

This Recovery is for Real: Solid, Sustainable, but Sub-Par

Washington Association of Money Managers

*Washington, DC
December 9, 2009*

Chris Varvares, President
Macroeconomic Advisers, LLC
www.macroadvisers.com

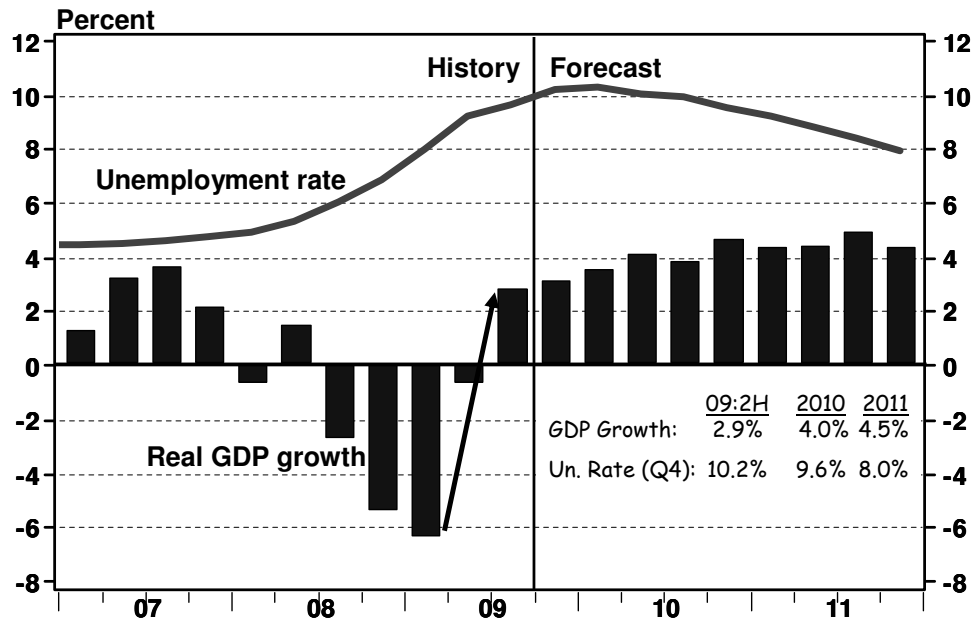
© Macroeconomic Advisers

The US Economic Outlook: Bottom Line

- Above-trend growth in 2nd half of 2009: 2.9% (a.r.)
 - Downside risks continue to shrink; upside risks emerge
 - Robust (but sub par) growth in 2010 (4.0%↑) & 2011 (4.5% ↑)
 - Unemployment rate peaks at 10.3% in 2010:q1
-
- Unemployment rate declines to 9.6% in '10:q4 and to 8.0% in '11:q4
 - Core inflation very low: =1.5% in 2009, ≅ 1.1 in 2010 & ≅ 0.9 in 2011
 - Revised higher relative to recent forecasts --- but still below FOMC
-
- Fed: Still expecting a late exit; but will “end easing” long before
 - Fiscal: Stimulus working for now; getting control of the deficit later
-

Back from the Abyss and Gaining Momentum

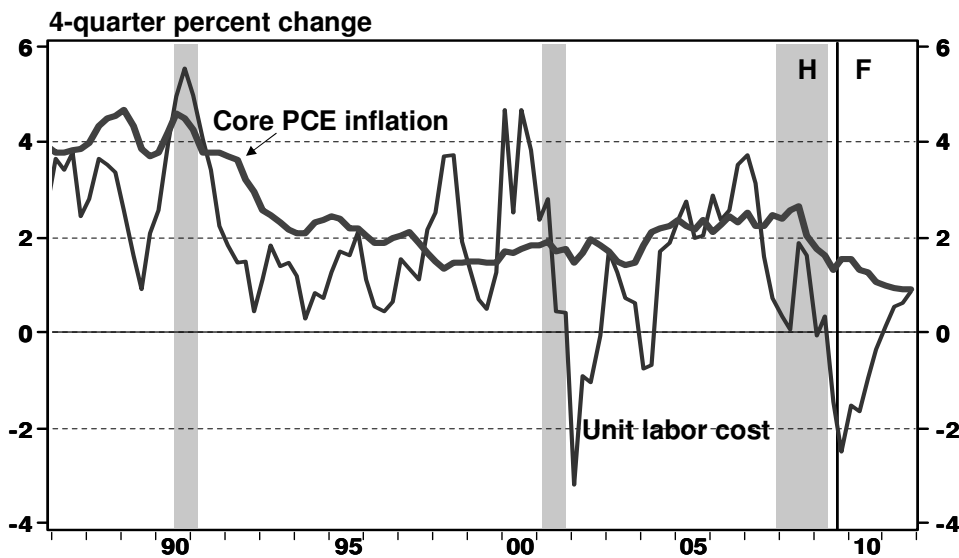
Deep U.S. Recession Followed by a Sub-Par Recovery



Source: Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

Slack Keeps Downward Pressure on Inflation

Unit Labor Cost and Core PCE Inflation

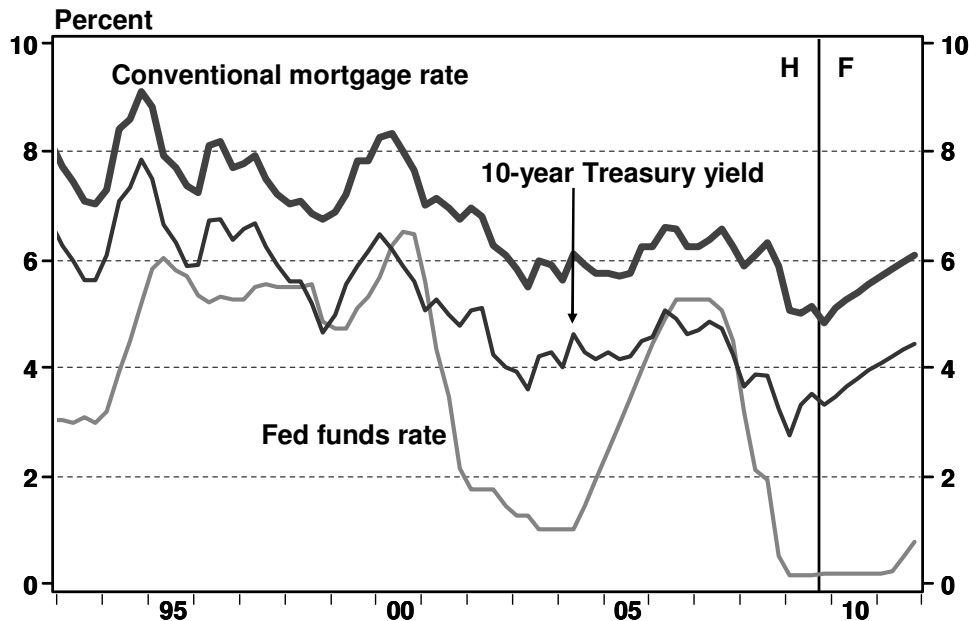


Note: The core PCE is Personal Consumption Expenditures Index excluding food and energy prices; the unit labor cost is the compensation paid per unit of output produced in the nonfarm business sector.

Source: U.S. Department of Labor, Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

Below-Target Inflation & Lingering Slack Imply Late Exit

Long-Rates are on the Rise, but the Fed Stands Pat



Source: Federal Reserve Board, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

December 2009

© Macroeconomic Advisers

5

Forecast Comparison

| | 09Q3 | 09Q4 | 10Q1 | 10Q2 | 2009 | 2010 |
|----------------------------|------|------|------|------|---------------|---------|
| GDP Growth | | | | | | |
| | | | | | Q4/Q4 | |
| MacroAdvisers (Dec 3) | 2.8 | 3.1 | 3.5 | 4.1 | -0.4 | 4.0 |
| Blue Chip (Dec 10) | 2.8 | 2.8 | 2.8 | 2.8 | -0.5 | 2.9 |
| | | | | | FOMC CT (Nov) | |
| | | | | | -0.4-0.1 | 2.5-3.5 |
| PCE Growth | | | | | | |
| | | | | | Q4/Q4 | |
| MacroAdvisers | 2.9 | 1.9 | 2.9 | 2.9 | 1.1 | 3.2 |
| Blue Chip | 2.9 | 1.5 | 1.7 | 2.0 | 1.0 | 2.1 |
| Unemployment Rate | | | | | | |
| | | | | | Q4 Average | |
| MacroAdvisers | 9.6 | 10.2 | 10.3 | 10.1 | 10.2 | 9.6 |
| Blue Chip | 9.6 | 10.2 | 10.3 | 10.2 | 10.2 | 9.9 |
| | | | | | FOMC CT (Nov) | |
| | | | | | 9.9-10.1 | 9.3-9.7 |
| GDP Price Inflation | | | | | | |
| | | | | | Q4/Q4 | |
| MacroAdvisers | 0.5 | 0.9 | 1.1 | 1.0 | 0.8 | 1.0 |
| Blue Chip | 0.5 | 1.4 | 1.5 | 1.3 | 0.9 | 1.5 |
| Fed Funds Rate | | | | | | |
| | | | | | Q4 Average | |
| MacroAdvisers | 0.16 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| Blue Chip* | 0.16 | 0.20 | 0.20 | 0.25 | 0.20 | 0.75 |
| 10-yr Note Yield | | | | | | |
| | | | | | Q4 Average | |
| MacroAdvisers | 3.52 | 3.33 | 3.49 | 3.65 | 3.33 | 3.95 |
| Blue Chip | 3.52 | 3.4 | 3.5 | 3.7 | 3.4 | 4.1 |

* Inferred from t-bill yield

December 2009

© Macroeconomic Advisers

6

Factors Contributing to Above-Trend GDP Growth

- Motor-vehicle production rebound (with or without C.A.R.S.) ★
- Inventory *liquidation* to slow sharply; X-auto: Q4=+\$64b, Q1=+\$27b ★
- ARRA actually is providing stimulus
- Housing bounces off the bottom, begins strong recovery ★
- Home prices are stabilizing, to remain flat (emergence of upside risk?)
- Broad financial conditions improving: ★
 - Especially equities
 - But spreads have narrowed also
- Implies improving balance sheets for households
- Helps stabilize & then boost consumer spending (pent-up demand!)
- Productivity "overshoot" could unwind and bring jobs back quicker
- Global nature of the recovery

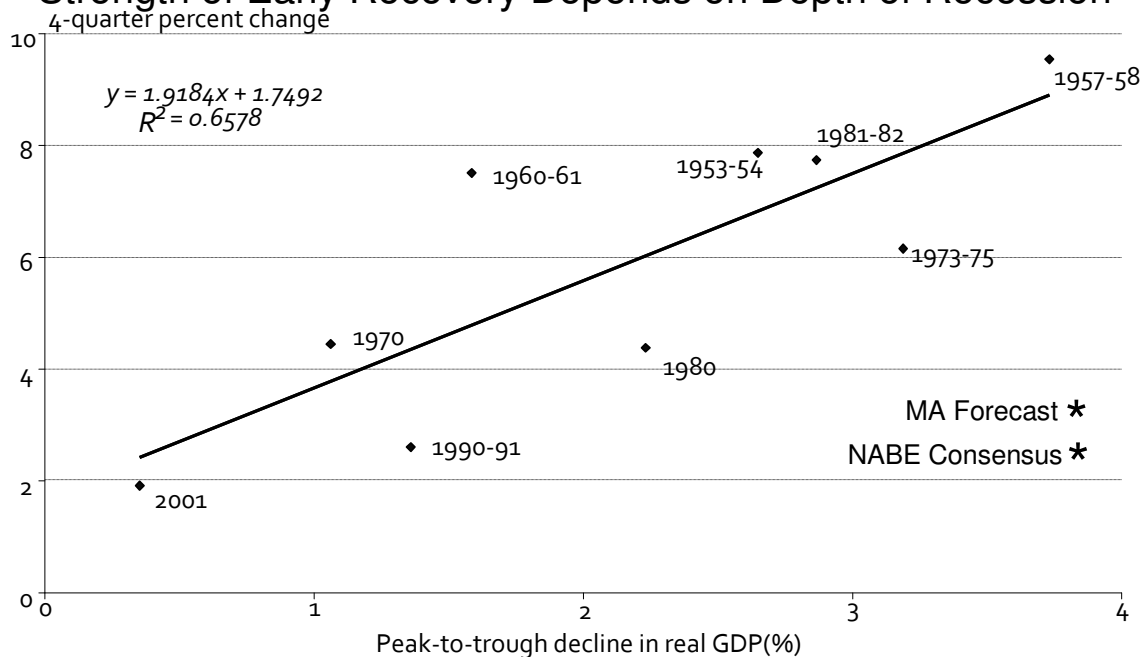
December 2009

© Macroeconomic Advisers

7

Recession Dynamics Hint at Upside Risk

Strength of Early Recovery Depends on Depth of Recession



December 2009

© Macroeconomic Advisers

8

Significant Downside Risks Remain

- Securitization markets in key segments still “dependent” or broken
- CMBS market still facing a refi squeeze, with spillovers to banks
- RMBS spreads may widen sharply as Fed unwinds balance sheet
- Bank lending to consumer remains stingy; More HH de-leveraging?
- Foreclosures threaten home price stabilization; prices could turn down
- Recovery in equities could falter; further erode HH balance sheets
- Energy price increases still are a drag on growth; could be worse
- Foreign demand for \$ assets could fall short, pressure \$ ↓ and rates ↑

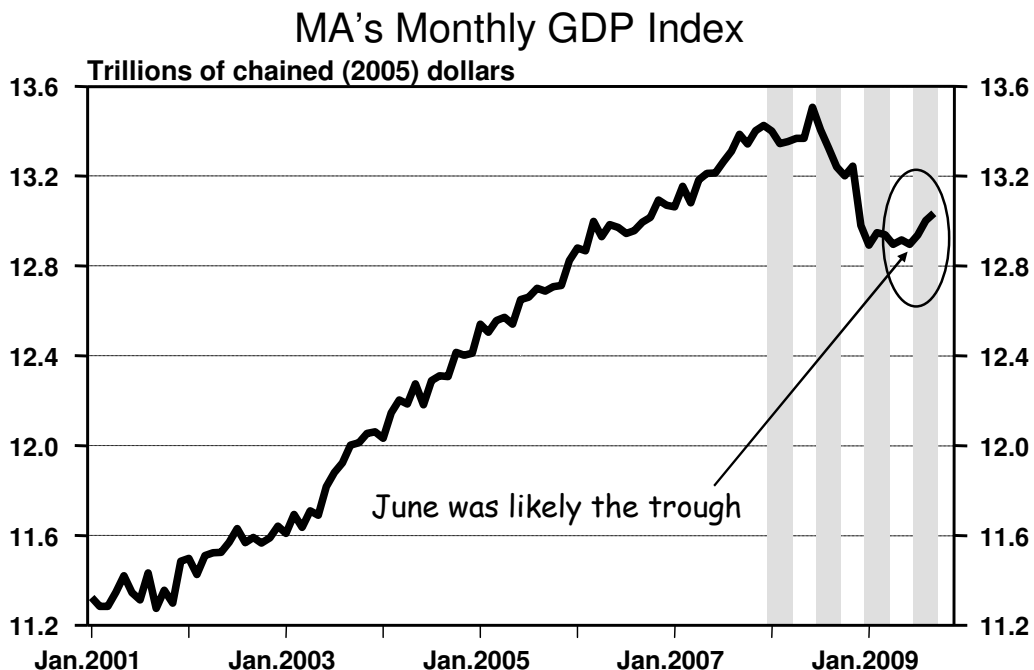
- Expiring Bush tax cuts could add drag ... uncertain as to when
- Back side of ARRA stimulus implies drag; will recovery have legs?
- What about health care reform? Cap and Trade?

December 2009

© Macroeconomic Advisers

9

July, August and September Saw Strong Growth



Source: Macroeconomic Advisers, LLC; Last data plotted for September 2009

December 2009

© Macroeconomic Advisers

10

Q4:A Solid Second Quarter of Recovery



Current-Quarter GDP Tracking

Fourth Quarter 2009

| December Releases | Reference | GDP | | Final Sales of Domestic Product | | | | | | | | | | | Change in Private Inventories | | |
|----------------------------|-----------|-----|-----|---------------------------------|------------------------------------|-----|------------------|---------|-----|-----------------|------------|-------------|-------|--------|-------------------------------|-----|----|
| | | | | Total | Final Sales to Domestic Purchasers | | | | | Net Exports | | | | | | | |
| | | | | | Total | PCE | Fixed Investment | | | Govern. Cons. & | Gross Inv. | % ch | | | | | |
| | | | | | | | Total | Struct. | E&S | | | Residential | Level | Change | | | Ex |
| MA Base Forecast | 5-Dec-09 | 98 | 3.1 | 1.2 | 1.7 | 1.9 | -5.5 | -15.9 | 0.1 | 16.4 | 2.4 | -374 | -16 | 9.5 | 11.4 | -74 | 59 |
| Construction | 1-Dec-09 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| Unit Vehicle Sales | 1-Dec-09 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| Man. Ship, Inv, Orders | 4-Dec-09 | 101 | 3.2 | 1.2 | 1.7 | 1.9 | -5.5 | -15.9 | 0.1 | 16.5 | 2.4 | -374 | -16 | 9.5 | 11.4 | -77 | 62 |
| Wholesale Trade | 9-Dec-09 | | | | | | | | | | | | | | | | |
| Boeing Deliveries & Ords | ??-Dec-09 | | | | | | | | | | | | | | | | |
| International Trade | 10-Dec-09 | | | | | | | | | | | | | | | | |
| Monthly Treasury Statement | 10-Dec-09 | | | | | | | | | | | | | | | | |
| Retail Sales | 11-Dec-09 | | | | | | | | | | | | | | | | |
| Business Inventories | 11-Dec-09 | | | | | | | | | | | | | | | | |
| Industrial Production | 15-Dec-09 | | | | | | | | | | | | | | | | |
| Housing Starts | 16-Dec-09 | | | | | | | | | | | | | | | | |
| Consumer Price Index | 16-Dec-09 | | | | | | | | | | | | | | | | |
| Existing Home Sales | 22-Dec-09 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| New Home Sales | 23-Dec-09 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| Durable Goods Orders | 24-Dec-09 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| CQ Forecast as of | 4-Dec-09 | 101 | 3.2 | 1.2 | 1.7 | 1.9 | -5.5 | -15.9 | 0.1 | 16.5 | 2.4 | -374 | -16 | 9.5 | 11.4 | -77 | 62 |
| BEA's Advance Est. | 29-Jan-10 | | | | | | | | | | | | | | | | |

Construction: These data were available when we prepared our base forecast and incorporated therein.

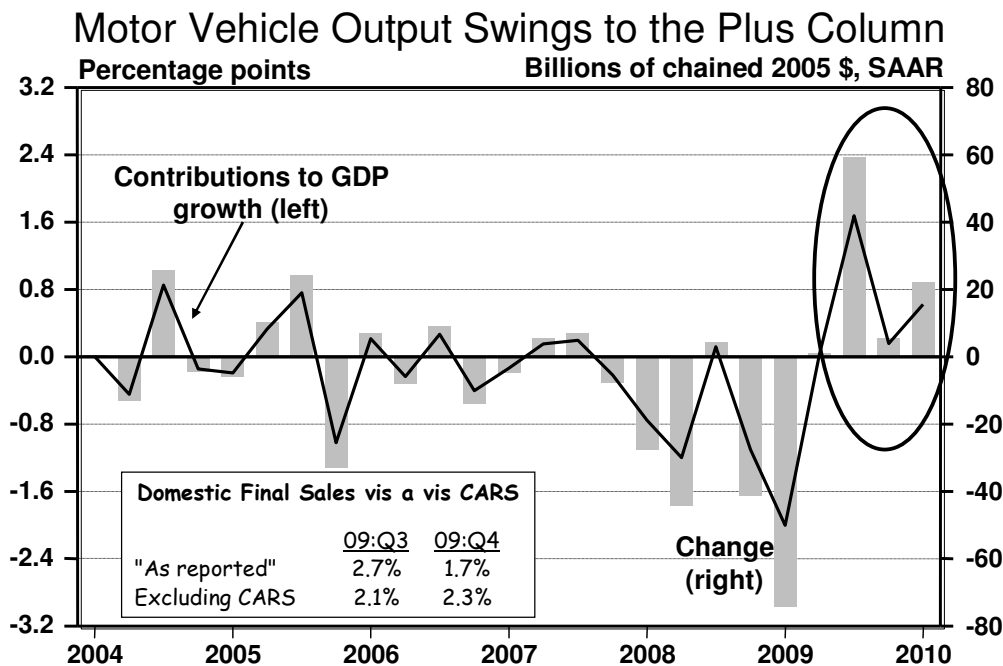
Unit Vehicle Sales: These data were available when we prepared our base forecast and incorporated therein.

Man Ship, Inv, and Ords: Manufacturers' inventories were revised down for Sep and were stronger than expected in Oct. Both developments suggest more of an increase in CPI in Q4.

Wholesale Trade:

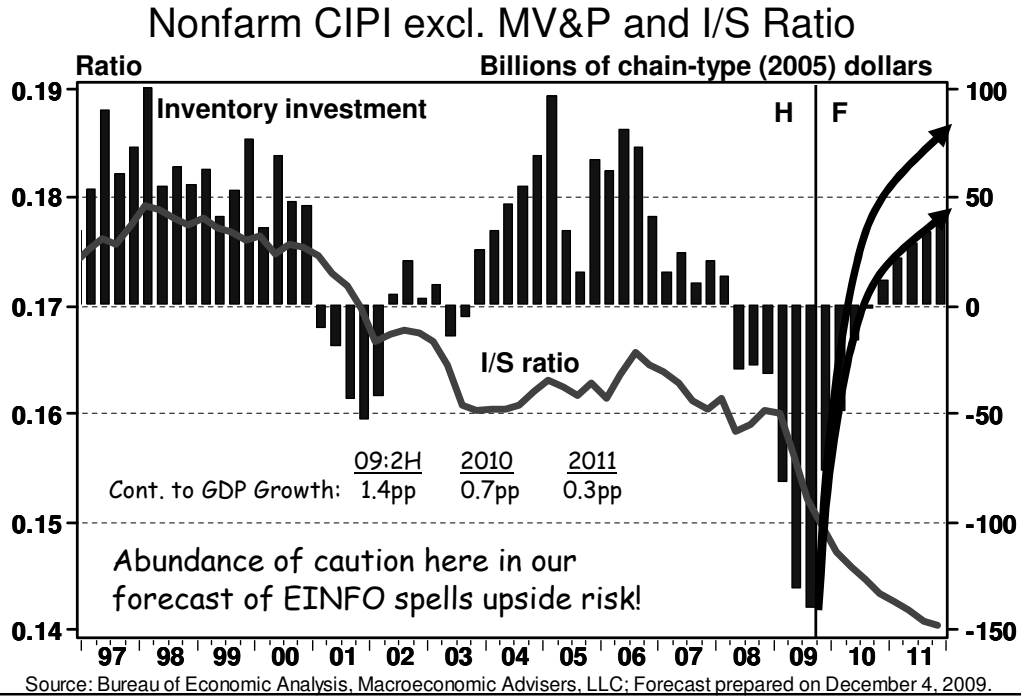
Domestic Final Sales adjusted for CARS = 2.3%

Q3: Even Without C.A.R.S. MVO Was Set to Jump



Forecast prepared on December 4, 2009.

2nd Half and Beyond – Lift from Inventories

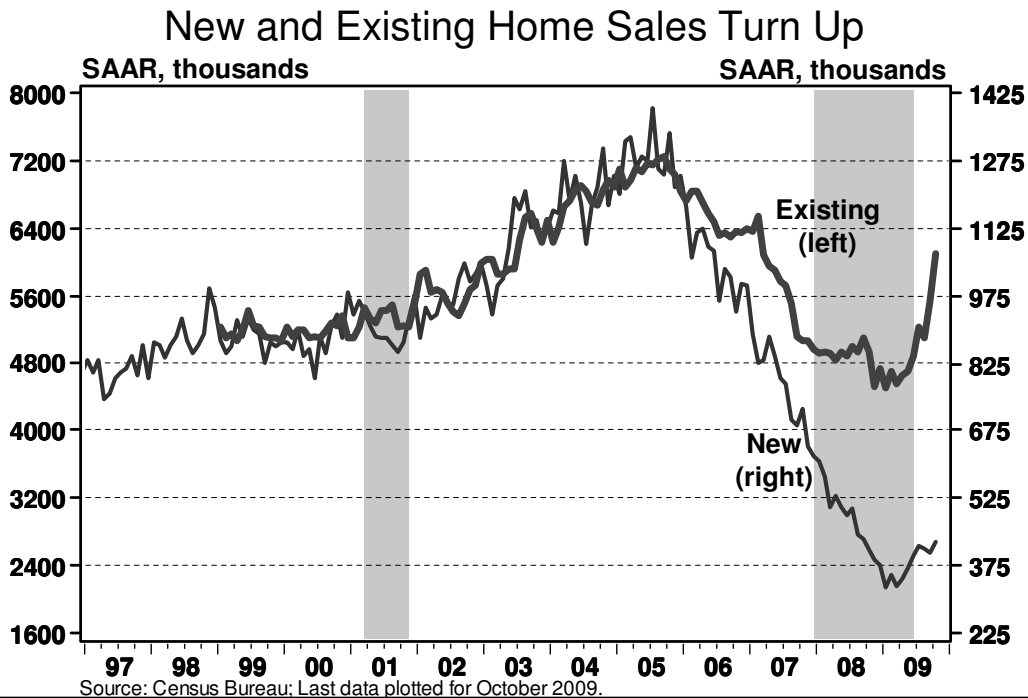


December 2009

© Macroeconomic Advisers

13

2nd Half and Beyond – Lift from Housing!



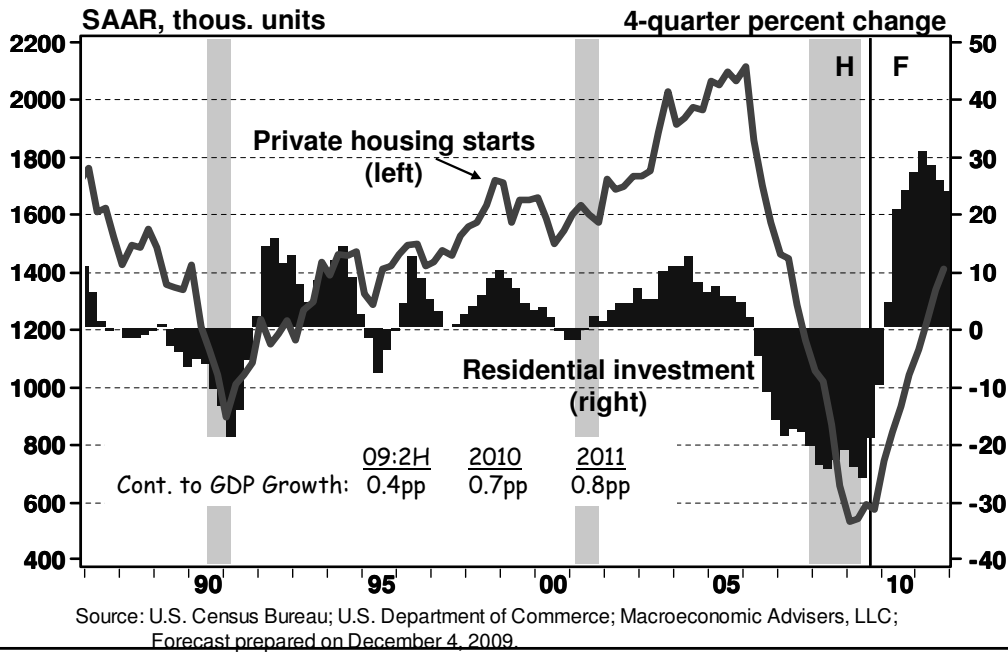
December 2009

© Macroeconomic Advisers

14

2nd Half and Beyond – Lift from Housing!

Housing Starts and Residential Investment Turn Up



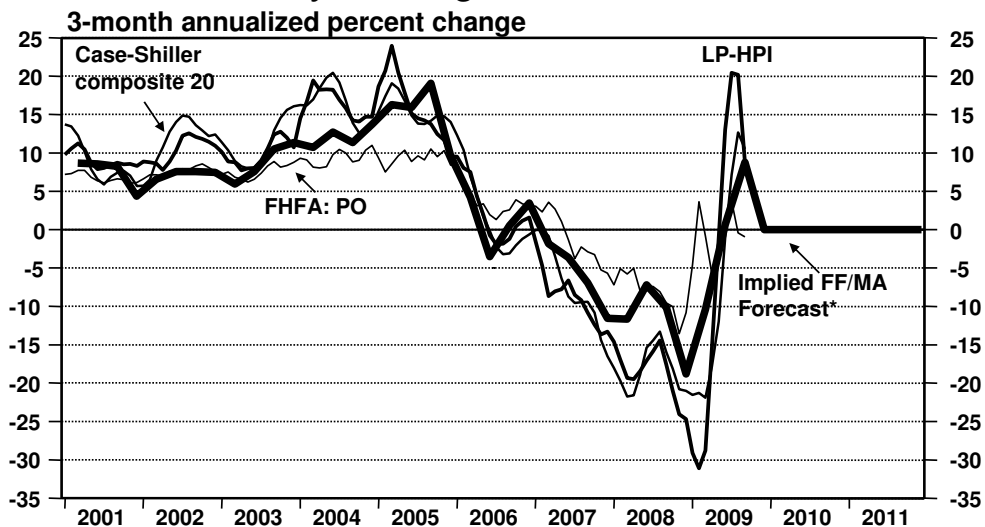
December 2009

© Macroeconomic Advisers

15

Are House Prices Turning Up?

Certainly Firming Ahead of Schedule



Source: Loan Performance; FHFA; S&P; Flow of Funds Accounts (FF); Last data plotted is for September 2009.

*Calculated as Holding Gains on Real Estate (market value) held by Households and Non-profit Organizations and Residential Real Estate held by Nonfarm Noncorporate Business, divided by Total Real Estate Holdings, lagged one quarter. Forecast prepared on December 4, 2009.

December 2009

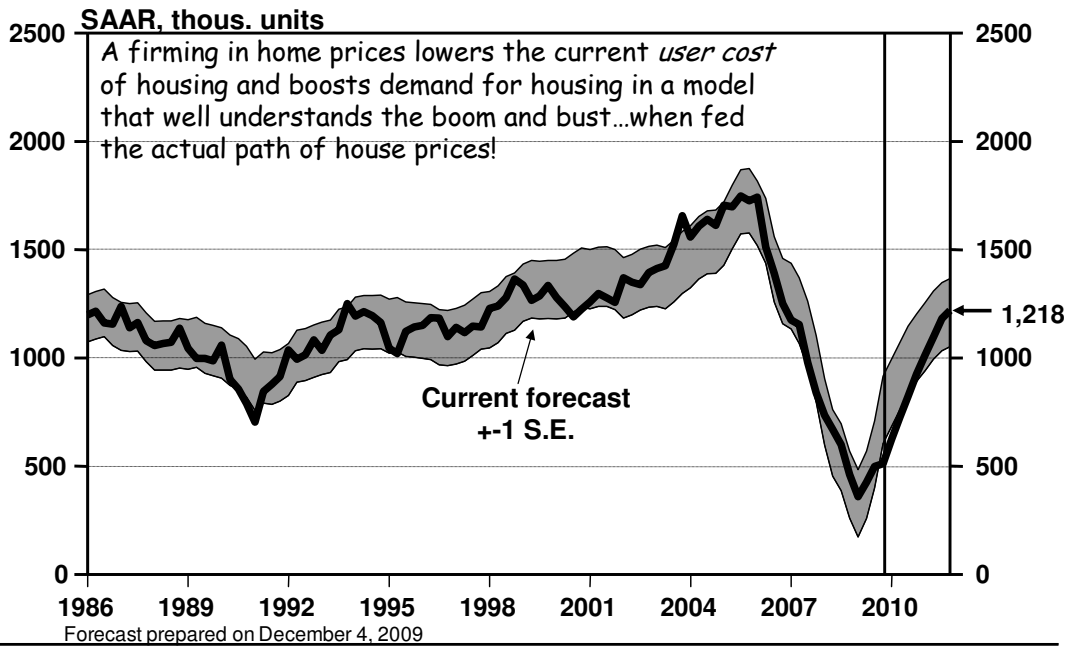
© Macroeconomic Advisers



16

2nd Half and Beyond – Lift from Housing!

Single-Family Housing Starts



December 2009

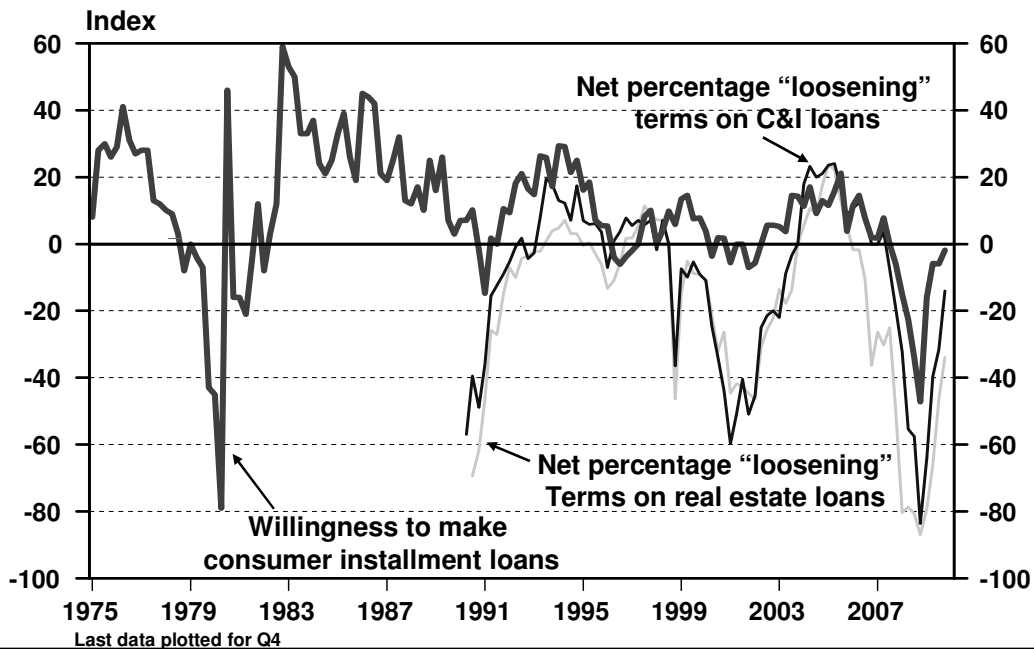
© Macroeconomic Advisers



17

Financial Conditions: Healing Apace

Senior Bank Loan Officer Survey Diffusion Indexes



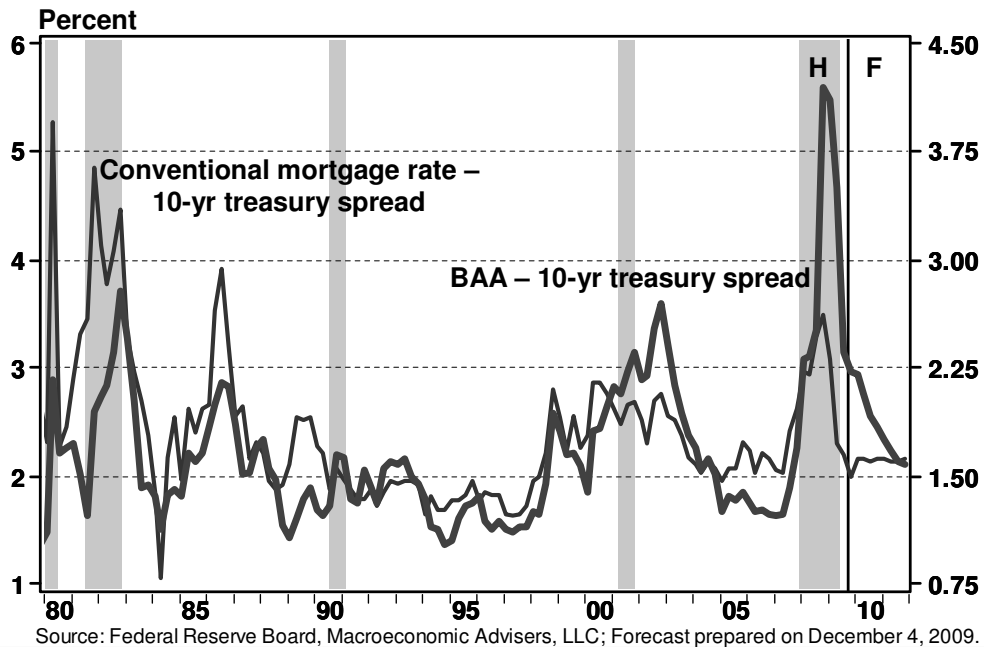
December 2009

© Macroeconomic Advisers

18

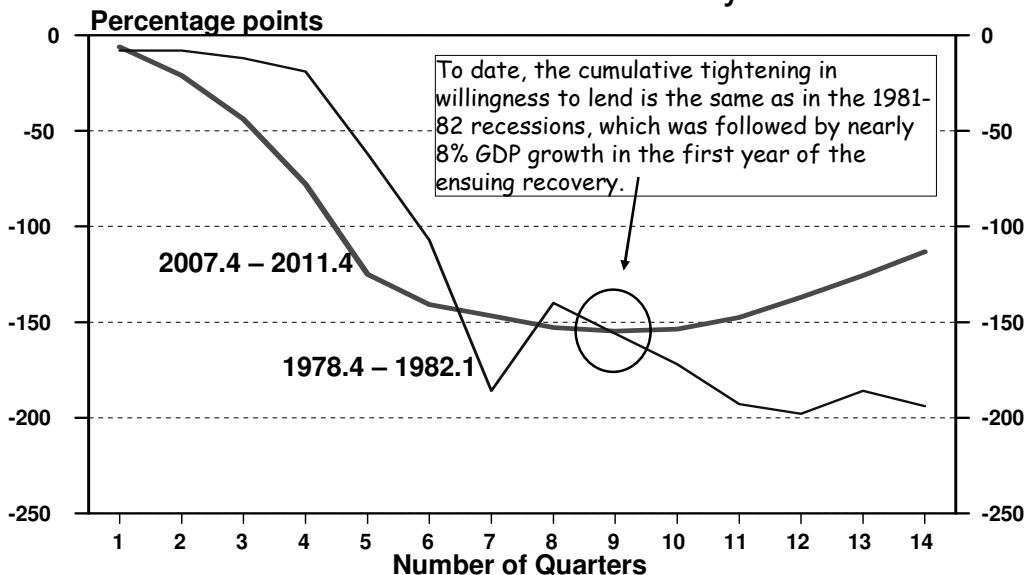
Financial Conditions: Healing Apace

Credit Conditions Much Improved



Financial Conditions: Healing Apace

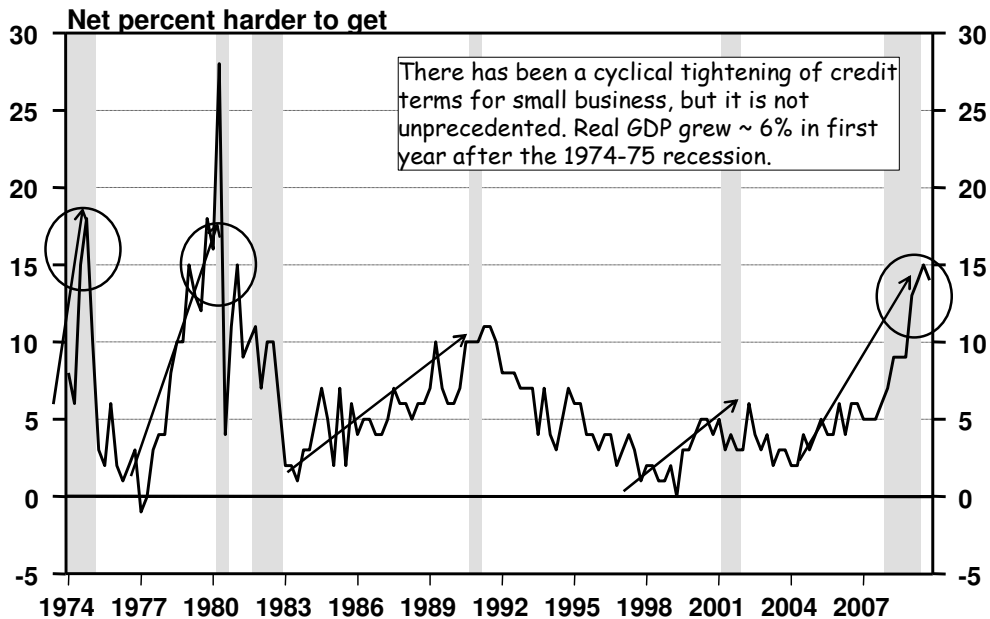
Cumulative Change in Bank Willingness to Lend to Consumers No Worse than Early 1980s?



Source: FRB Senior Loan Officer Opinion Survey on Bank Lending Practice; Macroeconomic Advisers, LLC

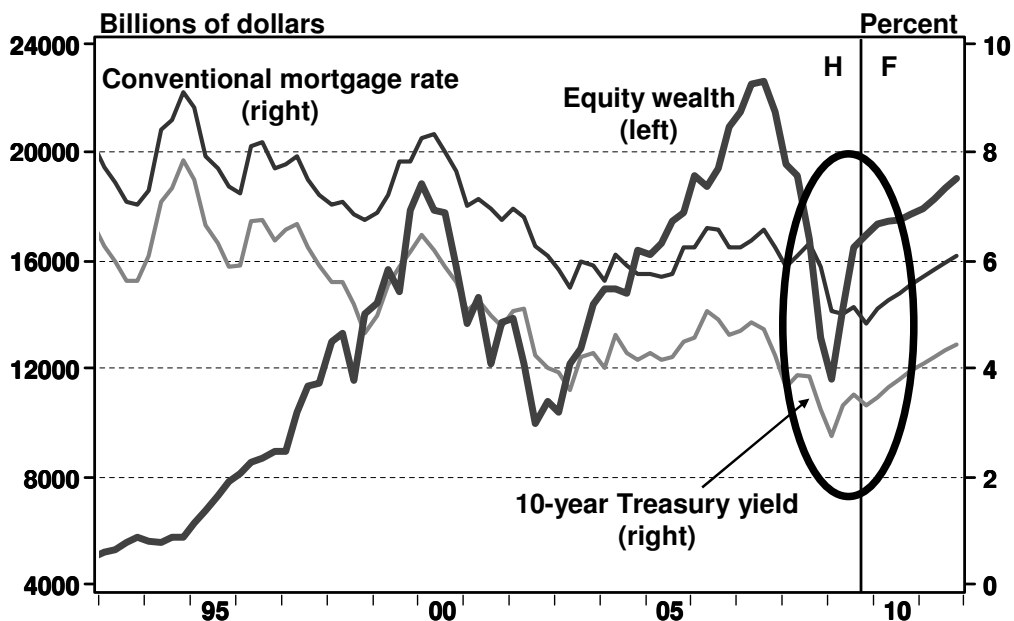
Financial Conditions: Healing Apace

Small Business Credit Problems No Worse than Early 1980s?



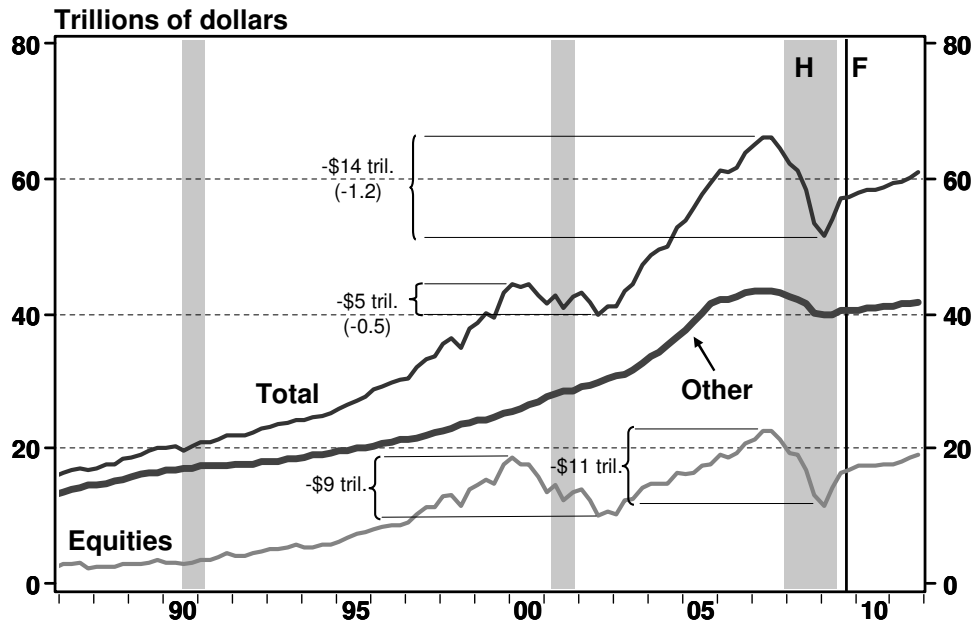
Financial Conditions: Healing Apace

Interest Rates & Equity Values



Household Net Worth: A Start at Recovery!

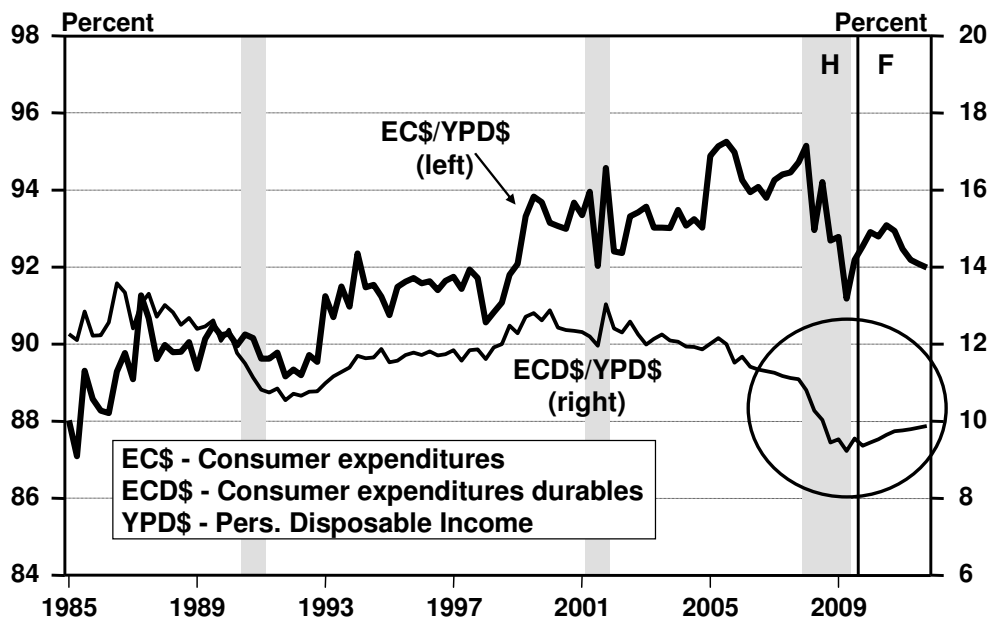
Household Net Worth



Source: Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

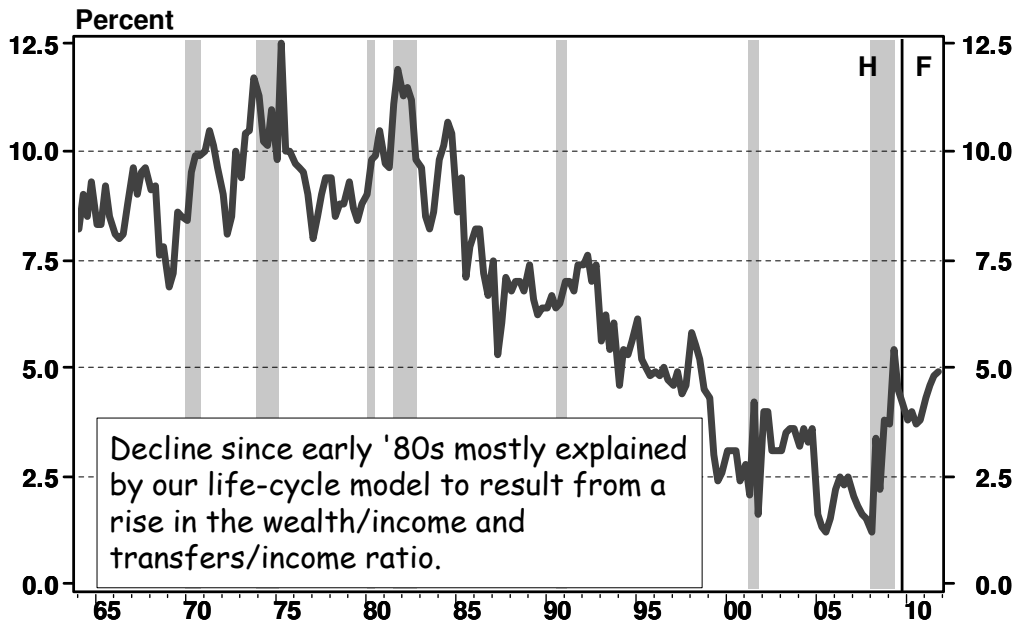
Consumption Ratios Reset Lower

Comparative Consumption/Income Ratios



Saving Rate Reset Higher

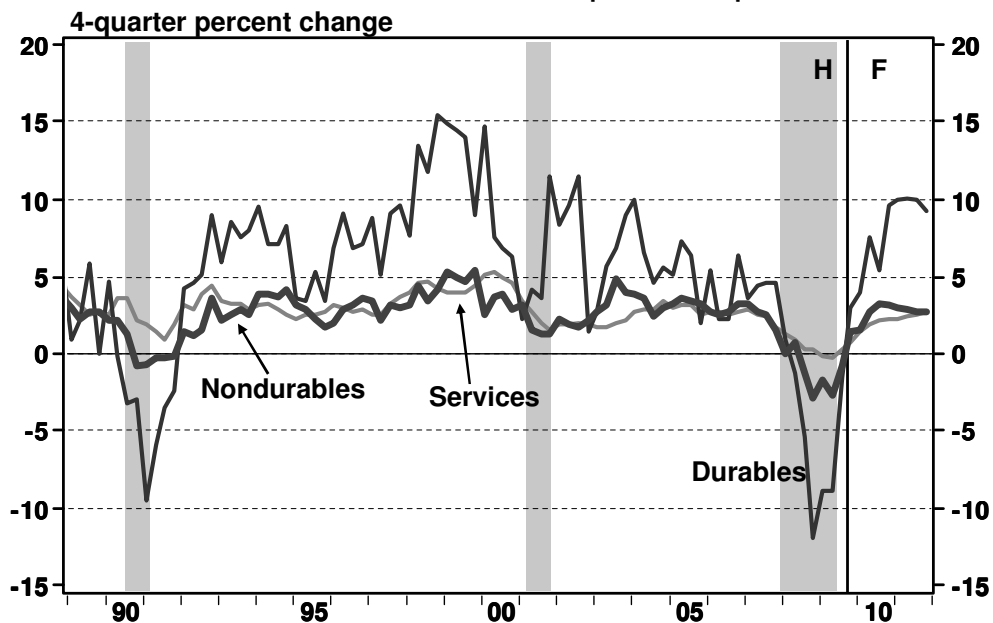
Personal Saving Rate



Source: Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

...But PCE Growth Can Return to "Trend"

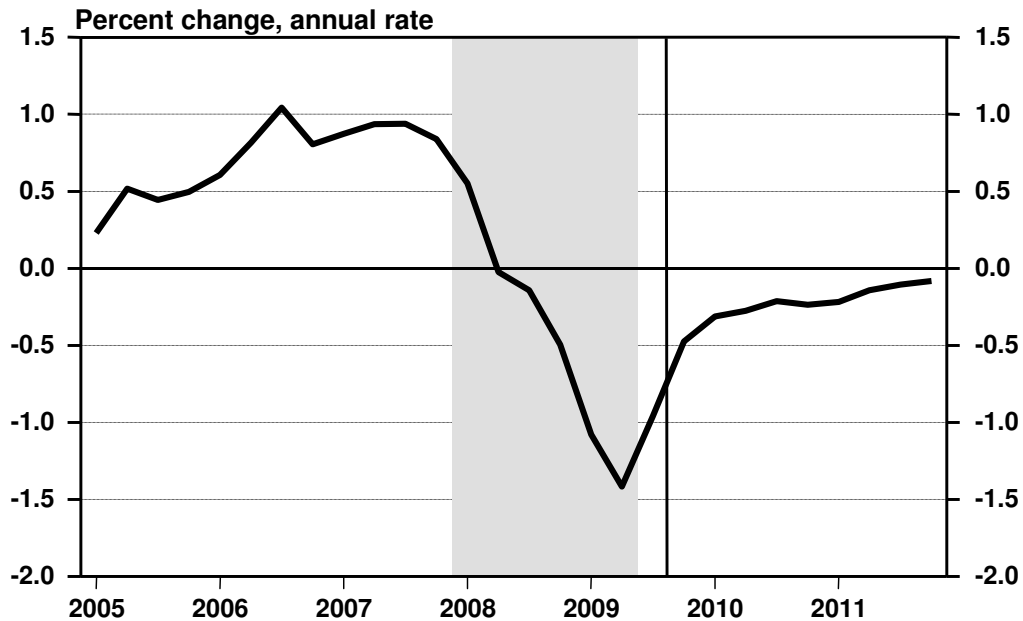
Growth of Personal Consumption Expenditures



Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

Diminishing Drag as HH Balance Sheets Stabilize

Contributions of Error-Correction Term to Growth of CON



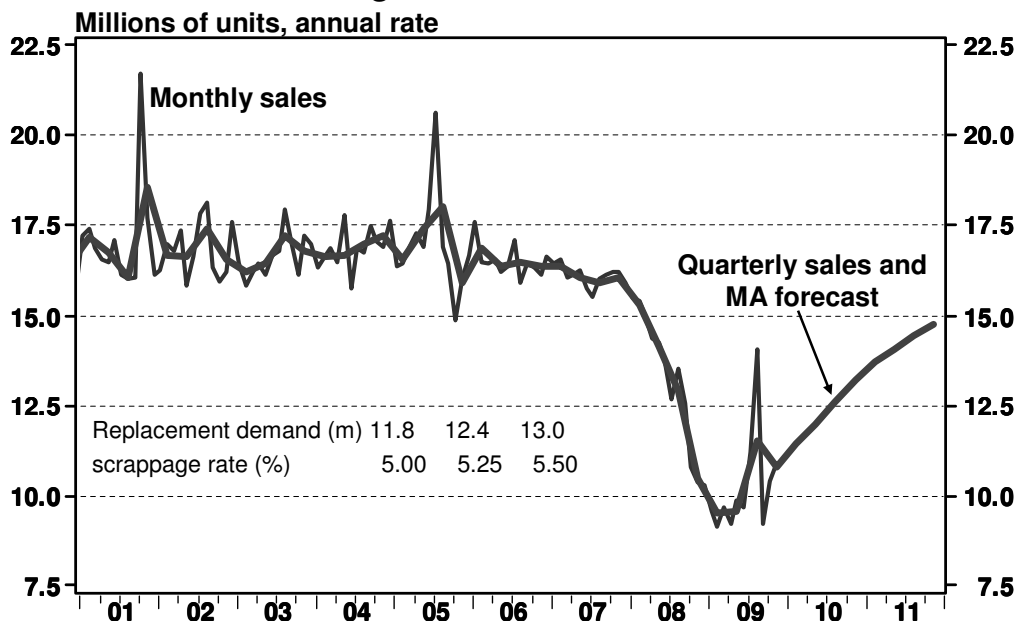
December 2009

© Macroeconomic Advisers

27

Durables Bear Much of the Burden

Light Vehicle Sales



Source: Bureau of Economic Analysis; Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

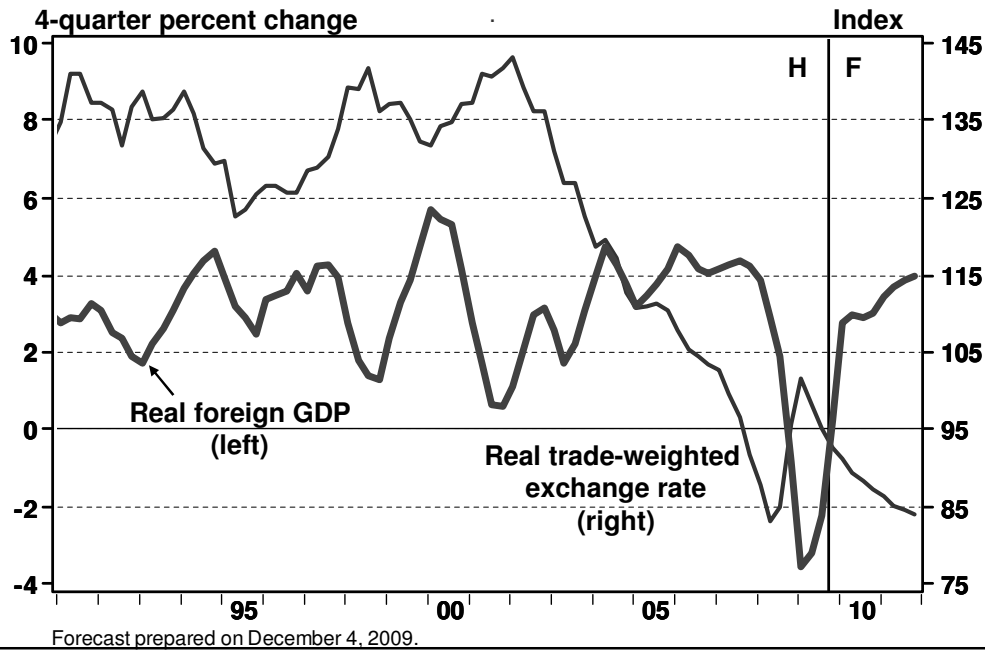
December 2009

© Macroeconomic Advisers

28

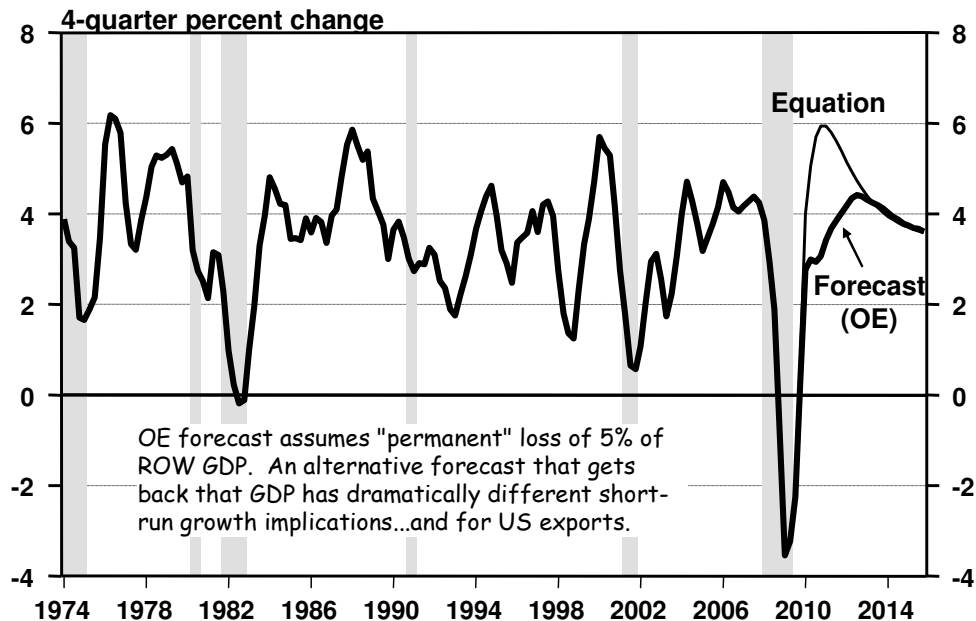
Global Recovery, Dollar Decline "Help"

Foreign Growth and the Dollar



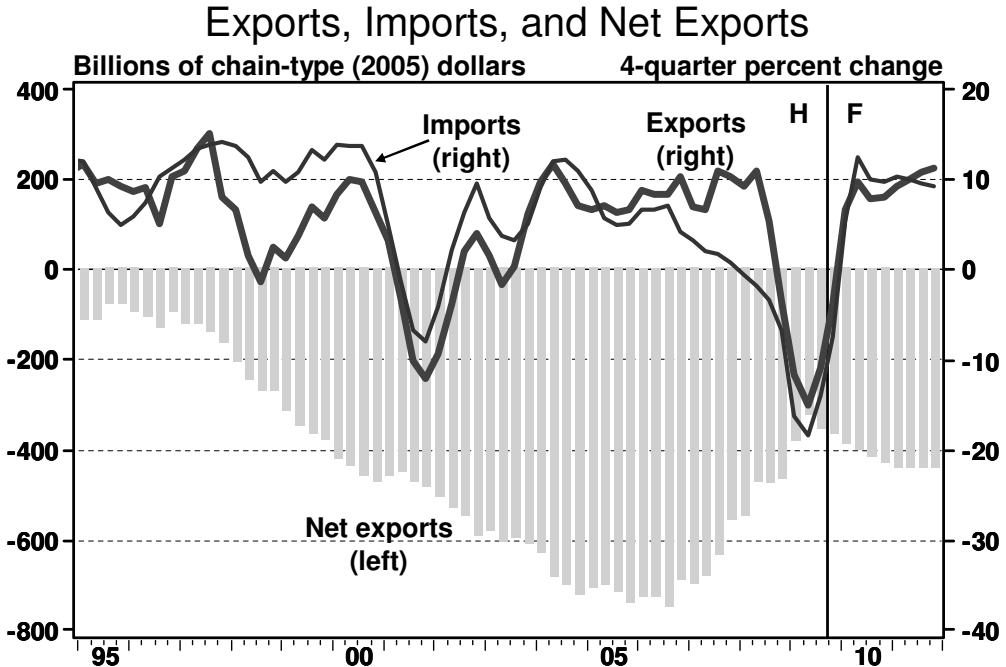
Global Recovery, Upside Growth Risk

Broad, Trade-Weighted, Foreign Real GDP



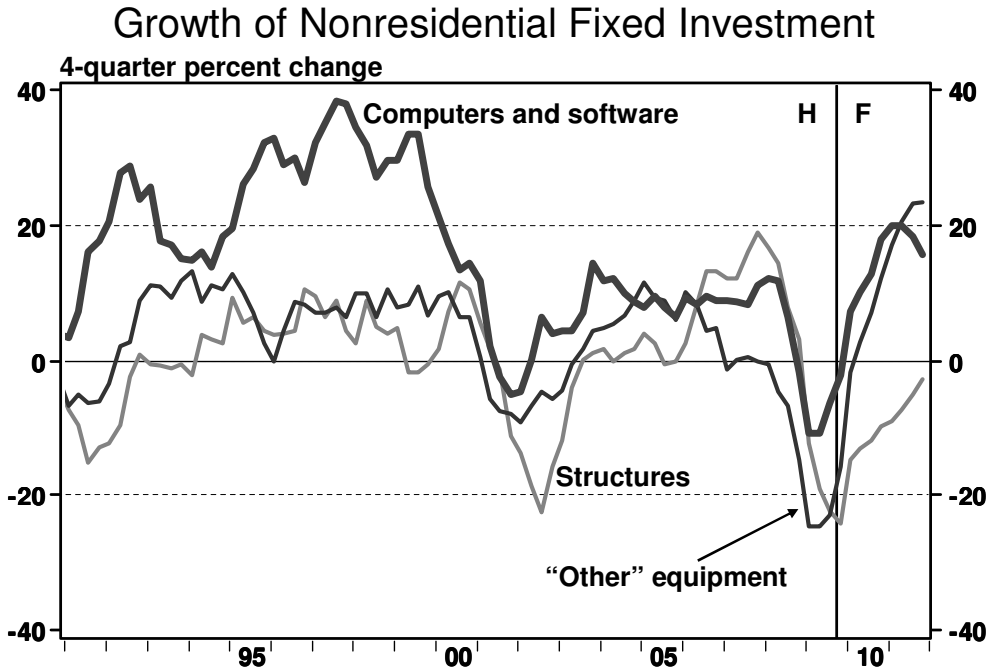
Source: Oxford Economics, Macroeconomic Advisers

Sharply Rising Imports Depress Net Exports



Source: Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

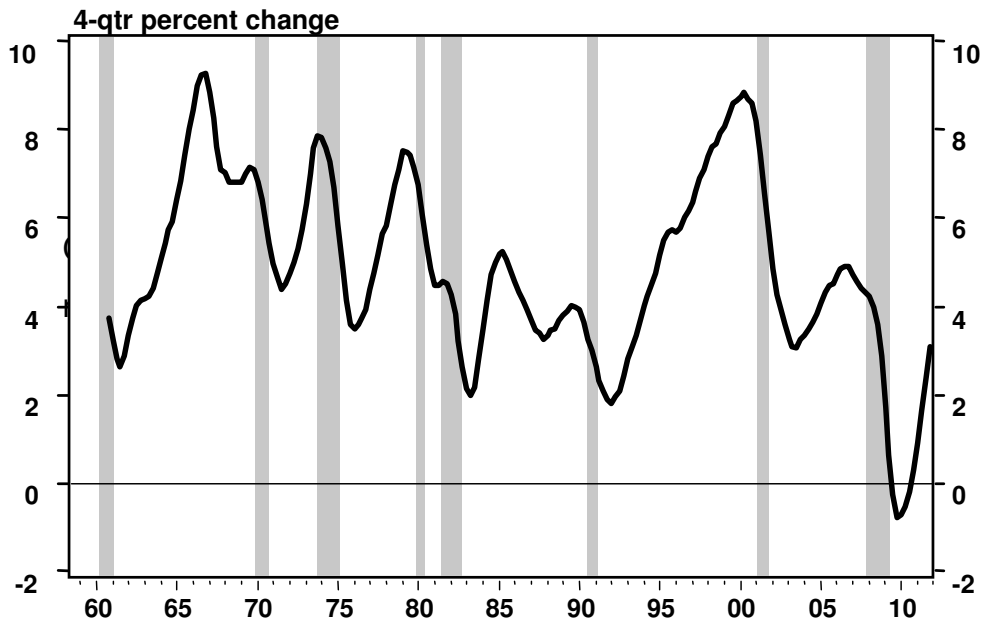
Pent-up Demand Helps CapEx Tepid Recovery



Source: Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

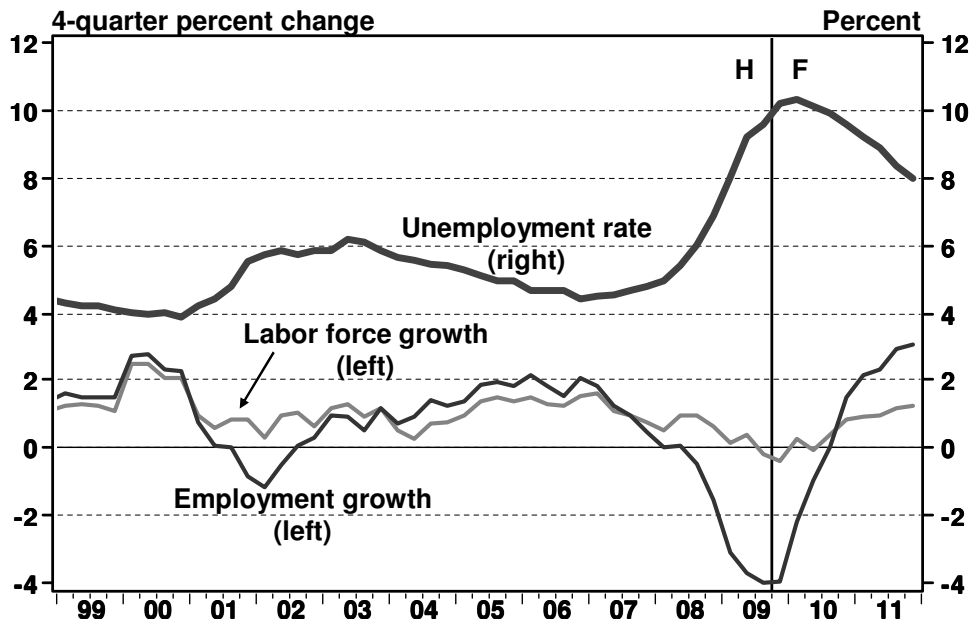
A Low Base(!) Helps CapEx's Tepid Recovery

Stock of Equipment & Software



Not Quite a Jobless Recovery!

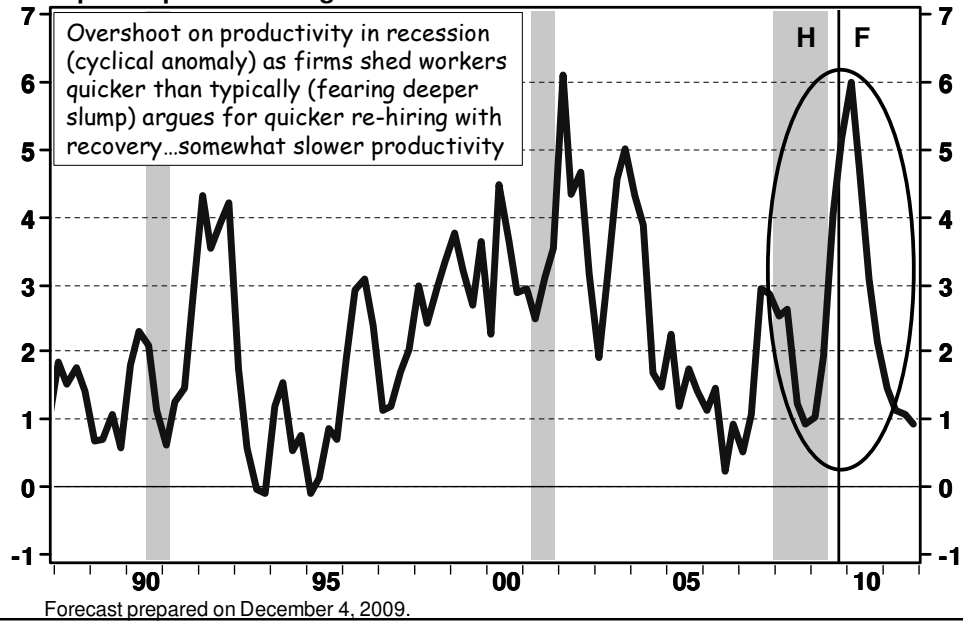
Employment, Labor Force, and Unemployment



Not Quite a Jobless Recovery!

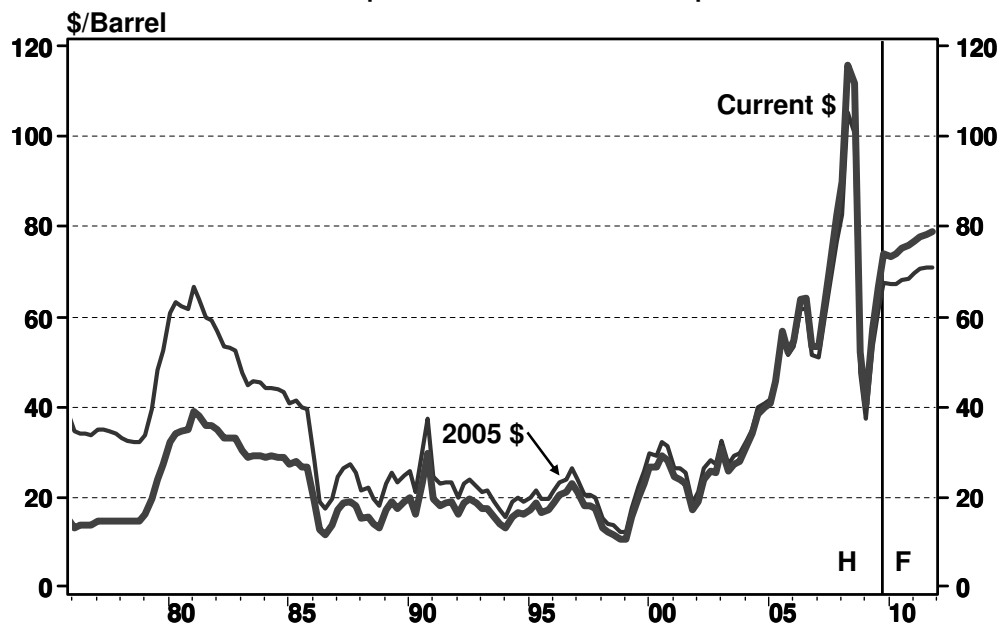
Output per Hour in the Nonfarm Business Sector

4-quarter percent change



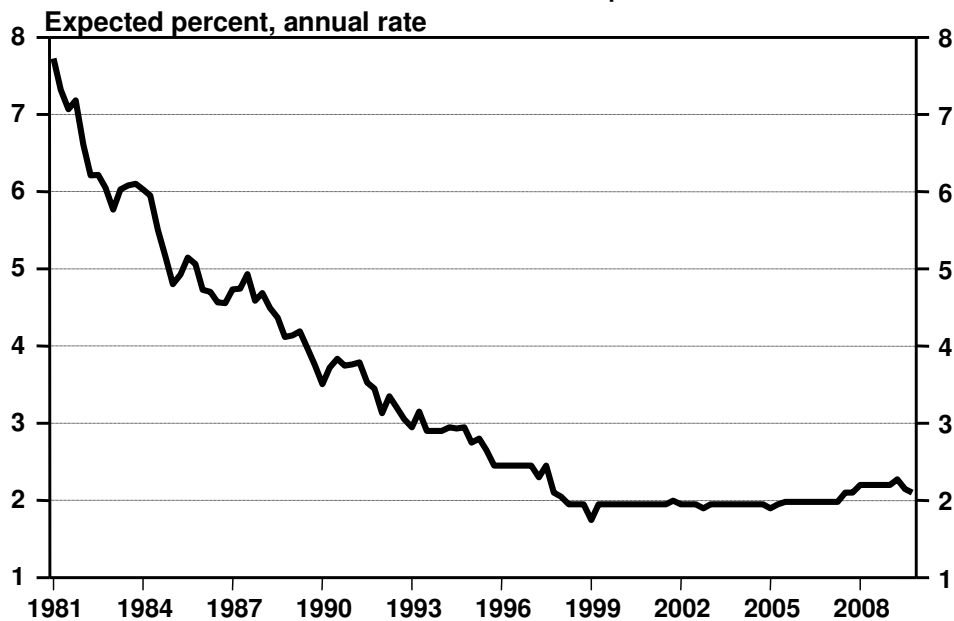
Rising Energy Prices Marginally Boost Inflation

Refiners' Acquisition Cost of Imported Oil



Inflation Expectations Remain Well Anchored

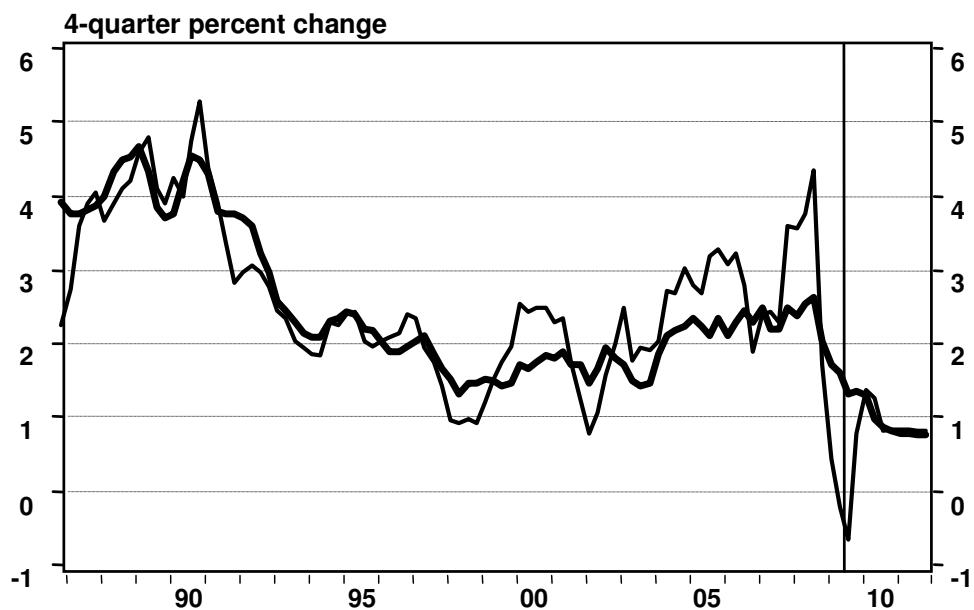
10-Year PCE Inflation Expectations



Source: FRB Philadelphia; Macroeconomic Advisers, LLC; Last data plotted Q4-2009

Slack Has Already Helped Drag Inflation Lower

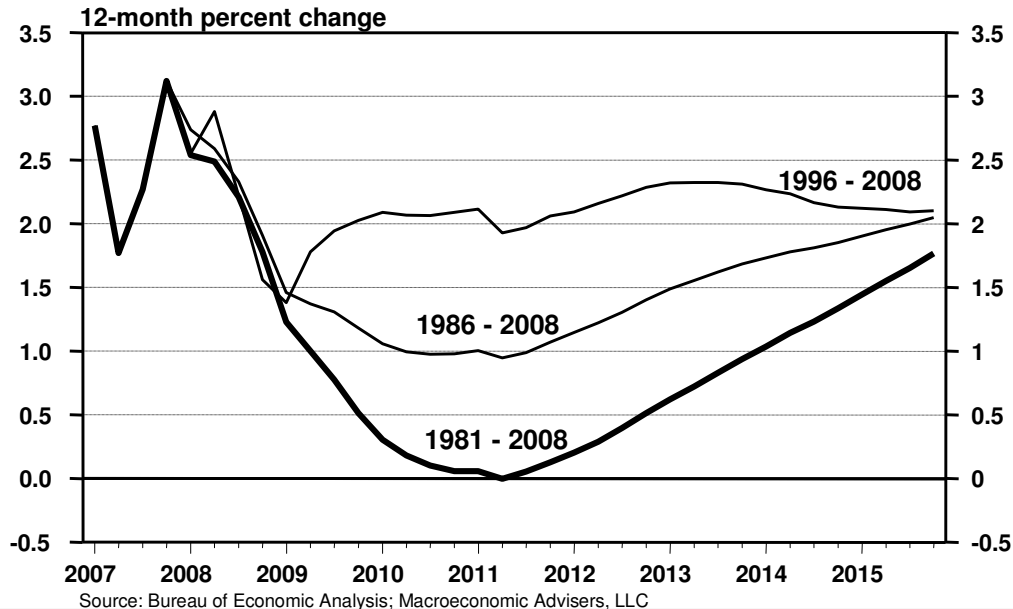
PCE Inflation



Model Uncertainty and the Inflation Forecast

Simulated Core PCE Inflation

From Models Estimated over Alternative Samples



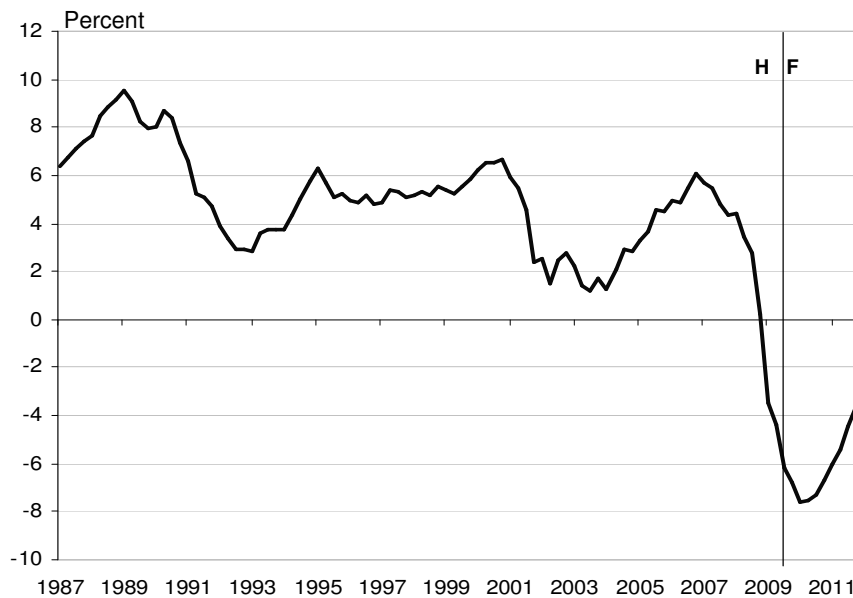
December 2009

© Macroeconomic Advisers

39

When?: Via a (backward-looking) Policy Rule

Rate Prescriptions from a Taylor-like Rule



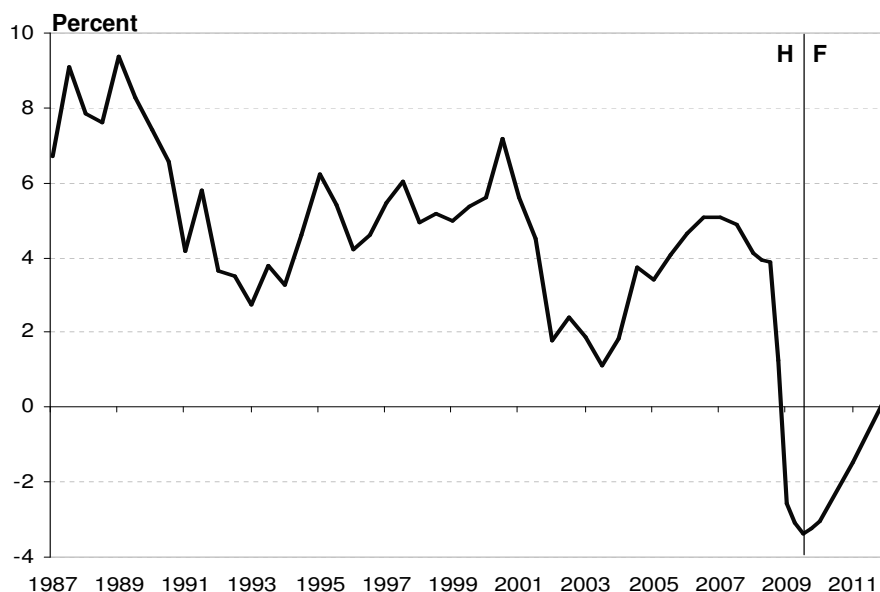
Macroeconomic Advisers forecast prepared December 4, 2009.

© Macroeconomic Advisers

40

When?: Via a (forward-looking) Policy Rule

Rate Prescriptions from a Taylor-like Rule



Macroeconomic Advisers forecast prepared December 4, 2009.

© Macroeconomic Advisers

41

Why Might the Fed Exit “Early”?

- Emergence of an asset bubble (or asset bubbles)
 - Credit (already?)
 - Equities (next year?)
 - Housing (hard to believe, but...)
- Rise in LT inflation expectations => loss of credibility
 - Despite very low core inflation for an extended period
- Collapse in the dollar

How?: Exit Strategy

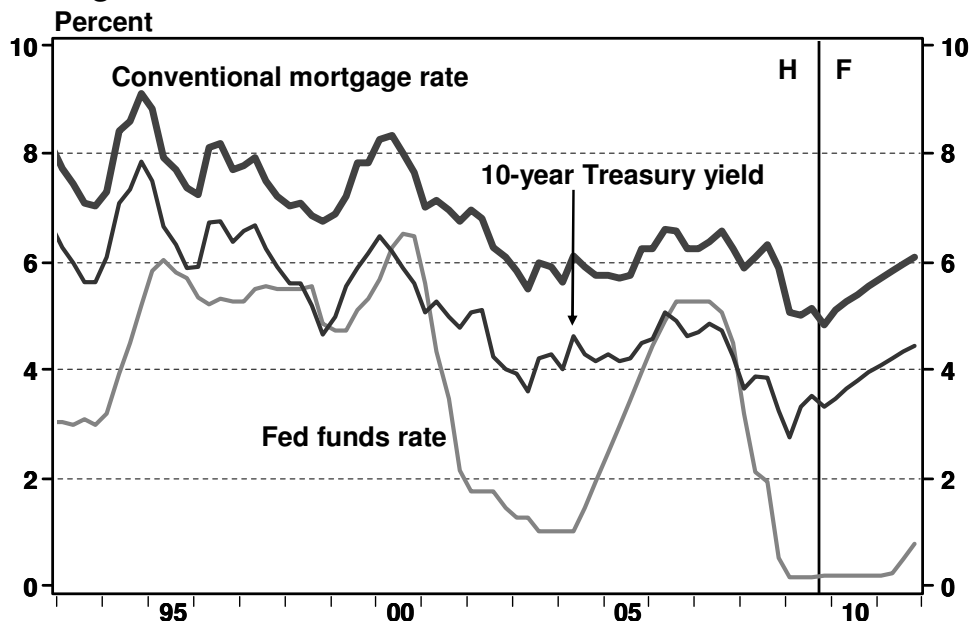
- End Easing
 - End Securities Purchase Programs
- Passive steps
 - Close Liquidity Facilities
 - Runoff
- Active steps
 - Raise Interest on Reserves (IOR)
 - Actively Withdraw Reserves (reverse repos, term deposits)
 - Shrink the Balance Sheet (asset sales vs runoff)

Exit Sequence: Two Options

- Preparatory steps: discussion, small scale RRs
- Sequence #1
 - Active withdrawal of reserves first
 - Interest rates second
 - Active shrinking of the balance sheet (last, if at all)
- Sequence # 2
 - IOR and active withdrawal of reserves simultaneously
 - Active shrinking of balance sheet later (if at all)

Below-Target Inflation & Lingering Slack Imply Late Exit

Long-Rates are on the Rise, but the Fed Stands Pat



The US Economic Outlook: Bottom Line

- Above-trend growth in 2nd half of 2009: 2.9% (a.r.)
 - Downside risks continue to shrink; upside risks emerge
 - Robust (but sub par) growth in 2010 (4.0%↑) & 2011 (4.5% ↑)
 - Unemployment rate peaks at 10.3% in 2010:q1
-
- Unemployment rate declines to 9.6% in '10:q4 and to 8.0% in '11:q4
 - Core inflation very low: =1.5% in 2009, ≅ 1.1 in 2010 & ≅ 0.9 in 2011
 - Revised higher relative to recent forecasts --- but still below FOMC
-
- Fed: Still expecting a late exit; but will “end easing” long before
 - Fiscal: Stimulus working for now; getting control of the deficit later

Back-up Slides

MA Forecast Details

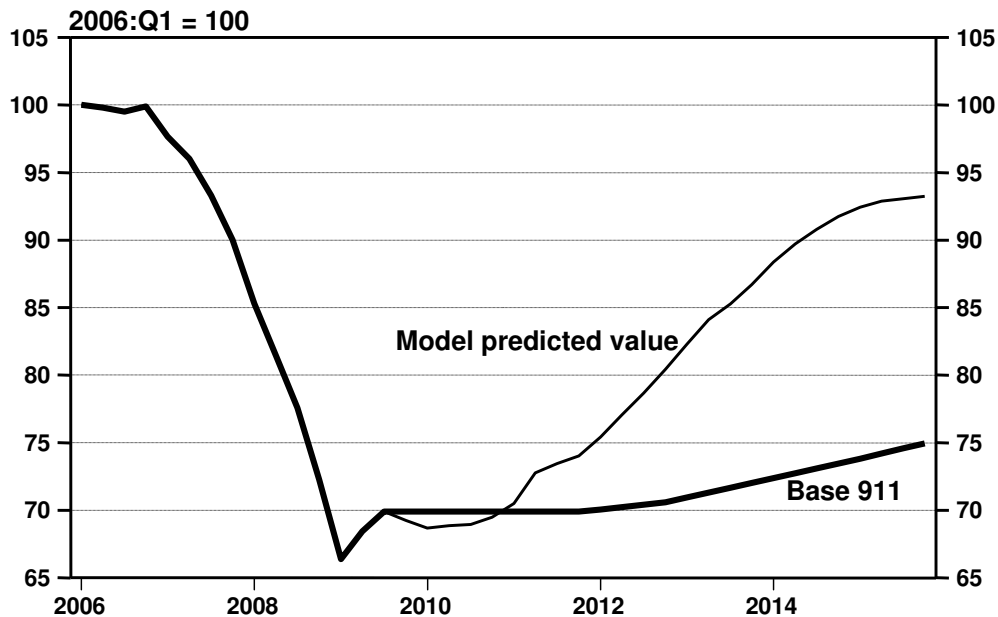
| | 2009.1 | 2009.2 | 2009.3 | 2009.4 | 2010.1 | 2010.2 | 2010.3 | 2010.4 | Q4/Q4 % change or annual avg. | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------------------|--------|-------|-------|
| | | | | | | | | | 2008 | 2009 | 2010 | 2011 |
| Real GDP & Components | | | | | | | | | | | | |
| Gross domestic product | -6.4 | -0.7 | 2.8 | 3.1 | 3.5 | 4.1 | 3.8 | 4.6 | -1.9 | -0.4 | 4.0 | 4.5 |
| Contributions to Real GDP Growth | | | | | | | | | | | | |
| Final sales | -4.1 | 0.7 | 1.9 | 1.2 | 2.5 | 3.2 | 3.3 | 4.1 | -1.4 | -0.1 | 3.3 | 4.1 |
| Change in inventories | -2.4 | -1.4 | 0.9 | 1.8 | 1.1 | 0.8 | 0.5 | 0.5 | -0.5 | -0.3 | 0.7 | 0.3 |
| Personal consumption expenditures | 0.6 | -0.9 | 2.9 | 1.9 | 2.9 | 2.9 | 3.4 | 3.6 | -1.8 | 1.1 | 3.2 | 3.4 |
| Non-res fixed investment | -39.2 | -9.6 | -4.1 | -5.5 | 1.5 | 4.6 | 7.9 | 11.8 | -6.0 | -16.0 | 6.4 | 14.2 |
| Residential investment | -38.2 | -23.3 | 19.5 | 16.4 | 15.0 | 34.3 | 33.1 | 30.1 | -21.0 | -9.9 | 27.9 | 24.0 |
| Inventory investment* | -113.9 | -160.2 | -133.4 | -74.4 | -40.1 | -12.3 | 5.5 | 22.9 | -25.9 | -120.5 | -6.0 | 51.9 |
| Exports | -29.9 | -4.1 | 17.0 | 9.5 | 5.8 | 7.7 | 9.0 | 10.1 | -3.4 | -3.7 | 8.1 | 11.2 |
| Imports | -36.4 | -14.7 | 20.8 | 11.4 | 8.0 | 9.8 | 10.5 | 10.7 | -6.8 | -7.6 | 9.8 | 9.3 |
| Gov't consumption & gross invest. | -2.6 | 6.7 | 3.1 | 2.4 | 1.8 | 2.1 | -1.1 | 0.3 | 3.0 | 2.3 | 0.8 | -1.0 |
| Private housing starts (thous. units) | 528 | 540 | 589 | 573 | 739 | 842 | 933 | 1039 | 900 | 557 | 888 | 1279 |
| Light vehicle sales (mil. units) | 9.5 | 9.6 | 11.5 | 10.8 | 11.4 | 12 | 12.6 | 13.2 | 13.2 | 10.3 | 12.3 | 14.2 |
| Industrial production (% change a.r.) | -19.0 | -10.3 | 5.6 | 5.8 | 6.9 | 5.6 | 5.8 | 6.5 | -6.7 | -5.1 | 6.2 | 6.1 |
| Capacity utilization (mfg) | 66.7 | 65.4 | 66.9 | 68.1 | 69.6 | 70.6 | 71.6 | 72.6 | 75.1 | 66.8 | 71.1 | 74.8 |
| Nonfarm payroll employment (mil) | 133.7 | 132.1 | 131.2 | 130.7 | 130.8 | 131.7 | 132.0 | 132.9 | 137.0 | 131.9 | 131.8 | 135.7 |
| Unemployment rate (civilian, percent) | 8.1 | 9.2 | 9.6 | 10.2 | 10.3 | 10.1 | 9.9 | 9.6 | 5.8 | 9.3 | 10.0 | 8.6 |
| GDP price index | 1.9 | 0.0 | 0.5 | 0.9 | 1.1 | 1.0 | 1.1 | 0.8 | 1.9 | 0.8 | 1.0 | 0.8 |
| CPI (all urban) | -2.4 | 1.3 | 3.6 | 3.2 | 1.6 | 1.3 | 1.3 | 1.1 | 1.5 | 1.4 | 1.3 | 1.1 |
| Core CPI (all urban) | 1.5 | 2.4 | 1.5 | 1.7 | 1.2 | 1.2 | 1.1 | 1.0 | 2.0 | 1.8 | 1.1 | 1.0 |
| Core PCE | 1.1 | 2.0 | 1.3 | 1.7 | 1.3 | 1.1 | 1.0 | 1.0 | 2.0 | 1.5 | 1.1 | 0.9 |
| Compensation per hour | -4.7 | 6.8 | 5.5 | 2.8 | 2.4 | 1.4 | 1.6 | 1.6 | 2.6 | 2.5 | 1.8 | 1.8 |
| Output per hour | 0.3 | 6.9 | 8.4 | 5.2 | 3.6 | 2.0 | 1.6 | 1.5 | 0.9 | 5.2 | 2.1 | 0.9 |
| Unit labor cost | -5.0 | -0.1 | -2.7 | -2.2 | -1.1 | -0.5 | 0.0 | 0.1 | 1.6 | -2.5 | -0.4 | 0.9 |
| Exchange rate (FRB broad nominal) | 111.1 | 107.1 | 103.7 | 101.6 | 100.8 | 100.0 | 99.4 | 99.0 | 99.8 | 105.9 | 99.8 | 98.7 |
| Price of Imported oil (\$/barrel) | 40.5 | 57.6 | 66.7 | 73.7 | 73.3 | 73.7 | 75.2 | 75.8 | 92.3 | 59.6 | 74.5 | 77.9 |
| Federal funds rate | 0.18 | 0.18 | 0.16 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 1.93 | 0.18 | 0.20 | 0.43 |
| 10-year Treasury note yield | 2.74 | 3.31 | 3.52 | 3.33 | 3.49 | 3.65 | 3.80 | 3.95 | 3.67 | 3.22 | 3.72 | 4.28 |
| Aaa corporate bond yield | 5.27 | 5.51 | 5.27 | 5.14 | 5.23 | 5.26 | 5.30 | 5.40 | 5.64 | 5.30 | 5.30 | 5.63 |
| Corporate profits w/iva & ccadj | 22.8 | 15.7 | 49.6 | 16.6 | 16.7 | 13.9 | 9.6 | 10.2 | -25.1 | 25.5 | 12.6 | 6.6 |
| Real Disposable Personal Income | 0.2 | 6.2 | -1.5 | 0.4 | 1.3 | 3.4 | 2.1 | 4.3 | 0.3 | 1.3 | 2.8 | 4.5 |
| Personal saving rate (%) | 3.7 | 5.4 | 4.5 | 4.2 | 3.8 | 4.0 | 3.7 | 3.8 | 2.7 | 4.4 | 3.8 | 4.7 |
| HH equity net worth (eop)** | -11.5 | 22.1 | 16.1 | 3.0 | 2.3 | 0.6 | 0.2 | 1.0 | -39.0 | 29.2 | 4.2 | 8.1 |
| Federal surplus (unified, FY, bil \$) | -1796 | -1220 | -1323 | -1440 | -1643 | -1105 | -1291 | -1370 | -455 | -1417 | -1370 | -1301 |

*Billions of chained (2005) dollars

**Percent change quarterly rate

Are House Prices Turning Up?

LoanPerformance House Price Index



Source: LoanPerformance; Macroeconomic Advisers, LLC;

December 2009

© Macroeconomic Advisers

49

Our House Price Model

Modeling the Loan Performance HPI

Dep. Variable: $\Delta \log(\text{HPI})$

Sample: 1978q4 -- 2009q1

| | Coef. | t-stat. |
|-----------------------------|---------|---------|
| constant | 0.0033 | 2.1 |
| error-correctic | -0.0241 | -2.9 |
| Δ user cost | -0.4866 | -4.3 |
| $\Delta \log(\text{HPI}-1)$ | 0.3946 | 3.6 |
| $\Delta \log(\text{HPI}-2)$ | 0.3237 | 3.3 |
| Δ vac. Rate | -0.0216 | -1.9 |
| R2 adjusted | 0.8760 | |
| S.E. reg | 0.0072 | |
| DW | 2.0274 | |

Target: $\exp(-0.51 + \log(\text{prcs}) + 0.22 * \log(\text{ypd}/\text{hhadj}) - 3.98 * \text{ucc})$

user cost (ucc) $(\text{prcs}/\text{pc}) * ((\text{rmtg} + \text{utsibp}) * (1 - .01 * \text{utw}) - \text{wxhpi} + 1.6)$

wxhpi: $100 * ((\text{lphpi}(-1)/\text{lphpi}(-9))^{(4/8)-1})$

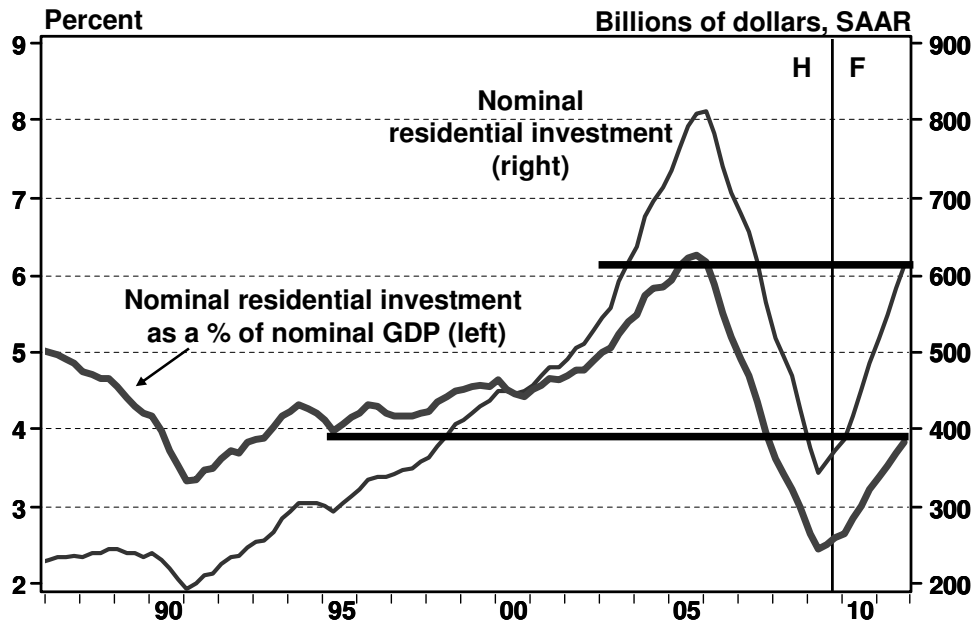
December 2009

© Macroeconomic Advisers

50

2nd Half and Beyond – Lift from Housing!

Housing Recovery in Context



Source: Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

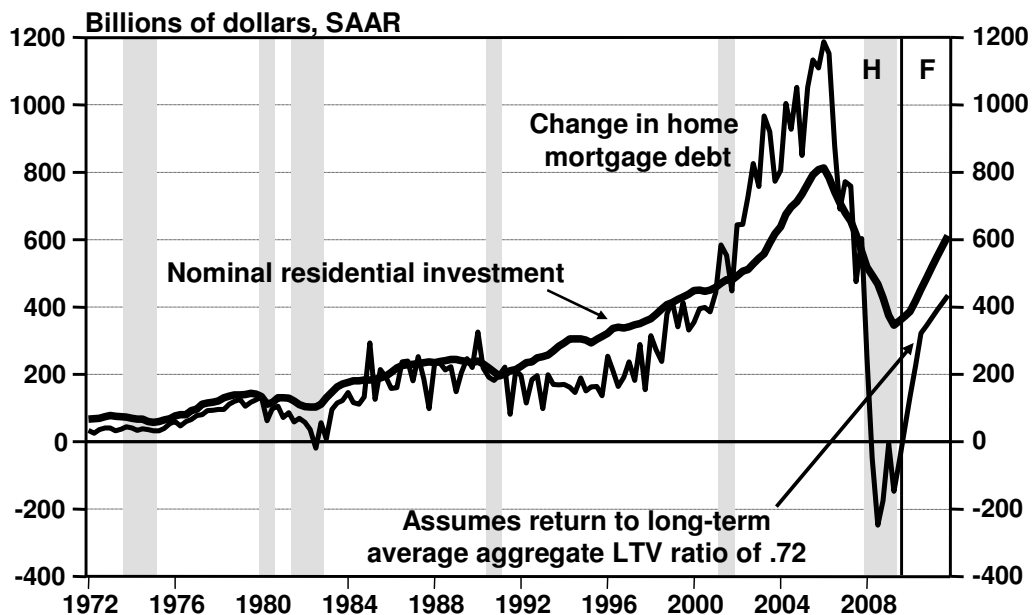
December 2009

© Macroeconomic Advisers

51

2nd Half and Beyond – Lift from Housing!

Can the Expected Housing Recovery be Financed?



Source: Bureau of Economic Analysis, Flow of Funds, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

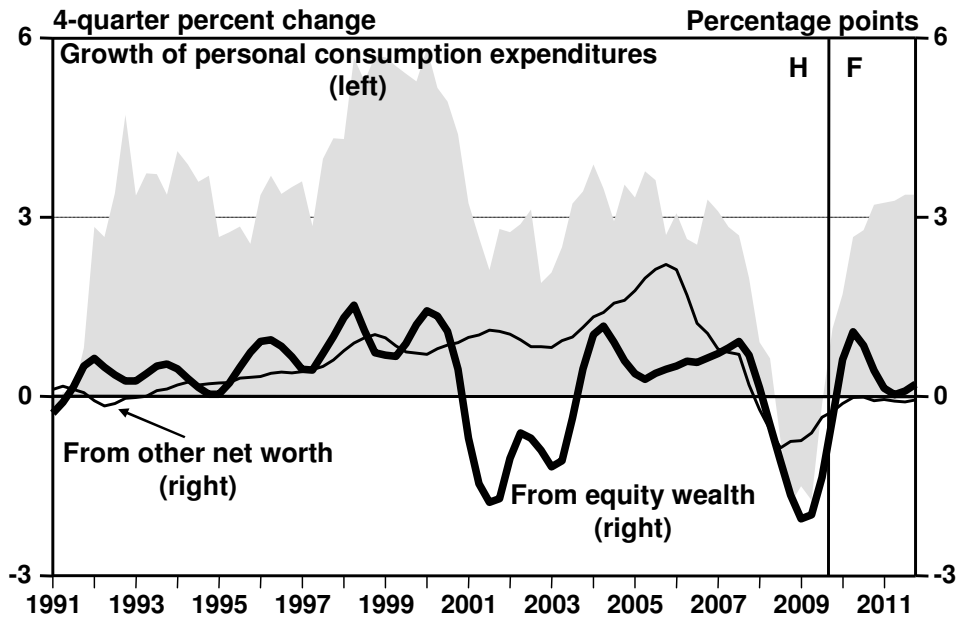
December 2009

© Macroeconomic Advisers

52

PCE Aided by Improving Financial Conditions

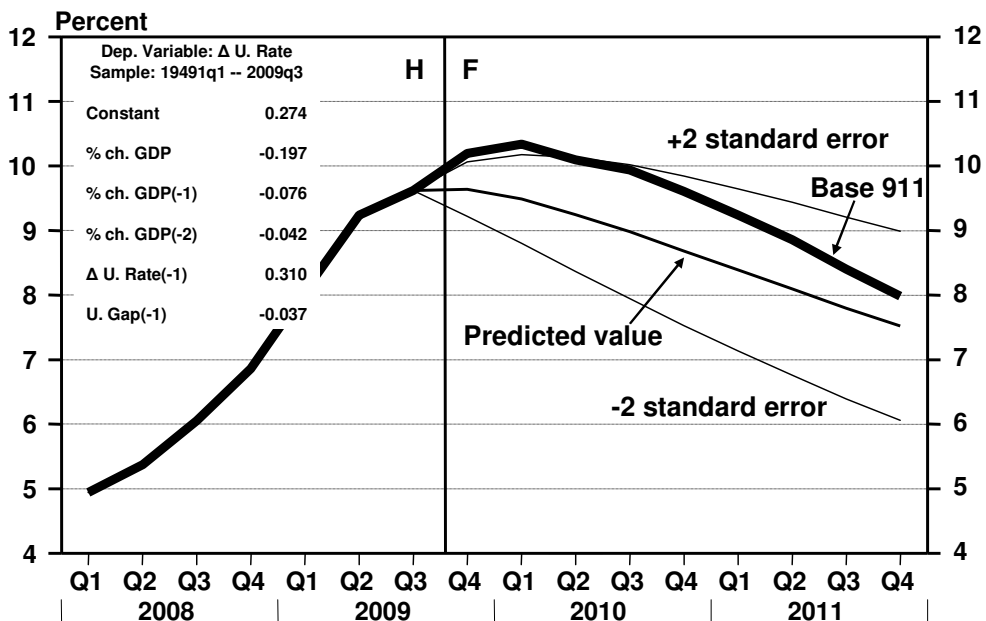
PCE Growth & Contributions from Wealth



Bureau of Economic Analysis, Macroeconomic Advisers, LLC; Forecast prepared on December 4, 2009.

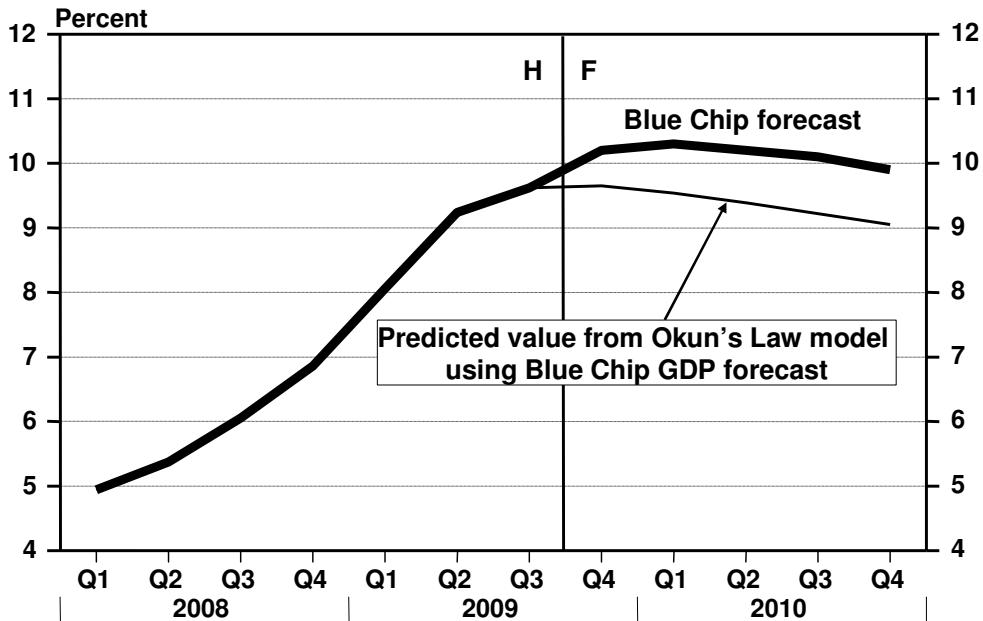
MA's Unemployment Path versus Okun's Law

Simulation Results and MA Forecast



Not Quite a Jobless Recovery!

Blue Chip Forecast Compared to Okun's Law Predicted Values



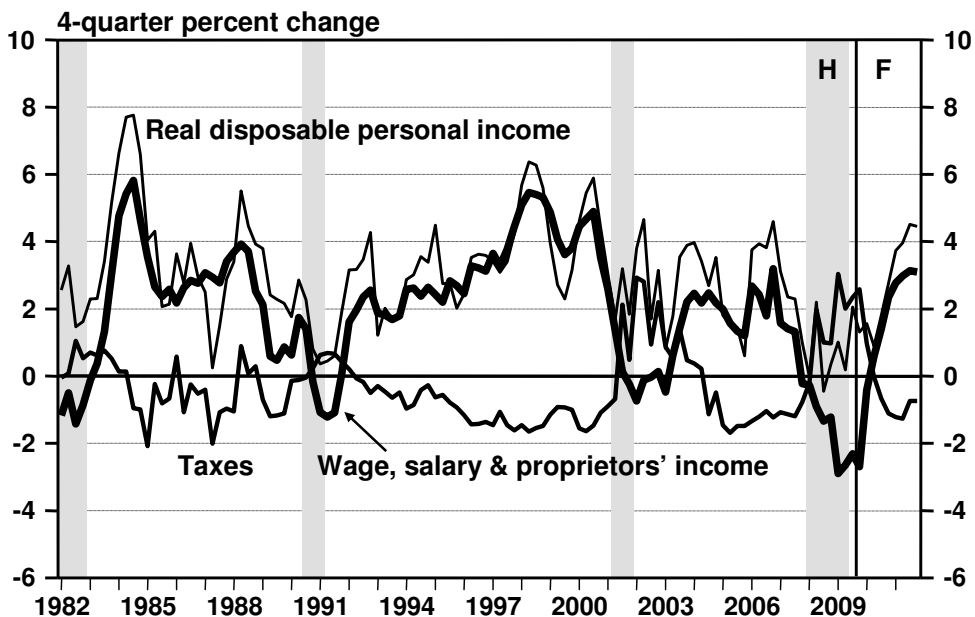
December 2009

© Macroeconomic Advisers

55

Wage & Salary Income Poised to Turn Up

Contributions to Real Disposable Personal Income



* All other includes interest, dividend and transfer income. Forecast prepared on December 4, 2009.

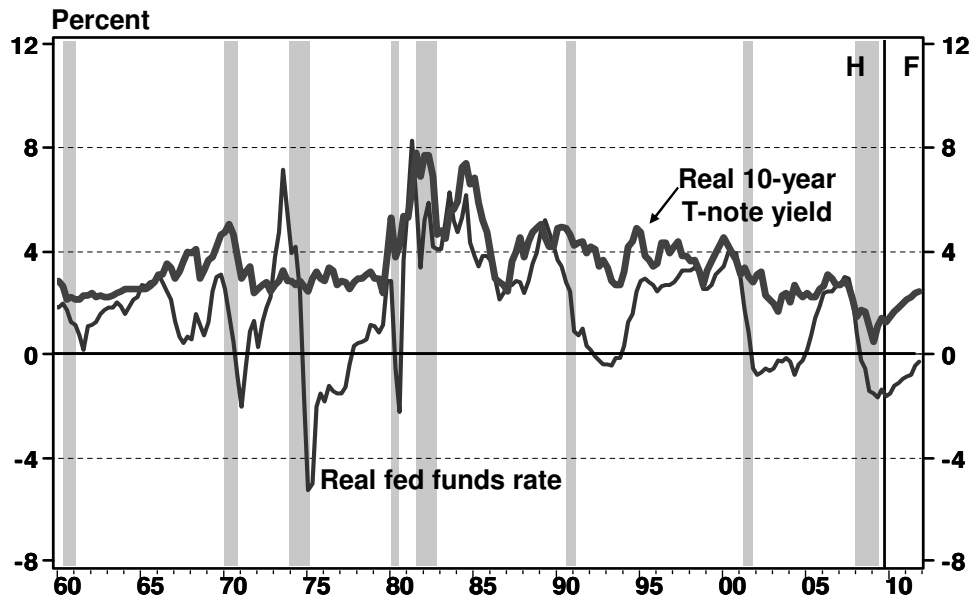
December 2009

© Macroeconomic Advisers

56

Below-Target Inflation & Lingering Slack Imply Late Exit

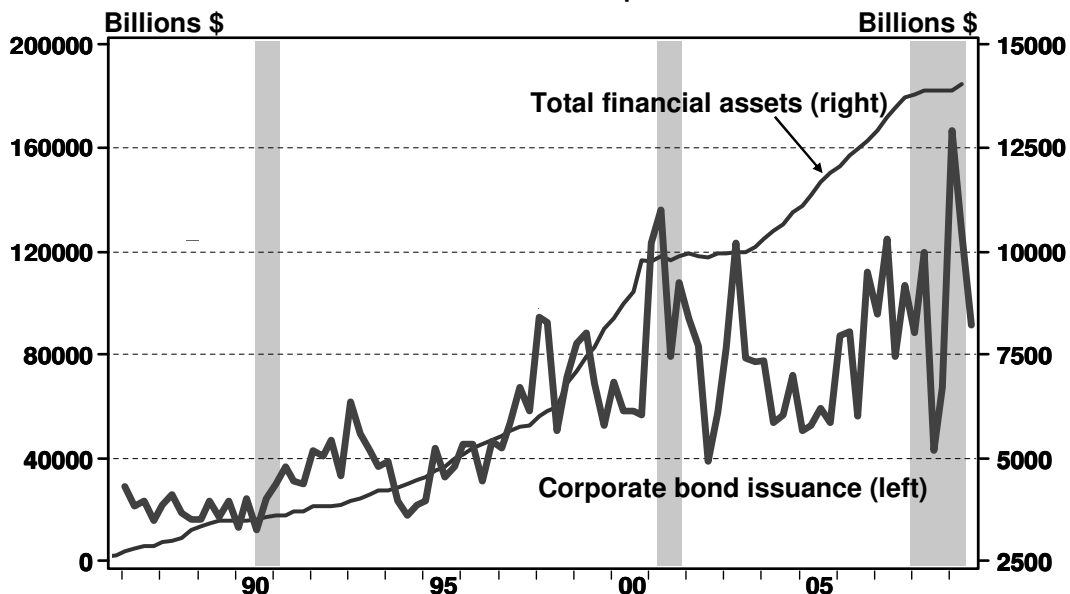
Real Fed Funds Rate and Real 10-year T-note Yield*



*Real long rate calculated as nominal rate less 10-year inflation expectations, real funds rate calculated as nominal rate less 4-quarter percent change in the core CPI.

Large Credit Worthy Firms Can Still Get Credit

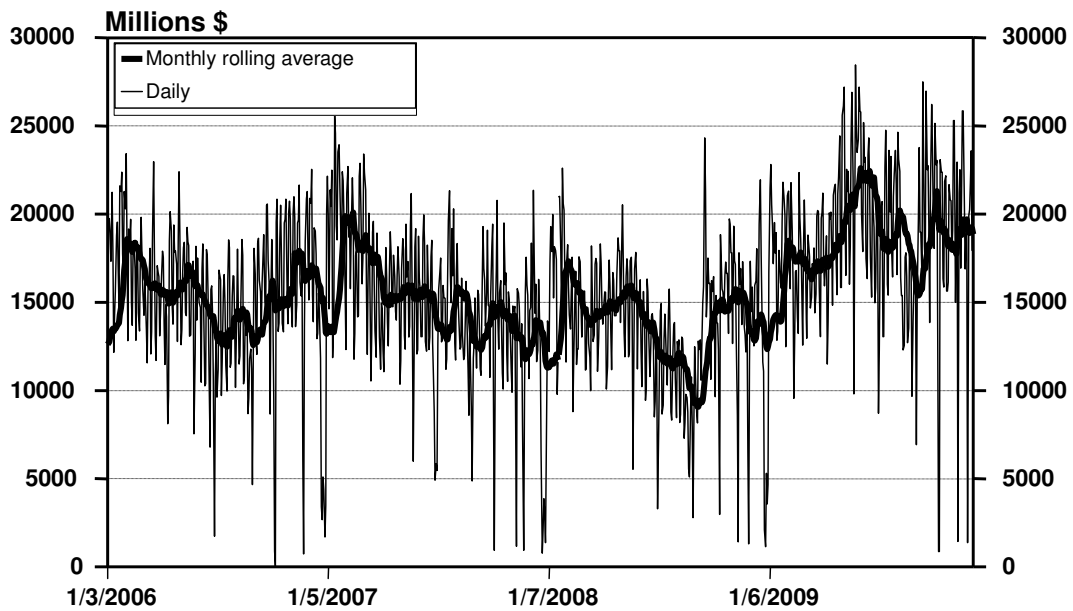
Nonfarm Nonfinancial Corporate Business



Source: Flow of Funds Accounts; Last data plotted for Q2-2009 for Total Financial Assets and for Q3-2009 for Corporate Bond Issuance.

Liquidity in Corp. Bond Market Remains Ample

US Corp Bond Volume Traded in Secondary Market



Source: Bloomberg; Only TRACE eligible securities - reported to the SEC; Last data plotted for December 7, 2009.