

---

---

# Capital Markets and their Impact on Valuation

Everett (Allen) Greer  
Greer Advisors

August 26, 2009

---

---

**Greer Advisors, LLC**

---

---

---

---

# Goals of Presentation

---

- Fundamentals
- Capital Markets (CMBS/CDO/REIT/CDS)
- Implications for Real Estate (Size/Yield/Impact)
- Real Estate Trends (Capitalization/Yield Rates)
- Conclusions
- Forecast
- Signs to Look for

---

---

# Fundamentals

---

## Supply / Demand

- Supply Growth – Development has Stopped
- “Big Picture” ties to Gross Domestic Product
  - Office – FIRE Employment, Portion of Service Employment
  - Retail – Household Formations, Income Growth
  - Industrial – Manufacturing vs Distribution
  - Multifamily – Households
  - Hotel – Corporate Travel – Office Employment
- Jobs & Retail Sales Drive Supply & Demand!!!

**Financing** – Currently Most Important Fundamental

---

---

# Financing Fundamentals

---

Capital Markets Drive Financing

CMBS / REITs are Benchmarks

Capital Markets Have Dried Up or Risen Many-fold

Banks are in DEEP Credit Crunch

Few Banks are “In the Game” of Lending

Rates Across the Spectrum Have Risen

Equity, Mezzanine, Debt

Deleveraging – Lower LTV / Higher DSC

Many “former” borrowers can’t get loans today

---

---

# 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.
- During the last few years, has accounted for slightly less than 40% of all commercial real estate lending.

---

---

# 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

---

---

# 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.



---

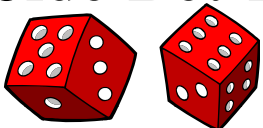
---

# Players in “Simple” CDS

---

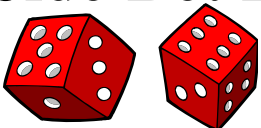
## Business Issues Bonds

Side Bet 1

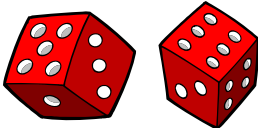


Bonds initially rated too poor for market, eg “BB”

Side Bet 2



Side Bet 3

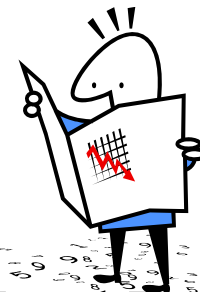


Investment Bank issues CDS (aka Credit Enhances Debt) Enough to make BB = AA, if debtor fails, IB buys bonds

## Rating Agency Rates Bonds



Gives loss forecast & amount required for “AA” rating



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

---

---

**Greer Advisors, LLC**

---

---

# 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

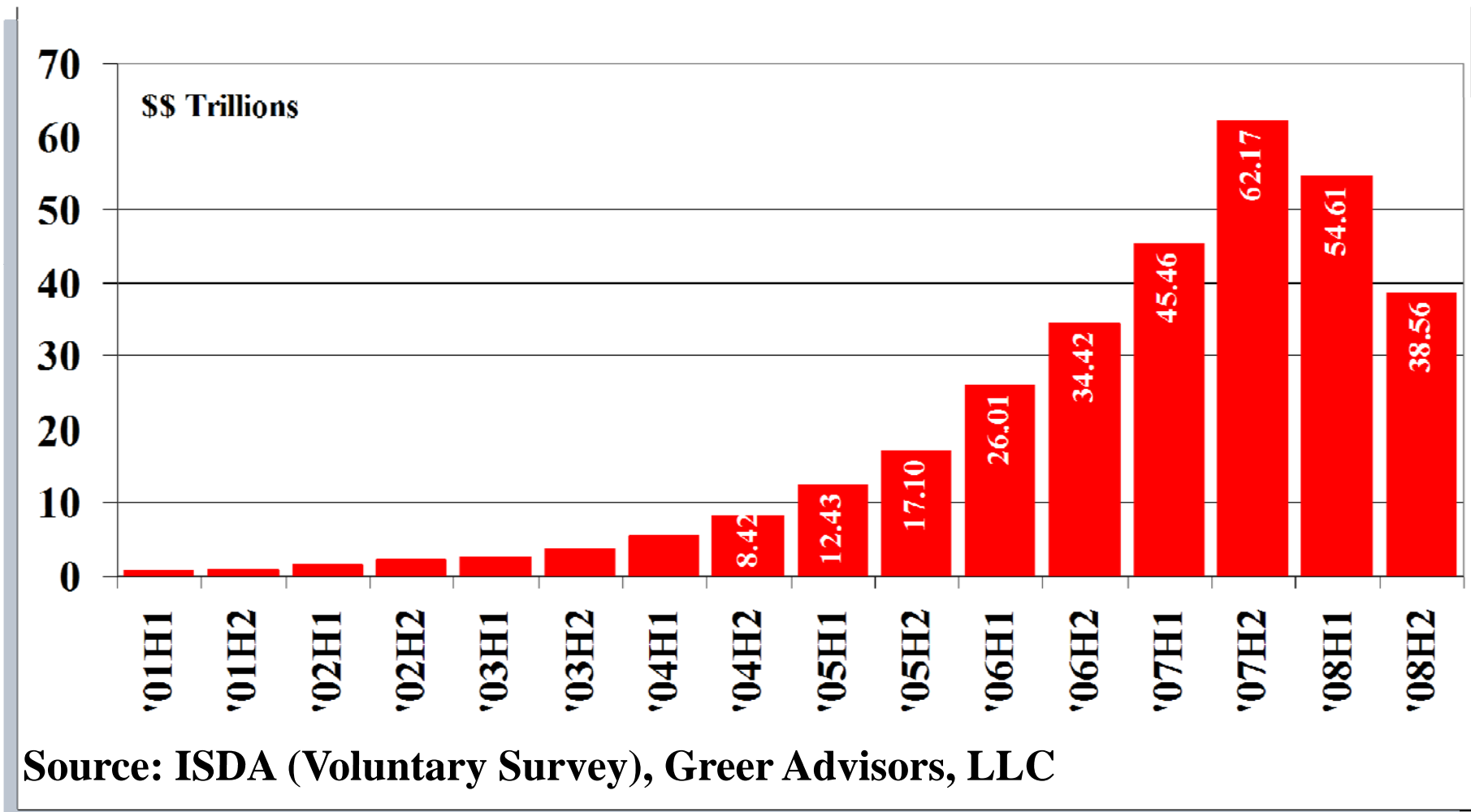
- Debt Issued \$1B
- SRA Rates Debt
- Estimated Loss = \$10MM = “B” Rating
- SRA says \$1MM = AA
- \$9MM CDS bought
- Debt “credit enhanced” from “B” to “AA”

## ■ 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, now addtl \$10MM expected loss
- Credit Enhancement not enough to yield desired rating on security

Note: Above is Hypothetical Example

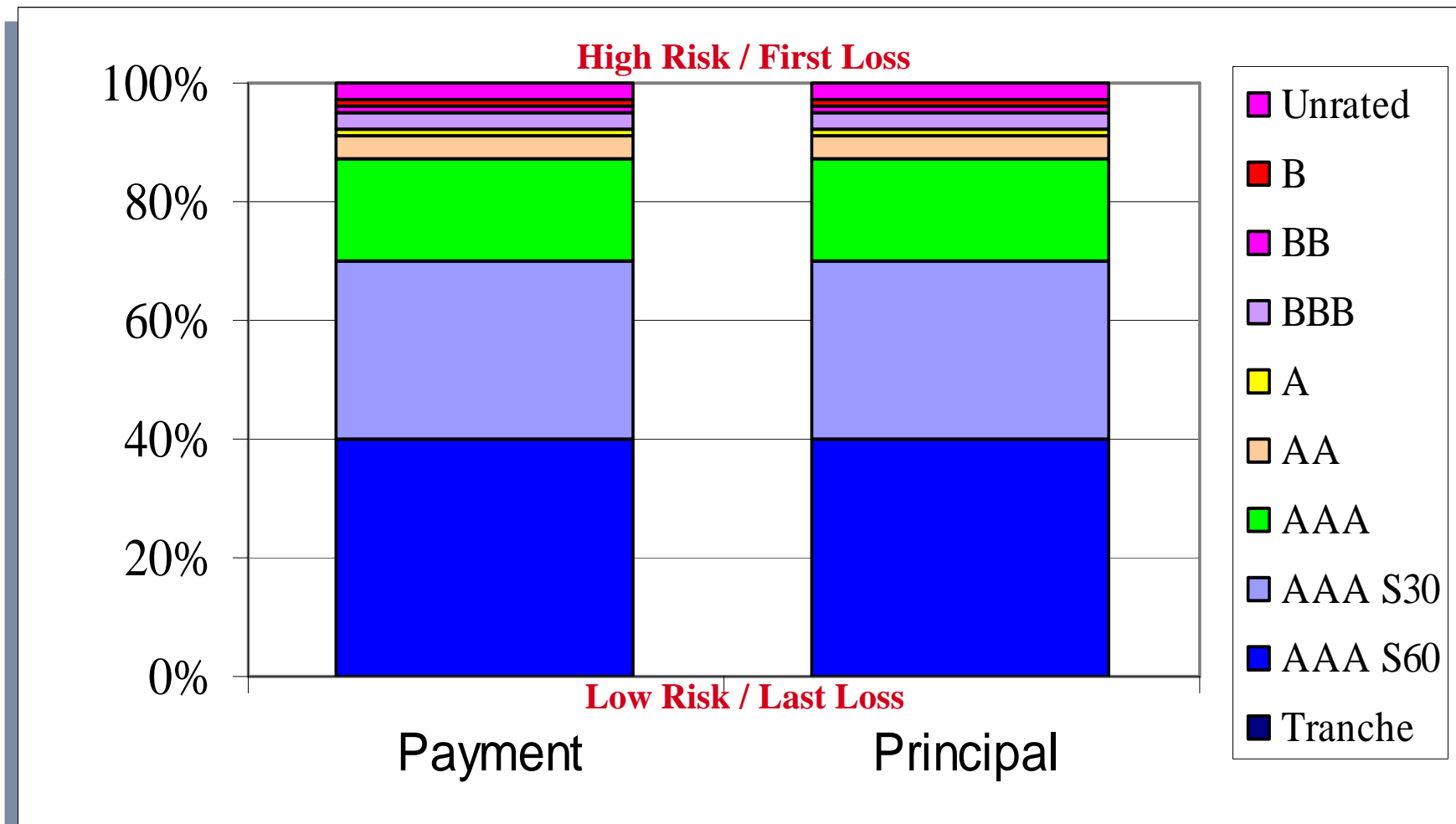
# Credit Default Swaps



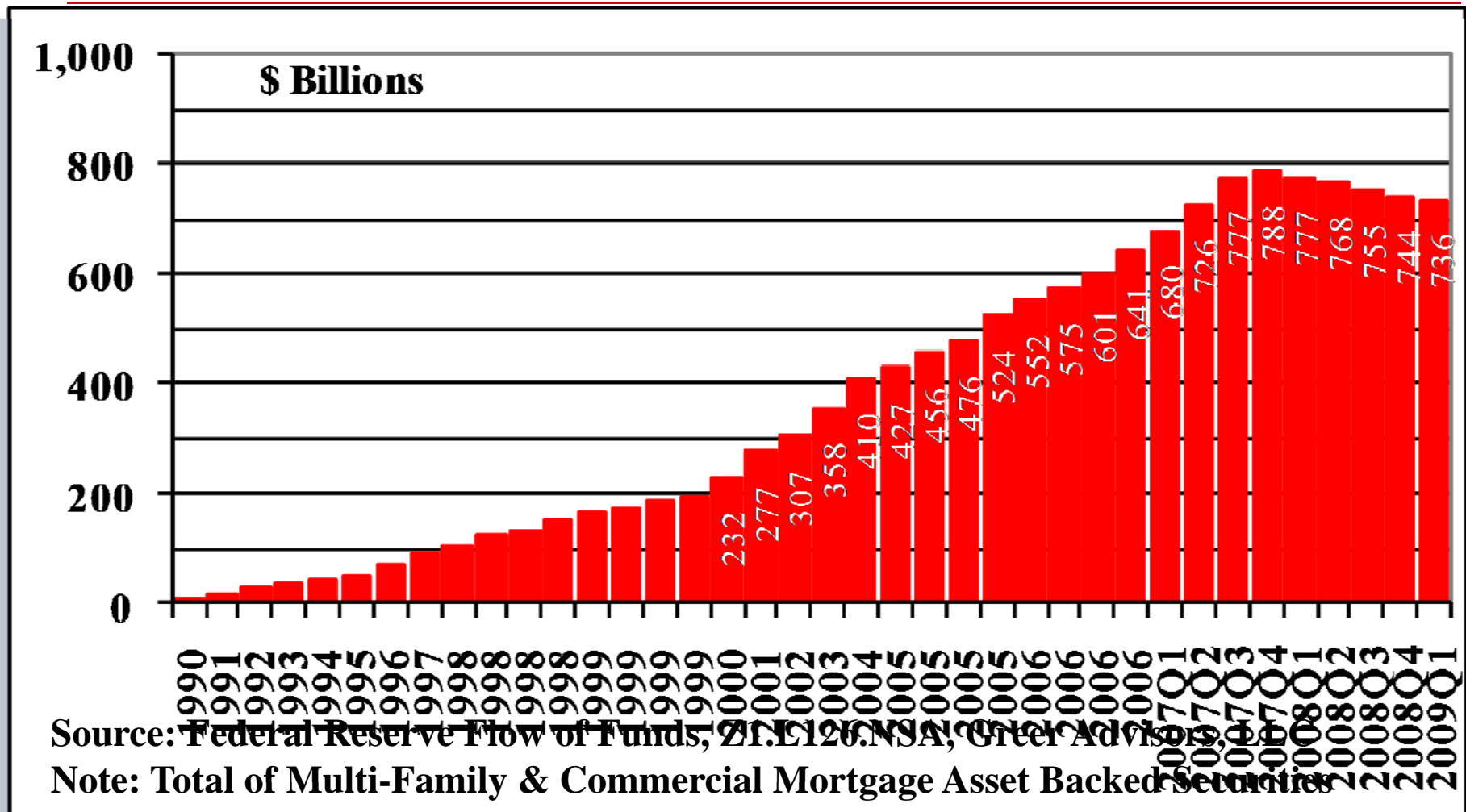
# Example of a “Typical” MBS

<b>No. Loans</b>	<b>250</b>		
<b>Avg. Loan Size</b>	<b>\$10,000,000</b>		
<b>Total Loan Amt.</b>	<b>\$2,500,000,000</b>		
<b>Index Name</b>	<b>10-Year Treasury</b>		
<b>Index Rate</b>	<b>3.450%</b>		
<b>Avg. Margin</b>	<b>1.750%</b>		
<b>Avg Yield</b>	<b>5.200%</b>		
		<b>THEN</b>	<b>NOW</b>
<b>Rating (10Y)</b>	<b>Subordination</b>	<b>2007.01</b>	<b>2009.0824</b>
<b>AAA S60</b>	<b>60.0%</b>	<b>3.650%</b>	<b>3.499%</b>
<b>AAA S30</b>	<b>30.0%</b>	<b>3.700%</b>	<b>5.098%</b>
<b>AAA</b>	<b>12.5%</b>	<b>3.750%</b>	<b>10.039%</b>
<b>AA</b>	<b>9.0%</b>	<b>3.850%</b>	<b>20.545%</b>
<b>A</b>	<b>8.0%</b>	<b>4.450%</b>	<b>34.942%</b>
<b>BBB</b>	<b>5.0%</b>	<b>5.200%</b>	<b>56.484%</b>
<b>BB</b>	<b>4.0%</b>	<b>5.950%</b>	<b>60.967%</b>
<b>B</b>	<b>2.5%</b>	<b>7.450%</b>	<b>143.952%</b>
<b>Unrated</b>	<b>0 to &lt;2.5%</b>	<b>8.450%</b>	<b>226.938%</b>
	<b>Weighted Average Yield</b>	<b>3.944%</b>	<b>15.891%</b>
<b>Implied Annual Excess Return</b>		<b>0.256%</b>	<b>-11.691%</b>
<b>Note: Assumes 1% swap, agency, trust, servicer and other fees.</b>			

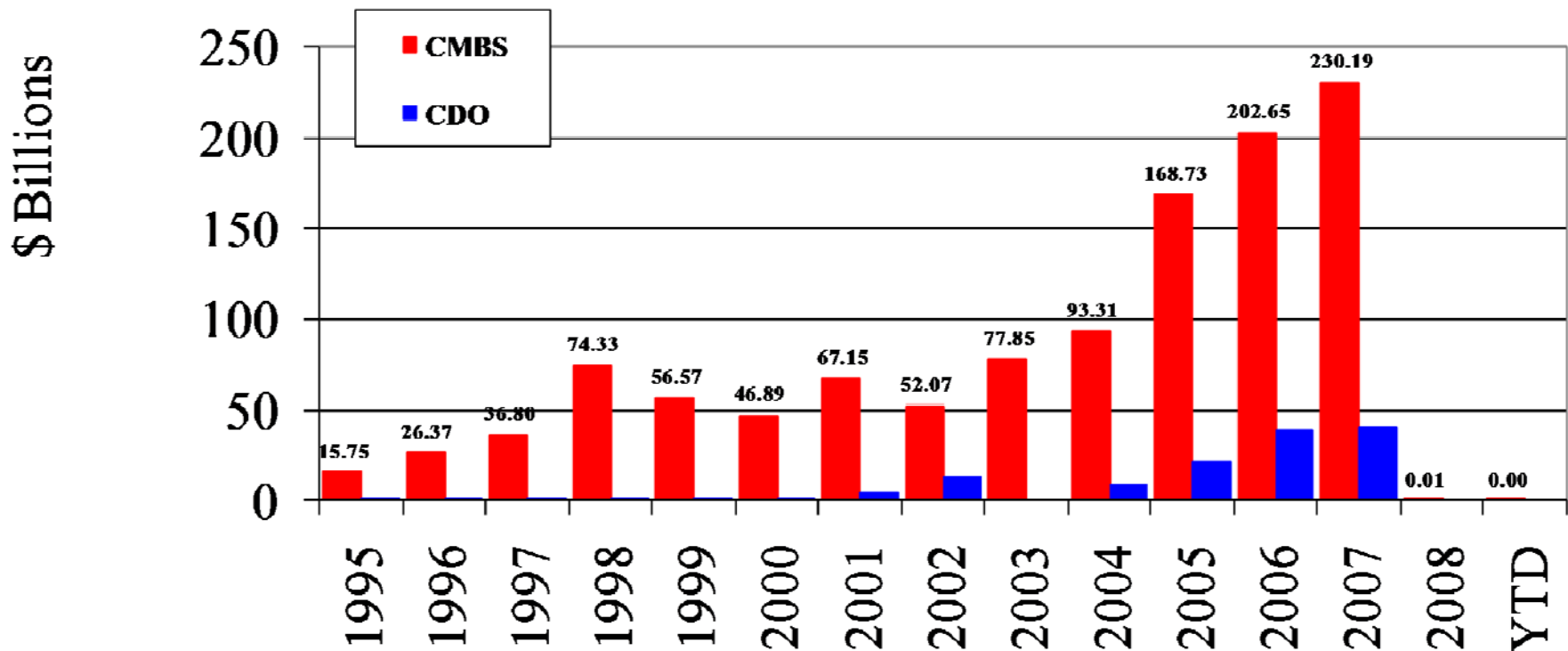
# Subordination Graph



# CMBS Outstandings in U.S. - Grows



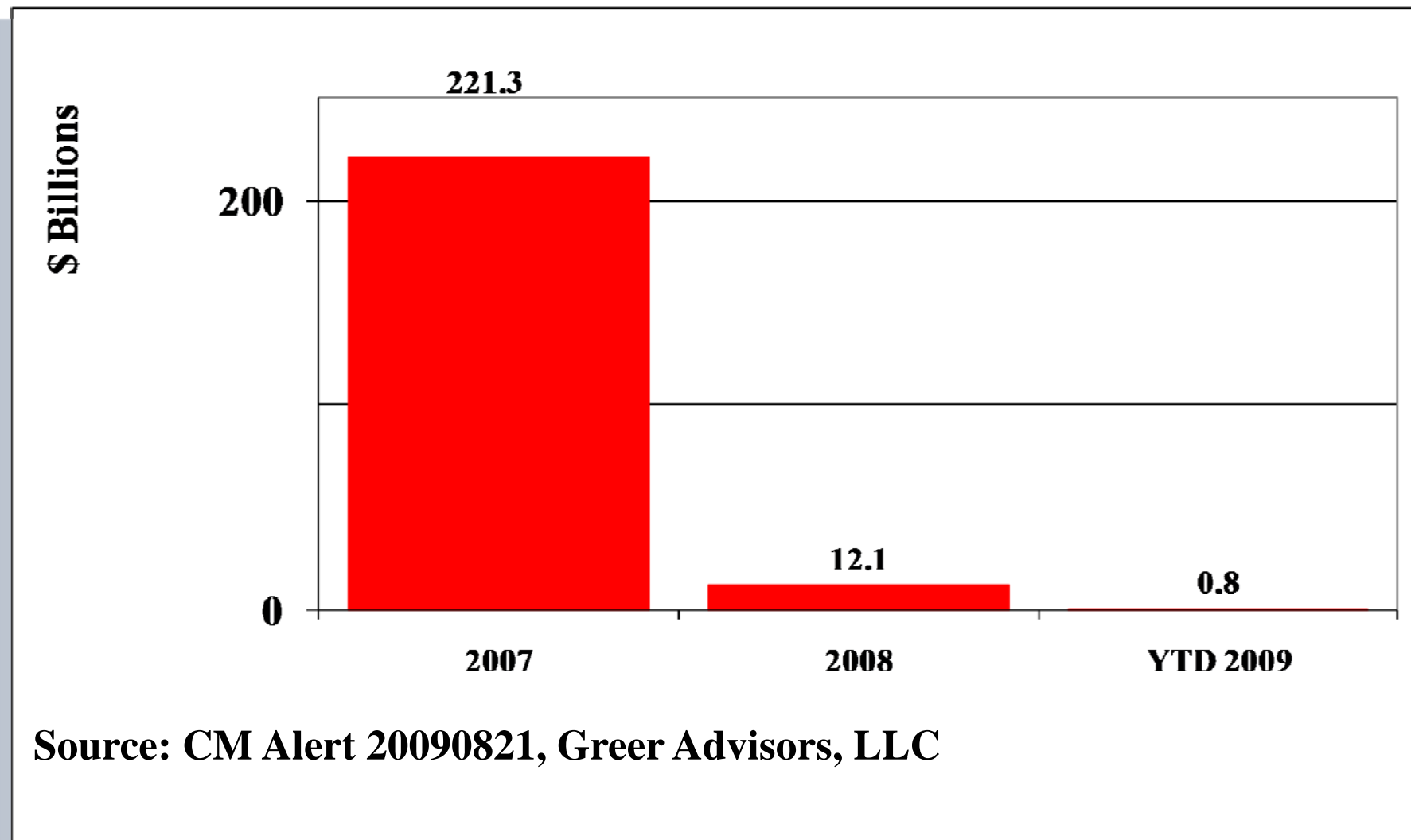
# CMBS Issuance in U.S. - Skyrockets



Source: CM Alert 20090821, Greer Advisors, LLC

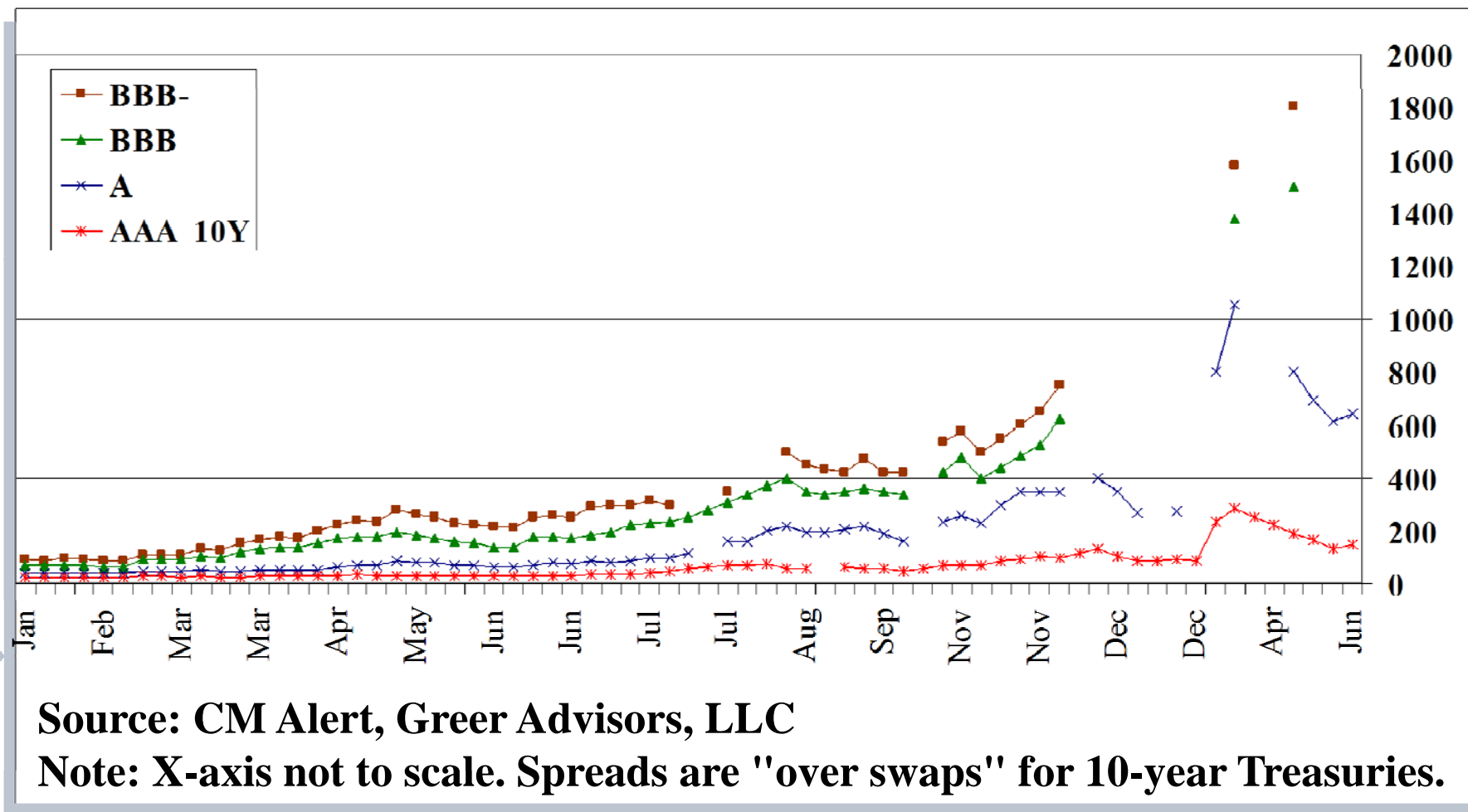


# CMBS Issuance in U.S. – 2008 Off 99% YTD



Source: CM Alert 20090821, Greer Advisors, LLC

# CMBS Yield Spreads (Spread to Swap)



Note: Last "TRUE" CMBS closed was June 29, 2008

18 Graph covers 1/2007 – Jun 2008

**Greer Advisors, LLC**

---

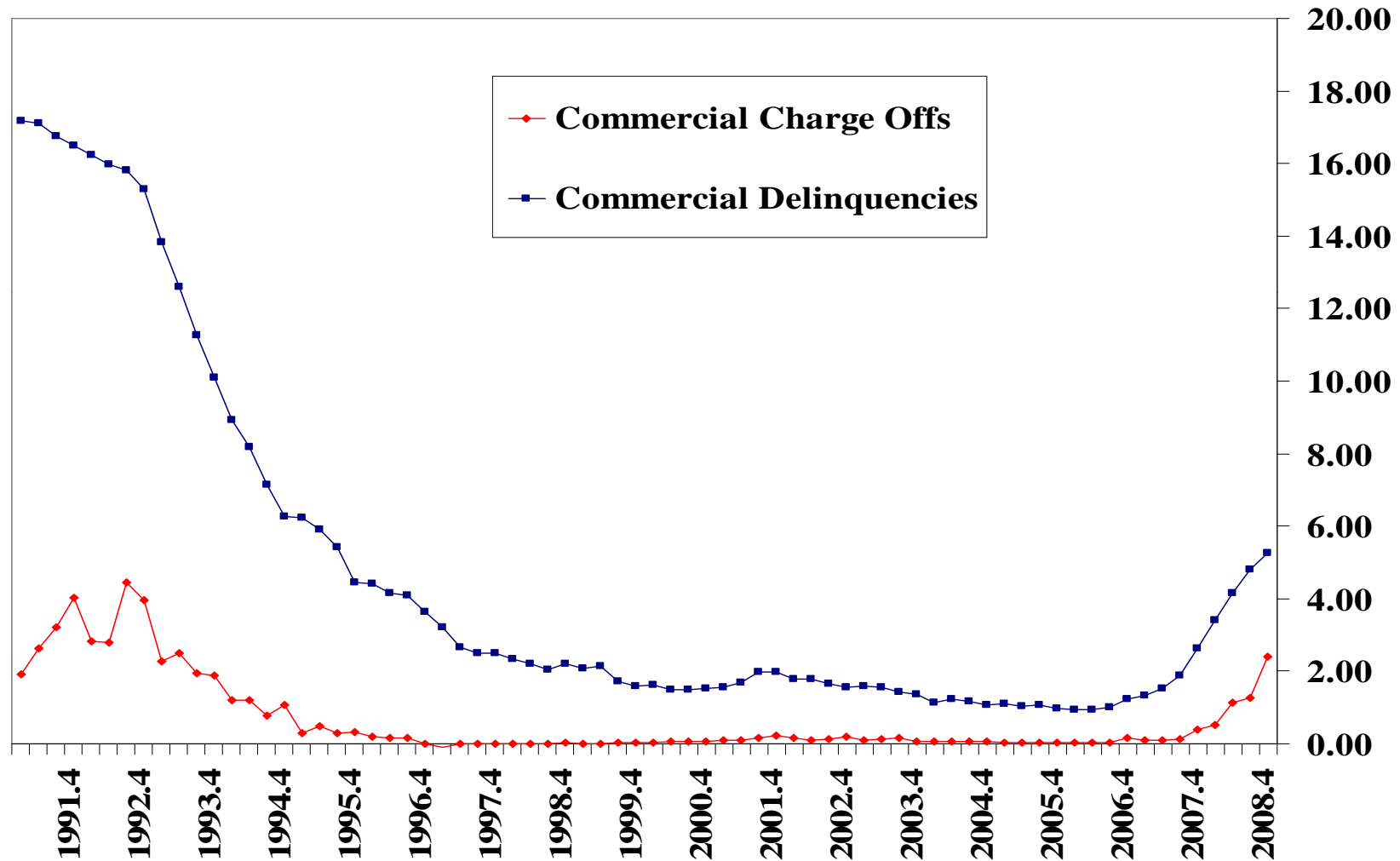
---

# Future - Mortgage Backed Security

---

- Until MBS Returns, markets WILL NOT fully recover
- Most banks ARE NOT in the business of holding long term debt
- New MBS WILL EMERGE with terms as follows
  - No “quick buck” investment banks/mortgage bankers
  - Issuer will hold 1-5% of pool as “1<sup>st</sup> Loss / Good Faith” position
  - 60-70% of pool will be AAA, not 92%
  - Buyers of paper will “re-underwrite” pools, regardless of SRA

# Commercial Real Estate Loans



Source: Fed Reserve Board, Top 100 Banks, SA,

## Synthetic CMBX Yields

<b>Tranche *</b>	<b>Yield * 8/24/09</b>	<b>Approx CMBS 1/2007 **</b>	<b>Rise in Yields**</b>
<b>CMBX.5 AAA</b>	<b>4.9%</b>	<b>3.25%</b>	<b>1.62%</b>
<b>CMBX.5 AAA AJ</b>	<b>13.7%</b>	<b>3.30%</b>	<b>10.41%</b>
<b>CMBX.5 AA</b>	<b>27.7%</b>	<b>3.35%</b>	<b>24.38%</b>
<b>CMBX.5 A</b>	<b>43.8%</b>	<b>3.45%</b>	<b>40.40%</b>
<b>CMBX.5 BBB</b>	<b>69.9%</b>	<b>3.70%</b>	<b>66.21%</b>
<b>CMBX.5 BBB-</b>	<b>74.9%</b>	<b>3.95%</b>	<b>70.94%</b>
<b>CMBX.5 BB</b>	<b>127.3%</b>	<b>4.15%</b>	<b>123.18%</b>

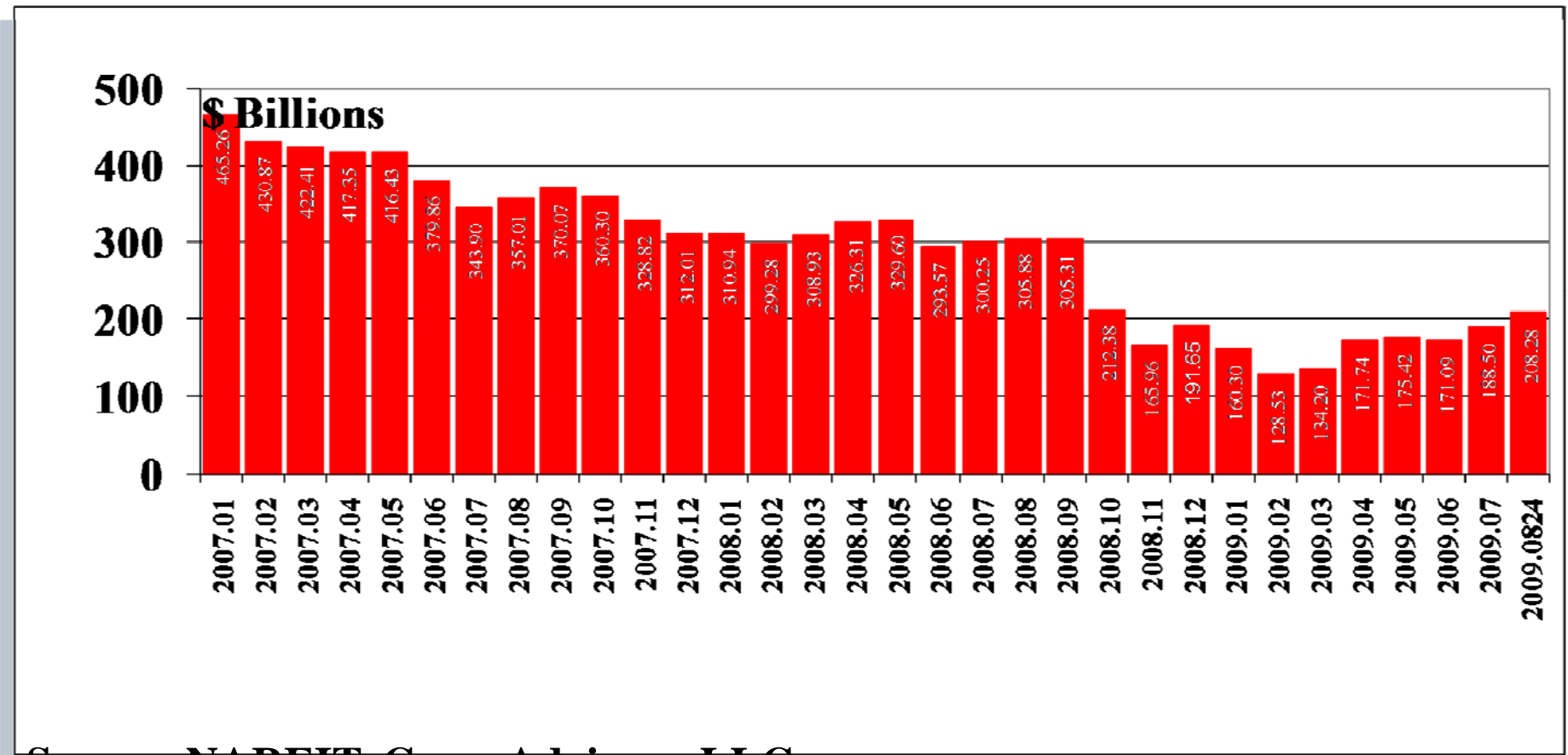
Source: \*Greer Advisors calculated based  
on initial data from Markit

# CMBS/X – Implied R.E. Yields

Greer CMBS/CMBx Yield Rate™				
Tranche	Yield	Suboord.	Weight of Debt	Contribution to Total
AAA Sr*	4.866%	29.76%	70.24%	3.42%
AAA Jr*	13.714%	12.70%	17.06%	2.34%
AA*	27.731%	10.63%	2.07%	0.57%
A*	43.848%	8.00%	2.63%	1.15%
BBB*	69.906%	4.72%	3.28%	2.29%
BBB-*	74.886%	3.68%	1.04%	0.78%
BB*	127.329%	2.69%	0.99%	1.26%
Unrated	180.0%	0.00%	2.69%	4.84%
			100.00%	
<b>Implied Debt Yield</b>				<b>16.66%</b>
<b>Overall Loan to Value Ratio</b>				<b>75%</b>
Class A Prop.	75.0%		100%	31.24%
Class B Prop.	180.0%		100%	57.49%

Source: \*Greer Advisors calculated

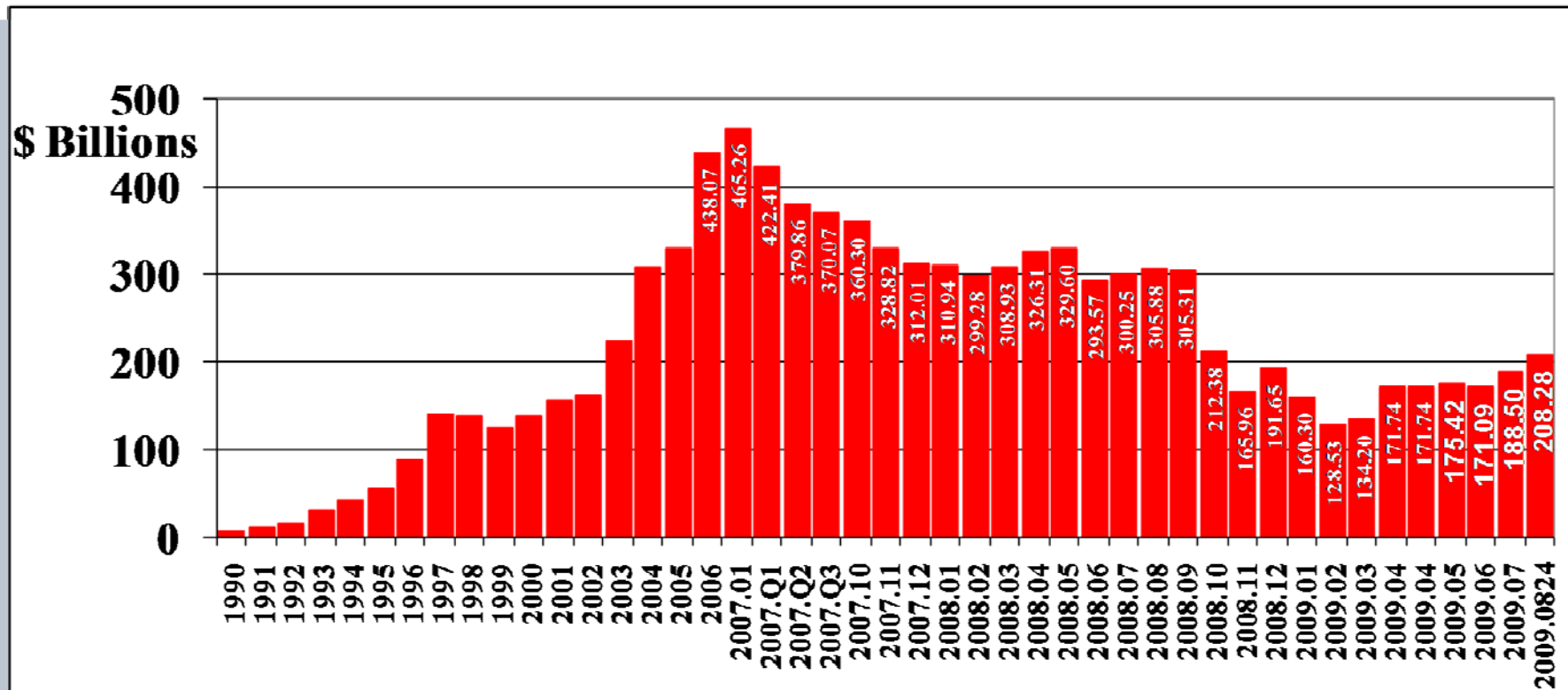
# REITs Lose \$296 Billion or 64% of value



Source: NAREIT, Greer Advisors, LLC

Note: Includes Equity, Debt and Hybrid REITS as of 8/24/09

# REIT Market Capitalization

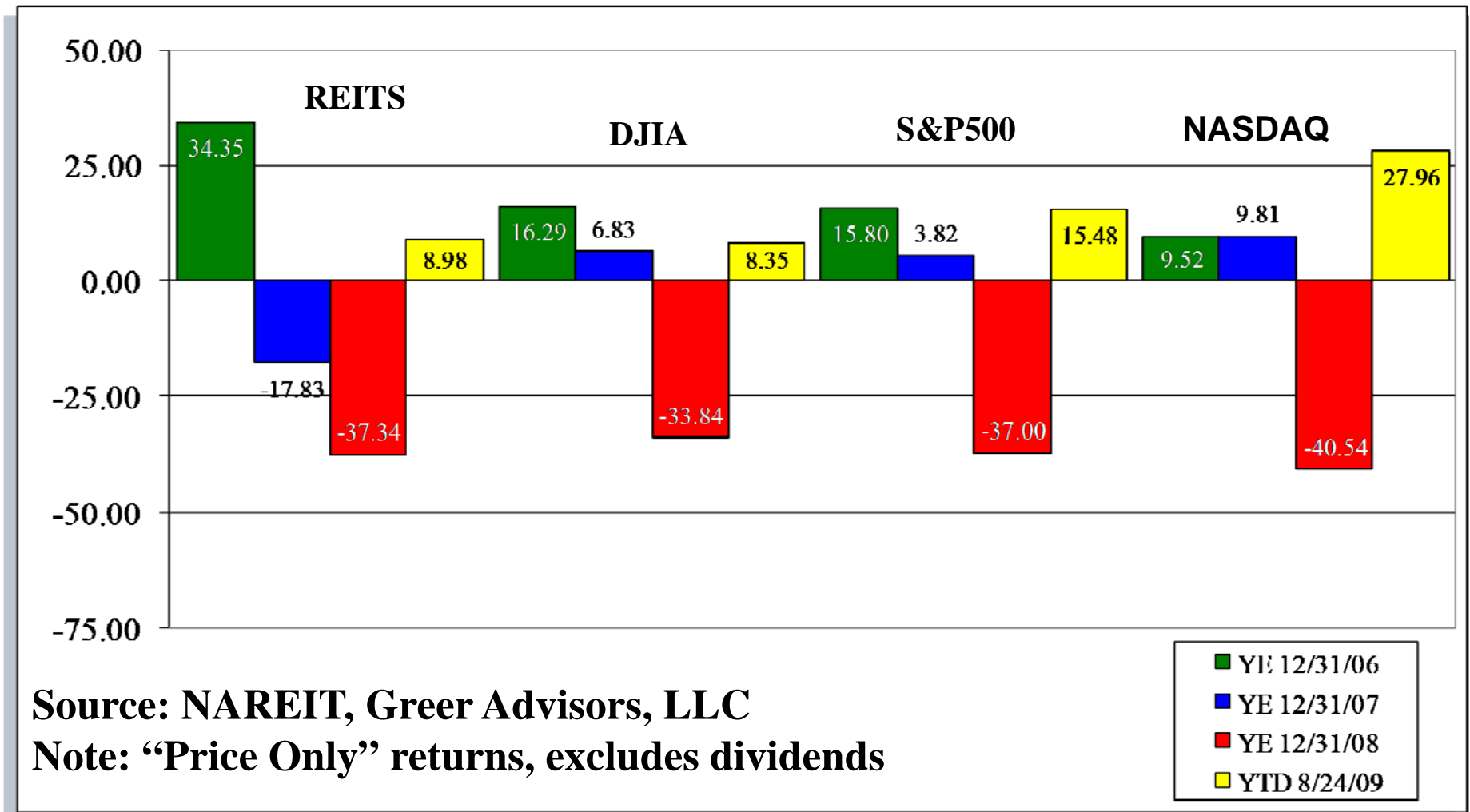


Source: NAREIT, Greer Advisors, LLC

Note: Includes Equity, Debt and Hybrid REITS as of 8/24/09



# Benchmark Returns — Changes so Fast!

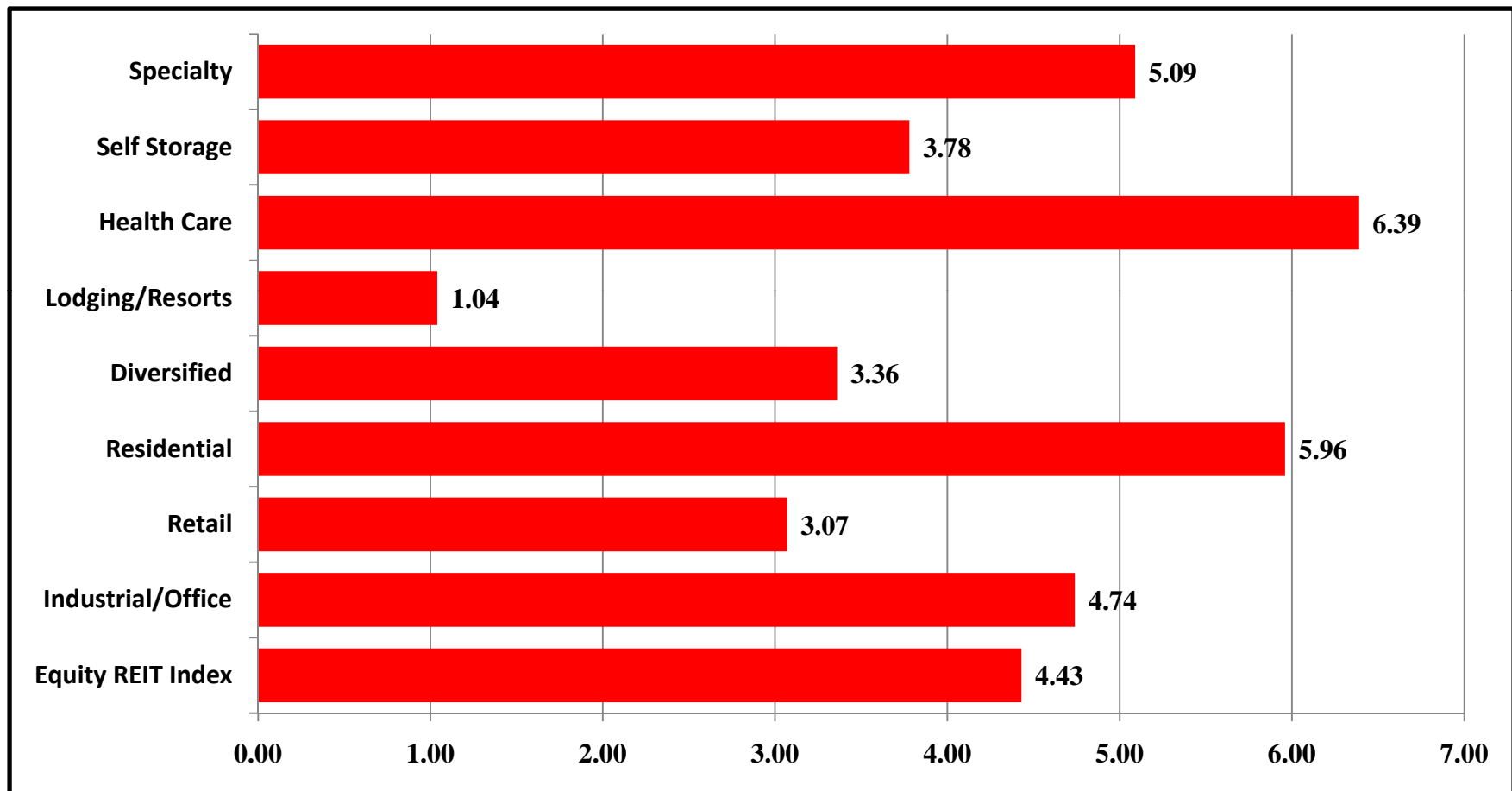


---

---

# REIT Dividend Yields by Property Type 8/24

---



Source: NAREIT, Greer Advisors, LLC

Note: Data as of 8/24/2009, "Spot" Rates

---

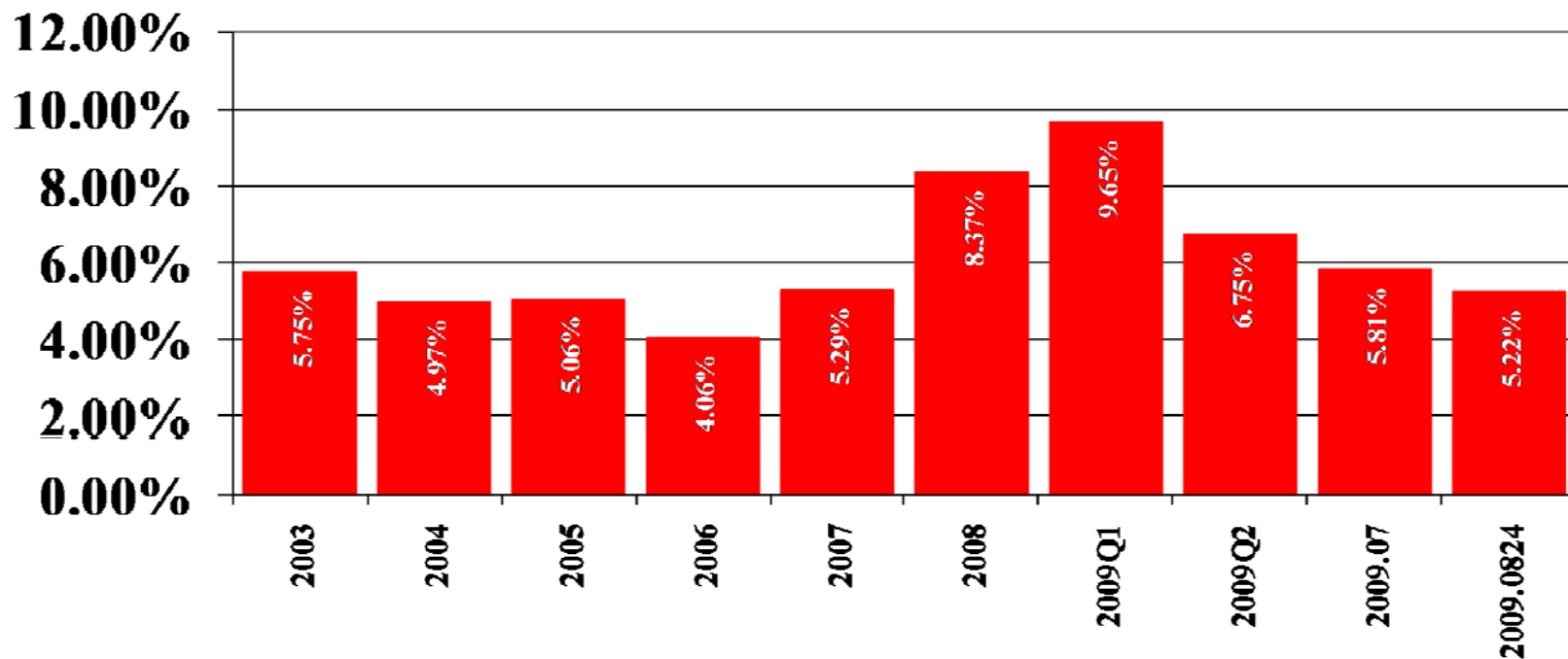
---

**Greer Advisors, LLC**

---

---

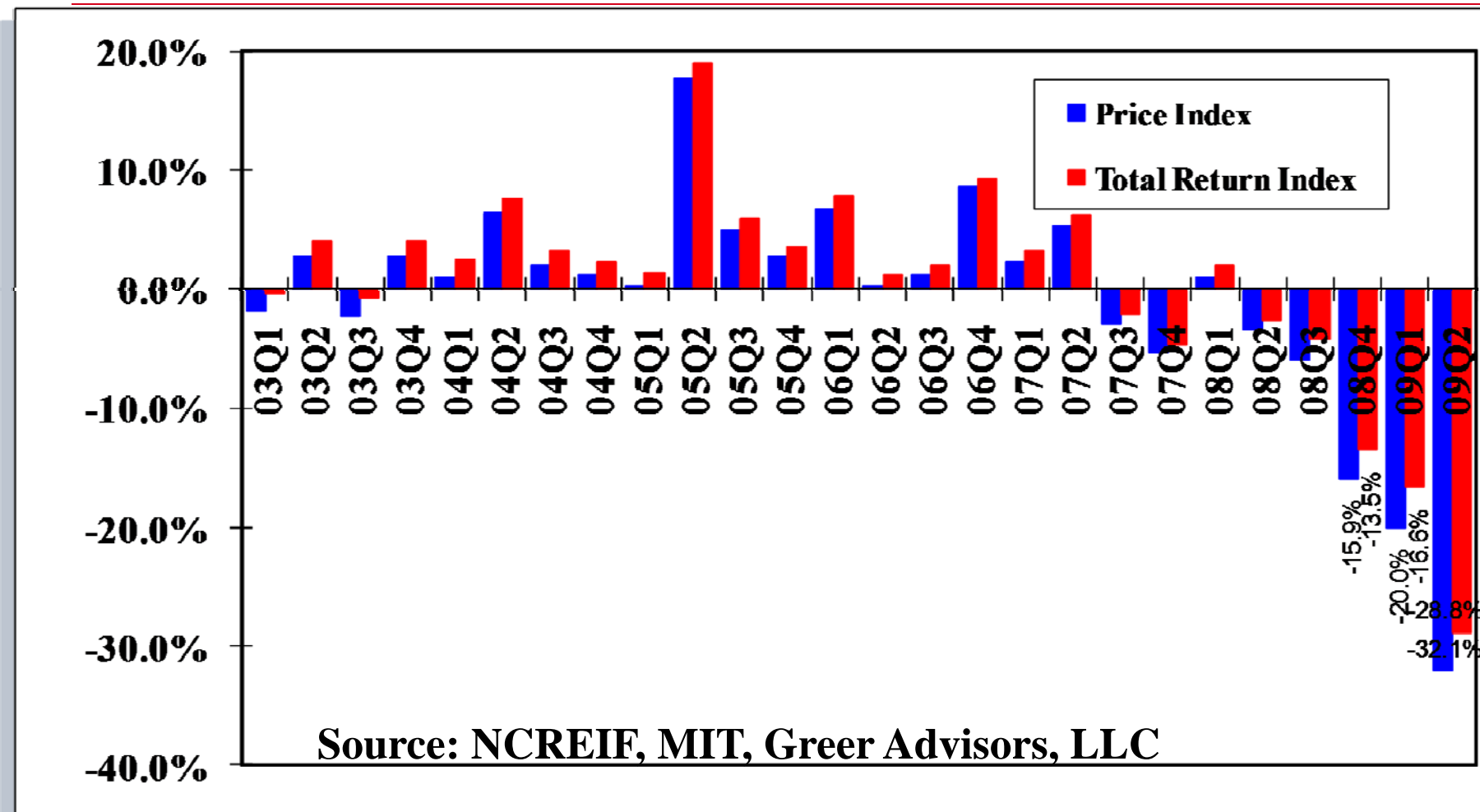
# REIT Dividend Yield (Cap Rate) Trends



Source: NAREIT, Greer Advisors, LLC

Note: Dividend Yield from NAREIT "All REIT Index" as of 8/24/09

# NCREIF 09.Q1 Continues Down



---

---

# Value Fundamentals

---

CMBS Market is Effectively Broken = Opportunities

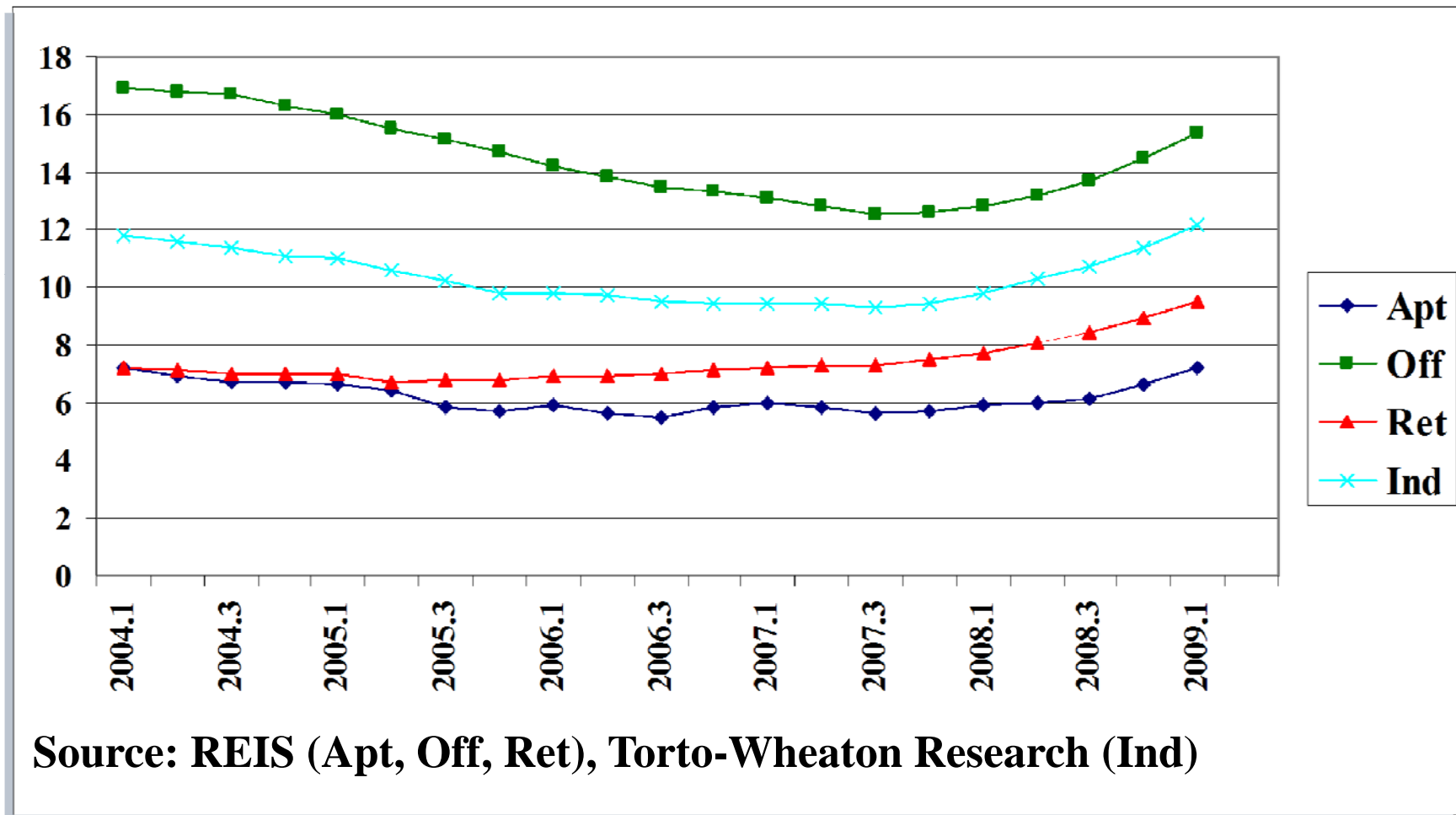
CMBS/CMBX Industry – Imply R.E. Yields Doubled

REITS are “Off” more than 50% = Opportunities

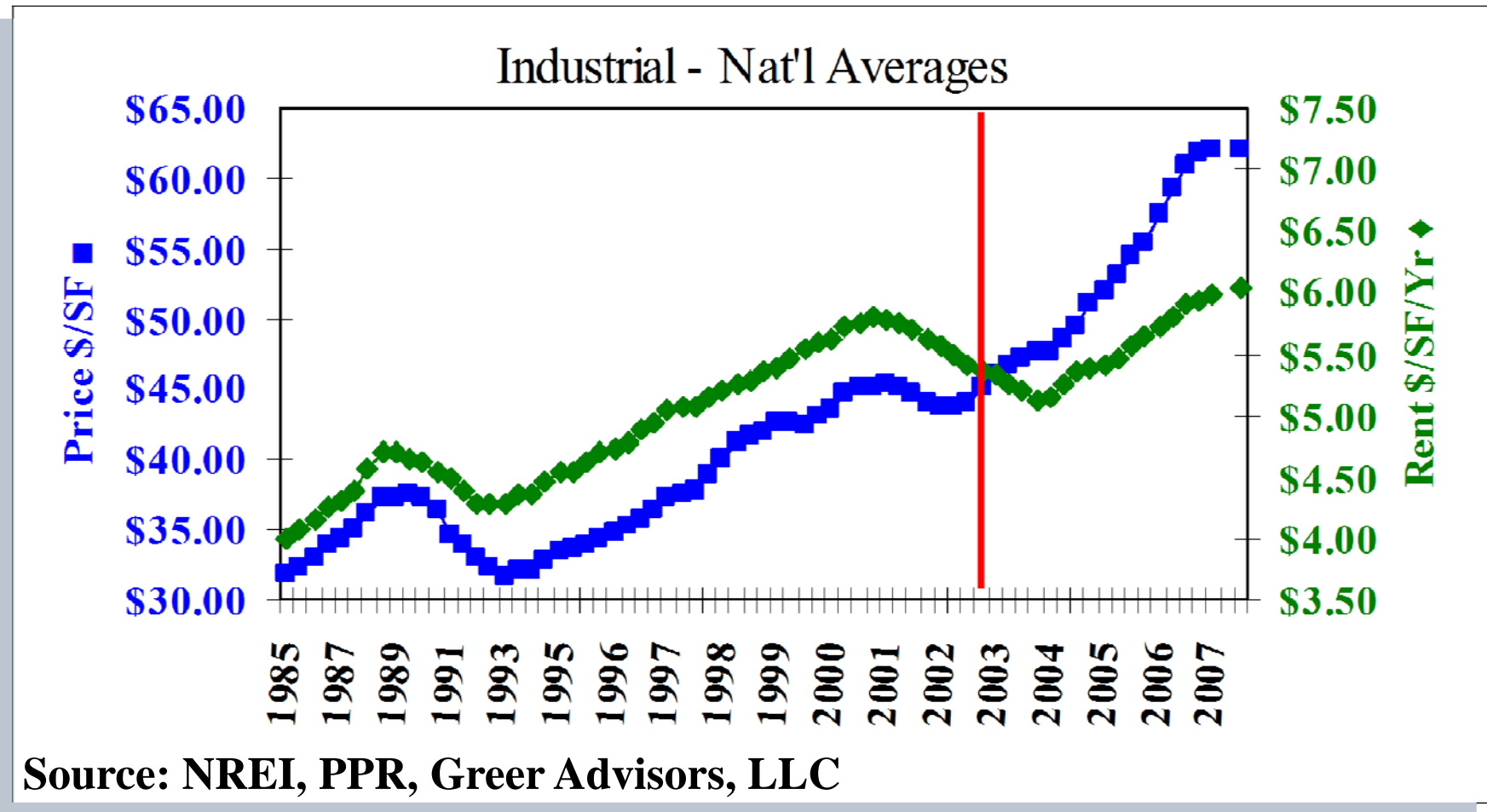
NCREIF is nearly Flat (down 2-3%)

Market Change brings Opportunities!

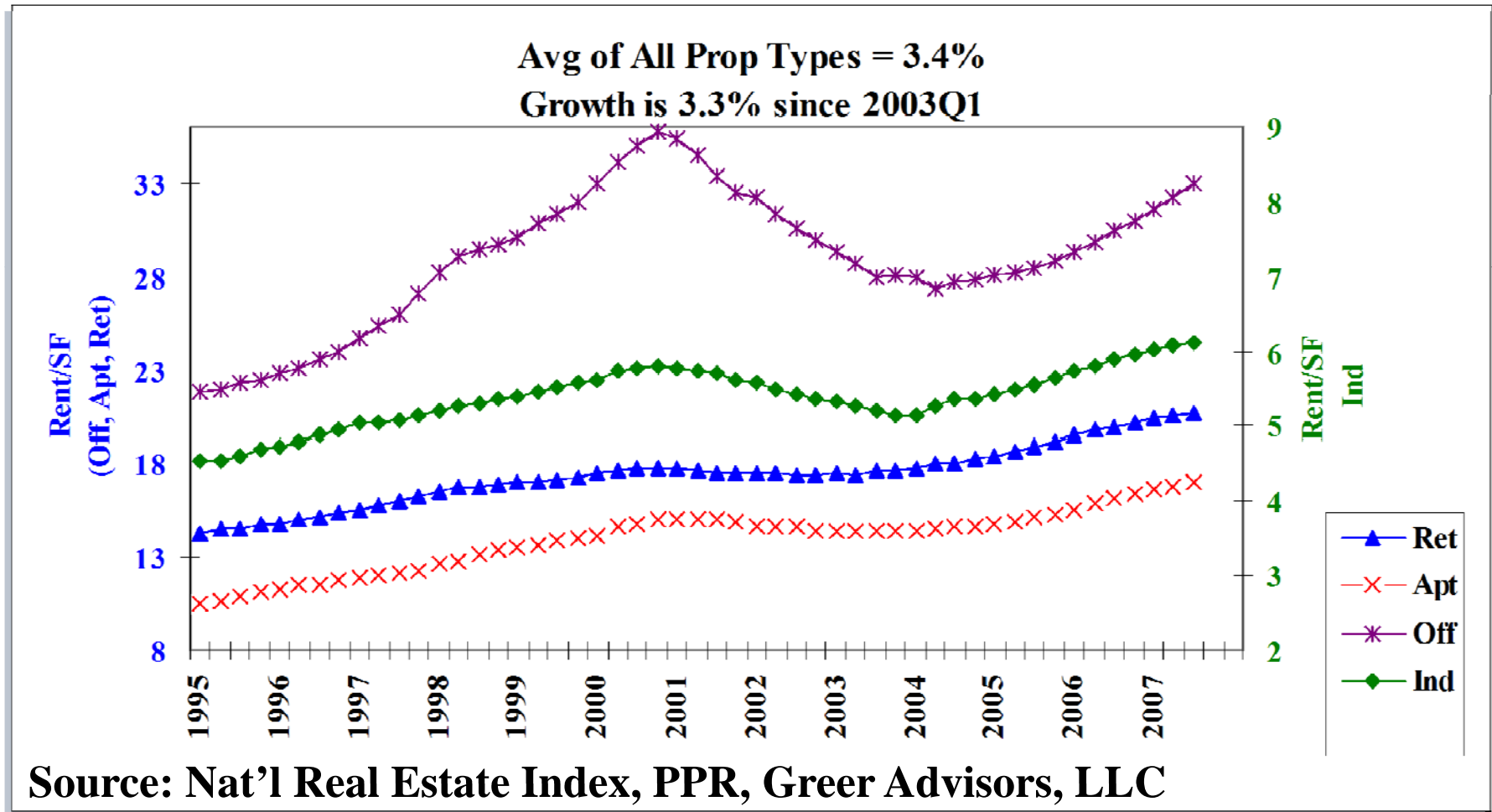
# National Trend — Vacancy – thru '09Q1



# The Relationship Breaks in 2003

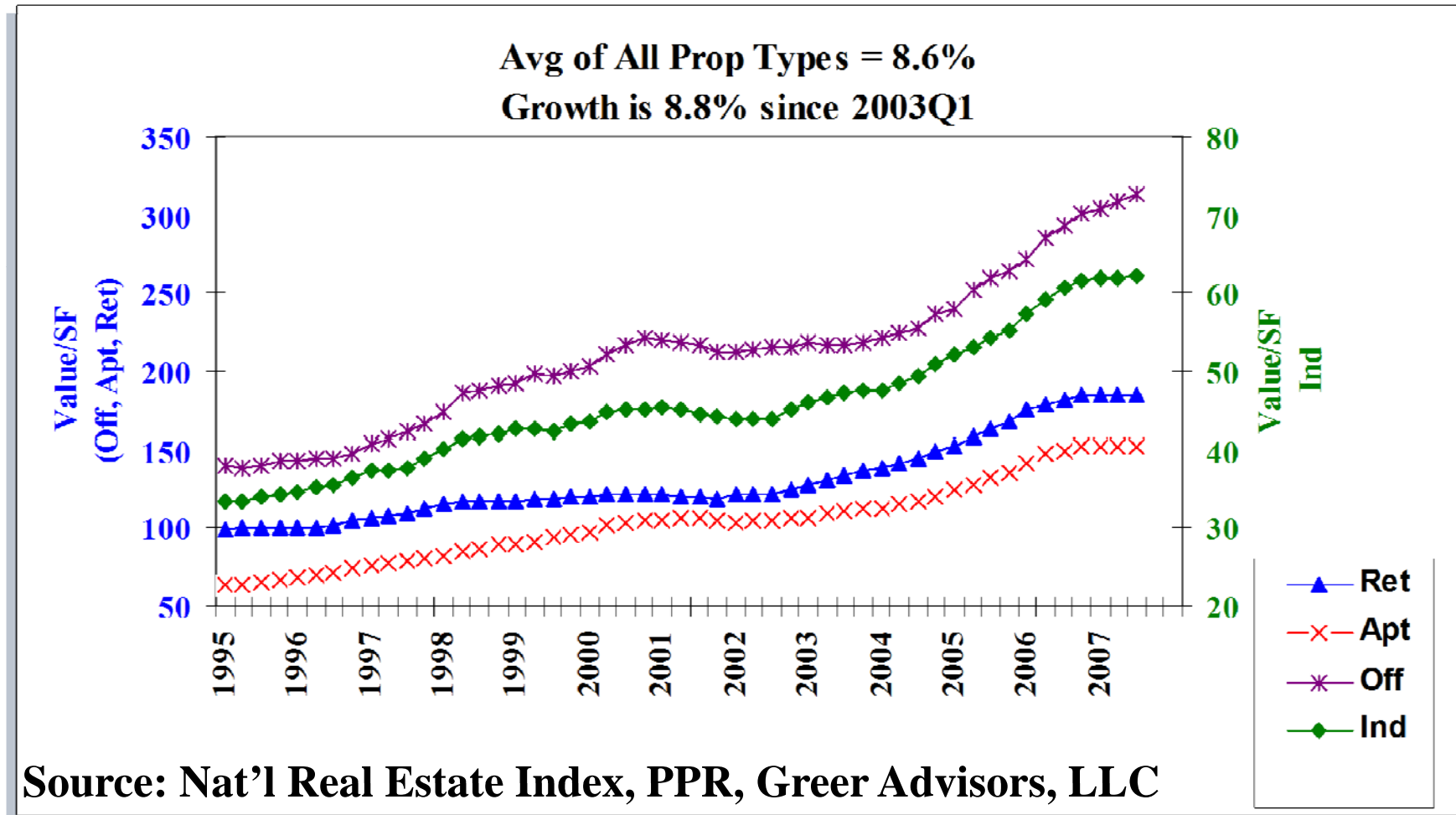


# Market Trends — National Rents





# Market Trends — National Values

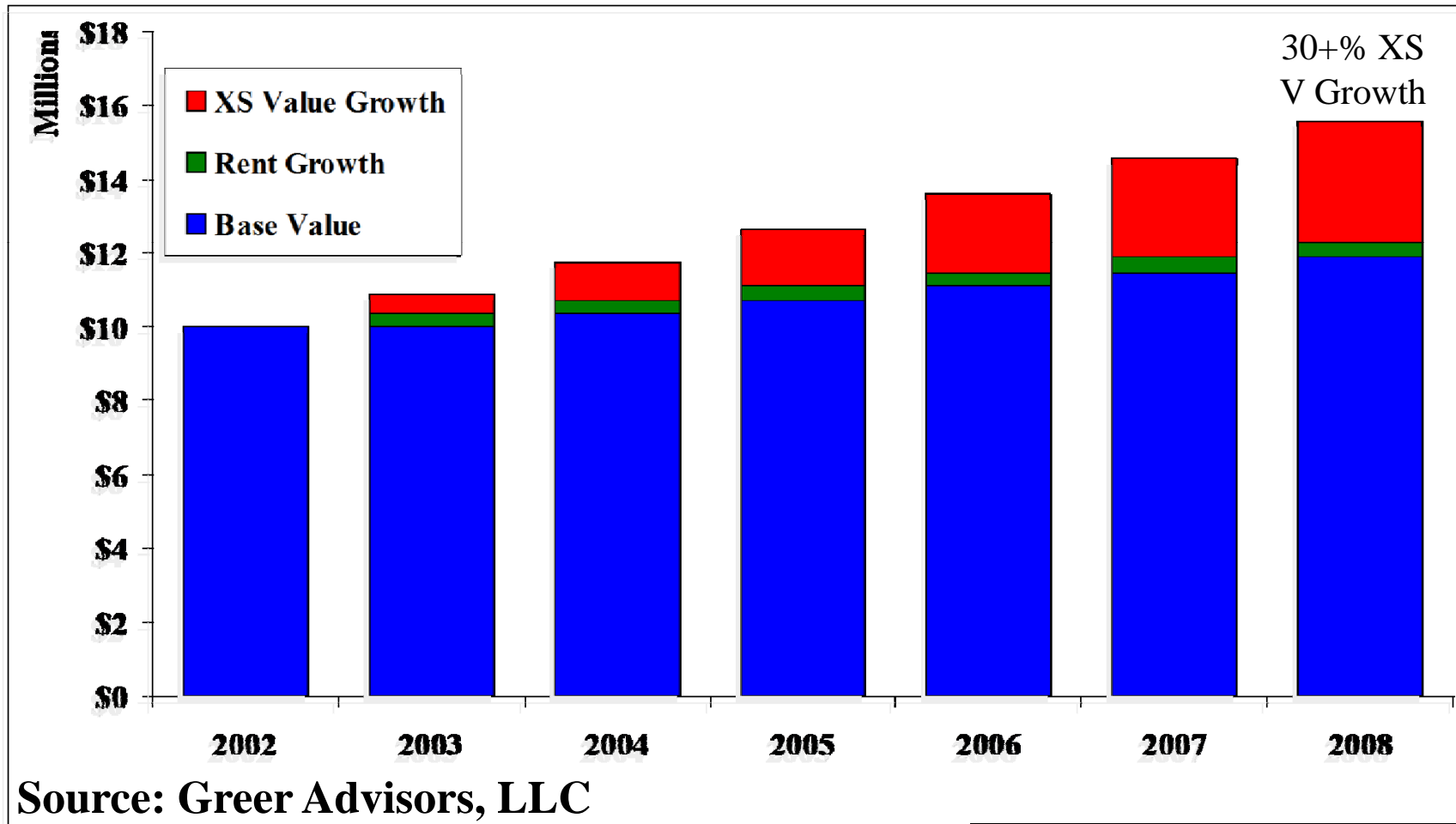


## Growth Example — Value vs. Income

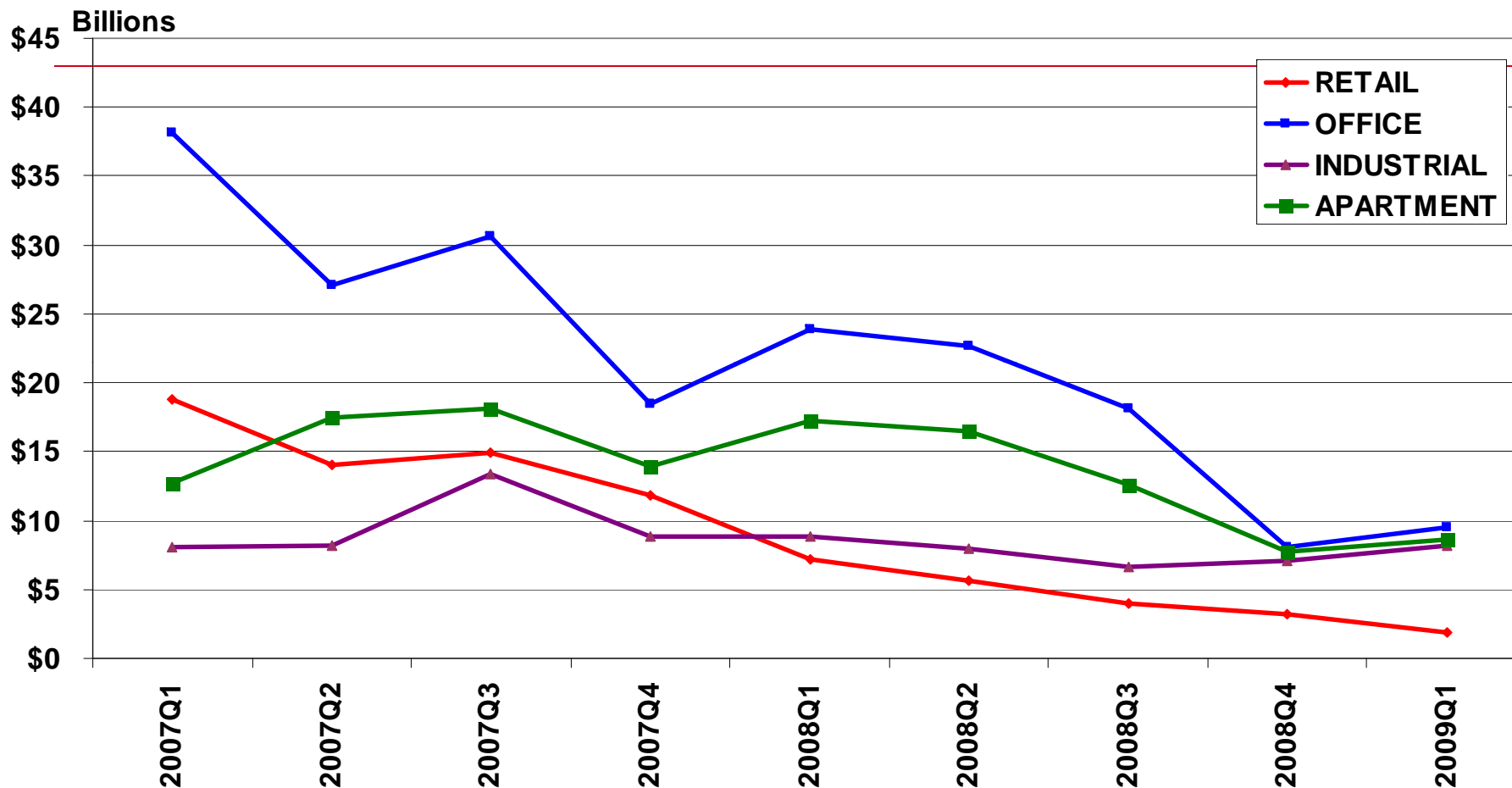
Year	Rent	RentG	Ind Cap	Value
2002	750,000	3.30%	7.50%	\$10,000,000
2003	774,750	3.30%	7.12%	\$10,880,000
2004	800,317	3.30%	6.76%	\$11,837,440
2005	826,727	3.30%	6.42%	\$12,879,135
2006	854,009	3.30%	6.09%	\$14,012,499
2007	882,192	3.30%	5.79%	\$15,245,598
2008	911,304	3.30%	5.49%	\$16,587,211
	average	3.30%		8.80%

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

# Rent versus Value Growth

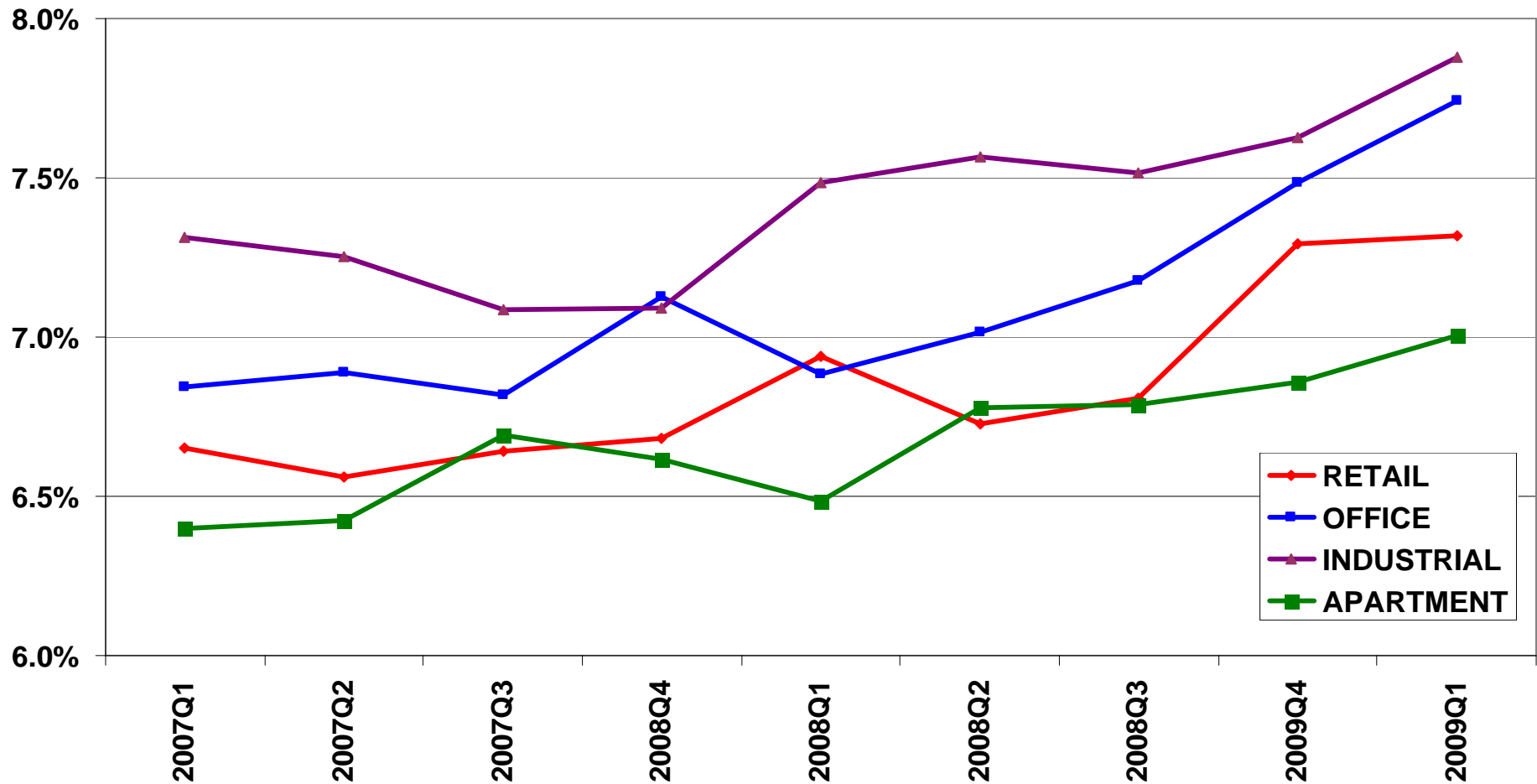


# Sales Trends – Volume



Source: Real Capital Analytics, Greer Advisors

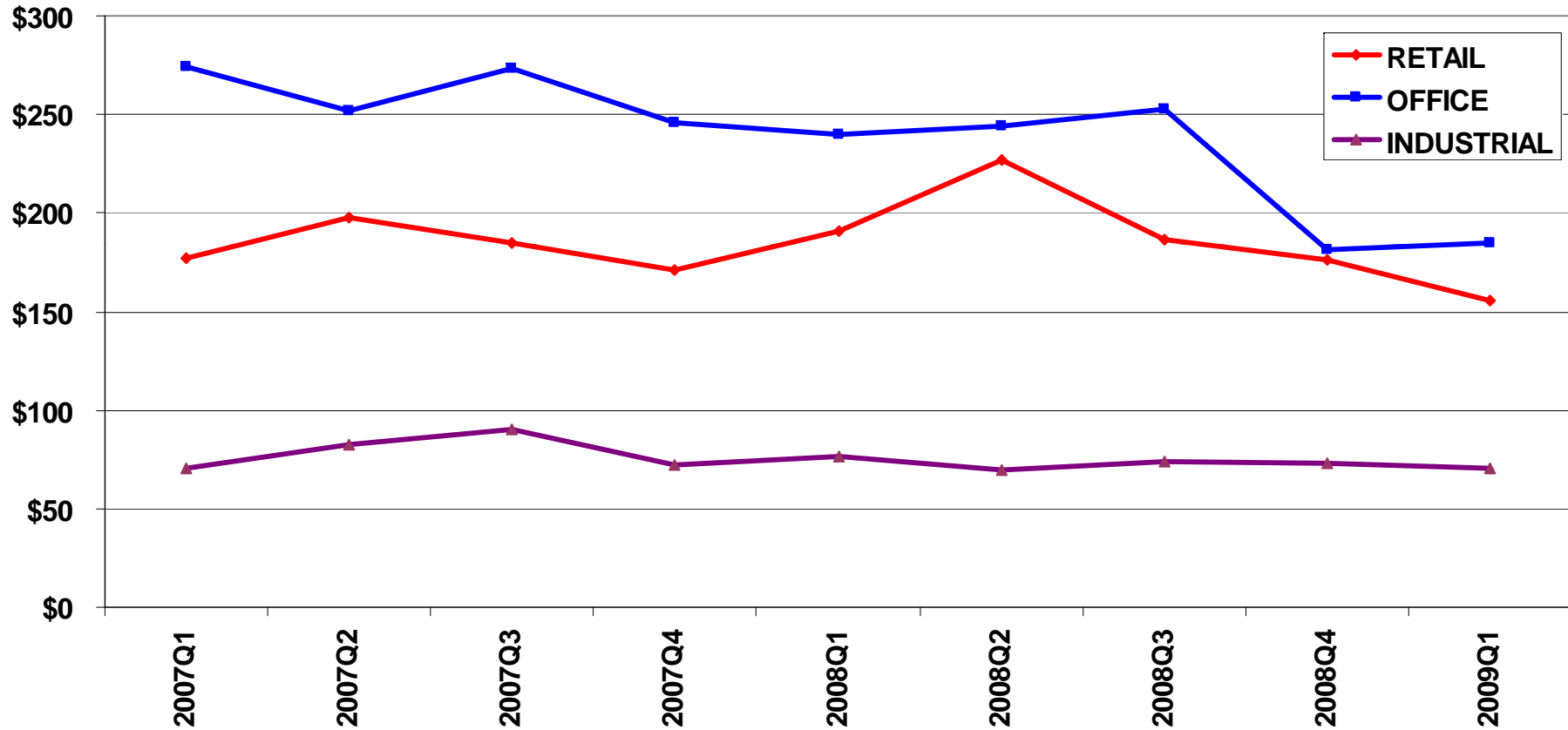
# Sales Trends – Cap Rates



Source: Real Capital Analytics, Greer Advisors

**Greer Advisors, LLC**

# Sales Trends – Price per SF



Source: Real Capital Analytics, Greer Advisors

---

---

# Quote of the Day

---

“...prediction is very difficult, especially when it’s about the future...”

~~NY Yankees #8, Yogi Bera~~

Niels Bohr

Nobel Laureate, 1922

Atomic Structure /

Quantum Mechanics



---

---

**Greer Advisors, LLC**

---

---

---

---

# Conclusions

---

- CMBS Market – Yield Spreads are 10-100x higher than 1/07
- CMBS – New Business Model will Arise
- REITs – Down 60%
- NCREIF – Mixed / Marginal Changes
- Most Lenders Closed, Stopped or Reduced Lending
- Financing Cap/Yield Rates Have RISEN
- CASH IS KING!
- Value Growth will Lag Rent Growth
- Rents / Vacancies Remain better than early 1990s
- Values Undergoing Correction



---

---

## Greer's 3-Year Forecast as of 5/21/2009

---

- Borrowing Rates will Rise Dramatically
- Margins (to 10 Yr Treasuries or LIBOR) will rise 200+ bps in 2009 and settle 350±50 bps over 10 year Treasuries, but might over-correct in the short run, say 10Yr+500 bps
- Rent Growth will Lag CPI growth by 0-5%
- Values will fall 5-15% from 2008-2012. Individual Market Performance will vary widely (10-30% difference in Top vs Bottom)
- Capitalization Rates will Rise 2-5% during 2008-2012 (eg 5.0% to 7.25% = 30% decline in value)
- Declines: #1=Retail; #2=Industrial & Office; then Apartment
- Change Creates Opportunities

---

---

# Greer's Recovery Signs

---

- CDS Exposure under \$25 Trillion (i.e. under 50% of peak)
- Decline in CMBx Yield Spreads for 6 straight weeks
- Re-emergence of CMBS market
  - New CMBS Market will include:
    - Issuer Keeps 1-5% 1<sup>st</sup>-loss piece
    - AAA Subordination near 30%....
    - AAA is 70%, not 90% of issue
- REIT Market Capitalization (Total Value) Stabilizes or Increases for 6 months
- Consumer Confidence Rises and stays above 70 for 6 months
  - As of 8/25/09 index stands at 54.1 (1985=100)
- Risk Curve (AAA Sr. vs BB) flattens to under 500 bps. As of 8/24/08, spread stands near 12,200 bps.

---

---

# Questions / Answers

---

---

---

## Greer Advisors, LLC

---

---

eag@greeradvisors.com

213.604.1330