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.
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

Savings Rate,%

Source: IHS Global Insight, September 2010
Global Capital lowers Government Bond Rates

Long Term Interest Rates

Source: IHS Global Insight, September 2010
Risk Premiums have Recovered, but Global Capital Seeks *Safe Investment*- Hence Risk Premiums Rise in the Long Run

Source: Moody’s, Federal Reserve
Excess Savings Drives the Provision of Debt, Reducing Illiquidity Premium: 1980s and 2000s

“Wall Street”

“Big Short”
4% treasuries, a return of risk, liquidity, gradual rent recovery
= Cap Rates back to...?

Source: CBRE Econometric Advisors; base case
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**

- 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?

- Two types of Industrial Markets in the US.
- Local Manufacturing, R&D, warehouse markets – very idiosyncratic: Boston, St Louis, San Francisco
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

Change in Bus. Inventories (billions 2005 $)

Industrial Net Absorption (millions sf)

Correlation=0.769
*Statistically significant at 0.001 level

Source: Bureau of Economic Analysis; Industrial Outlook XL, Fall 2009.
Path of Goods

Tonnage on Highways, Railroads, and Inland Waterways: 2007

Annual Freight Tonnage by Mode
- National Highway System
- U.S. Class I Railroad
- Inland Waterways

Volume Scale (Tons/Year)
- 250,000,000
- 125,000,000
- 62,500,000

Sources:
- 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”

Sources: Economy.com; CBRE EA Industrial Outlook, Winter 2011
Industrial: Strong Demand from Trade Recovery
Supply Hangover

Ind. Net Absorption, Completions (millions sf)
#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.
Job Growth in the Office Market will come from Service Sector

Recovery, (positive job growth), comes in early 2010 for services and finance. Expansion, (growth beyond the previous peak), comes in 2012 for services, not over next ten years for finance.

Source: Office Outlook XL, Fall 2009
US: Finance is now a declining and spatially dispersing share of Jobs

Financial Employment as a Share of Total Employment

US Office Market: Demand ½ 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!
Housing related sales still Way Below Previous Peak

Sales: Indexed to 2004=100

Sources: BOC
Internet Sales: recovering with even faster growth

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

Sources: BOC
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.
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

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<td>Total loans</td>
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* year-to-date

Sources: BLS, BOC, HopeNow, HMDA, Loan Performance, NAR, RealtyTrac.
2nd Homes: Housing price “bubble” in CANFLAZ: 2x rest of the US
The Miami Bubble: some construction recovery little in prices
The Phoenix Bubble: some construction recovery little in prices
Assessing 2\textsuperscript{nd} home markets

1). Primary home ownership determined by demographics => a limit to demand. Demand can be forecast.

2). There is no limit to 2\textsuperscript{nd} home demand. In China 2\textsuperscript{nd} homes preferred form of savings accounts!

3). 2\textsuperscript{nd} 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 2\textsuperscript{nd} home purchases = gasoline on a fire.

7). China has the correct attitude towards 2\textsuperscript{nd} home purchases: NDA (No Debt Allowed).
2000-2009 Price appreciation around the globe: Spain, UK = 2nd homes? (Indexes deflated by local currency)
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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