Some Thoughts On the Economy, Private Equity, and Real Estate

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Some Thoughts On the Economy, Private Equity, and Real Estate

- Coming out of the crisis, what next?
- General Economy.
 - What is the economy going to do? Will there be a double dip
 - What forces / factors are worth watching?
- Private Equity / Real Estate.
 - What have returns been in VC / PE / RE PE?
 - What drives returns?
 - Predictions / prognosis for the future?



Questions on the Economy

- What is the economy going to do? Will there be a double dip?
- What forces / factors are worth watching?
- Acknowledgments:
 - Learned and borrowed from several of my colleagues.
 - » Particularly, Anil Kashyap, Raghu Rajan and Amir Sufi.



Thoughts on the Economy: What is the economy going to do? Will there be a double-dip?

- Currently: Consumption
 - Consumption is back to pre-crisis levels for top ½.
 - Consumption below for bottom ½.
 - » Deleveraging takes time. Reinhart, Reinhart, and Rogoff.
 - Increases in / uncertainty about tax rates.
 - Reduction in stimulus.



Thoughts on the Economy: What is the economy going to do? Will there be a double-dip?

- Currently: Investment
 - Businesses have been frozen because of uncertainty.
 - » Economy.
 - » Government.
 - taxes,
 - healthcare,
 - labor rules,
 - financial regulations (Dodd-Frank, etc.)
 - energy,
 - Republican takeover of House will reduce that uncertainty.



Thoughts on the Economy

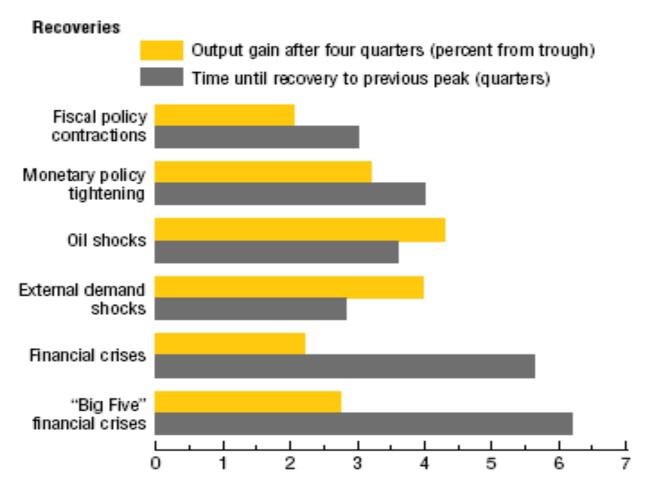
- Currently: Housing
 - Government policies have kept housing market from reaching equilibrium.
 - Crackdown on banks' foreclosure process further prevents housing market from reaching equilibrium.
- Currently: Other indicators
 - Exec Ed is up.
 - Recruiting spots up 27%.
 - Ad spending solid.
 - PE firms seeing slightly up.
 - High end nanny finder very busy.



Thoughts on the Economy: What does all that mean going forward?

- Double dip: Not likely.
 - Not unless there is a 2nd shock.
 - Election is a positive shock.
- Full recovery: Not likely.
 - Unemployment will remain high.
 - » Technology, outsourcing, regulation, taxation headwinds.
 - Full recovery will not occur until real estate market bottoms. See Leamer (2005).
- Post-crises in general:
 - Growth tends to be slow after financial crisis.
 - Reinhart, Reinhart, and Rogoff -- 5 years.

Recovery after financial crises are not quick





Source: IMF staff calculations.

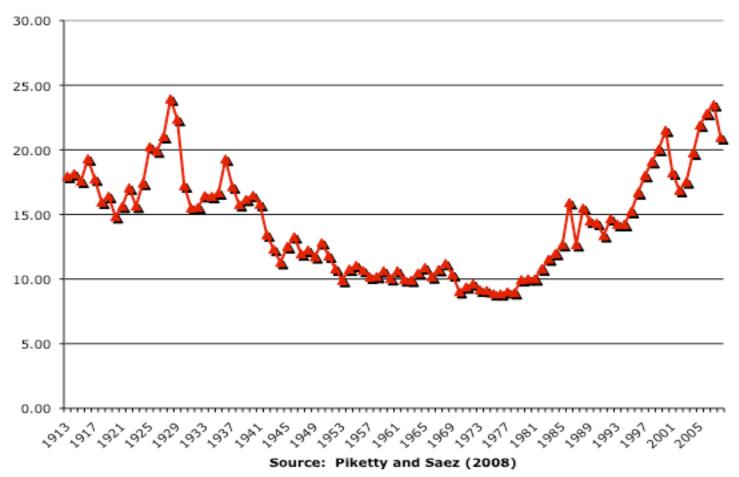
Thoughts on the Economy: An Aside About Income Inequality

- Fashionable to claim that income inequality is an important cause of the crisis and our malaise.
 - Robert Reich.
 - Jacob Hacker and Paul Pierson.
 - Barack Obama.
- According to these authors, income inequality:
 - threatens consumption (Reich).
 - threatens political instability (Reich).
- These arguments get a lot of attention in mainstream media.



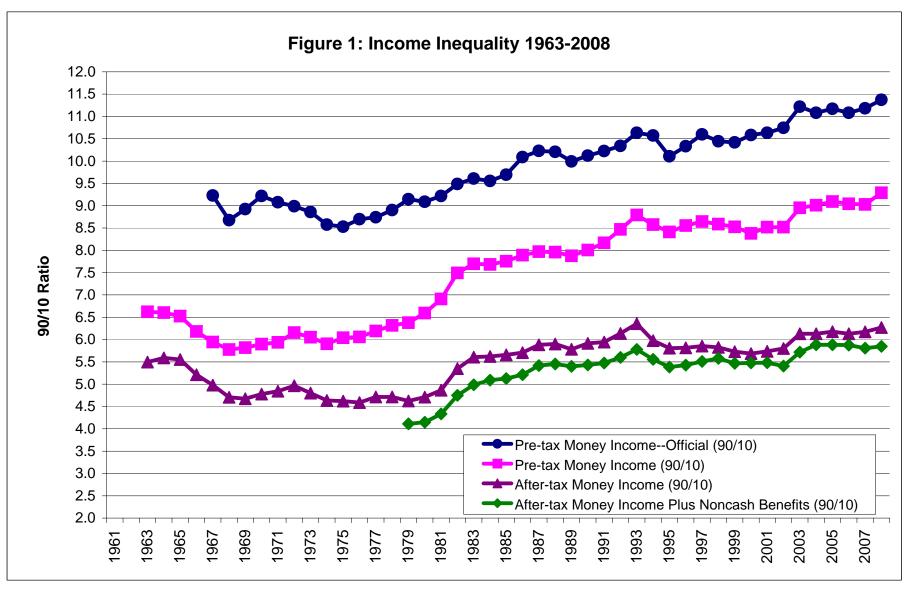
Income Inequality Has Increased At the Top End

Income Share (AGI) of Top 1% in U.S. from 1913 - 2008

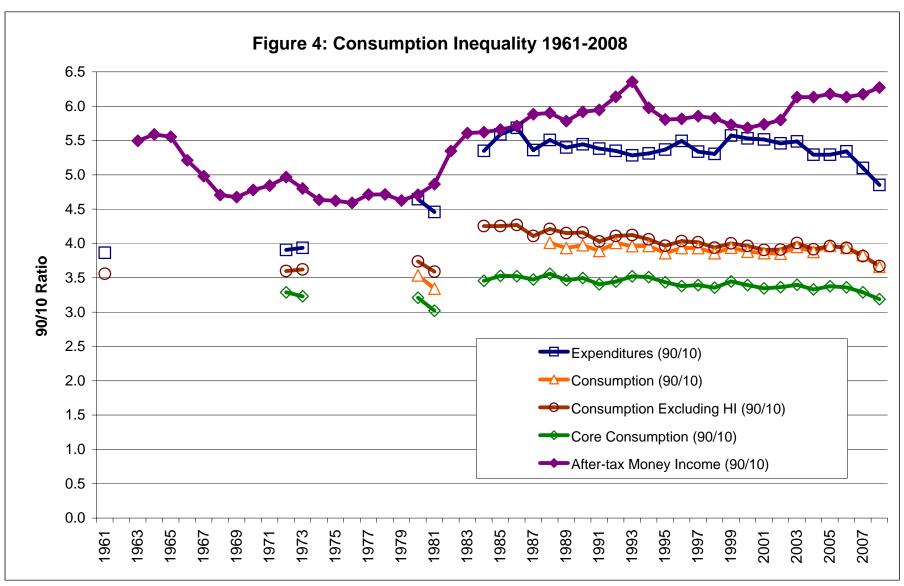


- While top 1% / 10% have done very well, rest of the country, supposedly has not done well.
- These arguments are overstated.
- Reich, Hacker, others look at pre-tax income inequality by taxpayer unit.
- Should look at:
 - after-tax income by similar size households.
 - consumption inequality by similar size households.
 - happiness inequality.

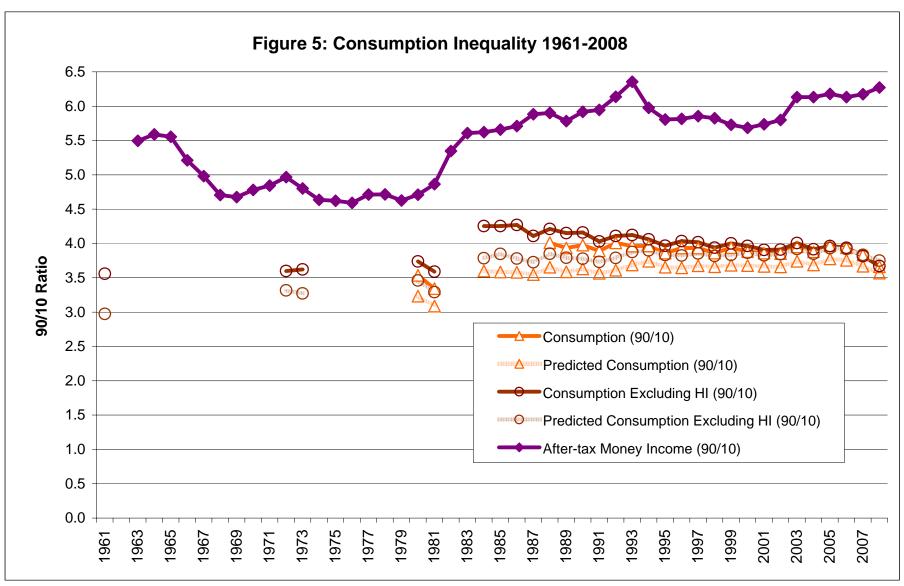




Notes: All measures other than the official measure, are adjusted for differences in family size using the NAS recommended equivalence scale. The unit of observation for the official measure is the household, while it is the family for the other income measures.



Notes: Core Consumption includes consumption of housing, food at home, vehicles, and other transportation. See text for more details.



Notes: Predicted Consumption is the predicted value of consumption from a regression of total consumption on core consumption and demographic characterisits using data from 1980 and 1981. See text for more details.

Trends in the Distribution of U.S. Happiness De-Meaned Level of Happiness Units: Cross-sectional SD(happiness) Average Happiness 0.20-0.00 -0.20 Assuming that the distribution of happiness is: Logistic Normal Uniform 1976 1972 1980 1984 1988 1992 1996 2000 2004 2008 Variance of happiness Relative to average level in sample Happiness Inequality 1.40 1.20 1.00 0.80

Figure 3: Estimated Trends in the Distribution of Happiness

Source: General Social Survey, 1972-2006.

1976

1980

1972

Notes: The mean and variance estimates are based on a generalized ordered probit, logit or uniform regressions of happiness on year fixed effects, as in equations (6)-(9).

1984

1988

1992

1996

2000

2004

2008

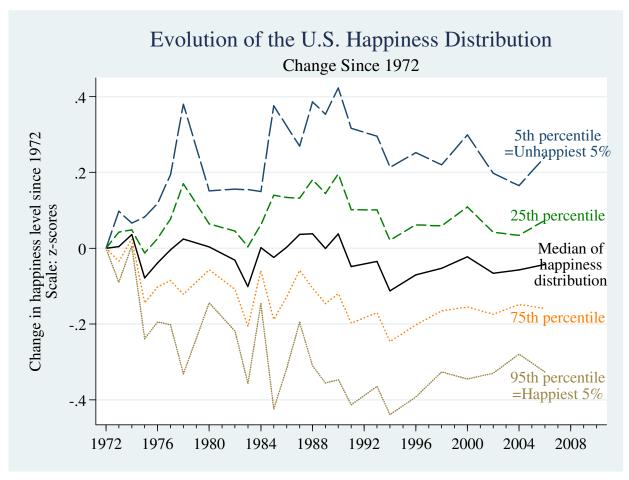


Figure 5: Changes in Happiness Levels Since 1972, by Percentile

<u>Notes:</u> Figure shows estimated percentiles in the happiness distribution implied by running a generalized ordered probit regression in which both the mean and variance of happiness are a linear function of year fixed effects. See Table 1 for coefficient estimates underlying this diagram.

Increase in Inequality Is Overstated

- Measured correctly:
 - After-tax income inequality has not changed much since 1980.
 - Consumption inequality has not changed much since 1980.
- Happiness inequality has narrowed since 1980.
 - The most happy have become less happy.
 - The least happy have become happier.
- Inequality nowhere near what it was in 1928.
- Likely that inequality nowhere near what it was in late 1800s.



Thoughts on the Economy: What does all that mean going forward?

U.S. economy will recover, but it will take time to work out of the leverage / real estate debacle.



Thoughts on Investing: What does this mean going forward?

- Will look at private equity and venture capital.
- Will try to say something about real estate.

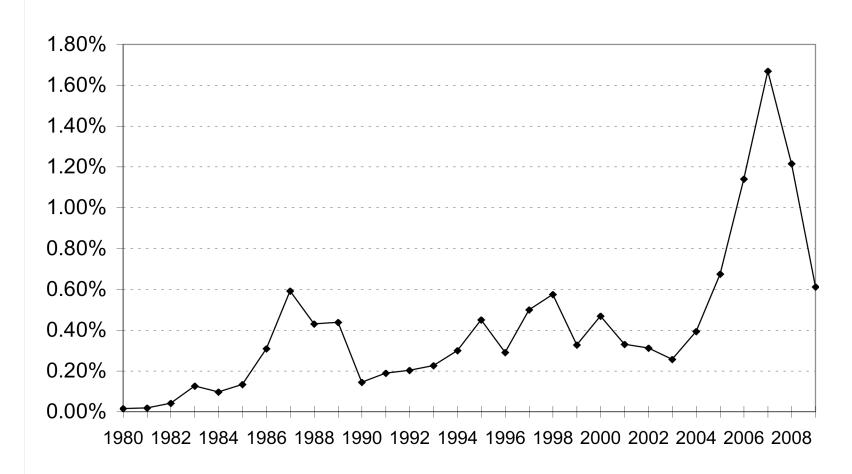


Private Equity / Real Estate.

- What have fundraising / returns been in PE / VC / RE PE?
 - Very dependent on vintage years.
- What drives returns?
 - Capital committed.
- Predictions / prognosis for the future?



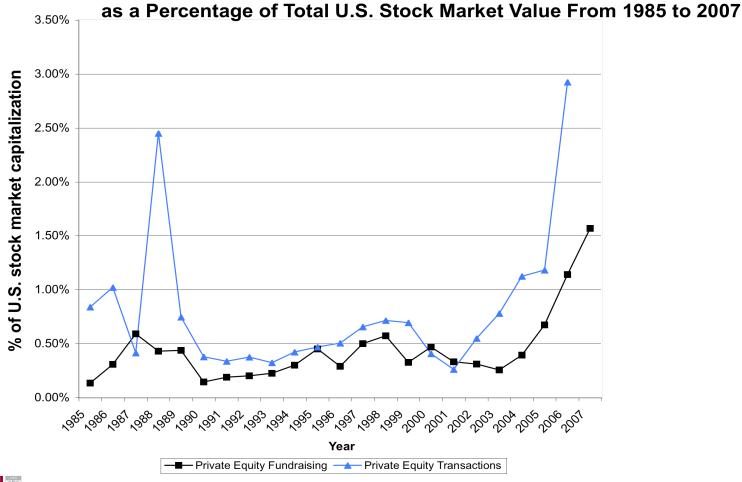
Commitments to Private Equity Partnerships in U.S. as fraction of boy stock market capitalization 1980 - 2009





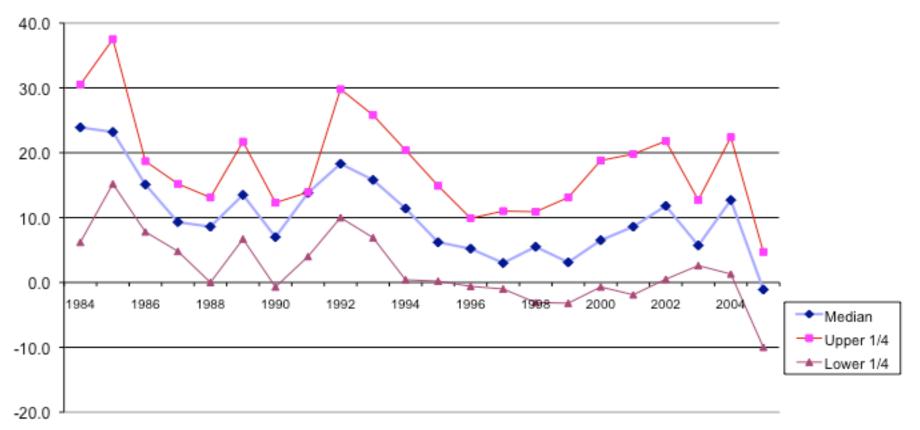
U.S. Fundraising and Transaction Value as a % of Stock Market Value

U.S. Private Equity Fundraising and Transaction Values
a Percentage of Total U.S. Stock Market Value From 1985 to 2007



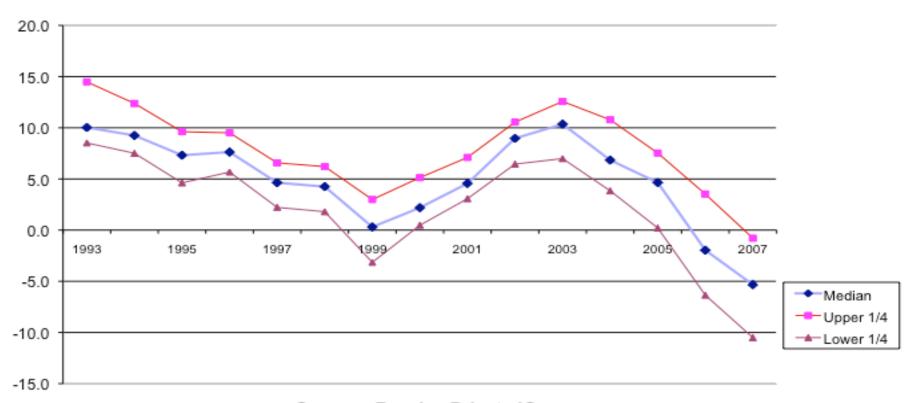


U.S. Buyout Returns by Vintage Year Median, Upper and Lower Quartiles



PE IRR vs. Public Markets

U.S. Buyout Excess Returns Over S&P by Vintage Year Median, Upper and Lower Quartiles



Source: Burgiss Private IQ

Past Performance, Fundraising, Future Performance

- Capital flows into specific GPs related to past performance.
 - Good funds raise more money.
- Capital flows into industry related to recent performance.
 - Money comes in after good returns.
- Subsequent performance is negatively related to the amount of money flowing into the industry.
 - Poor returns follow money coming in.
- I.e., a boom and bust cycle.



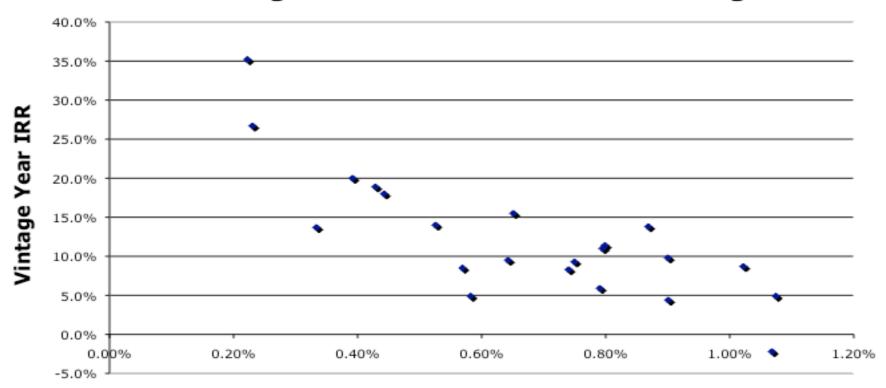
How Does the Cyclicality Work?

- Private equity market is cyclical.
 - IRRs related to funds raised.
 - IRR Vintage Year =
 - » 35% 25 x PE inflows in current and prior year as boy % of stock mkt.
 - Not exactly an efficient markets conclusion.



Vintage Year Returns vs. Capital Committed

PE Vintage Year Returns vs. Fundraising



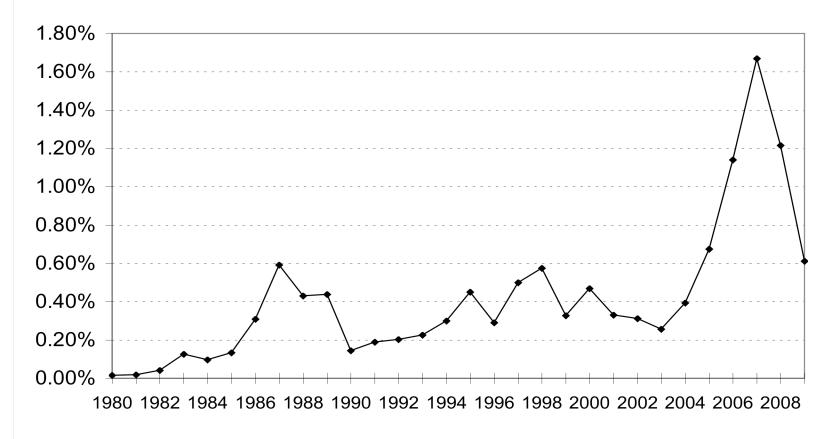
Commitments Last Two Years As % of Stock Market

What Will Happen Going Forward? Go back to the historical record

■ Where are we in the cycle?



Commitments to Private Equity Partnerships in U.S. as fraction of boy stock market capitalization 1980 - 2009



Source: Private Equity Analyst, Steven N. Kaplan



- Record fundraising levels in 2006, 2007 and 2008.
 - 1.14%, 1.57%, and 1.21% of the stock market.
- If historical relationships are repeated, 2006, 2007, and 2008 vintages will have negative IRRs.

Looks like that could happen?

What about 2009 and 2010 Vintages?

- Commitments declined in 2009. Came in at
 - 0.6% of beginning of year stock market. (0.4% of end of year.)
 - Mixed bag for 2009 vintages:
 - » Historically average commitments.
 - » Still have backlog / overhang from 2008.



What about 2009 and 2010 Vintages?

- Commitments have remained down in 2010.
 - Guess commitments at 0.5% of stock market
 - » If so, expect 2010 vintage to do ok / better.
 - » Based on historical relationships, 2010 vintage will have:
 - 35% 25 x 1.0% = +10%.
- PE industry will contract.
- PE returns will be ok / respectable.

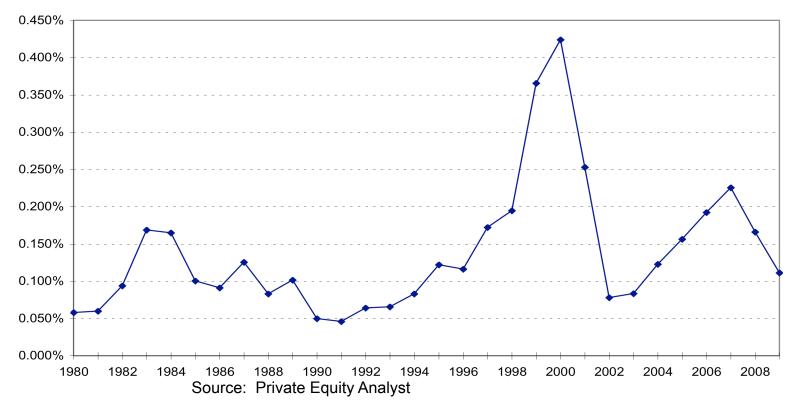
What About VC?

Some view VC as broken.



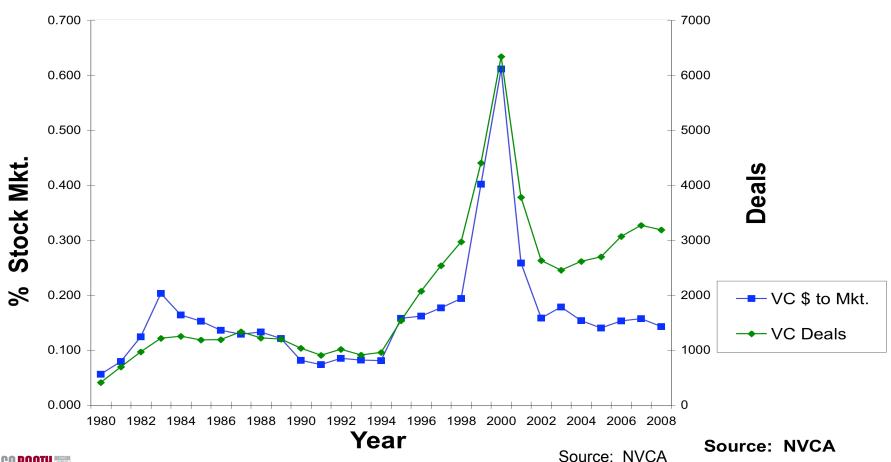
Fundraising (U.S.) as % of market

Commitments to U.S. VC Partnerships as fraction of stock market capitalization 1980 - 2009



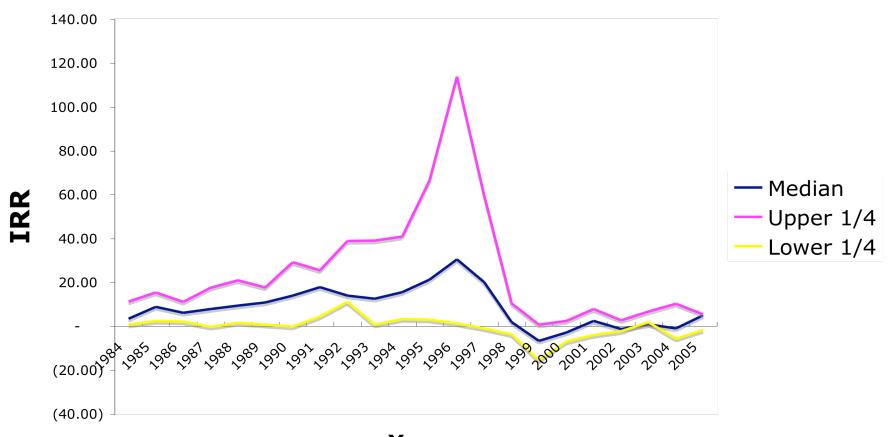


Deals and \$ (as a % of stock market) U.S. VC Deals and \$ Invested (as % of Mkt.)



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U.S. VC Vintage Year Performance Median, Upper, and Lower Quartiles

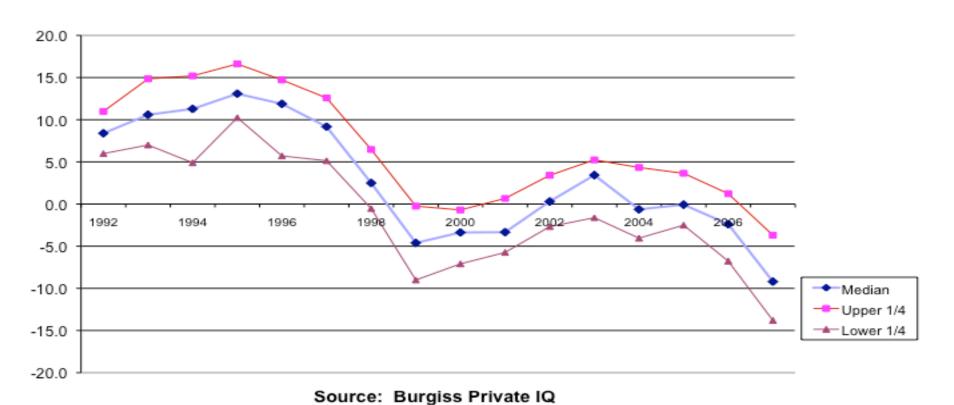


Year Source: Venture Economics



VC IRR vs. Public Markets

U.S.VC Excess Returns Over S&P by Vintage Year Median, Upper and Lower Quartiles



Past Performance, Fundraising, Future Performance

- Capital flows into specific GPs related to past performance.
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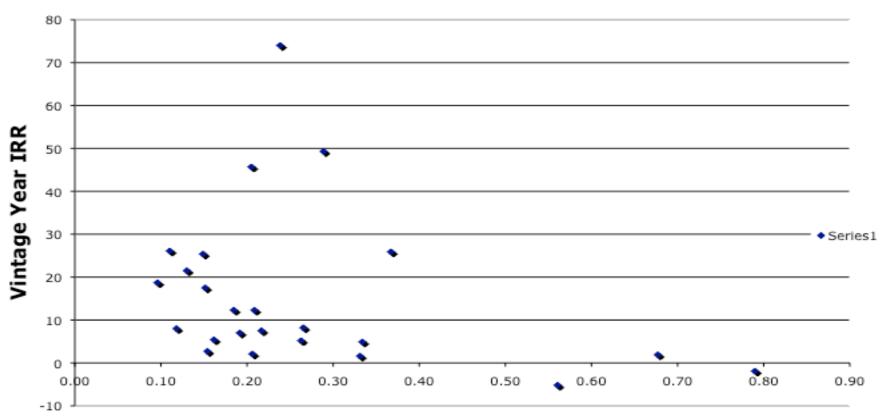
Future Performance and Fundraising:

- Returns in VC are significantly negatively related to fundraising.
 - Vintage IRR = 28% 41 x Cap Comm. last 2 years as % of market.



Future Performance and Fundraising:

VC Vintage Year Returns vs. Fundraising



Commitments Last Two Years As % of Stock Market

What will happen going forward?

- Capital committed in 2009 was only \$13 Billion.
 - Represents only 0.09% of total stock market value.
 - Down substantially.
- Fundraising has remained low in 2010.
- If fundraising is similar to 2009, total commitments are 0.2% of market in 2009 and 2010.
- Plug into return equation:
 - Vintage IRR = 28% 41 x Capital Committed in last 2 yrs as % mkt.
 - Implies IRR = 20% for 2010 vintages.
 - Suggests attractive returns.



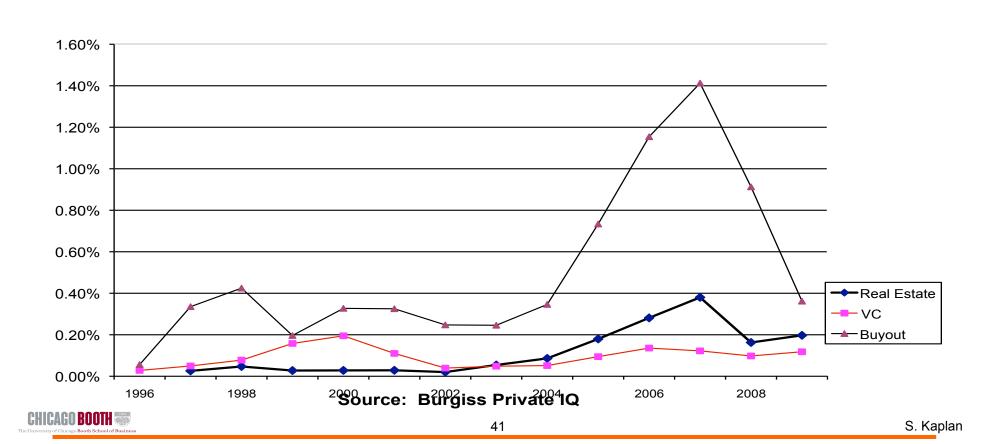
What about Real Estate PE?

- Data are hard to find.
- Look at comparable data on Real Estate PE from Burgiss Private IQ.
 - Based on investments by large institutional investors.
 - Similar boom in 2006 and 2007 and drop in 2008 and 2009.
 - » Less cyclical than PE.
 - » More cyclical than VC.

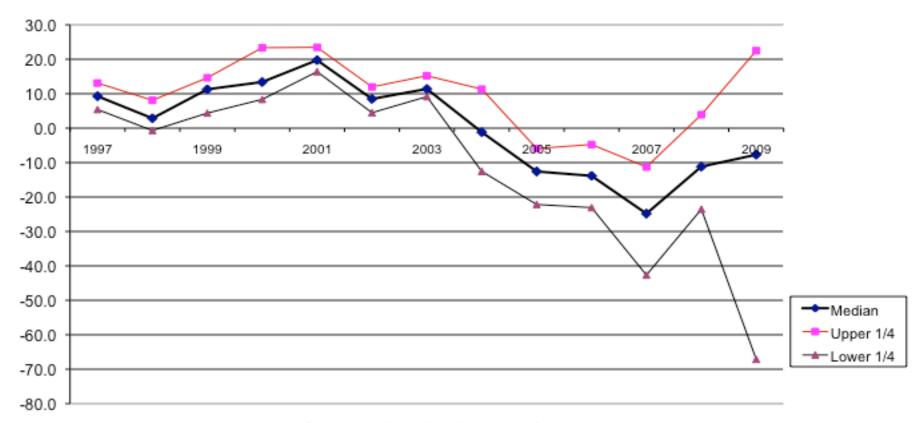


Fundraising (U.S.) as % of market

U.S. VC, Buyout and Real Estate Fund to Total Market by Vintage Year

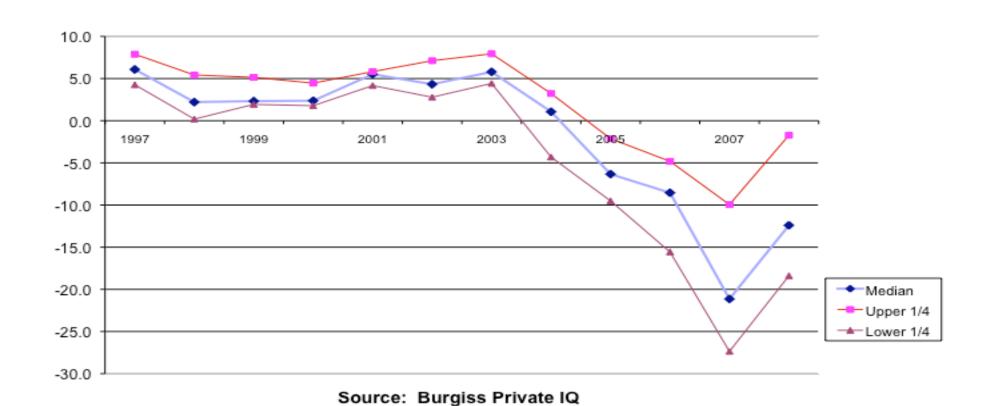


U.S. Real Estate PE Returns by Vintage Year Median, Upper and Lower Quartiles



RE PE IRR vs. Public Markets

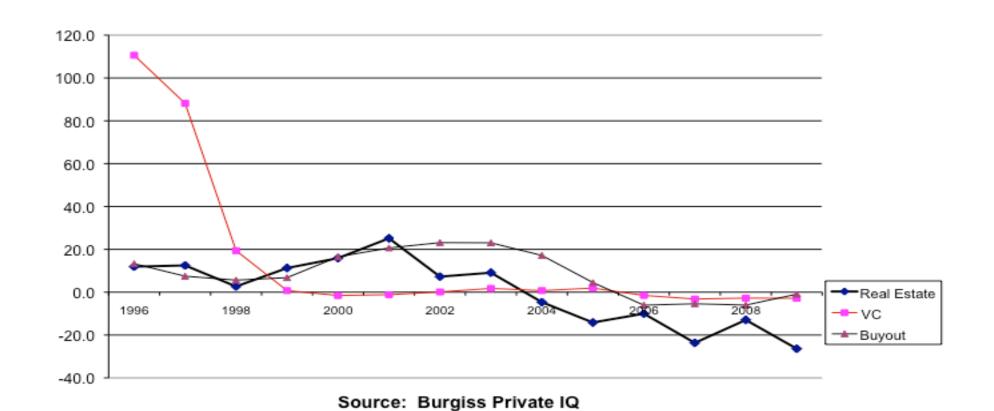
U.S.RE PE Excess Returns Over S&P by Vintage Year Median, Upper and Lower Quartiles



5. Napian

PE / VC / RE PE IRRs

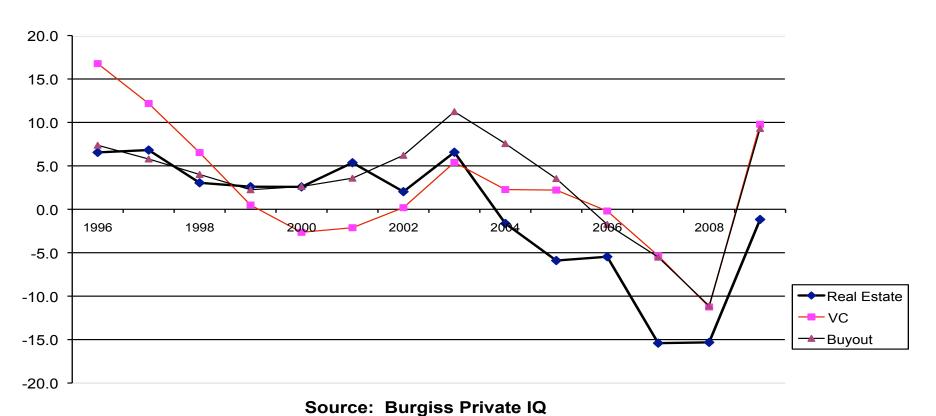
U.S. VC, Buyout and Real Estate PE Returns Pooled Average by Vintage Year



5. Napian

PE / VC / RE PE IRRs vs. Public Markets

U.S. VC, Buyout and Real Estate PE Returns **Pooled Average by Vintage Year**





What will happen going forward in RE?

- RE had a large influx of capital.
 - Returns would not have been great even without crisis.
 - With crisis, returns have been awful.
- Will take some time to work off existing problems.
- Capital commitments likely to decline as realized returns are poor.
- Seems likely that RE will have the same boom / bust cycle as PE / VC.
 - We are now in the bust.
 - As / if capital retracts, likely to create conditions for strong returns.



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