Inequality, the U.S. Great Recession, and Slow Recovery

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Message of this Paper

- Link two central features of U.S. economy
  - Borrow-and-spend behavior of households that caused the Great Recession / Global Financial Crisis
  - Rise of income inequality
- New evidence: unsustainable spending and balance sheet dynamics concentrated in bottom 95% of income distribution
- Challenge going forward: demand generation broken
  - Huge demand gaps
  - Inequality is <u>now</u> creating stagnation
- Rising inequality and dramatic U.S. macroeconomic dynamics of recent decades: <u>not a coincidence</u>

Related Literature **

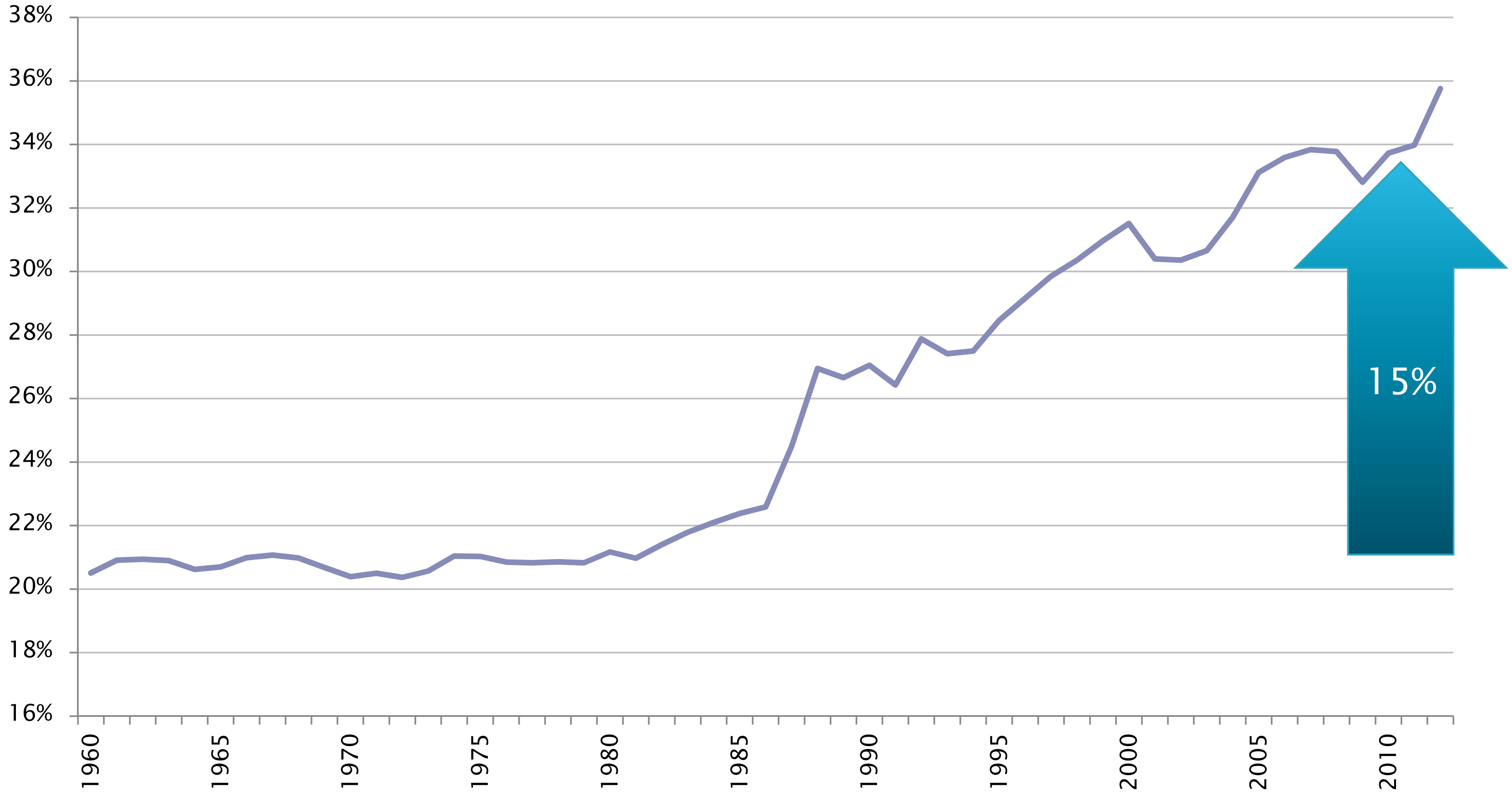
- Kalecki growth model: income distribution, demand and growth
- Palley JPKE, 2002: “Economic Contradictions Coming Home to Roost”
- Barba and Pivetti, CJE, 2008: Higher debt as a response to slow wage growth
- Cynamon and Fazzari (2008)
- Rajan, 2010: Debt access for the middle class a substitute for declining income share
- Kumhof and Ranciere, 2010: DSGE Model with role for income distribution
- Setterfield, 2013: Importance of link between wage growth and productivity growth.
- Kim and Setterfield; emulation effects can lead to unsustainable debt accumulation
- Recent overviews: Van Treeck and Sturn; Stockhammer, 2013

Inequality Trends

- Stability: 1960s to 1980
- Remarkable rise in top 5% share during "Consumer Age" period

Role of Inequality: Share of Top 5%

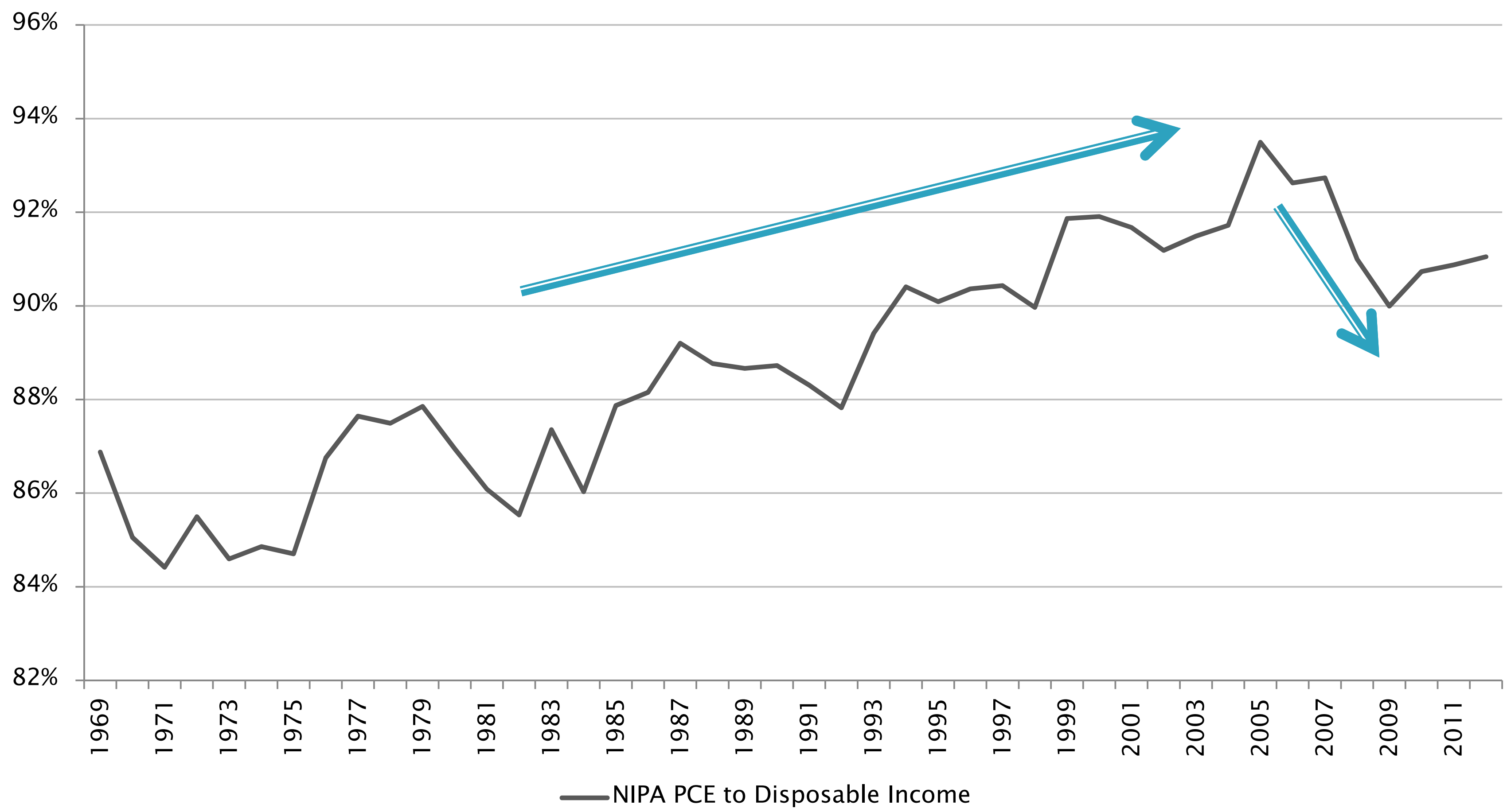
(Data from Piketty-Saez Tables)



A Paradox

- Theory implies that rising inequality leads to "demand drag" from consumers
  - Spending propensities across income groups
  - Kaleckian model: wages and profits
- But <u>strong</u> household demand growth in Consumer Age
  - Onaran, Stockhammer, Grafl, 2011 also explore paradox and possible resolutions

Aggregate Spending Rate



Income Dynamics and Rising Inequality

- Rising inequality => divergence of income growth
  - Slower growth in disadvantaged group (realistic)
- Budget constraint: Lower income growth => decline in growth of consumption and/or saving
- Aggregate data => spending was strong => biggest effect on saving growth.

Simple Algebra of Balance Sheets

- Lower income growth (g_Y), maintain consumption growth (g_C)
- Saving rate declines …

$$ds/dt = (g_Y - g_C)(1 - s) + r\,(D/Y)\,(g_Y - g_D)$$

- … and balance sheet deteriorates

$$d/dt\,(D/Y) = -s - g_Y\,(D/Y) + [(dA/dt)\,/\,Y]$$

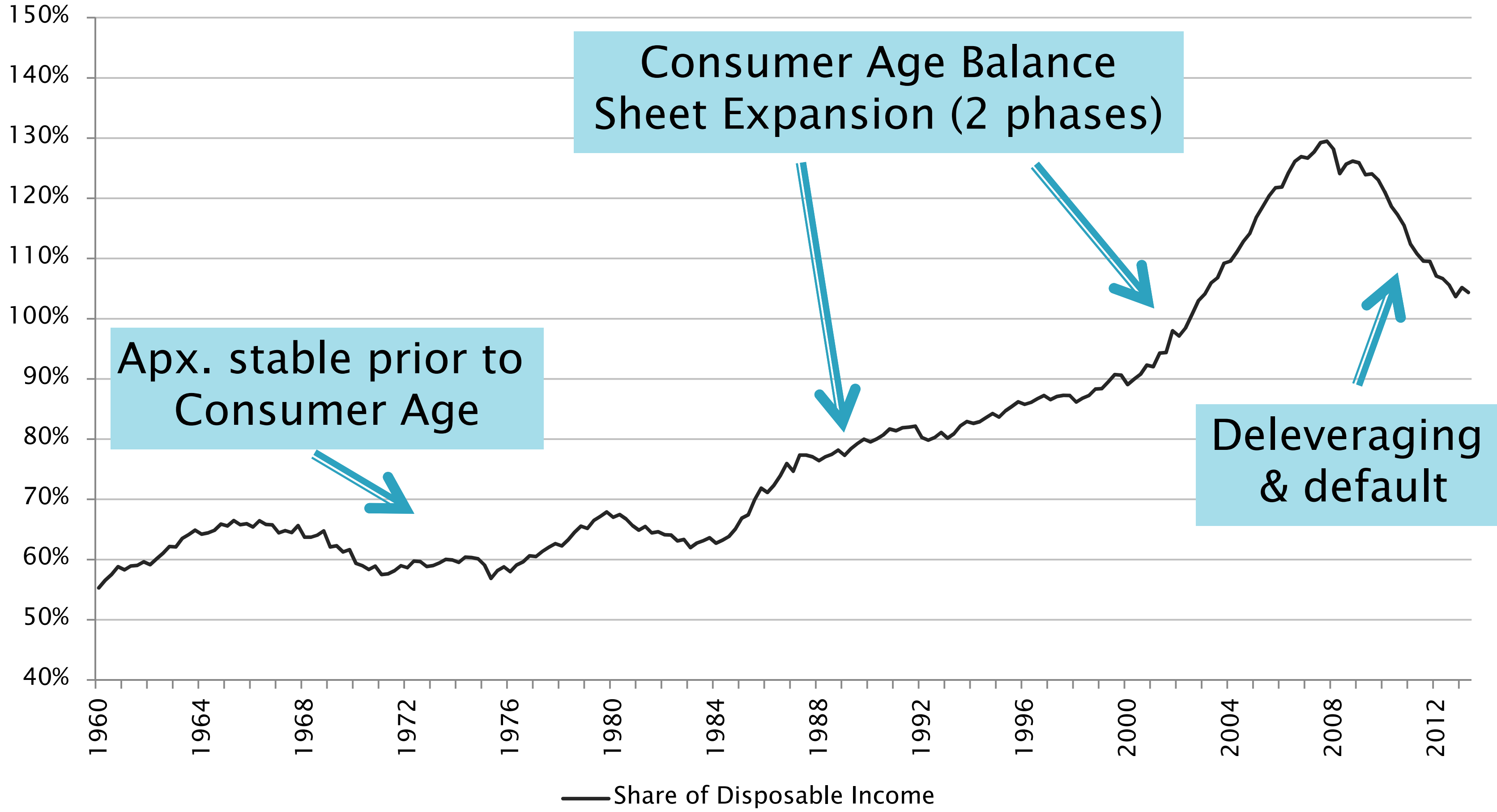
- One-time fall in s and g_Y => <u>continuous rise</u> in D/Y

Inequality and the Middle Class

- Real annualized growth rates (household income)

	1960 – 1980	1980 – 2007
Top 5%	4.0%	5.0%
Bottom 95%	3.9%	2.6%

Aggregate Debt / Income

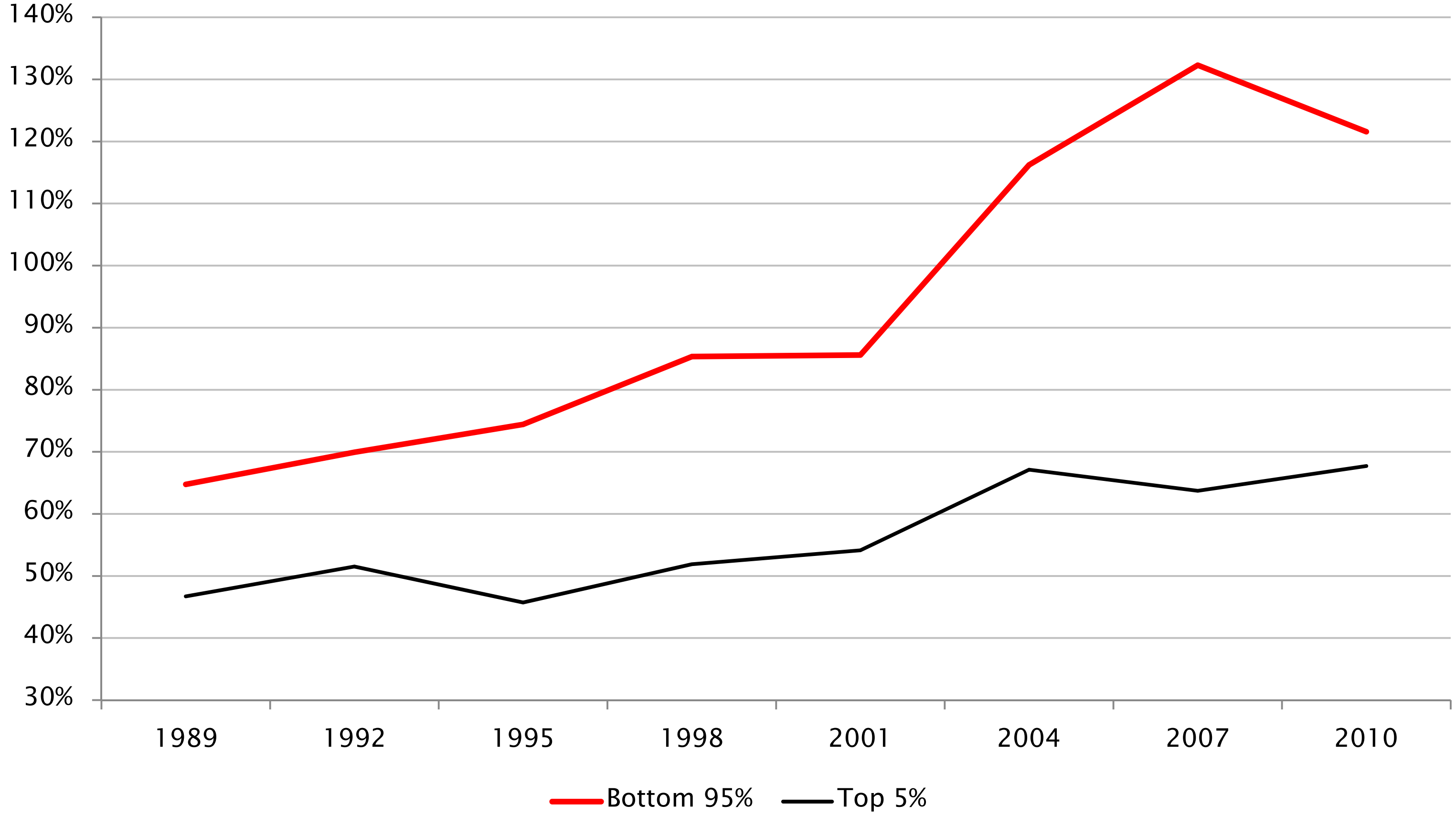


Look Beyond Aggregates

- Aggregate data consistent with link between inequality and balance sheets
  - Useful: long history and higher frequency
- But more direct evidence from disaggregation
  - Heterogeneity among distribution groups

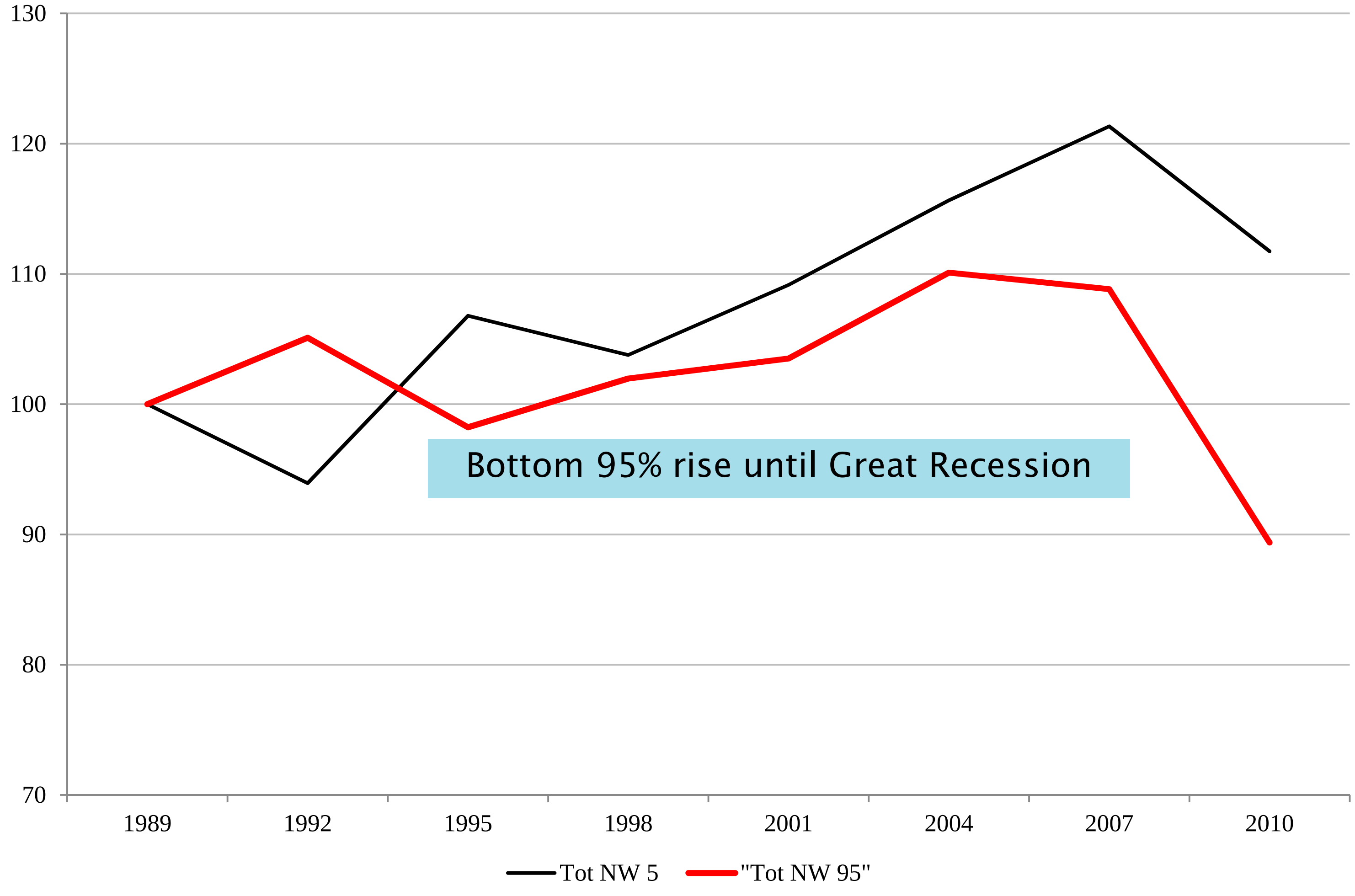
Who Was Borrowing?

(SCF Debt to Income)



Why Did They Borrow so Much? Collateral?

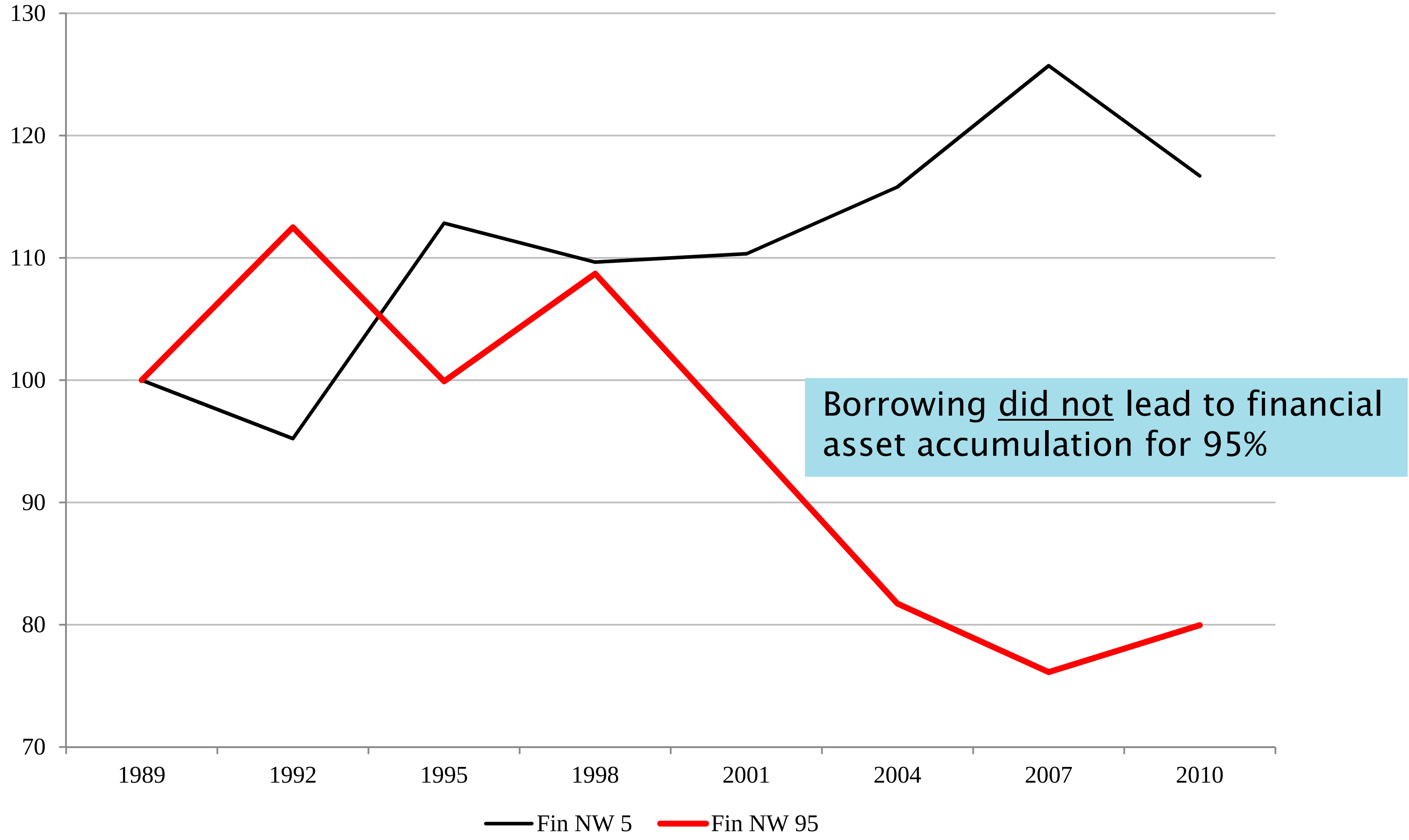
(Net Worth to Income -- Including Housing)



Minsky Dictum

- Lending should be based, first, on cash flows
  - "Prudent" banking (from Randy Wray)
- Collateral secondary
- Rising debt/income suggests that this principle was ignored
- Evidence of more trouble …

Exclude Housing Assets: Trouble for 95%
(Financial Net Worth to Income)



What About Spending?

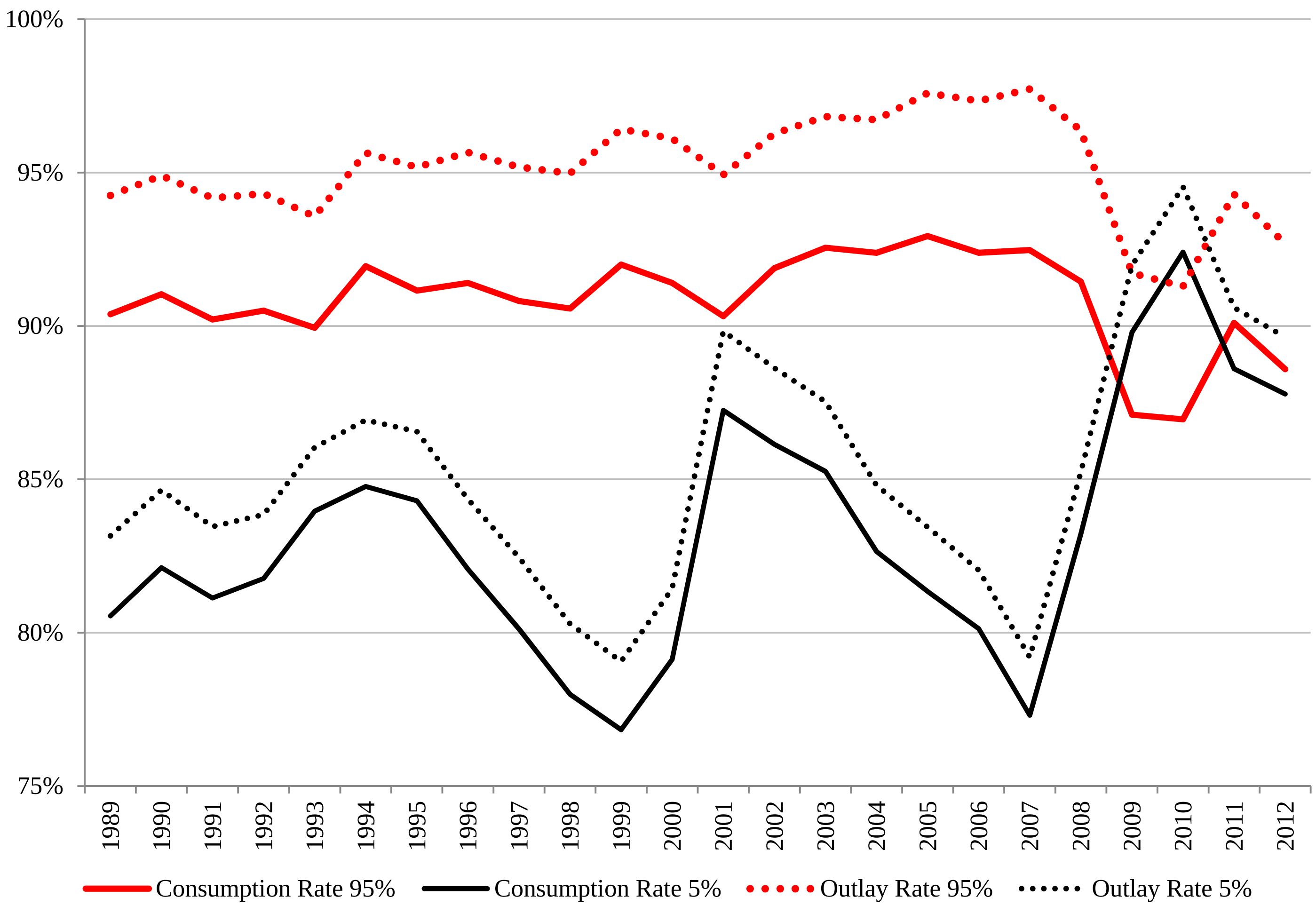
- Big data challenges
- Maki-Palumbo (2001)
  - Disaggregate balance sheet changes (FFA & SCF) to infer saving across income groups
  - Source data from Mark Zandi
- Compute disaggregated consumption from decomposition of income and transfers

Intuition for Method **

- Observe disaggregated income shares (SCF), aggregate flows in asset/liability stocks (FoF), disaggregated stock shares (SCF)
- Use asset/liability shares to disaggregate flows, compute change in net worth
- Spending = Income – Change in Net Worth
- Precision improved by looking at multiple asset and liability categories

Disaggregated Demand & Outlay Rates

(Ratios to Disposable Income + Realized Capital Gains)



What Do We Learn? (Part 1)

- Average difference between groups
  - 8 to 10 percentage points prior to 2008
  - Consistent with "demand drag" due to inequality
- Bottom 95%: stable and rising (before 2008)
  - Likely some increase prior to sample
  - Greater rise in outlay rate (fall in saving rate)
- Effect on Debt / Income (bigger than it seems)
  - Outlay rate increases 0.19 points per year (1989–2007)
  - Cumulates to 32 percentage point rise in Debt / Income
  - Lower bound; fall in saving rate before 1989

What Do We Learn? (Part 2)

- Top 5%: Consumption smoothing
- Bottom 95%: <u>No</u> consumption smoothing
- Remarkable contrast since 2007
  - End of borrowing boom => historic <u>drop</u> in C/Y for bottom 95%
  - Strong consumption smoothing => massive <u>rise</u> in C/Y for top 5%

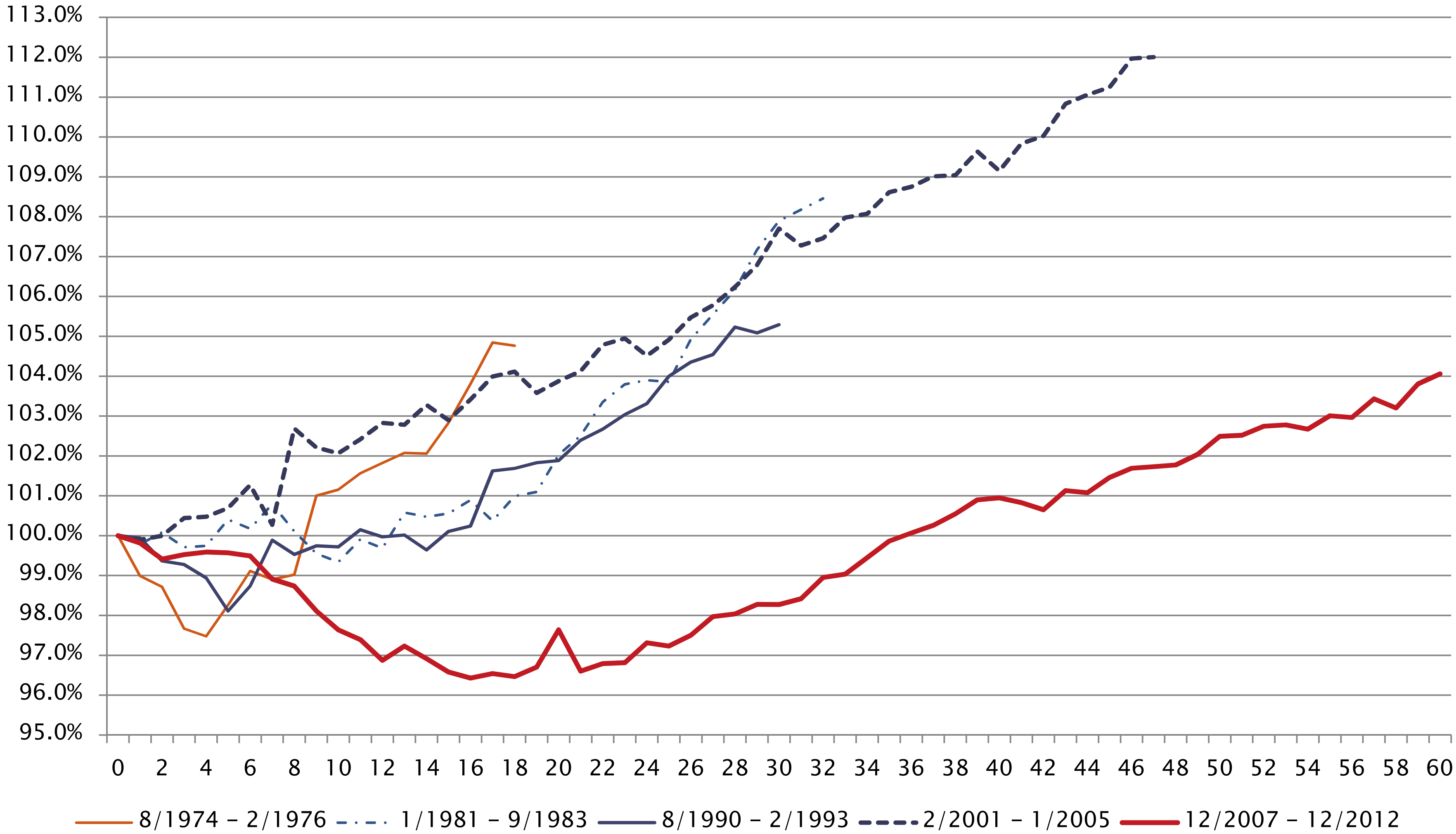
Demand Shortfalls

- Real PCE well below pre-2008 trend
  - Top 5%: $0.5 trillion; Bottom 95%: $1.1 trillion
  - Massive gaps relative to GDP
- Different reasons across groups
  - Top 5%: substantial slowing of income + cap. gains
  - Bottom 95%: modest income effect, but big drop in PCE => end of "Consumer Age" borrowing boom
- Good recovery for top 5% vs. continued stagnation for bottom 95%

Aftermath: Loss of Demand Engine

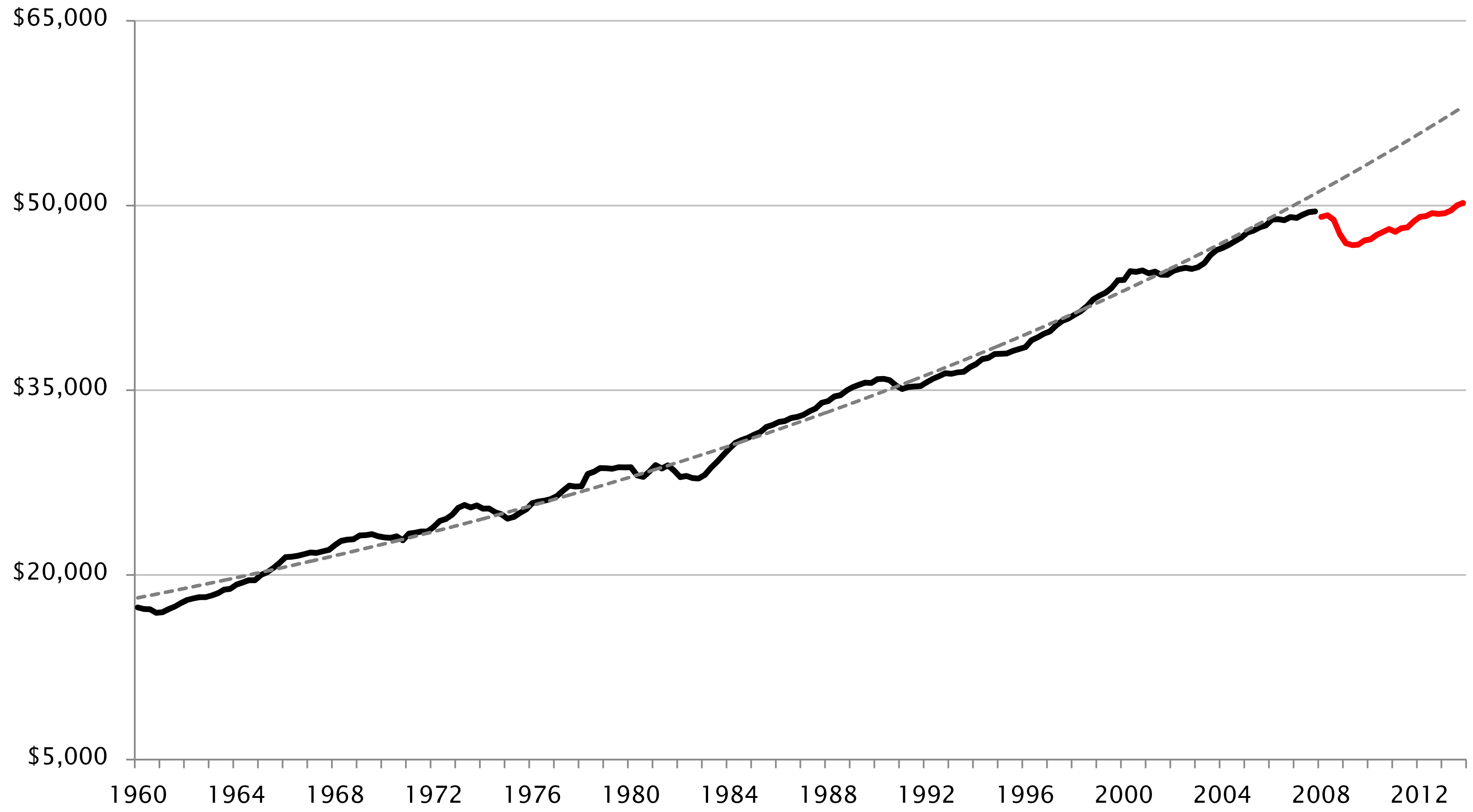
- <u>Needed</u> pre-2007 demand trend for adequate employment
  - Bubble in financing, not demand
  - Low interest rates, subdued wage and price inflation
- Disappointment, quarter after quarter
  - "Definitely concerned that things are a bit weaker than we expected in this weak recovery;" from "east coast power house" firm (Nov. 2013).
  - Why? Mainstream forecasts miss key structural flaw
  - Unprecedented consumption stagnation (data)
- No robust recovery with current trend of income distribution
- Deleveraging not enough; problem of demand generation

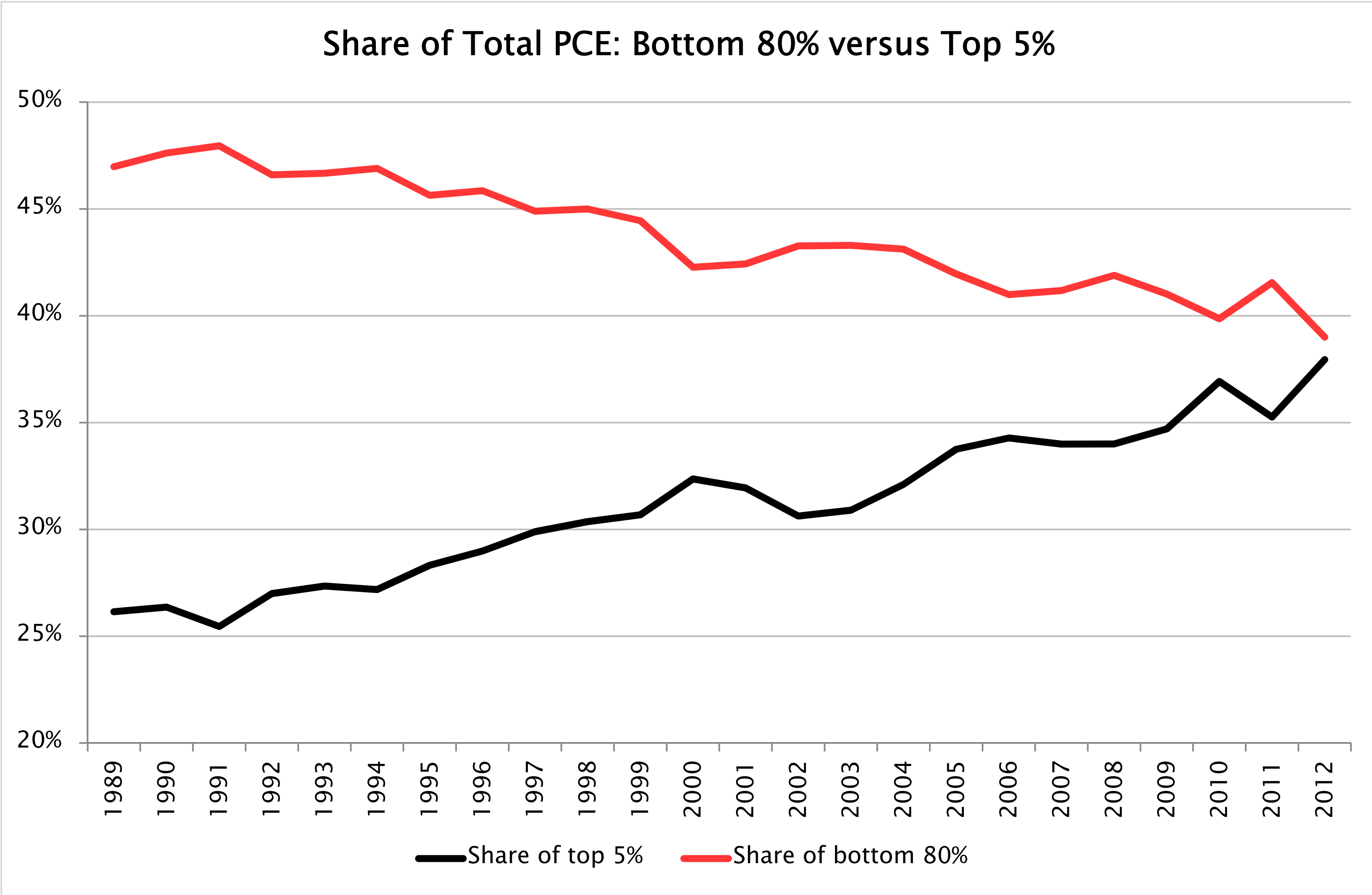
Real PCE Profiles Until Initial Employment Restored



Demand Drag and GDP

(Real GDP per capita)




Share of Total PCE: Bottom 80% versus Top 5%
50%
45%
40%
35%
30%
25%
20%
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Share of top 5%
Share of bottom 80%

Conclusion (1): Not a Coincidence

- Circumstantial case: inequality guilty for pre-2007 dynamics and recent demand drag
  - Concentration of balance sheet fragility in 95%
  - Heterogeneous behavior: before/after 2007
  - Timing
- Counterfactual: what would have happened <u>without</u> rising inequality?
- Inequality <u>causes</u> unsustainable dynamics
  - Middle class norms: Warren, earlier Cynamon-Fazzari (spending and financial behavior)
  - Consumption cascades: Frank and others
  - Evidence: Carr & Jayadev, Van Treeck, Bertrand & Morse

Conclusion (2): A New Era?

- Short history of U.S. demand generation
  - Postwar shared prosperity
  - Rising inequality and unsustainable Consumer Age
  - Recession and secular stagnation
- Inability of conventional monetary policy to assure adequate demand growth
- Alternatives
  - Continued secular stagnation
  - Demand driven by the affluent
  - More government and higher taxes
  - Explicit redistribution
  - Return of shared prosperity

Who Provides Engine of Demand?

- Stylized concept of postwar U.S. economy as mass production serving a broad middle class
  - Sense of "good jobs" in manufacturing
  - What's good for General Motors is good for the USA
  - Ford pays workers high enough wages to afford their cars
- But look at share of consumption …

Macro Implications (Speculative)

- Higher saving rate and demand drag
  - Need higher investment share; inconsistent with services and "soft" technology
  - More government and higher taxes; inconsistent with shift in political power
- Lower marginal propensity to consume; smaller multiplier, greater stability?
- More discretionary spending and high income volatility, less stability?

Social Implications (Speculative)

- Shift from manufacturing to personal services
  - Less scope for middle class to enjoy rising productivity
- More workers cannot afford to consume goods and services they produce => social alienation?

Relevant Micro Empirical Evidence

- Jayadev and Mason: “Veblen Effects”
  - Higher inequality drives saving rates down and leverage rates up
- Bertrand and Morse: Consumer spending and debt rises more in counties with greater income inequality
- Behringer and Van Treeck: Current account deficits and falling saving rates related to higher inequality across countries
- Conclusion: We should not be surprised that the bottom 95% responded to slower income growth by trying to maintain consumption growth
  - Access to debt is necessary; but financial system accommodated
  - Extension: rising inequality led the financial system to push loans on to middle class households