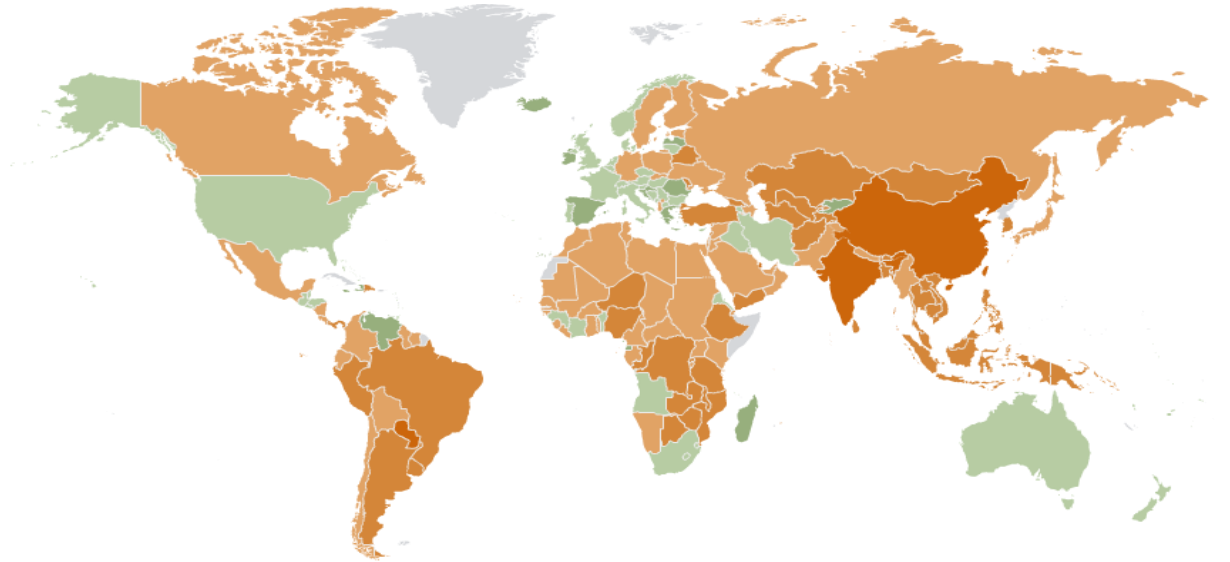


World real GDP growth in 2010

Annual percent change



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- 10% or more
- 6-10%
- 3-6%
- 0-3%
- Less than 0%
- No data

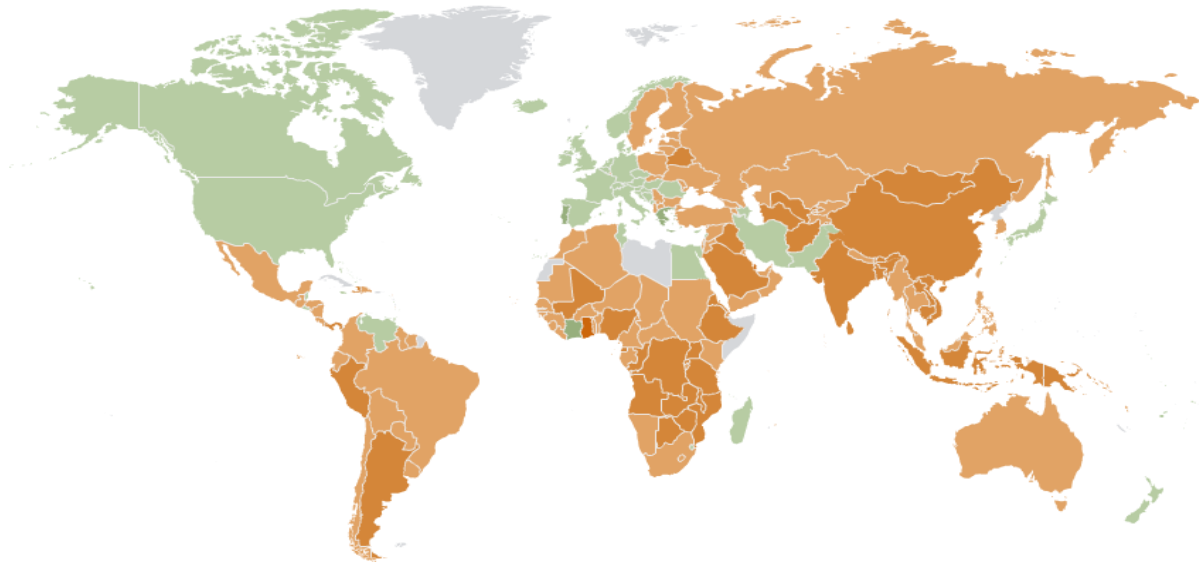
Source: International Monetary Fund.

World real GDP growth in 2011

Annual percent change



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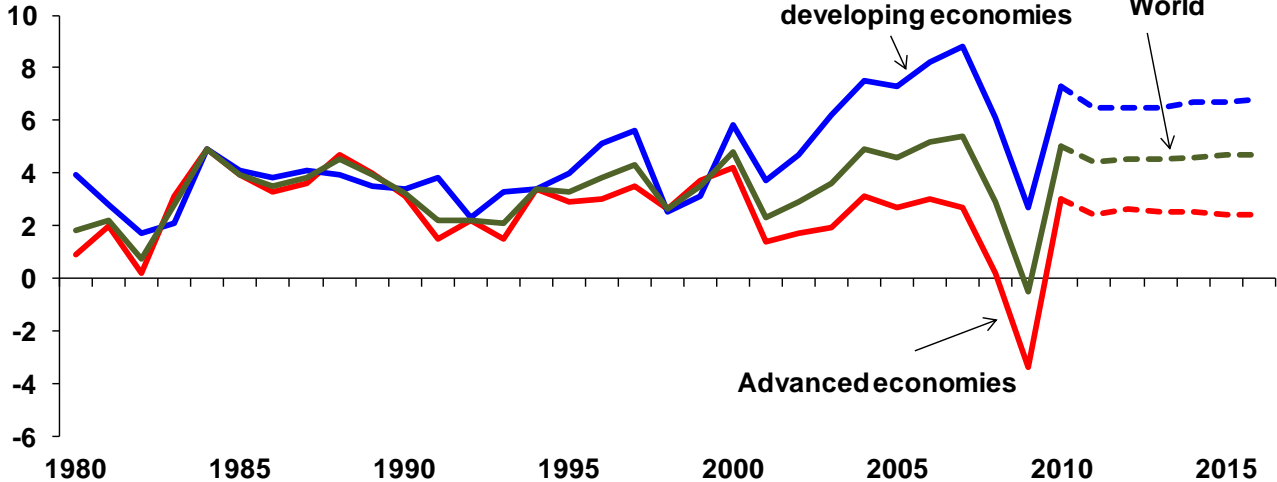
- 10% or more
- 6-10%
- 3-6%
- 0-3%
- Less than 0%
- No data

Source: International Monetary Fund.

Solid recovery

World real GDP grew by 5 percent in 2010

Real GDP growth, percent



Source: World Economic Outlook, International Monetary Fund, April 2011 update.

World output forecasts

Percent change from previous year



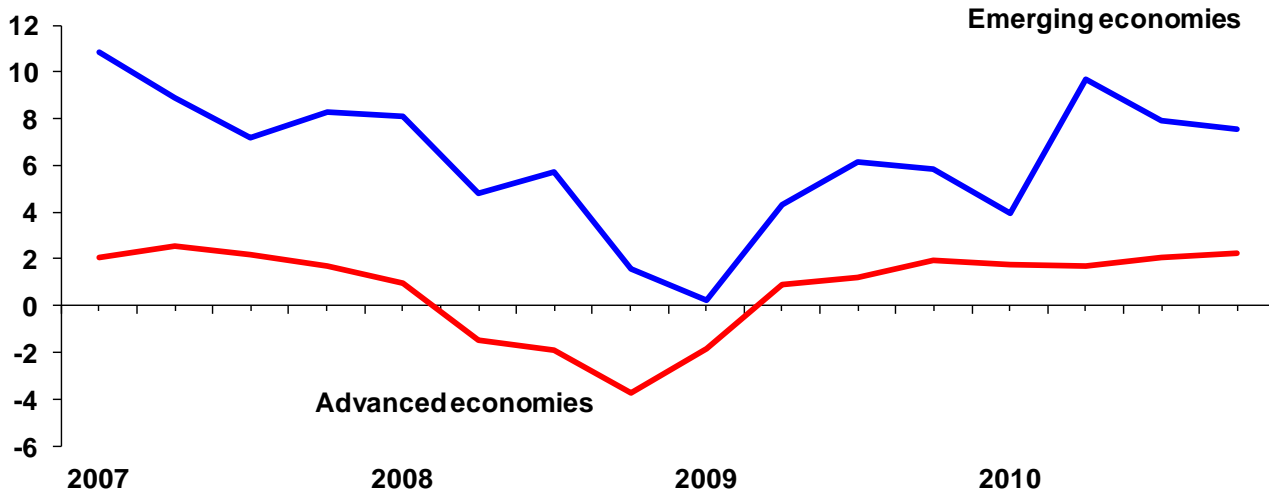
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	2010	2011F	2012F
World	5.0	4.4	4.5
Advanced economies	3.0	2.4	2.6
United States	2.8	2.8	2.9
Japan	3.9	1.4	2.1
United Kingdom	1.3	1.7	2.3
Euro area	1.7	1.6	1.8
Emerging and developing economies	7.3	6.5	6.5
Brazil	7.5	4.5	4.1
China	10.3	9.6	9.5
India	10.4	8.2	7.8
Russia	4.0	4.8	4.5

Source: World Economic Outlook, International Monetary Fund, April 2011.

Consumption has gradually strengthened

Real private consumption, annualized percent change from previous quarter

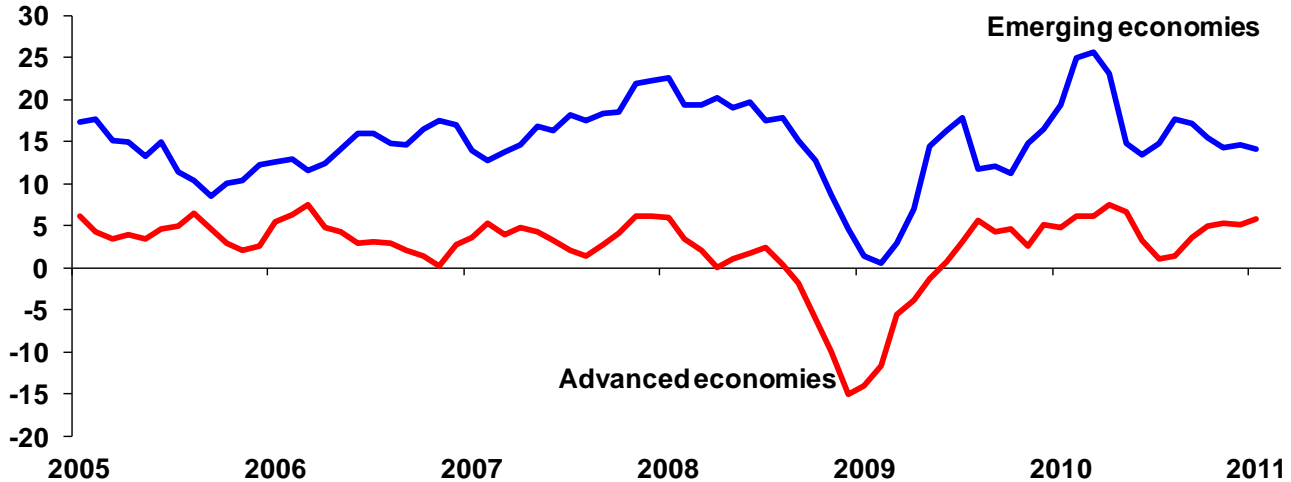


Retail sales: Strong in emerging economies and bouncing back in advanced economies



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Retail sales, annualized percent change of three-month moving average



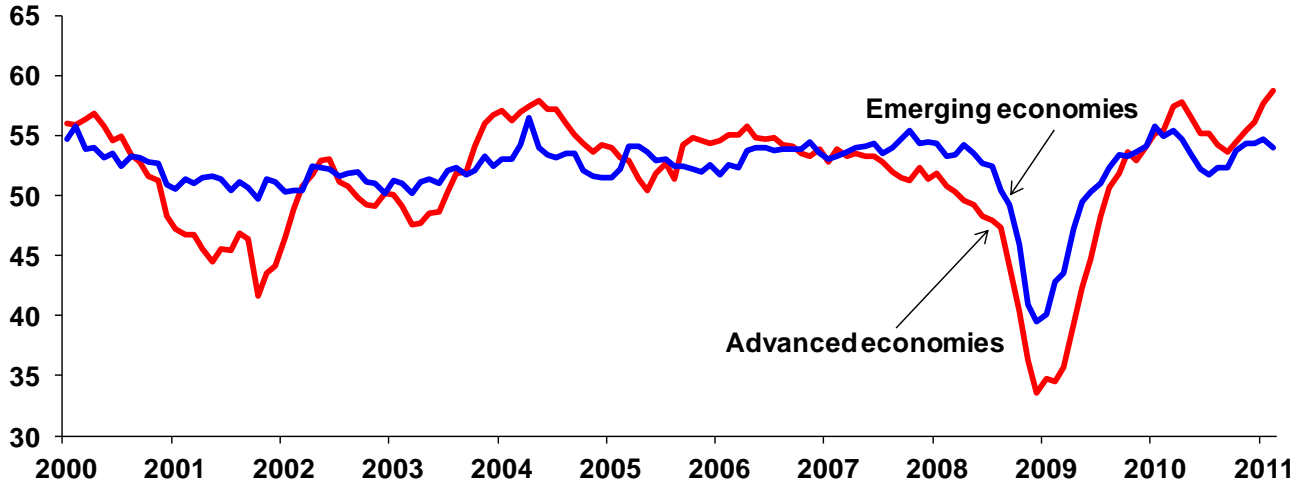
Source: International Monetary Fund.

Global industrial production begins to regain momentum



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Manufacturing Purchasing Managers' Index

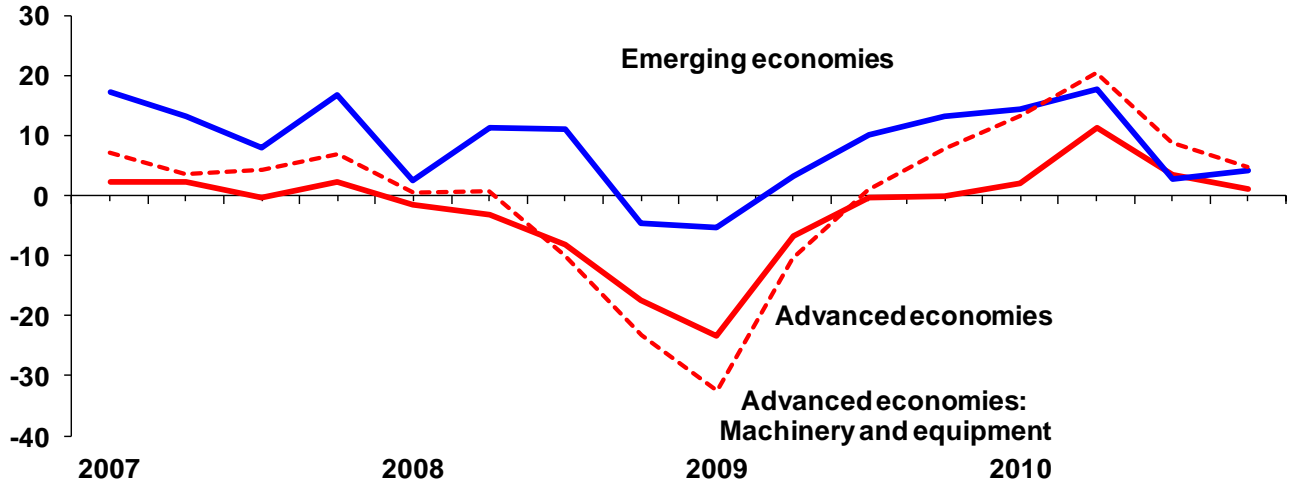


Source: International Monetary Fund.

Investment is recovering with the rebound of industrial production



Real gross fixed investment, annualized percent change from previous quarter

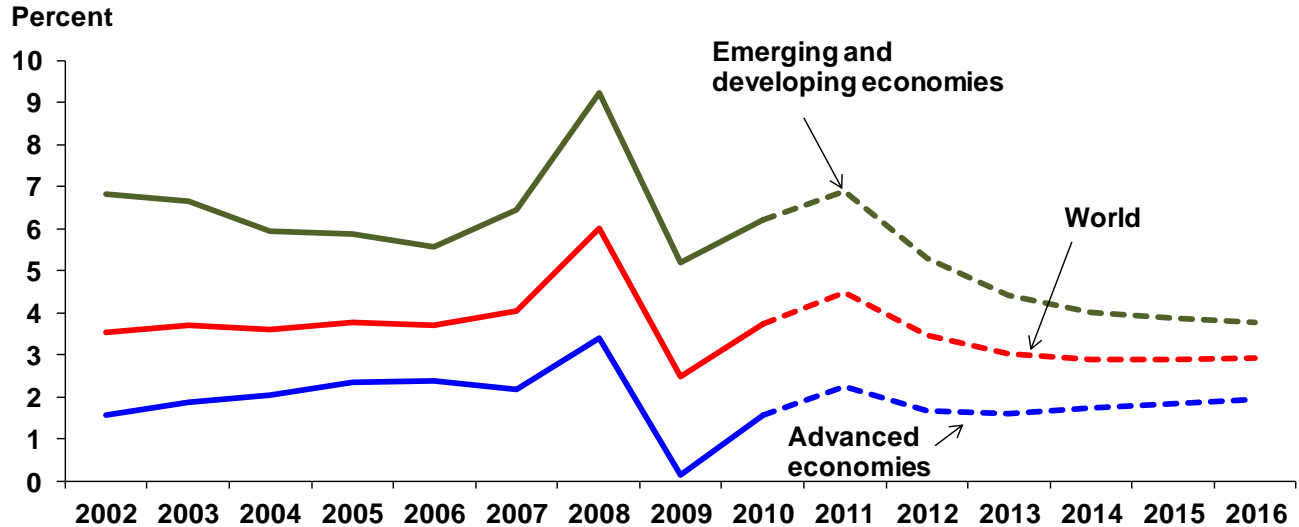


Inflation risk ahead?



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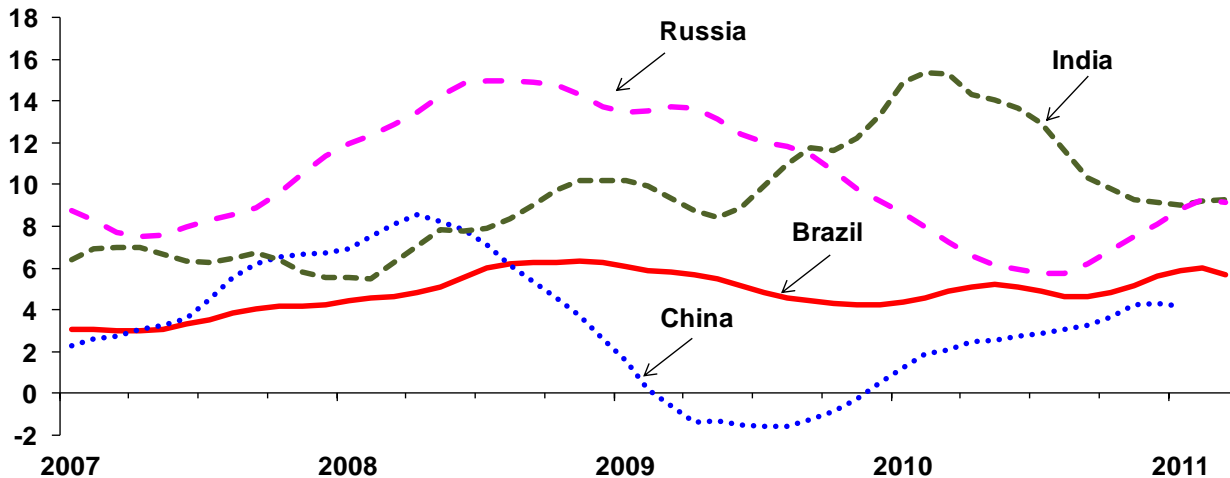
Percent change of consumer prices (year-to-year)



Source: World Economic Outlook, International Monetary Fund, April 2010 update.

Inflation pressure rising in emerging countries

% change in consumer price index, 3-month rolling average



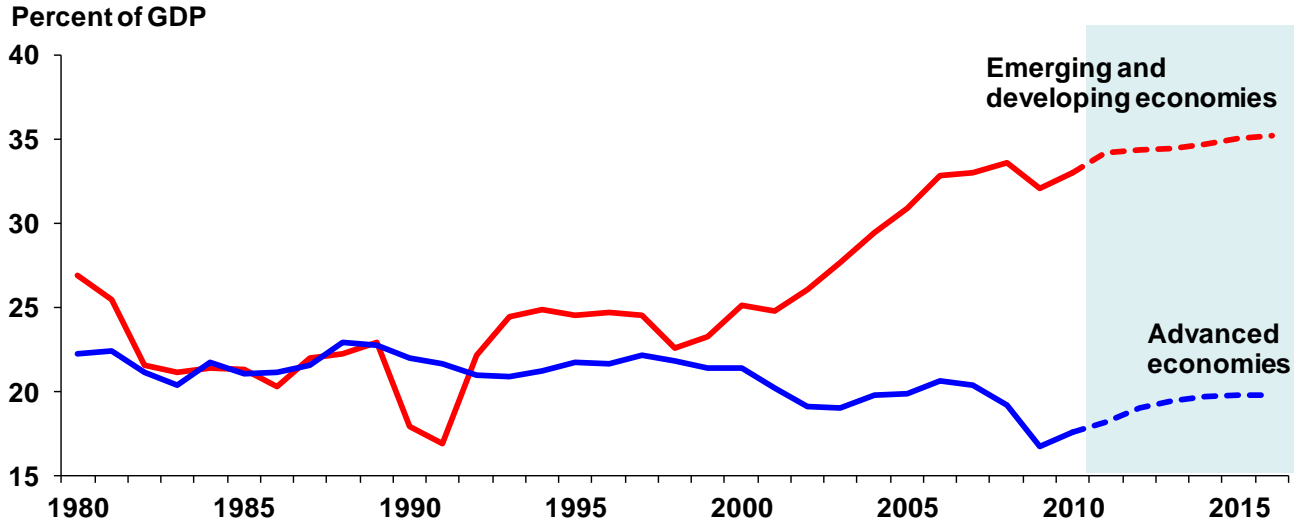
Sources: OECD, Milken Institute.

Saving more after the crisis?

Gross national saving rates



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Source: International Monetary Fund.

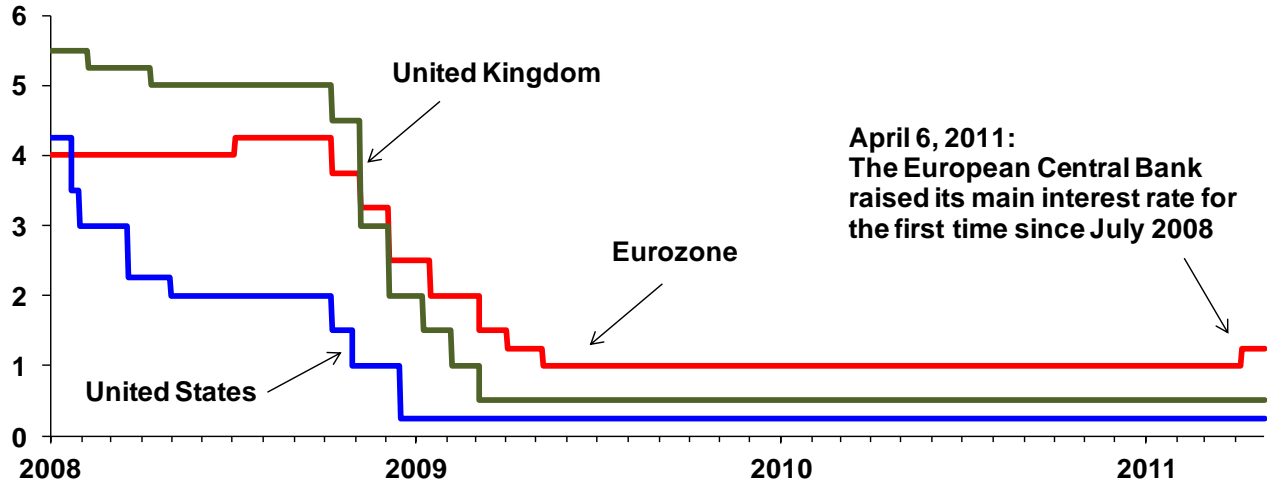
Interest rates for advanced economies

Target interest rates of central banks



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Policy interest rates, percent



April 6, 2011:
The European Central Bank
raised its main interest rate for
the first time since July 2008

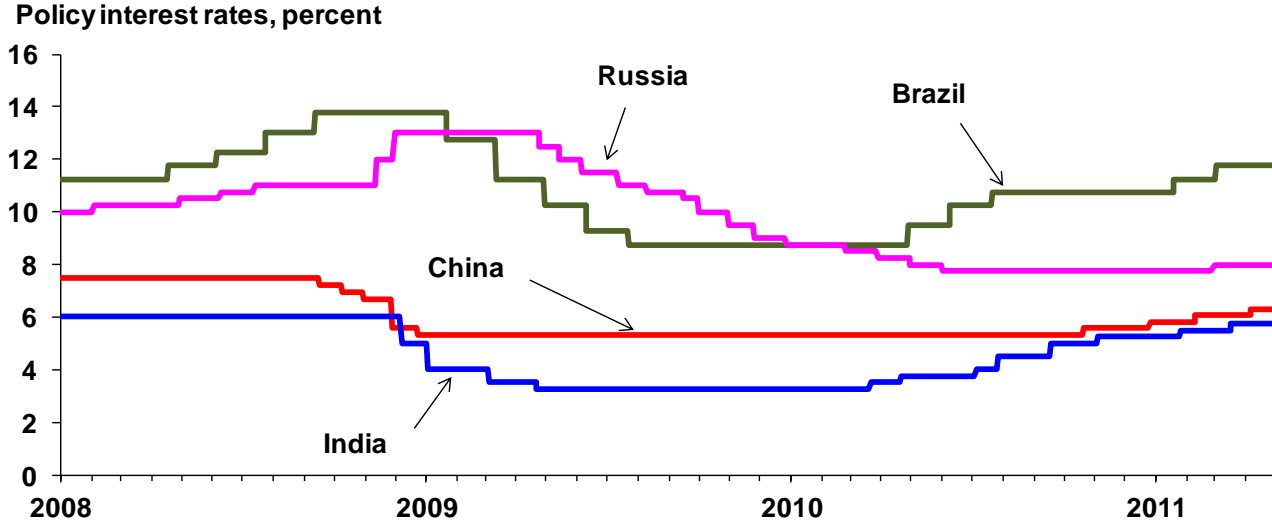
Source: Bloomberg.

Emerging countries have tightened monetary policy in fear of inflation

Target interest rates of central banks



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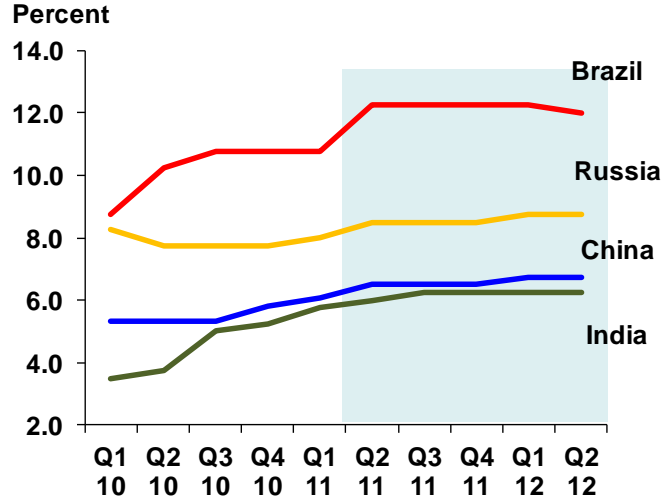
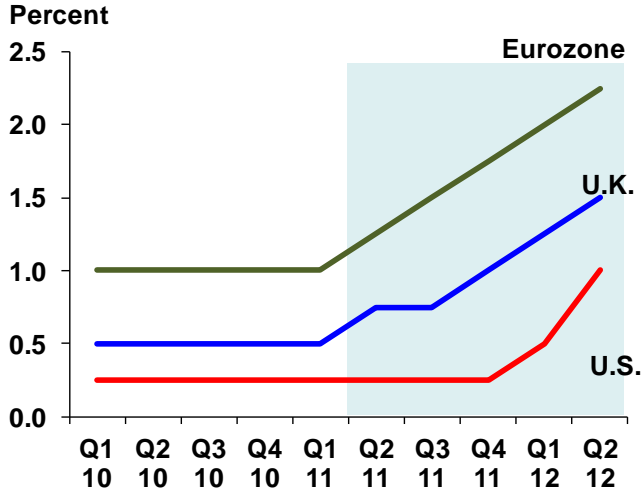
Source: Bloomberg.

End of the era of cheap capital?

Consensus forecasts: Central bank rates will increase in the next 12 months



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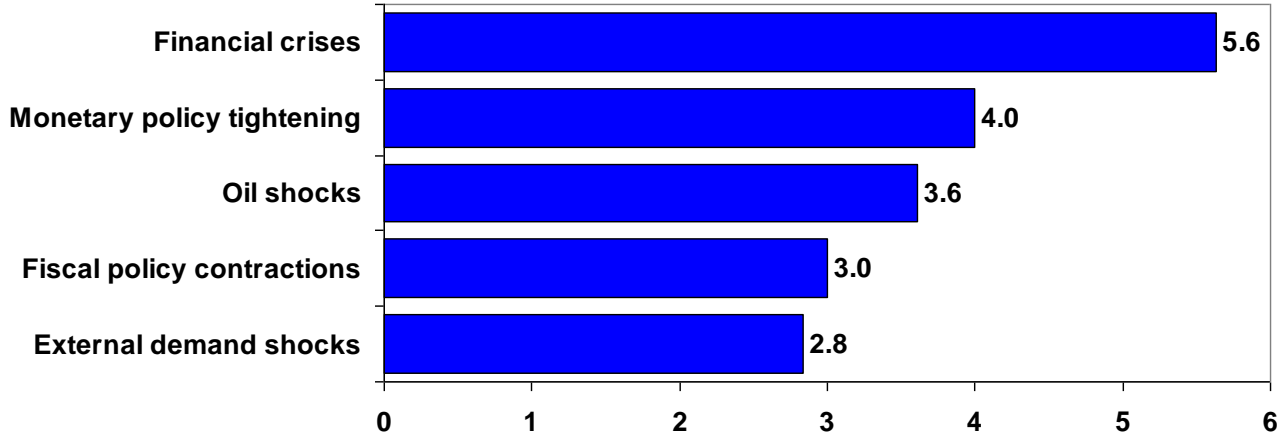


Source: Bloomberg.

Recoveries from financial crises take longer than recovery other types of crises



Average time until recovery to previous peak (quarters)



Notes: Estimates are based on 122 recessions in 21 advanced economies.

Sources: International Monetary Fund.

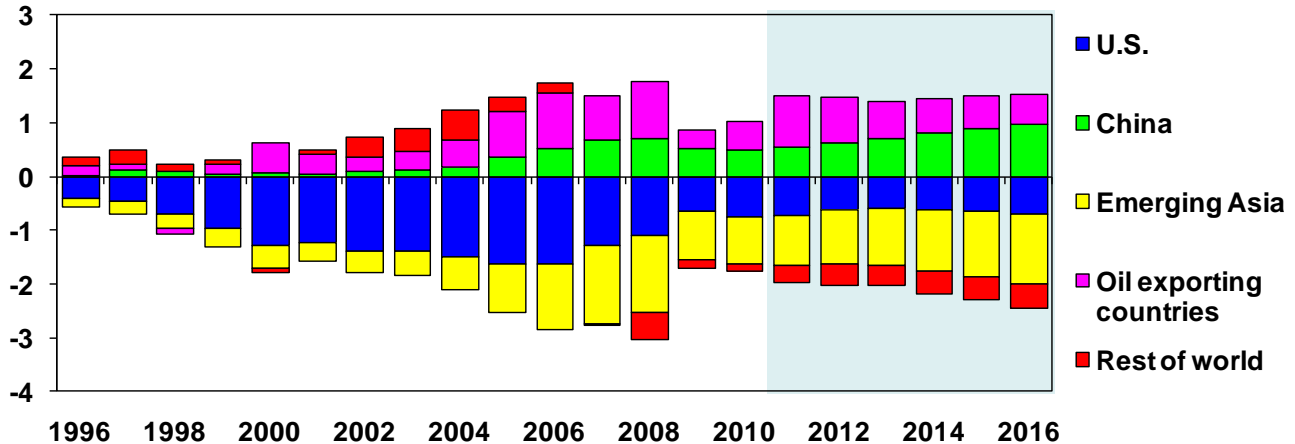
Global imbalances on the rise again

Projections after 2010



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Percent of world GDP



Sources: International Monetary Fund, Milken Institute.
Note: Discrepancies are not plotted.

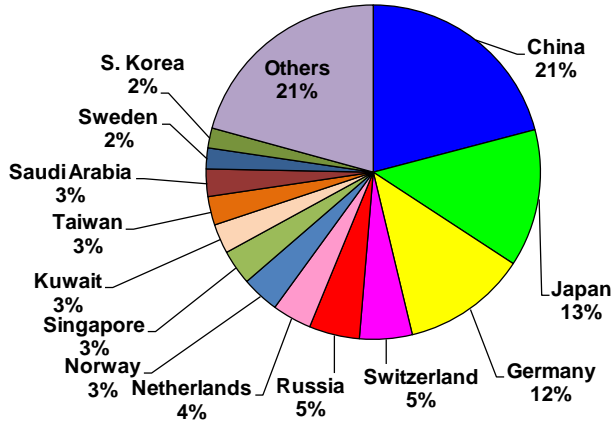
Major net exporters and importers of capital

2010

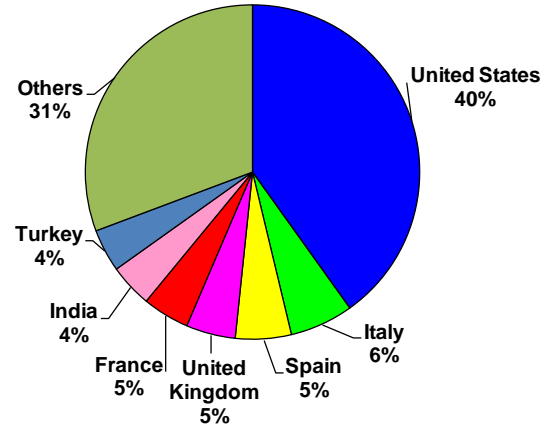


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Countries that export capital



Countries that import capital



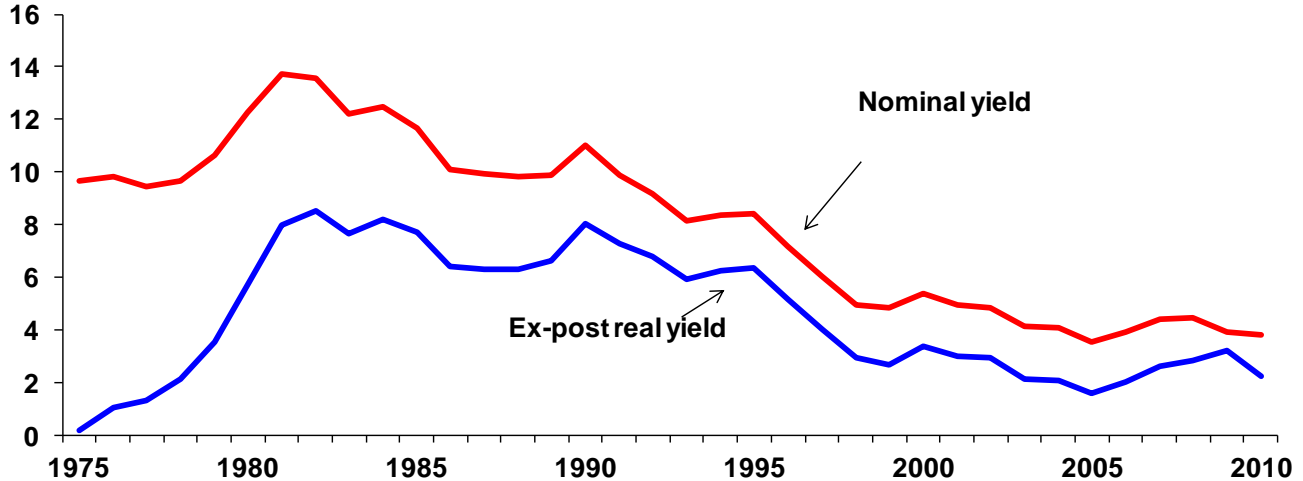
Source: International Monetary Fund.

Real interest rates in developed countries have fallen substantially since 1980



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Average yield on 10-year government bonds, percent

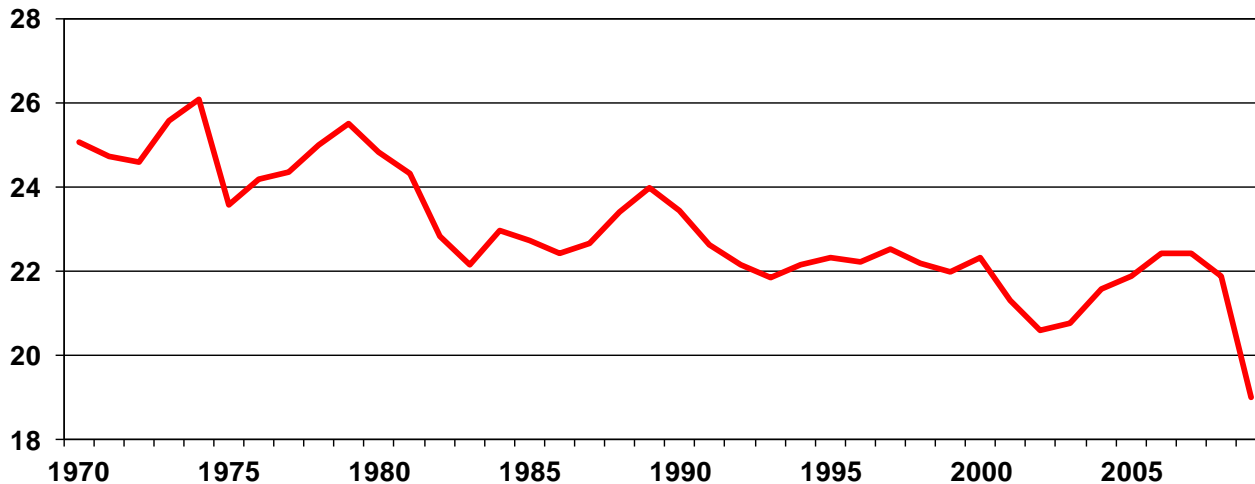


Sources: International Monetary Fund, OECD, Milken Institute.

Note: Ex-post real yield after 2000 is calculated based upon OECD forecasts of inflation rates in 2010-2019.

Global investment share of GDP at record low

Percent of GDP

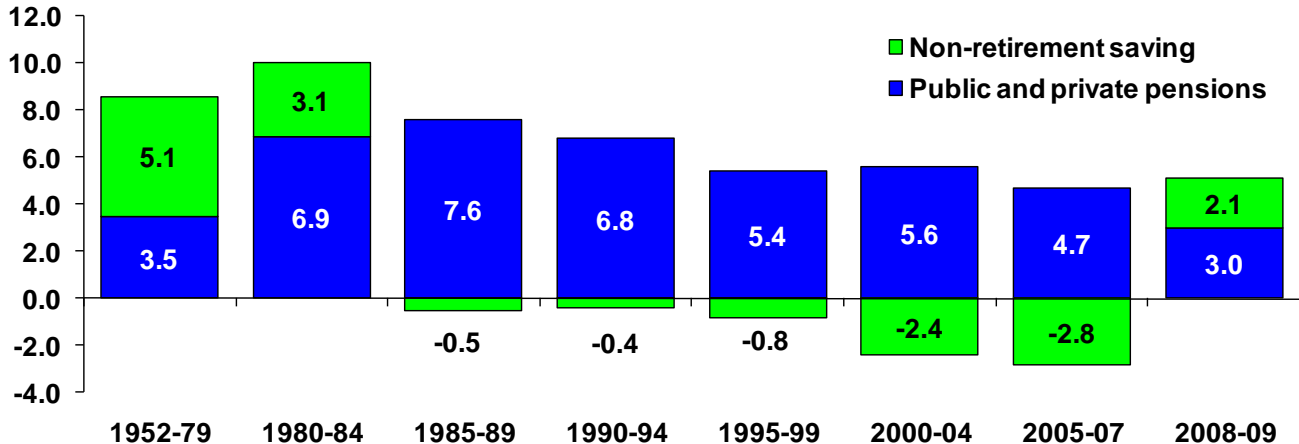


Source: World Bank.

From 1985 to 2007, U.S. households took out debt to finance consumption



Percent of disposable personal income



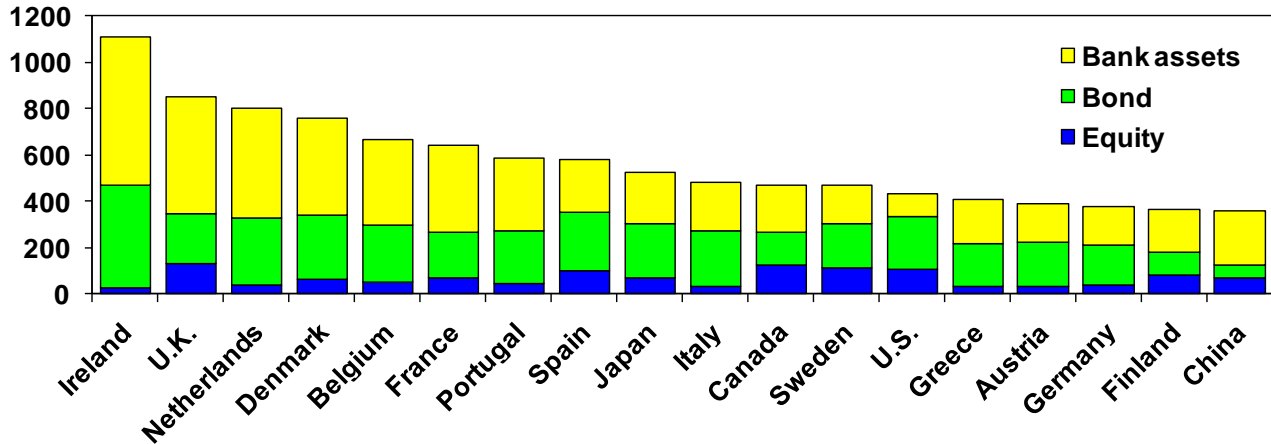
Size of capital markets relative to GDP

2009



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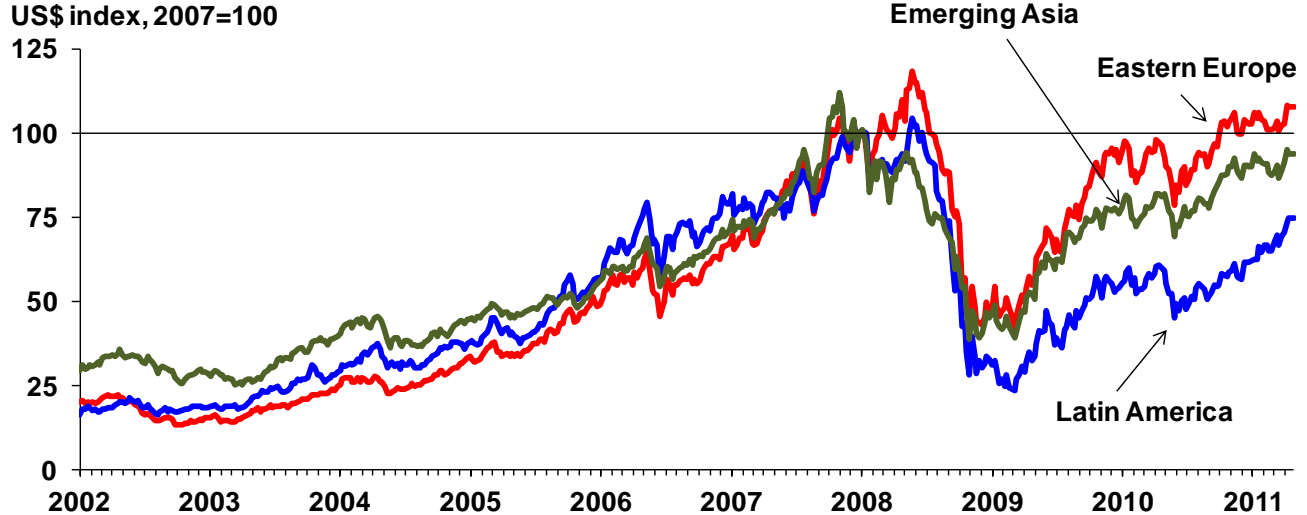
Percent of GDP



Emerging markets: Equity markets have returned to pre-crisis level



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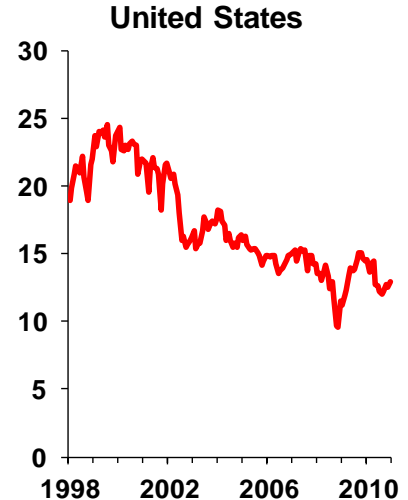
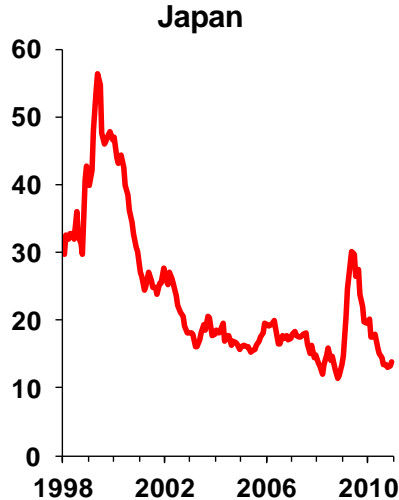
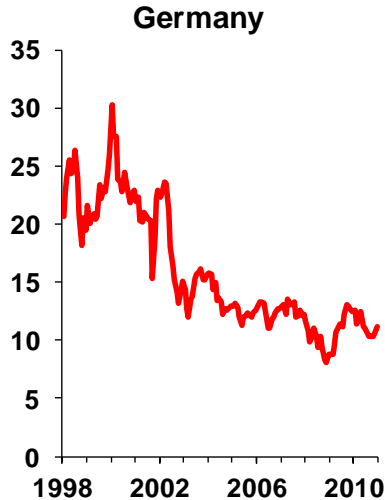
Source: Bloomberg.

Stocks are cheaper

Twelve-month forward price-to-earnings ratios



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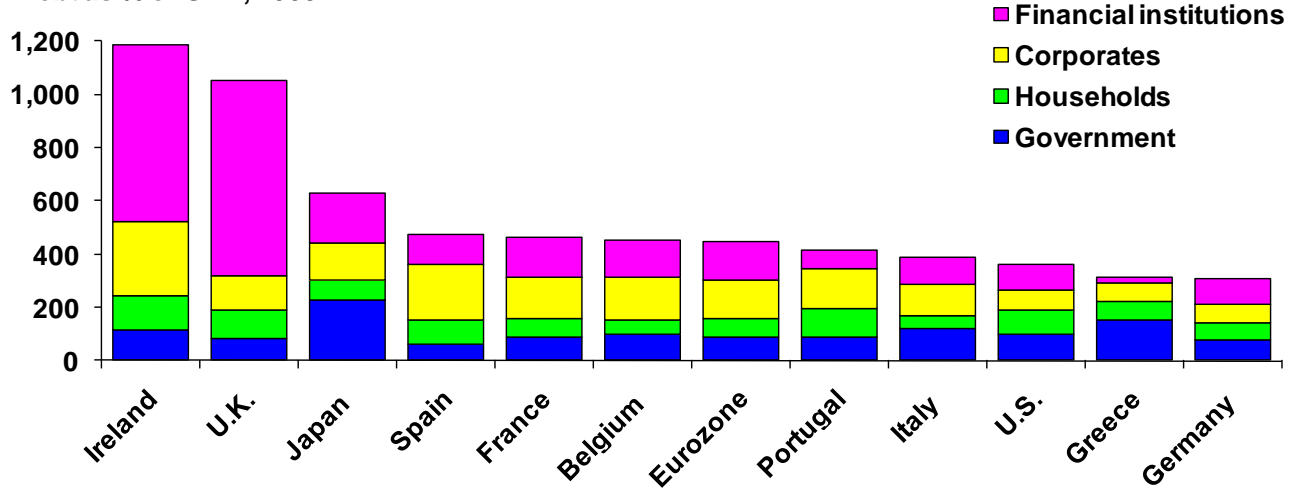


Source: International Monetary Fund.



Debt-to-GDP ratios in selected countries

Debt as % of GDP, 2009

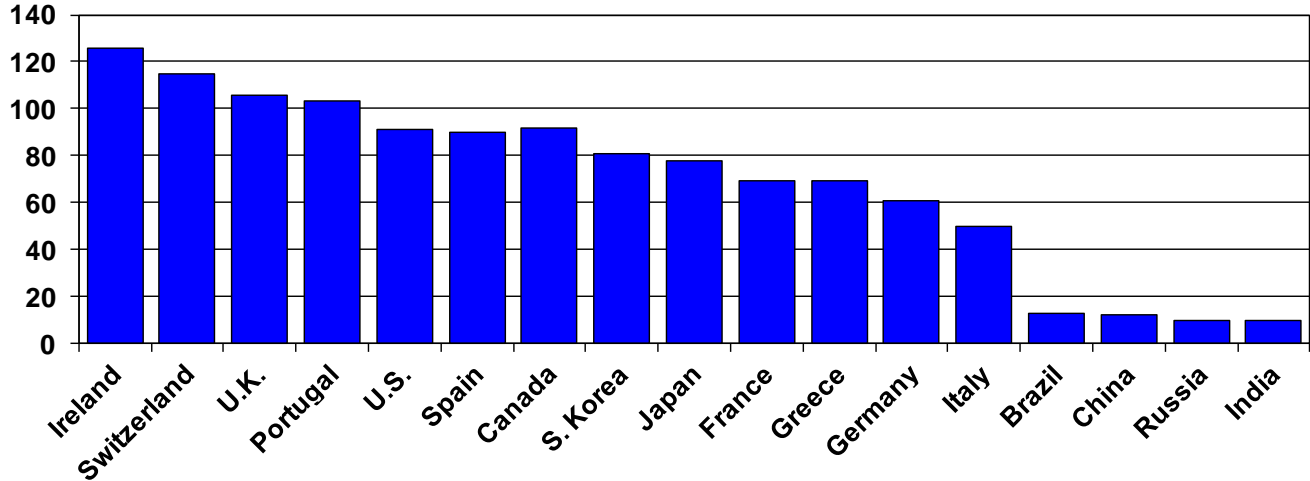


Source: International Monetary Fund.

Leverage ratios are higher in advanced economies



Household debt to GDP ratios, percent

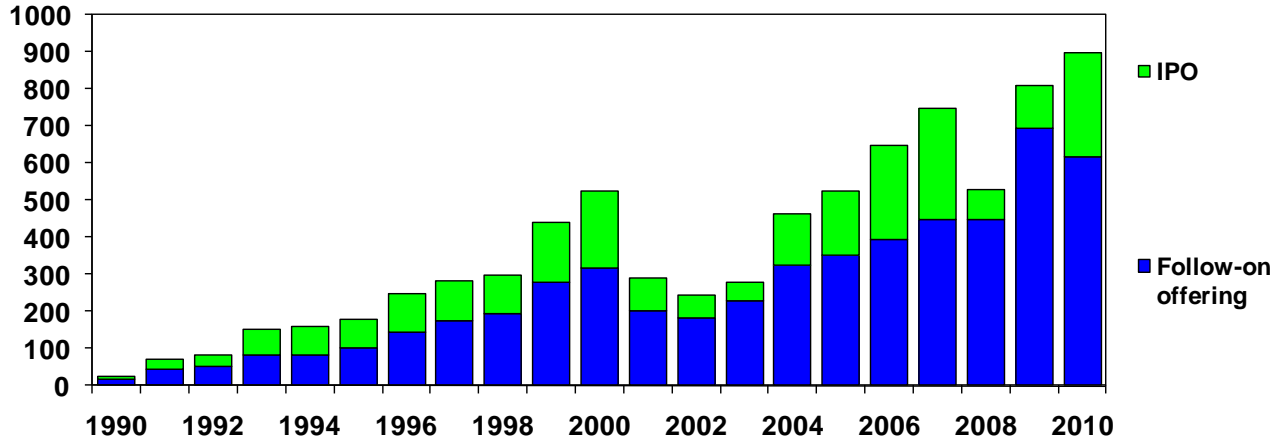


Source: International Monetary Fund.

Companies worldwide raised \$766 billion in 2010 via common stock issuance



US\$ billions

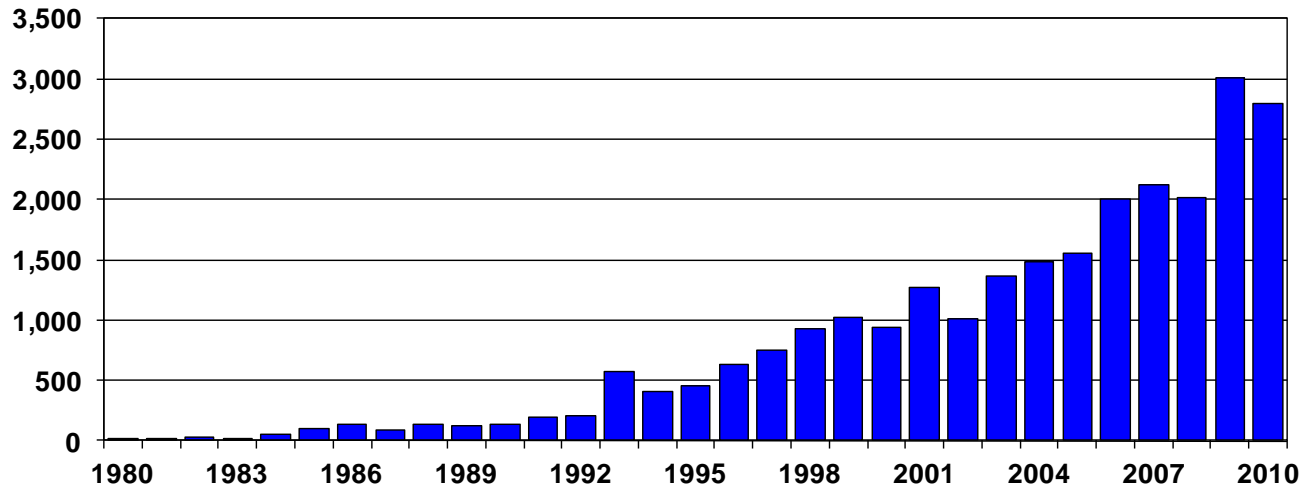


Sources: Dealogic, Thompson Reuters.

Global corporate bond issuance

1980 to 2010

US\$ billions



Sources: Dealogic, Thompson Reuters.

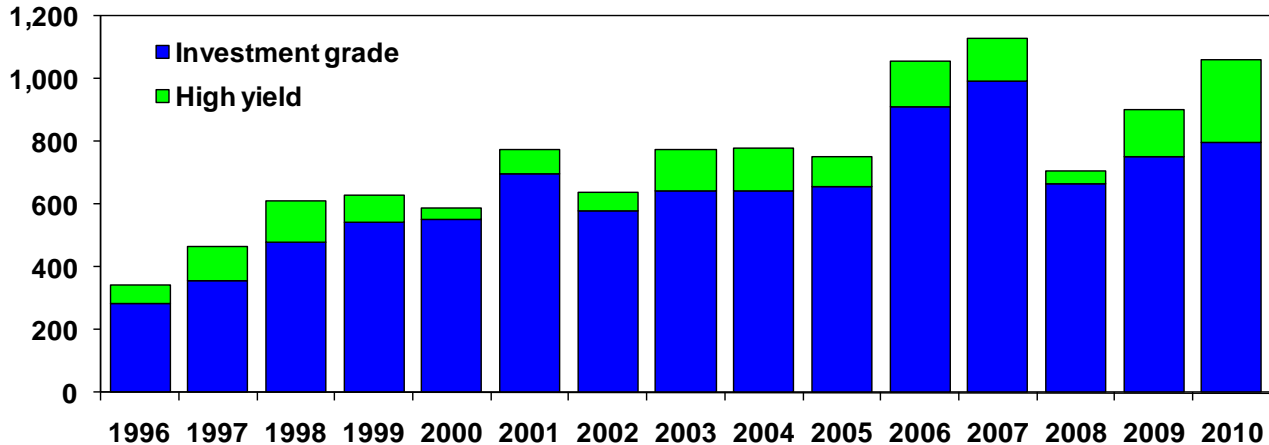
Corporate bond issuance in the United States



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1996 to 2010

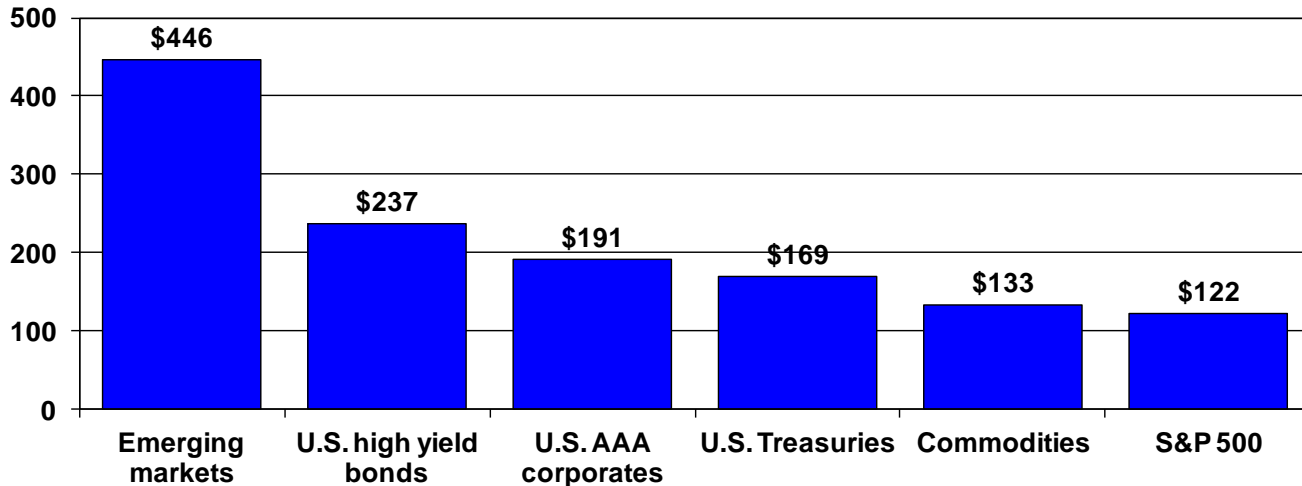
US\$ billions



Source: SIFMA.

Investment returns for selected asset classes

As of March 2011, a \$100 investment made in December 2000 gives you:



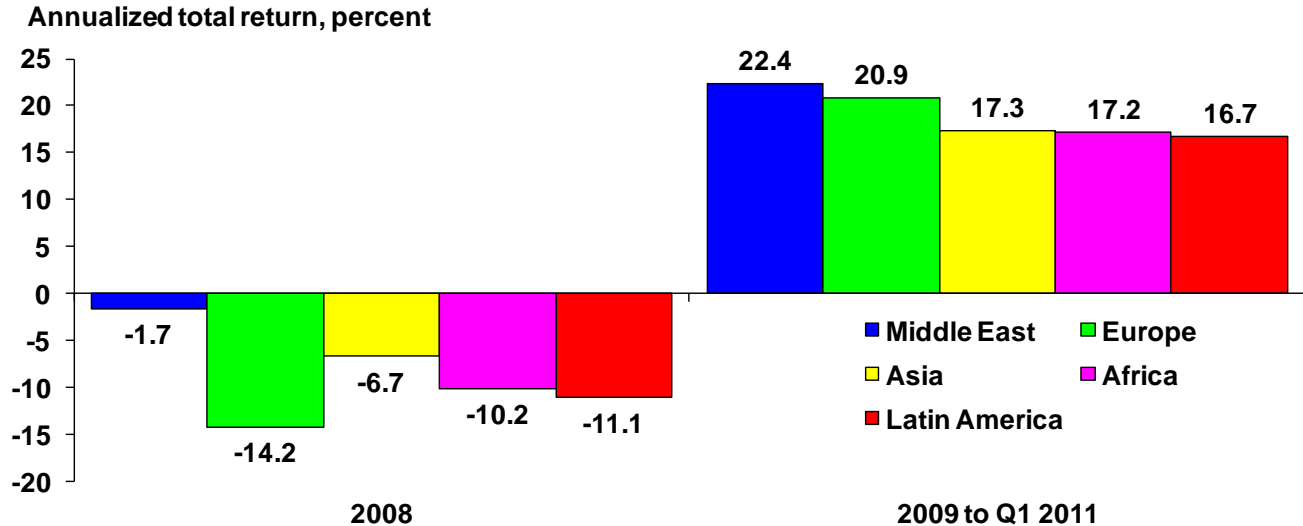
Sources: Bloomberg, Milken Institute.

Performance of emerging bond markets

Total return of JPMorgan EMBI Global indexes



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Sources: DataStream, Milken Institute.

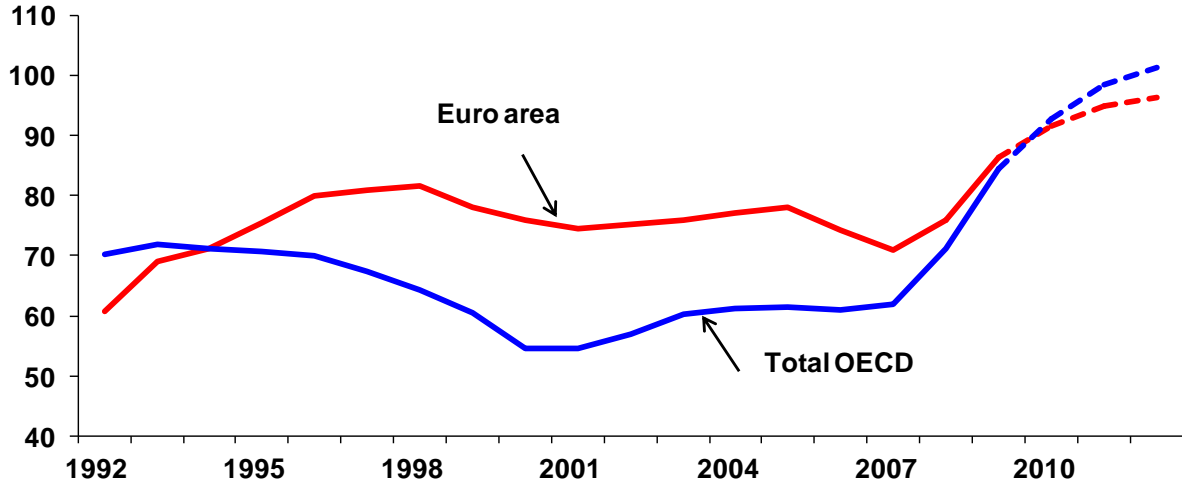
Government debt-to-GDP ratio at historic high



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1992 to 2012 (Projections after 2009)

Gross debt, percent of GDP



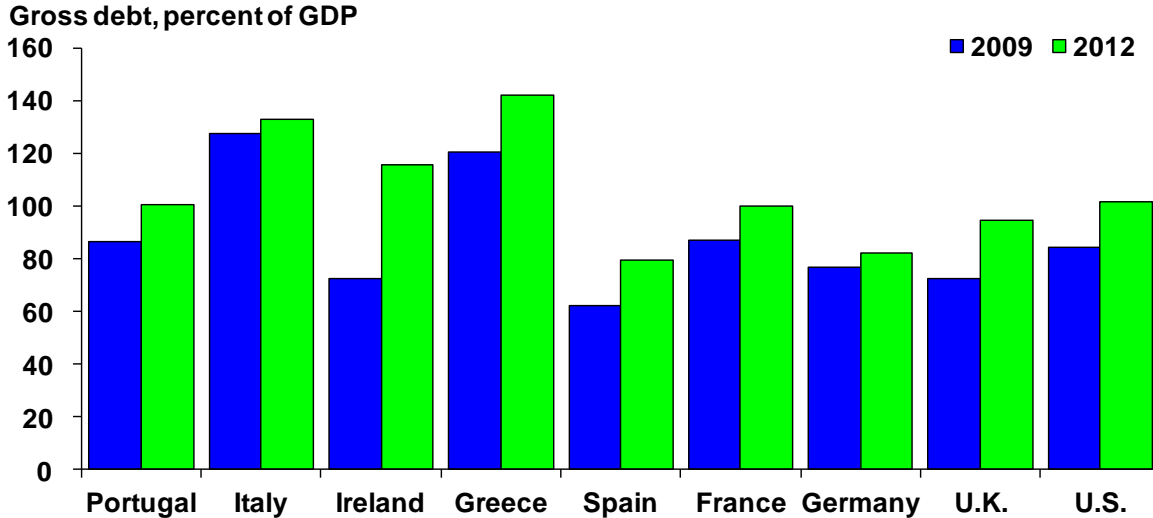
Source: OECD.

Government debt-to-GDP ratios still rising

2009 vs. 2012 (projection)



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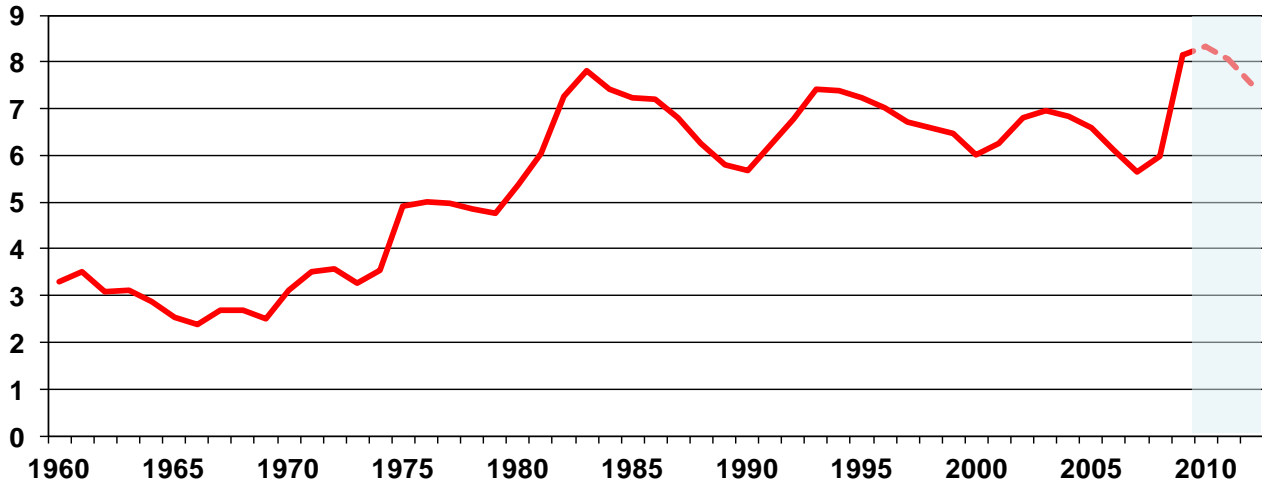


Source: OECD.

Unemployment in OECD countries

1960 to 2012 (projections after 2009)

Unemployment rate, percent of labor force



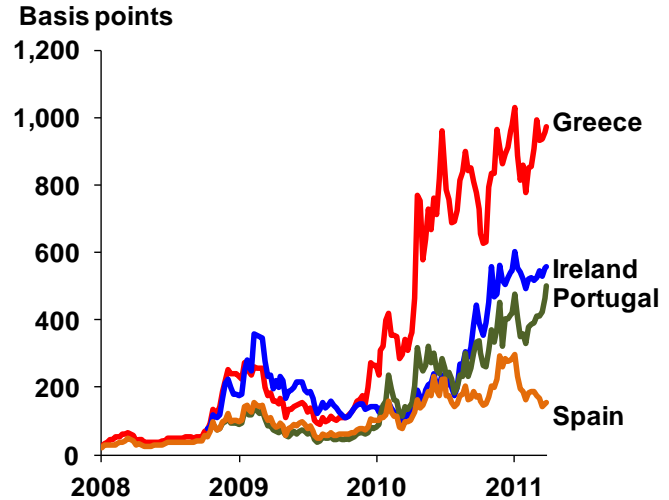
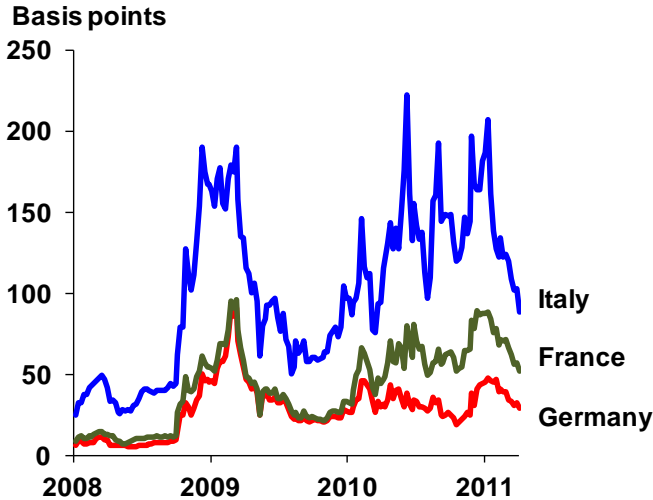
Source: OECD.

Sovereign risks heightened after 2009

Credit default swap spreads, five-year government bonds



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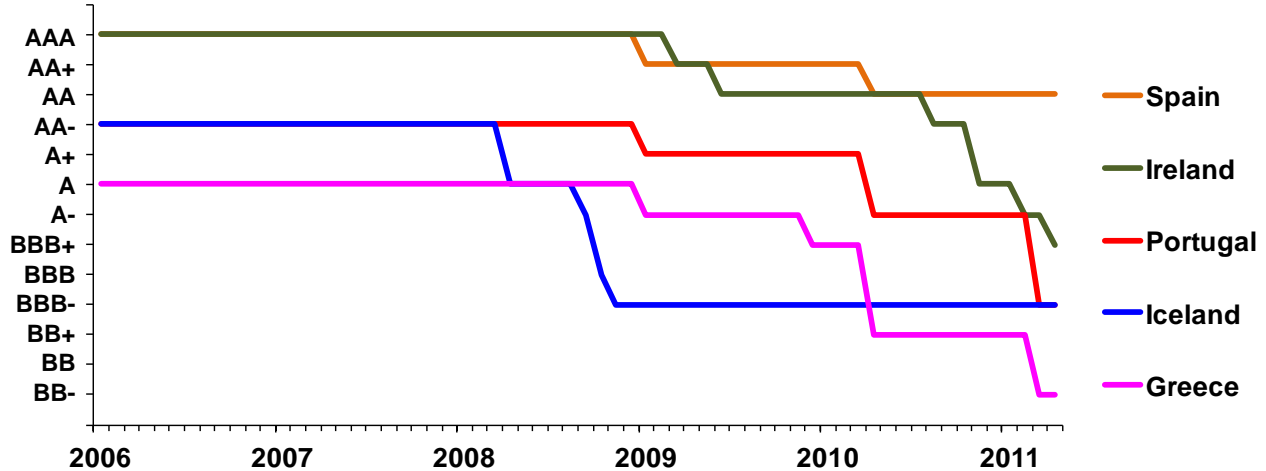
Source: DataStream.

Recent rating changes for selected European countries



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S&P's foreign currency long-term debt ratings



Sources: Bloomberg, Milken Institute.

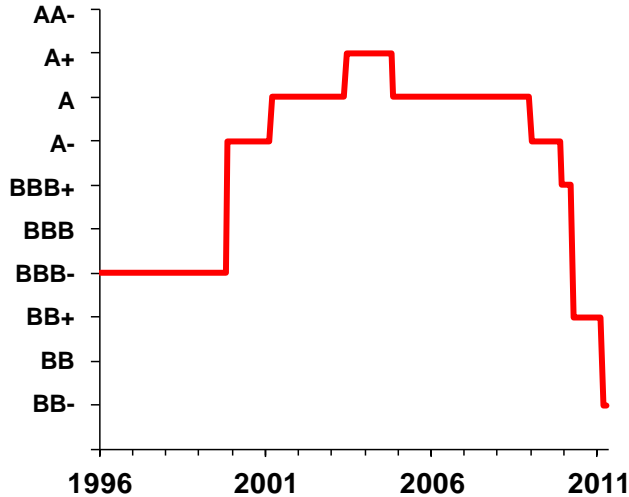
Sovereign ratings for Greece and Portugal

S&P's foreign currency long-term debt ratings

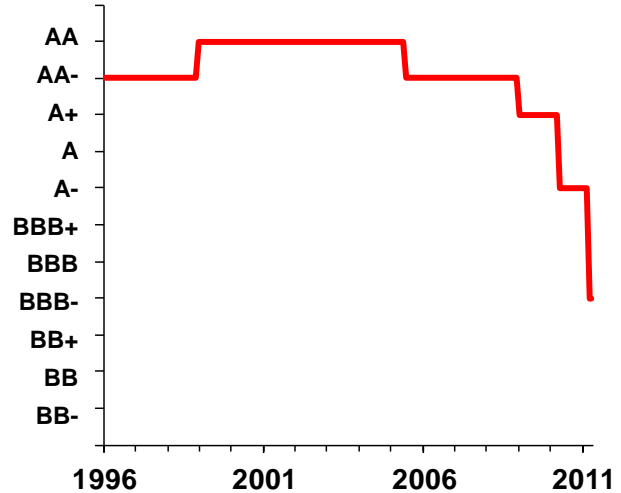


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Greece



Portugal



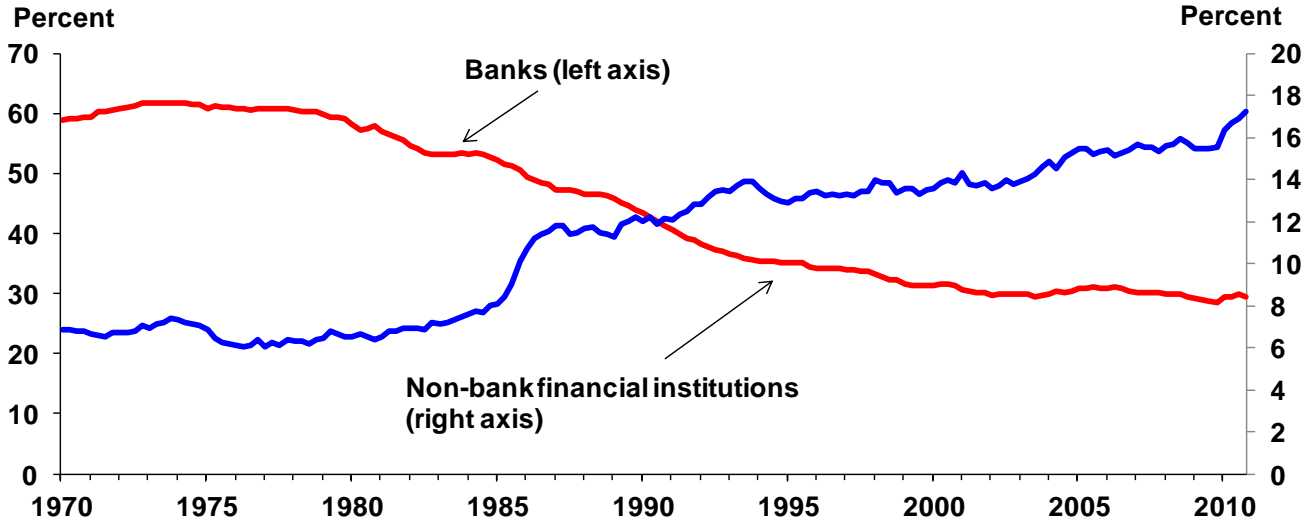
Sources: Bloomberg, Milken Institute.

Non-bank institutions are playing an ever-larger role in U.S. financial sector



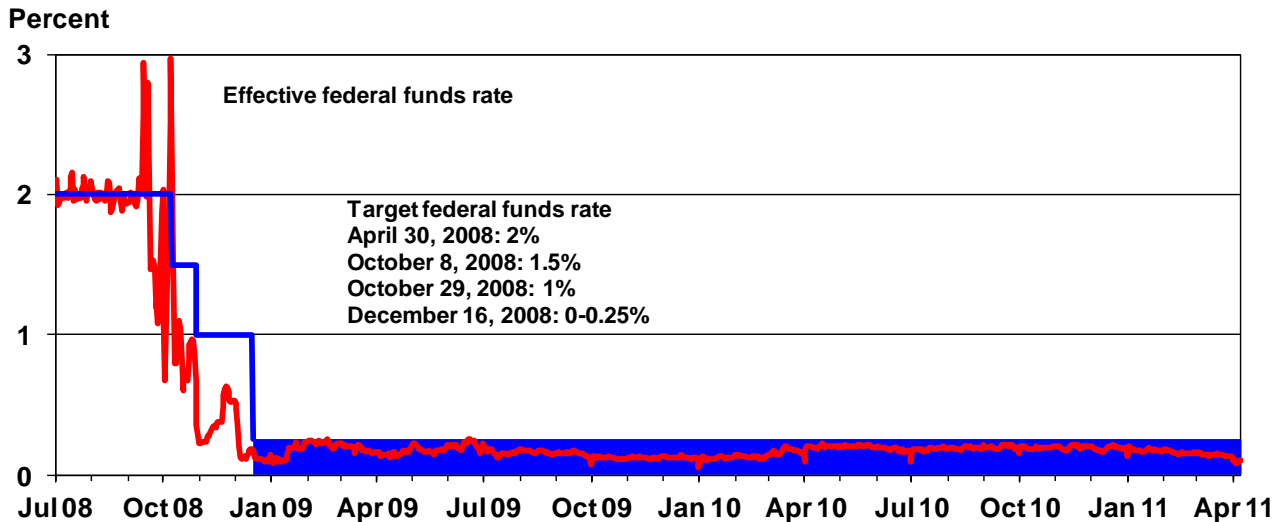
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Share of financial sector assets, 1970 to 2010



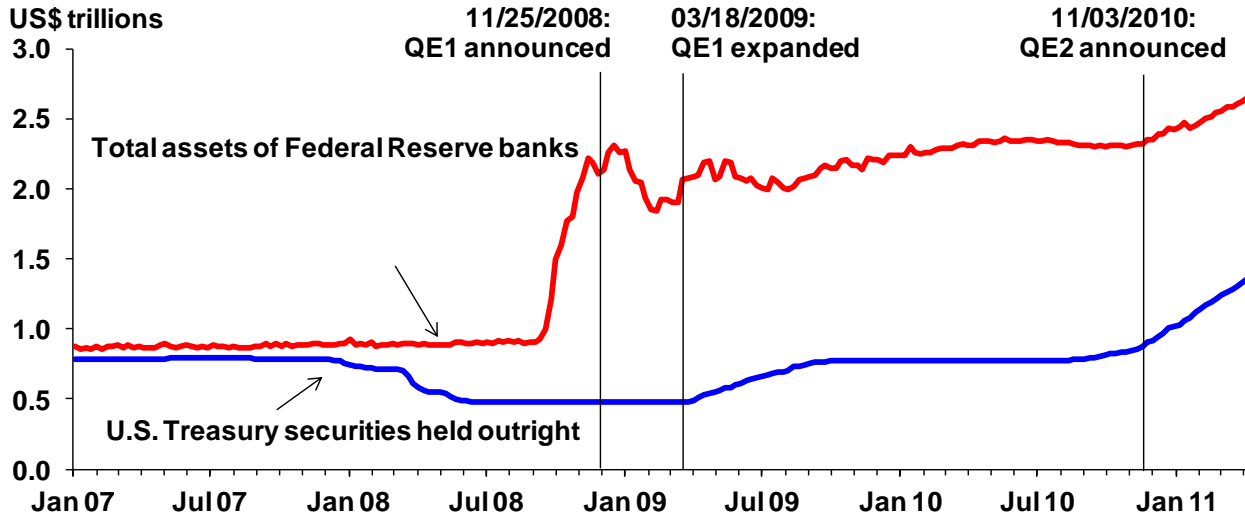
Source: Federal Reserve, Flow of Funds.

Federal Reserve has little room to maneuver



Sources: Federal Reserve, Milken Institute.

The Fed engages in quantitative easing



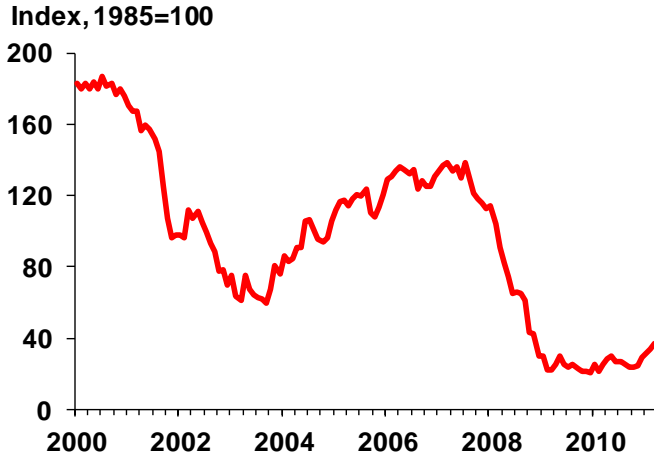
Sources: Federal Reserve, Milken Institute.

Tomorrow will be better?

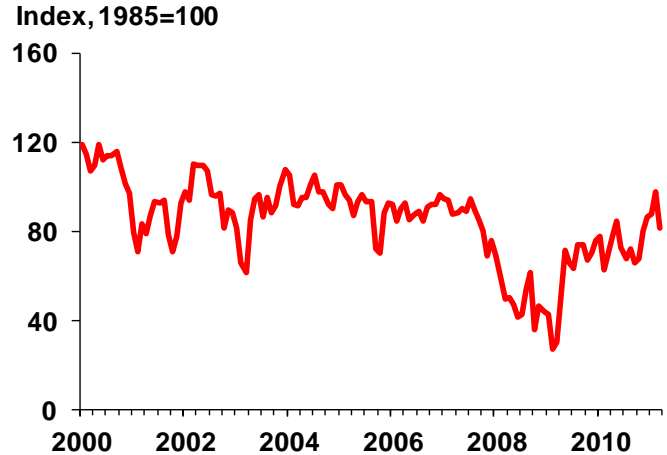
U.S. consumer confidence indices



Present situation



Expectations



Sources: Bloomberg, Conference Board.

An overview of past recessions

NBER business cycle dates



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Start	End	Duration in months
August 1929	March 1933	43
May 1937	June 1938	13
February 1945	October 1945	8
November 1948	October 1949	11
July 1953	May 1954	10
August 1957	April 1958	8
April 1960	February 1961	10
December 1969	November 1970	11
November 1973	March 1975	16
January 1980	July 1980	6
July 1981	November 1982	16
July 1990	March 1991	8
March 2001	November 2001	8
December 2007	June 2009	18 months

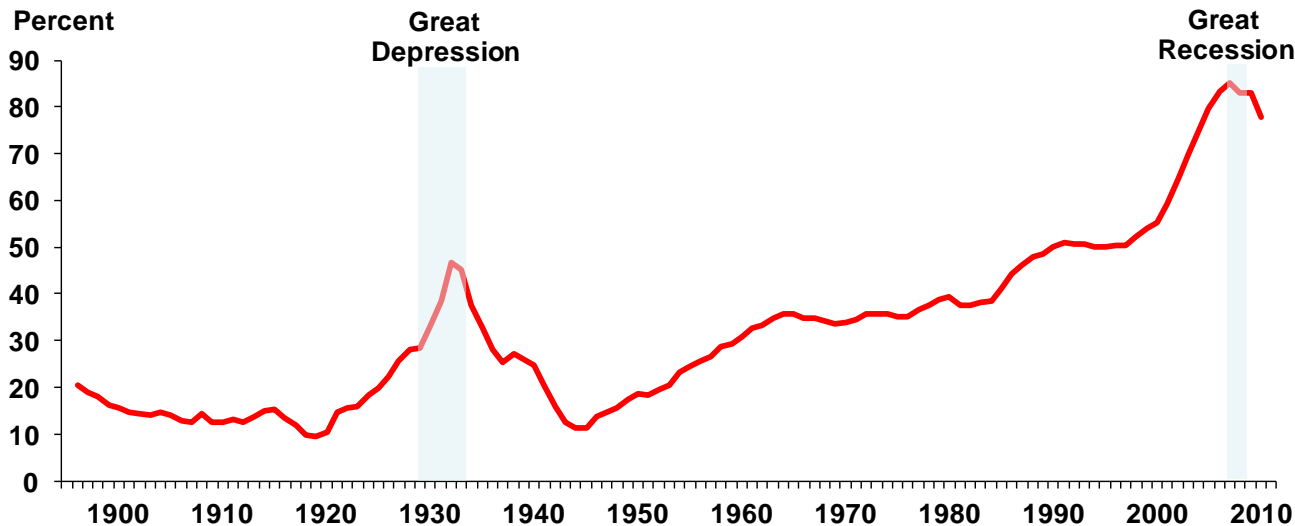
Source: National Bureau of Economic Research.

Ratio of U.S. home mortgages to GDP



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1896 to 2010



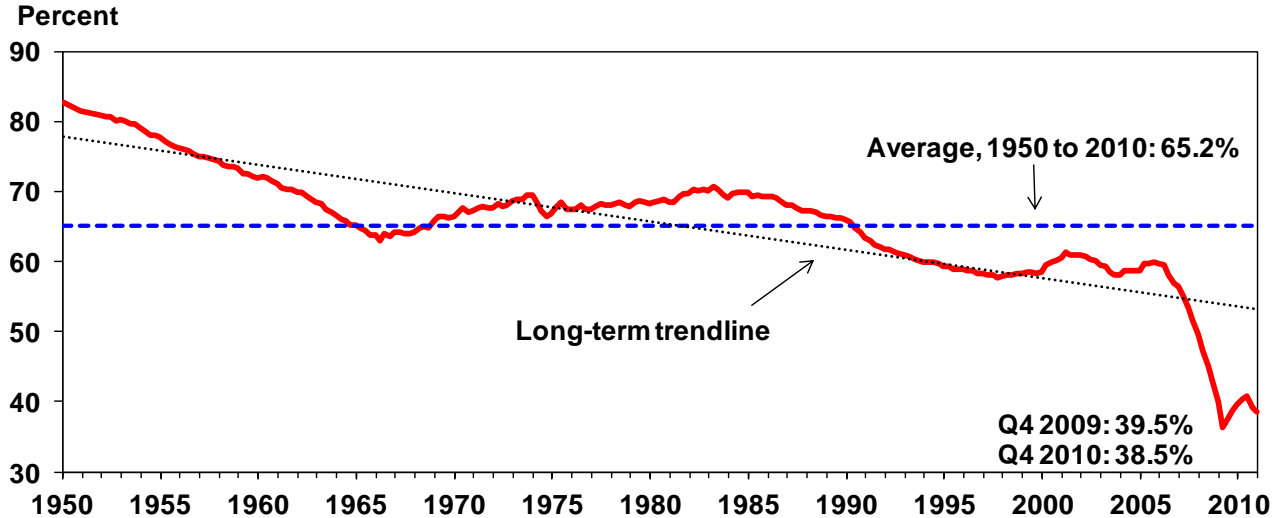
Sources: Federal Reserve, *Historical Statistics of the United States*, Bureau of Economic Analysis, Milken Institute.

U.S. homeowners' equity as a percent of real estate asset



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1950 to 2010



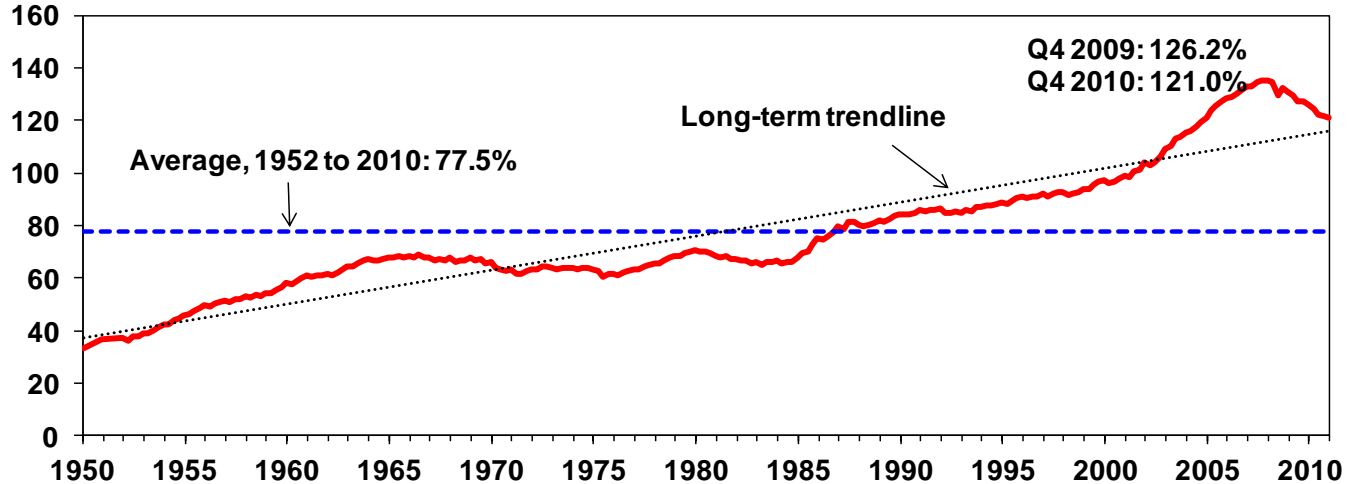
Source: Federal Reserve, Flow of Funds.

U.S. household debt-to-income ratio is still high *1950 to 2010*



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Percent

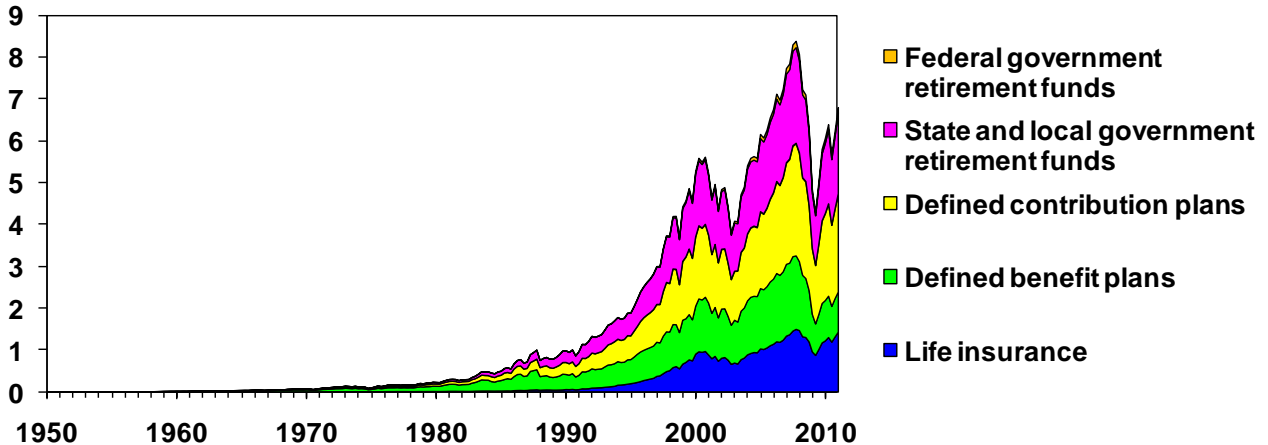


Source: Robert Shiller.

U.S. household retirement assets still \$1.6 trillion lower than previous peak

1950 to 2010

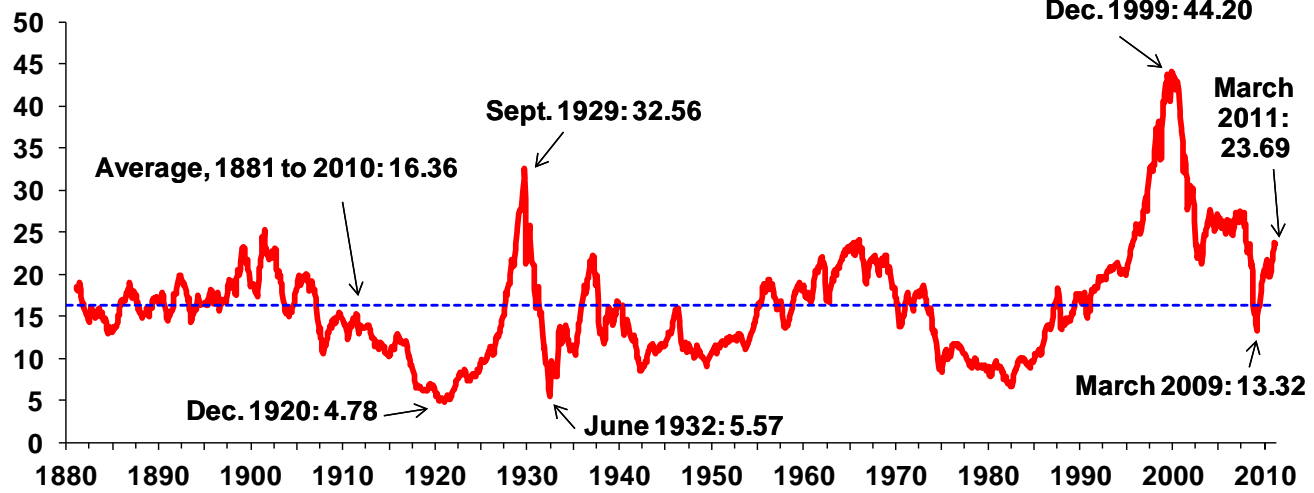
US\$ trillions



Source: Federal Reserve, Flow of Funds.

Long-term S&P 500 price-to-earnings ratio

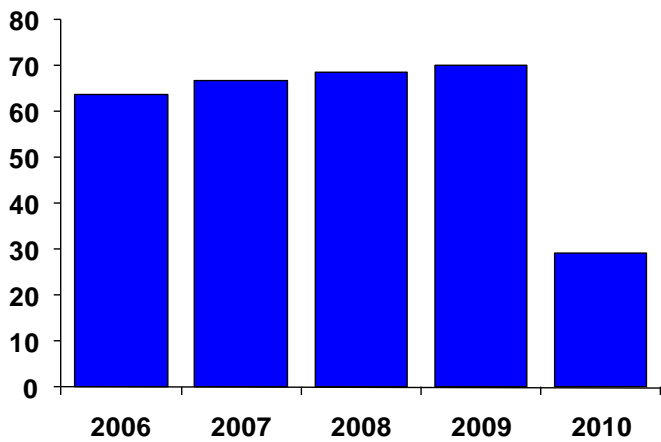
Price-to-earnings ratio of S&P 500 companies



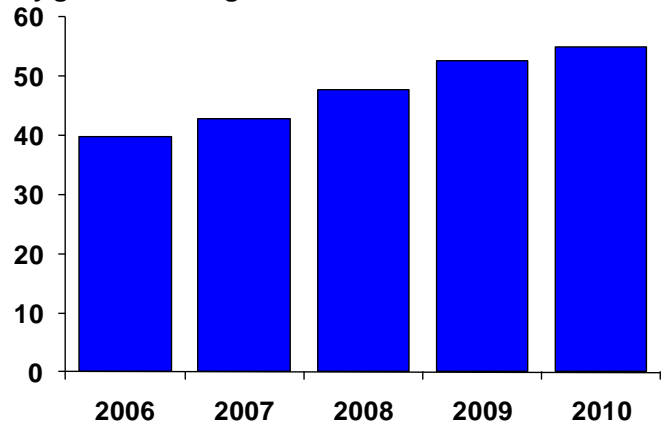
Source: Robert Shiller.

Changing landscape of the U.S. mortgage market

Percent of home mortgage loans securitized



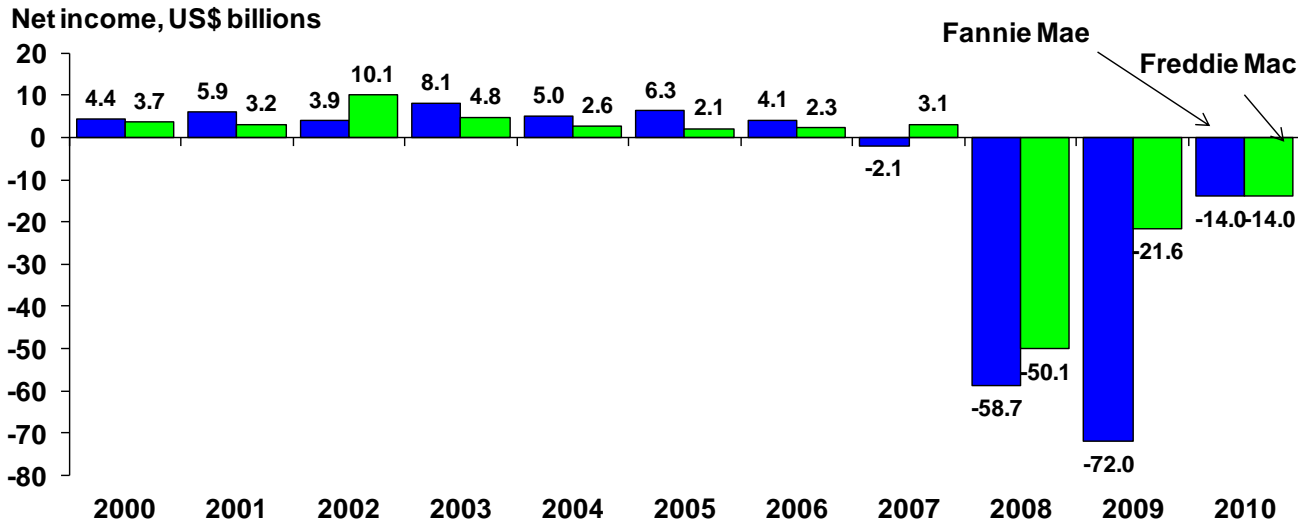
Percent of home mortgage loans held or securitized by government agencies and GSEs



Sources: Federal Reserve, Milken Institute.
 Note: Estimates based upon single-family home mortgages.



GSEs suffered significant losses in 2008 to 2010

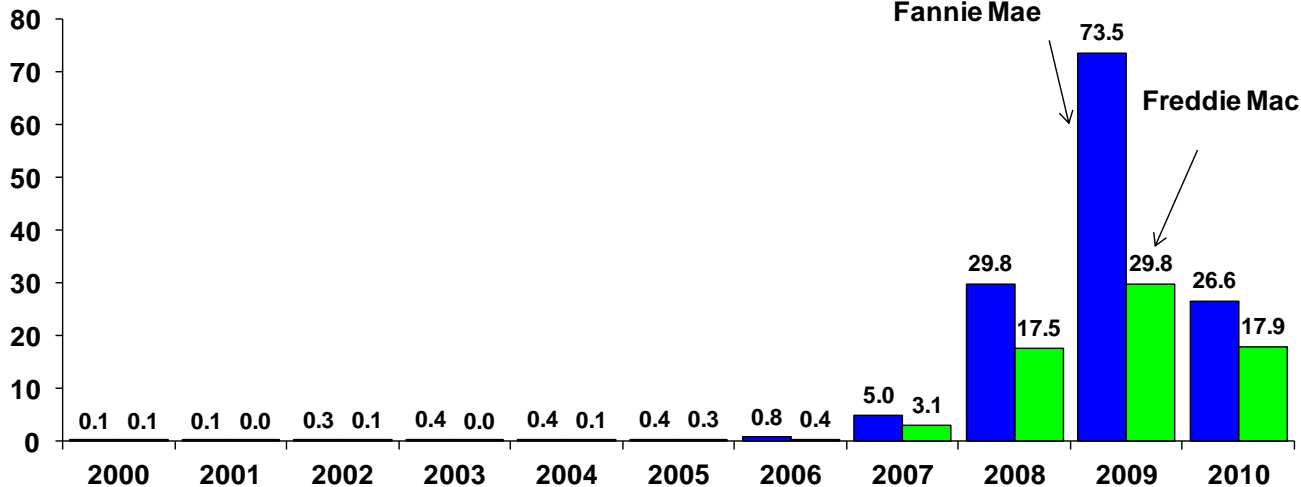


Sources: Fannie Mae, Freddie Mac, FHFA, *Inside the GSEs*.



Elevated credit expenses at GSEs

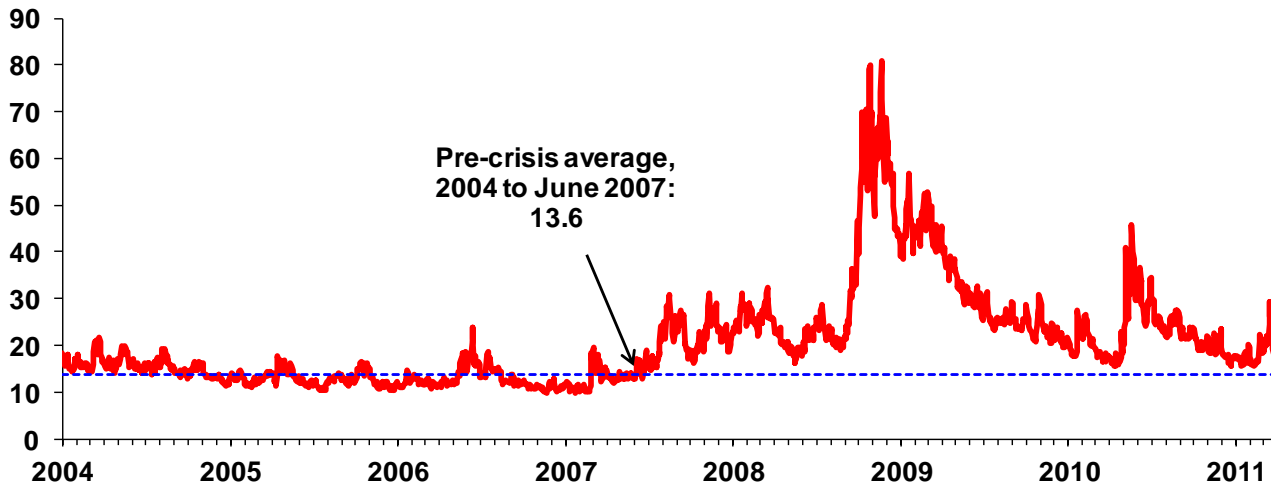
Credit-related expenses, US\$ billions



Sources: Fannie Mae, Freddie Mac, FHFA, *Inside the GSEs*.

Volatility in the U.S.: Still above pre-crisis level

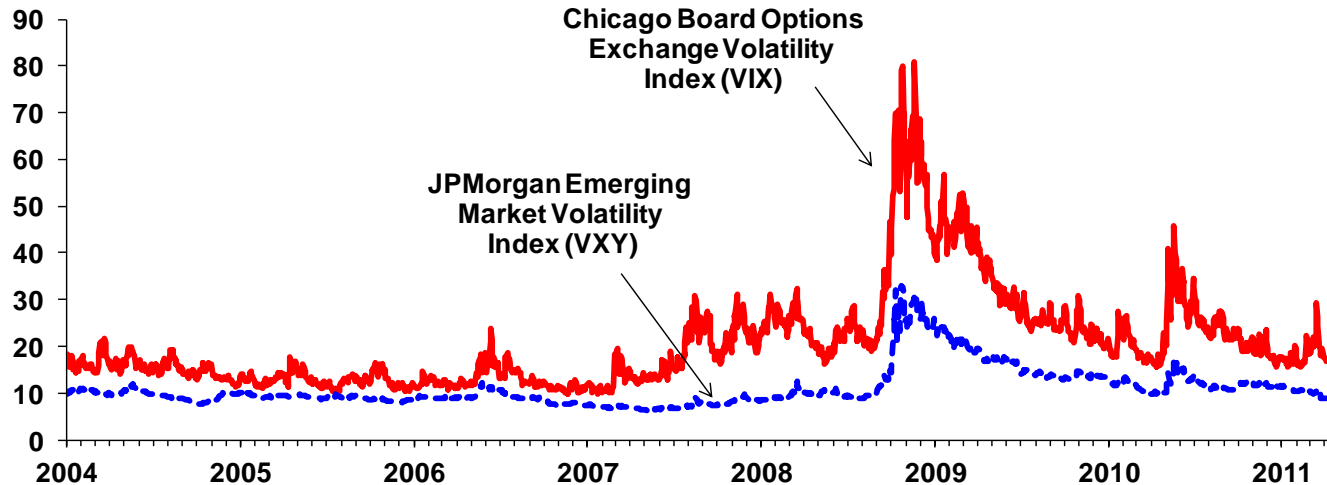
Chicago Board Options Exchange Volatility Index (VIX)



Source: Bloomberg.

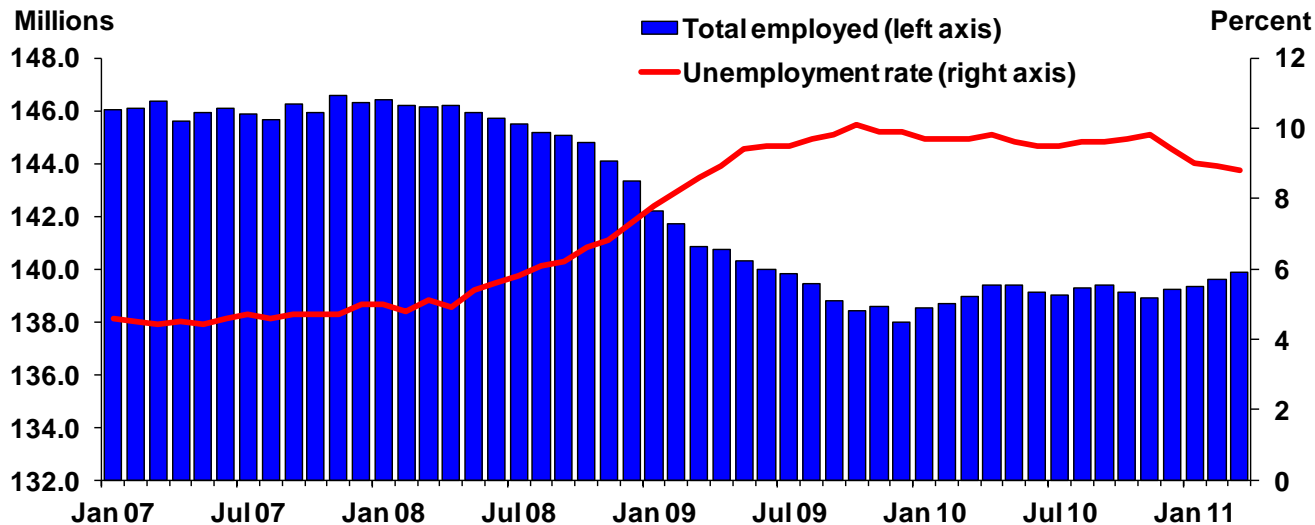
Implied volatility: U.S. vs. emerging markets

Implied volatility, percent



Source: Bloomberg.

Unemployment rate in the U.S. starts to fall

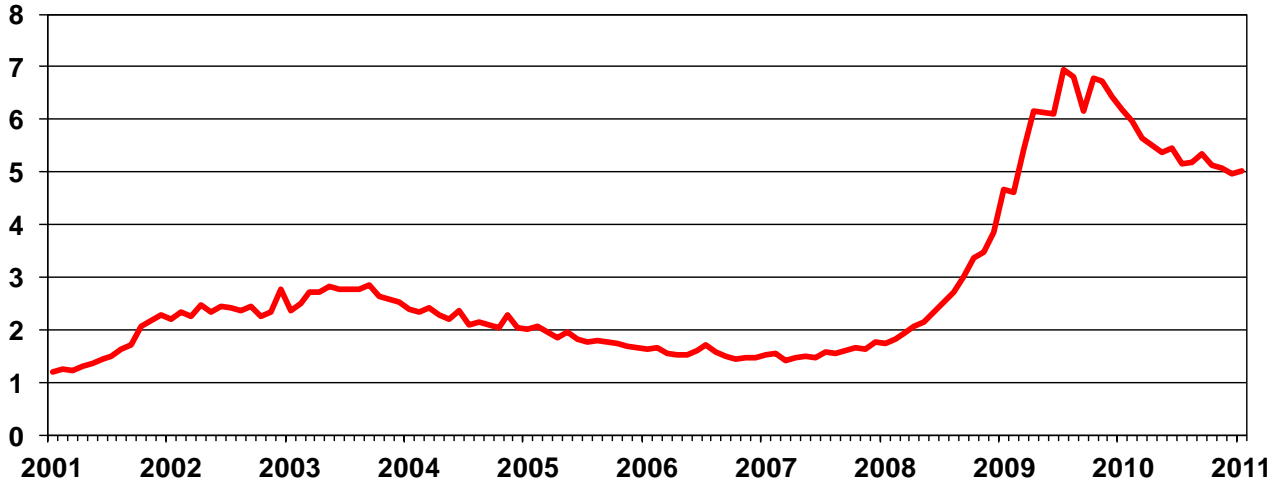


Source: Bureau of Labor Statistics.

Still not enough job openings

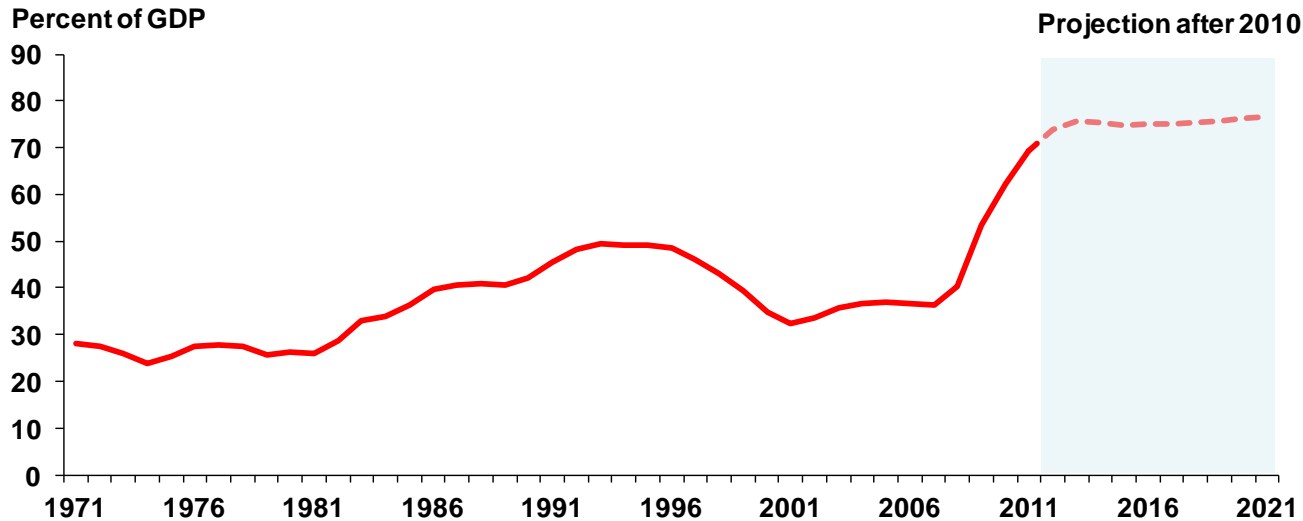


Number of unemployed per job opening



Source: Bureau of Labor Statistics.

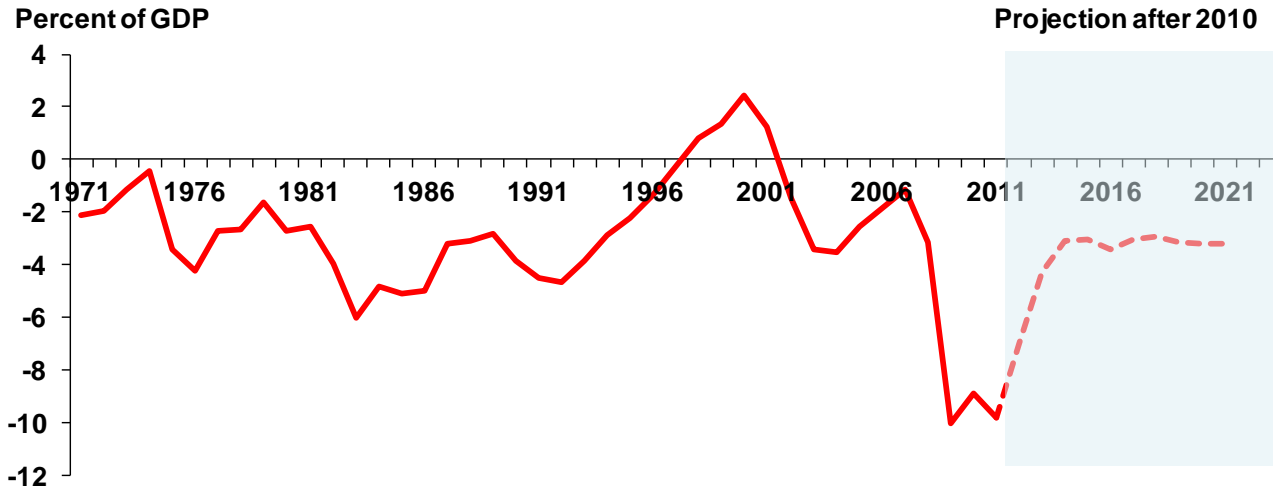
Federal debt held by public



Source: Congressional Budget Office.

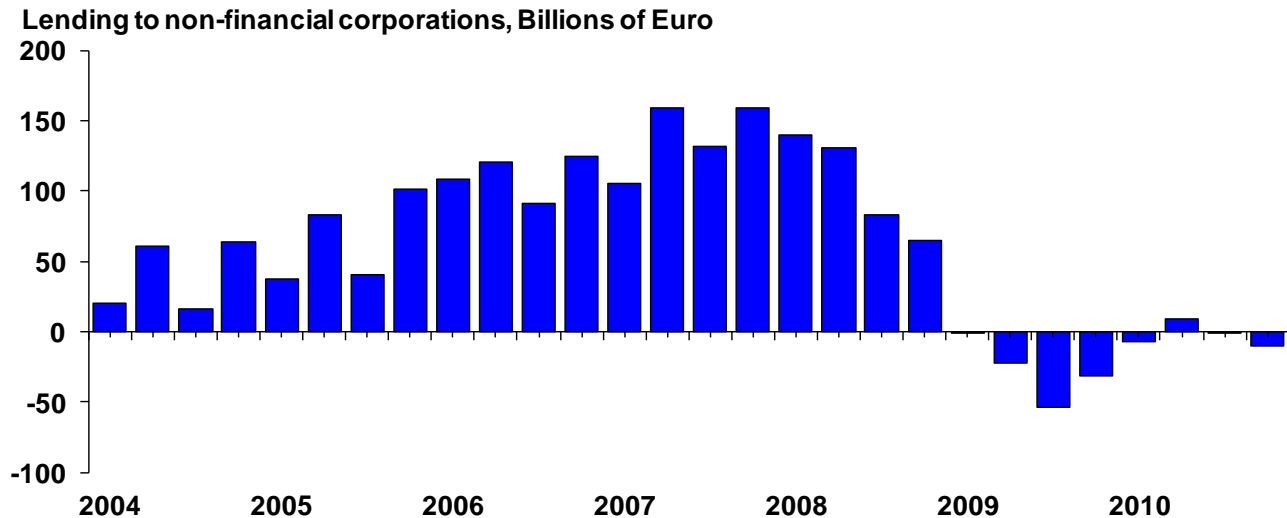


Federal budget deficit



Source: Congressional Budget Office.

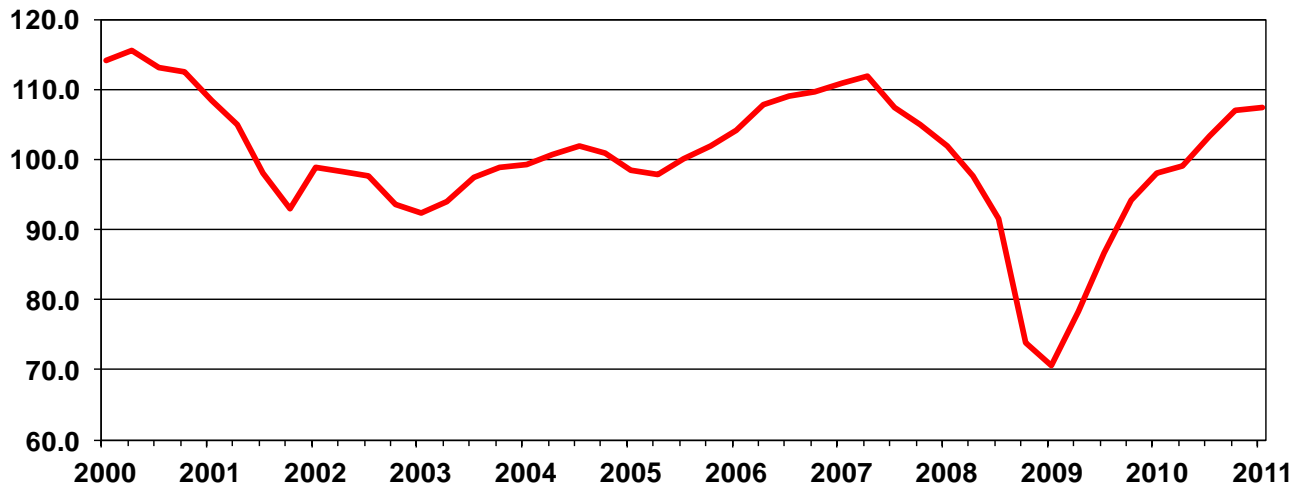
Europe: Banks are still not lending



Source: European Central Bank

Economic confidence index: Eurozone

Economic confidence index

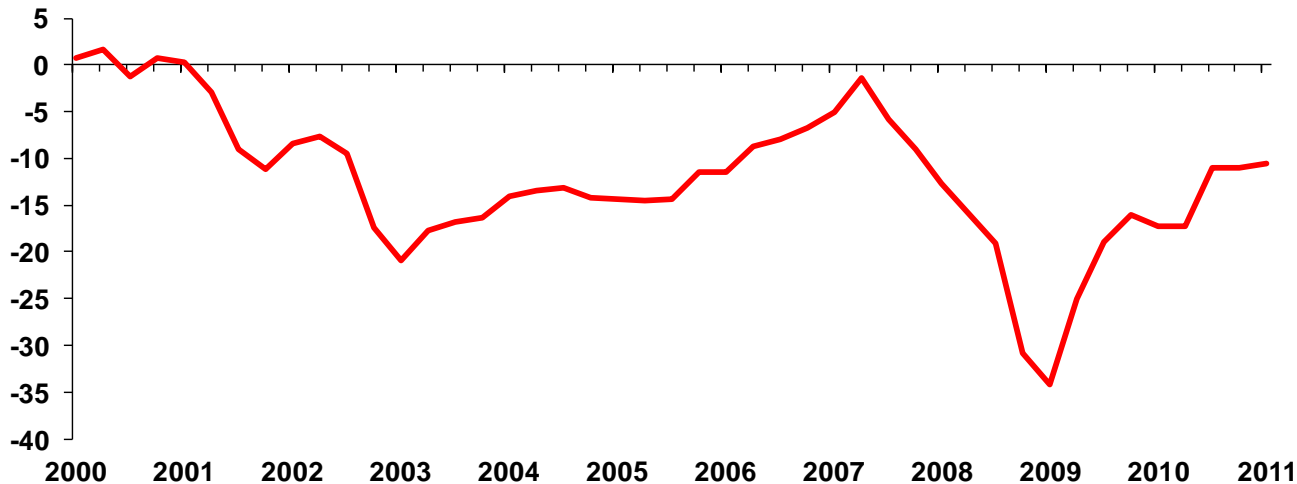


Sources: Eurostat, Bloomberg.



Consumer confidence index: Eurozone

Consumer confidence index

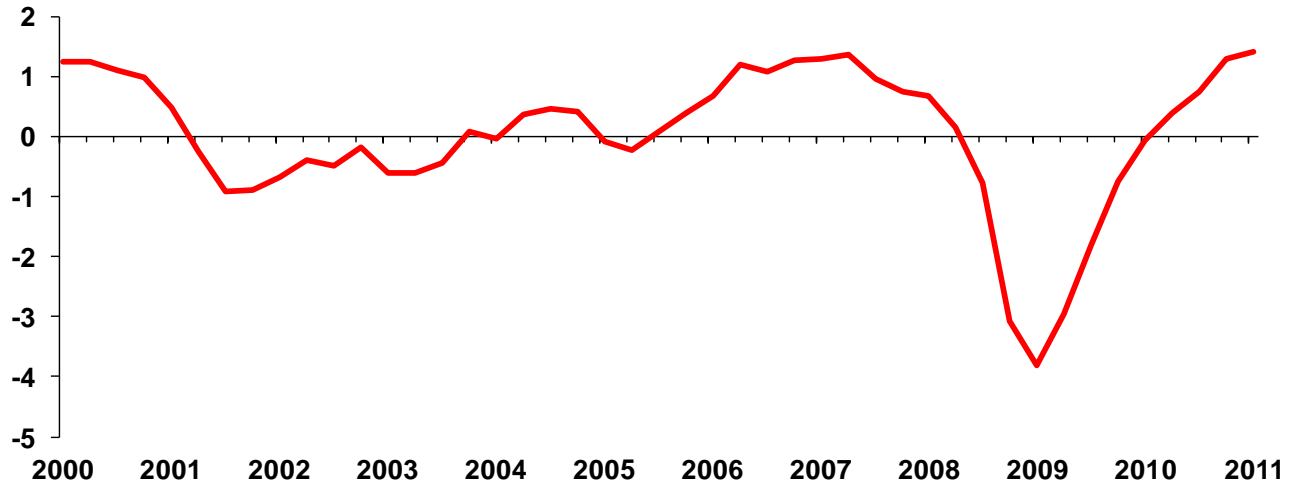


Sources: Eurostat, Bloomberg.



Business climate indicator: Eurozone

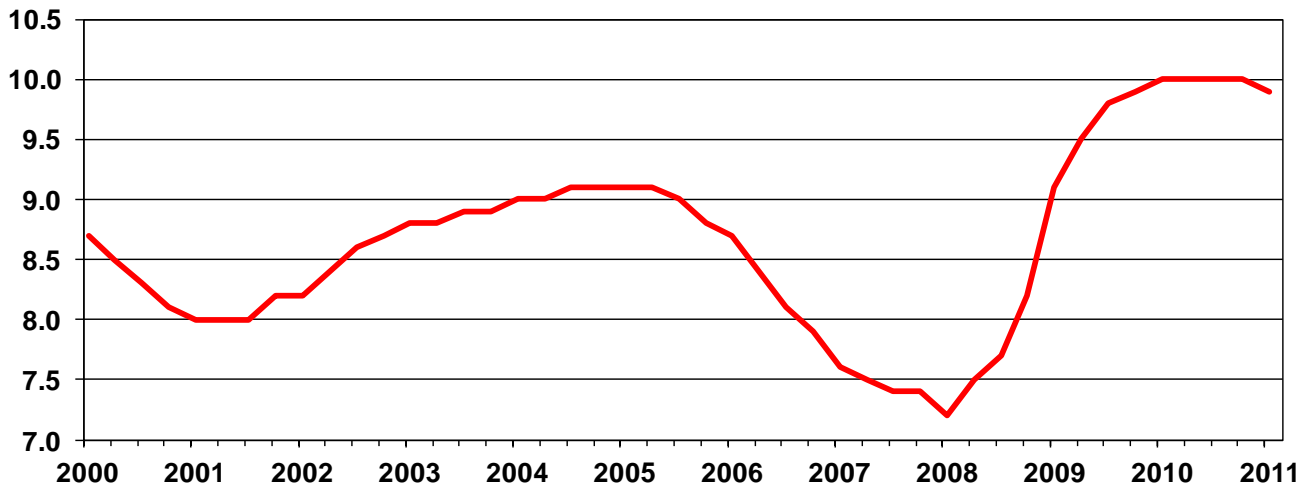
Business climate indicator



Sources: Eurostat, Bloomberg.

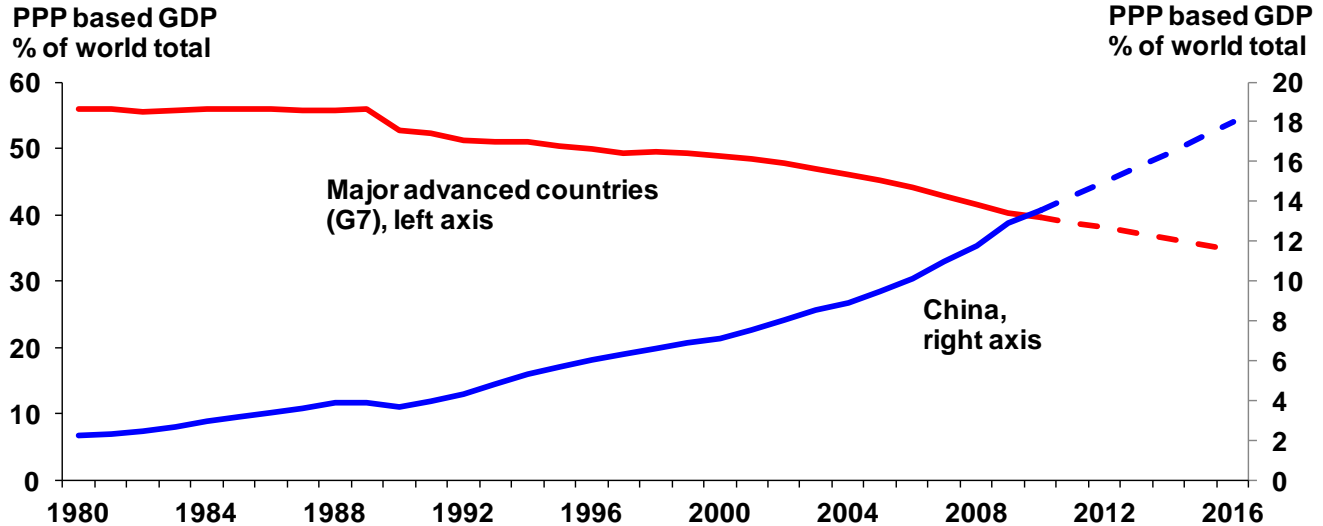
Unemployment rates in the Eurozone remain high

Unemployment rate, percent (seasonally adjusted)



Sources: Eurostat, Bloomberg.

China's rising purchasing power: Will domestic demand be the new engine of growth?



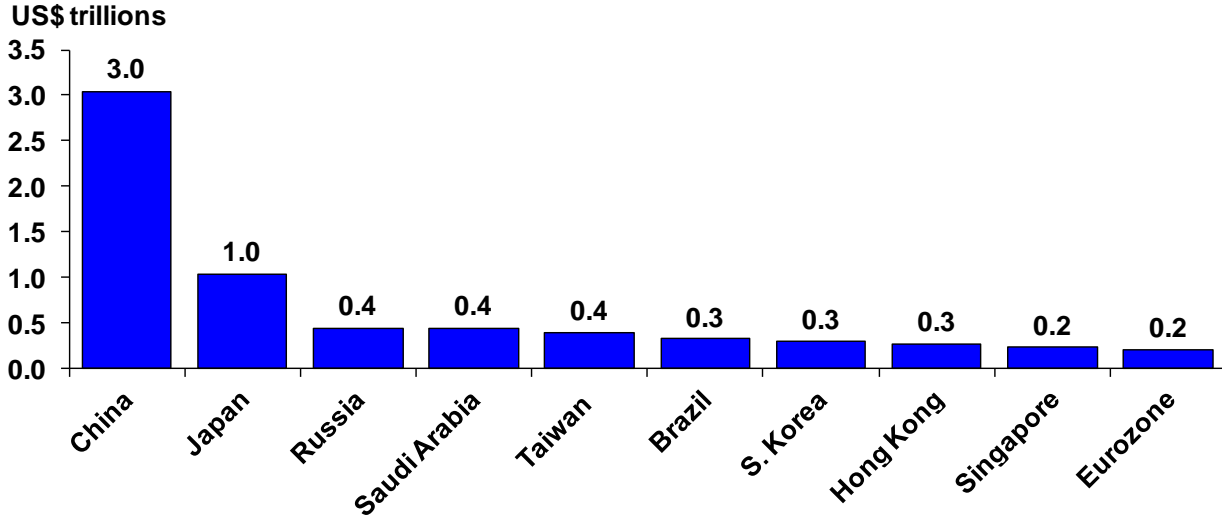
Source: International Monetary Fund, *World Economic Outlook*.

Top holders of foreign exchange reserves

Most recently available data, as of April 20, 2011



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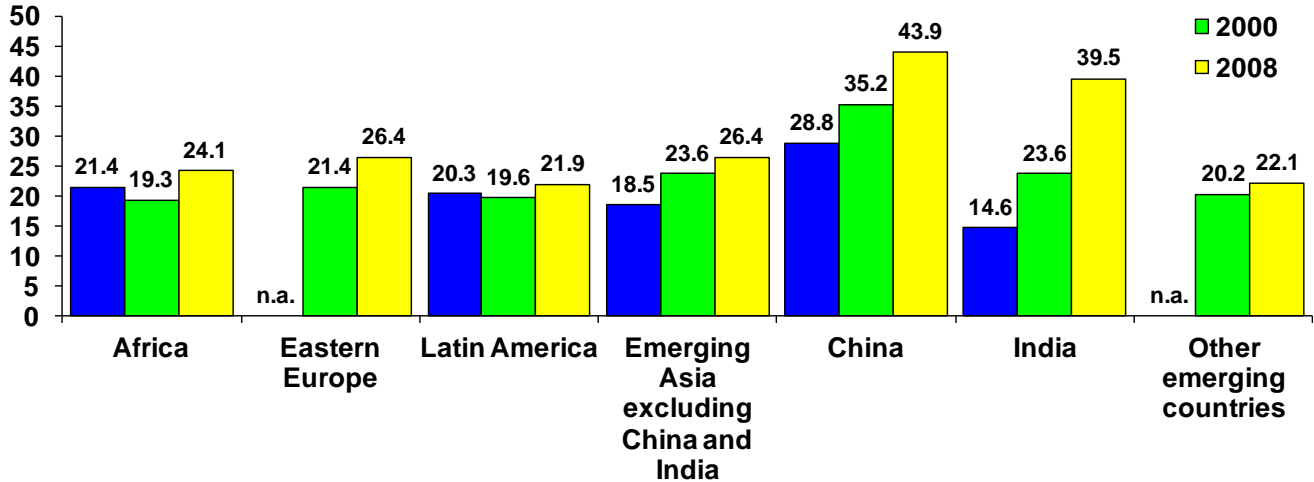
Source: Bloomberg.

Investment rates have increased across all emerging market regions since 2000



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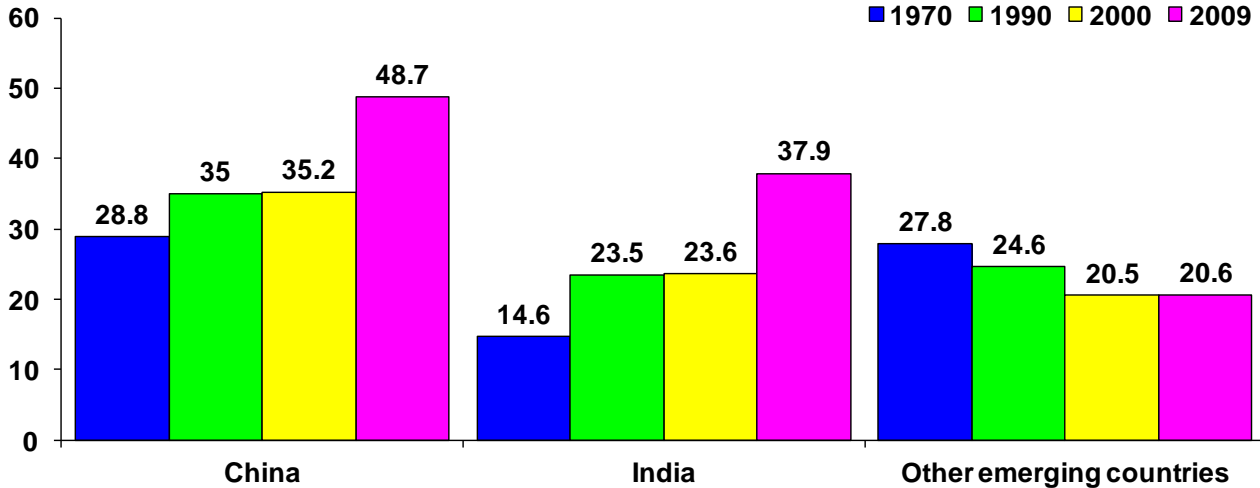
Investment, percent of GDP



Source: McKinsey Global Institute.

Investment rates at China and India have reached very high levels

Investment, percent of GDP



Middle class in emerging countries spends a total of \$6.9 trillion annually

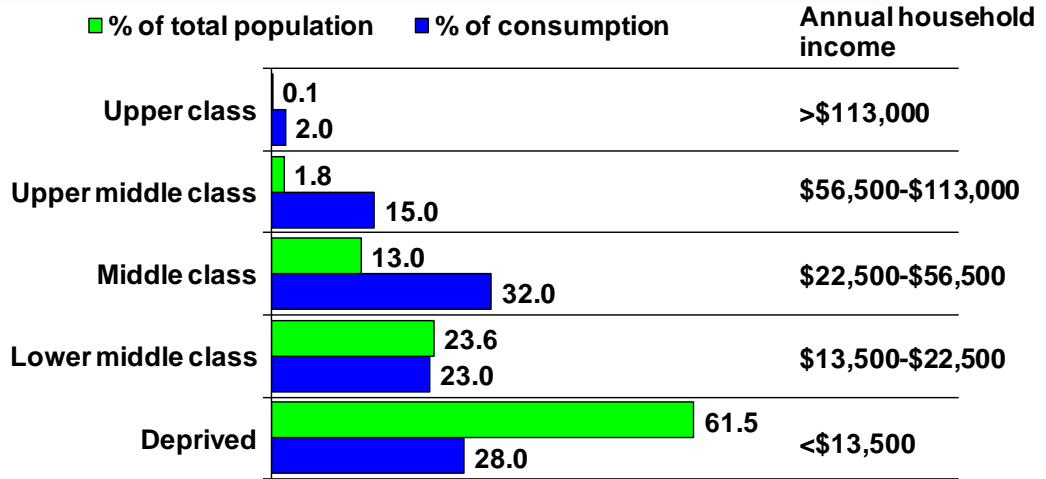


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In 2009:

Total consumption
by emerging
countries:
\$9.7 trillion

Of which:
Consumption by
Middle class:
\$6.9 trillion

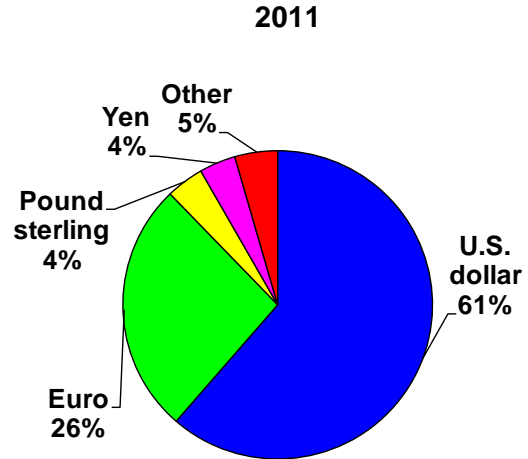
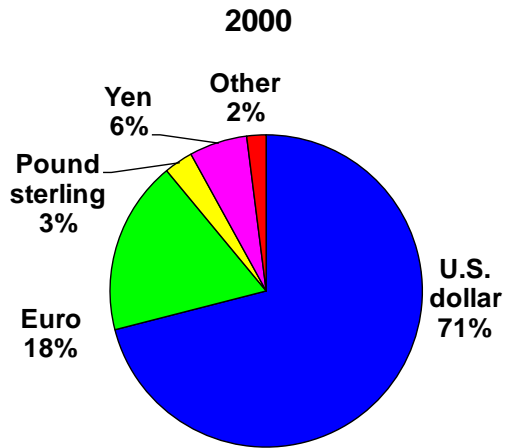


Increasing competition for the U.S. dollar



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Foreign exchange reserves held in different currencies



Source: Bloomberg.

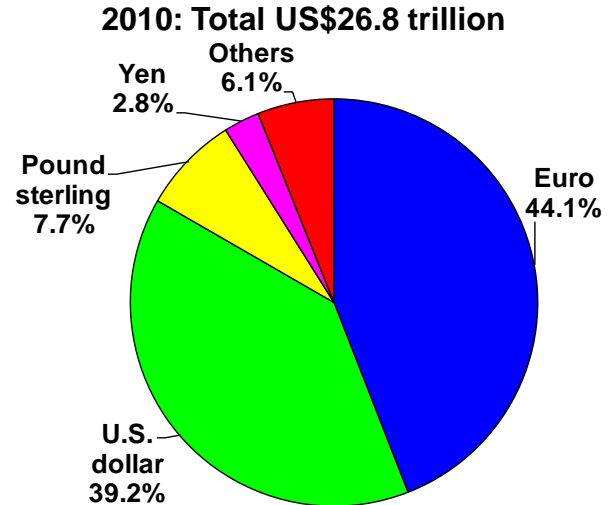
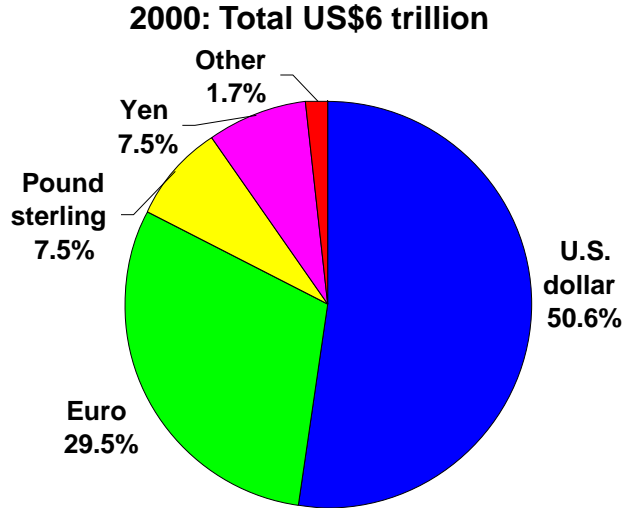
Note: Unallocated foreign exchange reserves excluded.

Declining role of the U.S. dollar

International debt outstanding by currency



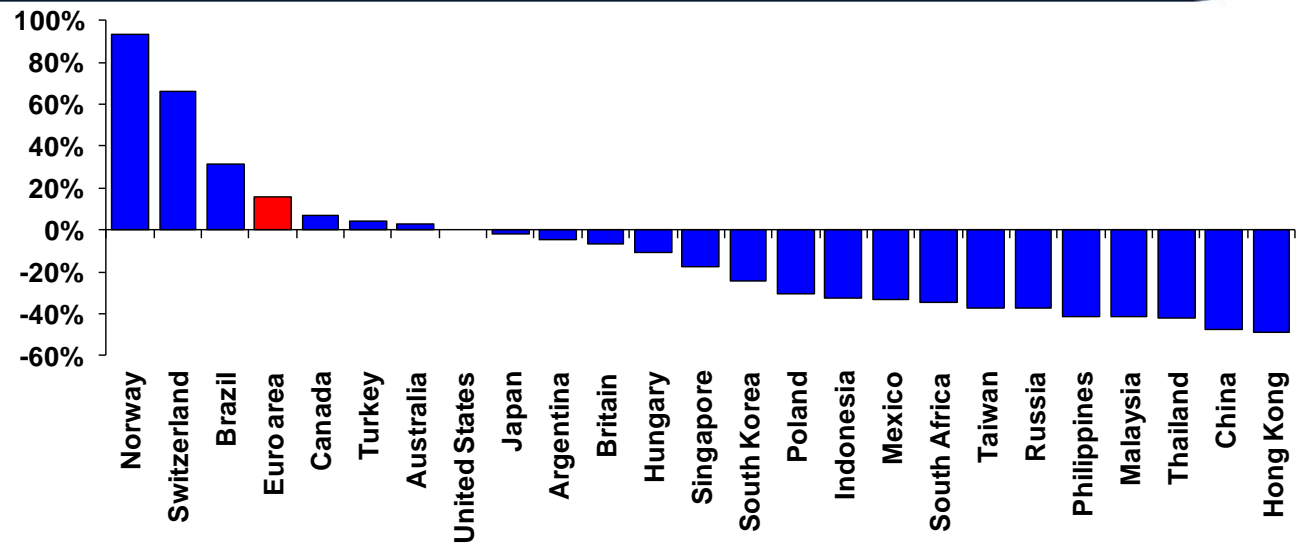
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Source: Bank of International Settlements.



Big Mac Index: Euro overvalued?

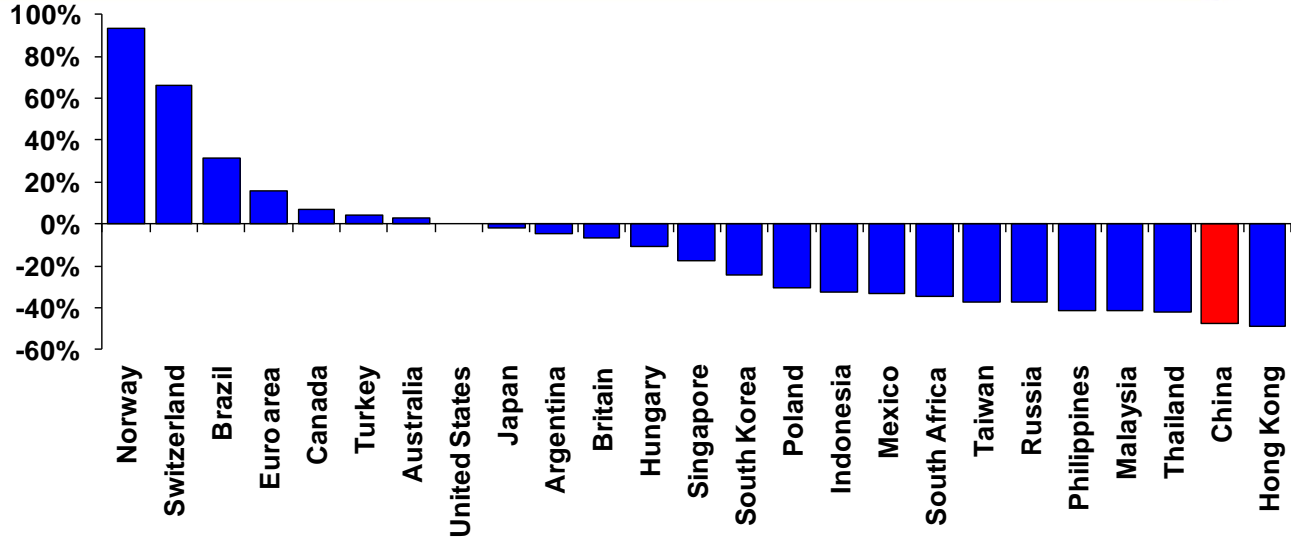


Source: *The Economist*.

Big Mac Index: Chinese currency still undervalued



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Source: *The Economist*.

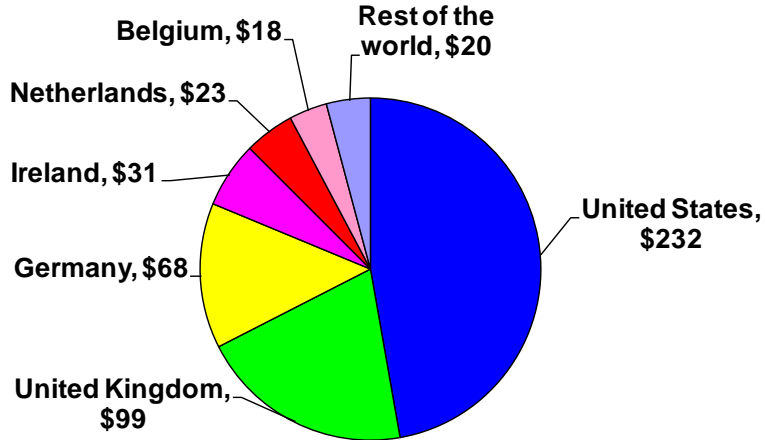
Government capital investments in financial firms

Most recently available data, as of April 6, 2011 (US\$ billions)



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Total outstanding = \$491 billion



Source: Bloomberg.

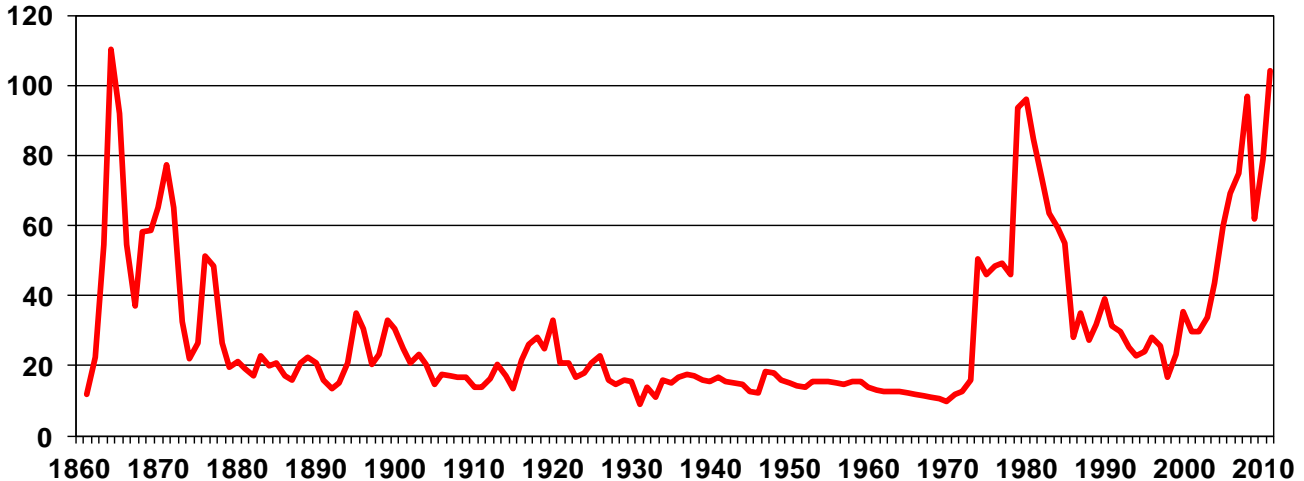
Oil prices in real terms nearly at historical high



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1861 to Q1 2011

Average crude oil price in 2009 dollars, US\$ per barrel



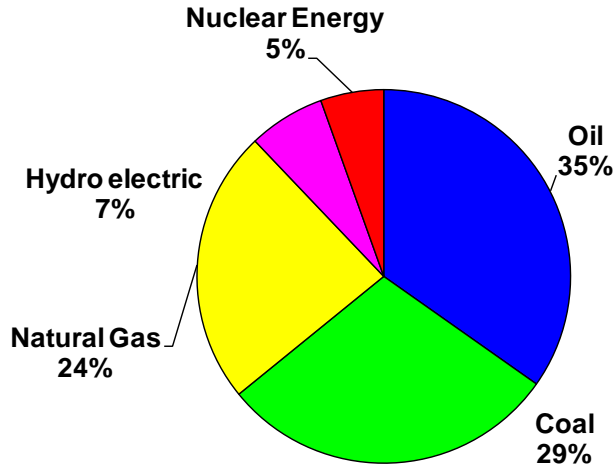
Sources: BP Amoco's, Bloomberg, Bureau of Labor Statistics, Milken Institute.

Note: 1861-1944 U.S. average. 1945-1983 Arabian Light posted at Ras Tanura. 1984 onward Brent dated. 1861-2009 figures calculated by BP. 2010 and 2011 figures calculated by MI staff using data from Bloomberg and Bureau of Labor Statistics.

Oil accounts for one-third of global primary energy consumption 2009



Global primary energy consumption

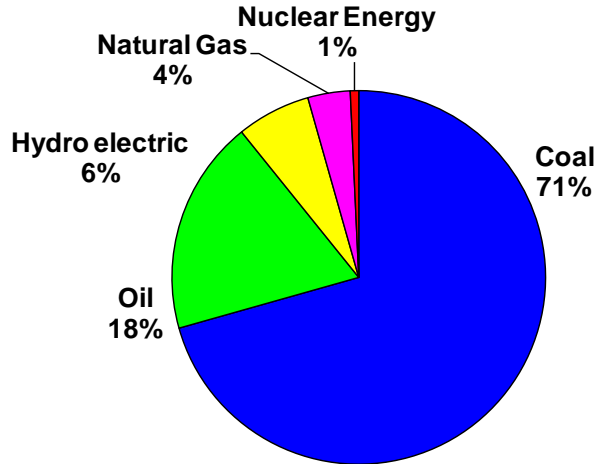


Source: BP Amoco's.

Coal accounts for 70 percent of China's primary energy consumption *2009*



China's primary energy consumption

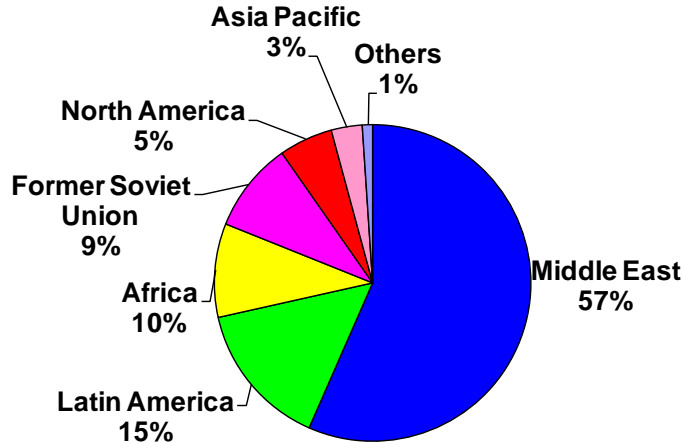


Source: BP Amoco's.

Oil reserves are concentrated in politically unstable regions



Total proved reserves (2009): 1.33 trillion barrels



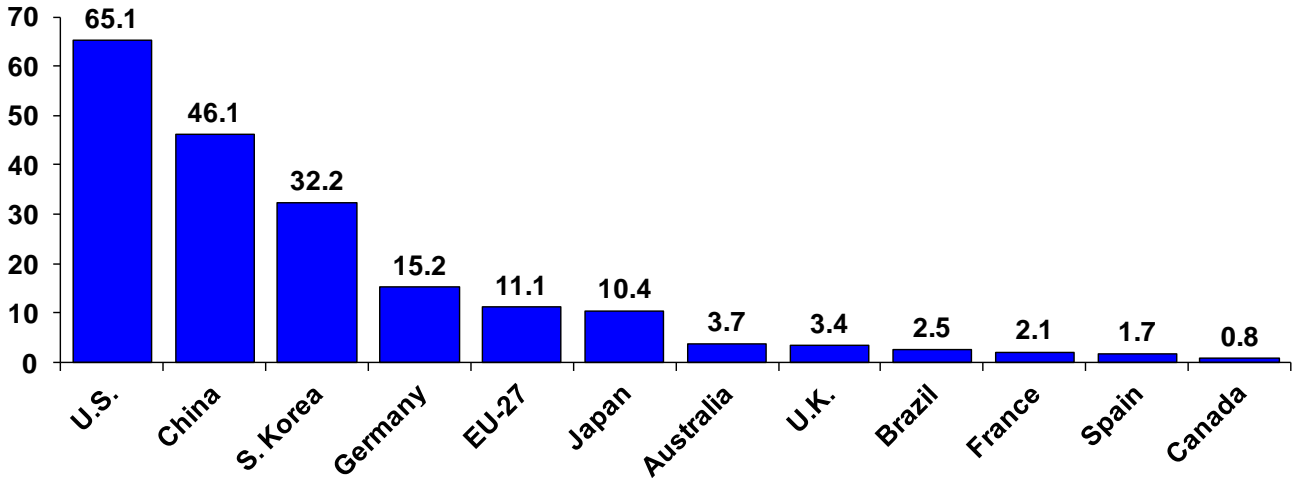
Green components of economic stimuli

2010



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US\$ billions



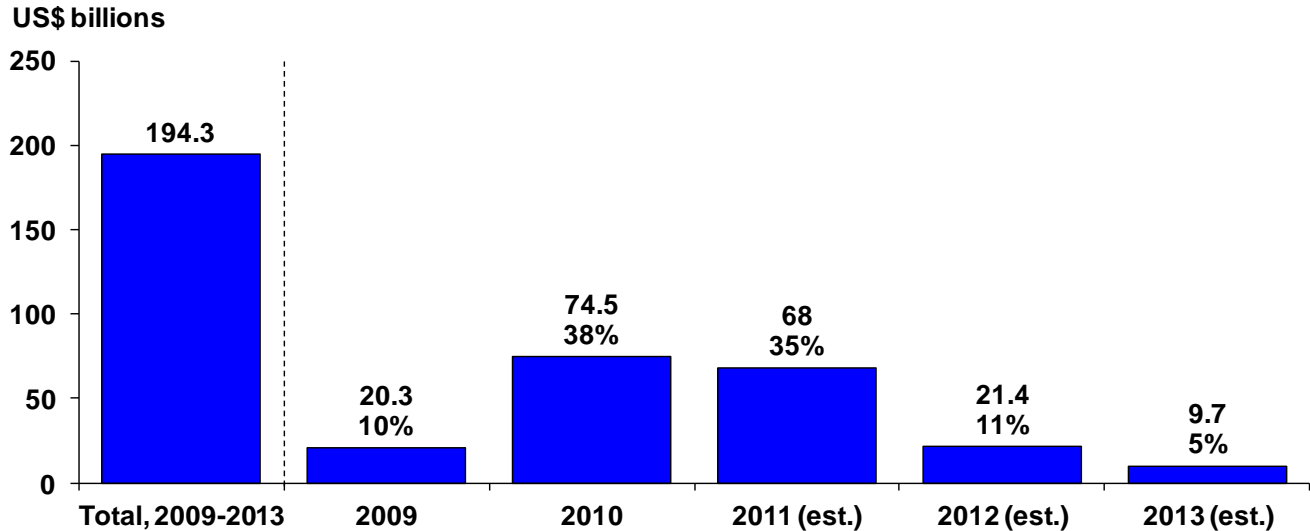
Source: Bloomberg New Energy Finance.

Global spending on clean energy stimuli

As of 2010

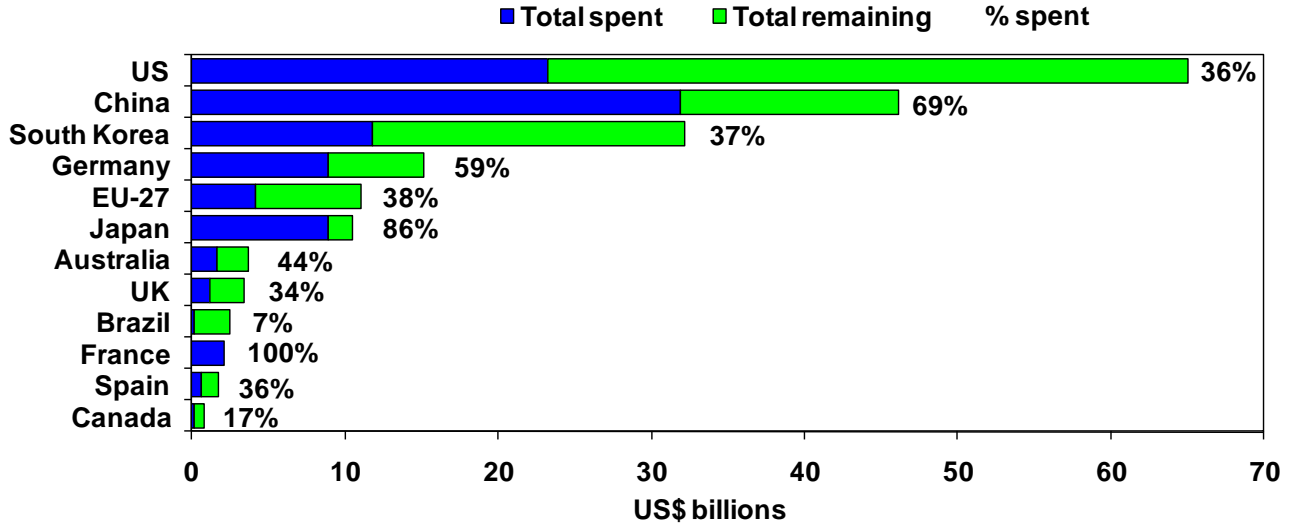


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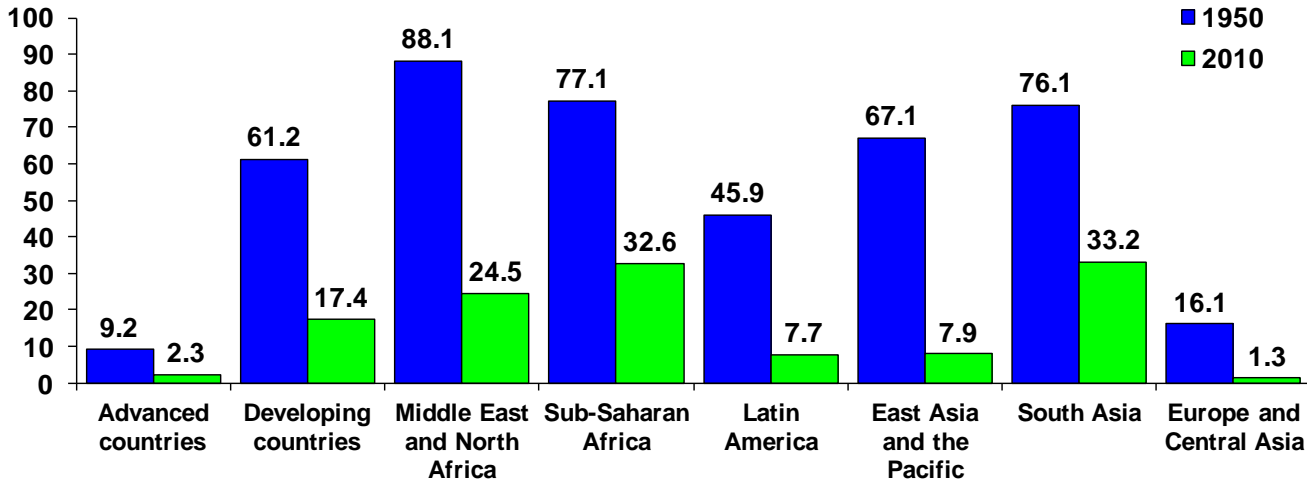
Source: Bloomberg New Energy Finance.

Clean energy stimulus funds spent and remaining *As of year-end 2010*

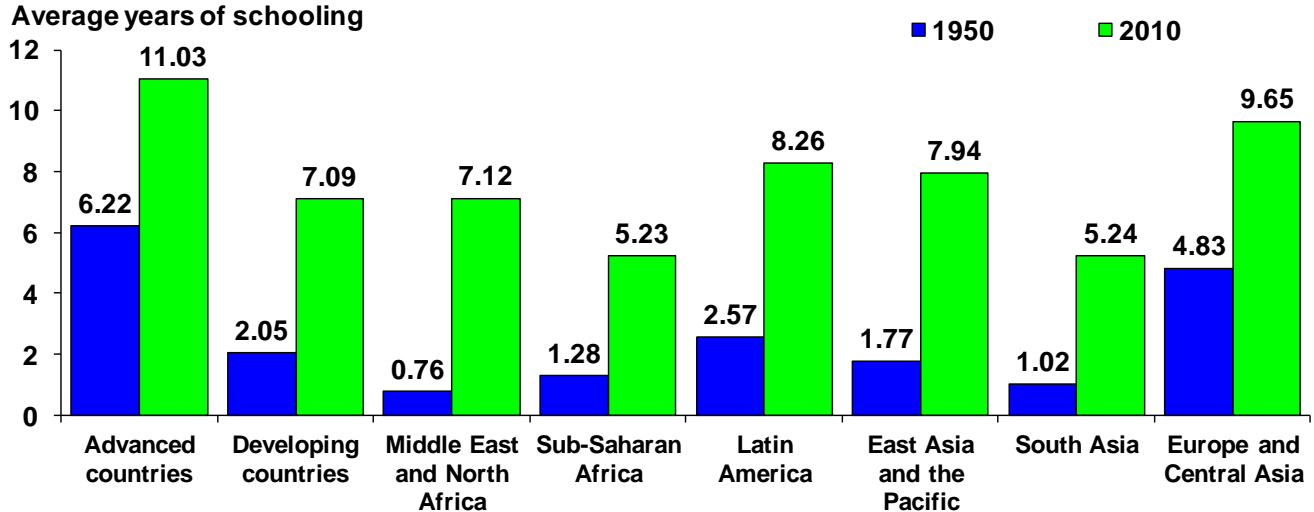


The education gap across regions

Population with no schooling, percent of population aged 15 and over

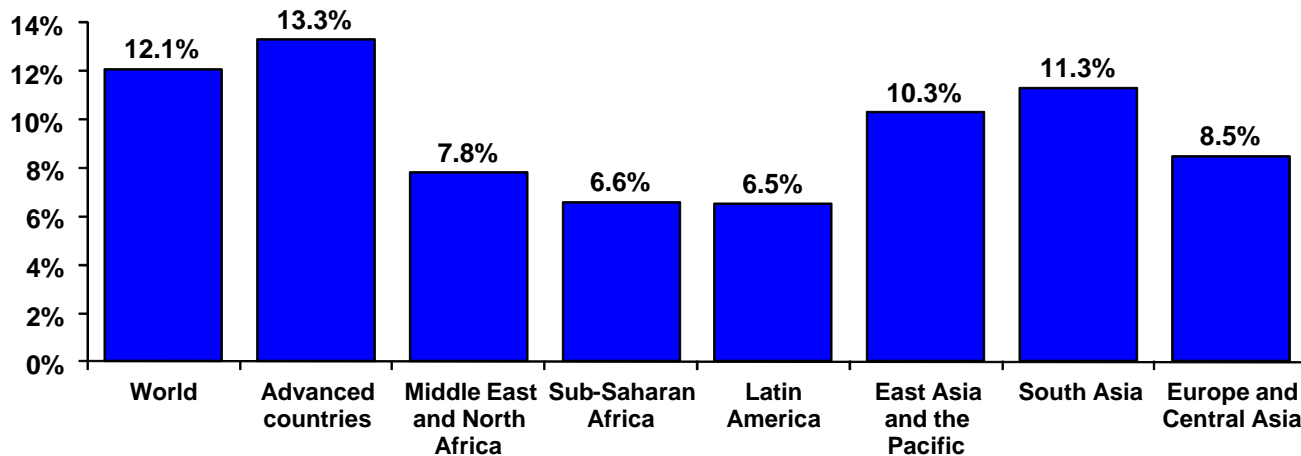


Average years of schooling increased dramatically for developing countries in the past 60 years



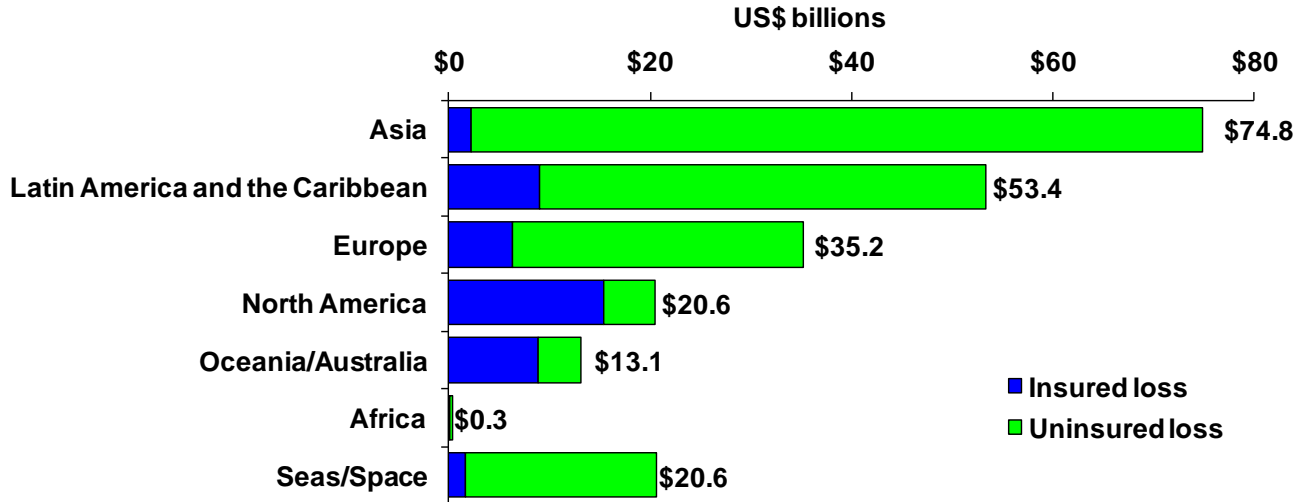
Return on human capital

Rate of return on an additional year of schooling, percent



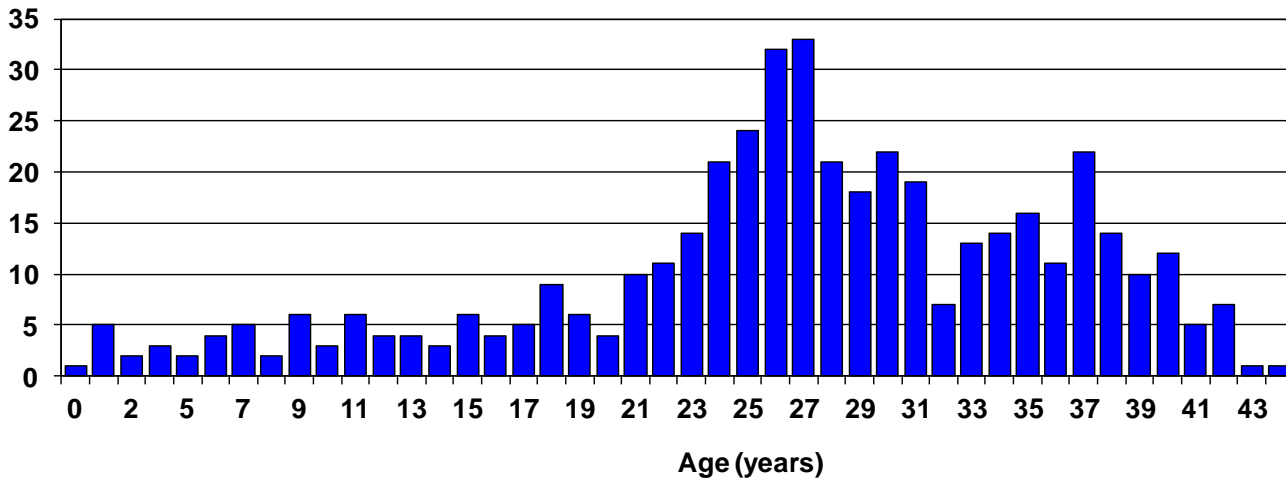
Source: Robert Barro and Jong-Wha Lee (2010).

Catastrophes in 2010 caused \$218 billion of economic losses, of which \$43 billion was insured



Aging nuclear reactors worldwide

Number of nuclear reactors



Source: World Nuclear Association.

Bank of Japan injected liquidity into the economy after the earthquake

