



US and Pennsylvania Economic Outlook

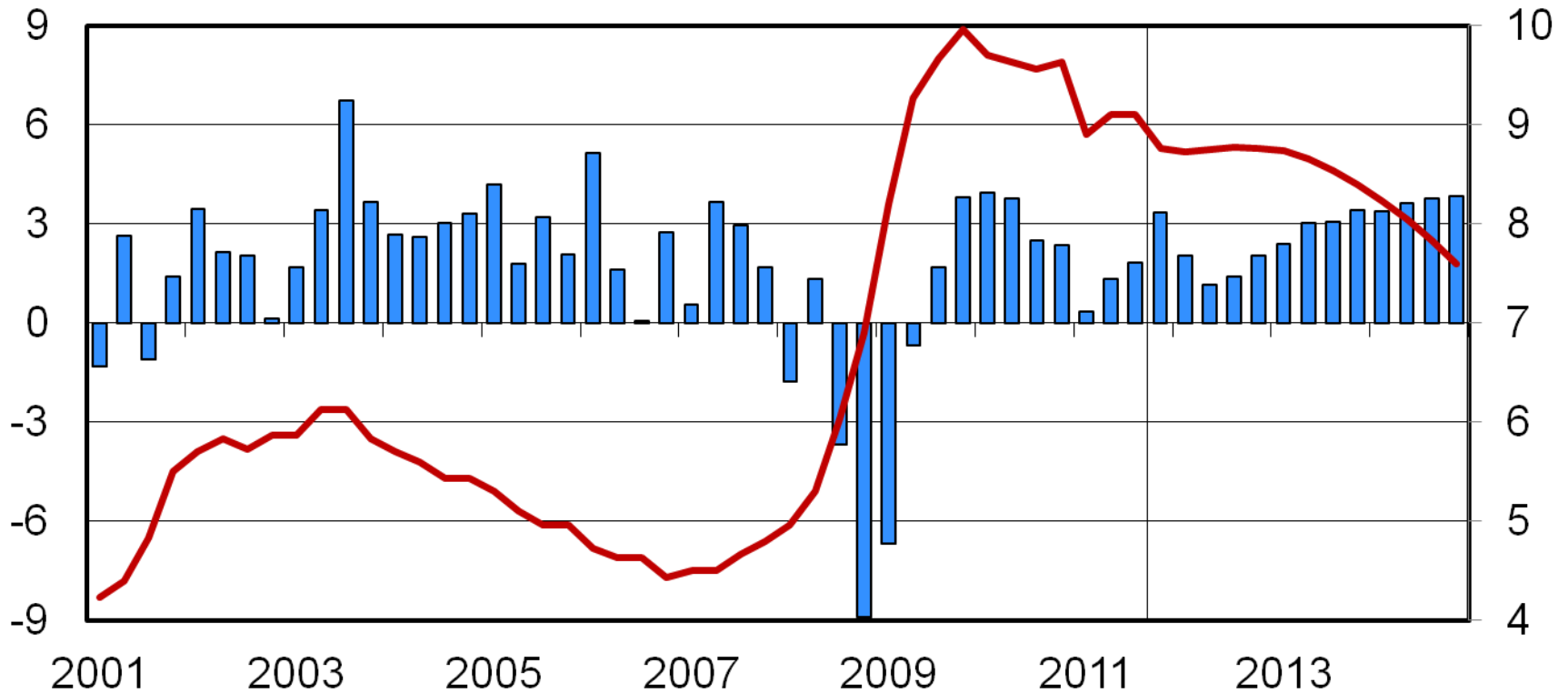
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The US Economy Keeps Growing

- Amid global storm clouds, the US economy will grow at a modest pace.
- Business equipment investment and consumer durables, supported by replacement demand, are driving near-term growth.
- Strained household finances will limit real consumption gains to about 2%.
- Fiscal policies will tighten, although the timing and scope is uncertain.
- A recovery in housing markets is key to more robust economic growth in 2013-15.
- The Eurozone sovereign-debt crisis is the biggest threat to growth; we see a 30% risk of another US recession in 2012.

Modest US Economic Growth and High Unemployment



■ Real GDP Growth (Left scale, annual percent change)
— Unemployment Rate (Right scale, percent)



US Economic Growth by Sector

(Percent change)

	2010	2011	2012	2013
Real GDP	3.0	1.8	2.0	2.4
Consumption	2.0	2.2	2.2	2.0
Residential Investment	-4.3	-1.7	7.7	16.9
Business Fixed Investment	4.4	8.7	5.3	5.8
Federal Government	4.5	-1.8	-2.5	-3.5
State & Local Government	-1.8	-2.2	-2.4	-0.9
Exports	11.3	6.9	4.0	7.6
Imports	12.5	4.8	3.2	3.5

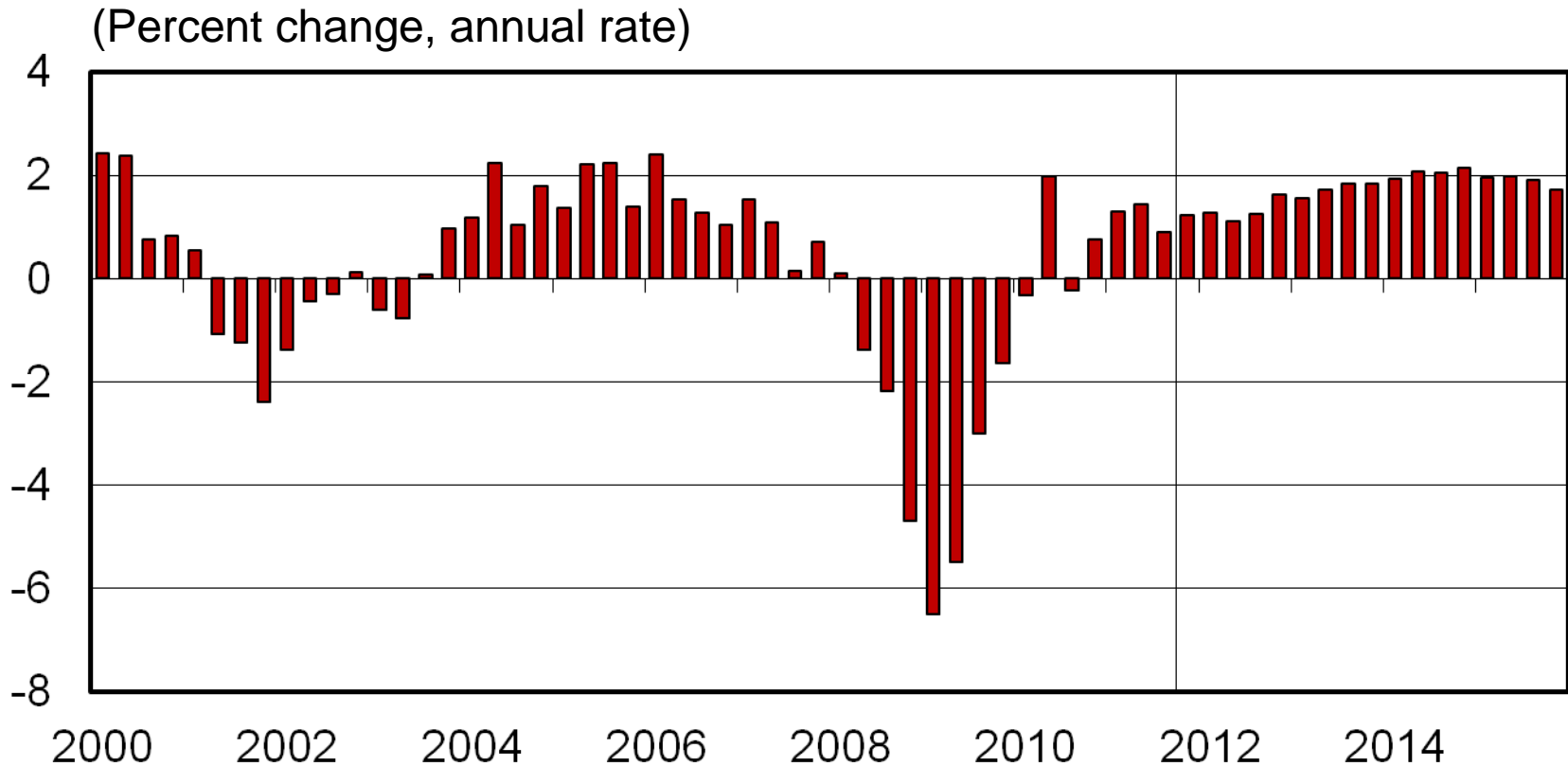


Other Key US Indicators

(Percent change unless noted)

	2010	2011	2012	2013
Industrial Production	5.3	4.1	2.8	2.9
Payroll Employment	-0.7	1.0	1.2	1.6
Light-Vehicle Sales (Millions)	11.6	12.8	13.5	14.7
Housing Starts (Millions)	0.58	0.61	0.73	0.97
Consumer Price Index	1.6	3.1	1.5	1.8
Core CPI	1.0	1.7	1.6	1.7
Refiners' Acquisition Oil Price (\$/barrel)	77	101	98	106
Federal Funds Rate (%)	0.2	0.1	0.1	0.1
10-Year Treasury Yield (%)	3.2	2.8	2.3	2.8

US Employment Will Gradually Recover, Reaching a New Peak in Late 2014





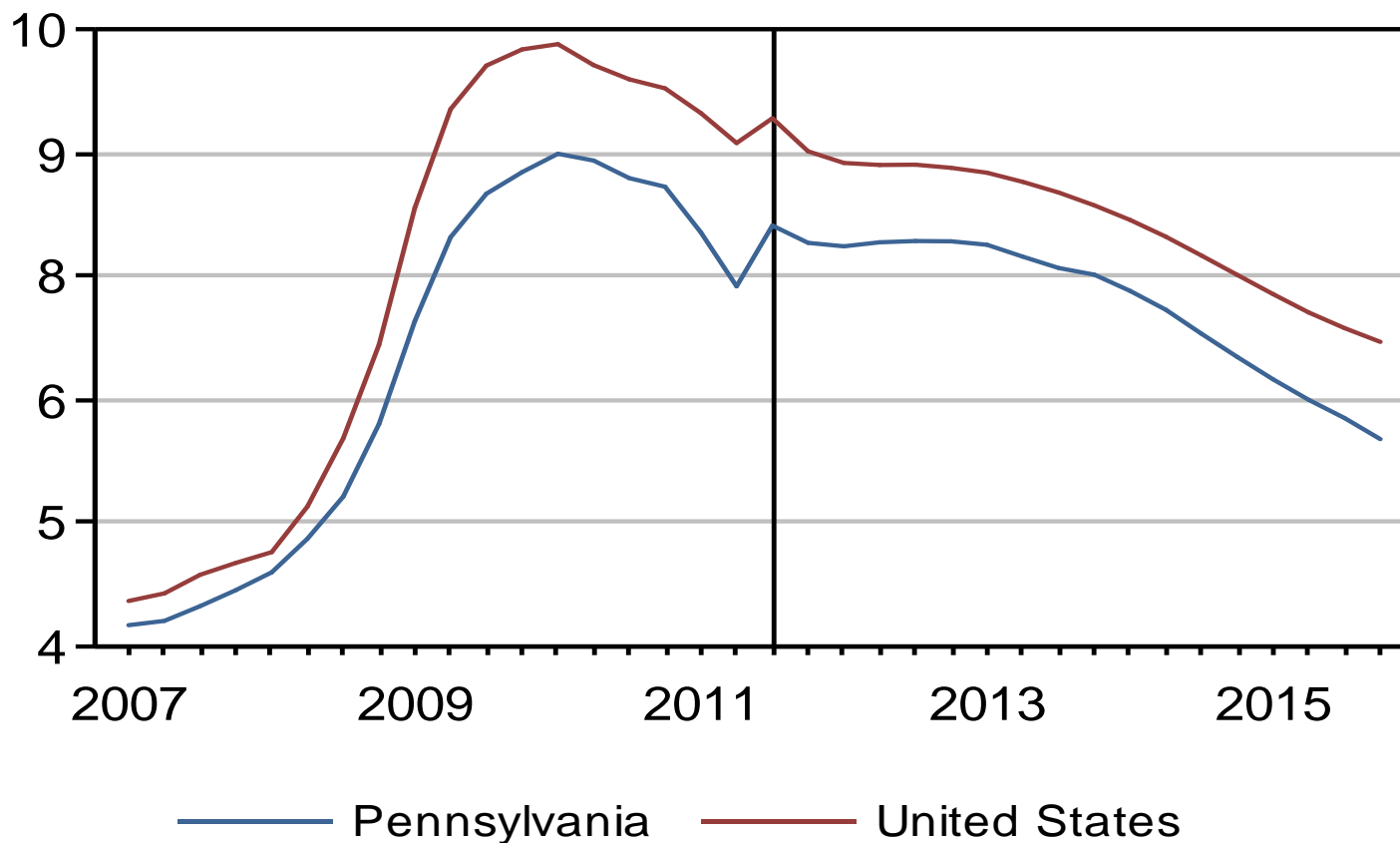
PA Faring Better than US During and Post-Recession

- The housing downturn was not as severe as in most-affected states.
 - PA got caught in overall problem.
- Decrease in payroll employment started later than in PA (mid-2008) than in states in middle of housing crisis (mid-2007).
- PA will also return to pre-recession peak employment earlier than US average
 - PA – 2013Q2 vs. US – 2014Q3
- Marcellus Shale natural gas production has been a big jobs booster.
 - Natural resources/mining and manufacturing the most obvious sectors.
 - Many related sectors, especially professional services, also involved.
 - Hotels, restaurants, retail, short-term housing also get a boost.
- State and local budget crunch (reduced revenues, more need for many services, can't put it on a credit card) adding to job losses, among other things.

PA Unemployment Rate Performing Better than US Since Start of Recession



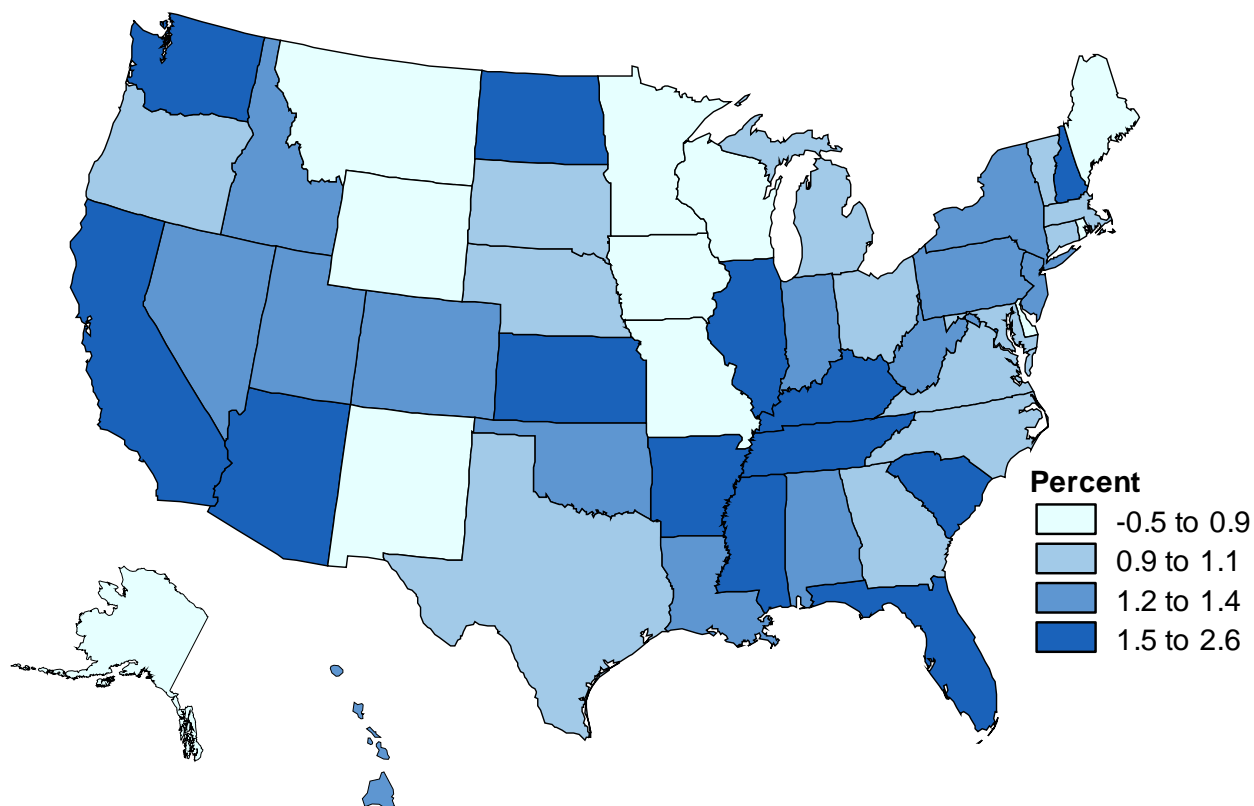
(Percent)



PA Employment Growth Better than Average Over the Next Year



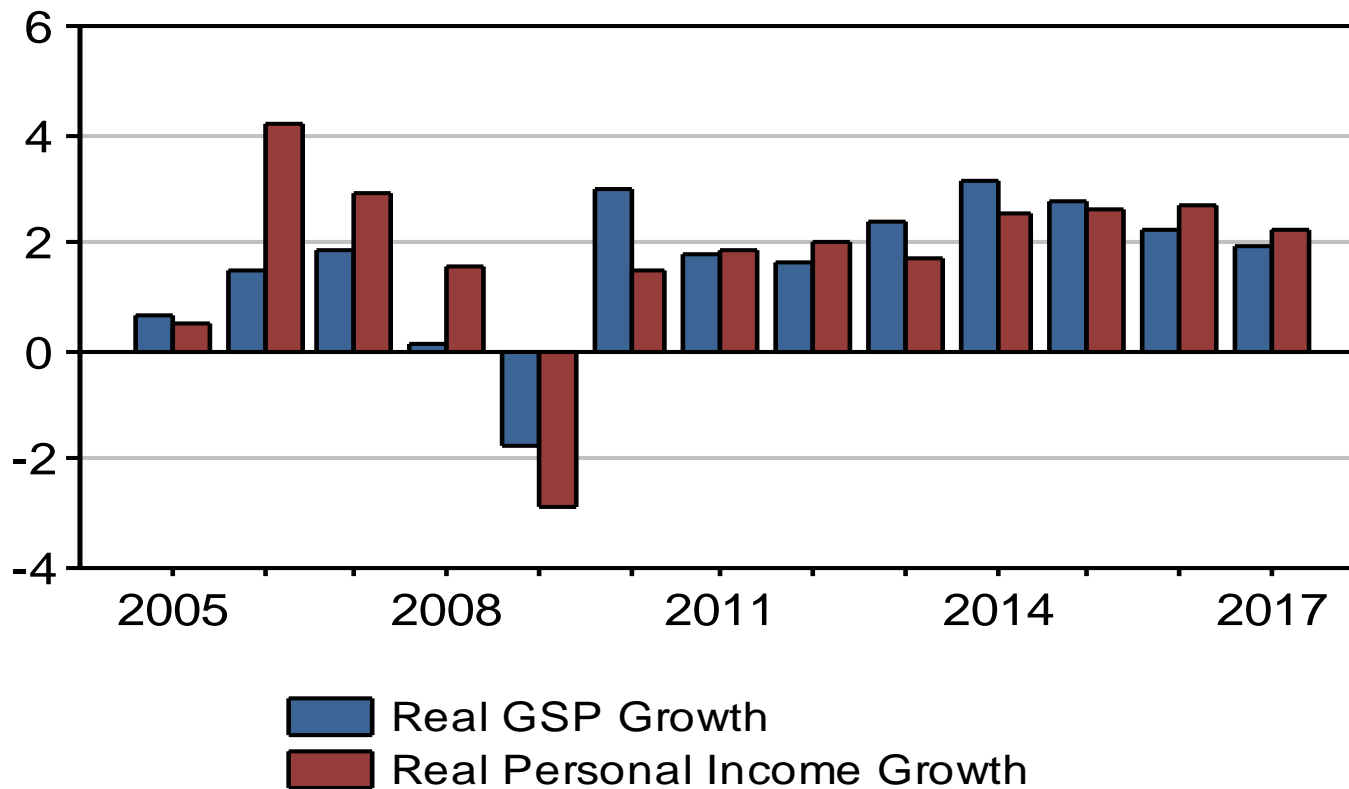
(Percent Change vs. Year-Ago)



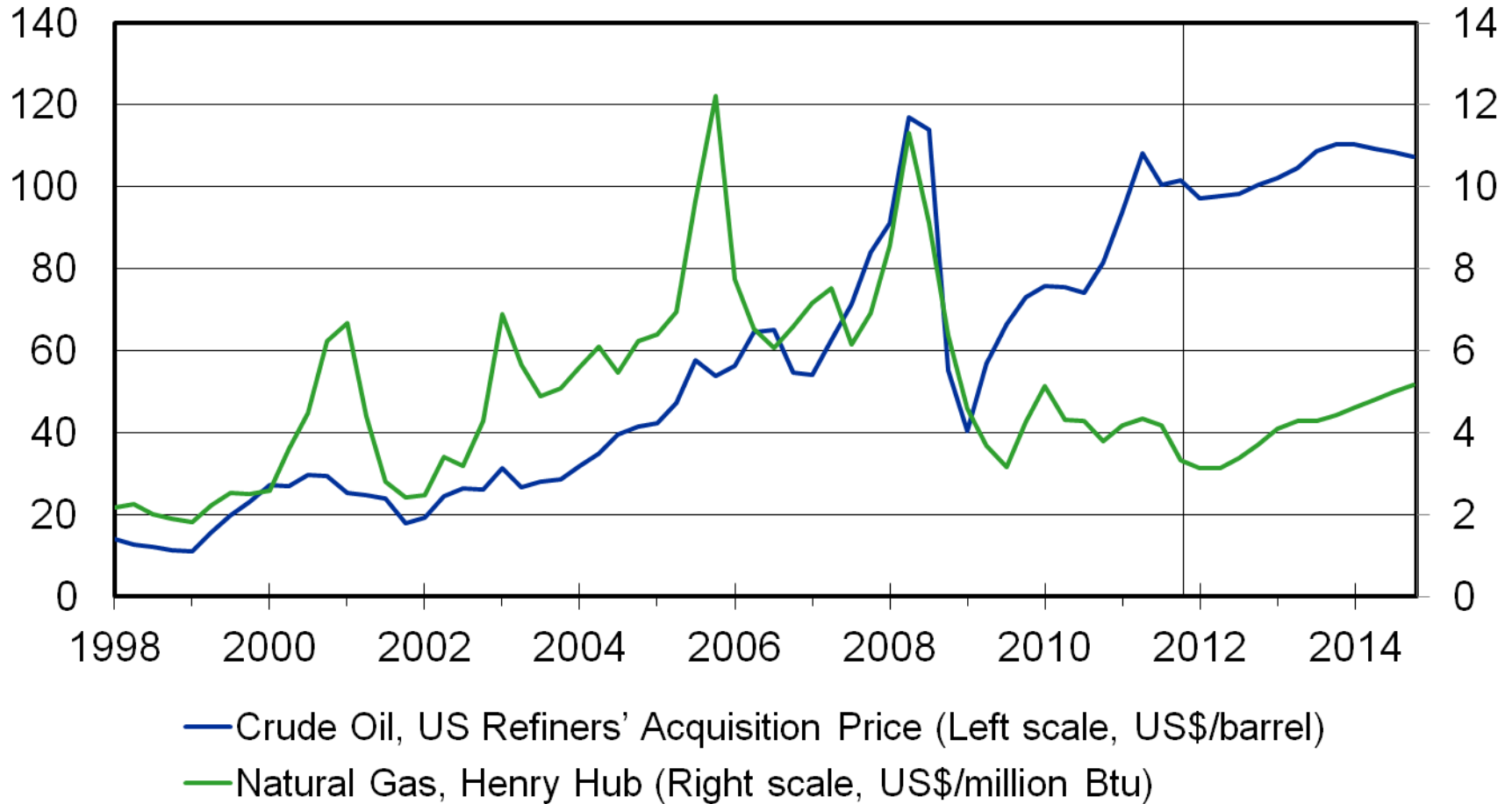
PA Gross State Product Growth Declines in 2011, While Incomes Continue to Rebound



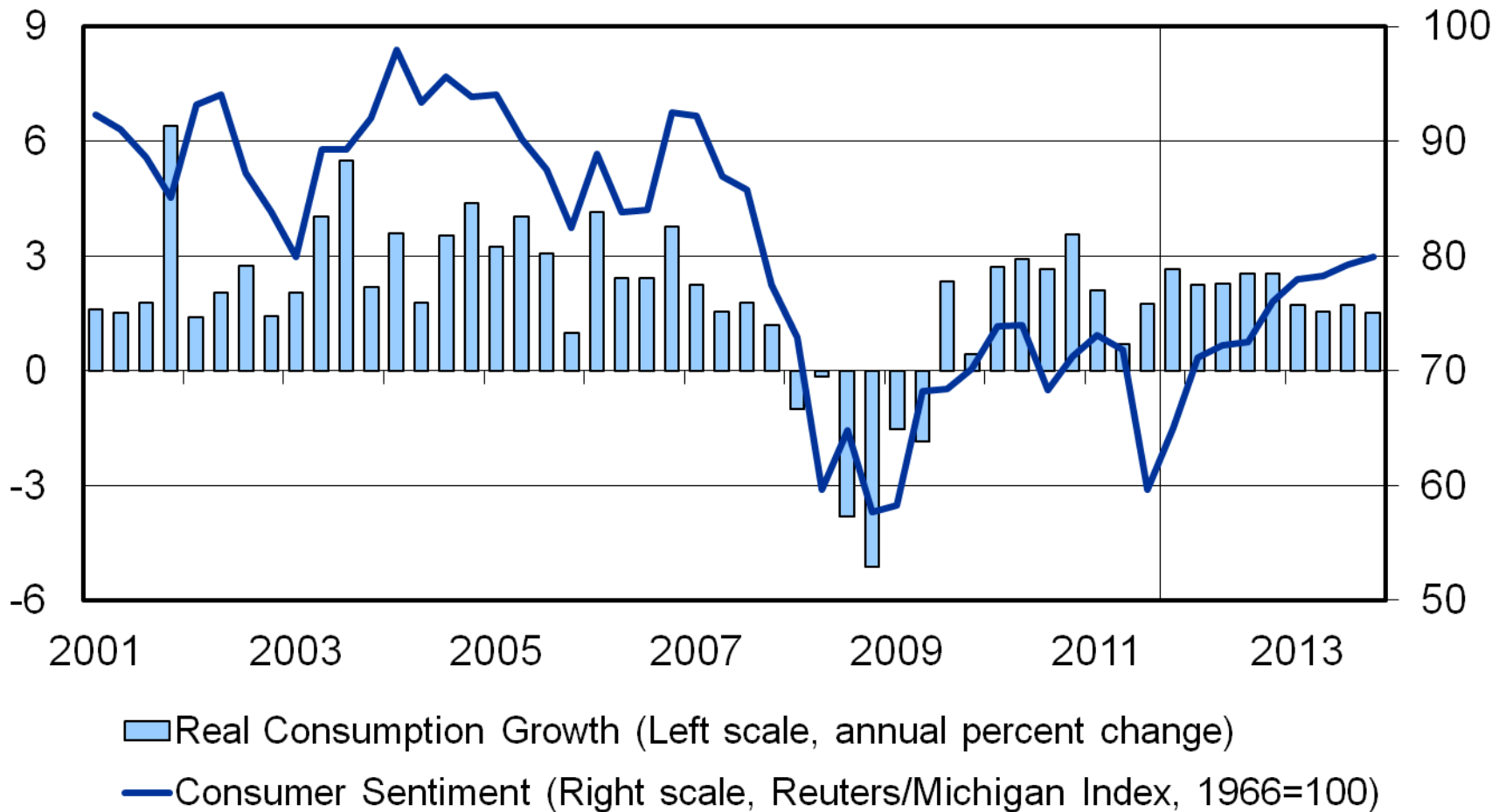
(Percent Change From Year Ago)



Crude Oil and Natural Gas Prices Have Diverged



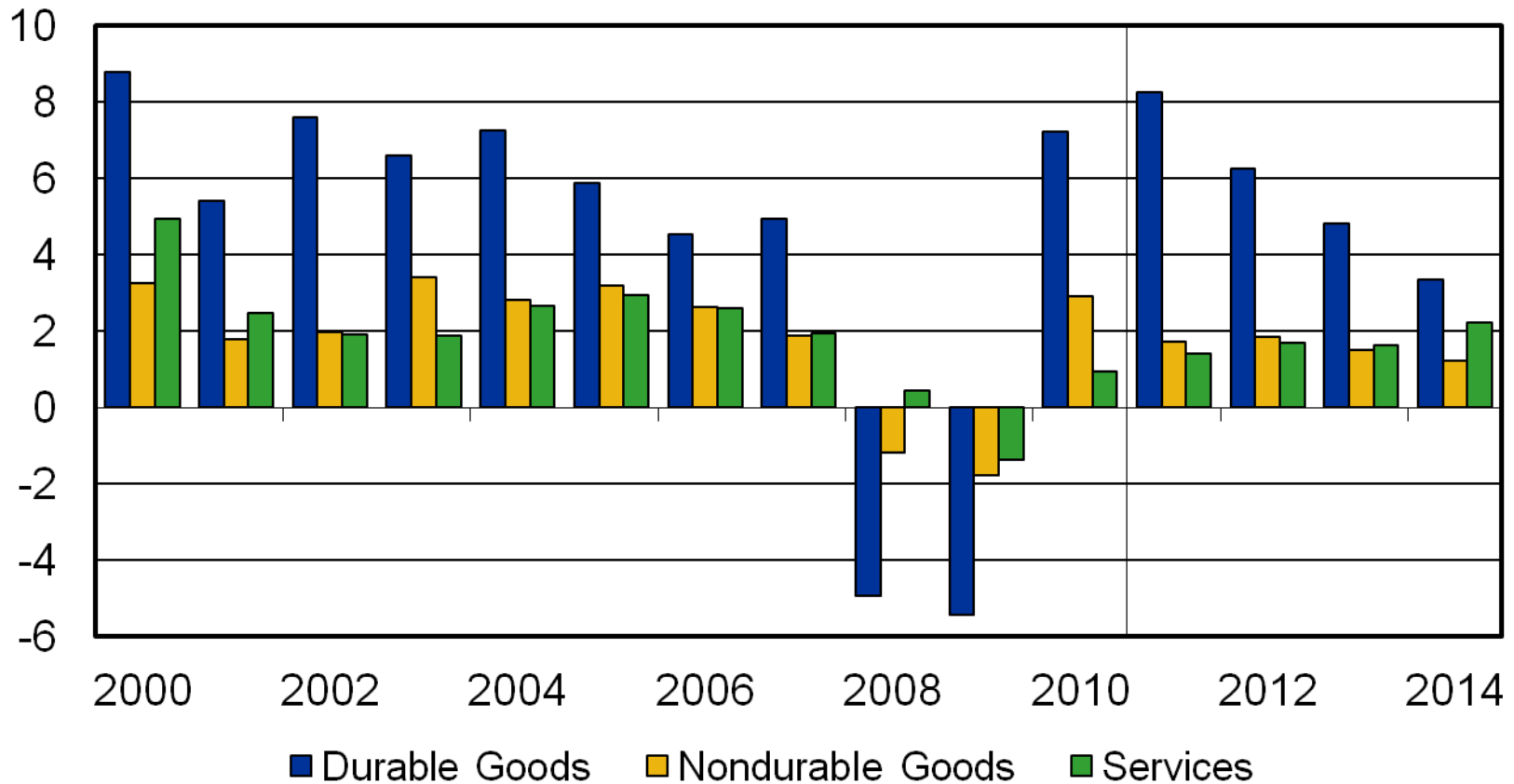
Consumers Are Cautious: Real Spending Growth



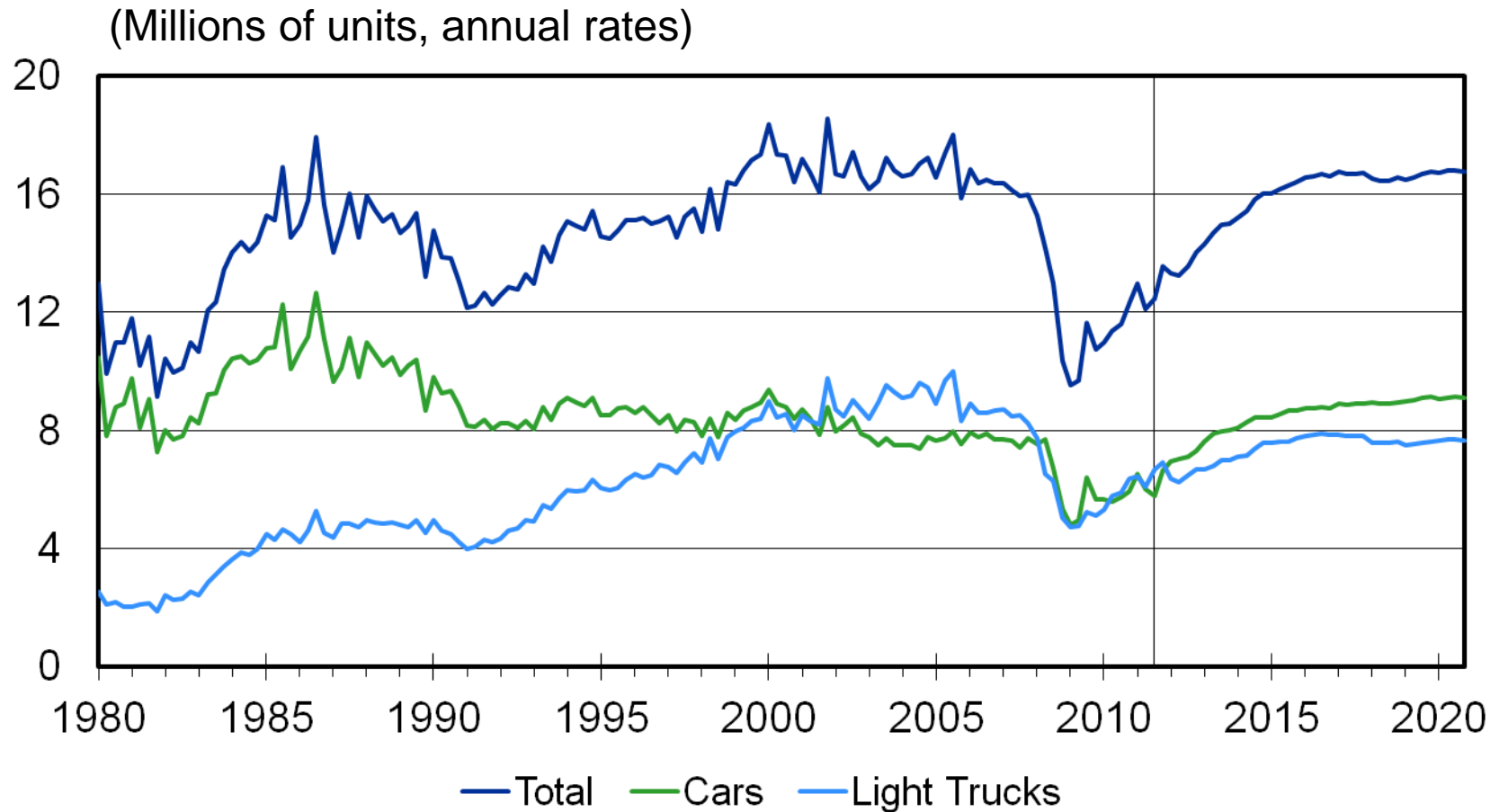
Pent-up Demand for Durable Goods Drives Growth in US Consumer Spending



(Percent change, chained 2005 dollars)



US Light-Vehicle Sales Are Gradually Recovering

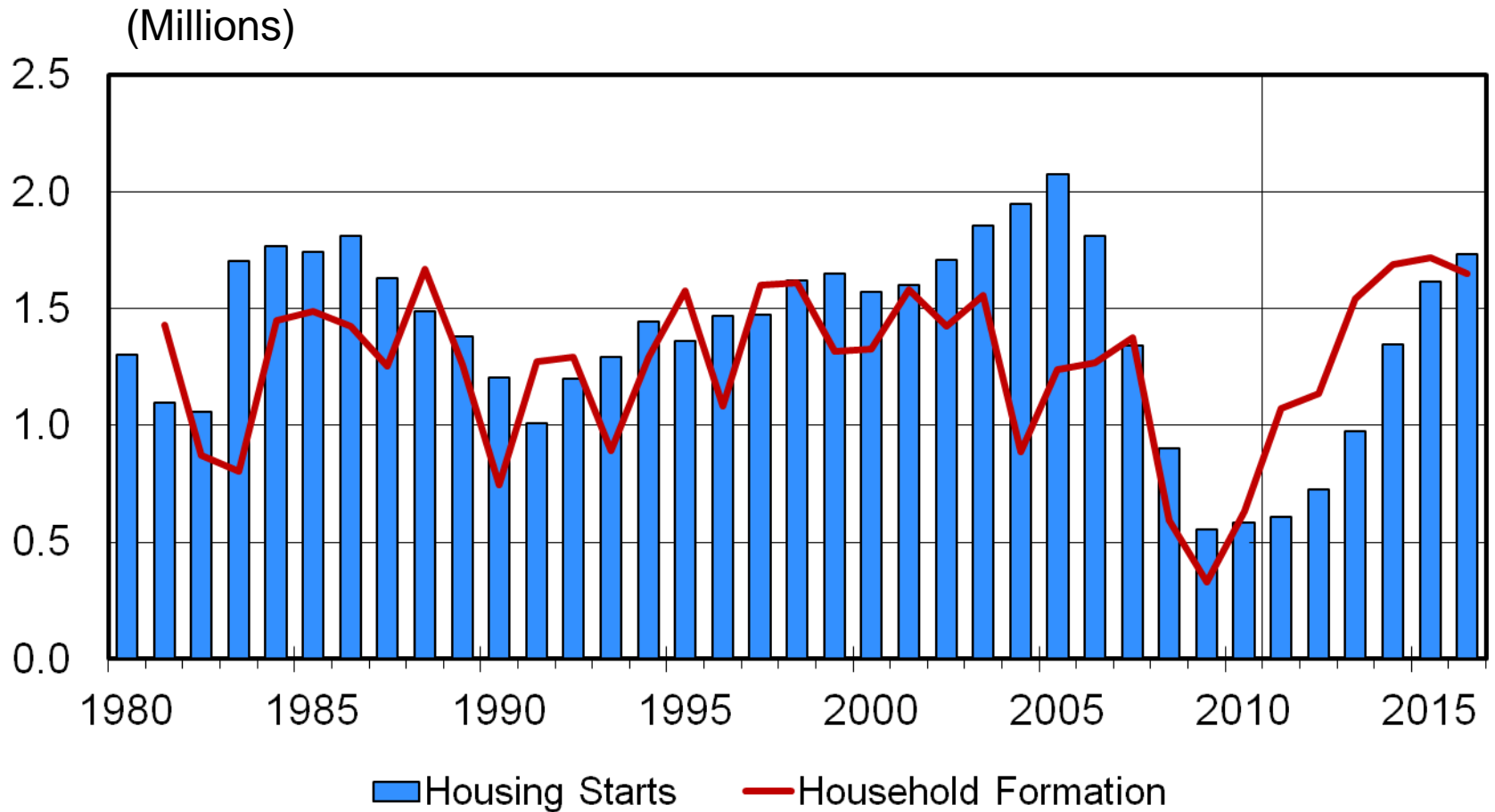




A Much-Delayed Recovery in US Housing Markets

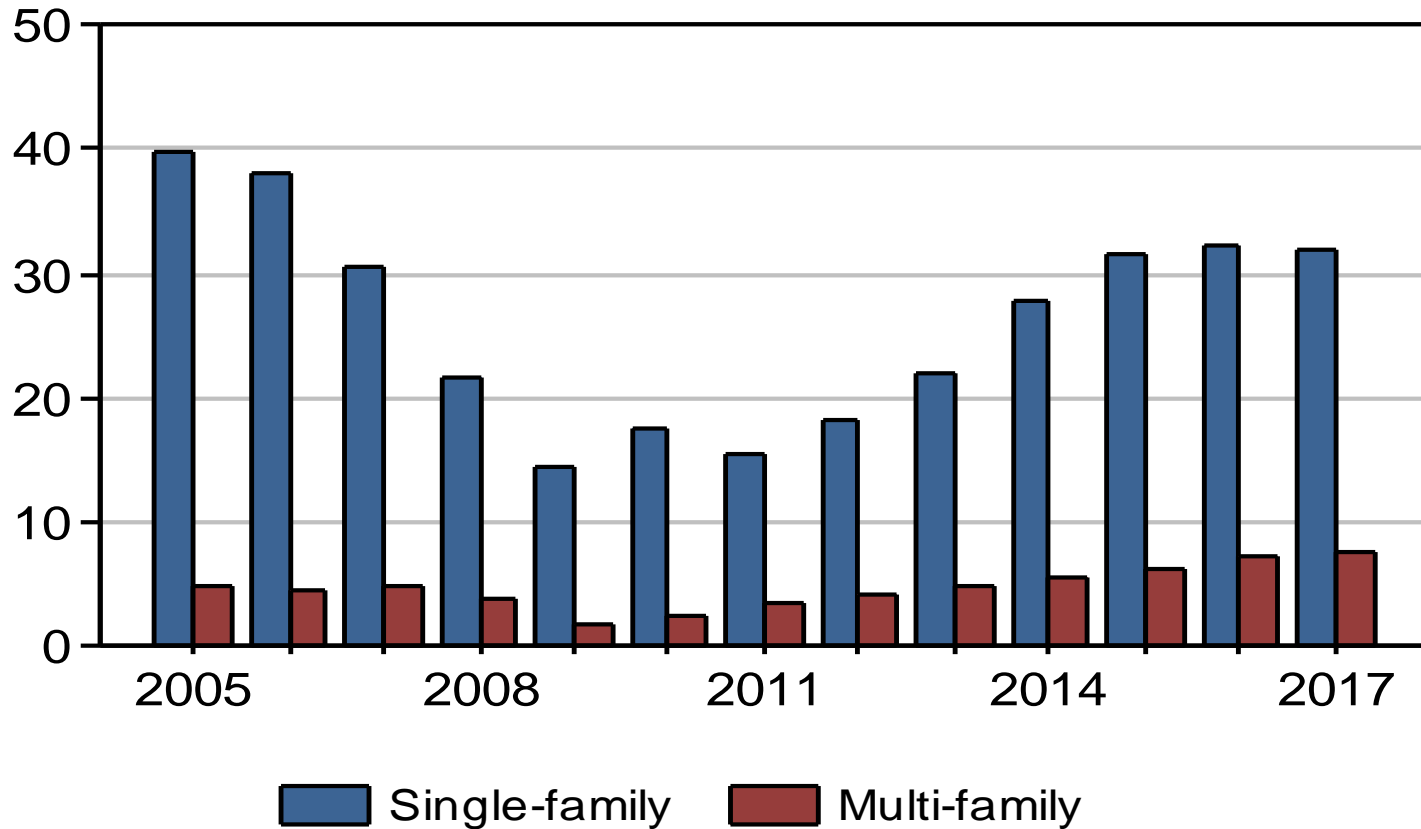
- The recession led to a drop-off in household formation.
- Sustained job growth is needed for revival.
- Record affordability of homes should boost demand.
- Credit conditions remain tight across regions.
- Mortgage foreclosures are adding to excess supply, thereby depressing prices and holding back new construction.
- Multifamily home construction will lead the recovery, reflecting a shift from owner-occupied to rental housing.

A Rebound in Household Formation Will Lead the Recovery in Housing Starts



PA Housing Starts on Verge of Slow Recovery

(Thousands, annual rate)





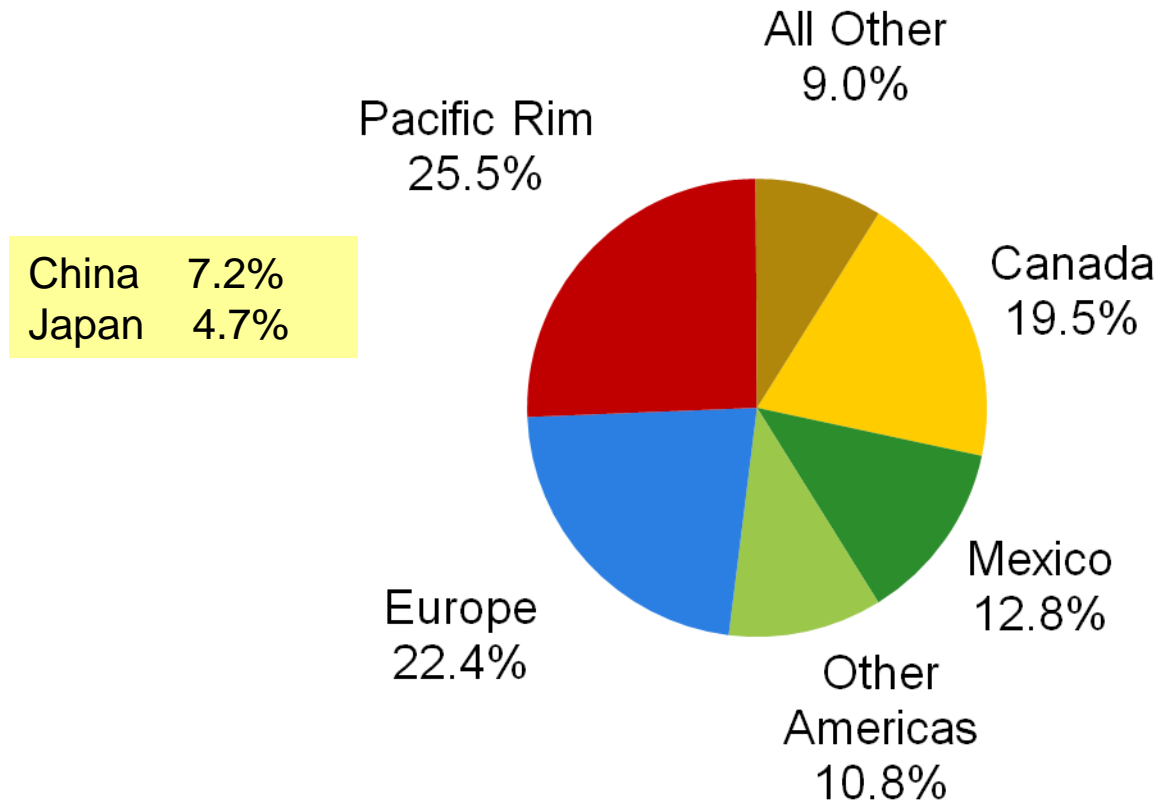
US Construction Growth by Sector

(Percent change, 2005 dollars)

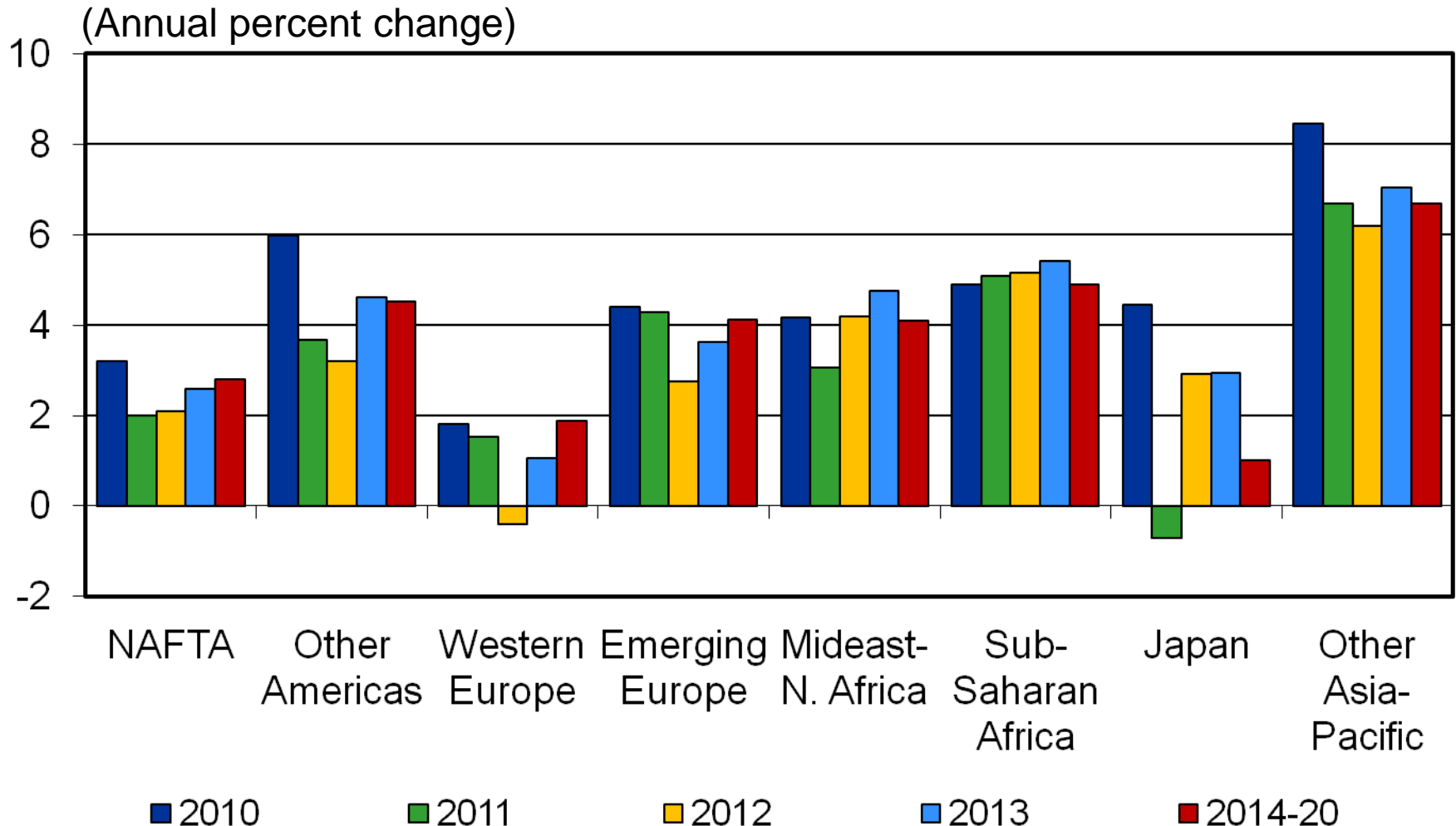
	2010	2011	2012	2013
Total Construction	-10.9	1.9	4.3	8.4
Residential	-4.6	-1.9	7.6	17.2
Commercial	-30.6	-2.9	1.5	15.0
Manufacturing	-31.8	-9.3	7.7	5.6
Mines & Wells	16.6	24.8	2.6	-2.4
Healthcare	-5.7	-6.1	1.6	5.9
Public Utilities	-12.8	6.8	-2.7	-9.0
Highways & Streets	-1.5	-8.8	-4.9	-1.8
Public Education	-7.9	-14.2	-7.4	-2.6

Destinations of US Merchandise Exports

(Percent of total, 2010)



Asia-Pacific Will Achieve the Fastest Real GDP Growth



Risks to the US Forecast

- **Pessimistic Scenario: Double-Dip Recession (30%)**

- Europe's sovereign-debt crisis leads to a global credit crunch.
- Policymakers allow the payroll tax cut and emergency unemployment insurance benefits to expire in March 2012.
- Consumers retrench as asset values and real incomes erode.
- The US housing recession drags on; credit remains tight.

- **Optimistic Scenario: Recovery Reignites (15%)**

- The Eurozone crisis is resolved convincingly through institutional, fiscal, and structural reforms.
- Credit channels function more smoothly, supporting investment.
- Confidence revives, leading to more spending and hiring.
- Robust growth in emerging markets fuels exports.



Bottom Line for US Economy

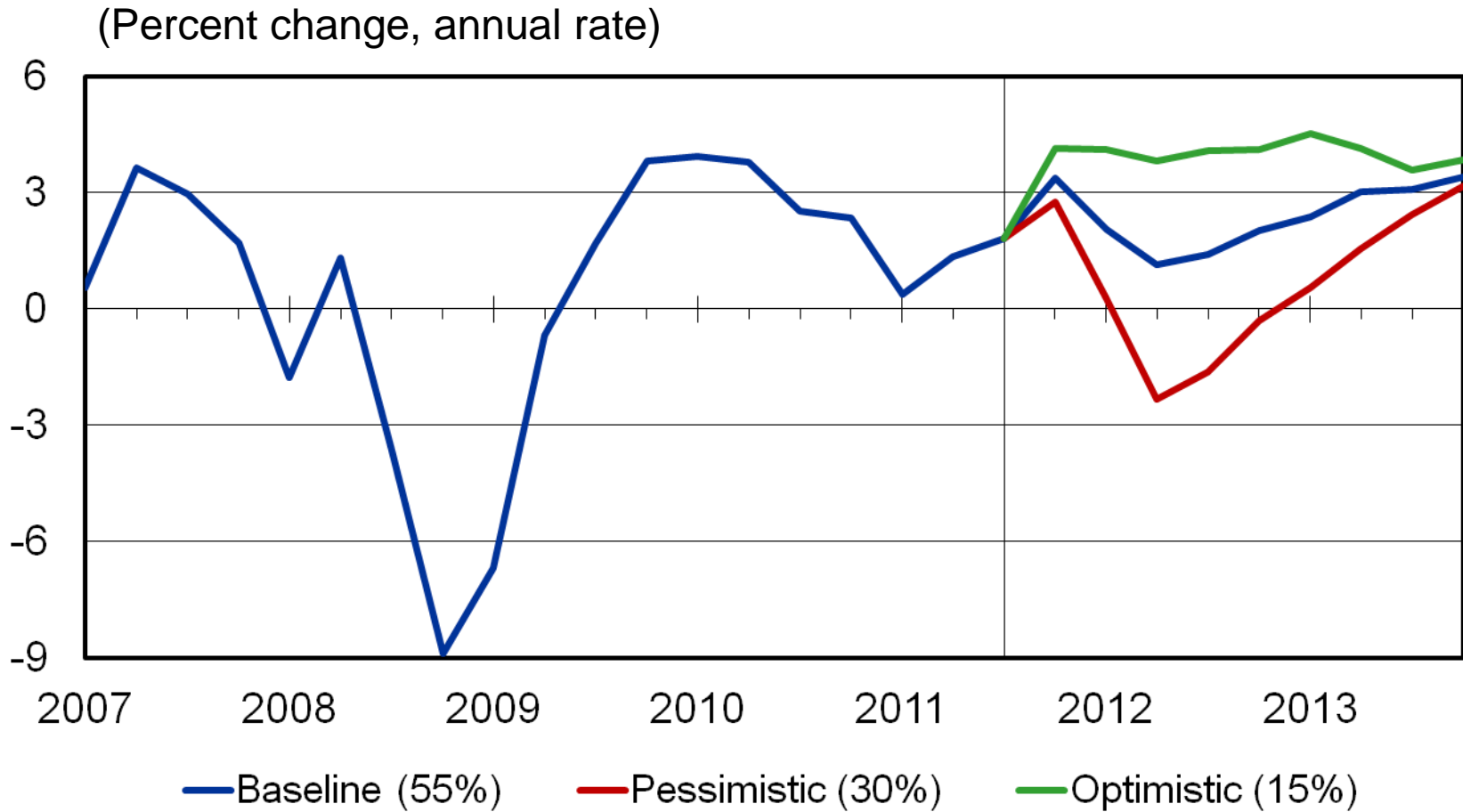
- Consumers and businesses are cautiously increasing their spending.
- The Federal Reserve's powers to support growth are limited.
- Fiscal tightening is coming, but the big issues (entitlements and taxes) will not be settled until after the 2012 elections.
- Pent-up demand for housing will eventually lead to stronger economic growth.
- The major risk is financial contagion from the Eurozone sovereign-debt crisis, which could pull the US economy into recession.



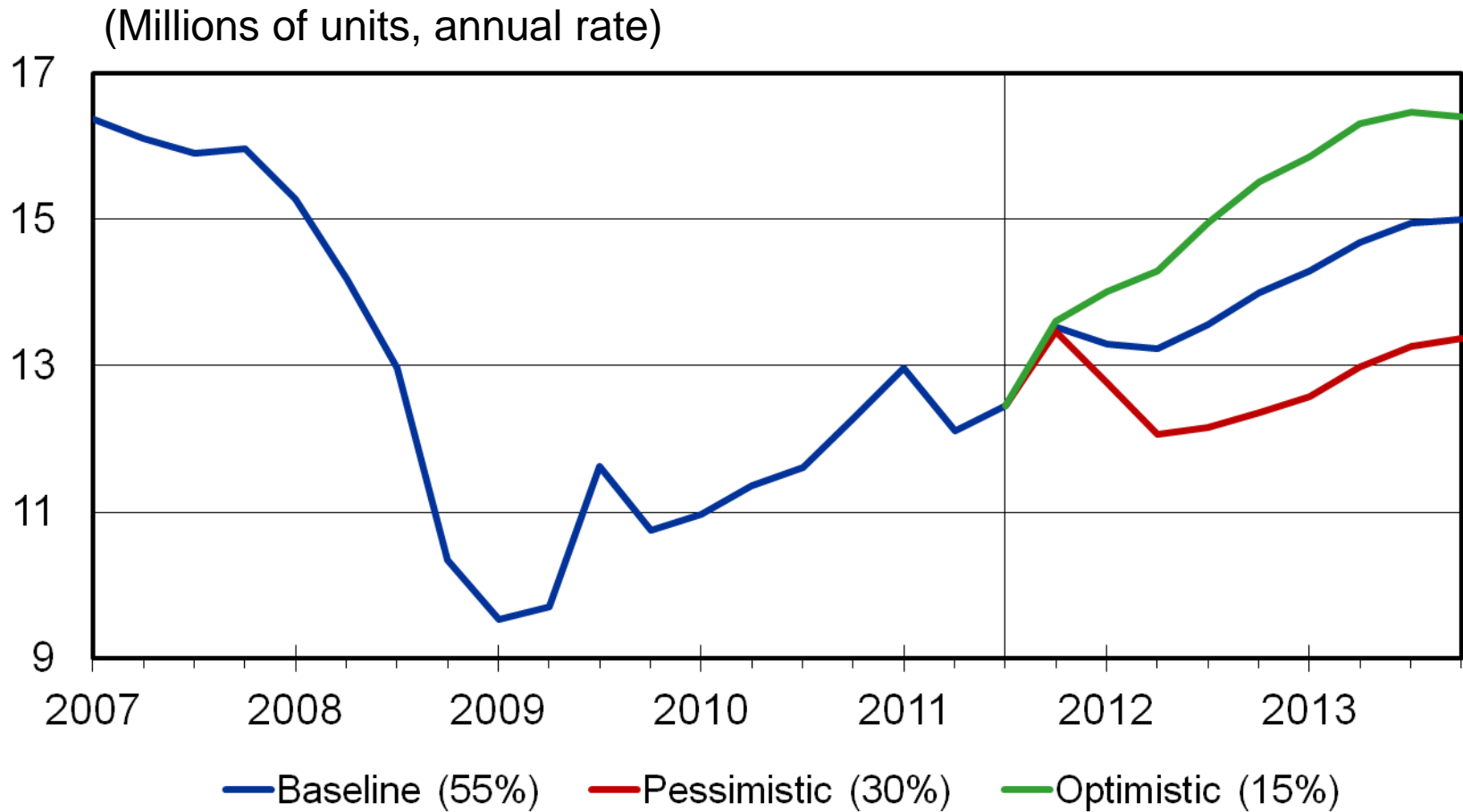
Longer-Term PA Employment Issues

- Marcellus Shale development will continue to generate both direct and indirect job growth, although rate of growth will slow.
 - Persistent low natural gas prices may limit rate of growth.
- Next step in Marcellus development is adding value to the gas production.
 - E.g., chemical manufacturing plants, natural gas into vehicle-fuel stream.
 - These jobs won't all necessarily be located in Pennsylvania.
- State's educational and research capabilities should help to attract employers.
- Construction jobs will get a boost from (eventual) housing recovery.
- Professional services, health-care services continue to provide jobs growth.
- Public-sector employment levels off at state and local level as budget improves.
 - Federal level more at risk due to expected budget cuts.
- Slow population growth limits job growth longer term, especially since service jobs are correlated with population.

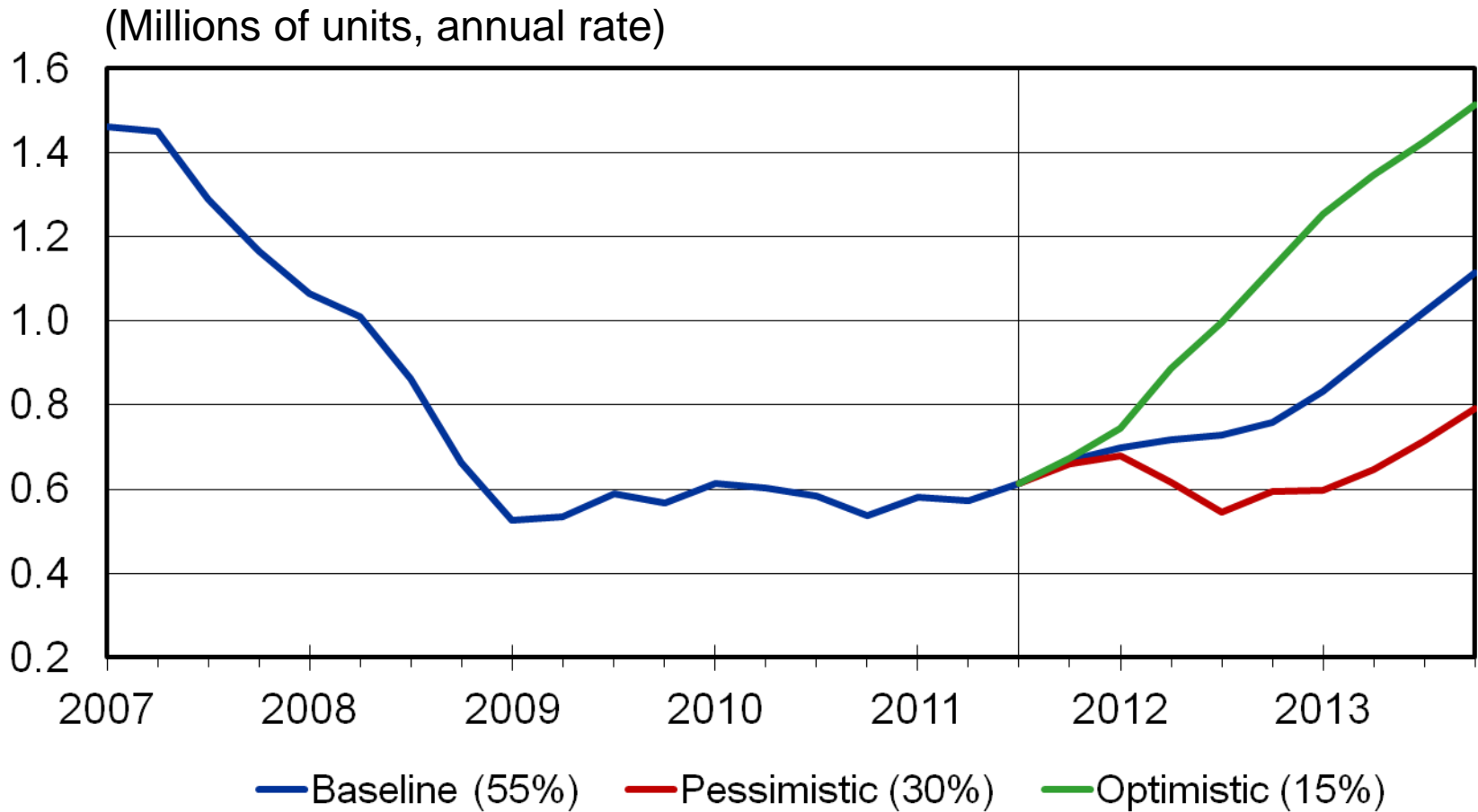
Real GDP Growth in Alternative Scenarios



Light-Vehicle Sales in Alternative Scenarios



Housing Starts in Alternative Scenarios





Thank you!

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