



Grant's Fall 2012 Conference

The Fed

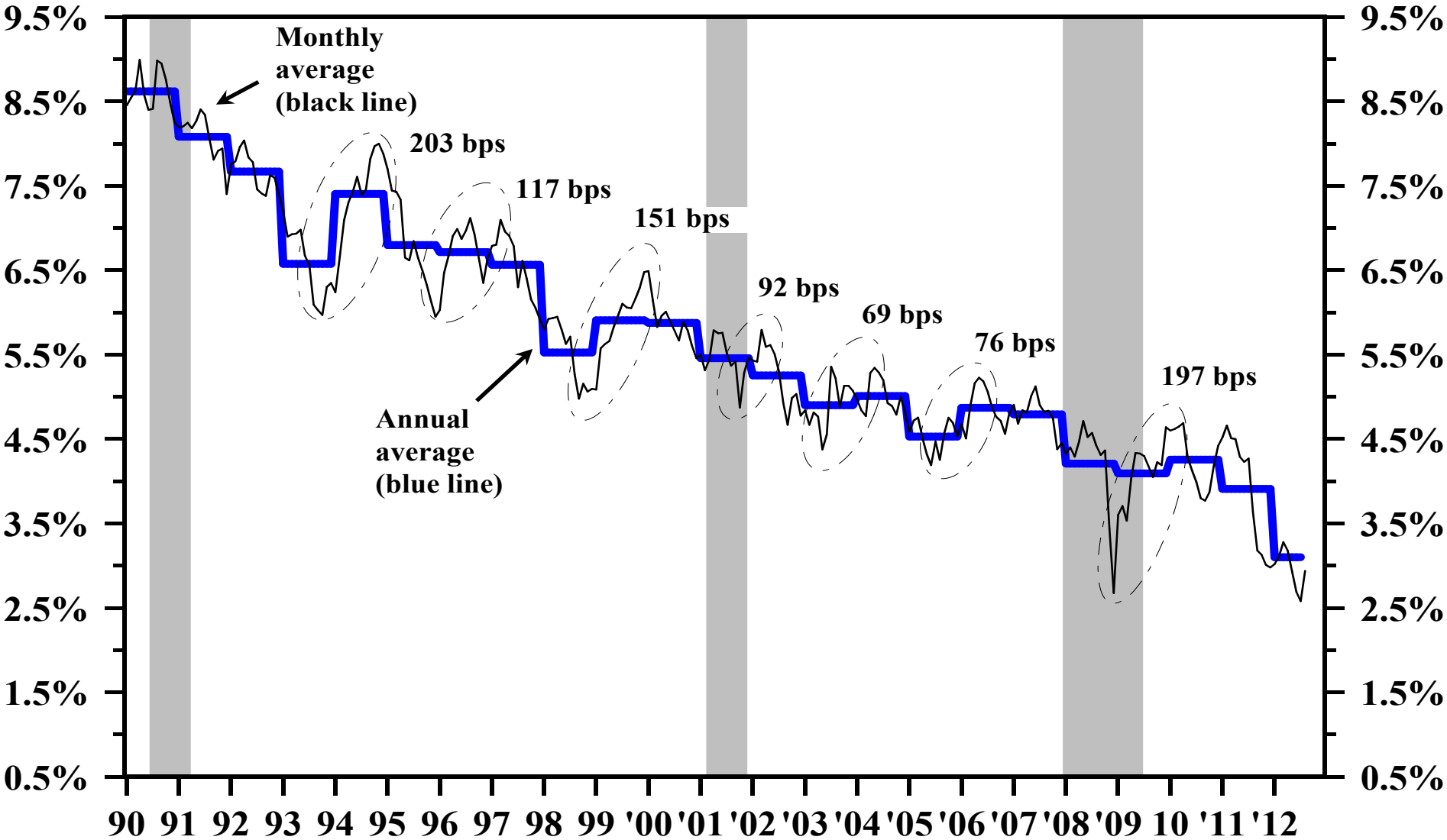
VS.

The 30 Year Treasury Bond

October 23, 2012

6836 Bee Caves Road ▪ Building 2, Suite 100
Austin, Texas 78746
512-327-7200 Fax 512-327-8646
www.Hoisington.com

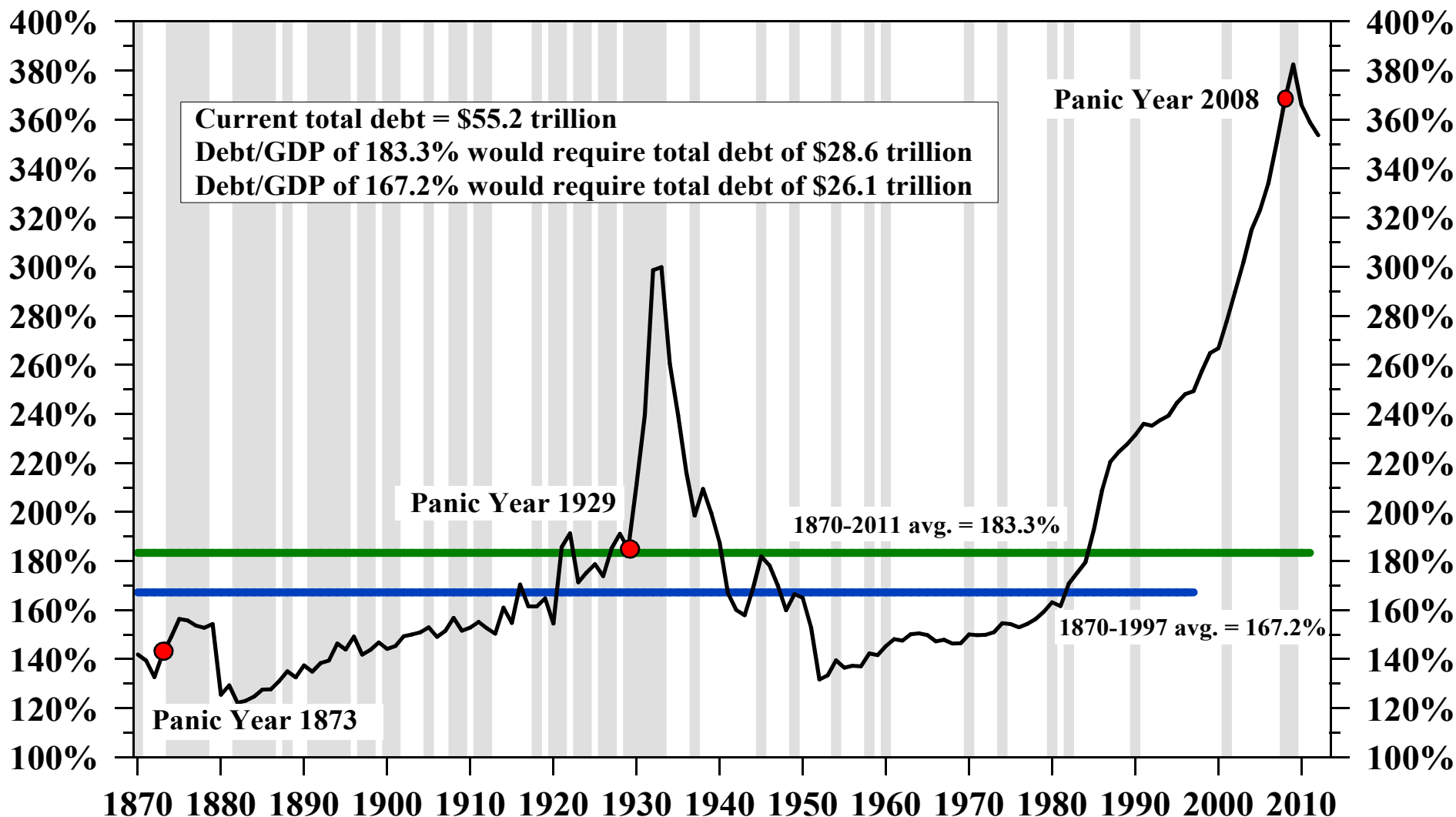
Long Term Treasury Rate



Source: Federal Reserve. Through September 2012. Annual average for 2012 is the twelve month average ending in September.

U.S. Private and Public Debt as a % of GDP

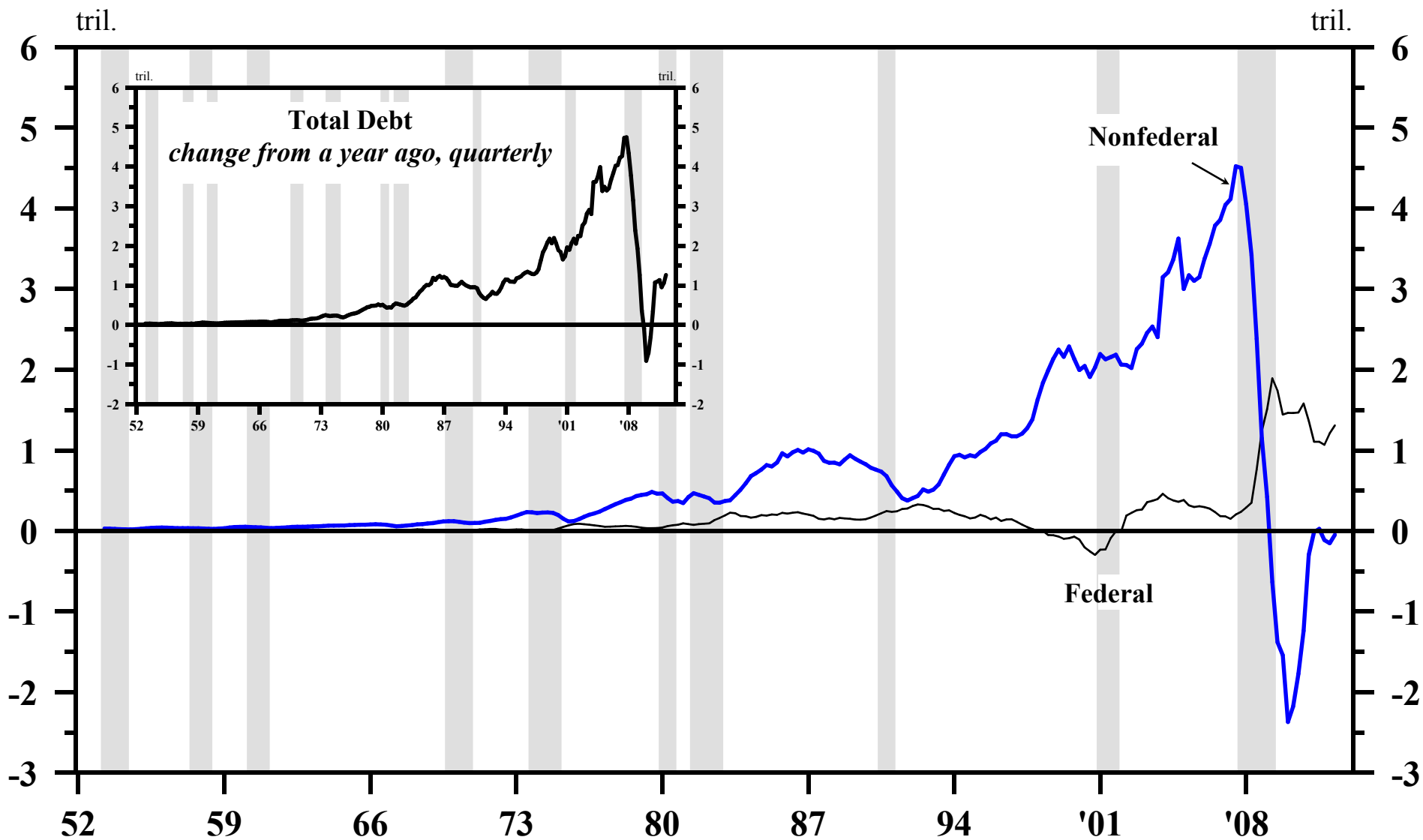
annually



Sources: Bureau of Economic Analysis, Federal Reserve, Census Bureau: Historical Statistics of the United States Colonial Times to 1970. Through Q2 2012.

Nonfederal Debt and Federal Debt

change from a year ago, quarterly

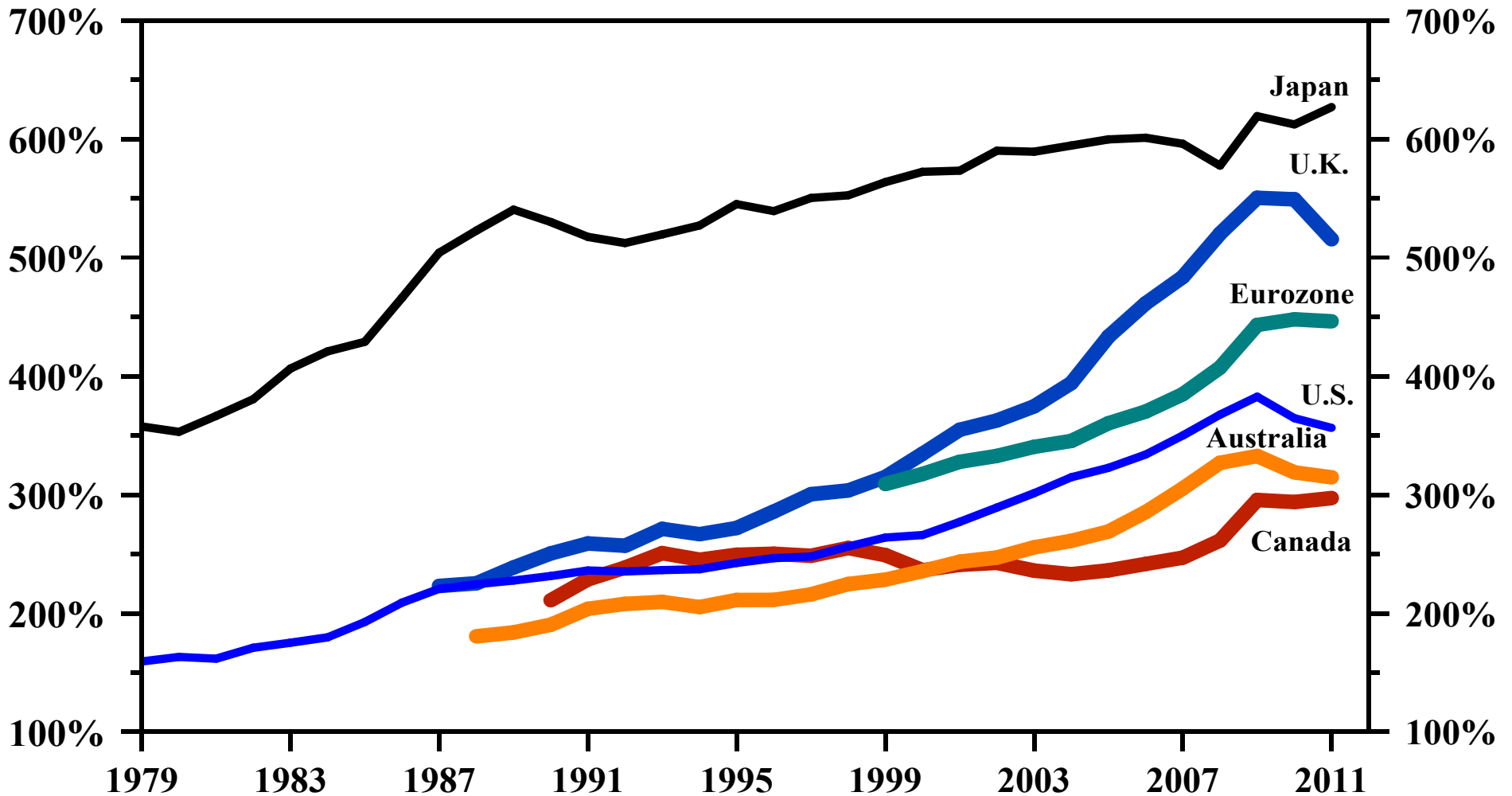


Source: Federal Reserve Board. Through Q2 2012.

Total Public and Private Debt as a % of GDP

Major Countries

annual



Source: Bank of Japan, Cabinet Office, Statistics Canada, Federal Reserve, Bureau of Economic Analysis, Office for National Statistics of U.K., Statistical Office of the European Communities, Reserve Bank of Australia.

General Government Gross Financial Liabilities as a % of GDP

		2010	2011	2012	% of World GDP
1	Canada	85.1%	87.8%	92.8%	2.4%
2	France	95.2%	98.6%	102.4%	4.3%
3	Germany	87.1%	86.9%	87.3%	5.8%
4	Italy	126.1%	127.7%	128.1%	3.4%
5	Japan	200.0%	211.7%	219.1%	8.8%
6	United Kingdom	82.2%	90.0%	97.2%	4.5%
7	United States	94.2%	97.6%	103.6%	25.5%
8	OECD Euro area (15 countries)	92.9%	95.6%	97.9%	26.0%
9	China 2011:				8.0%
					75% of World GDP
10	Officially reported government debt to GDP		16		
11	Hidden liabilities		144.0%		
12	Total debt including hidden liabilities		160.0%		

Source: McKinsey Global Institute,
OECD Economic Outlook No. 90, OECD Economic Outlook: Statistics and Projections (database). World Bank, USDA.
(% of world GDP in real 2005 dollars.)

Debt Overhangs: Past and Present

Post 1800 Episodes Characterized by Public Debt to GDP Levels Exceeding 90% for At Least Five Years.

Consistent with other more recent research, the authors confirm that public debt overhang episodes are associated with growth over one percent lower than during other periods.

“...duration of the average debt overhang episode across all 26 episodes lasted an average of 23 years. ...Growth effects are significant even in the many episodes where debtor countries were able to secure continual access to capital markets at relatively low real interest rates. That is, growth-reducing effects of high public debt are apparently not transmitted exclusively through high real interest rates.”

“The long duration belies the view that the correlation is caused mainly by debt buildups during business cycle recessions. The long duration also implies that cumulative shortfall in output from debt overhang is potentially massive.”

"At the end of 23 years...Real GDP is 24 percent lower than for the baseline. It is not exactly what T.S. Eliot had in mind when he wrote ‘This is the way the world ends, Not with a bang but a whimper’ but the general thrust appears to be applicable to the debt-without-drama damages.”

This research documents the first systematic evidence on the association between high public debt and real interest rates. They write: **“Contrary to popular perception, we find that in 11 of the 26 debt overhang cases, real interest rates were either lower or about the same as during the lower debt/GDP years. Those waiting for financial markets to send the warning signal through higher interest rates that government policy will be detrimental to economic performance may be waiting a long time.”**

Carmen M. Reinhart, Vincent R. Reinhart, Kenneth S. Rogoff, National Bureau of Economic Research, working paper 18015.

Government Size and Growth

Any conflict between the size of government and economic growth is largely explained by variations in definitions and the countries studied. Bergh and Henrekson write, “An alternative approach - of limiting the focus to studies of the relationship in rich countries, measuring government size as total taxes or total expenditure relative to GDP and relying on panel data estimations with variation over time - reveals a more consistent picture...” Bergh and Henrekson find a “significant negative correlation.” Specifically, “an increase in government size by 10 percentage points is associated with a 0.5% to 1% lower annual growth rate.”

Government Size and Growth: A Survey and Interpretation of the Evidence. Journal of Economic Surveys. Andreas Bergh, Research Institute of Industrial Economics (IFN) Lund University. Magnus Henrekson, Research Institute of Industrial Economics (IFN) Lund University. April 2011. Page 2.

The Impact of High and Growing Government Debt on Economic Growth

Checherita and Rother investigated the average effect of government debt on per capita GDP growth in twelve euro area countries over a period of about four decades beginning in 1970. They confirm and extend the finding by Reinhart and Rogoff in their 2010 NBER paper. A government debt to GDP ratio above the turning point of 90-100% has a “deleterious” impact on long-term growth. In addition, they find that there is a non-linear impact of debt on growth beyond this turning point. **A non-linear relationship means that as the government debt rises to higher and higher levels, the adverse growth consequences accelerate.** Results across all models “show a highly statistically significant non-linear relationship between the government debt ratio and per-capita GDP for the 12 pooled euro area countries included in their sample.”

Moreover, confidence intervals for the debt turning point suggest that the negative growth rate effect of high debt may start from levels of around 70-80% of GDP. Due to these findings, Checherita and Rother write this “...calls for even more prudent indebtedness policies.” Checherita and Rother make a substantial further contribution by identifying the channels through which the level and change of government debt is found to have an impact on economic growth: (1) private saving, (2) public investment, (3) total factor productivity and (4) sovereign long-term nominal and real interest rates. **Cristina Checherita and Philipp Rother, The Impact of High and Growing Government Debt on Economic Growth, An Empirical Investigation for The Euro Area, European Central Bank working paper, Number 1237, August 2010.**

IMF Working Paper

How Big (Small?) are Fiscal Multipliers?

*Prepared by Ethan Ilzetzki, Enrique G. Mendoza and Carlos A. Vegh
March 2011*

We contribute to the intense debate on the real effects of fiscal stimuli by showing that the impact of government expenditure shocks depends crucially on key country characteristics, such as the level of development, exchange rate regime, openness to trade, and public indebtedness. Based on a novel quarterly dataset of government expenditure in 44 countries, we find that (i) the output effect of an increase in government consumption is larger in industrial than in developing countries, (ii) the fiscal multiplier is relatively large in economies operating under predetermined exchange rate but zero in economies operating under flexible exchange rates; (iii) fiscal multipliers in open economies are lower than in closed economies and (iv) fiscal multipliers in high-debt countries are also zero.

Symptoms of Extreme Overindebtedness

	Post WWII Expansions <i>12 quarter % change a.r.</i>		
		<i>Real GDP per capita</i>	<i>Real DPI per capita</i>
1.	Current 12 quarters	1.6%	0.2%
2.	Post war high	6.0%	4.5%
3.	Post war low	1.8%	1.1%
4.	Post war average	3.4%	2.9%

Source: Bureau of Economic Analysis, HIMCO. Through Q2 2012.

Quantitative Easing: Critical Market Values

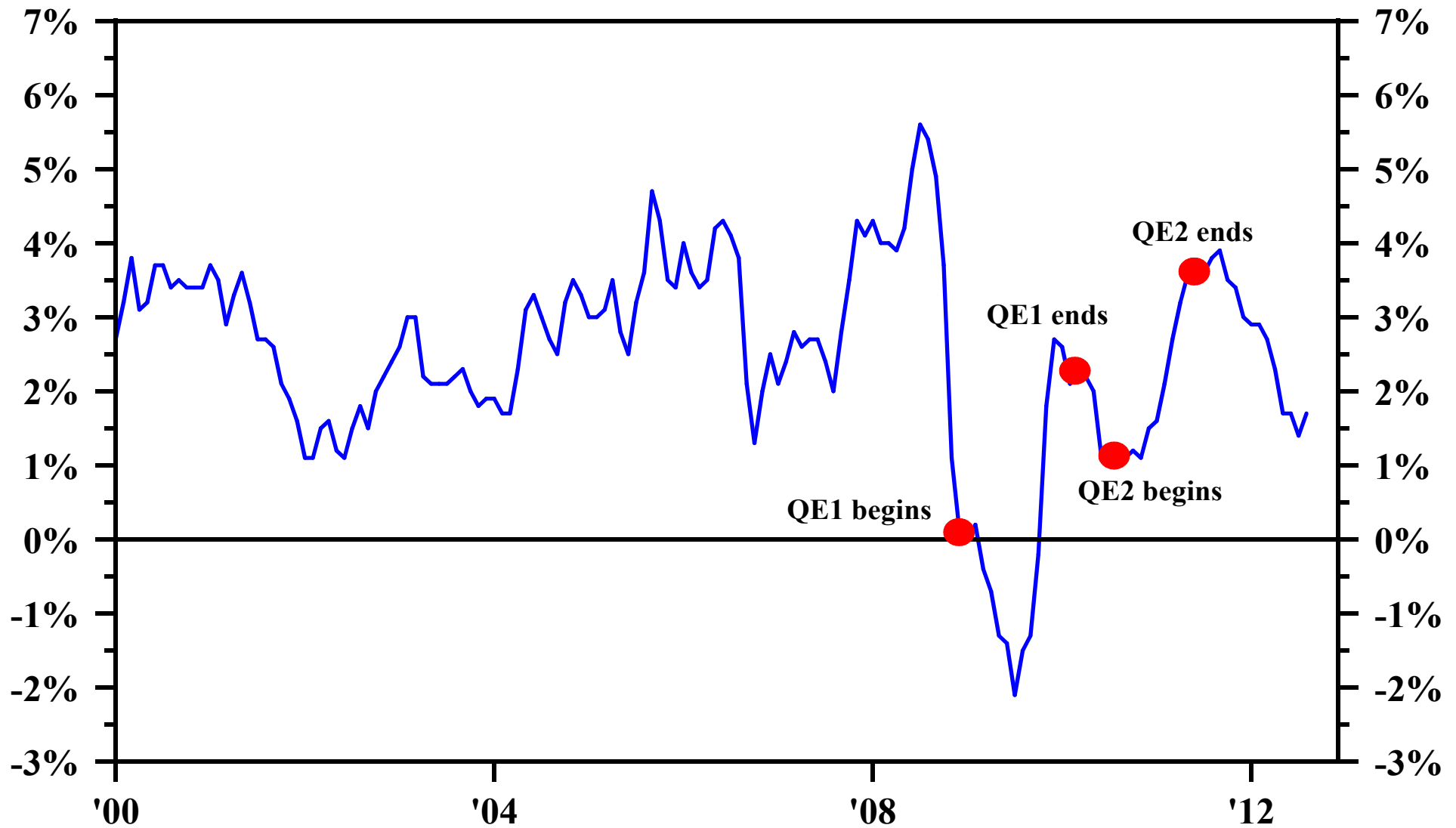
Positive Responders to Inflation/Risk

		QE1 Change	No QE	QE2 Change	No QE	W.S.J. QE3
		1.	2.	3.	4.	5.
1.	S&P 500	36.4%	-9.0%	24.1%	-5.6%	6.8%
2.	Gasoline	30.3%	-8.6%	36.8%	-5.5%	19.1%
3.	GSCI-Food	7.1%	19.1%	21.7%	-5.5%	18.7%

**Source: Federal Reserve, Bloomberg, Haver Analytics, NYMEX, Standard and Poors.
(Column 5 is from June 20 through Sept. 30, 2012.)**

Consumer Price Index

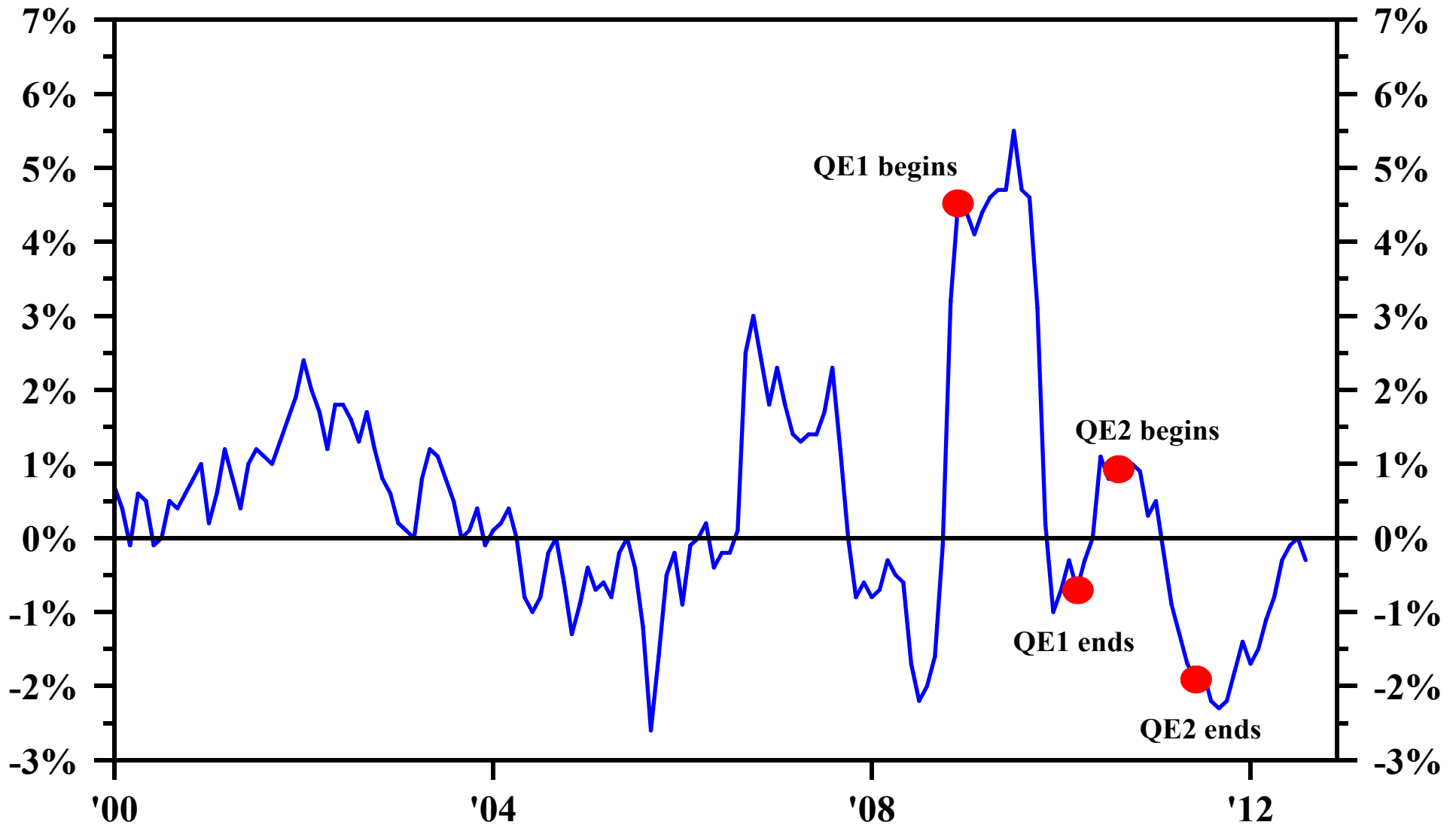
y-o-y percent change, monthly



Source: Bureau of Labor Statistics. Through August 2012.

Real Average Hourly Earnings

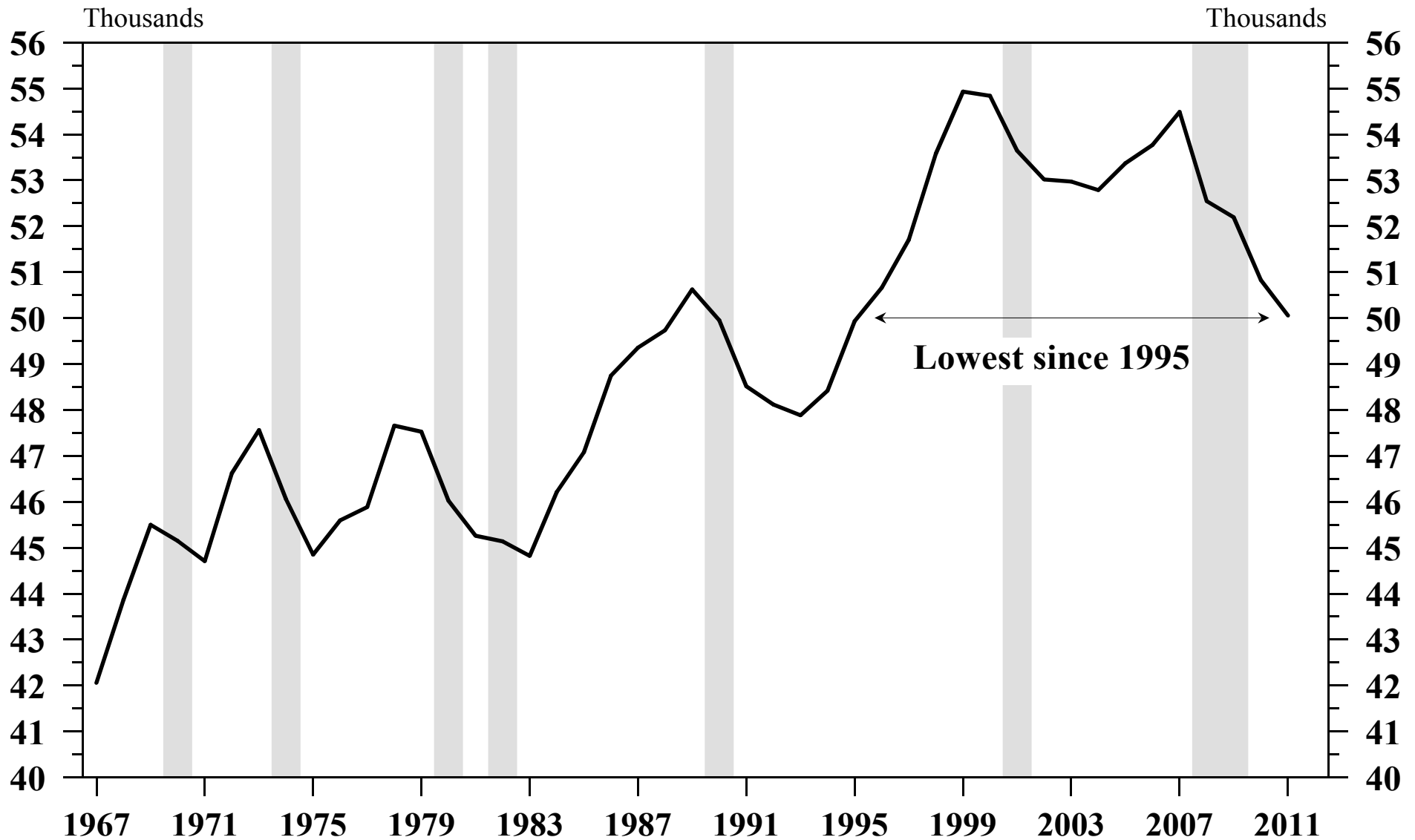
y-o-y percent change, monthly



Source: Bureau of Labor Statistics. Through August 2012.

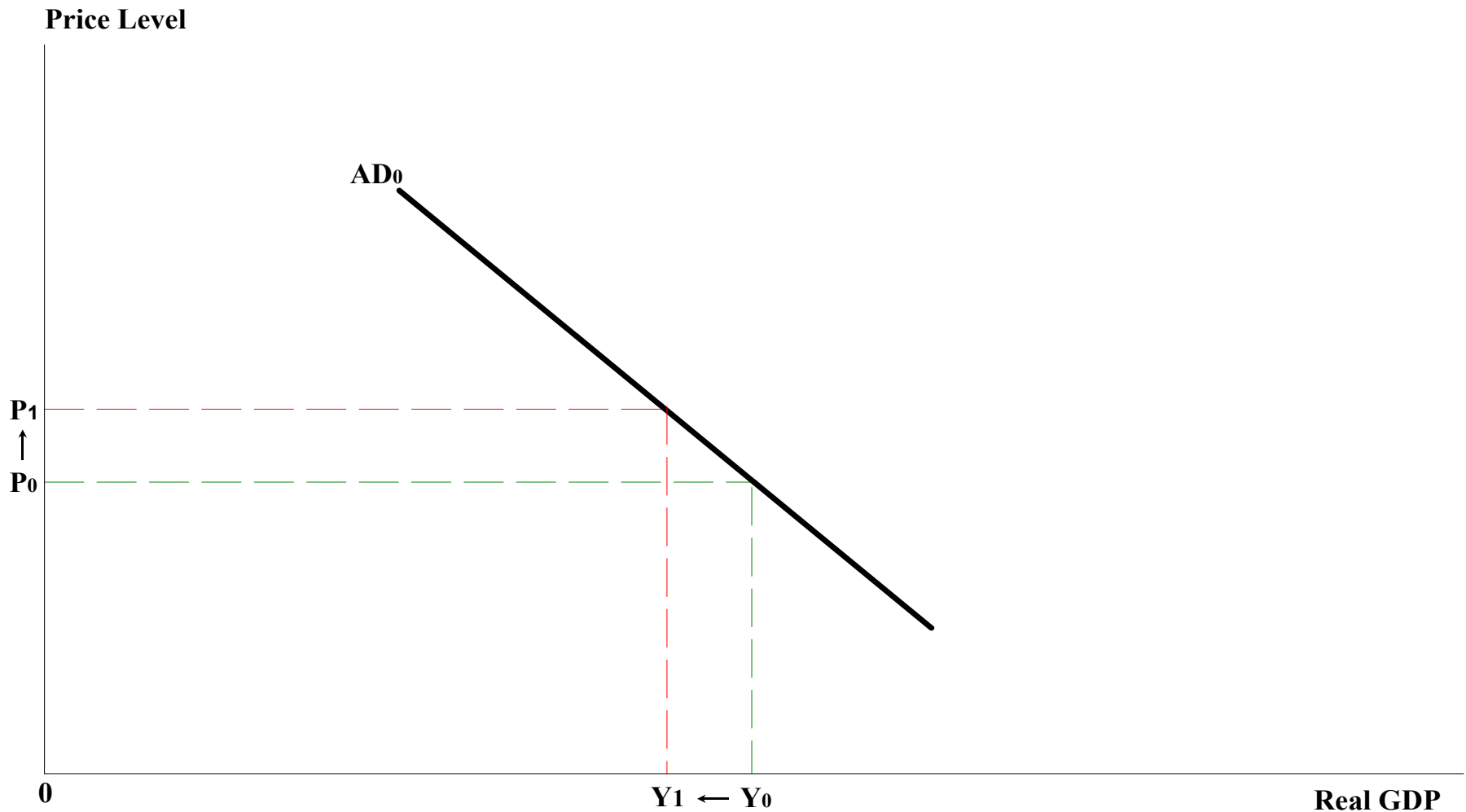
Real Median Household Income

annual

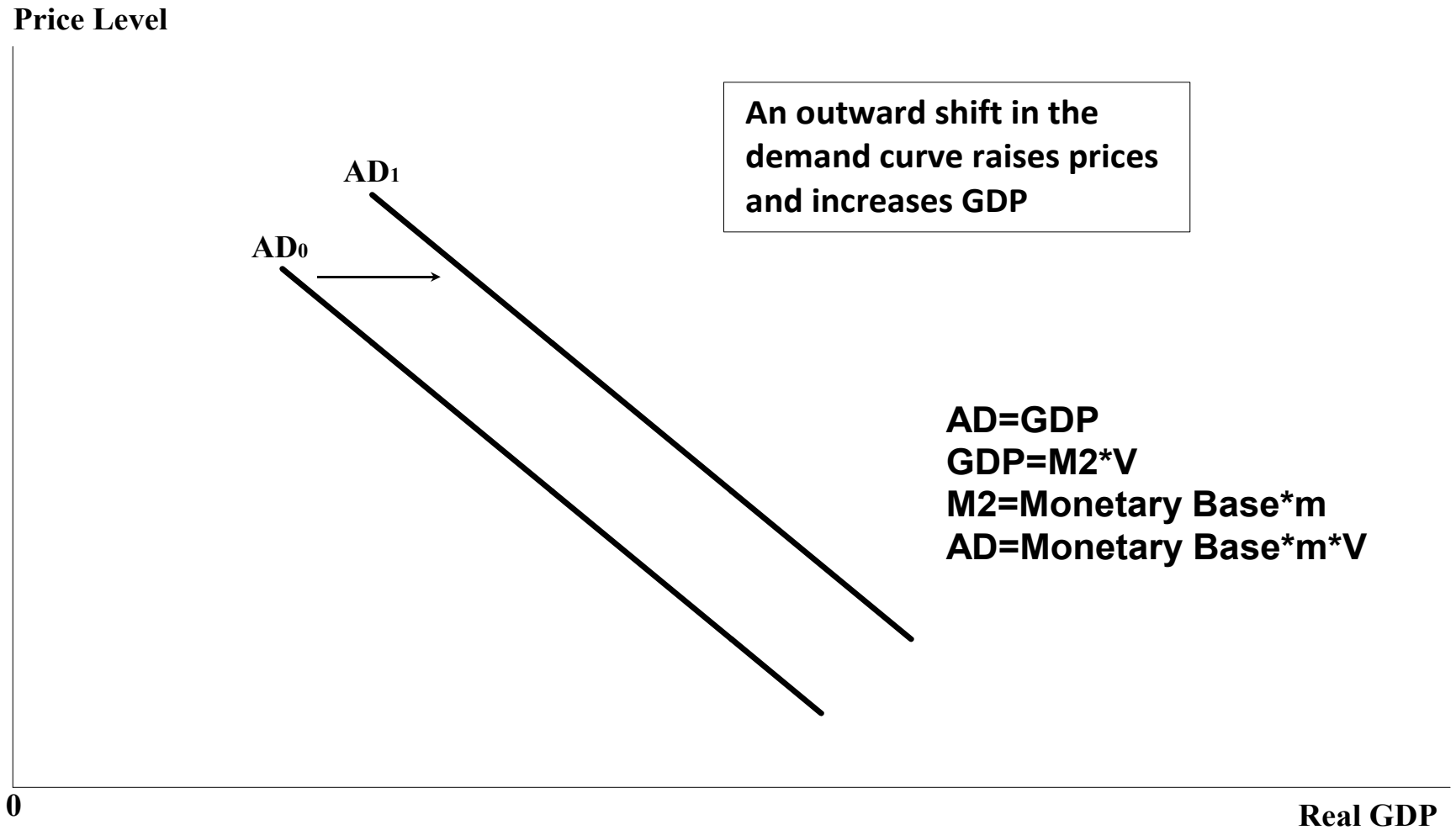


Sources: Census Bureau. Bureau of Labor Statistics. Through 2011.

The Aggregate Demand Curve; Real GDP varies inversely with the Price Level

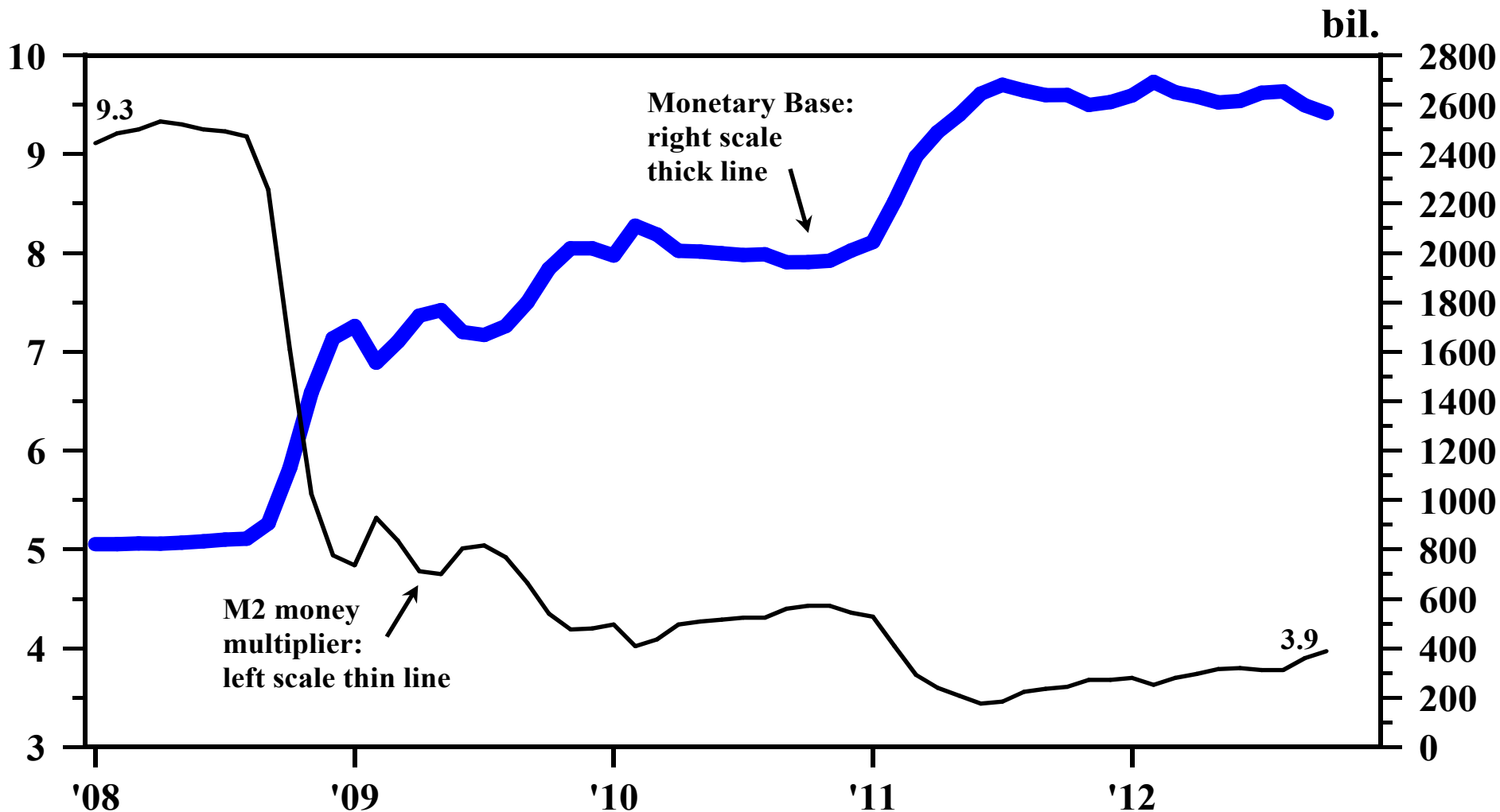


Determinants of the Aggregate Demand Curve



M2 Money Multiplier and the Monetary Base

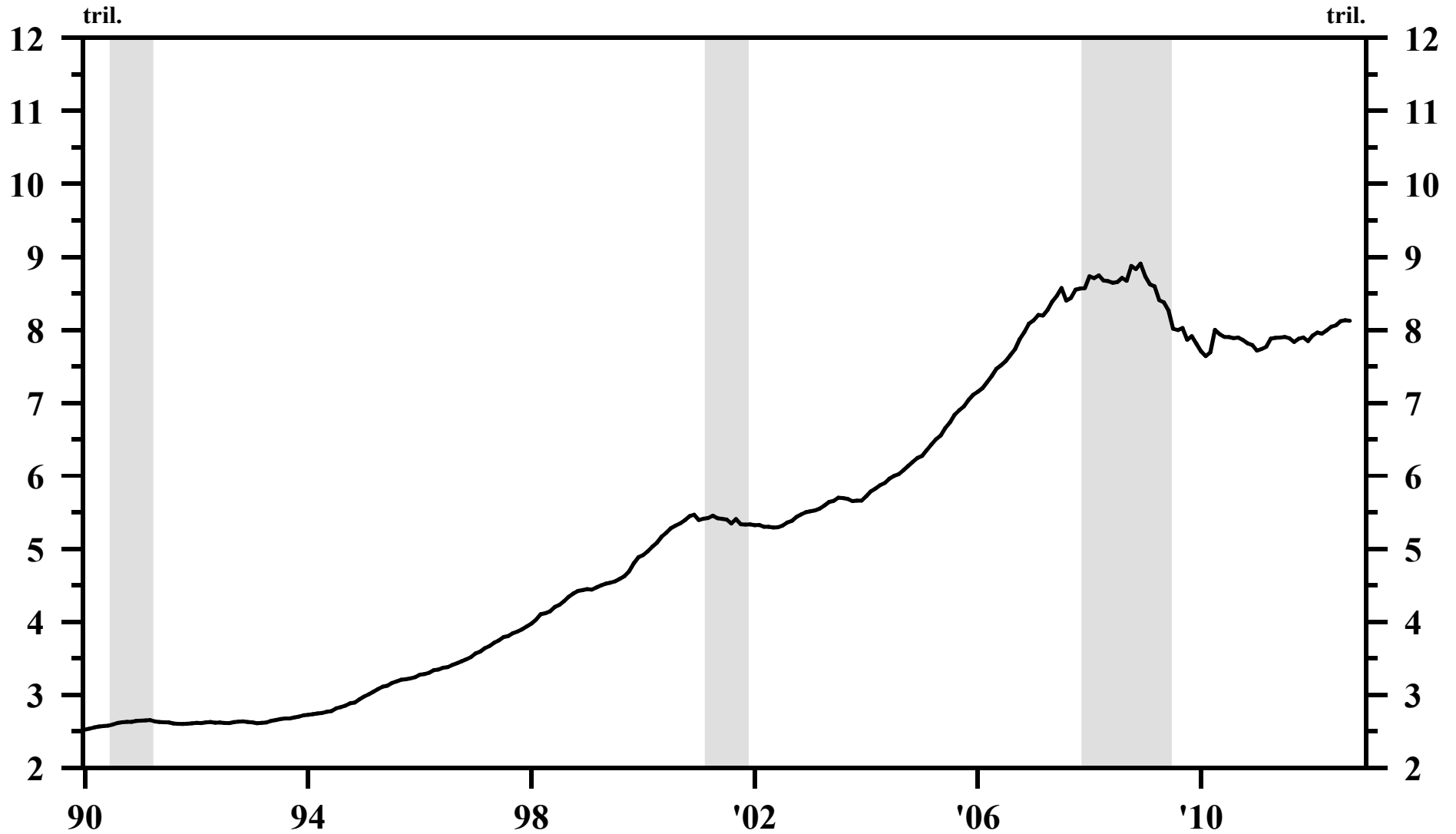
monthly



Source: Federal Reserve. Through Oct. 3, 2012. M2m through Oct. 1. (Multiplier is ratio of M2 to the monetary base.) The money multiplier or m is determined by the currency, time deposit, Treasury deposit and excess reserve ratios.

Bank Loans plus Commercial Paper

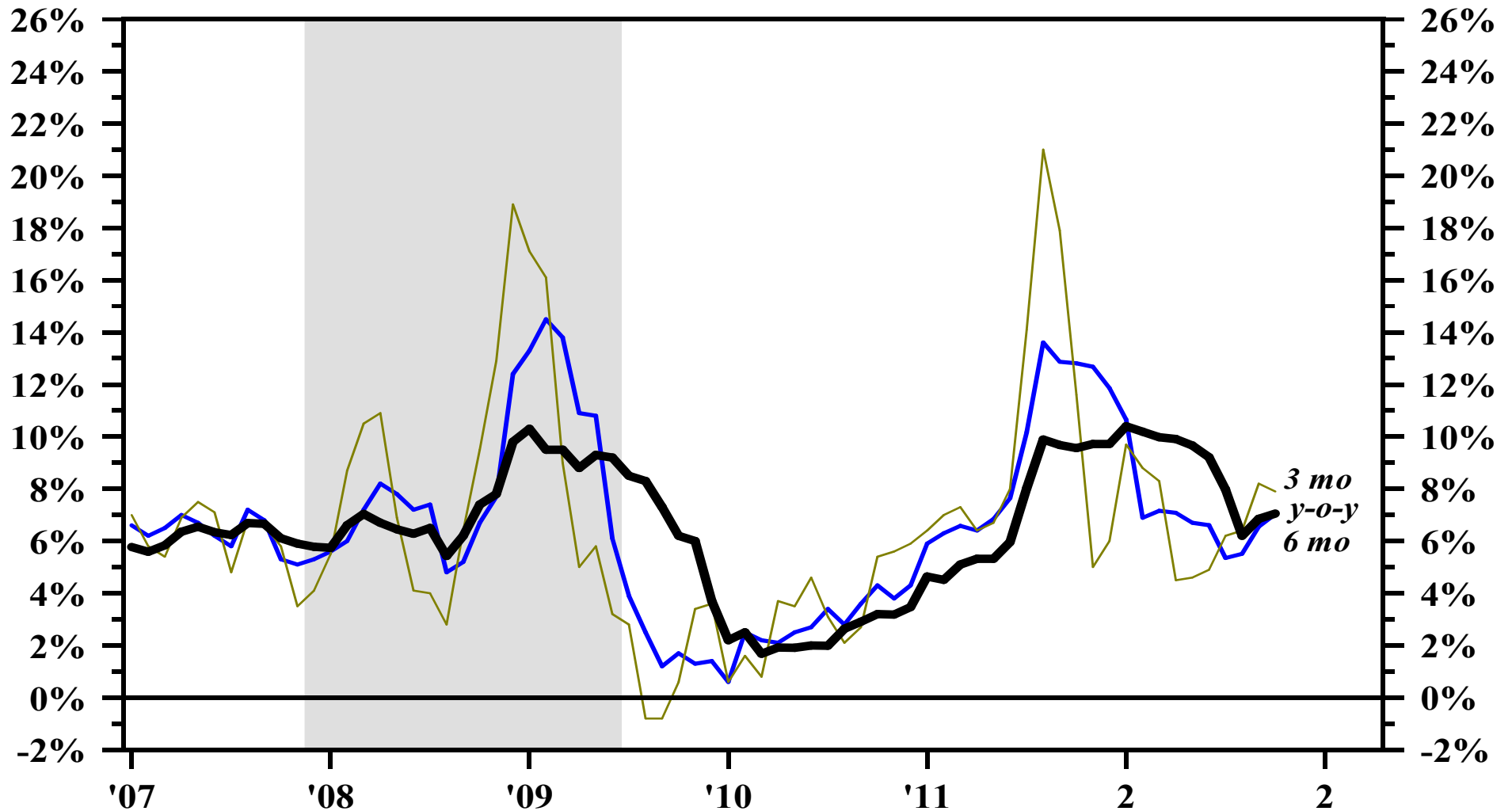
monthly



Source: Federal Reserve Board. Through 1st week in October 2012.

M2 Money Stock

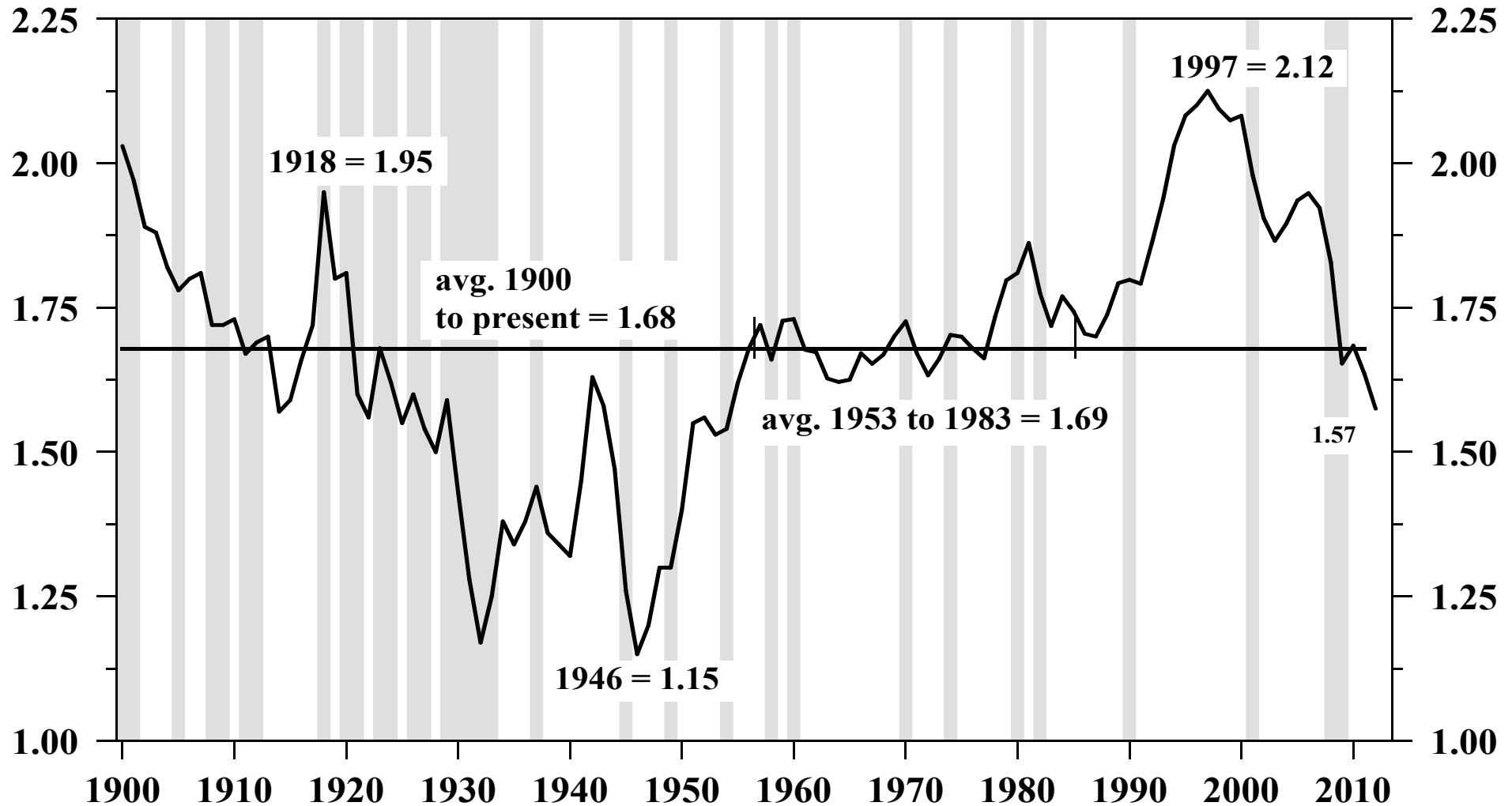
3 and 6 month % change, a.r. and y-o-y % change



Source: Federal Reserve. Through October 1, 2012.

Velocity of Money 1900-2012

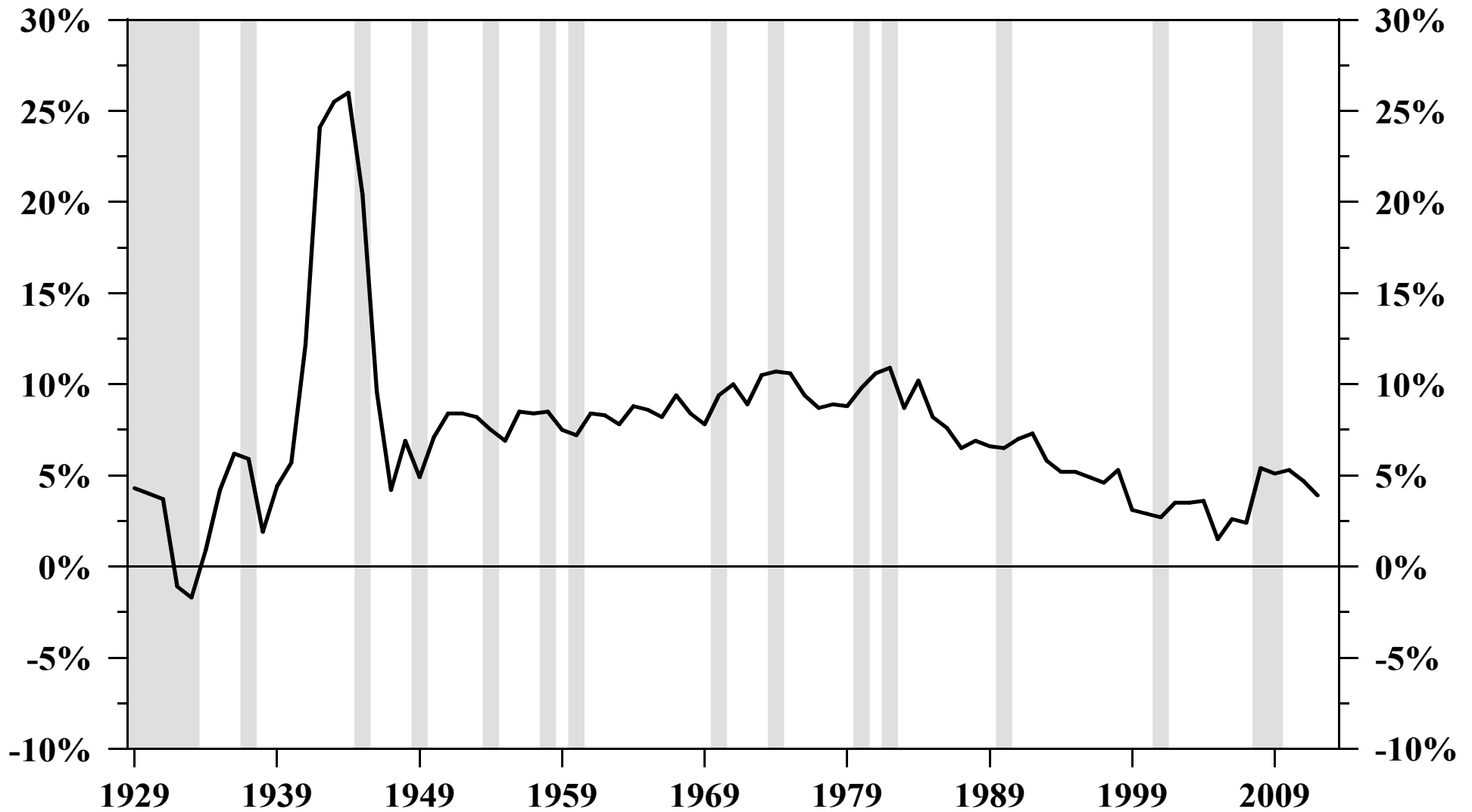
Equation of Exchange: $GDP(\text{nominal}) = M * V$
annual



Sources: Federal Reserve Board; Bureau of Economic Analysis;
Bureau of the Census; Monetary Statistics of the United States. Through Q2 2012.
Q2 2012; $V = GDP/M$, $GDP = 15.6$ tril, $M2 = 9.9$ tril, $V = 1.57$

Personal Saving Rate

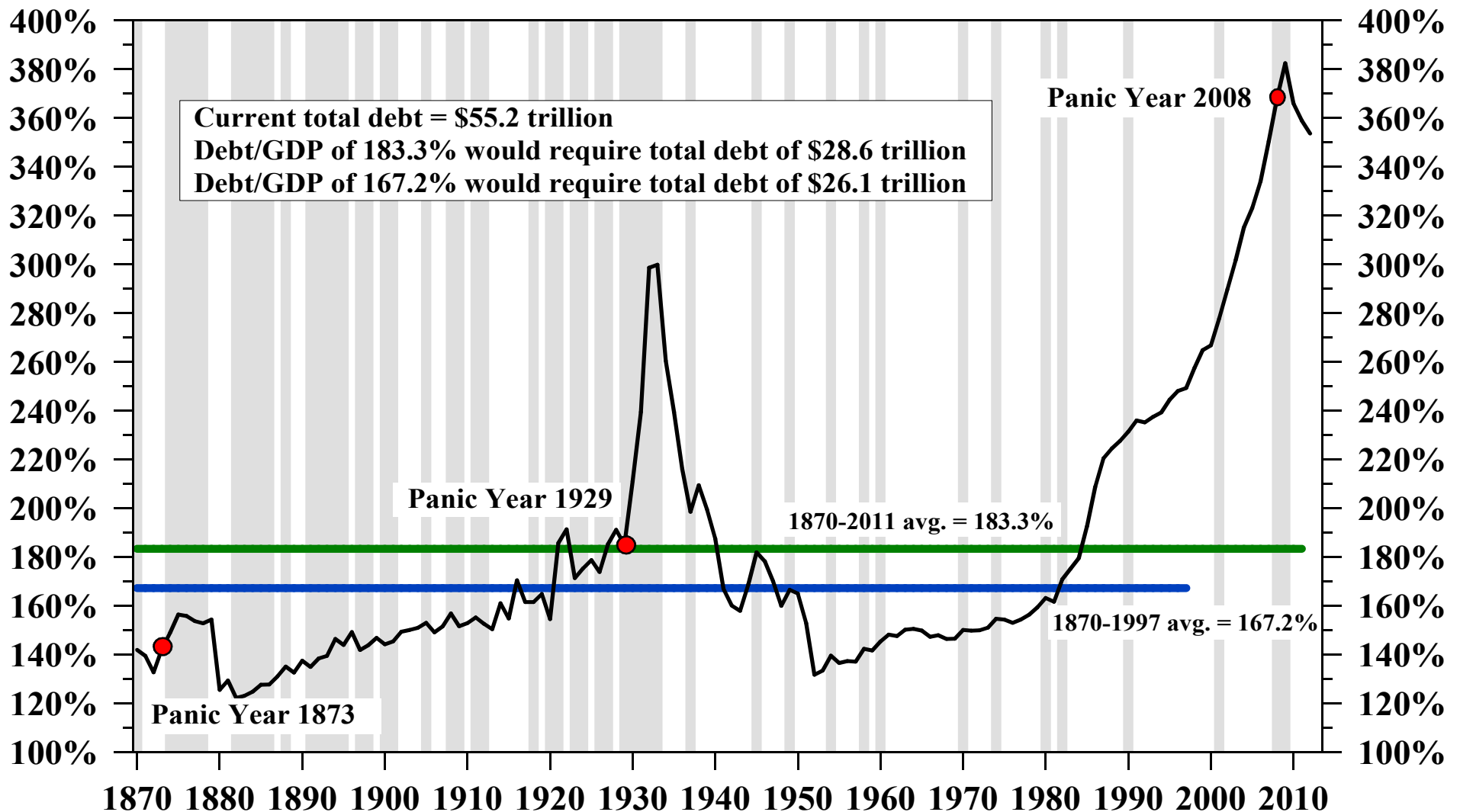
annual



Sources: Bureau of Economic Analysis. Through August 2012.

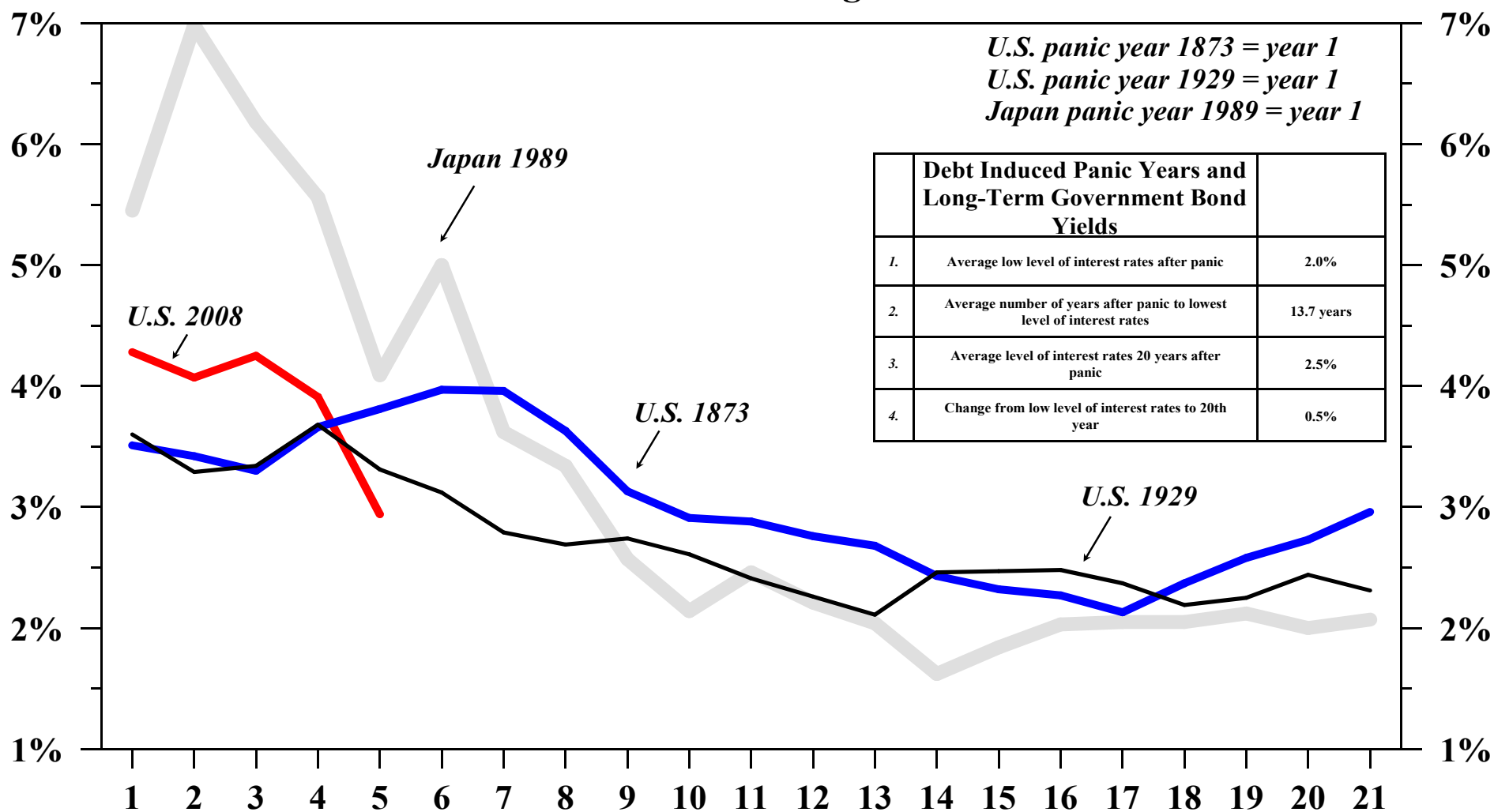
U.S. Private and Public Debt as a % of GDP

annually



Sources: Bureau of Economic Analysis, Federal Reserve, Census Bureau: Historical Statistics of the United States Colonial Times to 1970. Through Q2 2012.

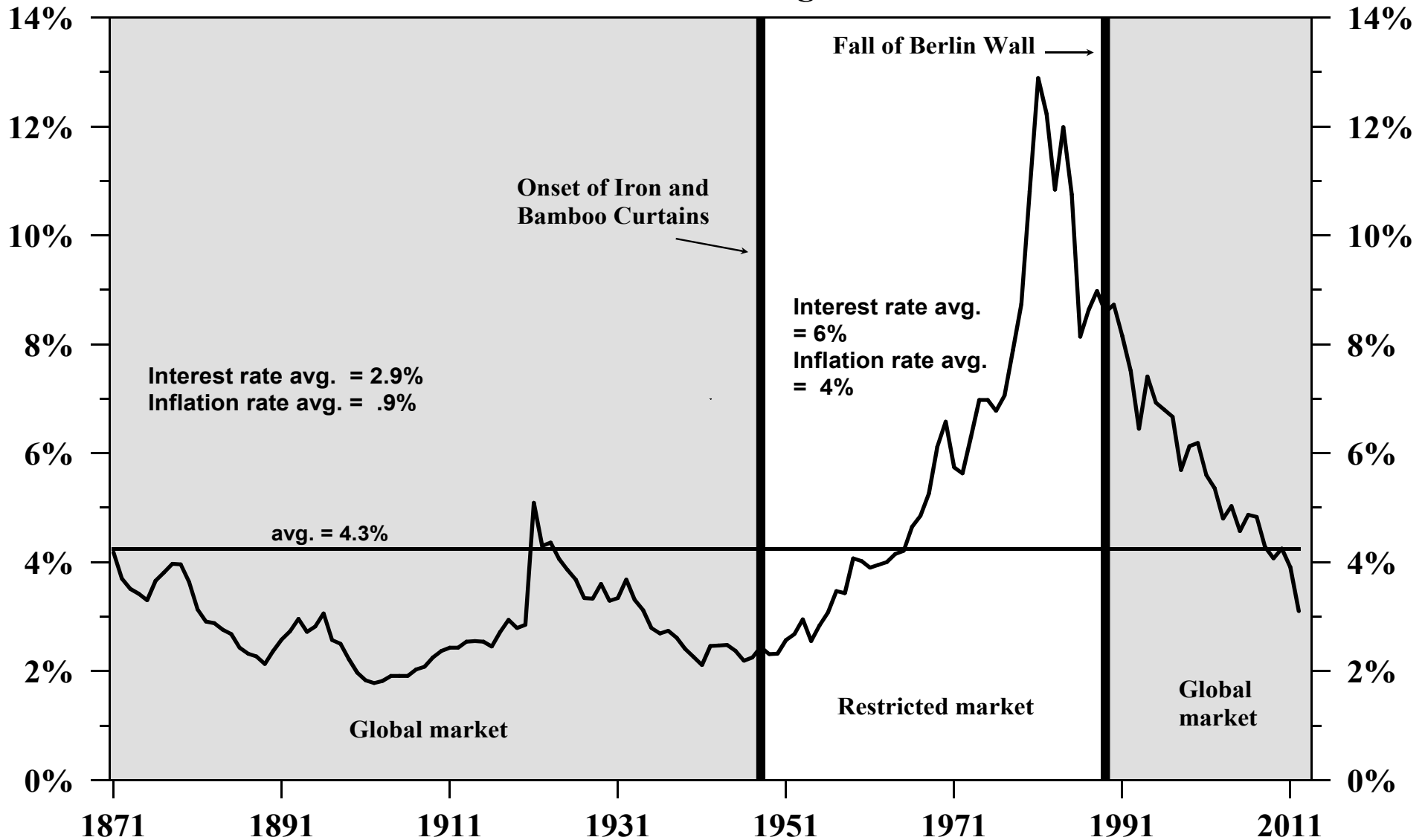
Long-Term Government Bond Yields Starting with Historic Panic Years: Japan 1989, U.S. 1873 and 1929 *annual average*



Sources: Federal Reserve Board, Homer & Sylla. Bank of Japan.

Long Term Treasury Rate 1871-2012

annual average



Sources: Federal Reserve Board, Homer & Sylla. Through September 2012. Initial global market period interrupted by WWI.