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5 “Really Big” Real Estate Questions

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#1: Will there be enough Global Capital?

Global Capital:

- Where will it come from. How Much
- Capital Determines pricing (cap rates- yields)
- Appropriately prices risk?
- Allows leverage and provides liquidity.
- We are all indebted to Asian Savers!

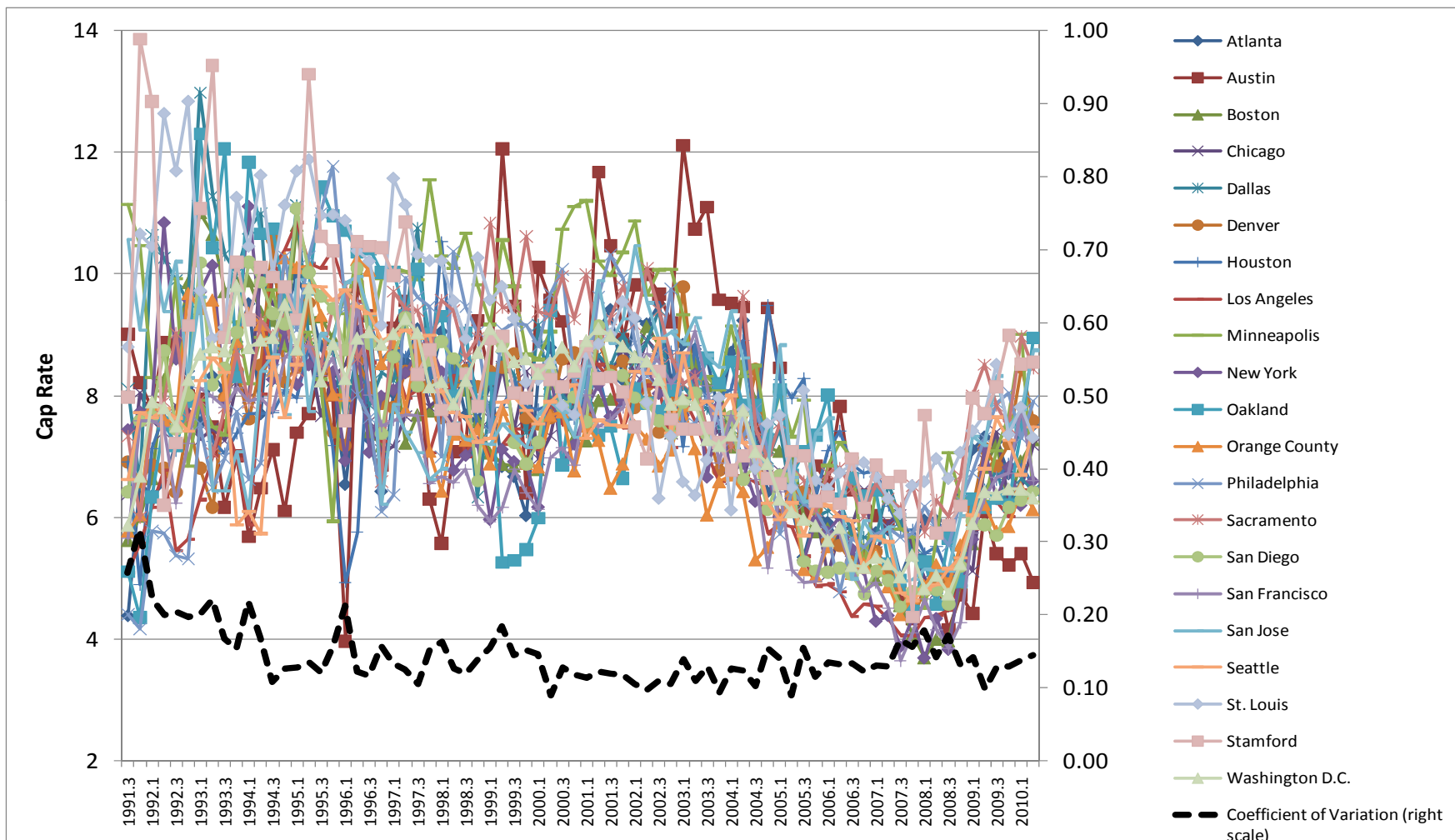
Local Real Estate:

- Local Economies drive RE Demand
- Determines the income flows that global capital prices.



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US Office Cap Rates converge as Macro factors increasingly drive pricing





What is in a Cap Rate?

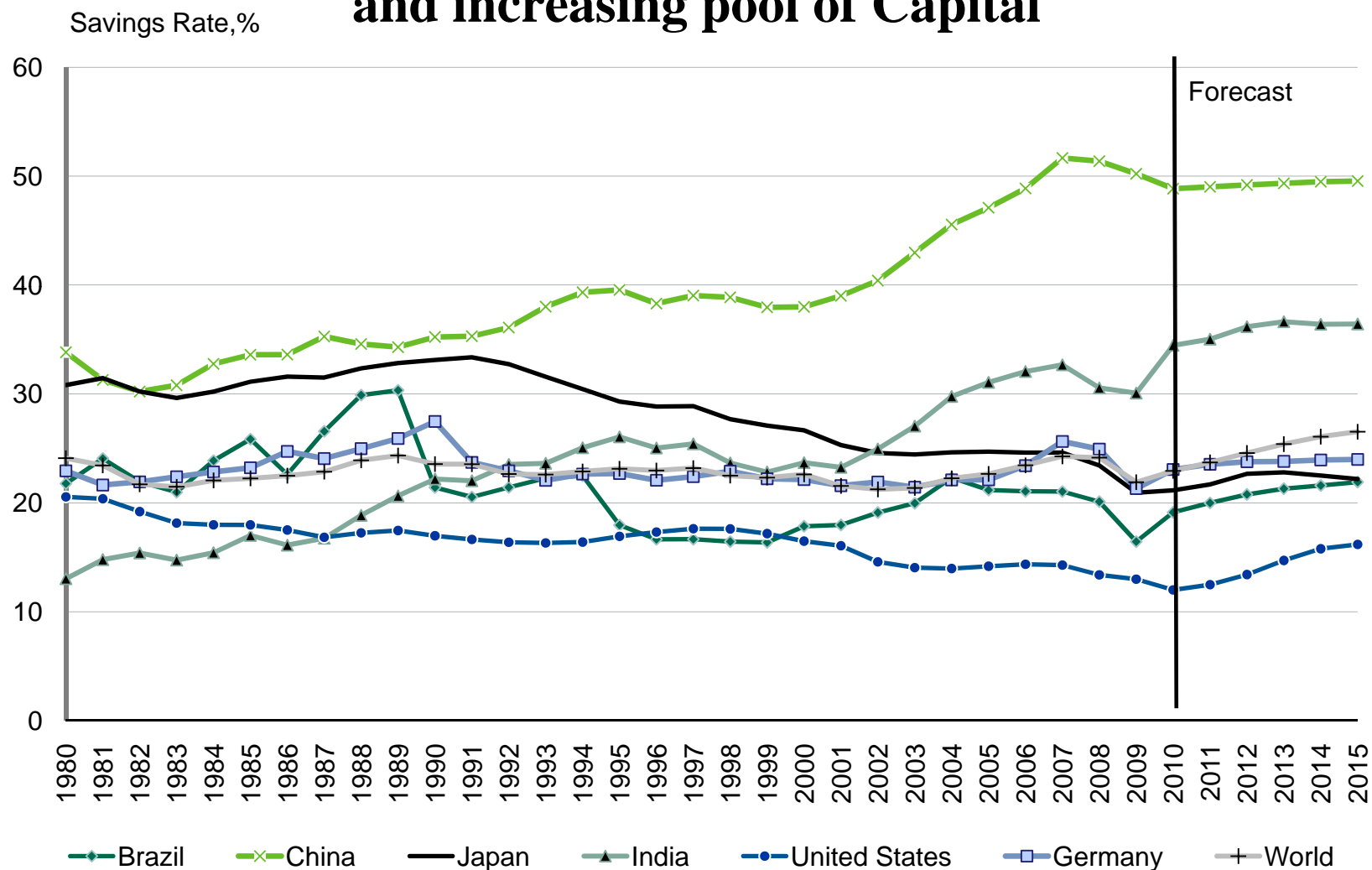
Equilibrium real estate yields are composed of:

- Treasury rate (e.g. 7.5 - 3.0%....)
 - + Risk premium (2 - 4%....)
 - + Illiquidity premium (1 - 3%....)
 - Expected Income Growth (0 – 5%)
- (The only *Local* Component)

3 of 4 components have declined between 1990 and 2010 - from a flood of excess global savings due to Global Imbalances



High Savings in Developing World Provides huge and increasing pool of Capital

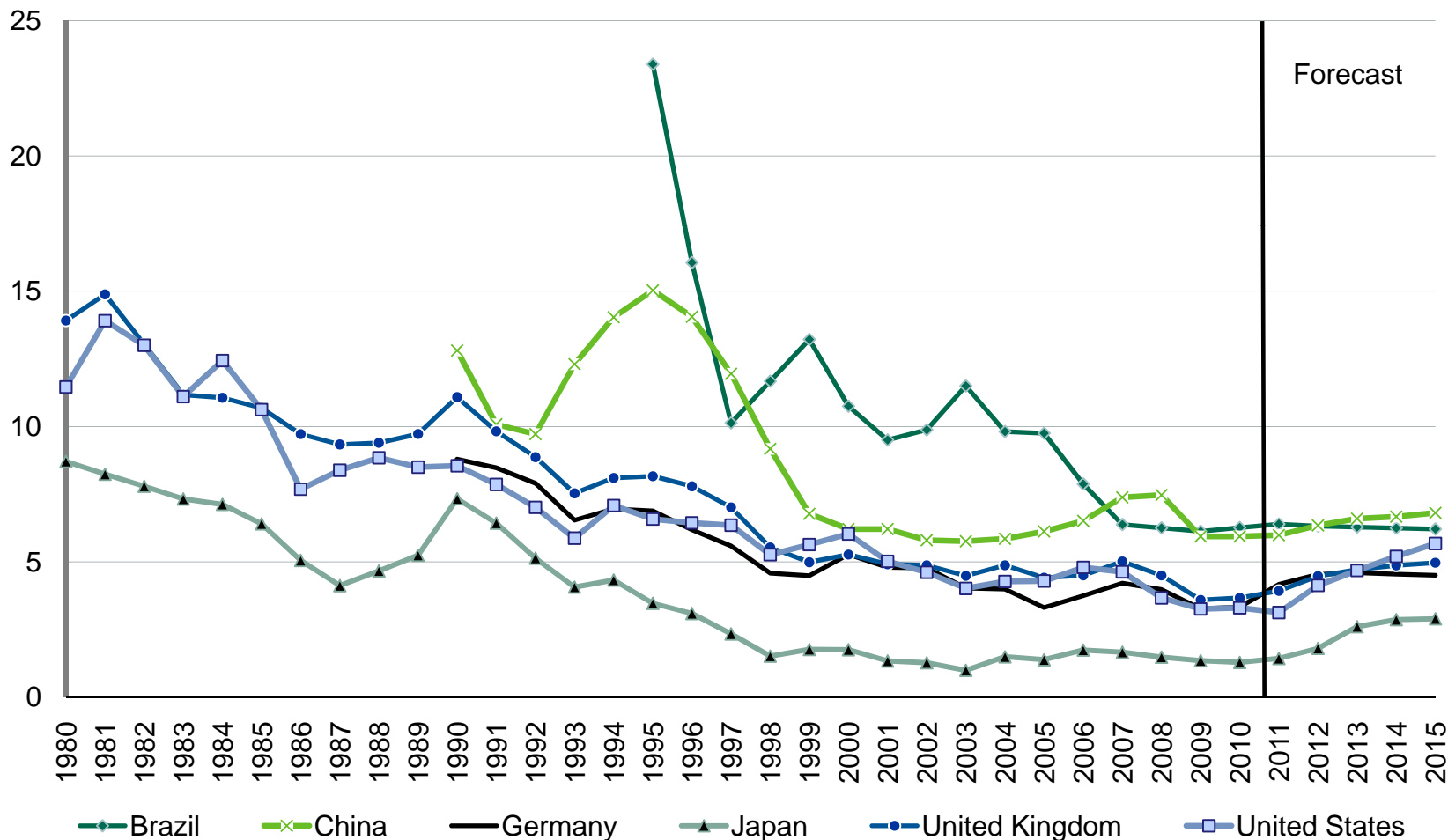


Source: IHS Global Insight, September 2010



Global Capital lowers Government Bond Rates

Long Term Interest Rates



Source: IHS Global Insight, September 2010

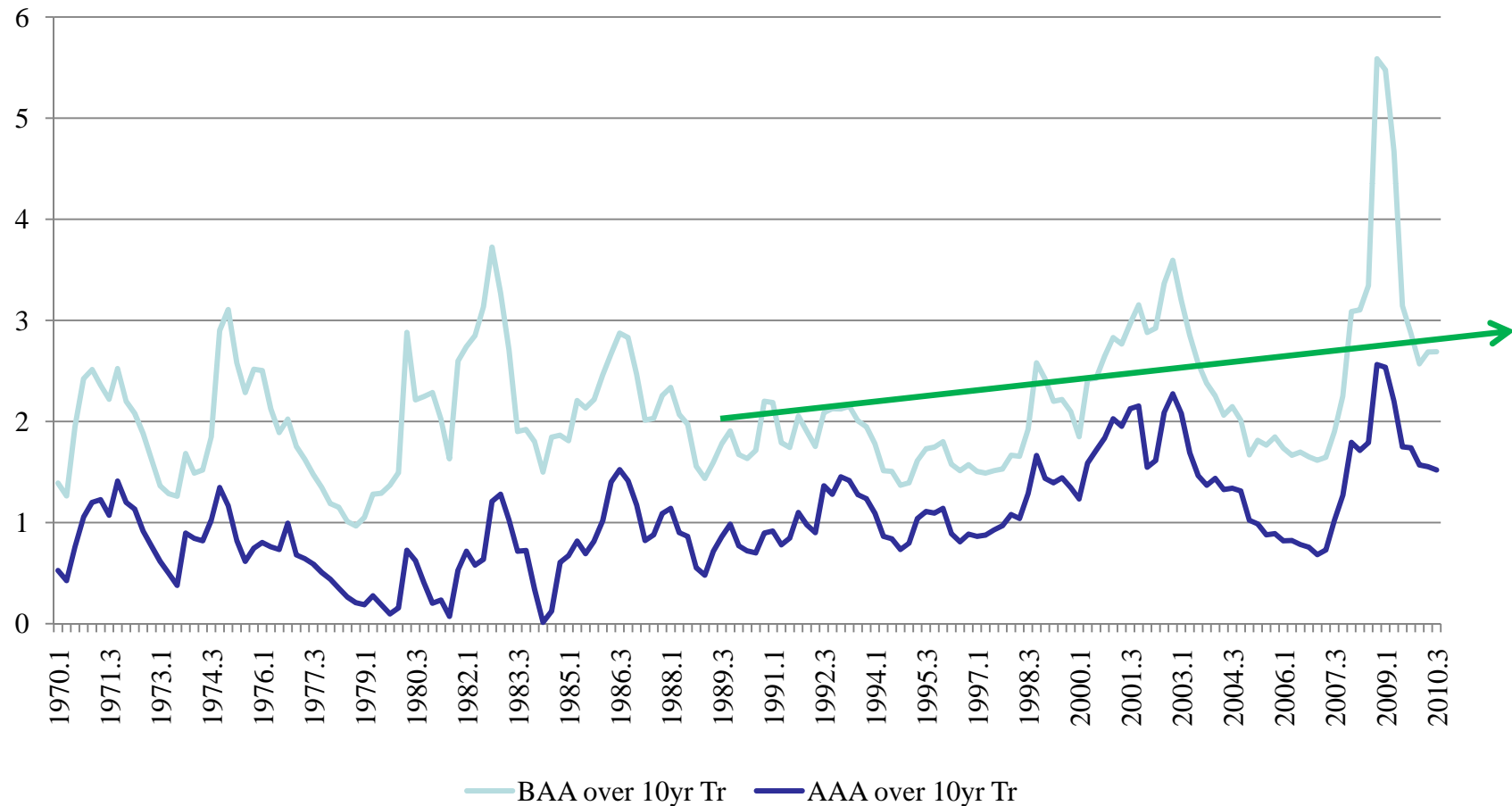


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Risk Premiums have Recovered, but Global Capital Seeks *Safe Investment*- Hence Risk Premiums Rise in the Long Run

100 BPS

Spreads on Debt

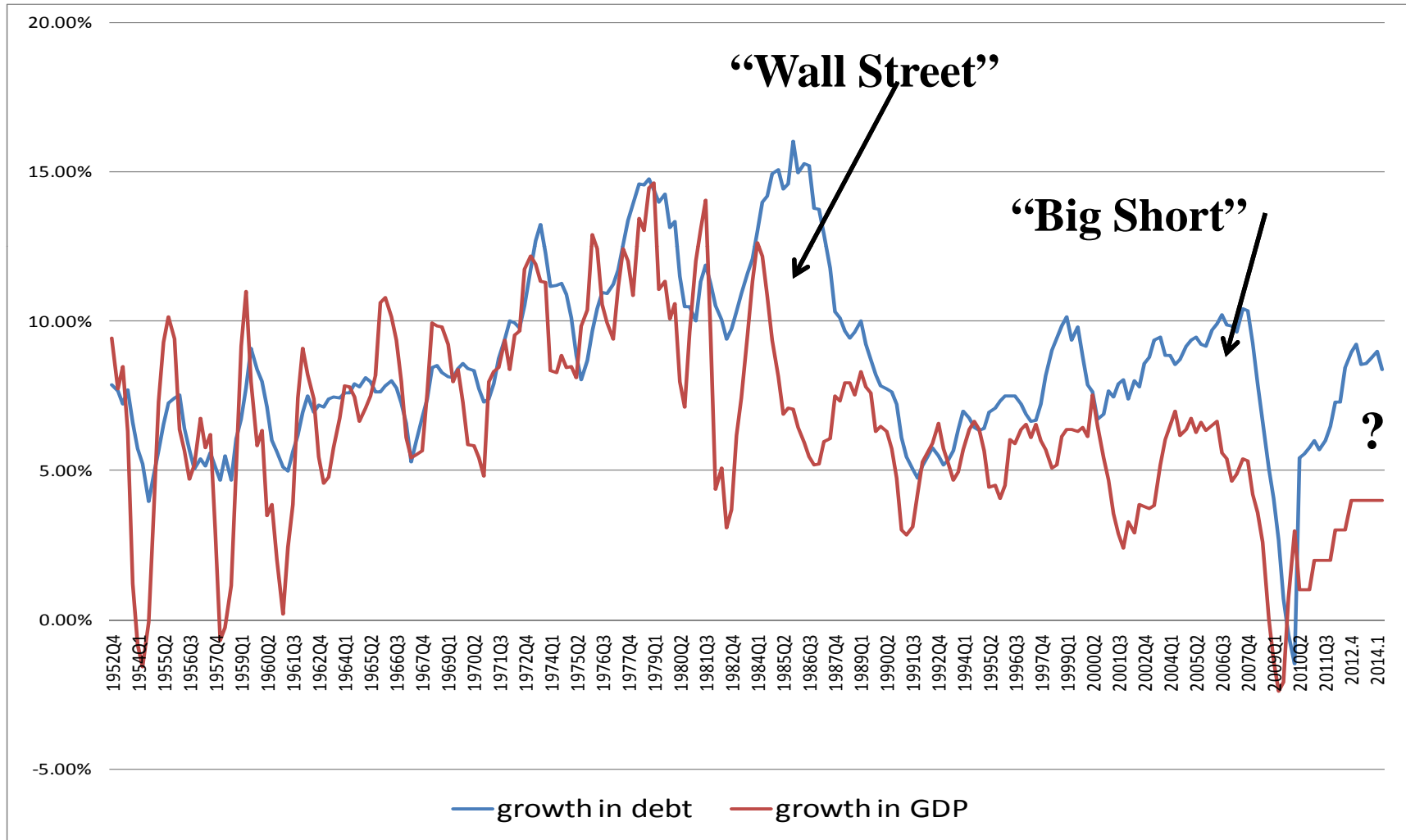


Source: Moody's, Federal Reserve



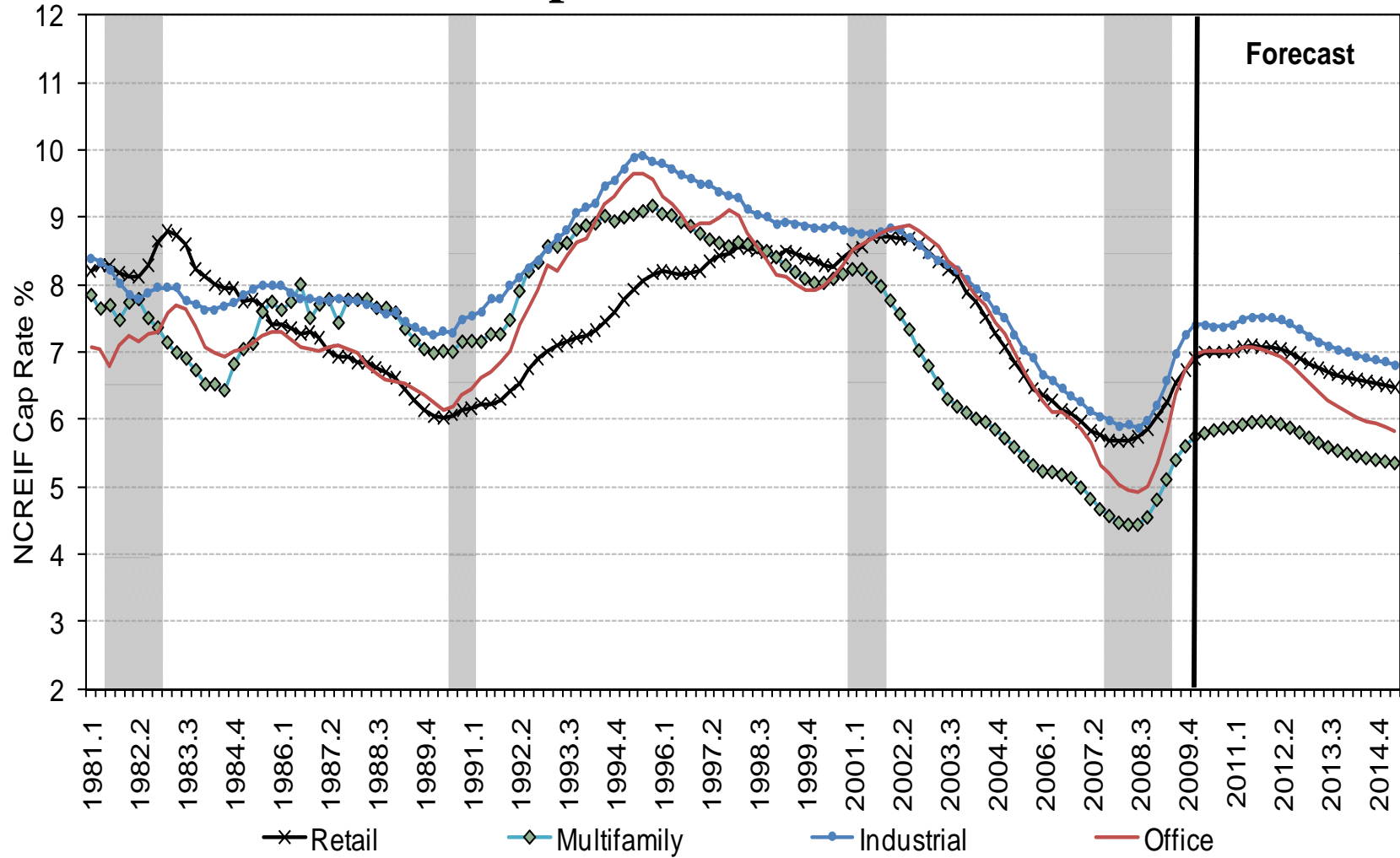
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Excess Savings Drives the Provision of Debt, Reducing Illiquidity Premium: 1980s and 2000s





**4% treasuries, a return of risk, liquidity, gradual rent recovery
= Cap Rates back to...?**





But Plentiful Capital Creates Financial Crises.

Equity based Financial Crises

- Example: 2001 Tech Bubble
- Bubble Burst creates only short term consumption drop from a wealth effect.
- Hong Kong Real Estate (periodic bubbles).

Debt Based Financial Crises

- Sovereign Debt Crises: Asia 1998.
- US Housing 2008. The EU in 2011?
- Bubble Burst destroys lending channel, lack of liquidity, contagion, even bank runs.
- Role of Securitization?



Securitization:

How to provide Discipline for the Debt we Love

- Originators have to keep a share of the risk – for some time frame.
- Need a rating's model where raters are independent and not paid by pool creators, but investors.
- Special Servicing contracts must provide for balanced asset disposition between tranches.
- *With this model, the AAA pool tranche should involve only systemic risk. 100% guaranteed by Uncle Sam !*
- GSE reform proposals will embody these principles for Residential real estate, including Apartments.
- What about CMBS? Being left to own demise.



#2: What will drive the Industrial Market?

Industrial Market Fundamentals

- Two types of Industrial Markets in the US.
- “Path of Goods” Distribution Markets – huge 1995-2010 growth with surging trade: Indianapolis, Riverside, Dallas.
- Local Manufacturing, R&D, warehouse markets – very idiosyncratic: Boston, St Louis, San Francisco

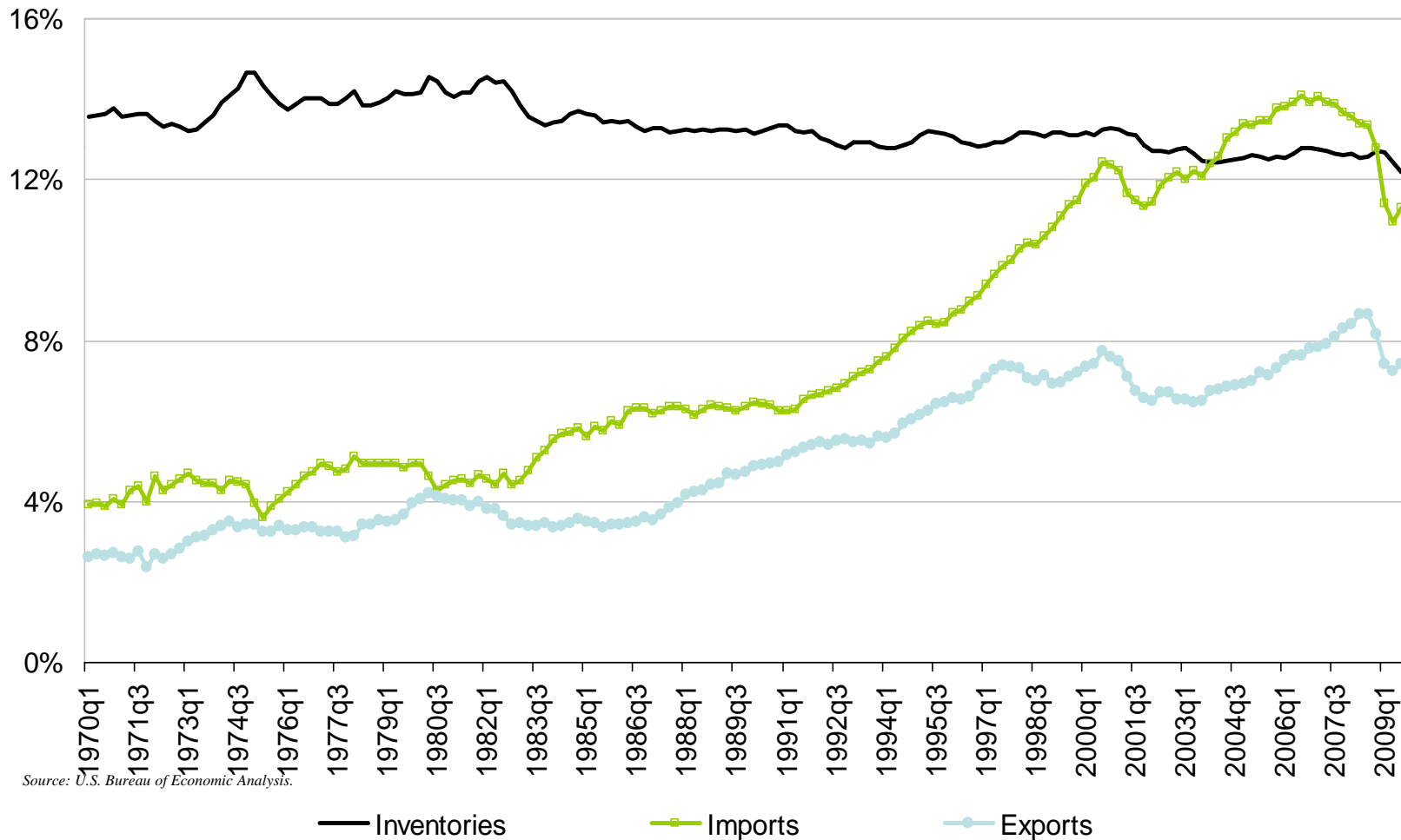


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Does Warehouse Demand grow with Inventories (2-3%),
Exports (5-6%) or Imports (7-8%) ?

Exports, Imports, and
Inventory as % of GDP

Inventory growth less from Logistic efficiency (JIT)



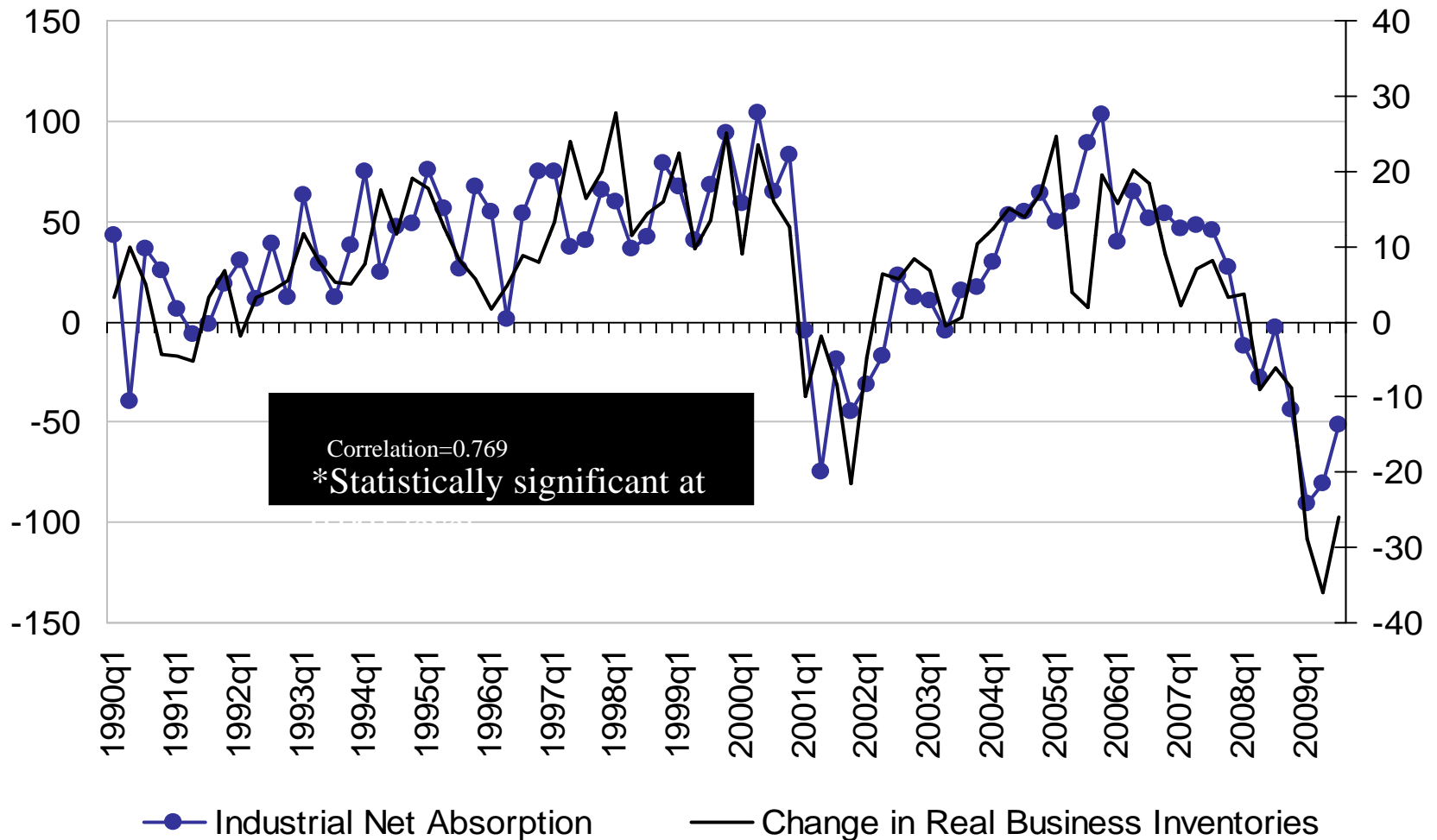
Source: U.S. Bureau of Economic Analysis.



Inventories are best predictor of US Industrial RE Demand

Industrial Net Absorption (millions sf)

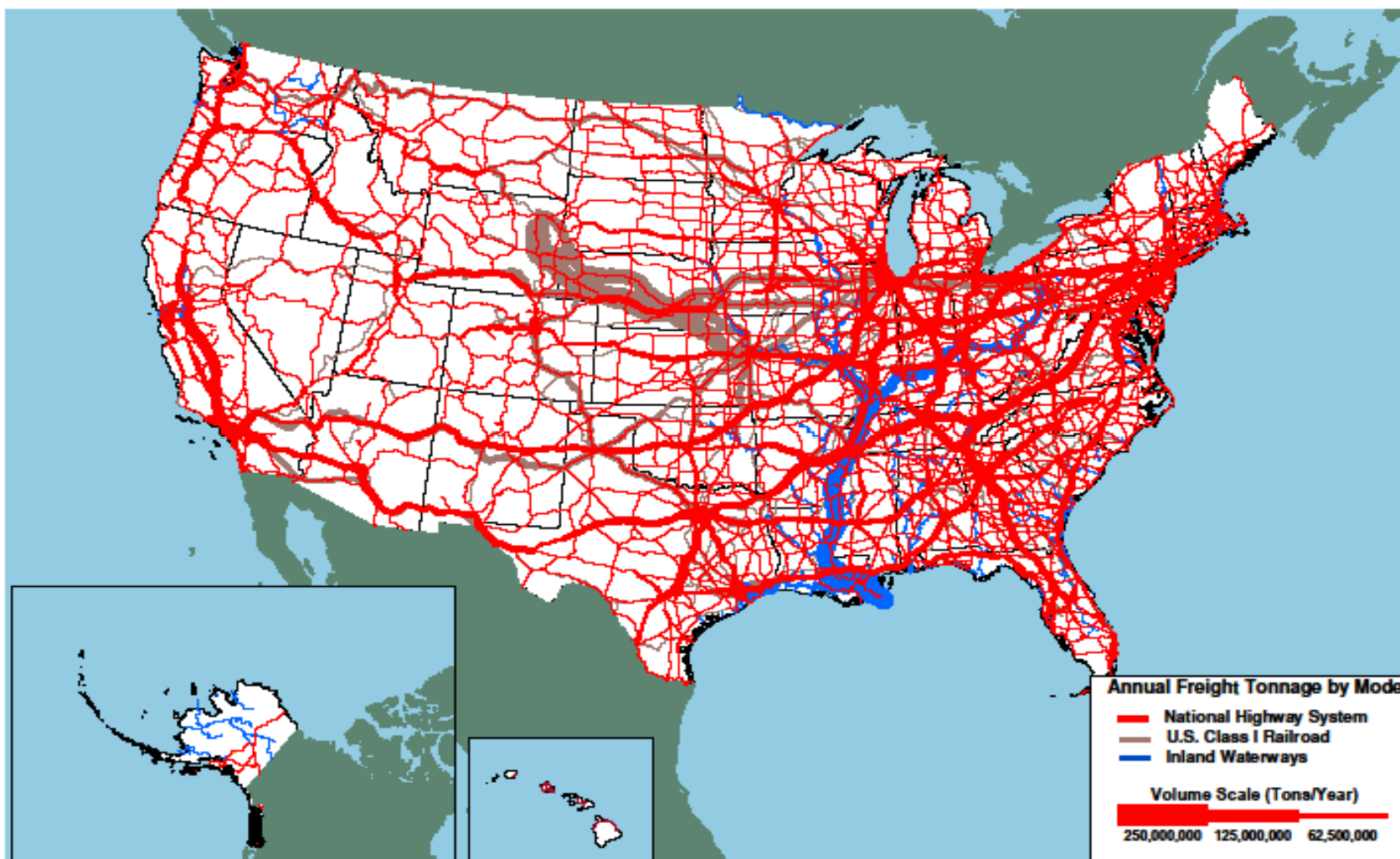
Change in Bus. Inventories (billions 2005 \$)





Path of Goods

Tonnage on Highways, Railroads, and Inland Waterways: 2007



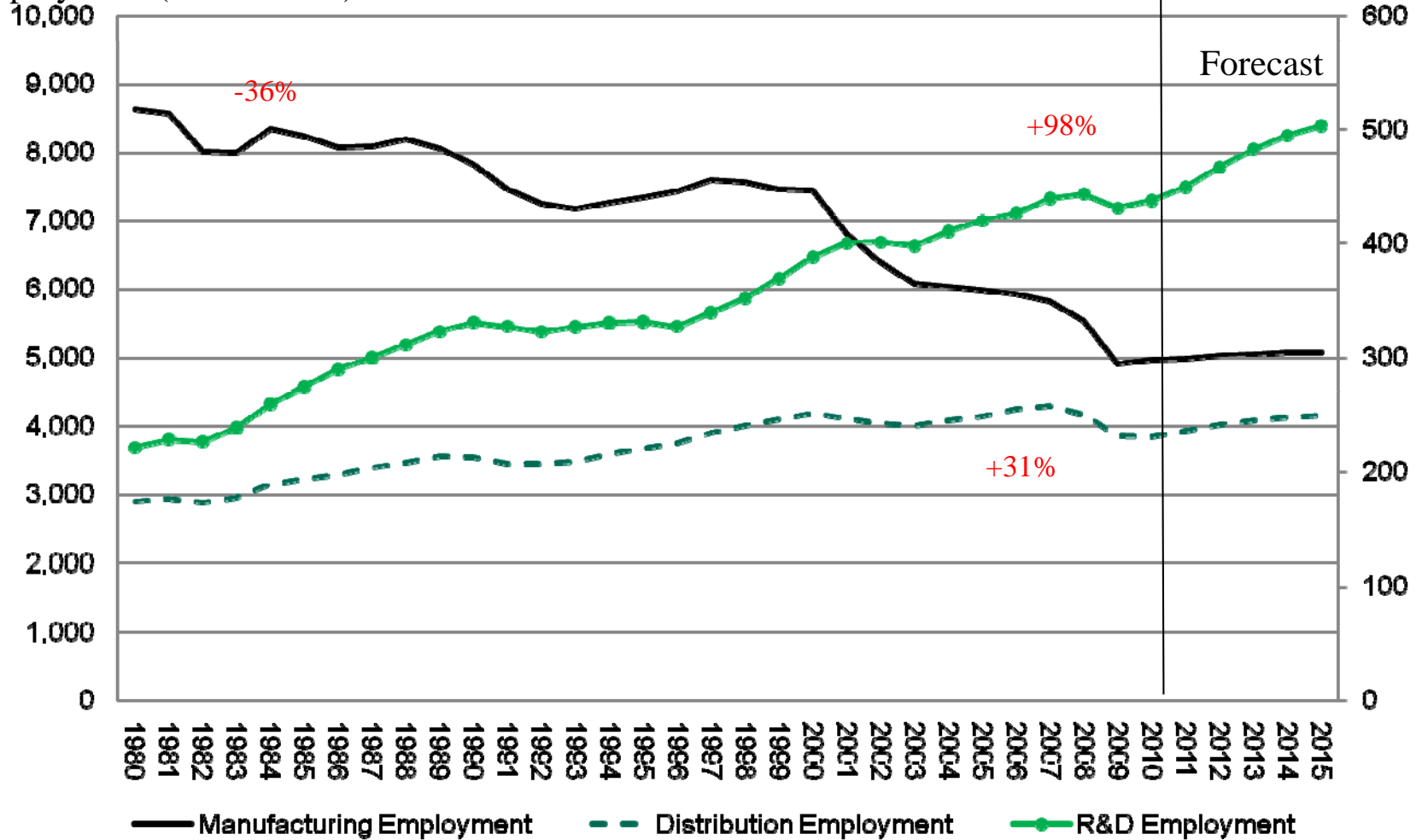
Sources: Highways: U.S. Department of Transportation, Federal Highway Administration, Freight Analysis Framework, Version 3.1, 2010. Rail: Based on Surface Transportation Board, Annual Carload Waybill Sample and rail freight flow assignments done by Oak Ridge National Laboratory. Inland Waterways: U.S. Army Corps of Engineers (USACE), Annual Vessel Operating Activity and Lock Performance Monitoring System data, as processed for USACE by the Tennessee Valley Authority; and USACE, Institute for Water Resources, Waterborne Foreign Trade Data, Water flow assignments done by Oak Ridge National Laboratory.



US R&D Market has “legs”

Manufacturing & Distribution
Employment (Jobs x 1000)

R&D Employment
(Jobs x 1000)



Sources: Economy.com; CBRE EA Industrial Outlook, Winter 2011

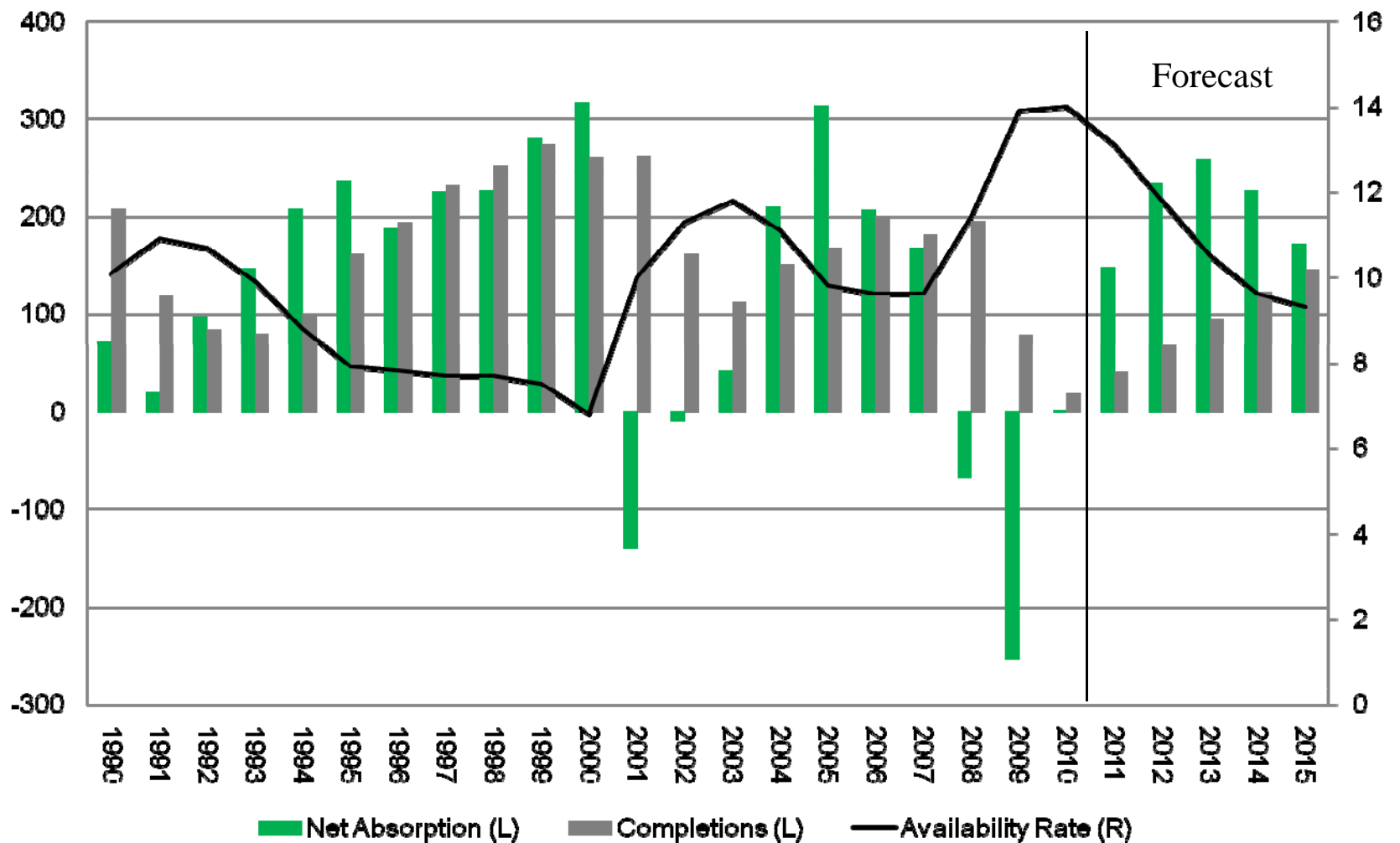


Industrial: Strong Demand from Trade Recovery

Ind. Net Absorption,
Completions (millions sf)

Supply Hangover

Ind. Availability Rate





#3: What will drive the Office Market?

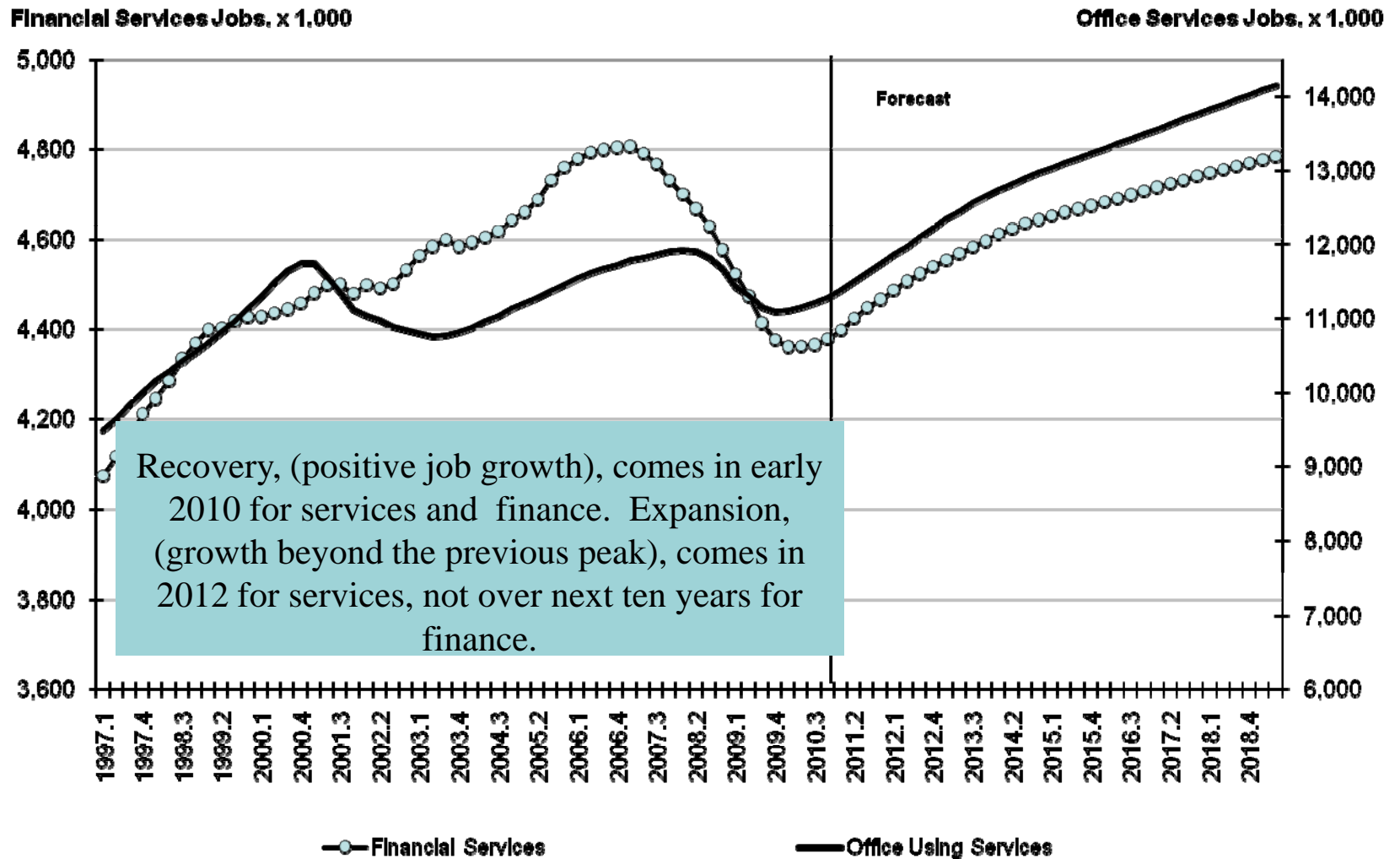
Office Market Fundamentals

- Fewer Finance Jobs in NYC in 2007 than in 1999 – and even fewer now. Finance has stopped growing rapidly as did in 1960-1990.
- Financial jobs dispersing into smaller markets and not concentrating in “money centers”
- Business/professional Services becoming the dominant office tenant. Comparative space needs (sqft/worker)?
- Work from home=nonsense. Work on the road makes sense. Space/worker declining.



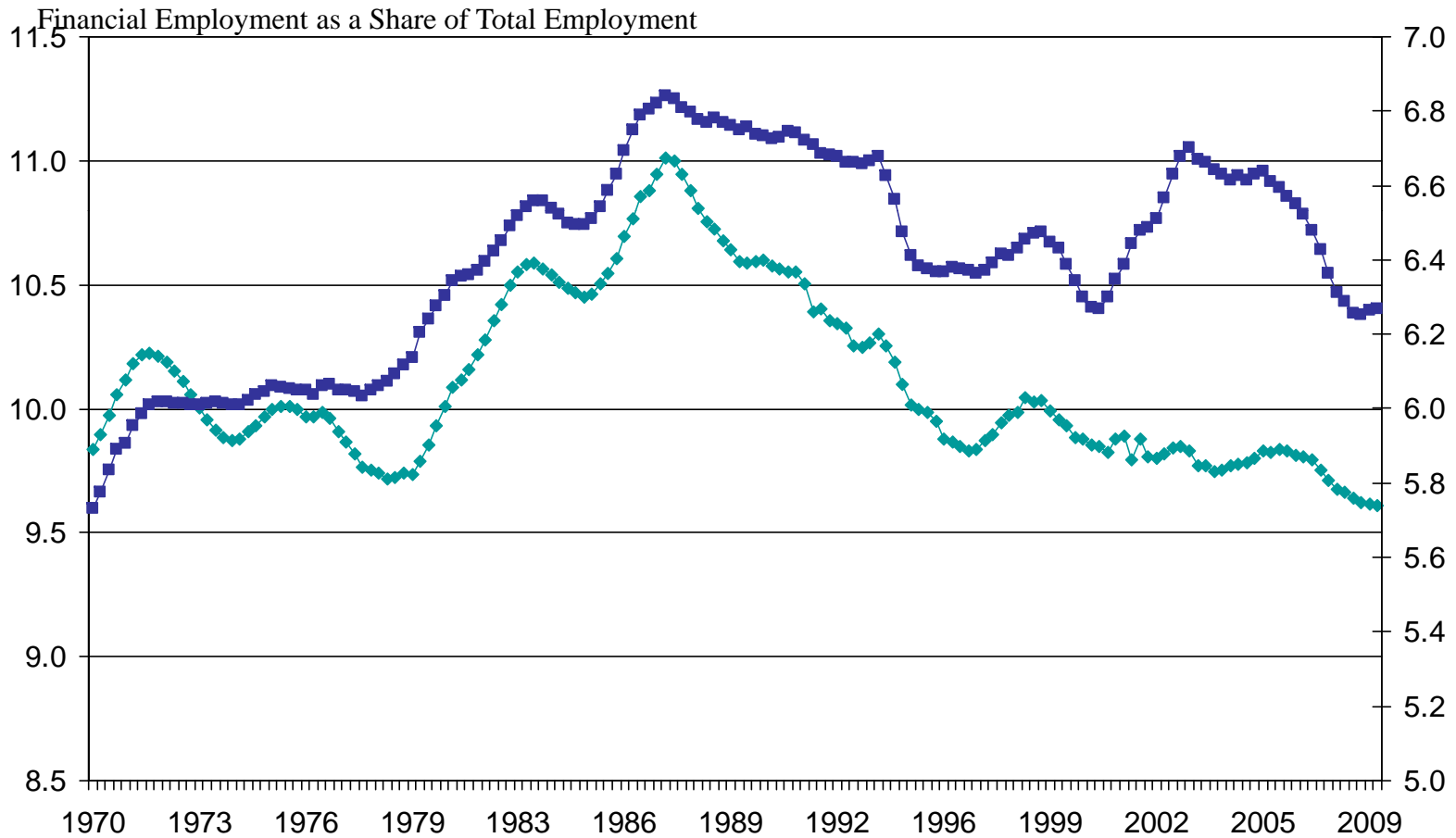
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Job Growth in the Office Market will come from Service Sector





US: Finance is now a declining and spatially dispersing share of Jobs



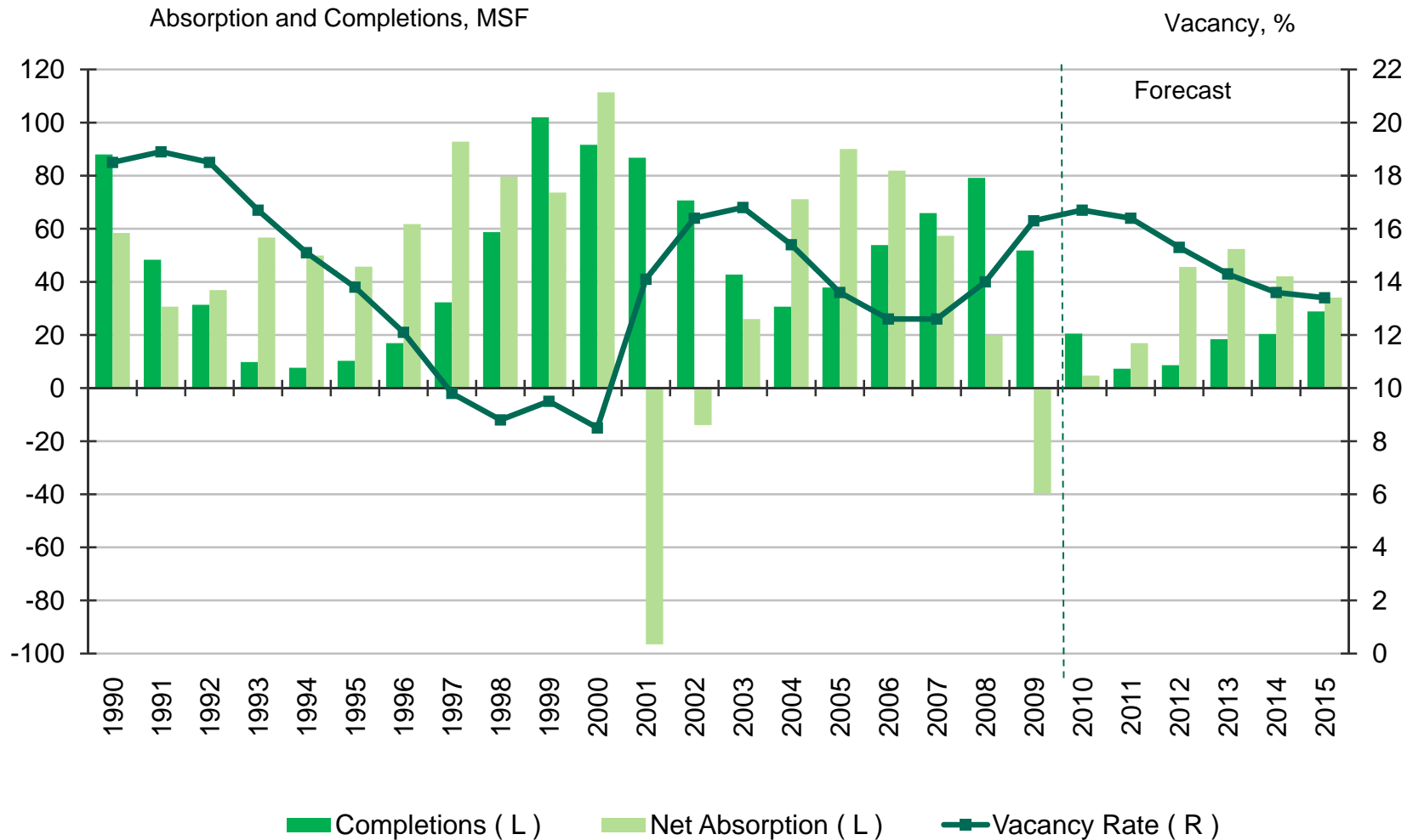
Source: Bureau of Labor Statistics.

◆ Top 10 Financial Markets (Left)

■ All Other Office Markets (Right)



US Office Market: Demand 1/2 prior decades



Source: CBRE-EA Office Outlook, Winter 2011



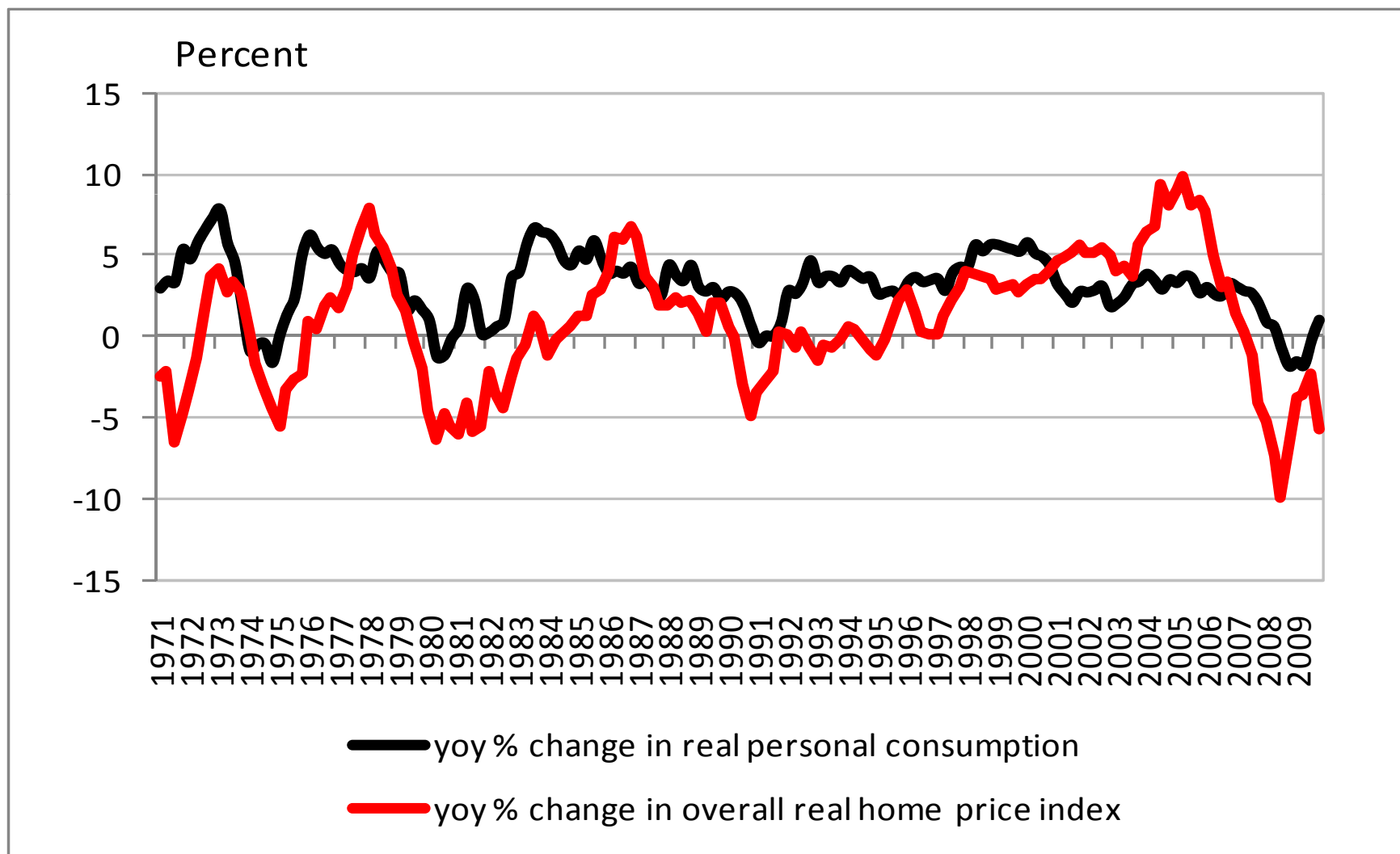
#4: What will happen to Retail?

Retail Market Fundamentals

- Store demand is recovering the slowest among commercial sectors.
- Prior to financial crisis: much demand was from Housing related consumption – this has yet to recover.
- The Internet is a “Huge” long term threat to traditional store formats – and hence shopping center space demand
- What is the future of retailing?



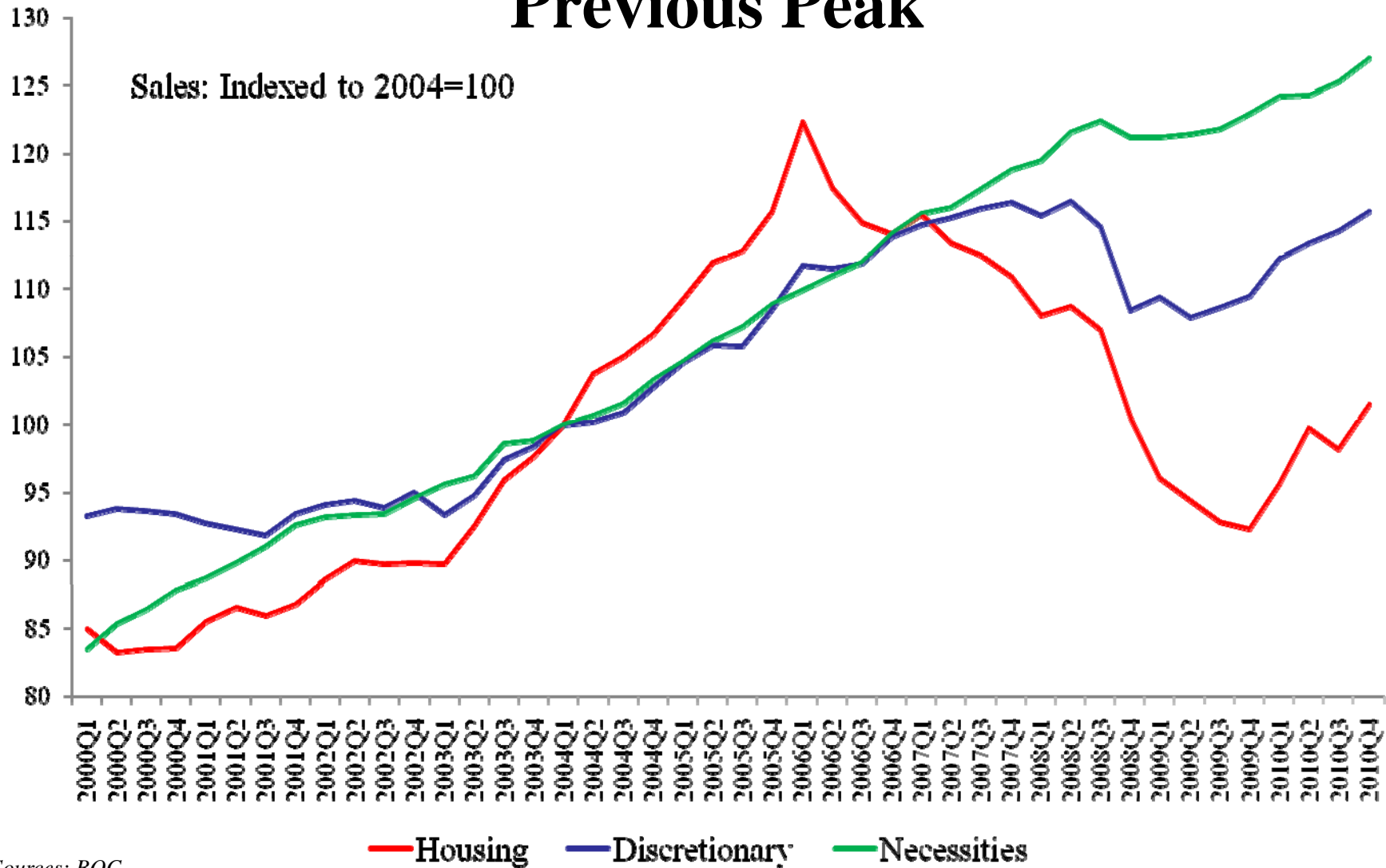
Take out recessions (crises) and the remaining correlation between house prices and spending surprisingly little!





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Housing related sales still Way Below Previous Peak

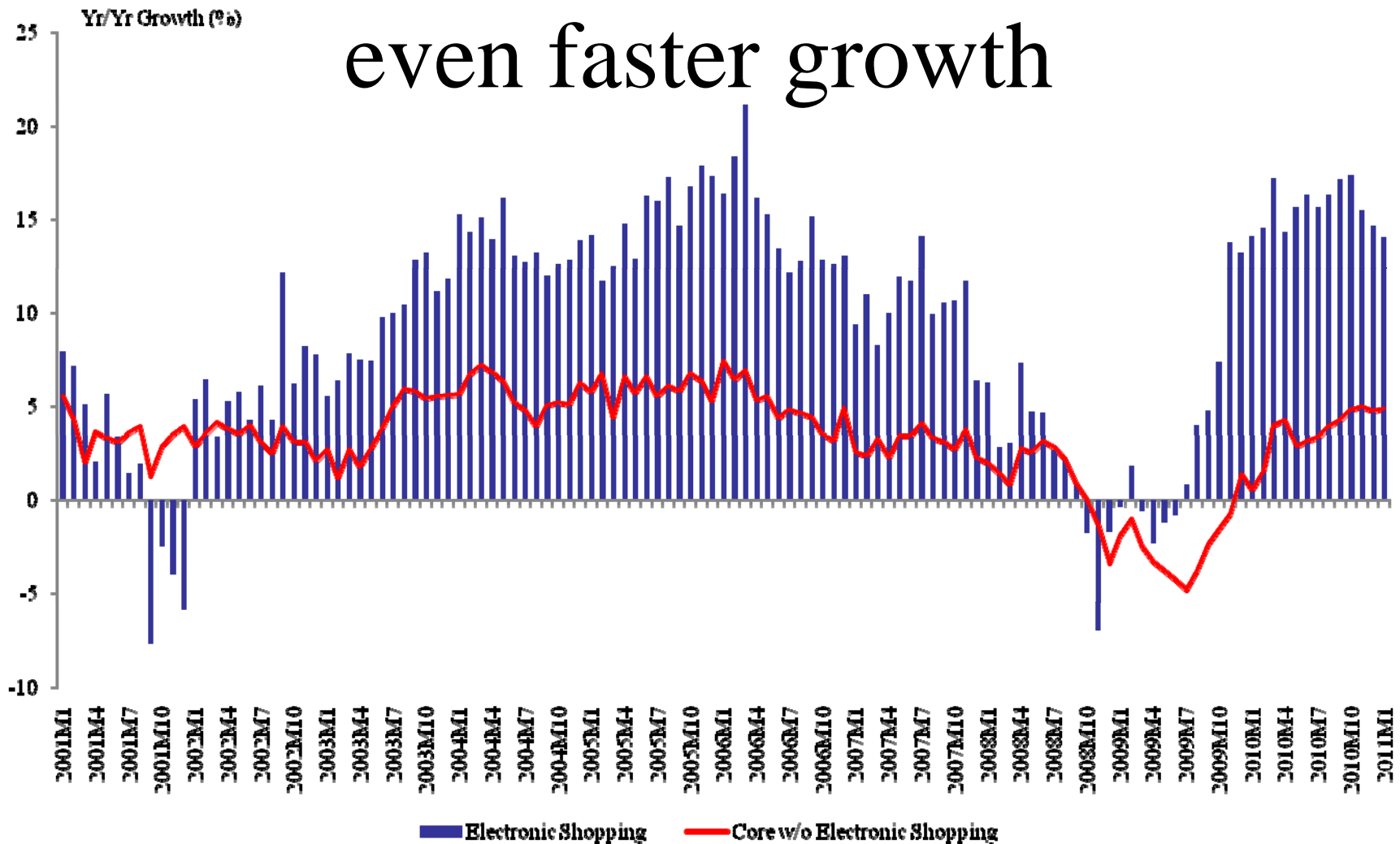


Sources: BOC



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Internet Sales: recovering with even faster growth

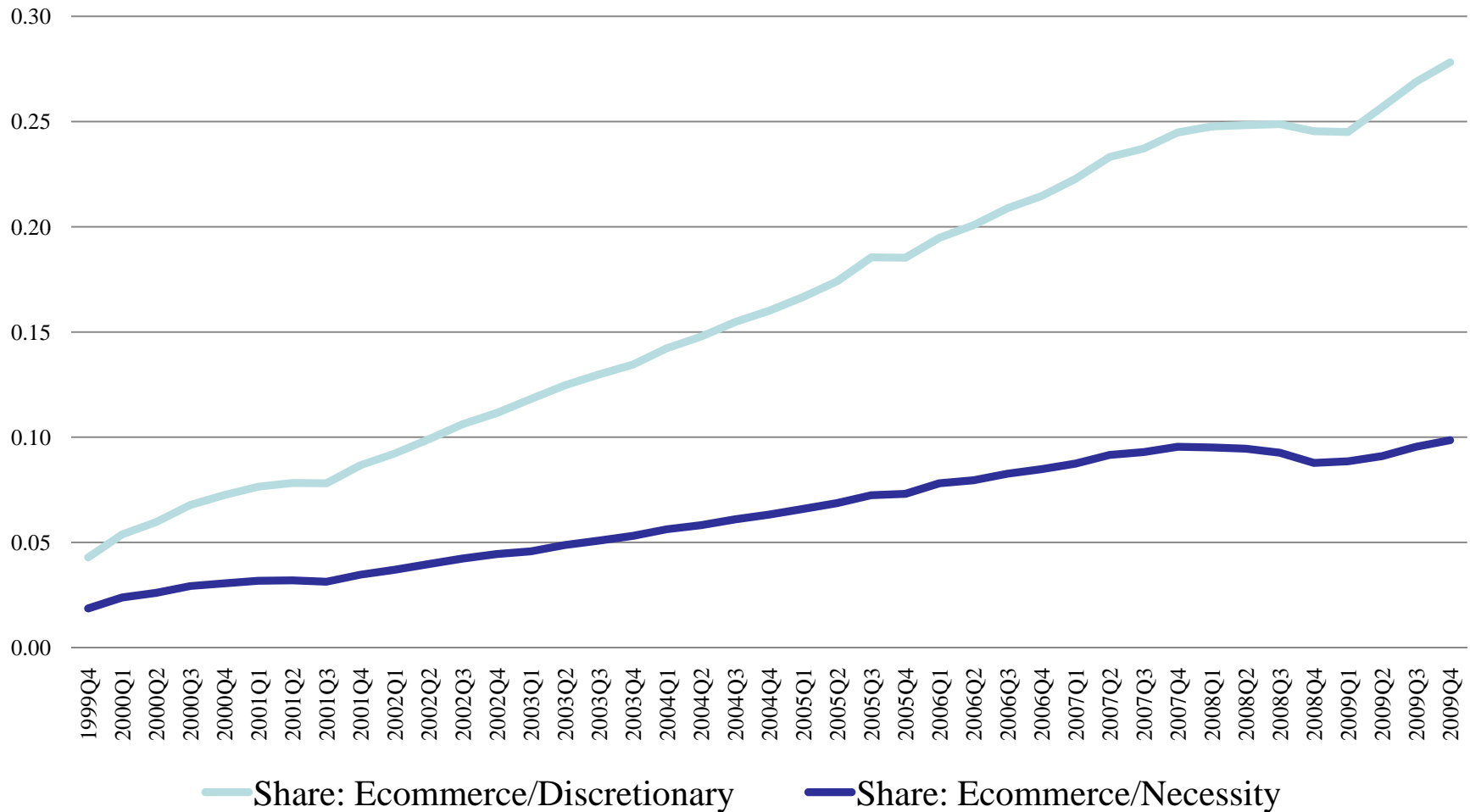


Sources: BOC



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So E-Commerce continues to gain market share: What do Retailers and Shopping centers look like in 2025?.....



**More clicks = smaller bricks for the same retailer,
as inventories move from shelves to warehouses**





Retailing in 2025: What the Internet does!

- Creates greater price competition between retailers. Competition lowers margins (and rents ?).
- Stores become smaller “display centers” where clients try, size, color items – which are then ordered-delivered.
- Inventories move from retailer (back) to warehouses.
- Small stores allow retailers to disperse into local targeted areas rather than regional centers.
- “Social shopping” remains – you just don’t take it home.



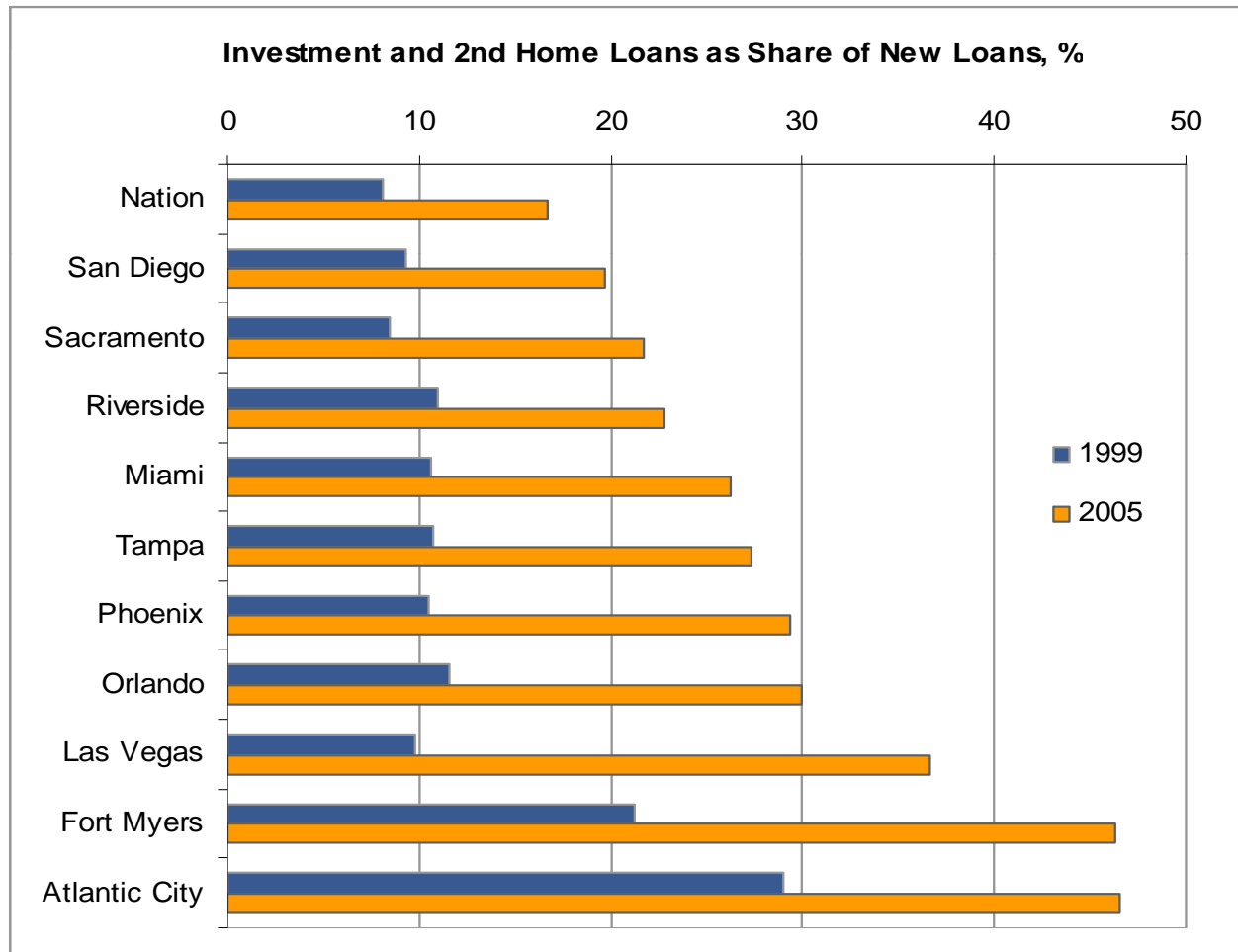
#5: How important was Speculation in the US Housing Crisis?

- 1). “Speculation” is the purchase of additional housing units mainly for investment rather than use.
- 2). 2nd homes can be calculated from Census Vacancy data:
= URE (Usual Residence Elsewhere) + Seasonal+ Occasional Use + other. These are “vacant” units *not on the market*.
- 3). This calculation has grown from 8% of owned units in 1978 to 16% in 2008 = 200k annual increase.
- 4). Post 1998 mortgage interest on 2nd homes became fully tax deductible. Helping home ownership or speculation?
- 5). Foreign exchange matters. Low dollar generates foreign purchases of US condos in anticipation of a recovery?
- 6). Four states: Florida, California, AZ, N.V. contributed disproportionately to the Boom/Bust. These are US second home havens.



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CANFLAZ purchase of 2nd or Investment (speculative) homes 2x US average (Condos excluded)



Source: Loan Performance, Torto Wheaton Research



CANFLAZ is a huge share of the “trouble”, relative to population or Housing Market share

	CANFLAZ as a % of US							
	2001	2003	2005	2006	2007	2008	2009	2010*
Total population	20.4	20.7	21.0	21.0	21.0	21.1	21.1	21.1
Residential permits	25.2	27.7	29.3	25.5	20.7	18.2	15.7	16.8
Existing home sales	20.6	20.8	20.4	16.5	14.0	18.0	21.8	21.4
2nd/investment home loans	35.4	39.9	44.2	NA	NA	NA	NA	NA
Total loans	27.6	27.1	29.4	27.7	25.8	26.1	26.3	26.3
"Under Water" Loans	NA	NA	NA	NA	NA	NA	NA	49.2
Foreclosure starts	NA	NA	23.8	26.6	37.9	47.4	50.4	46.8

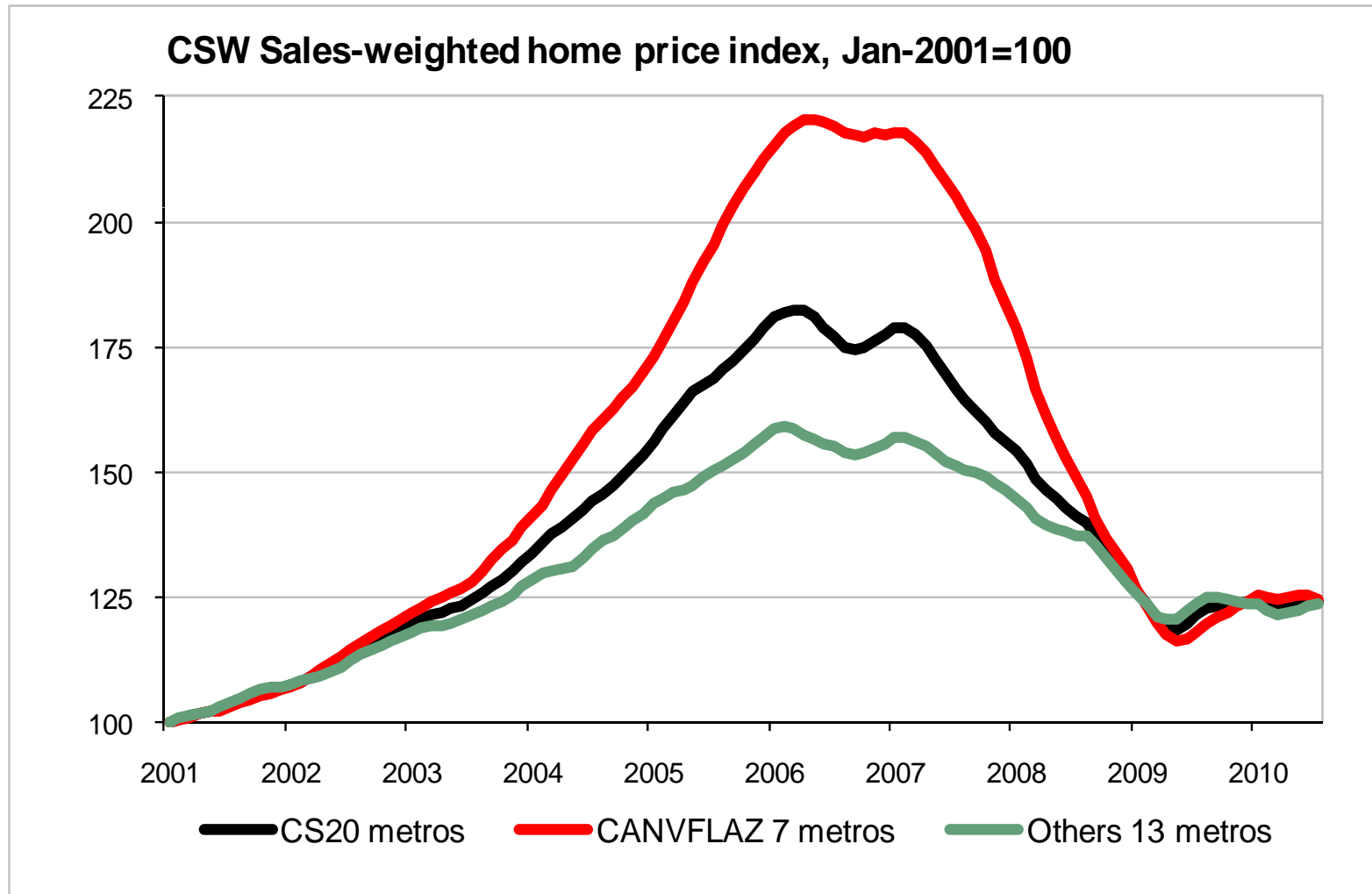
* year-to-date

Sources: BLS, BOC, HopeNow, HMDA, Loan Performance, NAR, RealtyTrac.



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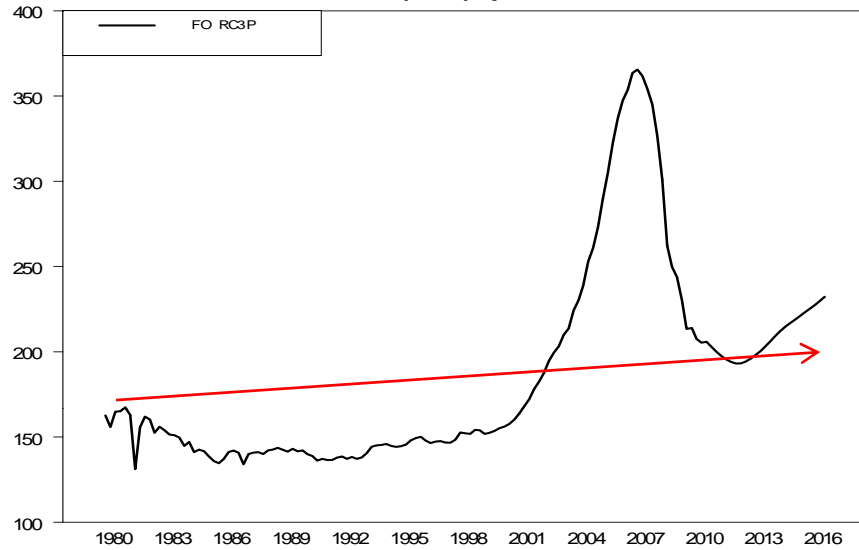
2nd Homes: Housing price “bubble” in CANFLAZ: 2x rest of the US



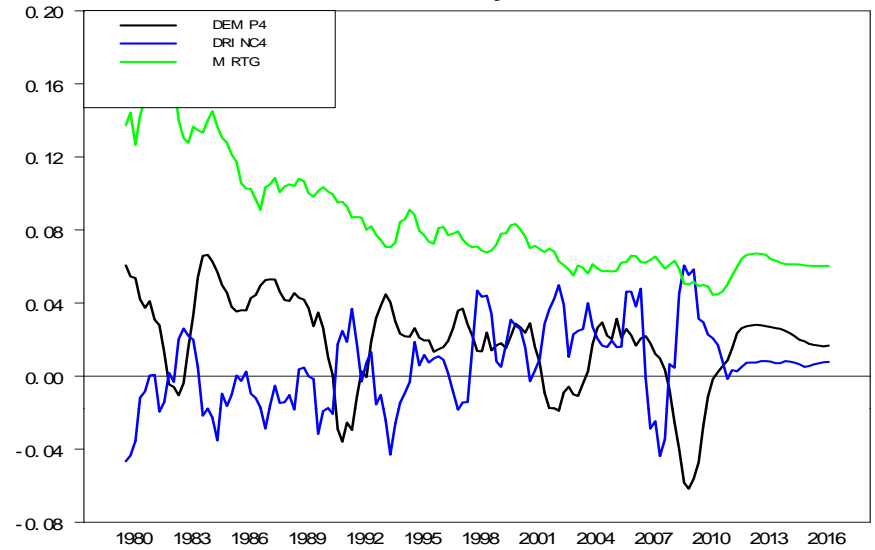


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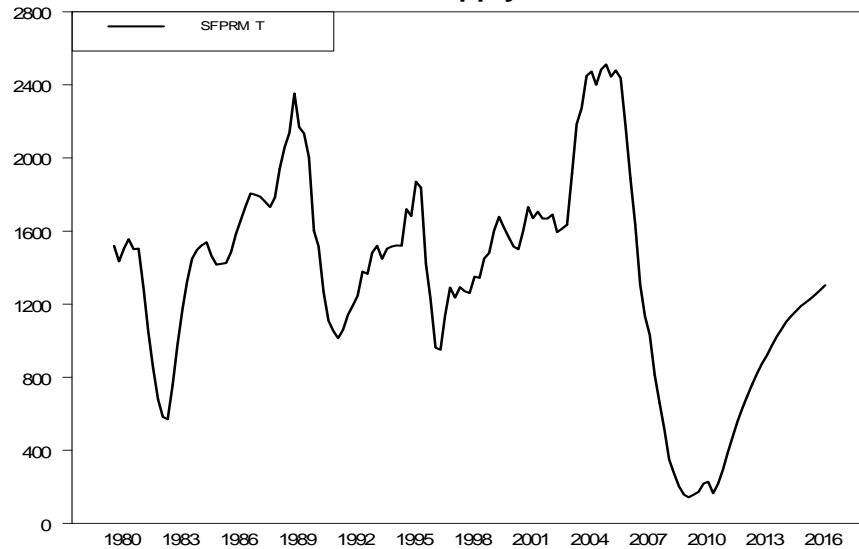
MIAMI (#32): prices



Economy



new supply

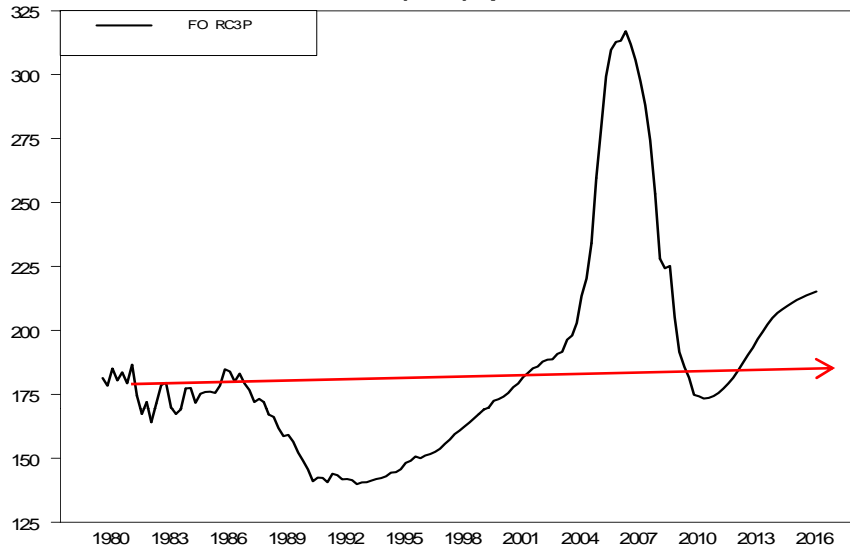


**The Miami Bubble:
some construction recovery
little in prices**

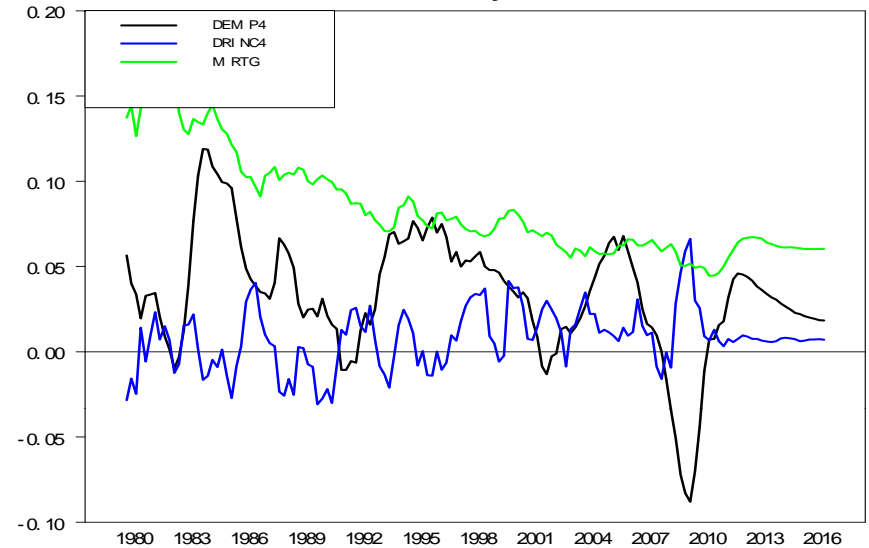


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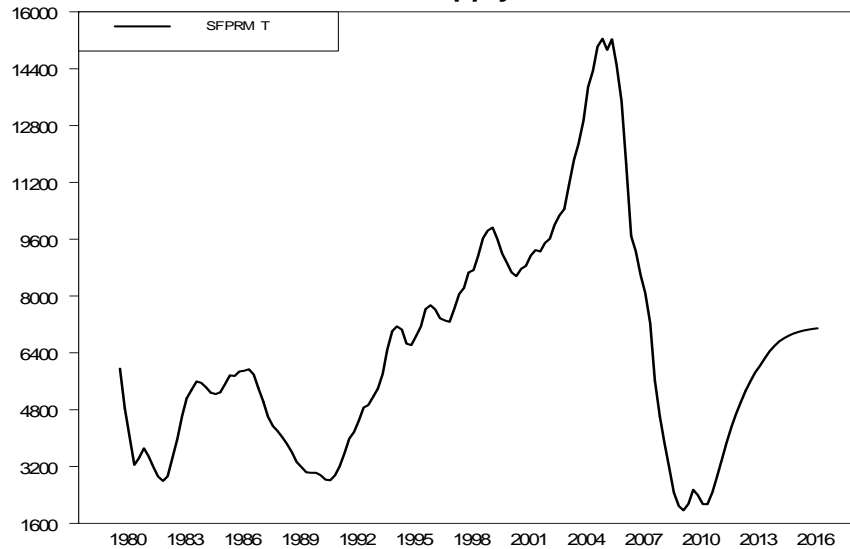
PHOENI (#44): prices



Economy



new supply



**The Phoenix Bubble:
some construction recovery
little in prices**



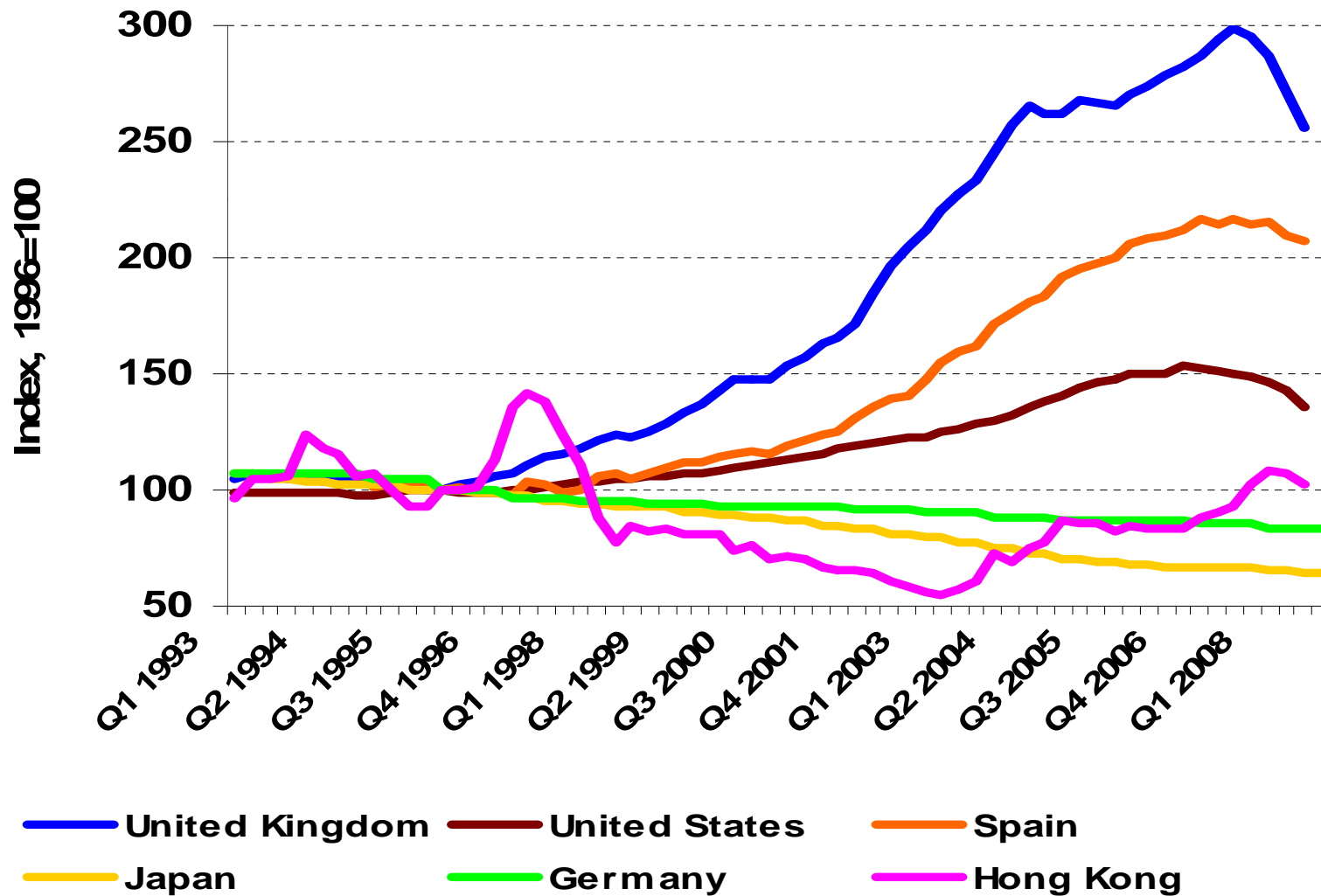
Assessing 2nd home markets

- 1). Primary home ownership determined by demographics => a limit to demand. Demand can be forecast.
- 2). There is no limit to 2nd home demand. In China 2nd homes preferred form of savings accounts!
- 3). 2nd home Demand often comes from different parts of the country or globe – *measuring, finding demand drivers is difficult or impossible. Cannot forecast “demand”*
- 4). Once such a market starts to decline will investors be patient, with high “reservations” (they do not *have* to sell). Or will they all try and “get out” at once?
- 5). Such markets are intrinsically risky: Dubai?
- 6). Easy Debt for 2nd home purchases = gasoline on a fire.
- 7). China has the correct attitude towards 2nd home purchases: NDA (No Debt Allowed).



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2000-2009 Price appreciation around the globe: Spain, UK = 2nd homes? (Indexes deflated by local currency)



William Wheaton, PhD

William Wheaton is Principal at CBRE Econometric Advisors and Professor at the Massachusetts Institute of Technology (MIT) in the Economics Department and the Department of Urban Studies and Planning. He helped found and served for many years as Director of the Center for Real Estate at MIT. The first economist to apply economic methods to the forecasting of commercial real estate markets, Dr. Wheaton's innovative perspective and integrated econometric modeling provide a framework for decision-making that other, more traditional analyses cannot. Dr. Wheaton attended Princeton University for his undergraduate degree and received his Ph.D. in Economics from the University of Pennsylvania. Dr. Wheaton co-authored the highly acclaimed textbook *Urban Economics and Real Estate Markets*, hailed as groundbreaking in the real estate economics field.



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