Will There Be an Asset Meltdown?

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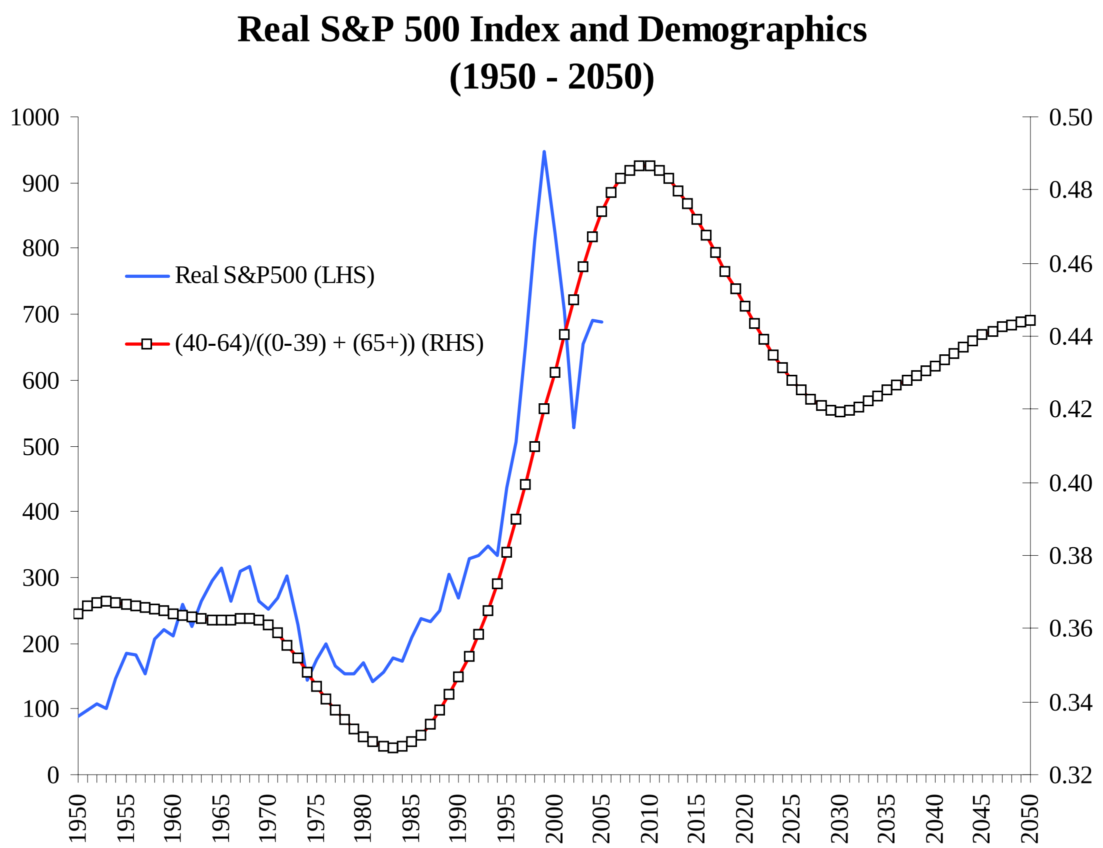
Global Aging and Financial Markets
September 7, 2006

Motivation

- How does demographics affect financial markets?
- First-round effects:
  - individual saving;
  - DB pension plans;
  - investment demand;
  - productivity growth.
- Second-round effects:
  - government finances;
  - monetary policy.
- Use regression analysis to find a summary measure of how demography impacts financial markets.



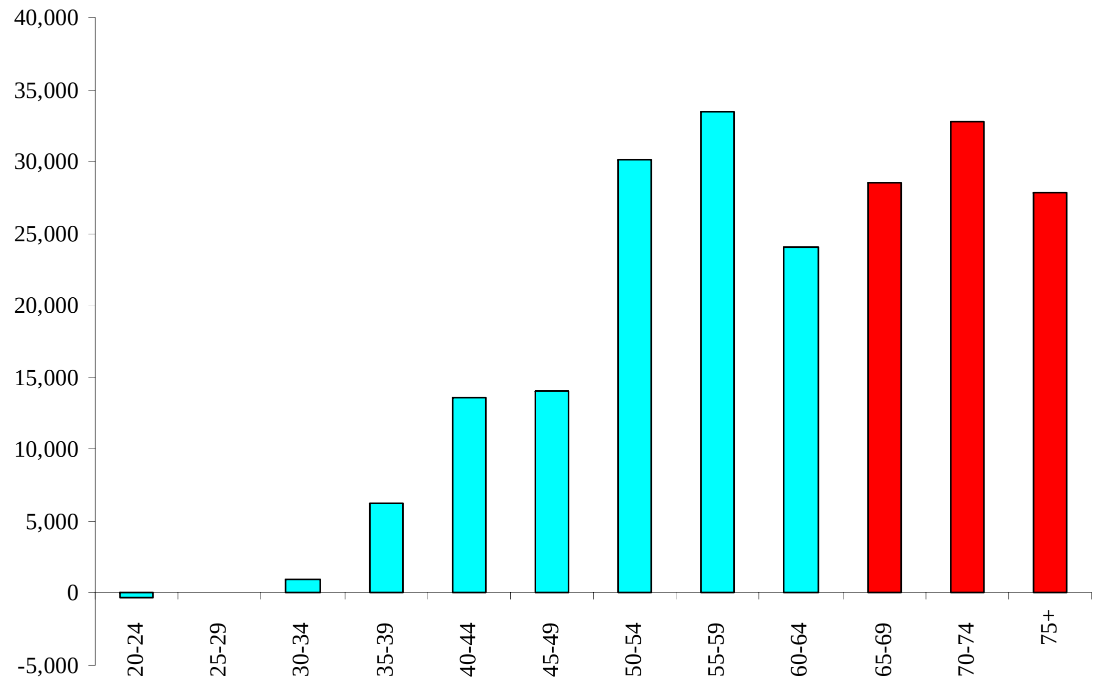
Even among less wealthy households there is little evidence of dis-saving in retirement.

- Financial asset holdings among middle-of-the-road households do not fall off dramatically in retirement.

- This could reflect:
  - longevity risk;
  - end-of-life care;
  - bequest motive.

- One third of boomers hold no financial assets at all:
  - fiscal fallout?

Median Net Financial Asset Holdings by Age (Survey of Consumer Finances, in 2001 U.S. Dollars)

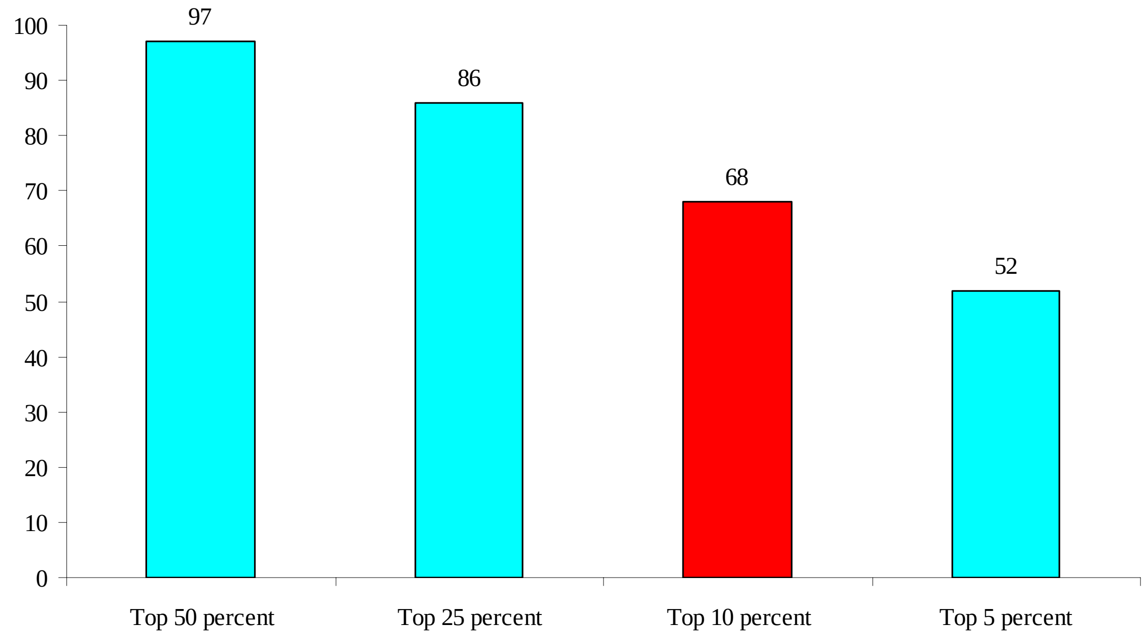


Source: Calculations based on 2001 Survey of Consumer Finances.

Holdings of financial assets are concentrated among the very wealthy.

- The wealthiest 10 percent of boomers own over two-thirds of financial assets held by that generation.
- These households will be able to live off the income generated by their wealth in retirement.
- They will not have to run down their financial assets in retirement.

Distribution of Boomer Financial Assets by Wealth



Source: GAO Analysis of 2004 Survey of Consumer Finances.

Empirical Evidence

- What is the empirical link between financial markets and demographics?
- Because demographics is slow moving, number of effective observations low.
- Get long time-series for:
  - stock prices and price-earnings ratios;
  - total return stock, t-bill and bond indices;
  - t-bill and bond yields;
  - CPI indices;
  - age distributions.

Table 1. Data Composition

	Start Date	End Date
Belgium	1920	2005
Denmark	1915	2005
Germany	1950	2005
France	1921	2005
Italy	1950	2005
Netherlands	1901	2005
Finland	1922	2005
Sweden	1921	2005
Norway	1918	2005
Switzerland	1921	2005
United Kingdom	1911	2005
Canada	1921	2005
Japan	1920	2005
USA	1900	2005
Australia	1921	2005
New Zealand	1926	2005

Estimation

- Run panel regressions of real asset prices or returns on country dummies, time dummies, and the share of each cohort in the age distribution:
  - *country dummies* control for time-invariant, country-specific factors such as institutions, preferences, and financial development;
  - *time dummies* control for a global cycle in non-demographic fundamentals, due to a global business cycle, the Great Depression, and WWII;
  - *age shares* for 0-4, 5-9, ..., 75+ where coefficients are country-specific and are constrained to lie on a third-order polynomial.

- Advantages of this approach:
  - reduced form results pick up *direct* effects (private saving, DB pension plans, investment demand, productivity) and *indirect* effects (monetary and fiscal);
  - control for non-demographic fundamentals with time dummies, which is good because actual data are unavailable for long horizons.

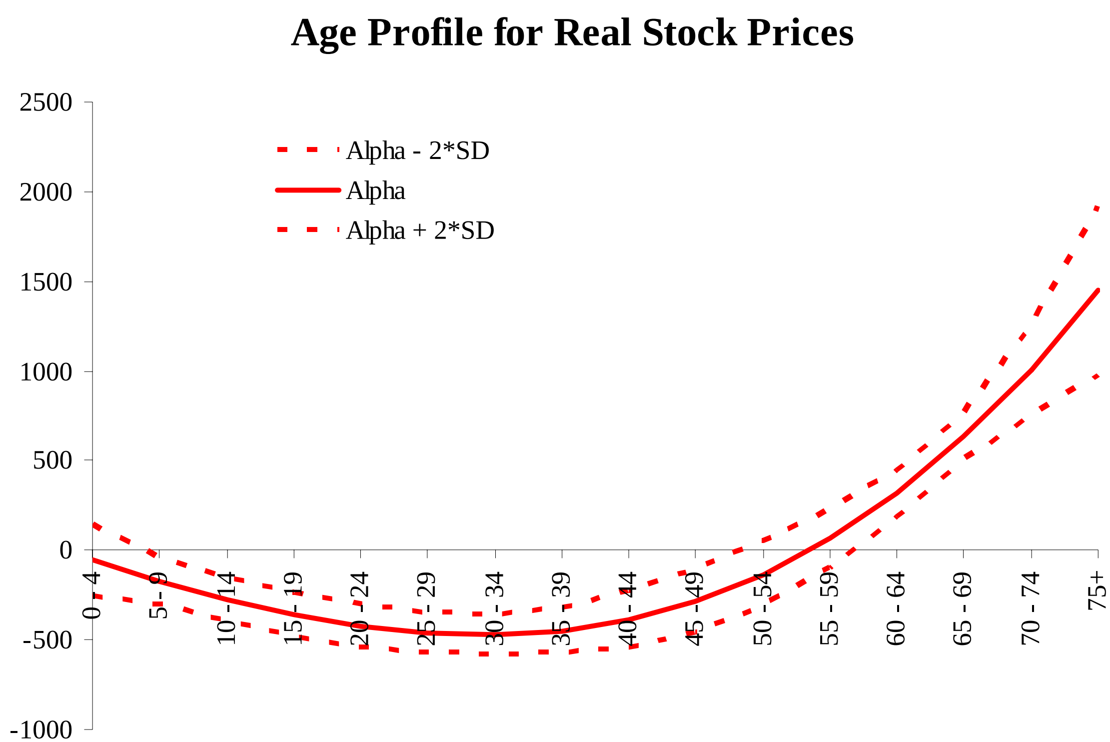
- Disadvantages of this approach:
  - do not capture the possibility of a fiscal train wreck;
  - time-varying relationships.

Real Stock Prices and Demographics

- Age share coefficients describe a U-shape:
  - middle aged cohorts are associated with low real stock prices;
  - high real stock prices are associated with old cohorts.

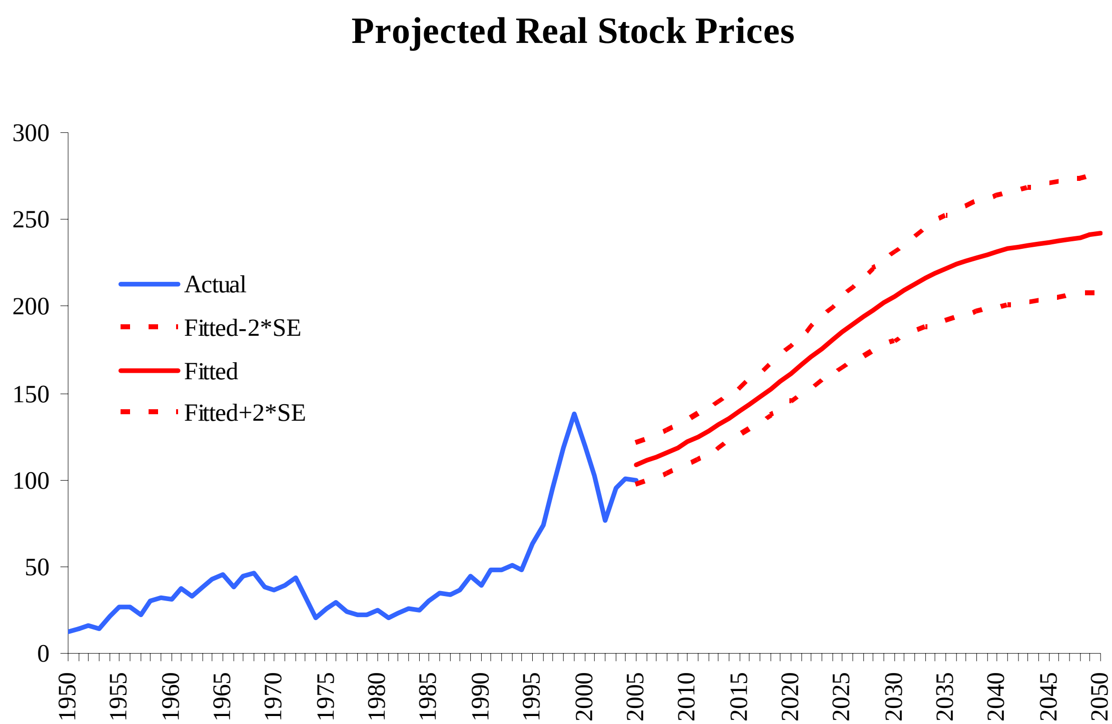
- Consistent with earlier evidence that households start saving late in middle age and do not dis-save much in retirement.

- Lots of people have yet to start saving in earnest.



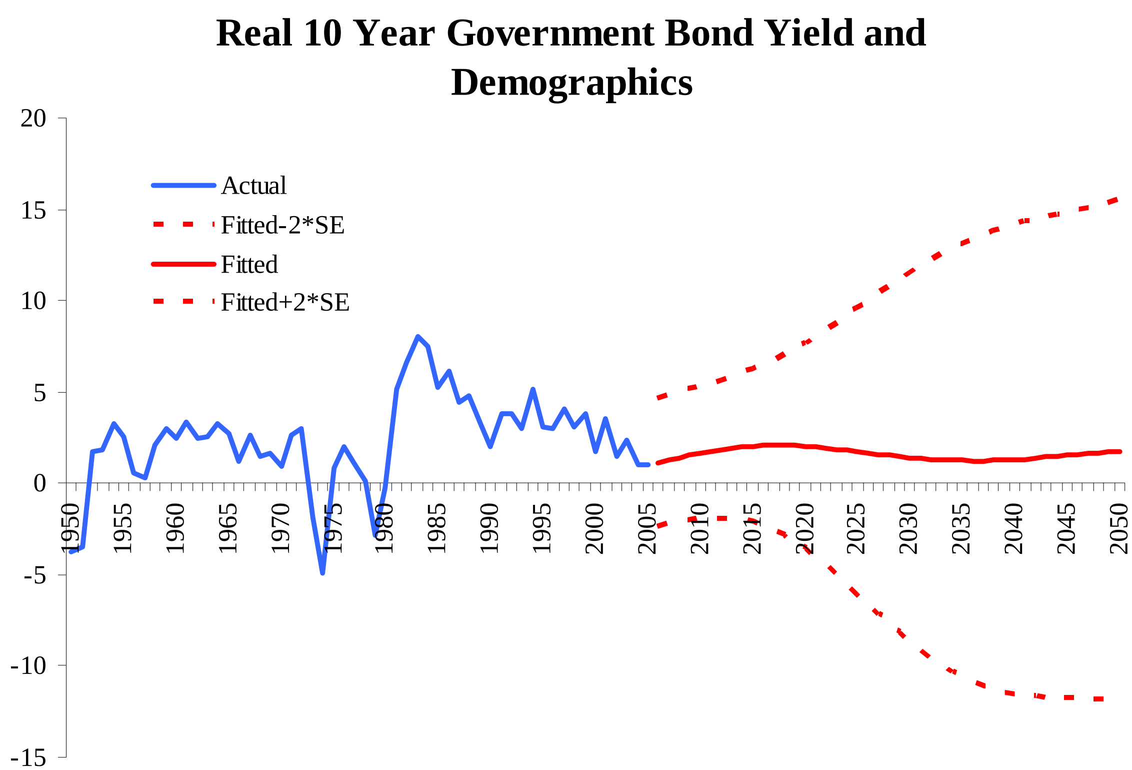
What Meltdown?

- Real stock prices will keep rising as the baby boomers continue to age.
- Similar results obtain for:
  - real total return stock index;
  - real total return bond index;
  - real total return t-bill index;
  - price-earnings ratios.
- Countries with similar results:
  - Australia;
  - Canada;
  - UK.



Stock Returns and Bond Yields

- No link between stock returns, bond yields and demographics.
- This does not mean that demographics does not matter:
  - its slow-moving nature means it should not help explain annual returns.
- Price/total return series may provide a better look at demographic effects, at risk of spurious results.



Conclusions

- The direct impact of the aging of the boomers on financial markets is not likely to be negative.
- But what about all the baby boomers who have not saved for retirement? The voting power of this segment of the population is growing.
- Hedge demographic risk by going long emerging markets with young populations and short emerging markets overall.