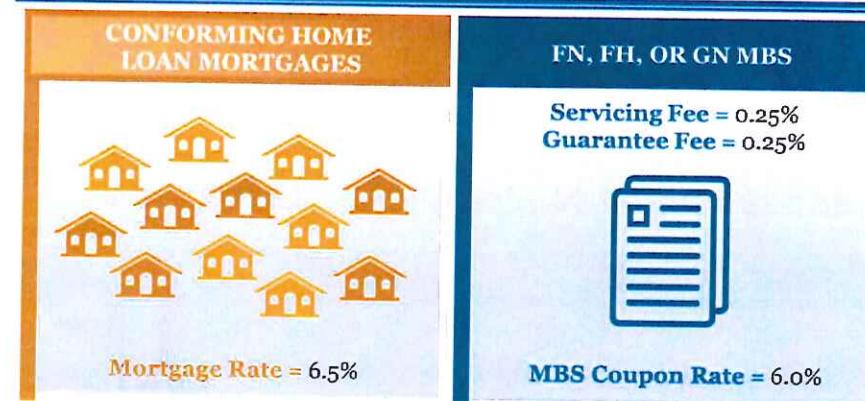
## Agency IIO Primer: What are Agency Mortgage-Backed Securities?

*Agency MBS are the cornerstone of residential mortgage finance in the United States.*

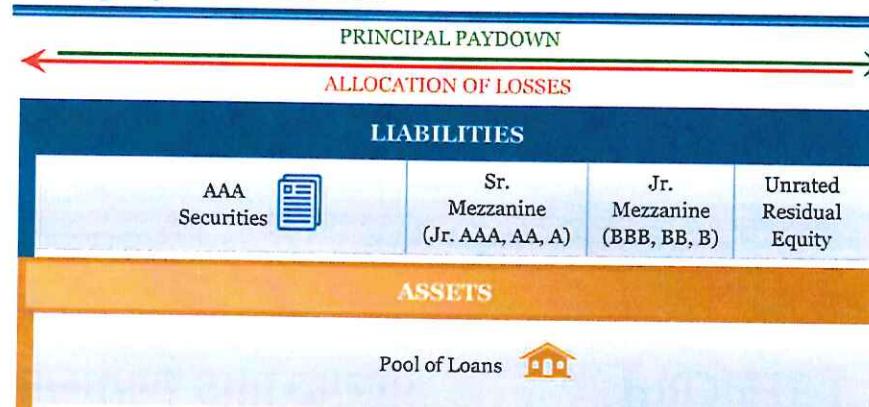
- Agency Mortgage-Backed Securities (“MBS”) represent pro-rata interests in a pool of residential home loan mortgages with a guarantee of timely payment of principal and interest from one of the three U.S. Housing Agencies.
- The three U.S. Housing Agencies are the Federal National Mortgage Association (“Fannie Mae” or “FN”), the Federal Home Loan Mortgage Corporation (“Freddie Mac” or “FH”) and the Government National Mortgage Association (“Ginnie Mae” or “GN”).
- In order to be eligible for inclusion in an MBS pool, a mortgage must conform to the origination guidelines of one of the three Agencies – these guidelines require higher credit quality borrowers (except for GN which caters to less credit worthy borrowers), fully documented underwriting, and a limit to the size of the loan that may be guaranteed.
  
- Securitizations backed by loans which do not conform to Agency credit, underwriting, or loan size standards are known as Non-Agency Residential Mortgage-Backed Securities (“Non-Agency RMBS”) and lack an Agency credit guarantee.
- Instead, Non-Agency RMBS obtain their credit support through the use of “internal credit enhancement mechanisms” such as splitting the issued securities into senior and subordinated bonds, where the subordinated bonds eat the losses arising from borrower defaults prior to the senior bonds taking any losses.

Does not represent an investment of a Fund. The background information contained in this section is general in nature and intended for illustrative purposes only, and is not intended to provide a basis for any decision about, or evaluation of, the Funds and should not be relied upon as investment advice. This information should only be considered in conjunction with the risk factors contained herein and in the confidential private placement memoranda of the Funds.

### MBS Structure



### Non-Agency RMBS Structure



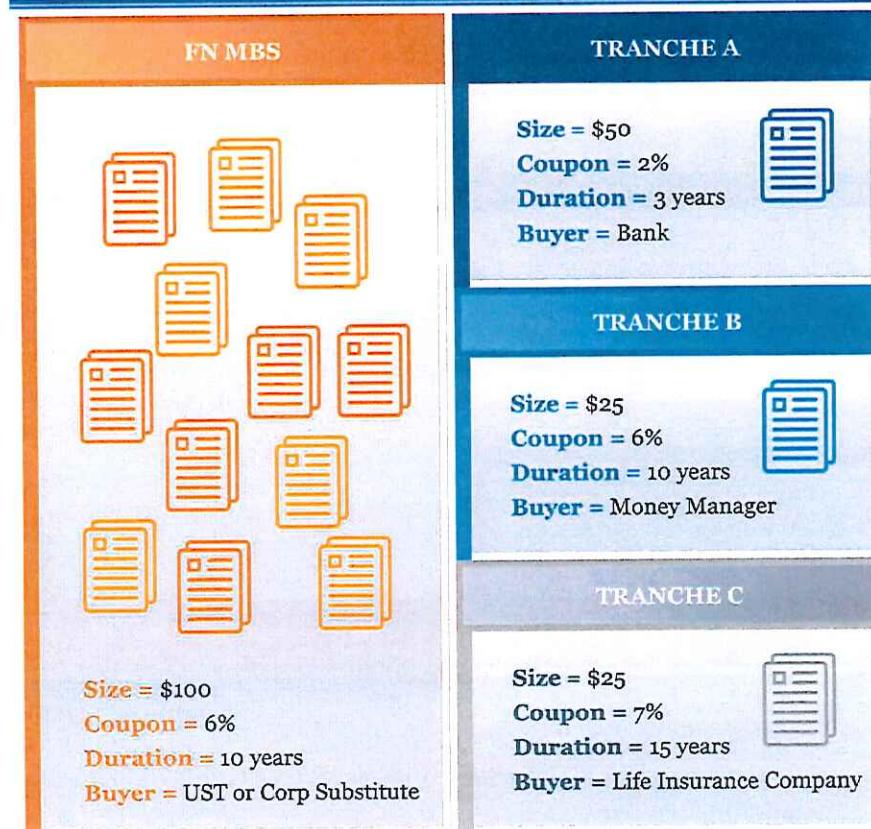
## Agency IIO Primer: What are Collateralized Mortgage Obligations?

CMOs serve to “complete” the Agency MBS market.

- Before CMOs, the only way to invest in mortgage bonds was to buy generic FN, FH, or GN Agency MBS – but many investors who wanted to enjoy the incremental yields available in the mortgage market were unable to participate because the parameters of generic Agency MBS did not fit their particular investment profiles.
- The invention of CMOs solved this problem by allowing investors to choose from a wide variety of different maturity, coupon and volatility profiles – in each CMO transaction, the CMO becomes the investor in a pool of generic Agency MBS “collateral” and investors can purchase the portion of their choice from the basket of new “tranches” issued by the CMO.
- However, CMOs are a zero-sum game – for each “made to order” bond that is carved out to suit a particular investor’s needs, there needs to be another investor who is willing to own the opposite profile.



CMO Deal

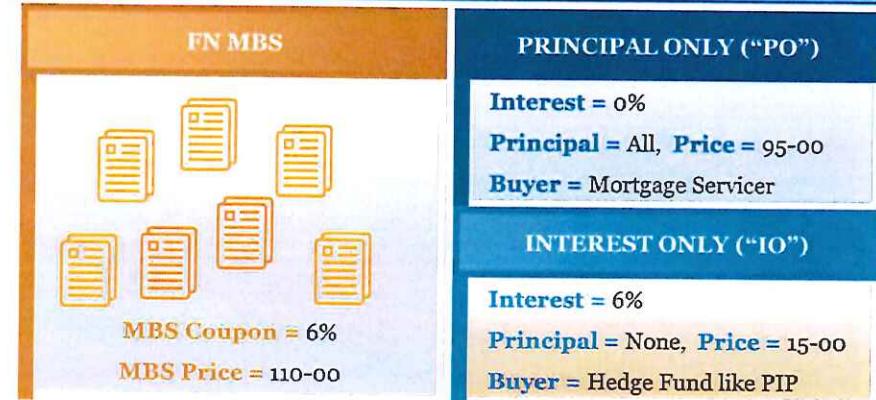


## Agency IIO Primer: What are Mortgage Derivatives?

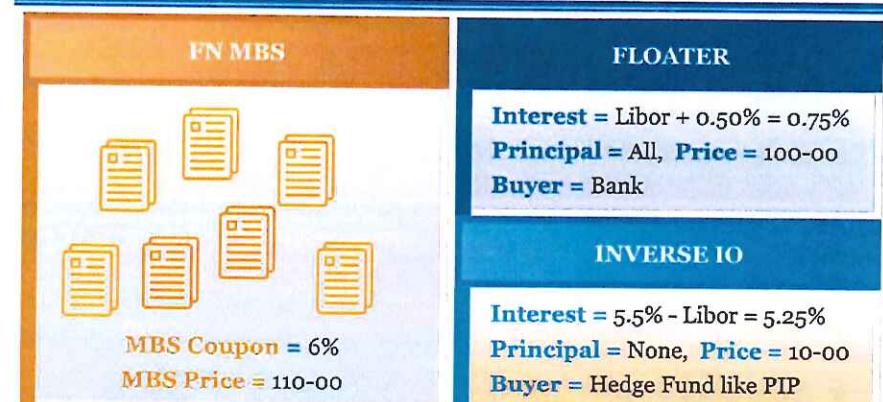
*Many CMO structures would not be possible without a buyer for the Mortgage Derivative byproducts.*

- Hedge funds specializing in Mortgage Derivatives have provided an important service to the highly liquid multi-trillion dollar Agency MBS market since the advent of the CMO over 20 years ago.
- As mentioned on the previous slide, CMOs are a zero-sum game – for each “made to order” bond that is carved out to suit a particular investor’s needs, there needs to be another investor who is willing to own the opposite profile.
- Hedge funds like PIP often serve as this “other investor” and seek to be paid an additional risk premium by the market in exchange for their willingness to manage the risks of owning the more complex portions of CMO deals.
- Common forms of Mortgage Derivatives include:
  - **Interest-Only Securities (“IOs”)** only receive interest to the extent the mortgage loans backing the bond remain outstanding – if a homeowner refinances his loan then the ongoing interest payments that would have been due to the IO holder are gone forever.
  - **Principal-Only Securities (“POs”)** receive all of the principal payments on the mortgage loans backing the bond.
  - **Floater**s receive a coupon that floats up and down depending on some reference index such as Libor – “Coupon rises when Libor rises.”
  - **Inverse Floater**s receive a coupon that floats up and down inversely depending on some reference rate such as Libor – “Coupon rises when Libor falls.”
  - **Inverse IOs** are both Inverse Floater and IOs at the same time.

### IO/PO Structure



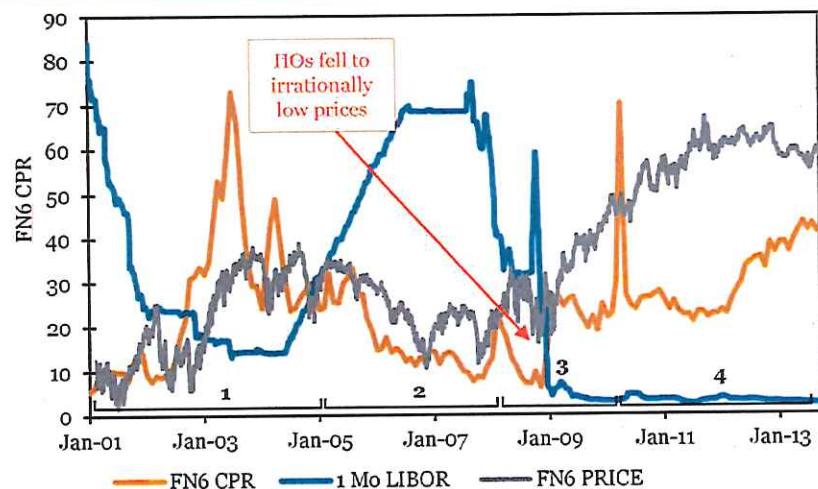
### Floater/Inverse IO Structure



## Agency Inverse IOs – What Happened in the Crisis?

Prepayment fears were grossly over-exaggerated in late 2008 and early 2009 in part because Wall Street prepayment models never contemplated the effect that a severe bear market in housing would have on a borrowers ability to refinance their loan.

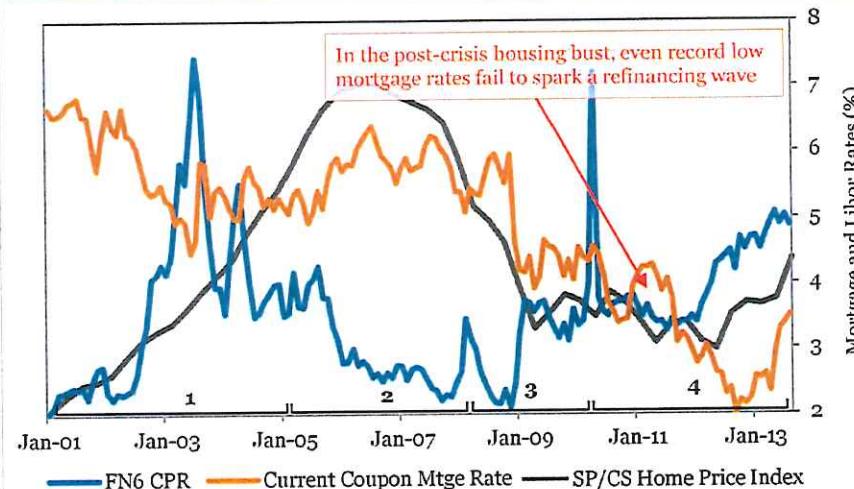
FN6 Prices (as proxy for IIOs) vs. Prepay Speeds and Libor Rates



The numbers below correspond to the numbered data points on both graphs:

1. IIOs traded at normal valuations.
2. IIOs traded at unattractive valuations.
3. IIOs traded at “opportunistically cheap” valuations because backwards looking models said that MBS will prepay very fast, when simple common sense suggested that would not be possible given the housing market crash and newly credit constrained /underwater borrowers.
4. IIO nirvana – “Libor low and prepays slow” – the IIO investment thesis is widely touted in the marketplace – prices are at all time highs, valuations are still reasonable – but by no means historically cheap.

FN6 Prepay Speeds vs. Home Prices and Mortgage Rates



- The Inverse IO universe is quite large at approximately \$50 billion.
- Inverse IOs are bifurcated into two types:
  - Originations after 2009 which behave like pre-crisis inverse IOs with traditional prepayment sensitivity to changes in mortgage rates.
  - Originations before 2009 which are significantly credit impaired and have much less sensitivity to changes in mortgage rates – on the other hand they are sensitive to government efforts to aid homeowner refinancing which could cause a sudden large and adverse spike in prepayment rates.



## Agency IIO Primer: U.S. Government Effort to Help Current Borrowers

*HARP 2.0 is meant to ease some of the impediments to current borrowers from accessing lower mortgage rates. Many market participants do not expect the latest changes to have a huge impact on Agency Inverse IOs, but we are treading with caution.*

Figure 1: Fannie Mae HARP 1.0 versus HARP 2.0

Type	Same servicer		Different servicer	
	HARP 1.0	HARP 2.0	HARP 1.0	HARP 2.0
Program Term	June 30, 2012.	December 31, 2013	June 30, 2012.	December 31, 2013
Automated or manual underwriting	Manual or DU process.	Same as HARP 1.0	DU process only.	Same as HARP 1.0.
LTV limit	Less than 125 LTV.	No limit	Less than 125 LTV.	No limit
Delivery fee cap	Capped at 2%.	For > 80 LTV, if term is greater than 20y, the cap is 75bp. If term is 20y or lower, the cap is 0bp.	Capped at 2%.	For > 80 LTV, if term is greater than 20y, the cap is 75bp if term is 20y or lower, the cap is 0bp.
Payment history	Manual: no more than one 30d DQ in last 12m.  DU: no 60d DQ in last 12m.	Manual: include in the last 6m and no more than one 30d DQ in last 12m.  DU: Same as HARP 1.0.	No 60d DQ in last 12m.	Same as HARP 1.0.
Appraisal	Manual: Original home value, a new appraisal, or exterior-only inspection. Regardless of method used, the lender is relieved from the r&w on the home value of the original loan but retains the r&w on the new value.  DU: AVM is offered for certain loans. In which case the lender is relieved of r&w on the home value of both the original and the new loans.	Same as HARP 1.0.	AVM is offered for certain loans, in which case the lender is relieved of r&w on the home value of both the original and the new loan. If new appraisal is obtained, the lender is relieved of r&w on the original value but must r&w the new home value.	Same as HARP 1.0.
Income/employment/asset documentation	Manual: qualification based primarily on the payment history and the borrower benefit from the refi transaction. VOE is required.  DU: somewhat reduced documentation (one pay stub).	Manual: Same as HARP 1.0 where monthly pmt is not increasing more than 20%.  DU: Same as HARP 1.0	Nearly full underwriting of the new loan, documentation as required by DU.	Same as HARP 1.0.
DTI/credit/closing cost	Manual: No DTI requirement. FICO required but no minimum. Financing of closing cost permitted.  DU: DTI and credit score required and assessed by DU. Financing of closing cost allowed.	Manual: Same as HARP 1.0 where monthly pmt is not increasing more than 20%.  DU: Same as HARP 1.0	DTI and FICO required and assessed by DU.  Financing of closing cost allowed.	Same as HARP 1.0.
Solicitation	Singling out Fannie loans for soliciting not allowed, campaign must be "general enough."	For > 80 LTV, lenders may solicit HARP-eligible borrowers but must do so in the same manner across FN/BH.	Singling out Fannie loans for soliciting not allowed, campaign must be "general enough."	For > 80 LTV, lenders may solicit HARP-eligible borrowers but must do so in the same manner across FN/BH.
Underwriting rep & warrant: original loan	R&w of the original loan is waived, still on the hook for "systematic fraud."	Same as HARP 1.0	R&w of the original loan is waived.	Same as HARP 1.0.
Underwriting rep & warrant: new loan	Lender r&w the new loan.	Same as HARP 1.0	Lender r&w the new loan.	Same as HARP 1.0.

Source: Fannie Mae, Barclays Capital.

- In April 2013, the HARP 2.0 term date was extended to December 31, 2015
- President Obama continues to push for everyone with a mortgage to be able to refinance regardless of their LTV
- In May 2013, President Obama named Mel Watt the new head of the FHFA. Watt is thought to be more "borrower friendly" than his predecessor Edward DeMarco.