Wall Street and Commercial Real Estate

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Goals of Presentation

- Market Drivers
- Capital Markets
- Implications for Real Estate
- Conclusions

- Market Drivers

Market Drivers

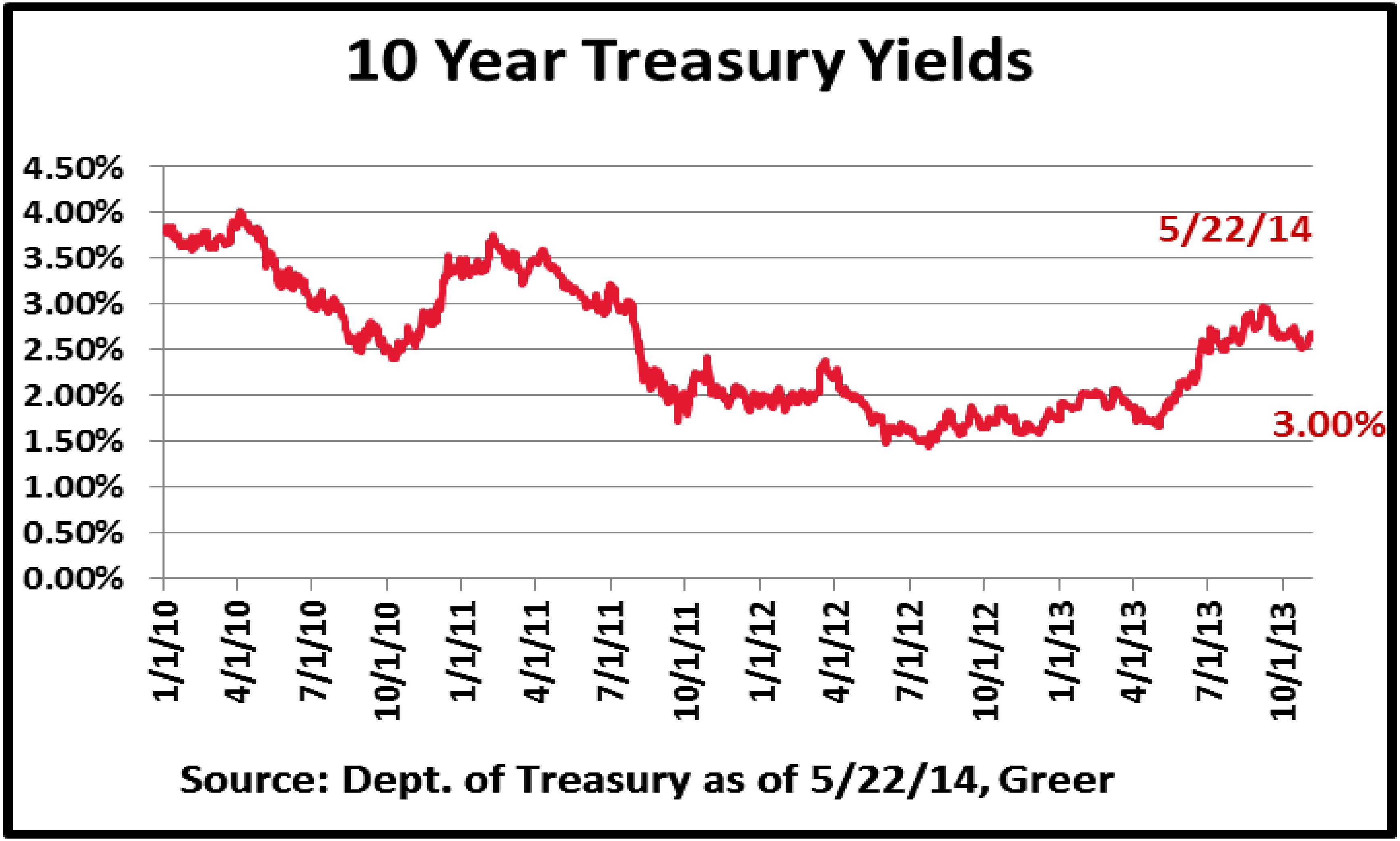
Supply / Demand

- Most Demand ties to Jobs
  - Office – FIRE Employment, Portion of Service Employment
  - Retail – Household Formations, Income Growth
  - Industrial – Manufacturing & Distribution (Logistics)
  - Multifamily – Households, non-Top 25% HH Income
  - Hotel – Corporate Travel – Office & Industrial Employment

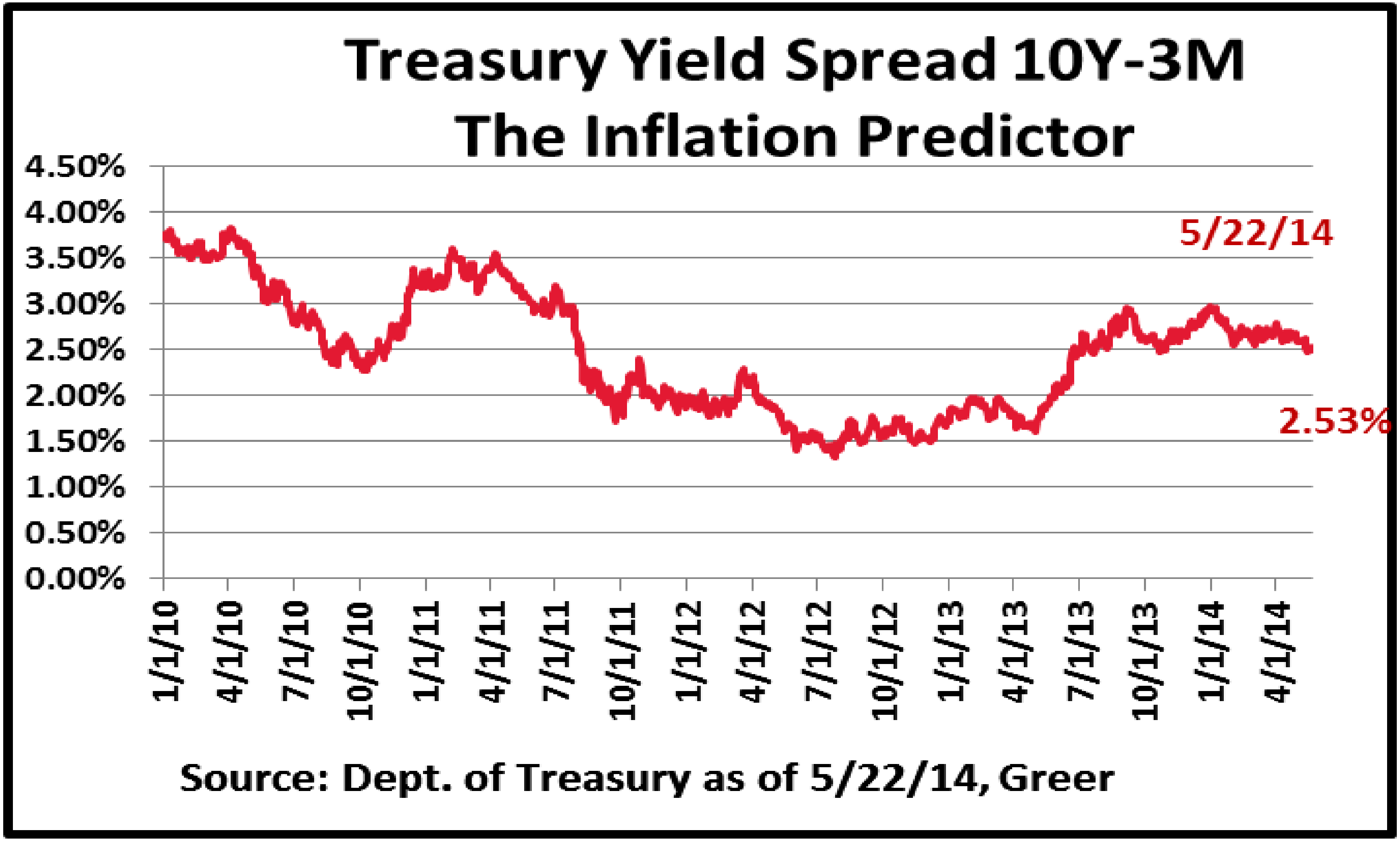
Financing – Is the Most Important Fundamental

- Availability
- Leverage
- Rate and Term
- Recourse

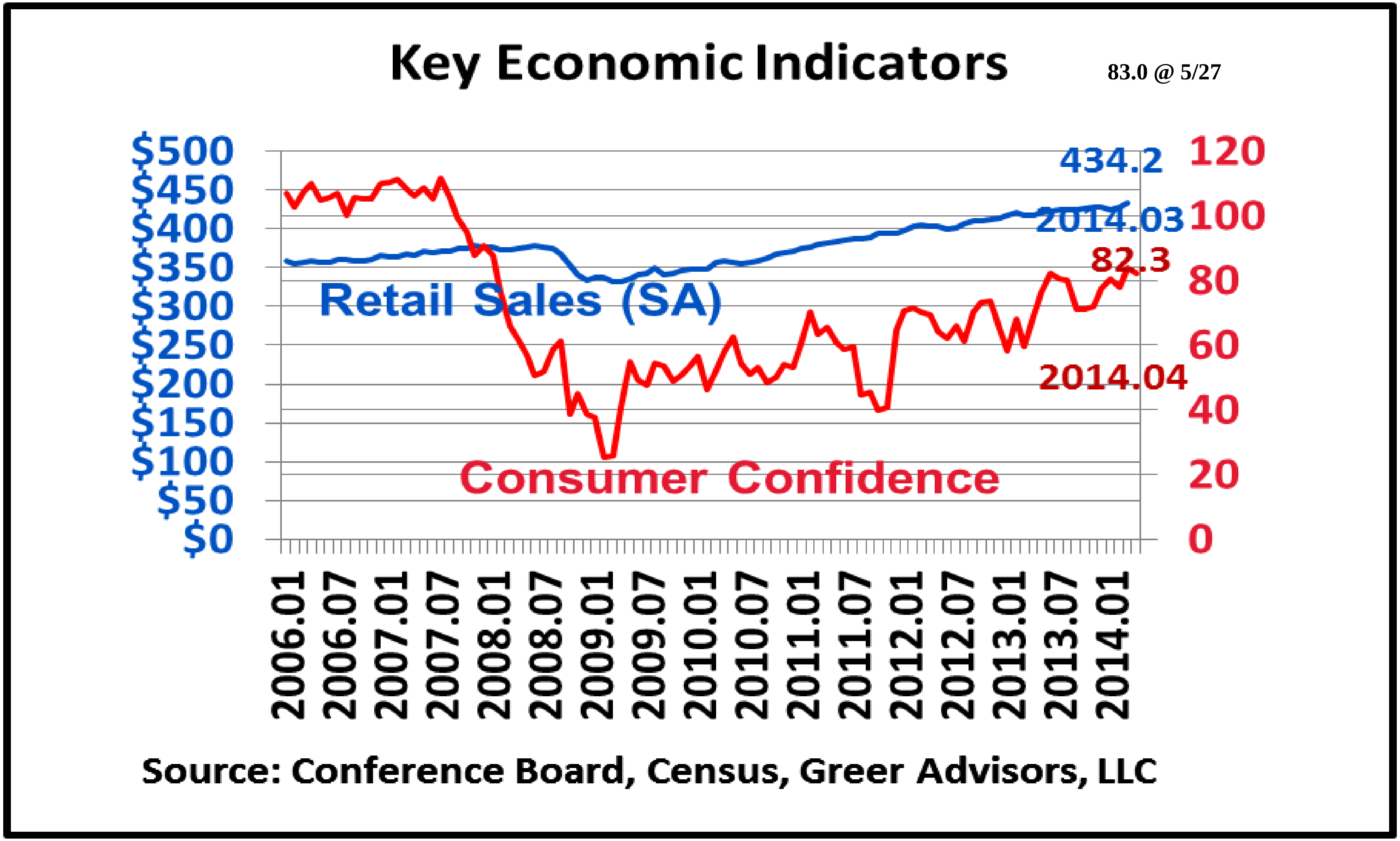
Interest


10 Year Treasury Yields
4.50%
4.00%
3.50%
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
5/22/14
3.00%
1/1/10
4/1/10
7/1/10
10/1/10
1/1/11
4/1/11
7/1/11
10/1/11
1/1/12
4/1/12
7/1/12
10/1/12
1/1/13
4/1/13
7/1/13
10/1/13
Source: Dept. of Treasury as of 5/22/14, Greer

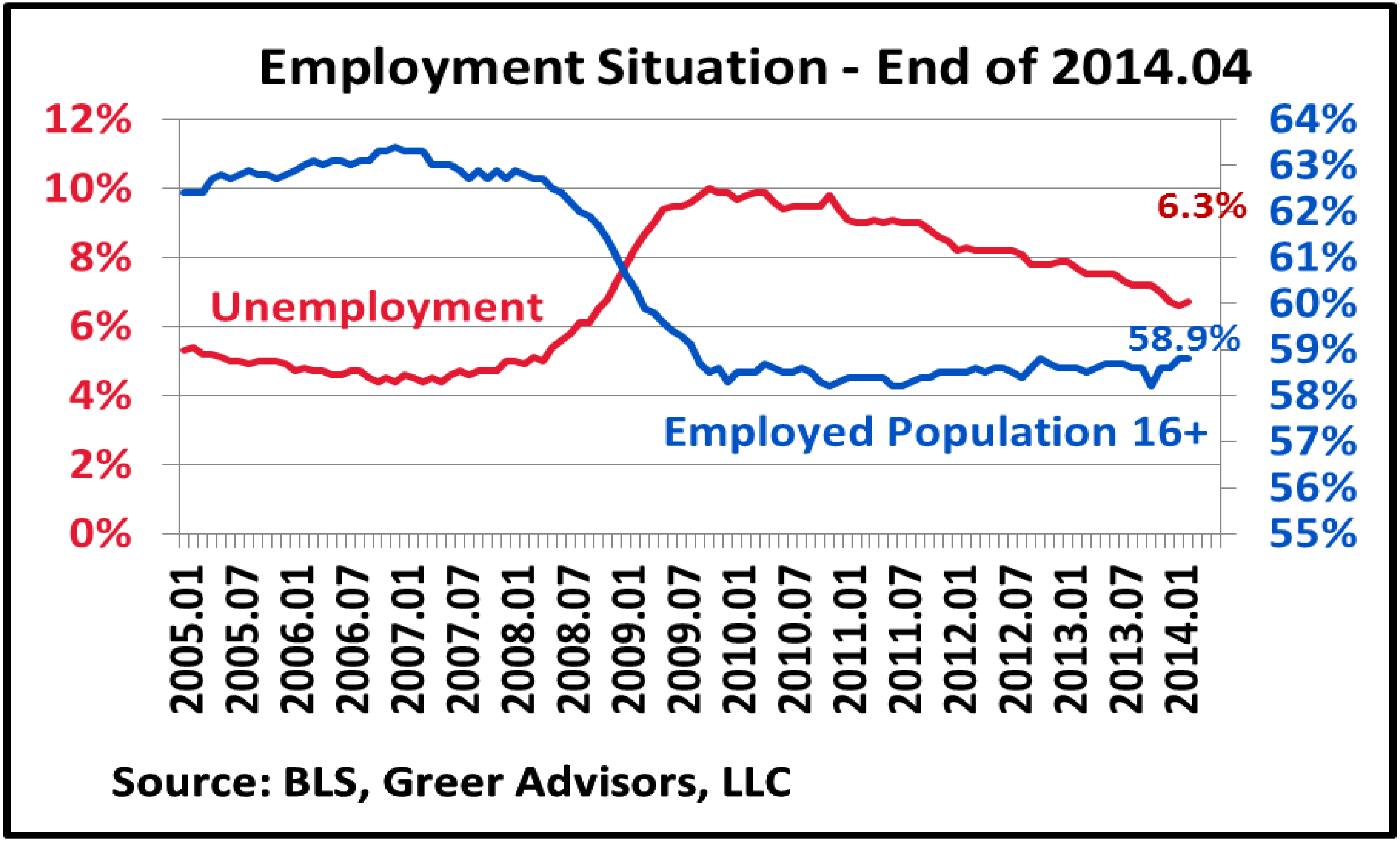
Inflation


Treasury Yield Spread 10Y-3M
The Inflation Predictor
4.50%
4.00%
3.50%
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
5/22/14
2.53%
1/1/10
4/1/10
7/1/10
10/1/10
1/1/11
4/1/11
7/1/11
10/1/11
1/1/12
4/1/12
7/1/12
10/1/12
1/1/13
4/1/13
7/1/13
10/1/13
1/1/14
4/1/14
Source: Dept. of Treasury as of 5/22/14, Greer

Economy – Consumer Confidence & Sales



Economy – Employment



Economy – Strengths / Weaknesses

Consumer Side

- Consumer Confidence improving 82.3 (Apr. Conf. Board)
- Unemp/% Wkforce improving 6.3%/58.9% (Apr. BLS)
- ObamaCare, Debt, Deficit, Runaway Spending
- Liquidity, Leverage, Interest (for non-AAA Debt) – Poor
- Retail Sales Show Small, but Consistent Growth
- Event Risk, EMP, Potential Sovereign Defaults

Investment Banks

- Capital IQ and Deal Logic show LBO's☺
- M&A Continues to Grow
- Derivative Risk – Net vs. Gross VAR

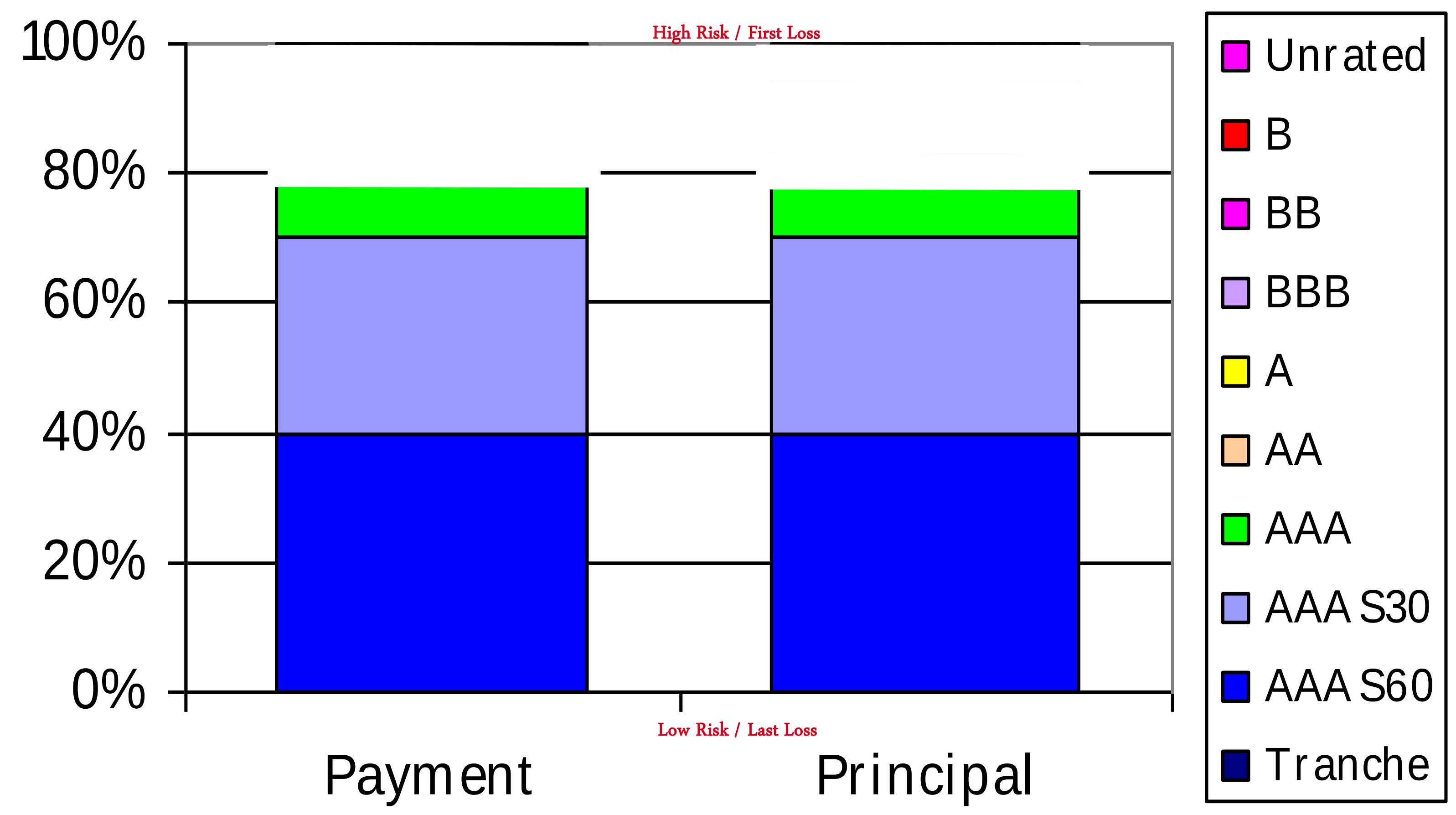
- Real Estate Capital Markets

What is a CMBS? ☺

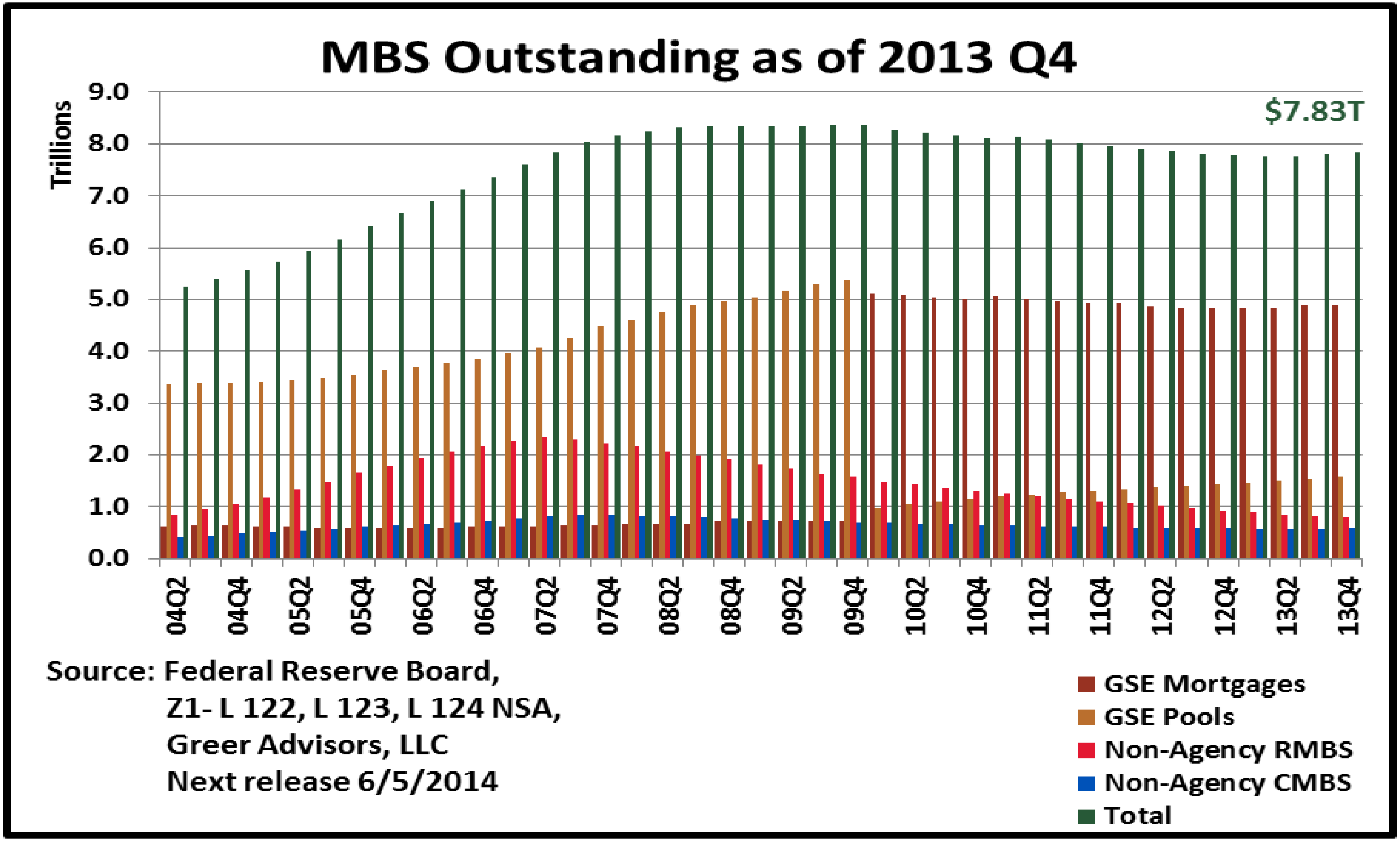
Commercial Mortgage Backed Security

- Type of pass-through security
- Commercial Mortgages are securitized into a pool. Rights to the revenue from the mortgages are divided into many smaller pieces (tranches, strips, slices), each with differing priorities. Proceeds are distributed to investors based on the priority of their tranche.

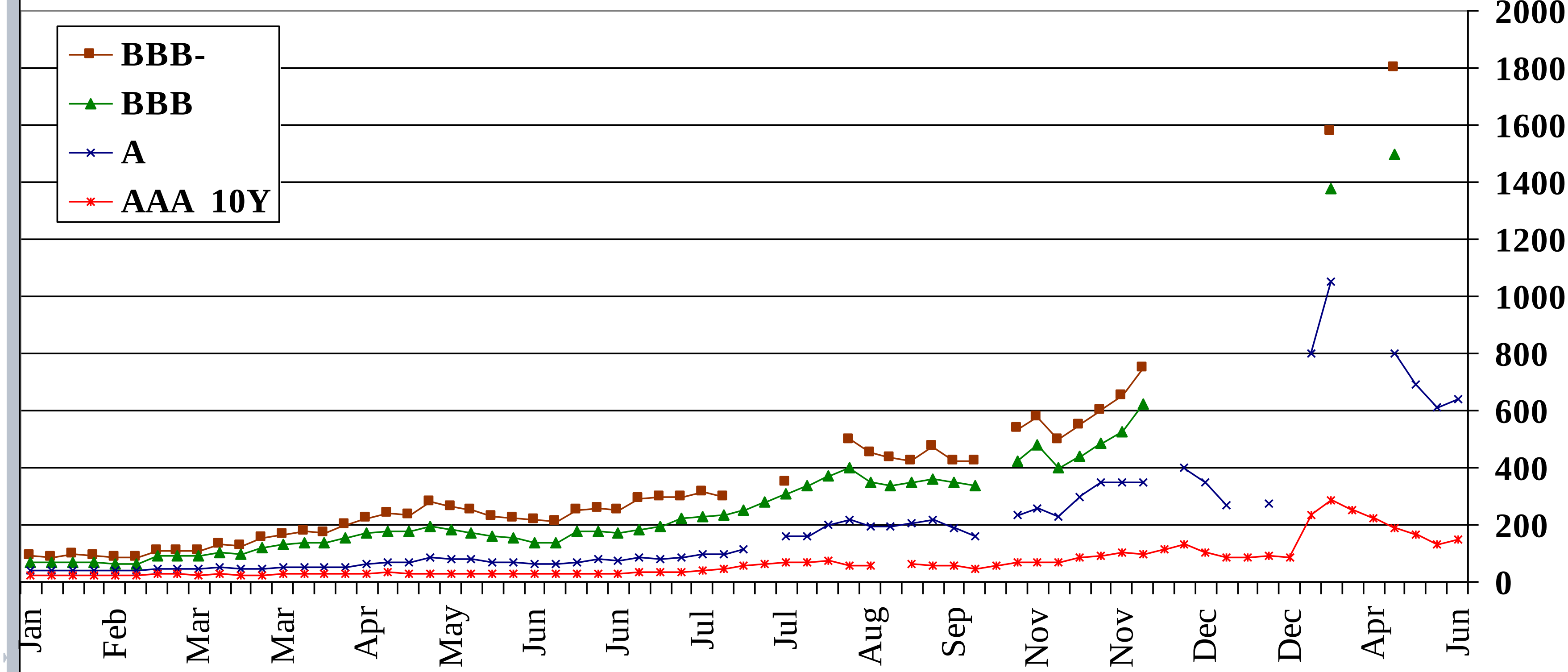
Subordination Graph



MBS Outstandings in U.S. - Grows



CMBS Yield Spreads (Spread to Swap)



Source: CM Alert, Greer Advisors, LLC

Note: X-axis not to scale. Spreads are "over swaps" for 10-year Treasuries.

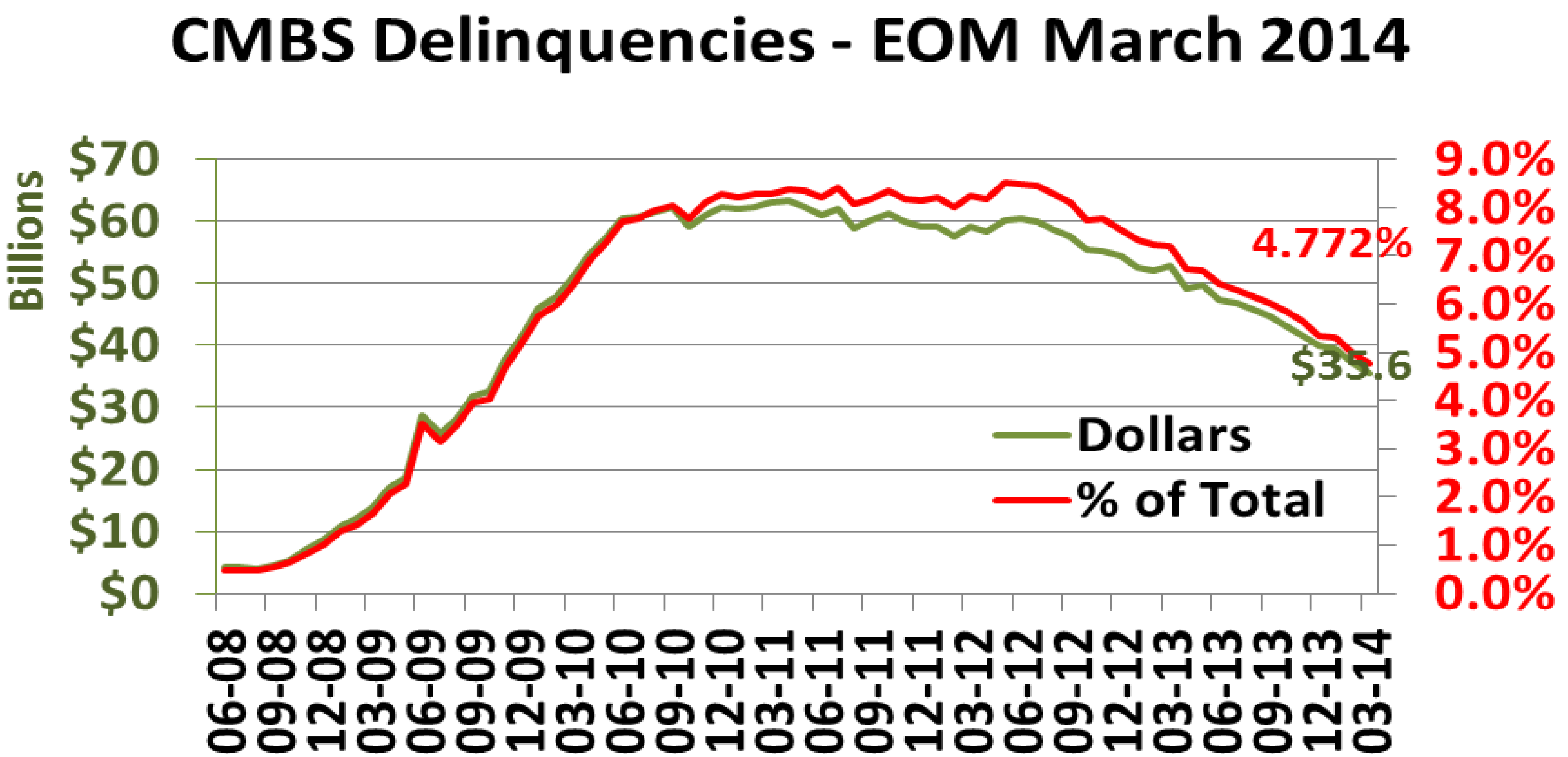
Note: Last this is what I sent throughout BofA in mid 2007.

Also sent prior versions early 2007

Example of a "Peak" vs. "Trough" CMBS

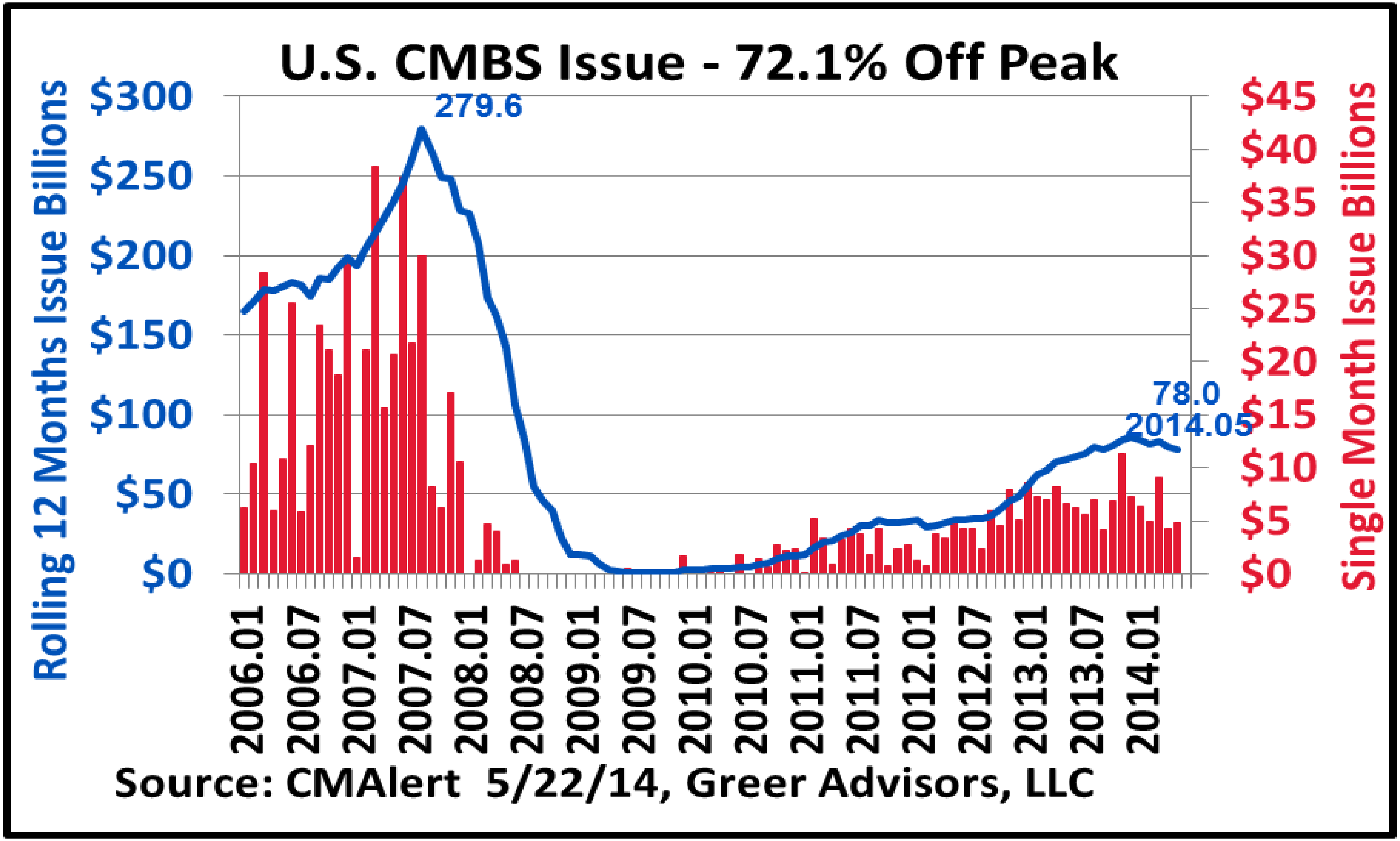
		No. Loans	250		
		Avg. Loan Size	$10,000,000		
		Total Loan Amt.	$2,500,000,000		
		Index Name	10-Year Treasury		
		Index Rate	3.100%		
		Avg. Margin	1.750%		
		Avg Yield	4.850%		
Peak	Near Trough			Peak	Near Trough
2007.01	2009.0513	Rating (10Y)	Subordination	2007.01	2009.0513
0.0020	0.0166	AAA S60	60.0%	3.300%	4.760%
0.0025	0.0170	AAA S30	30.0%	3.350%	4.795%
0.0030	0.0800	AAA	12.5%	3.400%	11.104%
0.0040	0.1617	AA	9.0%	3.500%	19.268%
0.0100	0.2650	A	8.0%	4.100%	29.605%
0.0175	0.4701	BBB	5.0%	4.850%	50.114%
0.0250	0.5128	BB	4.0%	5.600%	54.383%
0.0400	1.2204	B	2.5%	7.100%	125.144%
0.0500	1.8300	Unrated	0 to <2.5%	8.100%	186.100%
			Weighted Average Yielc	3.594%	14.833%
		Implied Annual Excess Return		0.256%	-10.983%
Note: Assumes 1% swap, agency, trust, servicer and other fees.				$6,400,000	-$274,577,763

CMBS Delinquencies – Rise & Fall



Source: Morningstar CMBS Report April 2014, Greer Advisors, LLC

CMBS Issuance - Rising from Floor



Synthetic CMBX Yields (Spreads to Swaps) – See Risk

Greer CMBS / CMBx Yield Rate™

Tranche	Yield	Suboord	% of Capital Stack	Contribution to Total
CMBX.NA.AAA.6	3.15%	30.9%	69.1%	2.18%
CMBX.NA.AS.6	3.65%	21.1%	9.8%	0.36%
CMBX.NA.AA.6	4.12%	15.7%	5.4%	0.22%
CMBX.NA.A.6	4.61%	12.1%	3.6%	0.17%
CMBX.NA.BBB-	5.65%	6.9%	5.2%	0.29%
CMBX.NA.BB.6	7.63%	5.3%	1.6%	0.12%
All others	25.00%	0.0%	5.3%	1.33%
Implied Overall Debt Yield (Interest)			100.0%	4.66%

Notes: ① The table is somewhat complicated, as evidenced by the numerous footnotes. Several conclusions can be drawn. 1) If the 'Implied Overall Debt Yield' is greater than loan rates in the marketplace, the CMBS market CAN NOT recover because the required bond yields are too high to make debt affordable to borrowers. 2) When the spread between AAA and BB tranches is high, say above 500 bps (now at 448 bps), the market can't recover because of risk aversion for lower-rated tranches. In January 2007, spreads were around 65 bps. For most of late 2008 through 2012, spreads were near 10,000bps. Lastly, the yields for each tranche provide tremendous insight into the pricing of risk premiums for each layer in the capital stack.

② MarkitTM Data and Calculations based on close of 5/23. Swap (10Yr) as of 5/22. CMBx prices are based on Series 6 data. Subordination levels are based on average credit enhancement.

③ Coupon and Price data were from MarkitTM for AAA Senior through BB bonds. MarkitTM data was used as part of the calculations by Greer Advisors, LLC to determine yields.

④ Profit / arbitrage opportunity for the issuer was ignored.

⑤ The yield for "other" classes was based on (BBB- minus BB yield) times 4.0, round to the nearest bp.

What is a CDO? ☺

Collateralized Debt Obligation

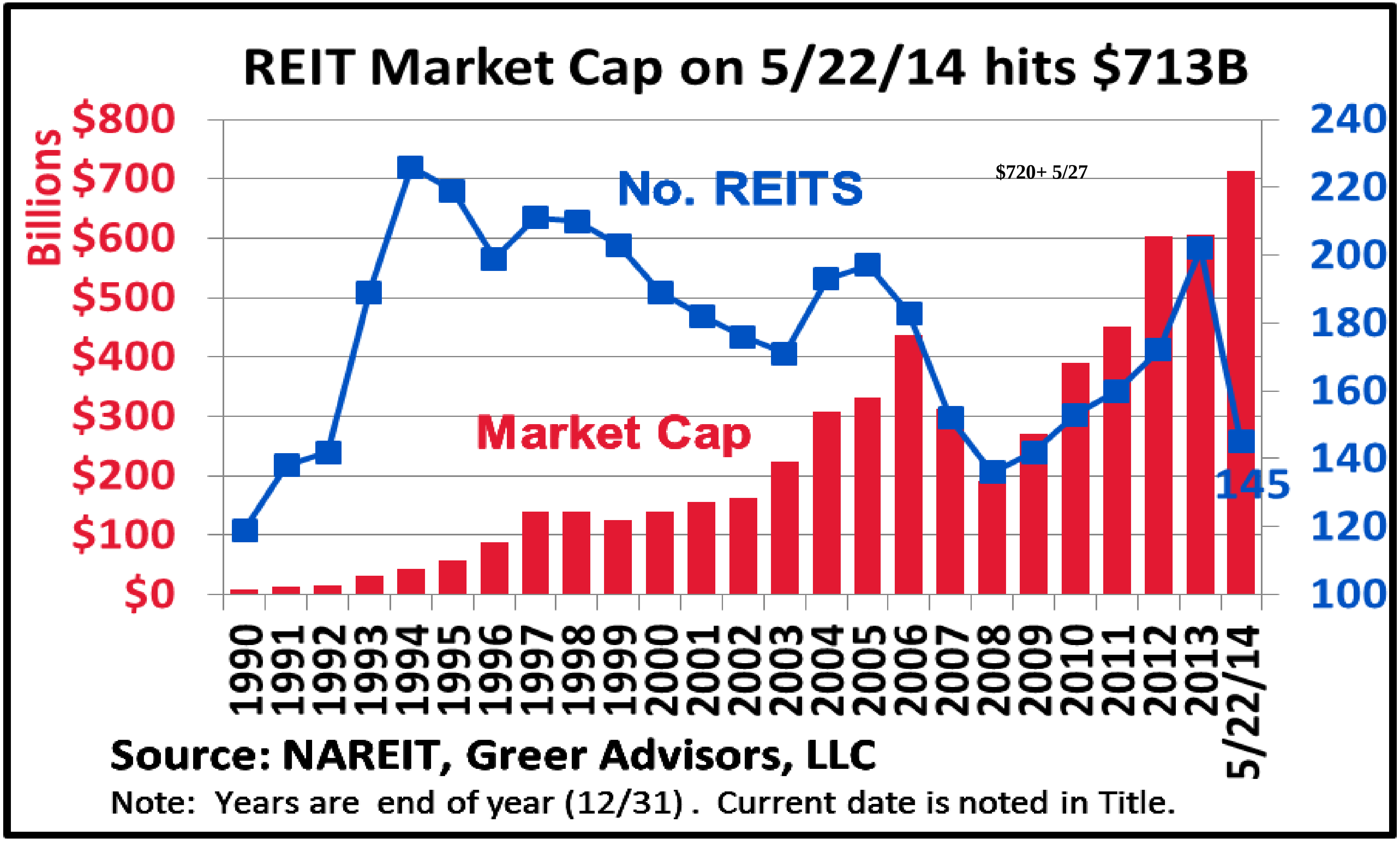
- Type of pass-through security
- CDOs are securitized debt pools, similar to CMBS, but debts can be CMBS/CDO paper, car/boat/plane loans, credit cards, or virtually any type of debt obligation. Rights to the revenue from the obligations are divided into many smaller pieces (tranches, strips, slices), each with differing priorities. Proceeds are distributed to investors based on the priority of their tranche.
- Tough to gauge accurately, but most experts believe these have accounted for 5-10% of all commercial real estate lending the past few years.

What is REIT? ☺

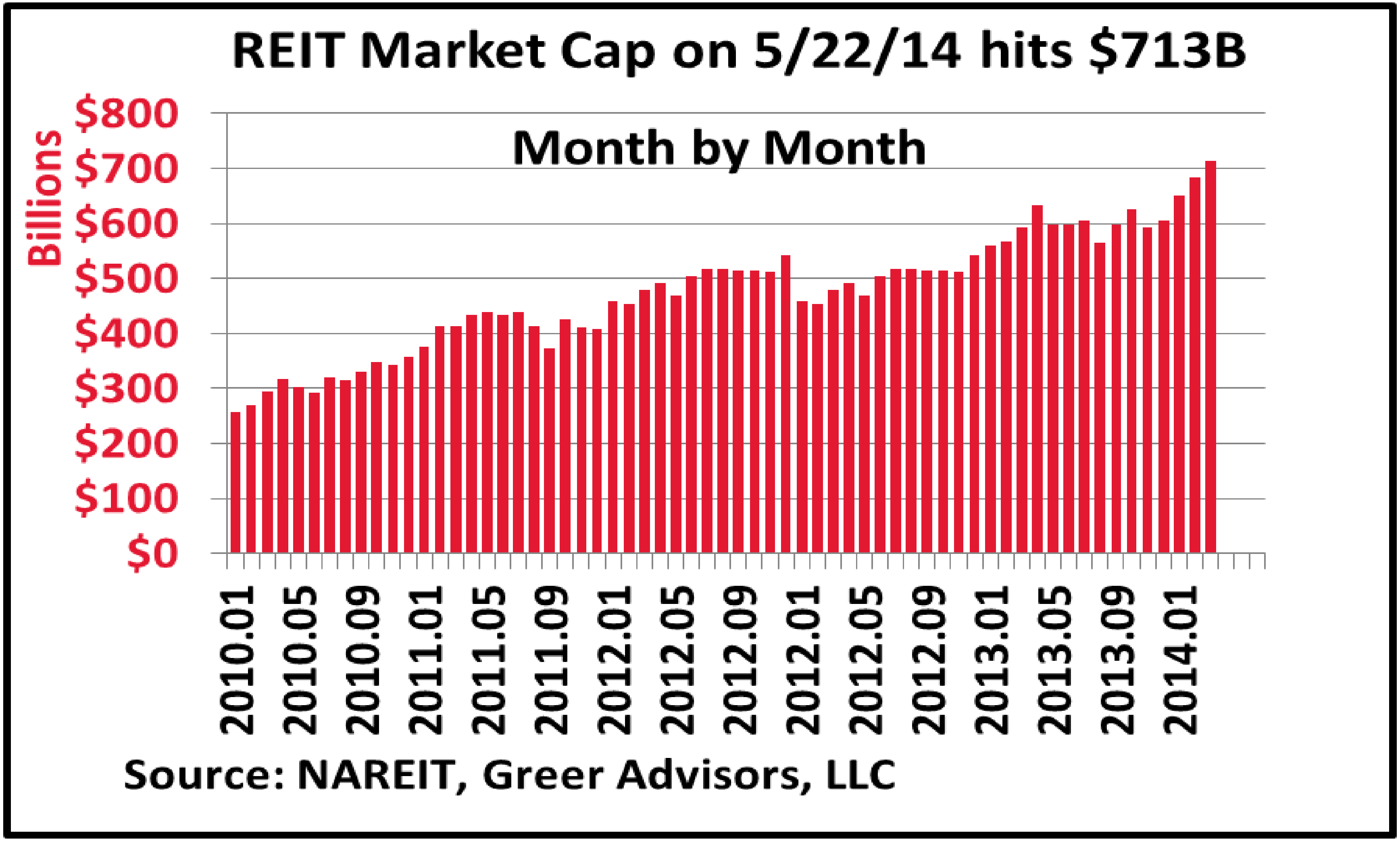
Real Estate Investment Trust

- Type of Pass-through Security
- Effectively a corporation
- 95% of income passed through to shareholders. No “corporate” tax. All earnings single-taxed at shareholder level.
- Current “Industry” Issues:
  Definition of Assets, Max Debt Load, Yield

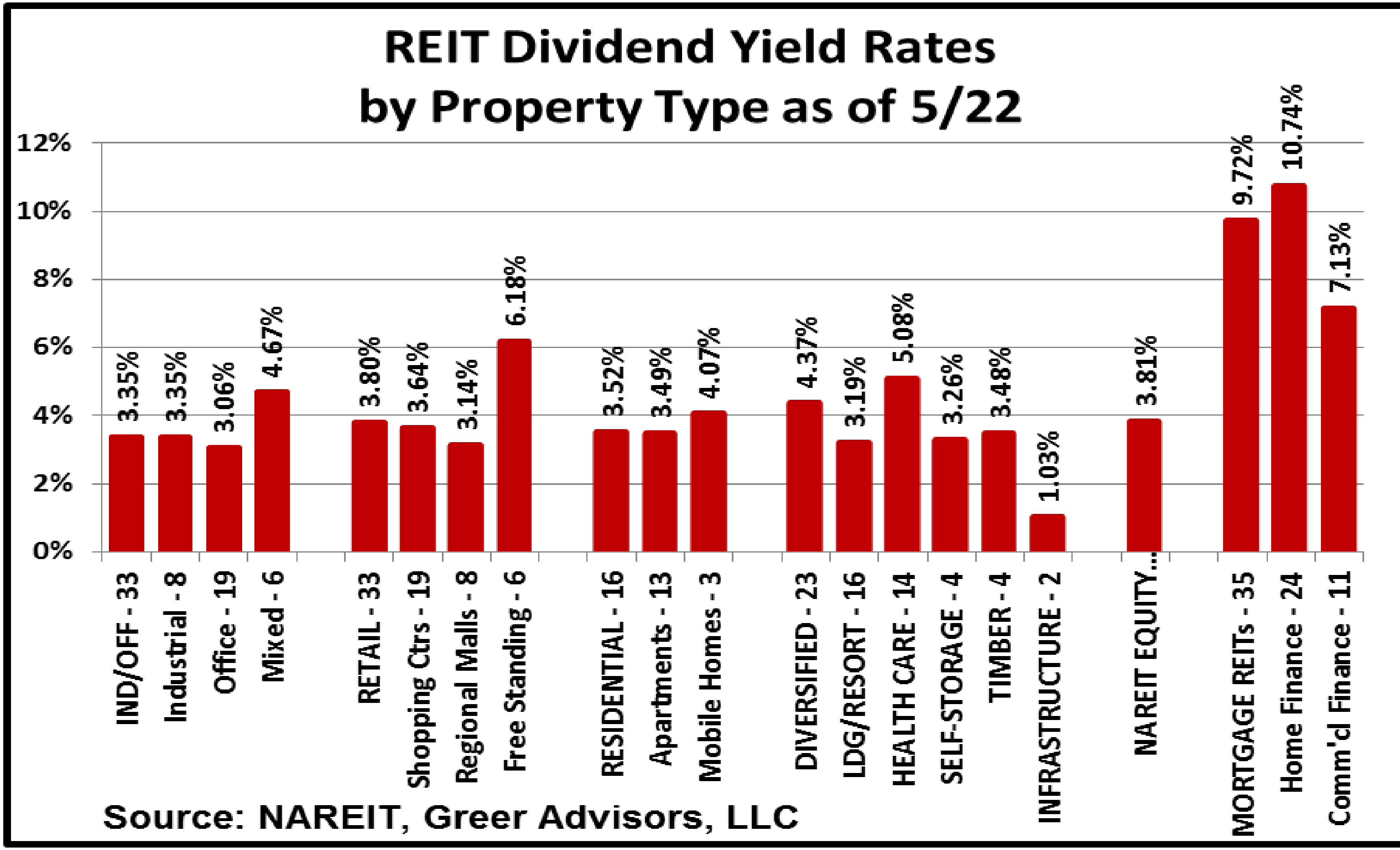
REIT Market Capitalization – Long Term



REIT Market Capitalization – Short Term



REIT Property Type Dividend Yields



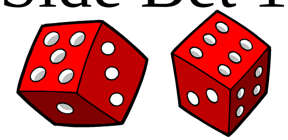
What is CDS? ☺

Credit Default Swap

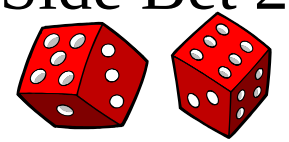
- A bilateral contract where two parties agree to trade the credit risk of a third-party. A protection buyer pays a periodic fee to a protection seller in exchange for a contingent payment by the seller upon a default or failure to pay. Once triggered, the seller either takes delivery of the collateral (eg bond, note) or pays the buyer the difference between the par value and recovery value of the bond (cash settlement).
- They resemble an insurance policy, as they can be used by debt owners to hedge against credit events.

Players in “Simple” CDS

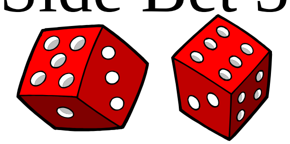
Side Bet 1



Side Bet 2



Side Bet 3



Business Issues Bonds

Bonds initially rated too poor for market, eg “BB”

Investment Bank issues CDS
(aka Credit Enhances Debt)
Enough to make BB = AA, if debtor fails, IB buys bonds

Rating Agency Rates Bonds

Gives loss forecast & amount required for “AA” rating

Pension Fund Buys Bonds
with CDS enhancement
Thinks it’s AA investment

Evolution of CDS

- Simple CDS = "Full Coverage"
  - Buyer is Party to Credit Instrument
  - Seller Provides "Full" Coverage
  - Seller Pays (makes up) Shortfall or
  - Seller Buys Credit Instrument from Buyer
  - Buyer is "Made Whole"
- Buyer is Not a Part to Credit Facility, merely a speculator
- Sellers Provide Partial Coverage (ceiling) or Part of Credit
- Sellers Provide Incremental Coverage
  - Goal is to provide "Partial" Credit Enhancement
  - Ratings Are Moved (eg "BB" to "A" rating)
- CDS – Complex Credit
  - CMBS (vertical [multi-tranche buyer] or horizontal)
  - Multiple facilities
  - REITs added

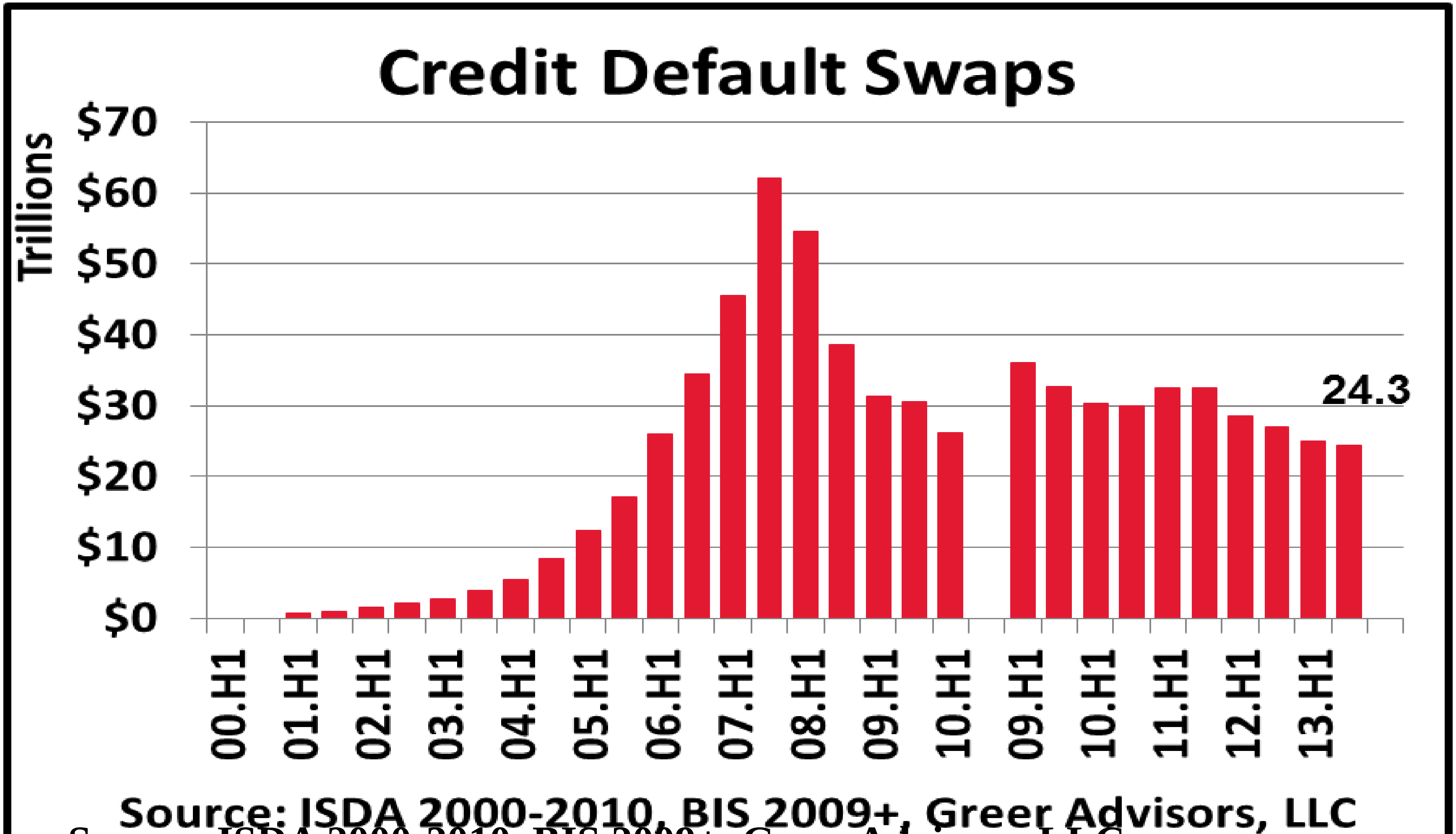
CDS – Credit Enhancement – Market Change

- **DEBT ISSUANCE**
- Debt Issued $1B
- SRA Rates Debt
- Estimated Loss =$10MM = “B” Rating
- SRA says $1MM = AA
- $9MM CDS bought
- Debt “credit enhanced” from “B” to “AA”

- **DEBT RE-RATED**
- Existing Debt 6 mo’s later
- SRA Re-Rates Debt
- Estimated Loss now $20MM = “unrated” security
- SRA says $1MM = AA
- CDS provided $9MM coverage, yields $11MM expected loss
- Credit Enhancement not enough to yield rated security

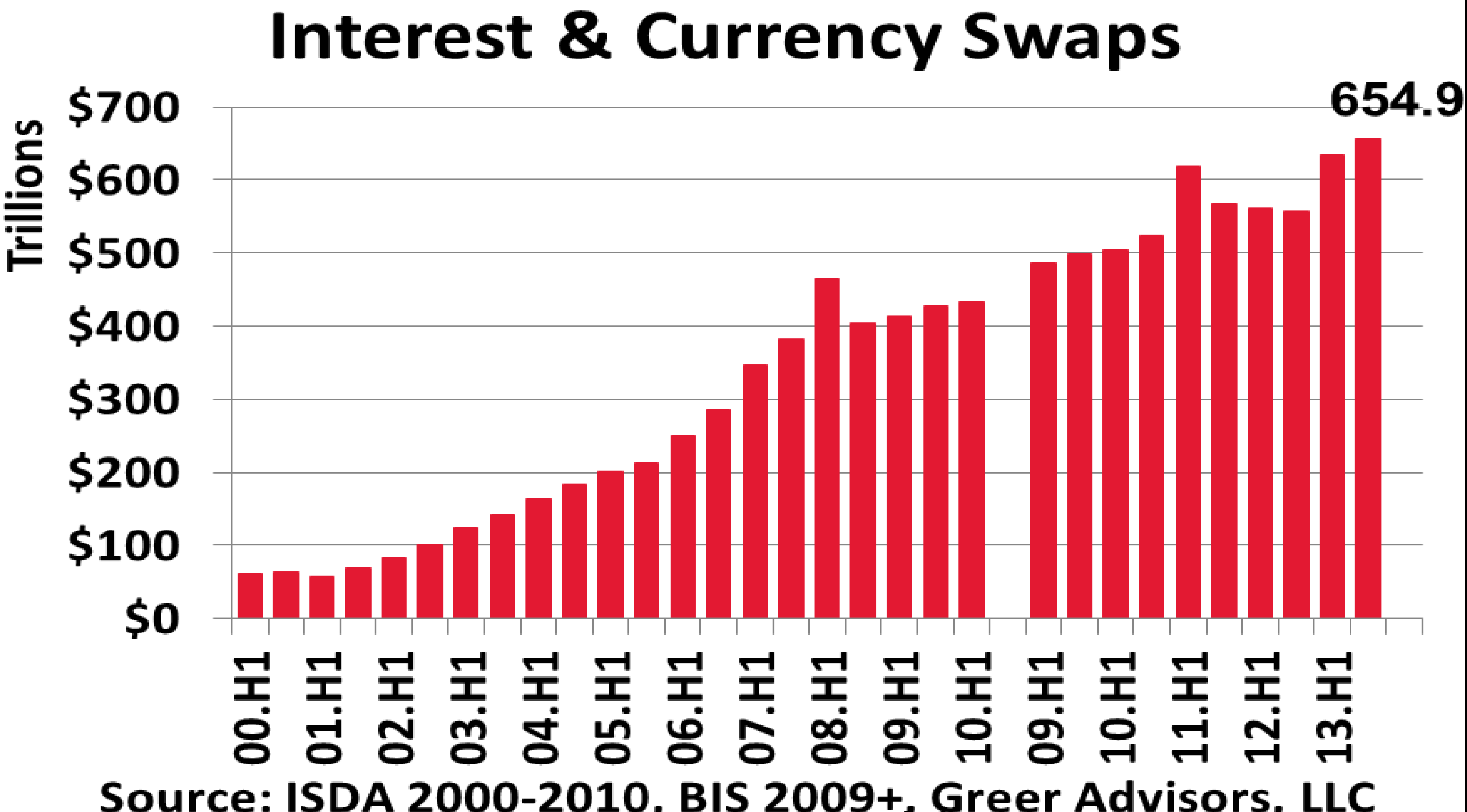
Note: Above is Hypothetical Example

Credit Default Swaps



Source: ISDA 2000-2010, BIS 2009+, Greer Advisors, LLC

Interest and Current Swaps



Source: ISDA 2000-2010, BIS 2009+, Greer Advisors, LLC

- What Caused the Fall

What caused the Fall?

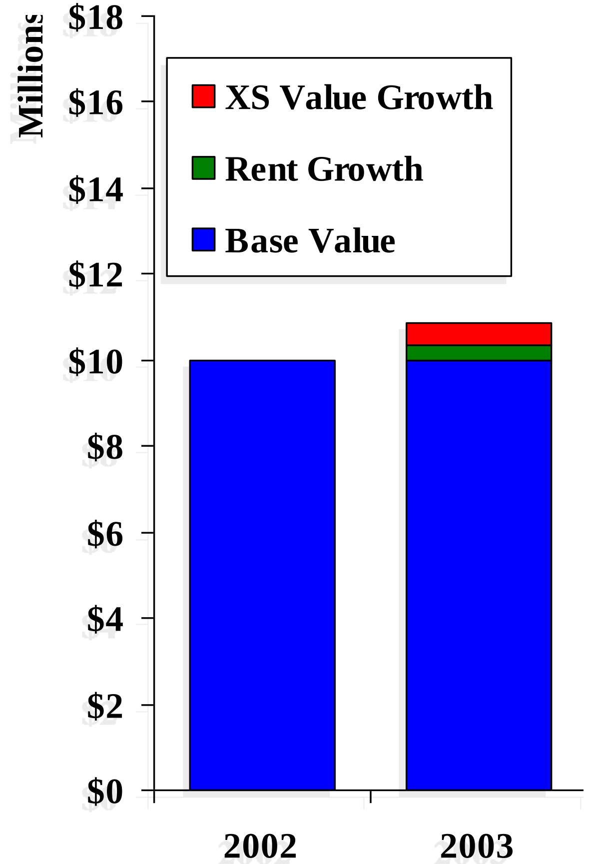
- Homeowners overbought. The escalation of values led to irrational behavior.
- Purchasers of securitized debt believed the rating agencies. They lost discipline, and no longer underwrote their purchases themselves. This led to unrealistically low interest rates.
- Issuers of securitized debt issued loans that were unsustainable. Critical underwriting was replaced with production goals. Loans were booked with the intention to sell in a few months, not with the intention to hold.
- Credit Enhancements were used to inflate ratings
- Regulators did not regulate with scrutiny. Numerous “soft” whistles were blown, but no-one did anything.

Cause of Greed – Unrealistic Growth

Year	Rent	RentG	Ind Cap	Value
2002	750,000	3.30%	7.50%	$10,000,000

- Increase in value was only "interest rates" first 2 years. Momentum effect carried it further. What happens when it stops?

Rent versus Value Growth



Source: Greer Advisors, LLC

Questions / Answers

Greer Advisors, LLC

www.GreerAdvisors.com

NOTE: This is Bicycle 3, “BEFORE” renovation