

Raymond G. Torto
Keynote Speaker, Economic Overview
Principal & Chief Strategist, Torto Wheaton
Research, Boston, MA



Perspective

Presented to:

VCU Real Estate Trends Conference

Raymond G. Torto, PhD, CRE

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Why Real Estate?

Opportunities for:

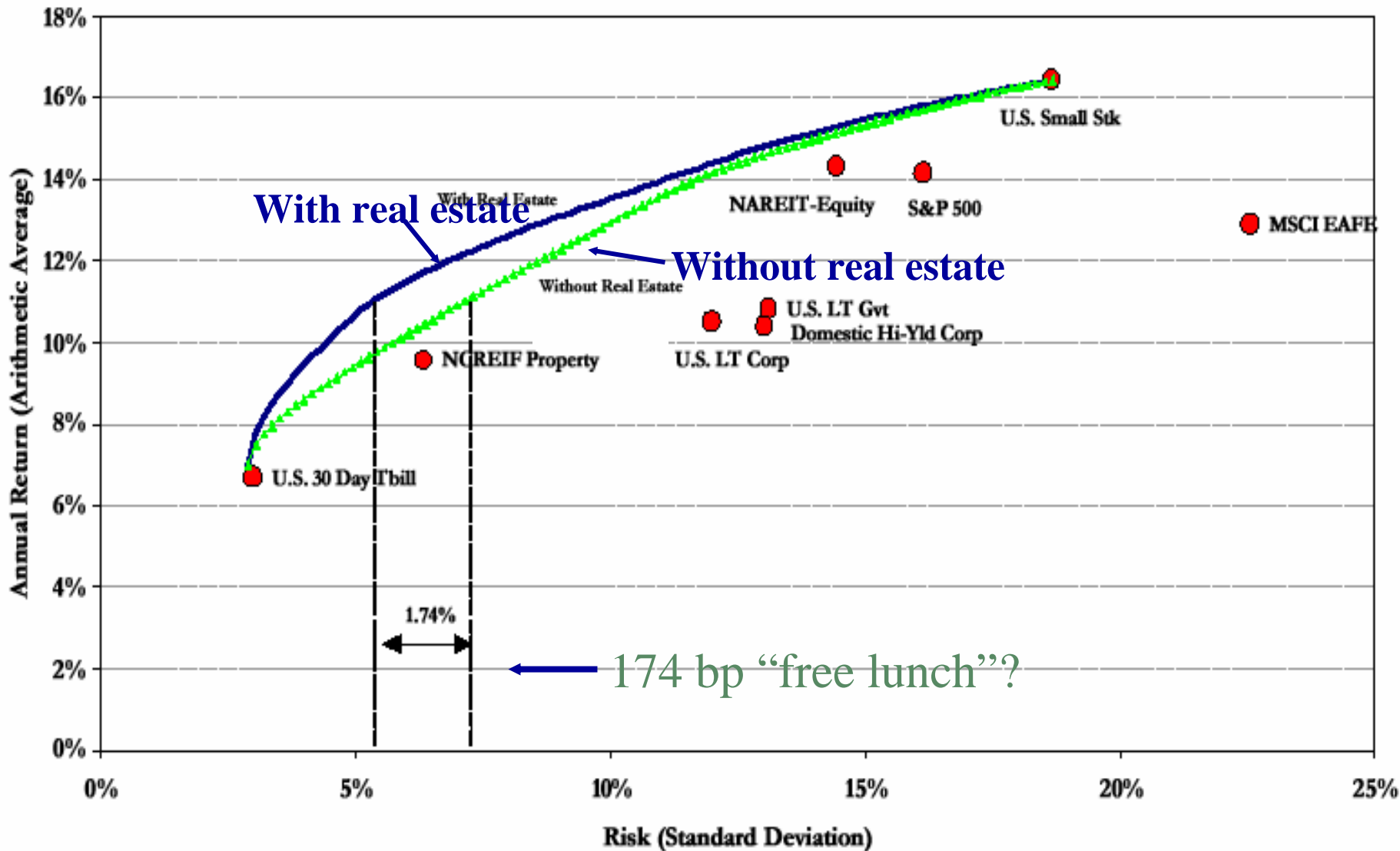
Cash Flow

Appreciation

Diversification

Alpha

Exhibit 4: Efficient Frontier (with and without Real Estate) and Selected Asset Classes for the Twenty-five-Year Period 1978-2002





Perspective

- **Space Markets**
 - Rents, Demand
- **Capital Markets**
 - Prices, Liquidity
- **Risks**

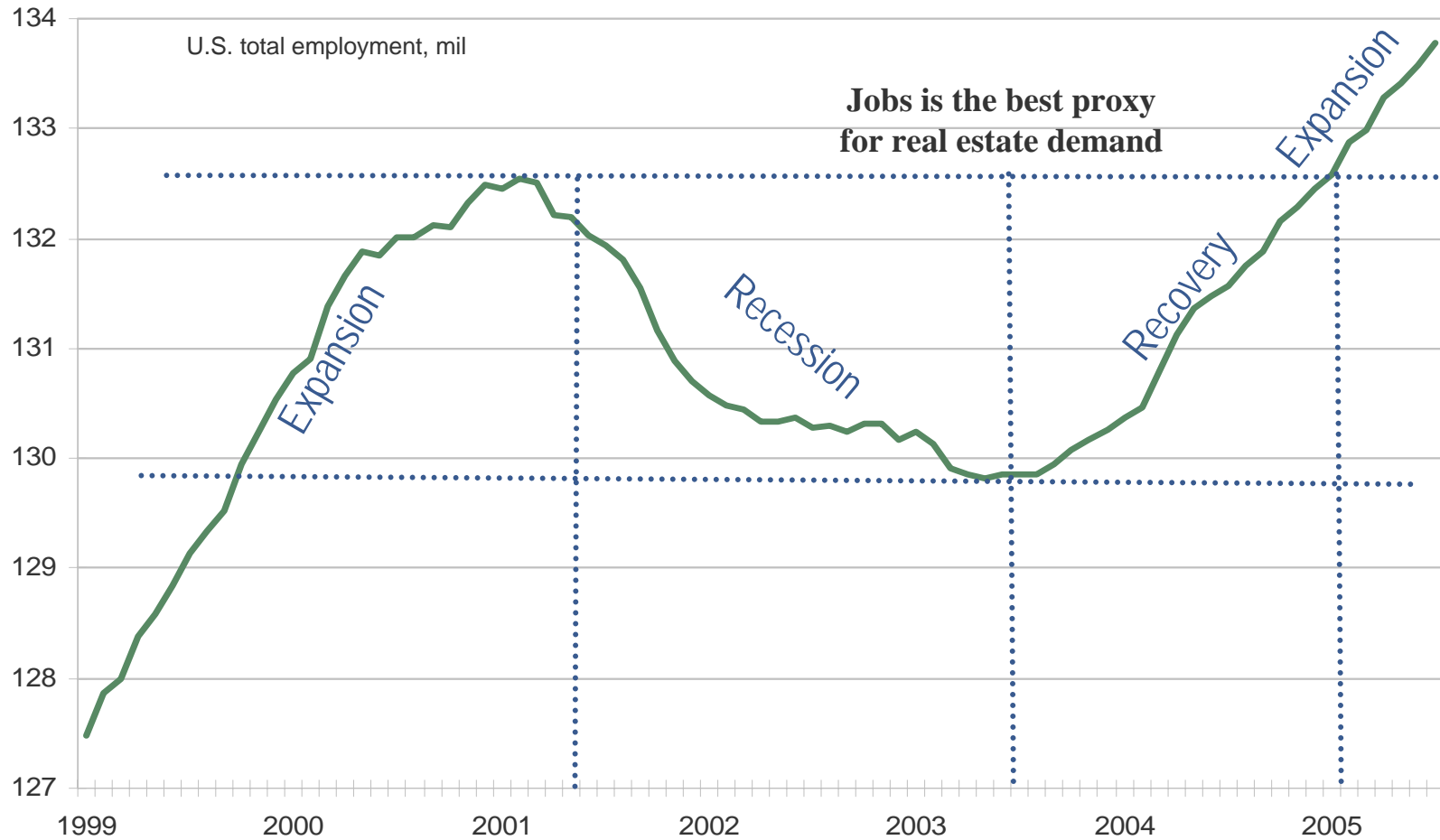
In Other Words:

What We Are Telling Our Clients

A circular graphic showing a modern, multi-story building with a glass facade and a flat roof, set against a background of a city skyline and abstract geometric patterns in shades of blue and green.

Fundamentals Are Improving for All Types

Recession, Recovery & Expansion



Source: BLS

Although We Are Expanding, It's Not Strong

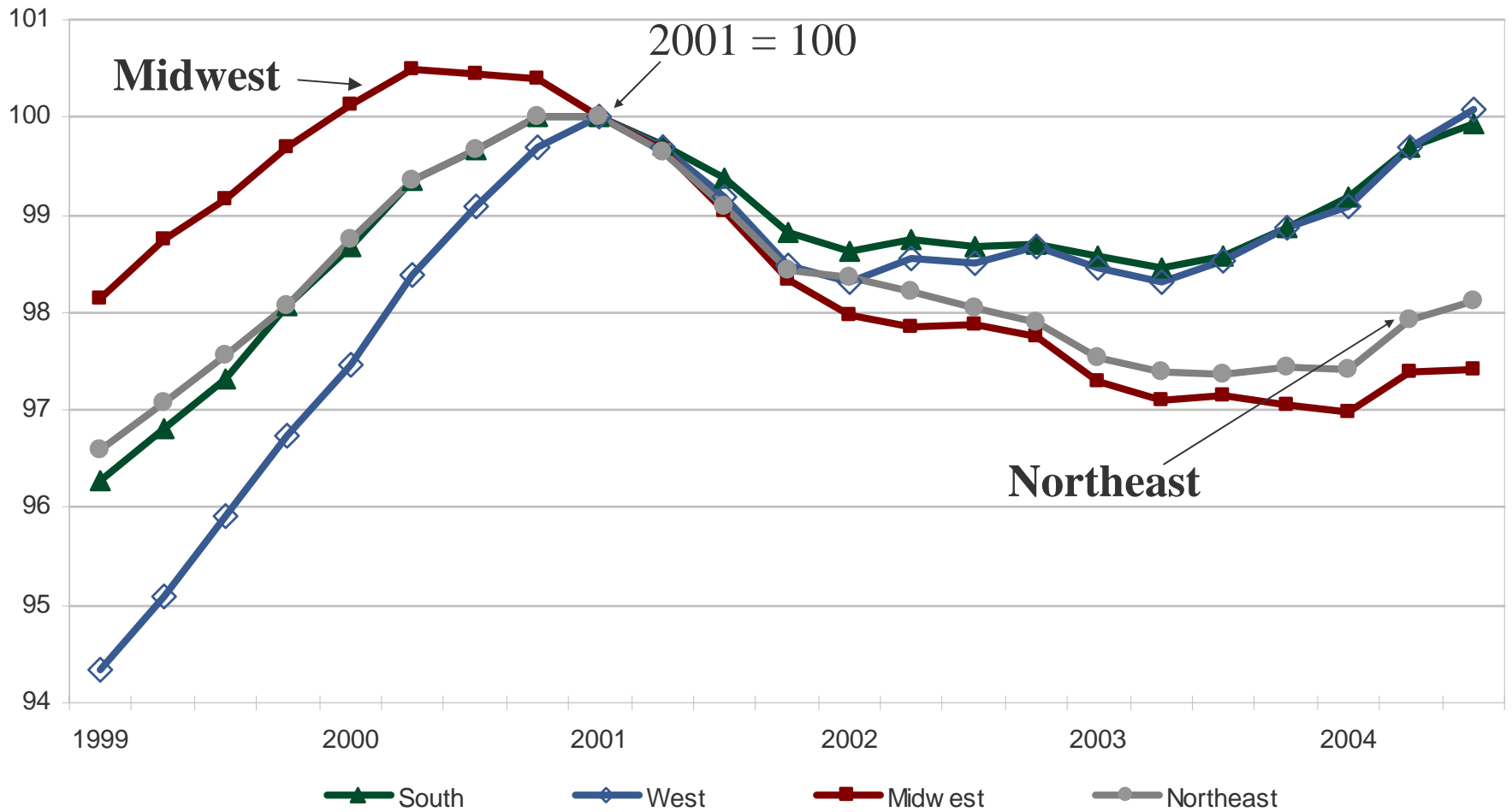
Decade	Absolute Payroll Employment Growth During Decade
1950s	10.7 Million
1960s	16.9 Million
1970s	19.6 Million
1980s	18.3 Million
1990s	26.6 Million
January 2000 - August 2005	3.5 Million

If we grow at 2m jobs a year for next 5 years, decade produces only 14m jobs!



Source: BLS, TWR

Its Also Not Uniform: Two Worlds.....for Jobs!

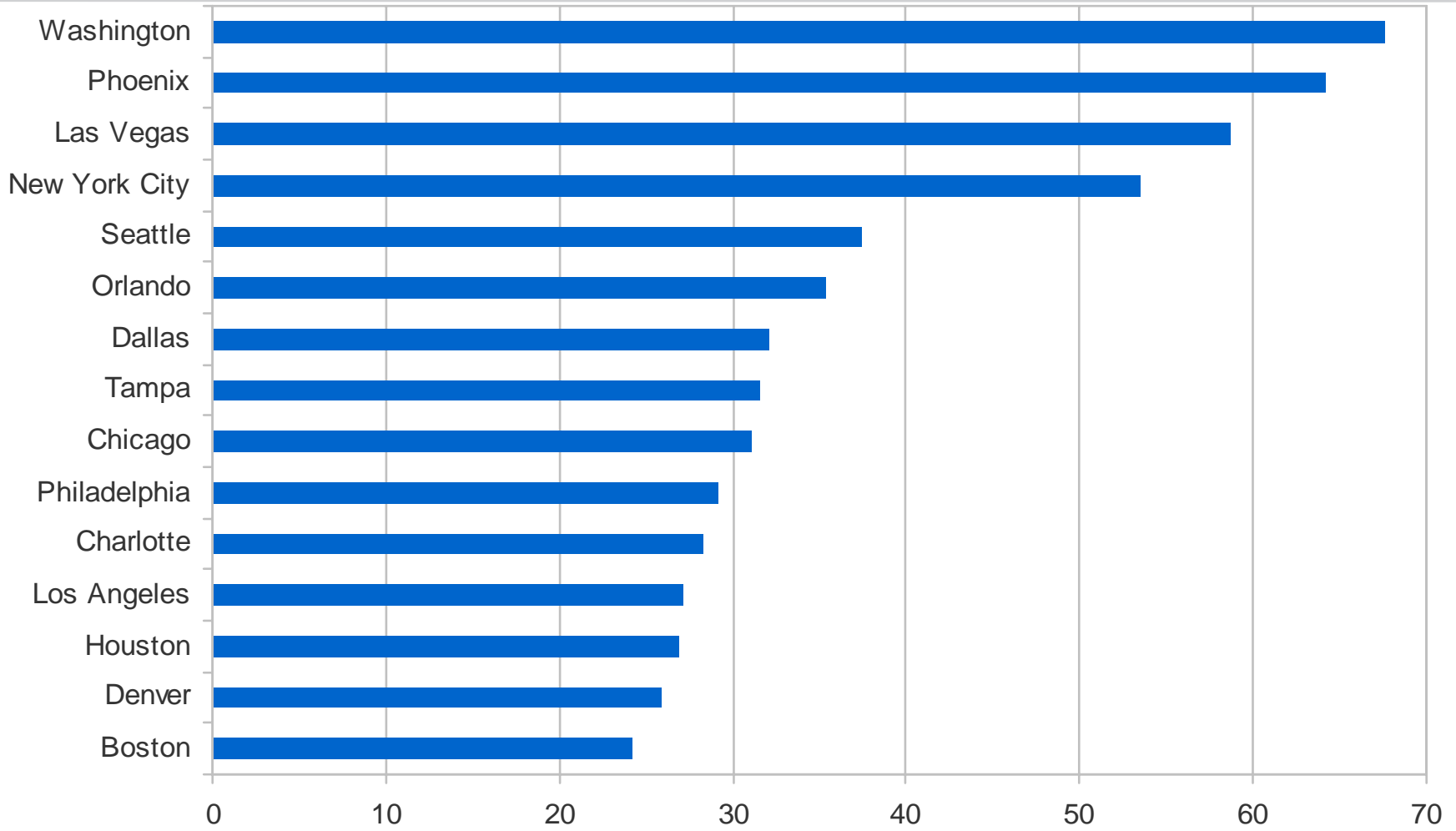


Source: TWR Outlook XL



Most Jobs Produced By Major Market

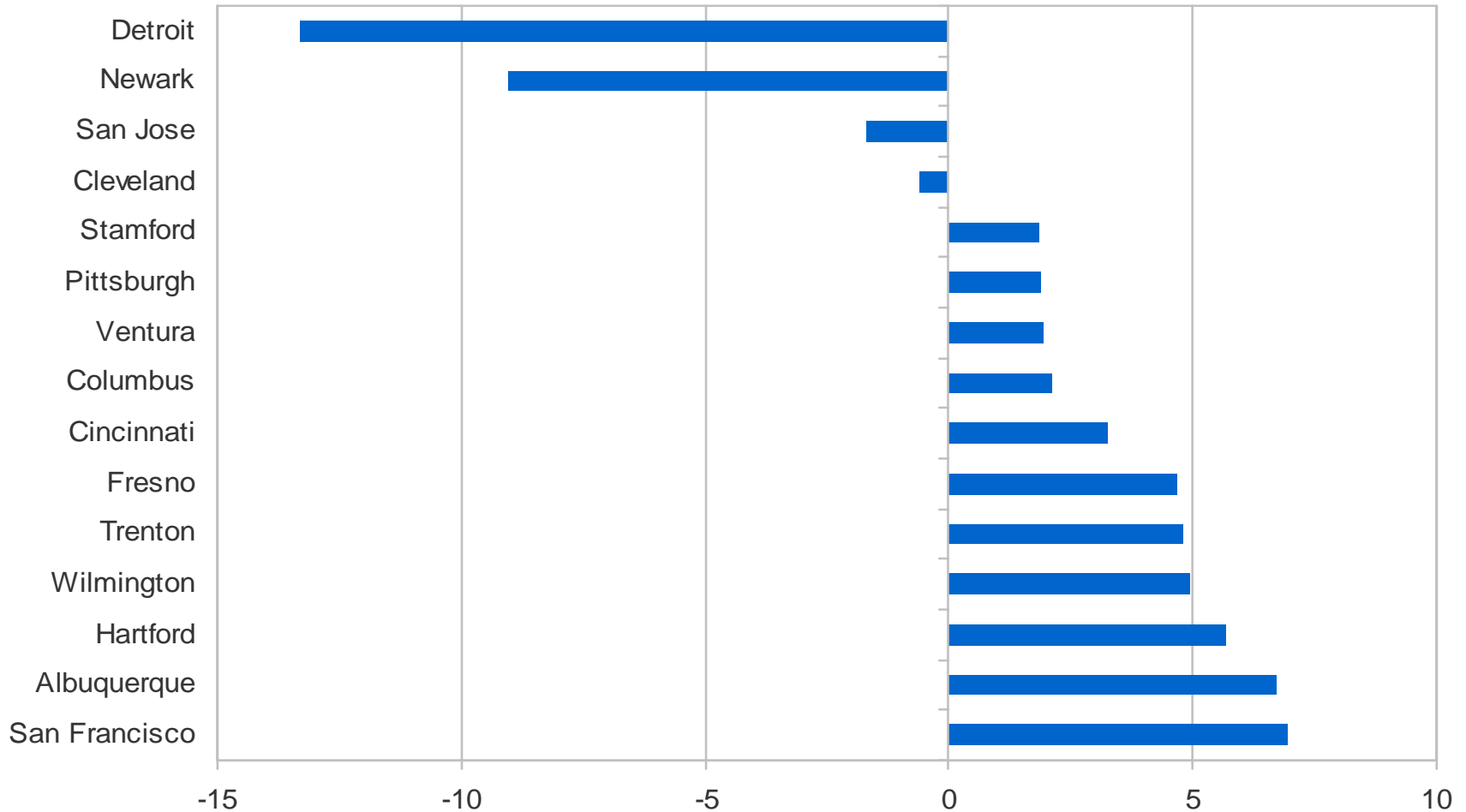
Change in number of jobs by industry, 05Q2-04Q2, ths



Source: *Economy.com, TWR*

The Laggards

Change in number of jobs by industry, 05Q2-04Q2, ths



Source: Economy.com, TWR



All Signs Are Positive for Leasing

<i>Absorption</i>	Historical	Forecast
Property Type	5 year	5 year
Office	0.4	1.4
Industrial	0.5	1.2
Retail	1.4	0.5
Multi-Housing	1.5	1.3
Hotel	2.0	2.0

<i>Rent Inflation</i>	Historical	Forecast
Property Type	5 year	5 year
Office	-2.9	4.4
Industrial	-1.4	2.9
Retail	2.8	2.7
Multi-Housing	2.0	3.0
Hotel	.07	3.3

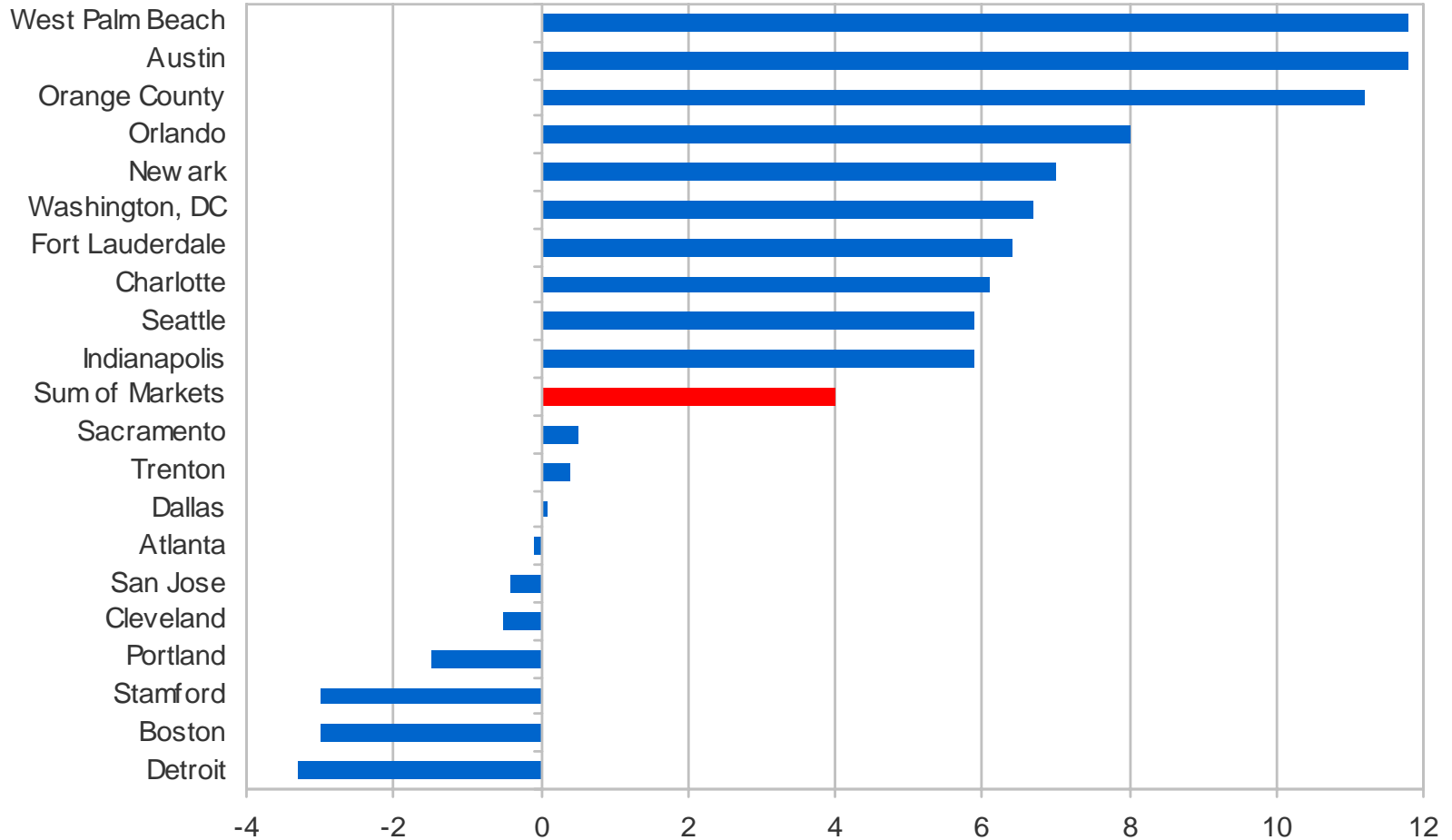
<i>Vacancy</i>	Historical	Forecast
Property Type	5 year	5 year
Office	640	-200
Industrial	370	-80
Retail	-120	70
Multi-Housing	40	0
Hotel	-190	160

← bps chg.

Source: TWR Outlook XL

Office Market Performance

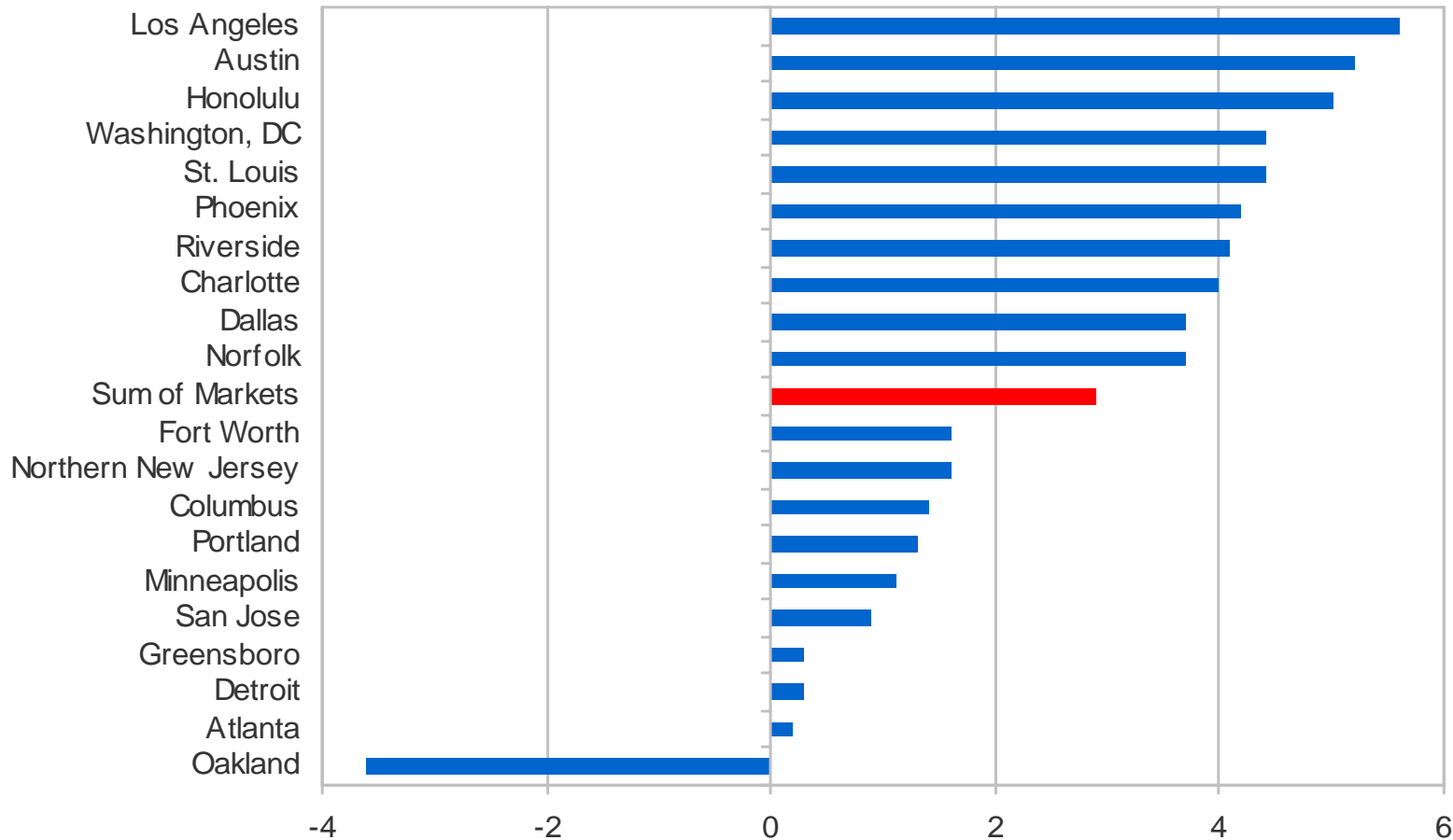
Selected markets: TW Rent Index (Avg. Ann. % change), 2 yr forecast



Source: TWR Outlook XL

Top and Bottom Performers Multi-Housing

Apartment Rent Growth (Avg. Ann. % Change), 2-Year Forecast



Source: TWR Outlook XL

A circular graphic showing a modern, multi-story building with a grid-like facade, set against a background of abstract geometric shapes and colors.

Capital Markets: The Biggest Concern



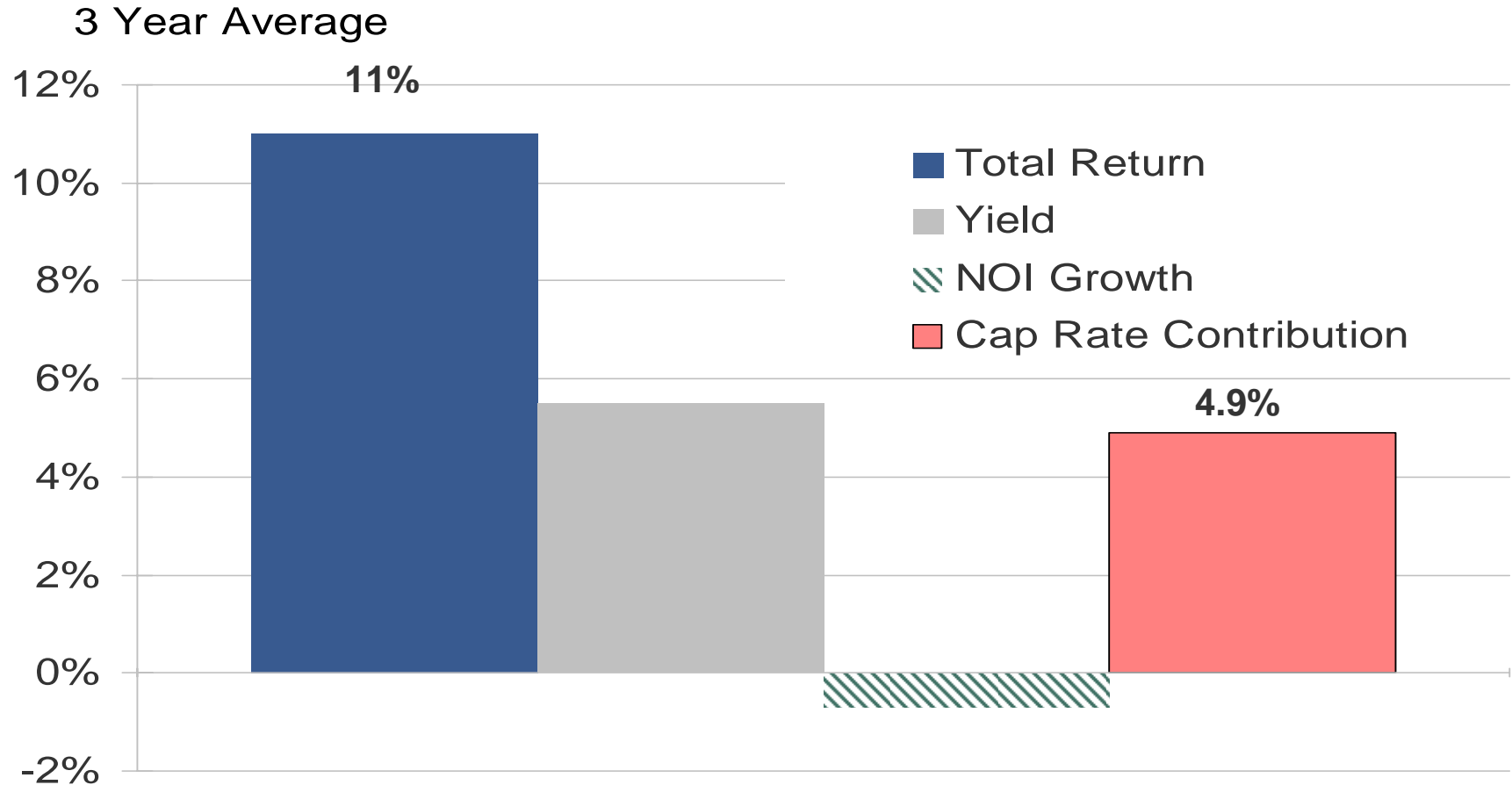
Sales Volume Continues Strong

	2005 YTD	2004 Comp	%chg,
Office	\$51	\$36	42%
Industrial	\$17	\$11	64
Multi	\$40	\$28	43
Retail	\$25	\$23	10

Source: Real Capital Analytics, CBRE IP, TWR

In Last 3 Years Over 100% of Appreciation Due to Cap Rate Decline

Components of Return (2003.2 to 2005.2)



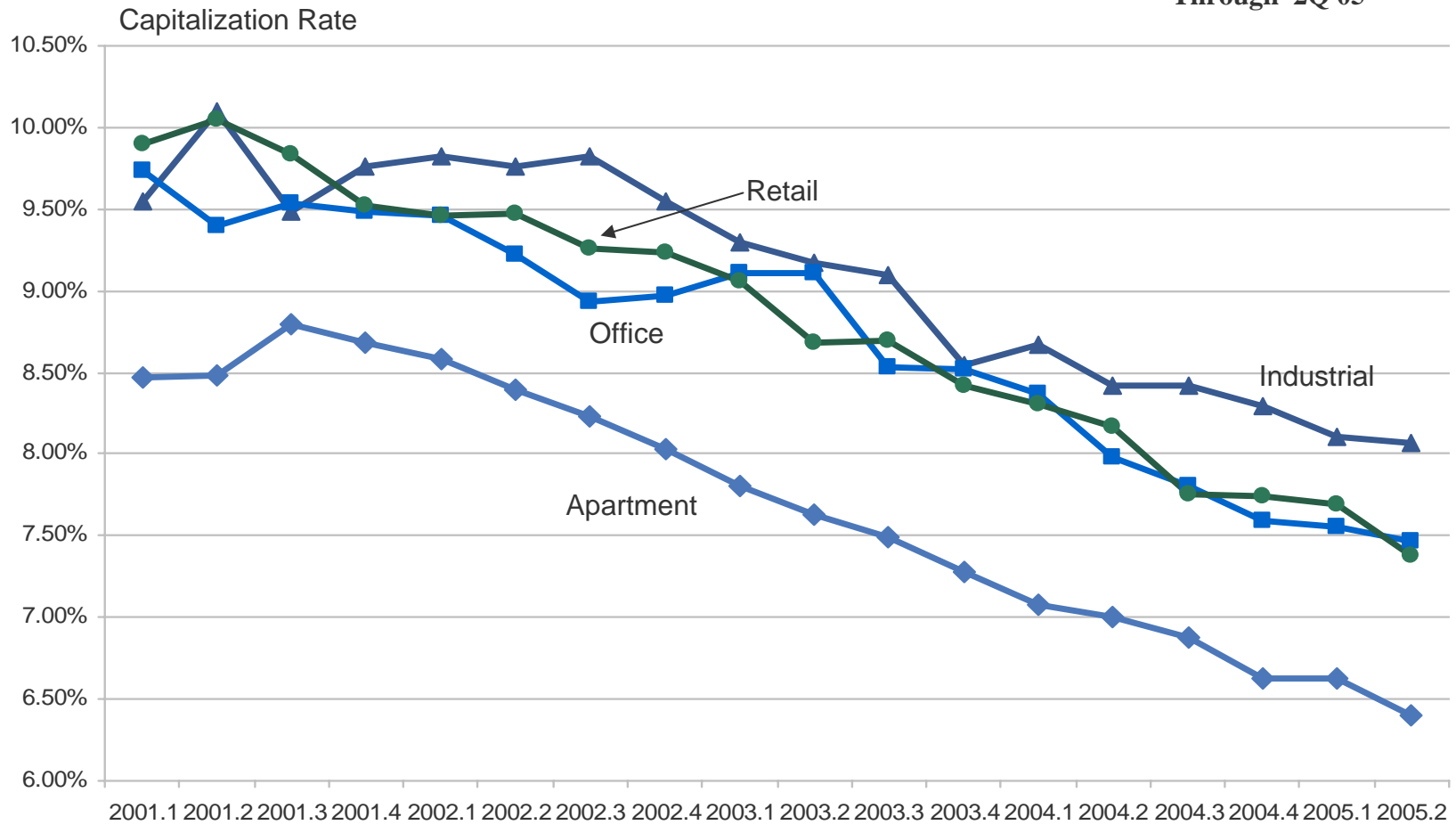
*Office, Industrial, Retail, Multi-Housing; NCREIF Weighted

Source: TWR Investment Database

Steady Decline in Cap Rates Continues in 2005

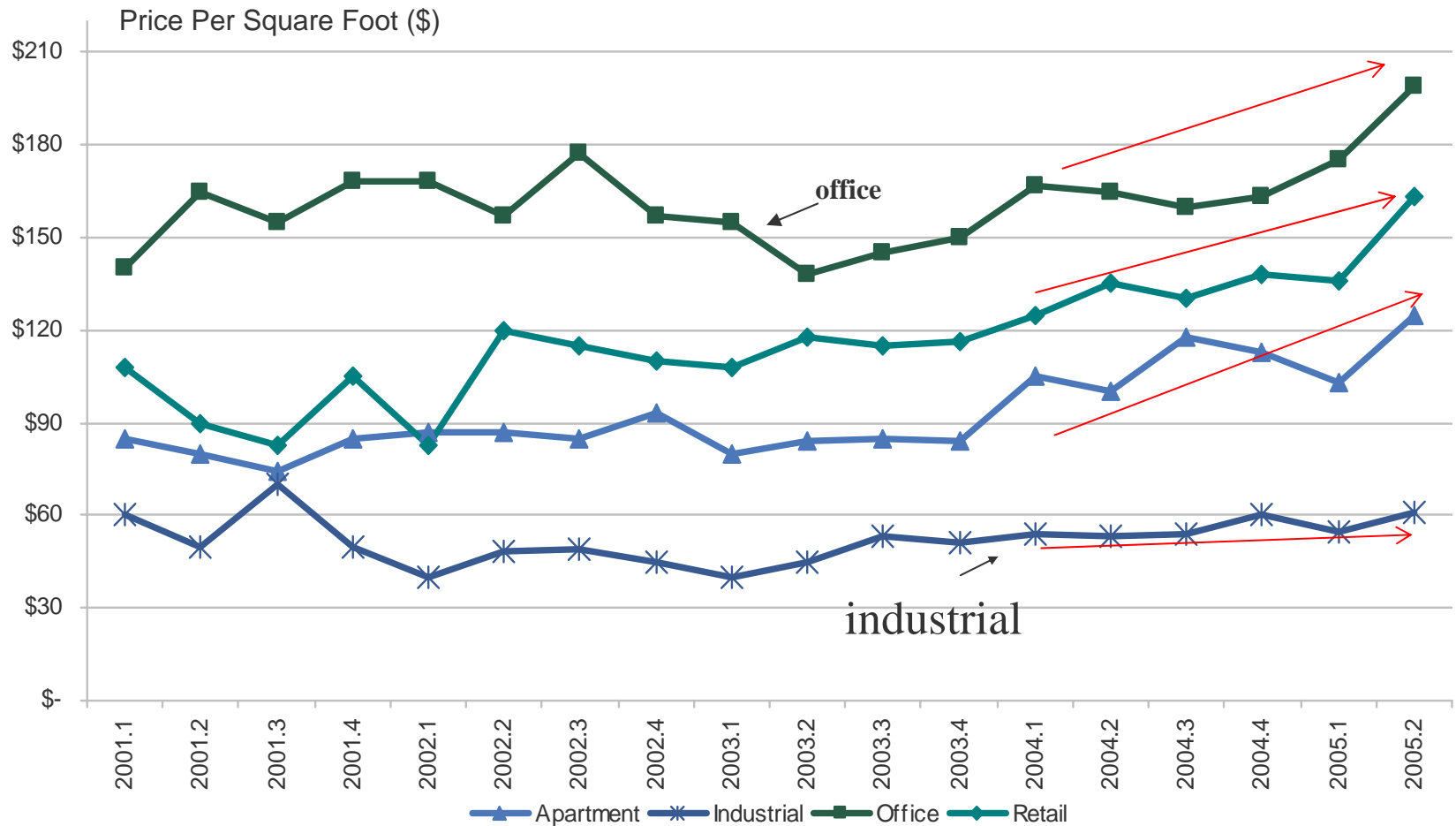


Through 2Q 05



Source: Real Capital Analytics

And, Price Per SF Rising of Late!



Source: Real Capital Analytics



Now Let's Think About This!

- **Cap rates falling, prices rising, in a leasing expansion, implies ratio of income to value is falling because buyers/prices are anticipating this increase in rents forthcoming. Or, said differently, pricing is anticipating the better space markets.**
- **So buying right means: be diligent about the potential for future NOI and residual cap rate increases.**



Remember:

Components of Investment Return [*Ex Post*]

- **Total Return = Income Yield + Appreciation**
- **Value = NOI / Cap Rate, and so:**

if you do the math, a rule of thumb is:
- **Appreciation = % chg NOI - % chg Cap Rate**

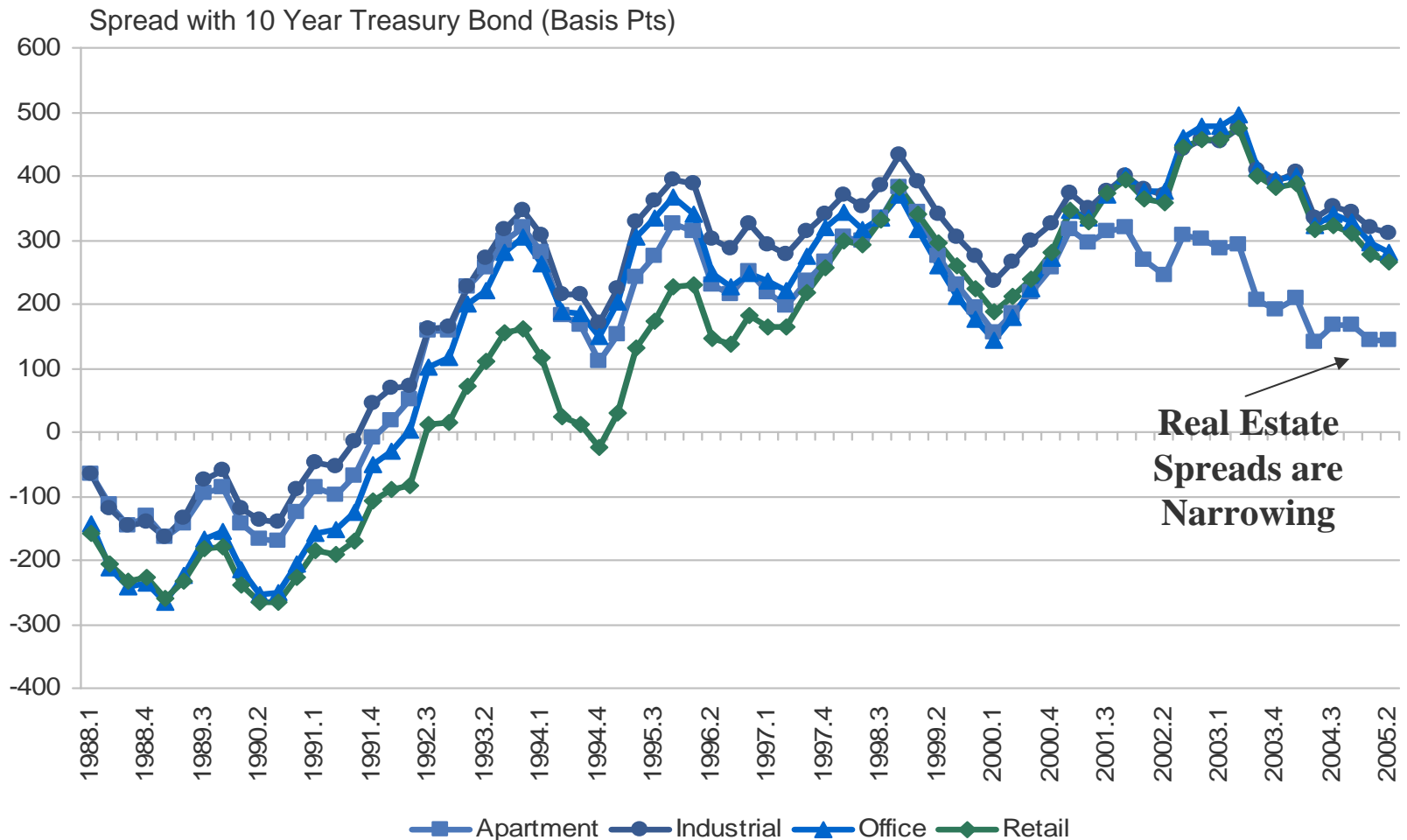
A circular icon showing a stylized building with multiple windows, set against a background of a grid pattern.

The Risk Premium For Real Estate

- **Cap Rate = target return (Treasurys + Risk Premium) - *expected appreciation***
- **Spreads = cap rate – Treasurys = risk premium – *expected appreciation***
- **Cap Rates should:**
 - move positively with interest rates and risk
 - negatively with *expected future appreciation*.
- **Spreads should:**
 - Move positively with the risk premium
 - negatively with *expected future appreciation*



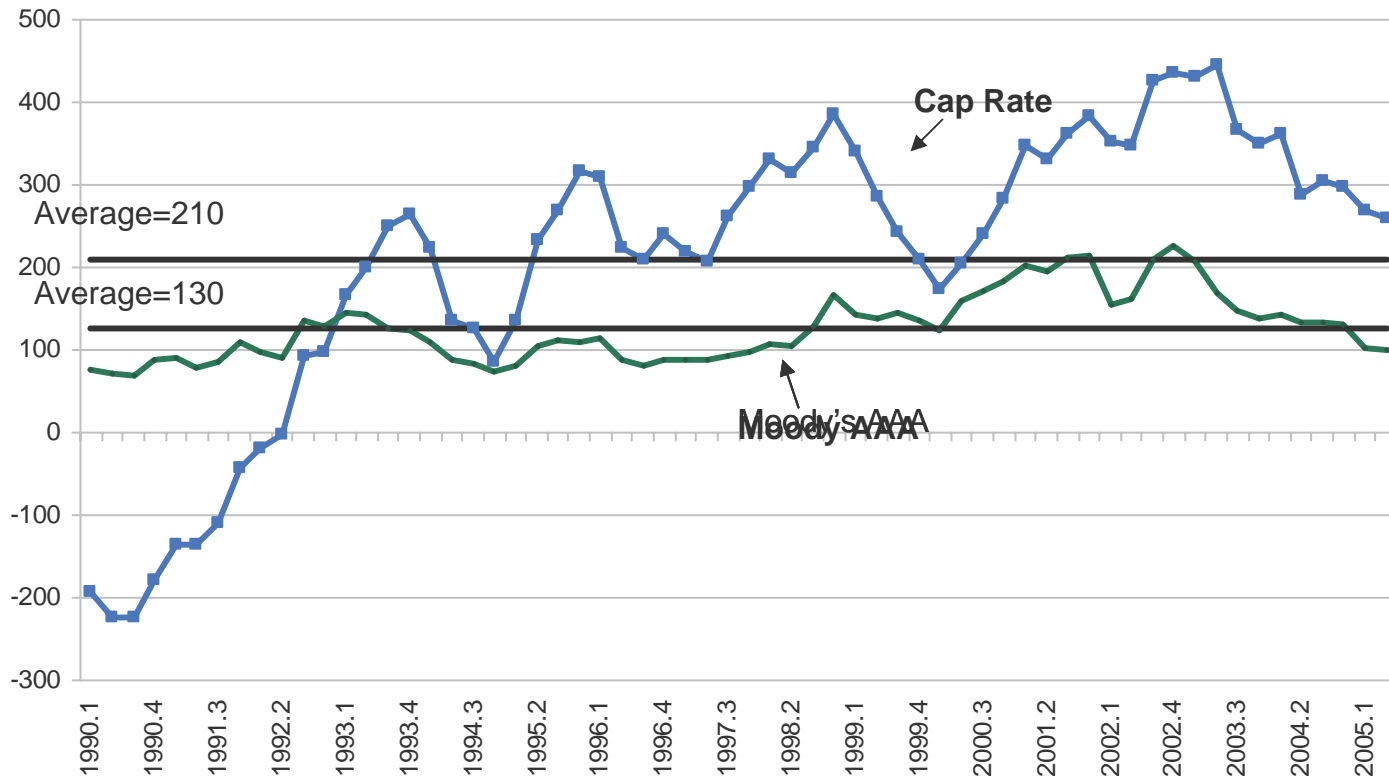
Risk Premium: Spreads to Treas.



Source: NCREIF, Federal Reserve Board

Cap Rate Spreads Have Narrowed But Are Still Above 15 year Average

Spread with 10 Year Treasury Bond (Basis Pts)



Source: NCREIF, Federal Reserve Board



Increased Demand for Real Estate is Lowing the Risk Premium and Keeping Cap Rates Spreads Low

- **Growing global acceptance of real estate as a permanent and strategic asset class and diversification in portfolio**
- **Proliferation of real estate investment vehicles which have increased ease of investor access**
- **Improved information flow from public real estate firms and from research companies**
- **Investor perceptions that real estate volatility is lower than historically thought.**
- **Positive alpha**



To Summarize to Here:

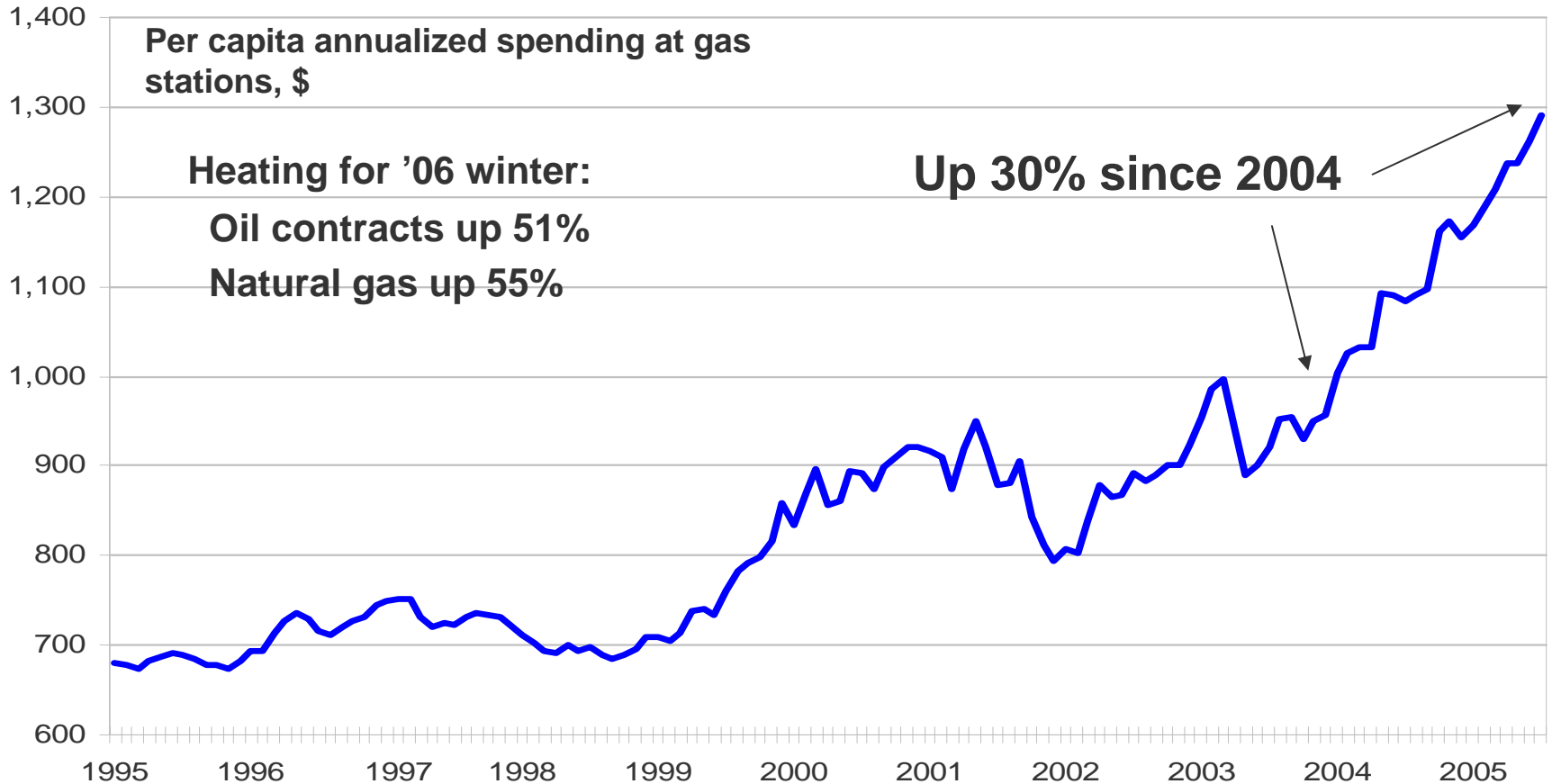
- The economy and fundamentals are improving steadily. Rent traction will take hold in 2006 and beyond. But wide variation in fundamentals performance across markets
- Prices and spreads are anticipating future real estate appreciation due to improving fundamentals and are perceiving less risk (spreads narrowing)!
- But what about the *Risks*? Especially interest rate risk?



The Risks:

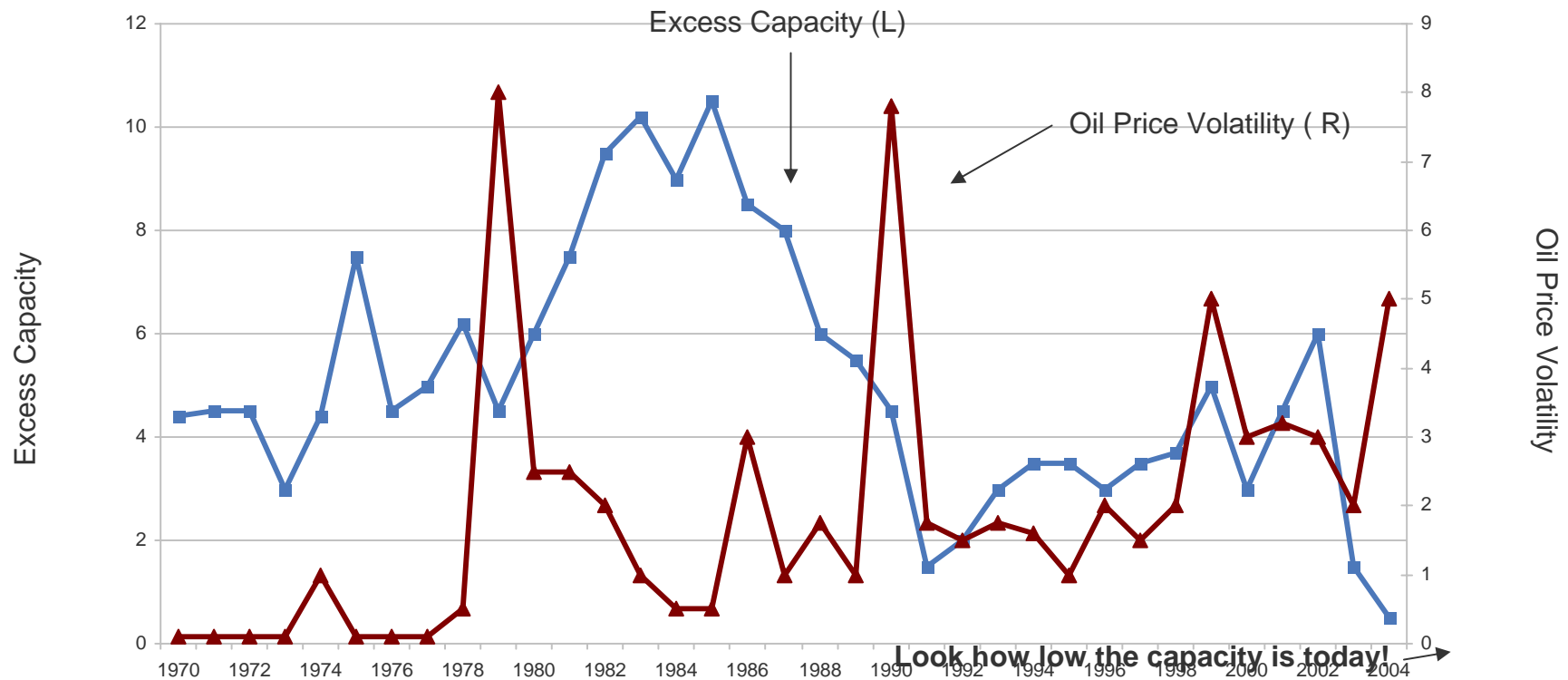
- INFLATION
 - Dual Deficits, Dollar, Oil, Commodities, Construction Costs (Katrina), Capacity
 - These risks can translated into inflation and into interest rates
- Economic Growth
 - Housing Bust, Oil “Tax”,
 - These risks can translated into lower demand
- Pricing
 - Prices above Replacement Costs
 - This risk can translated into more supply and lower rents

Capacity Issues Loom During Expansions



Source: BOC

Oil Price Volatility Correlates with Less Capacity



Source: IMF, TWR



240m vs. 3b People

Oil Demand 2000-2004

(mb per day)

	2004	Growth from 2000
U.S.	21	4.6%
China	7	42.0%
Total World	82	6.5%

Source: IMF, TWR

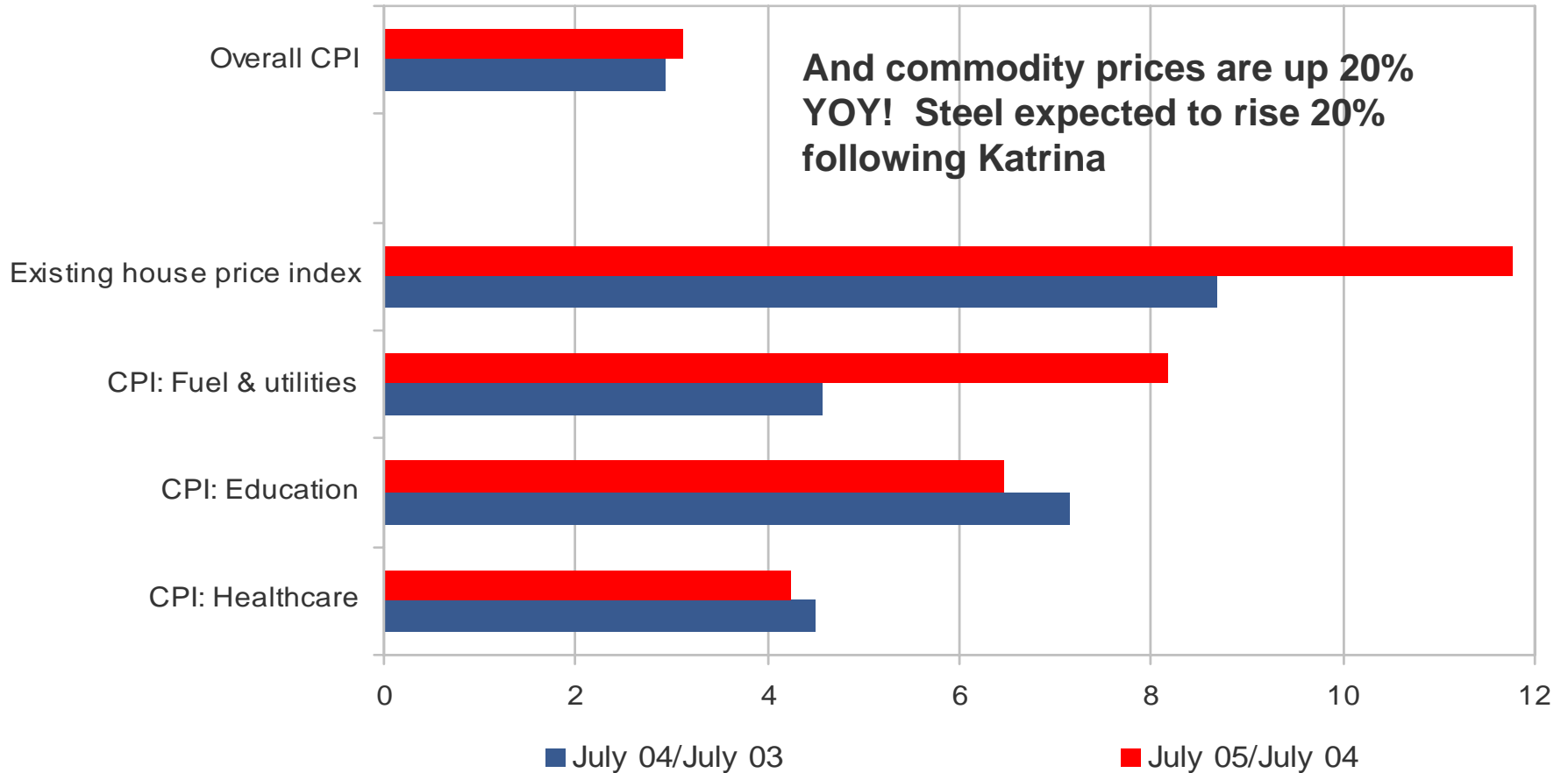


Long Term Supply Alternatives

- **Saudi Arabia's Fossil Oil Reserves**
 - 261b barrels
- **Unconventional Hydrocarbons:**
 - U.S. Shale Oil -- 2 trillion barrels
 - Alberta Oil Sands – 1 trillion barrels
- **Unconventional Oil Uses Capital:**
 - \$35,000 initial investment to get 1 more barrel per day (excludes variable costs).
- **At What Price?**
 - \$30+ “sustainable”

Where Else Is Inflation?

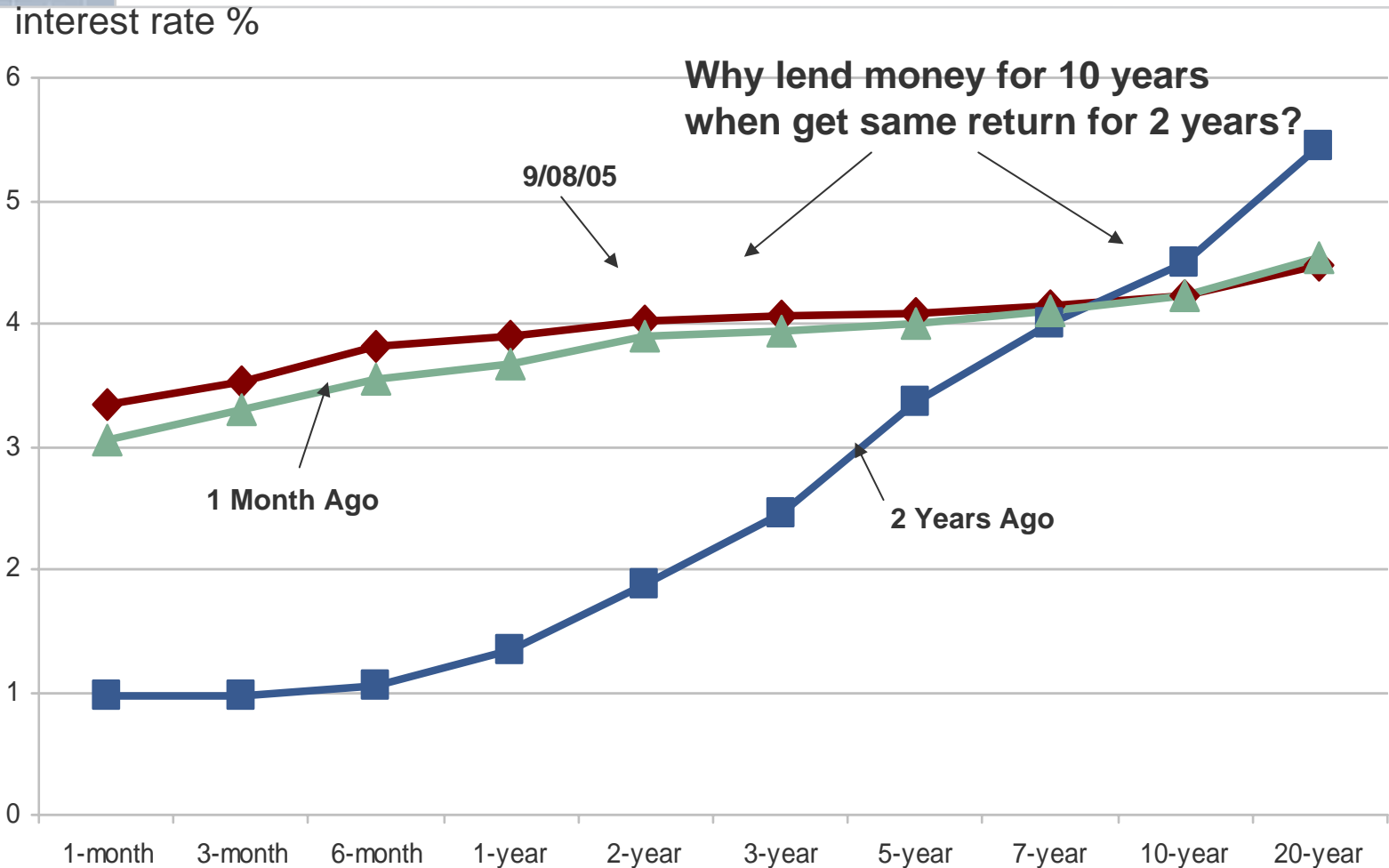
Consumer prices, % change



Source: BLS, OFHEO

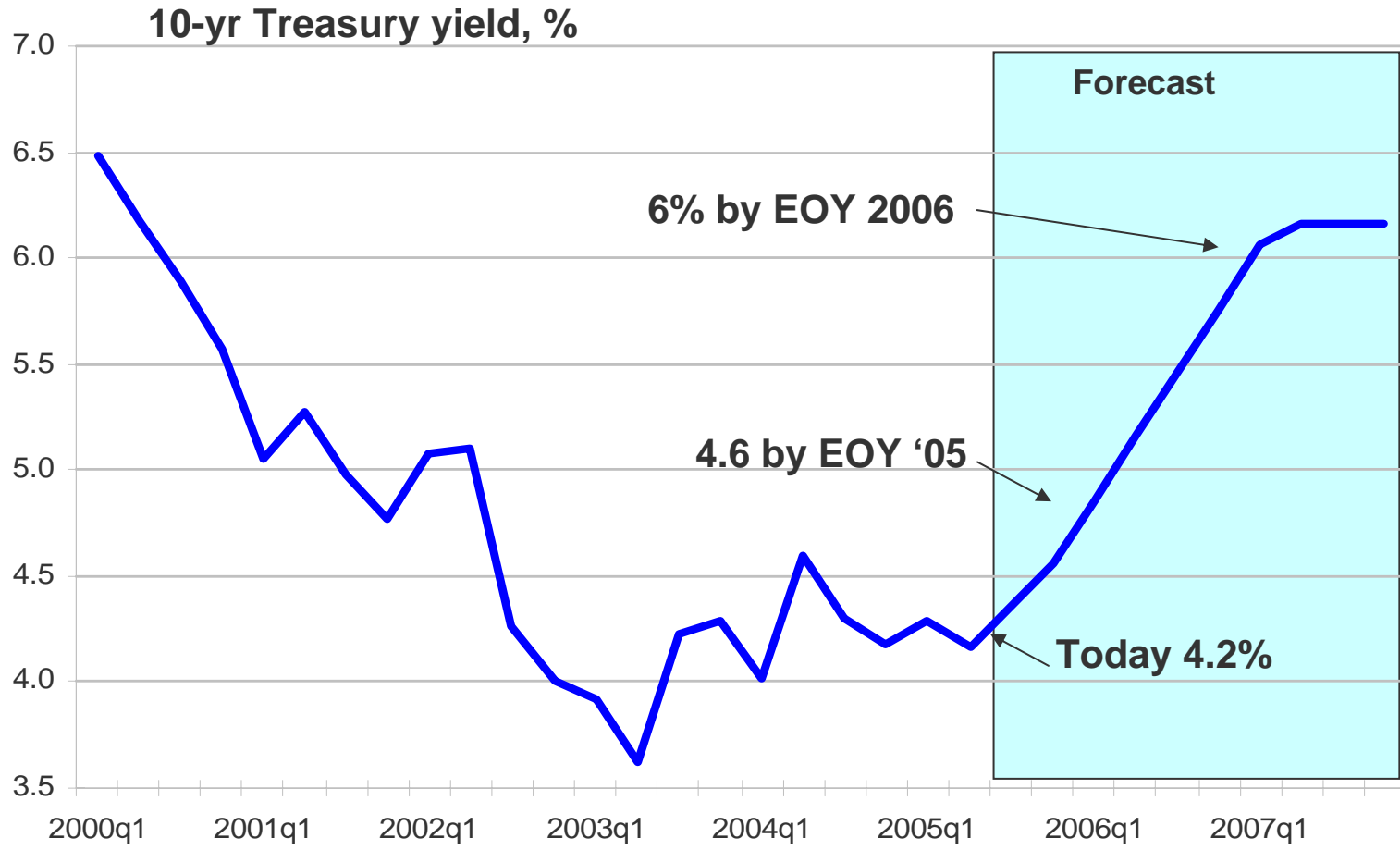
Inflation and Interest Rates

The Bond Market: A Good Prognosticator?



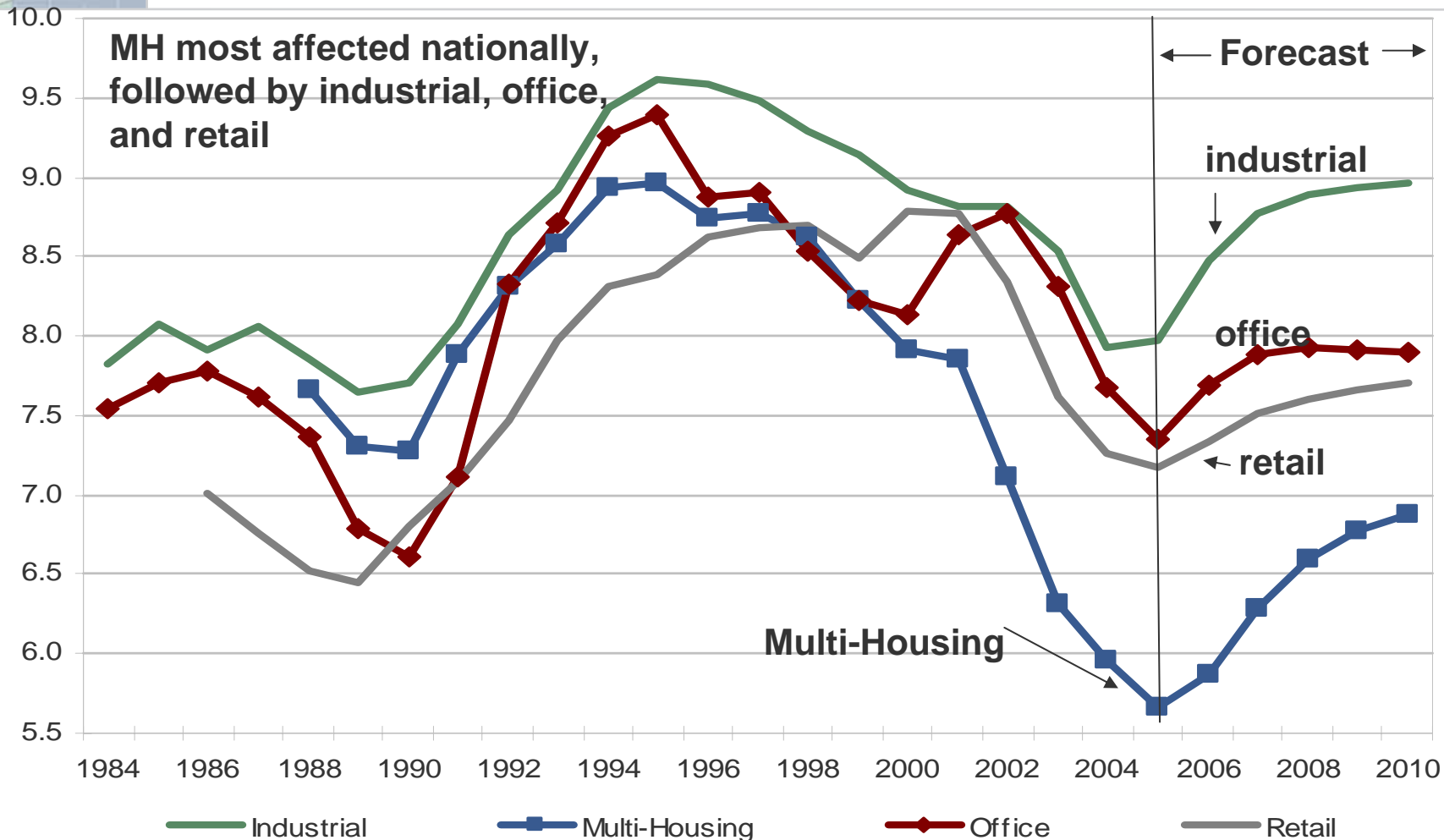
Source: Federal Reserve Bank

TWR Base Case: Long-Term Rates to 6%



Source: TWR, Federal Reserve Bank

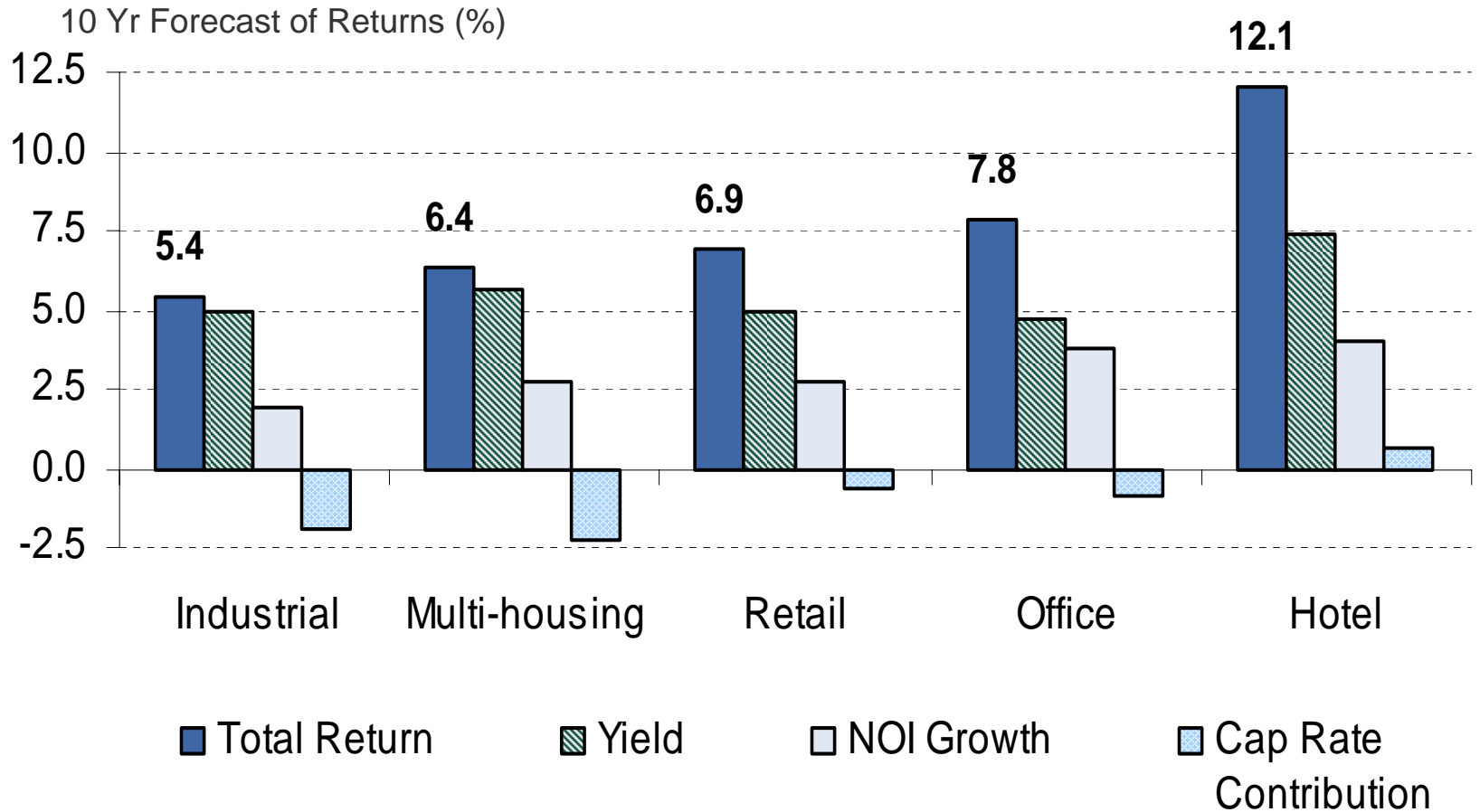
Cap Rates Rise Modestly with Our Forecast of Interest Rates to 6% in '06



Source: TWR Investment Database

High Prices, Moderate Cash Flow Growth Means A Lower Return Environment;

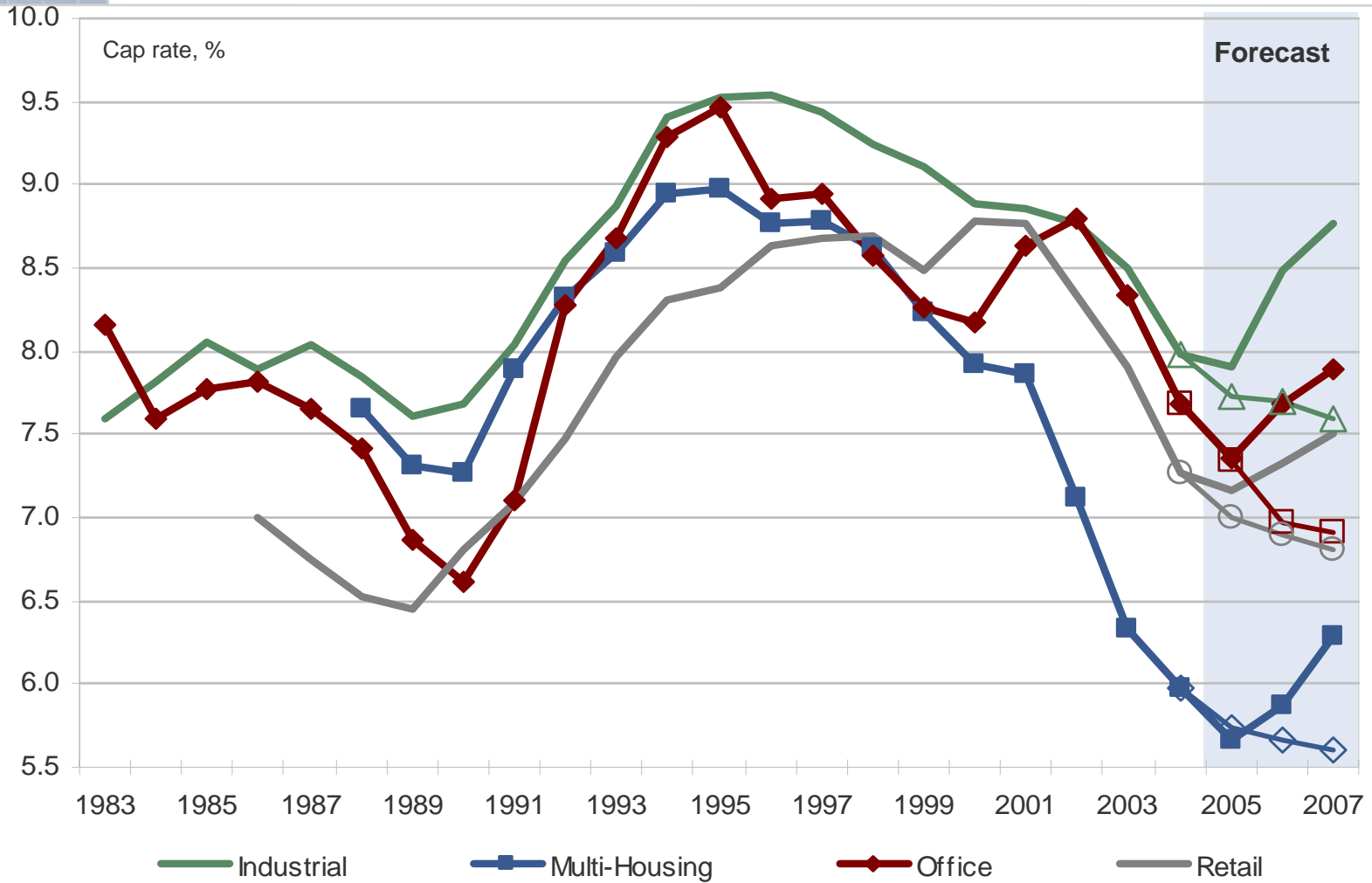
Market Selection Counts



A circular graphic showing a modern, multi-story building with a glass facade and a flat roof, set against a background of a city skyline. The building is rendered in a light gray and white color scheme.

Low Interest Rates Do Not Help Real Estate!

If Interest Rates Stay at 4.2%, Caps Will Fall Further



Source: TWR's Investment Database

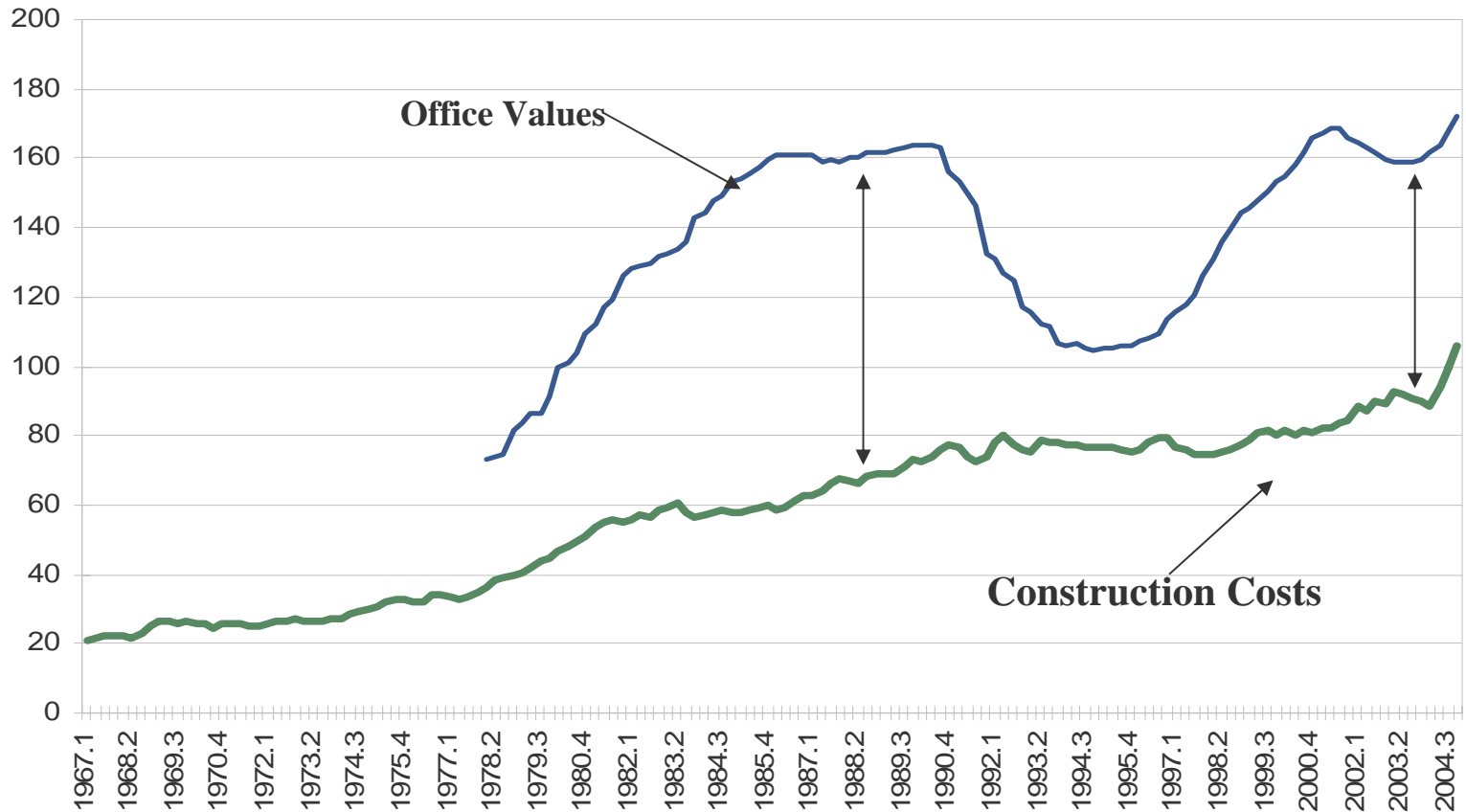


The Risk of Continued Lower Rates

- **With recovering market fundamentals, continued low cap rates mean asset prices rise further above replacement costs!**
- **With continued easy credit, a development boom occurs, as in the 1980s.**
- **The boom is fueled more by investors and not tenants.**
- **This building boom will end with a hard landing – as in 1990.**
- **The beginnings of such a boom are already apparent in several markets and property types.**

Does the Gap Imply Prices Above Replacement Costs?

Office Construction Costs, (Excluding Land and Soft Costs) vs. Office Values, per SF.



Source: TWR Dodge Pipeline



“Fooled by Randomness:

the Hidden Role of Chance in Life and in the Markets” by Nassim N. Taleb

- Book’s Thesis:
 - It’s plain dumb luck, or randomness, not skills, hard work, etc, etc,

- Book’s Implication:
 - Forecast don’t work: Big events not known
 - e.g., 9/11. Long Term Capital, 1987 market crash
 - “Even a broken clock right twice a day”

- Book’s Shortcoming
 - If didn’t anticipate future, how can we function?
 - Role of econometrics:
 - Determine what is explainable vs. what is unexplainable or random!



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Torto Wheaton Research

200 High Street, 3rd Floor

Boston, MA 02110

Tel: 617.912.5200

Fax: 617.912.5240

