

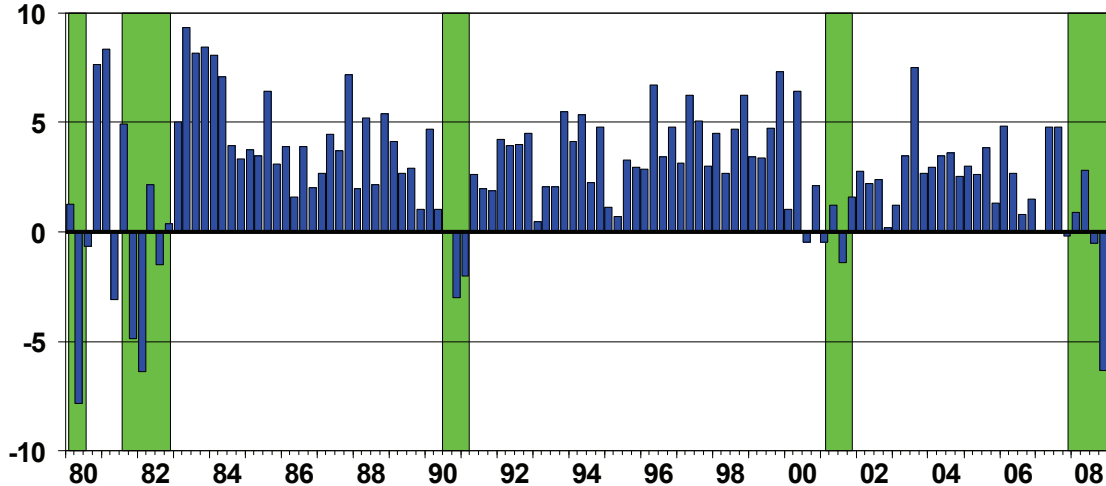
# Real gross domestic product

## United States



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Compound annual growth rate



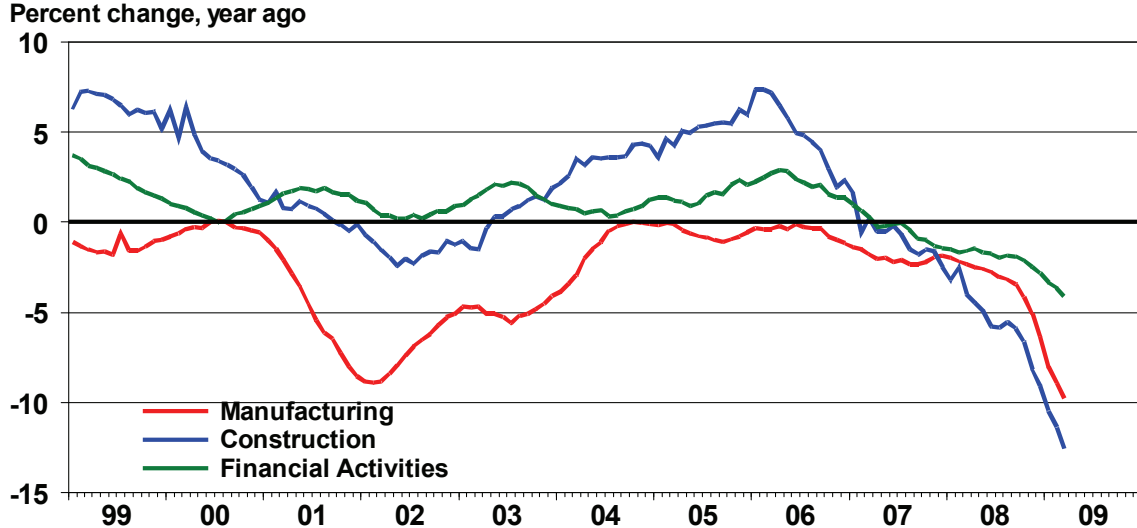
Sources: Bureau of Economic Analysis, IHS Global Insight.

# Employment by sector

*United States*



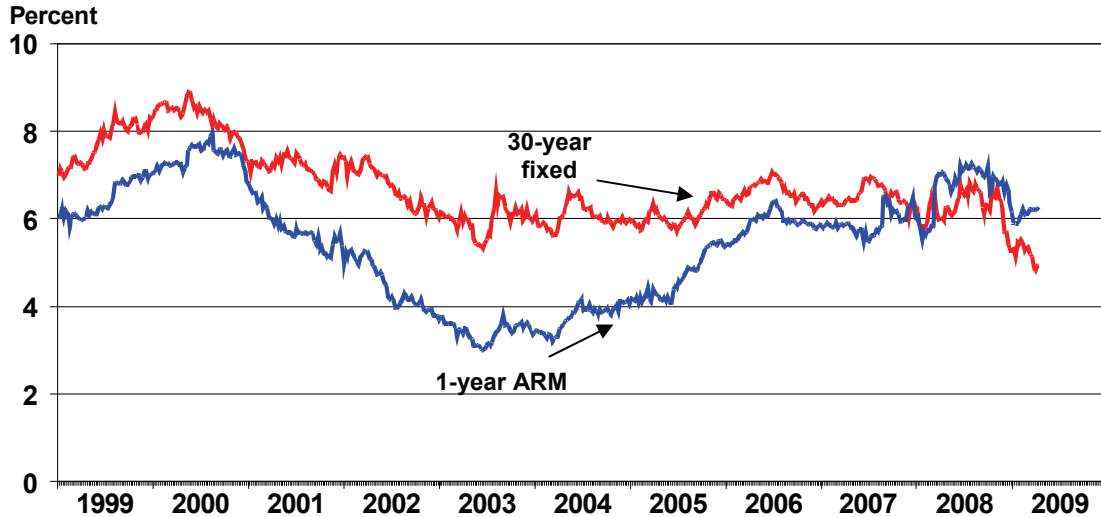
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Sources: Bureau of Labor Statistics, IHS Global Insight.

# Mortgage rates

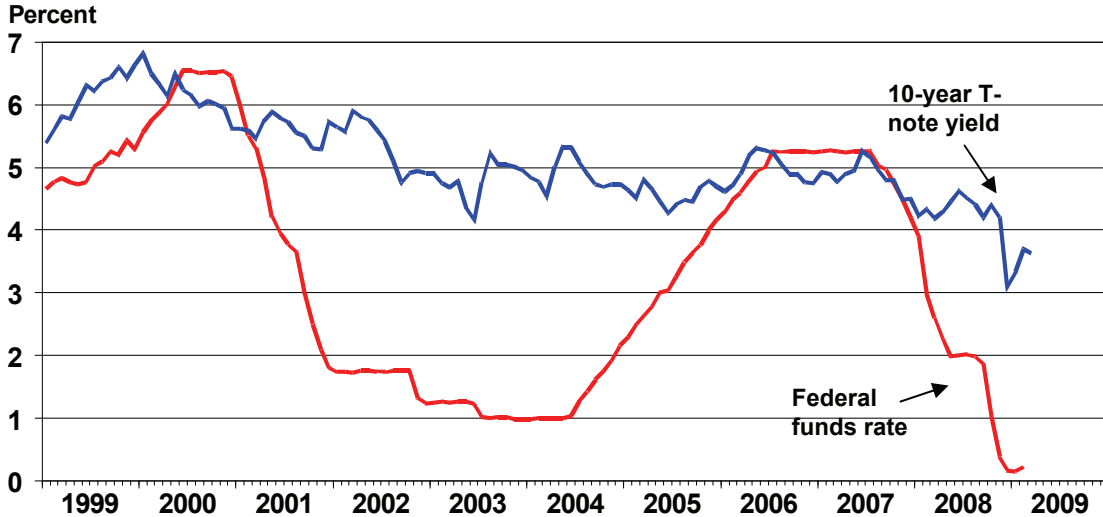
## United States



Sources: Mortgage Bankers Association, Moody's Economy.com.

# Interest rates

## *Fed funds rate vs. 10-year bond yield*



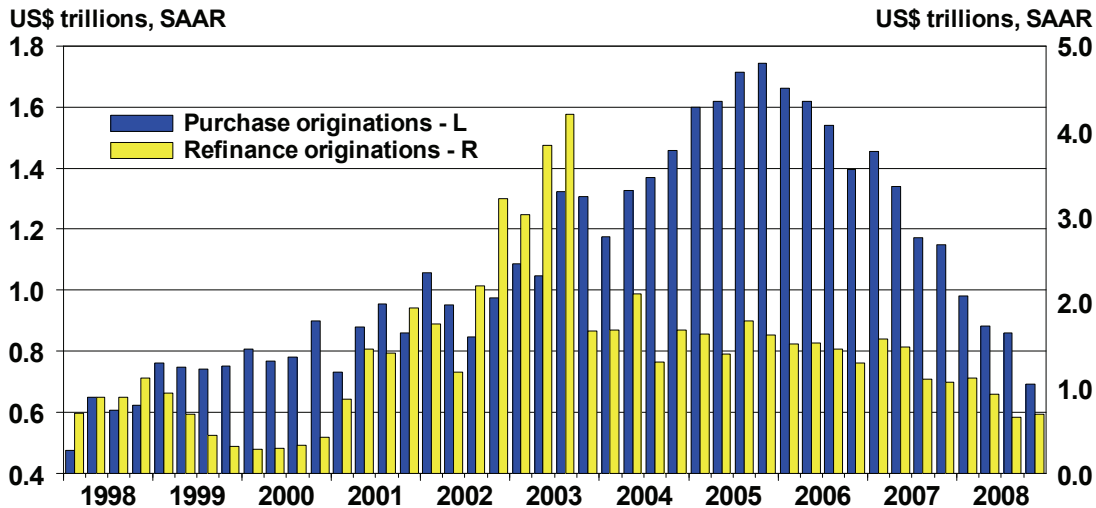
Sources: Federal Reserve Board, IHS Global Insight.

# Mortgage originations

*United States*



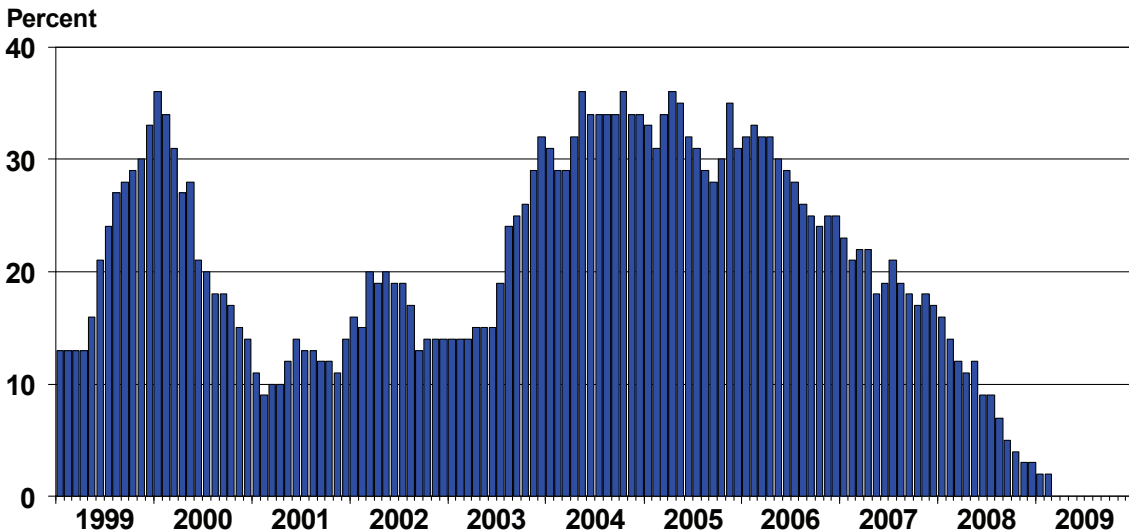
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Sources: HUD, Federal Reserve, Moody's Economy.com.

# ARM share of mortgage applications

## United States



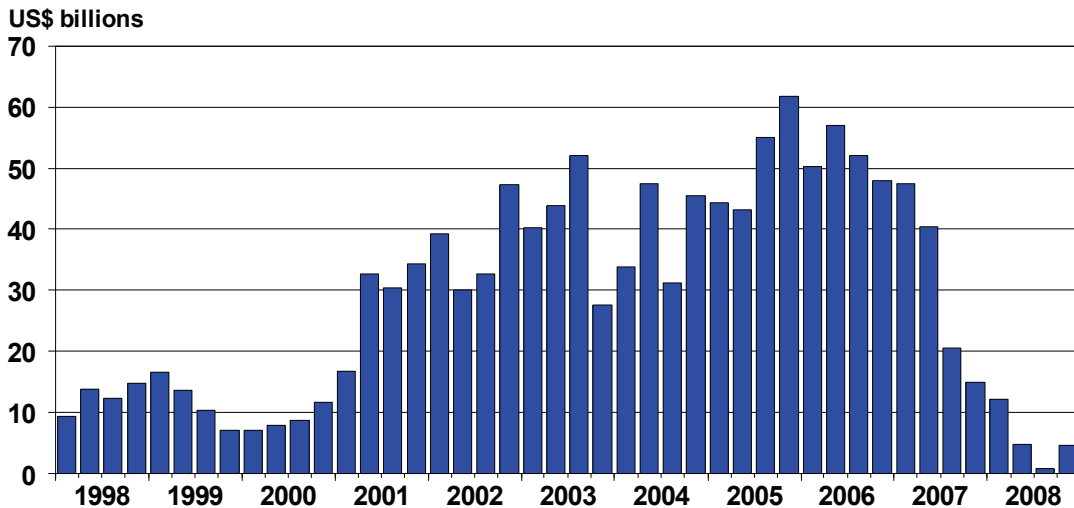
Sources: Freddie Mac., Moody's Economy.com.

# Cash out refinancings

*United States*



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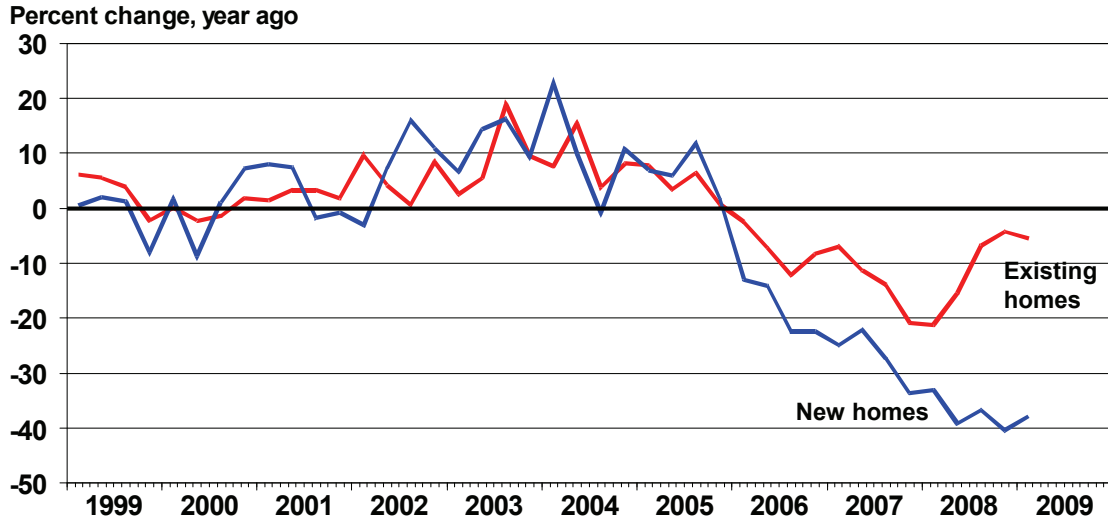
Sources: Federal Reserve., Moody's Economy.com.

# Median single-family home sales

*United States*



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Sources: National Association of Realtors, Moody's Economy.com.

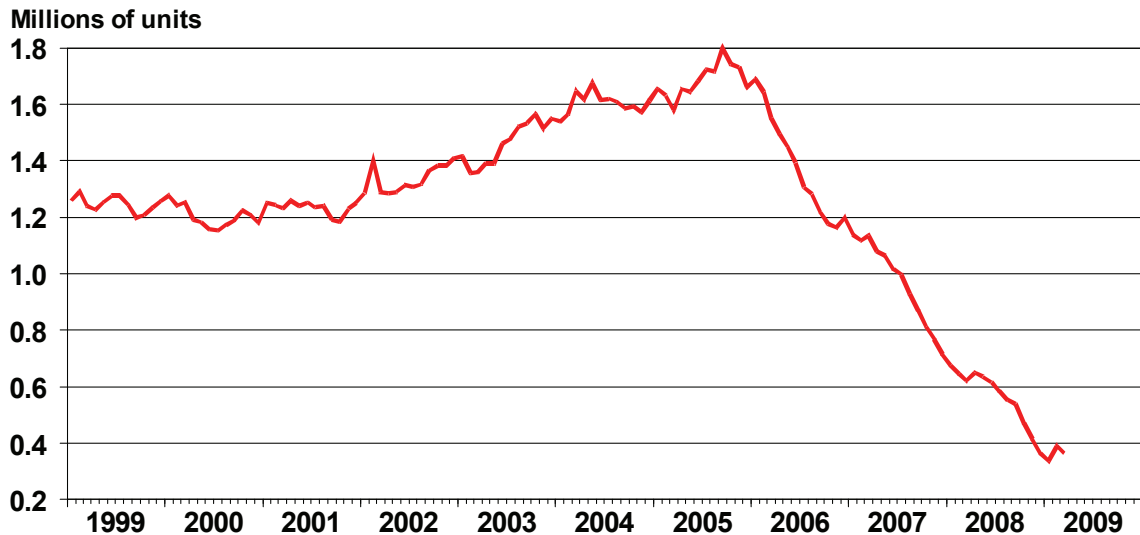


# Single-family housing starts

*United States*



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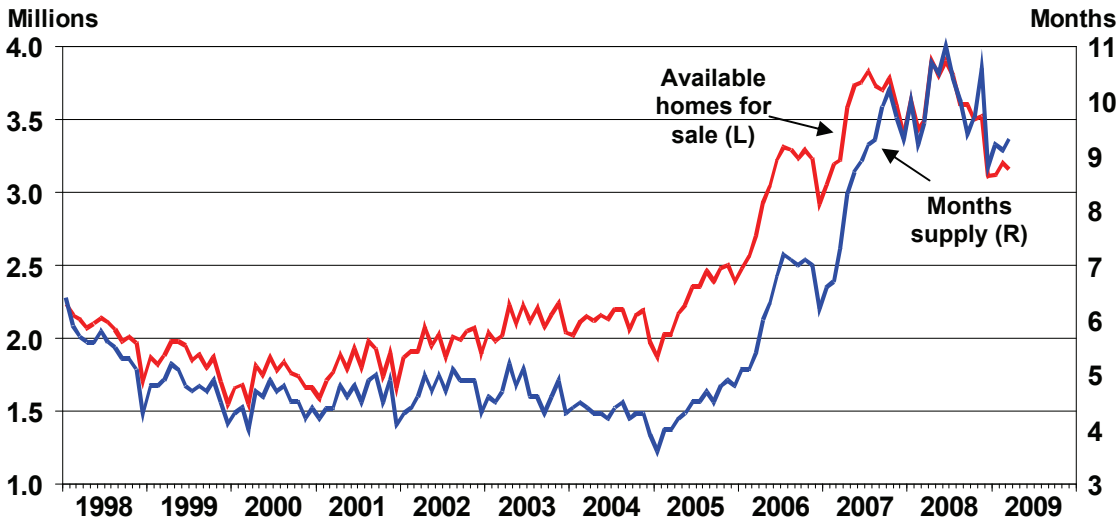
Sources: U.S. Census Bureau, IHS Global Insight.

# Housing inventory



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## Existing, Single-family homes, United States



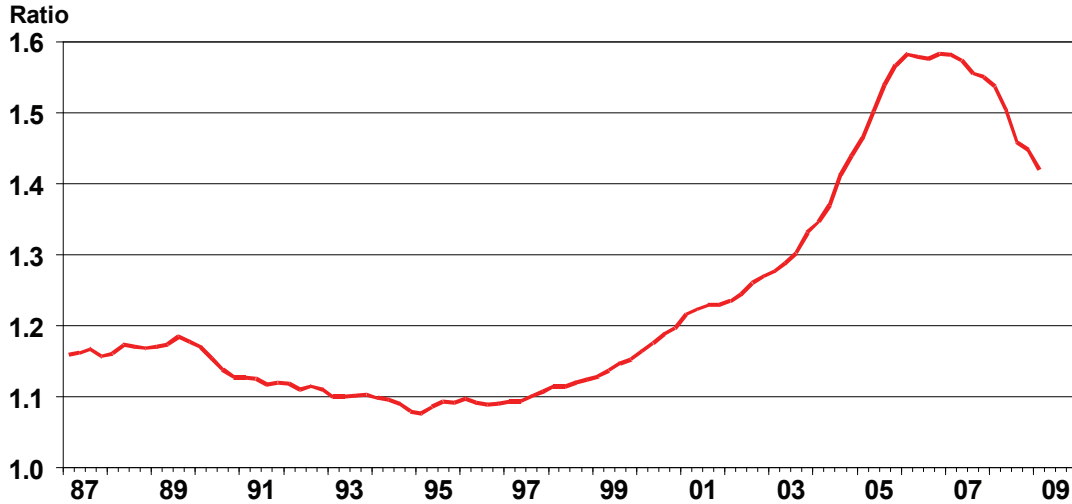
Sources: NAR, Moody's Economy.com

# Price-to-rent ratio

*United States*



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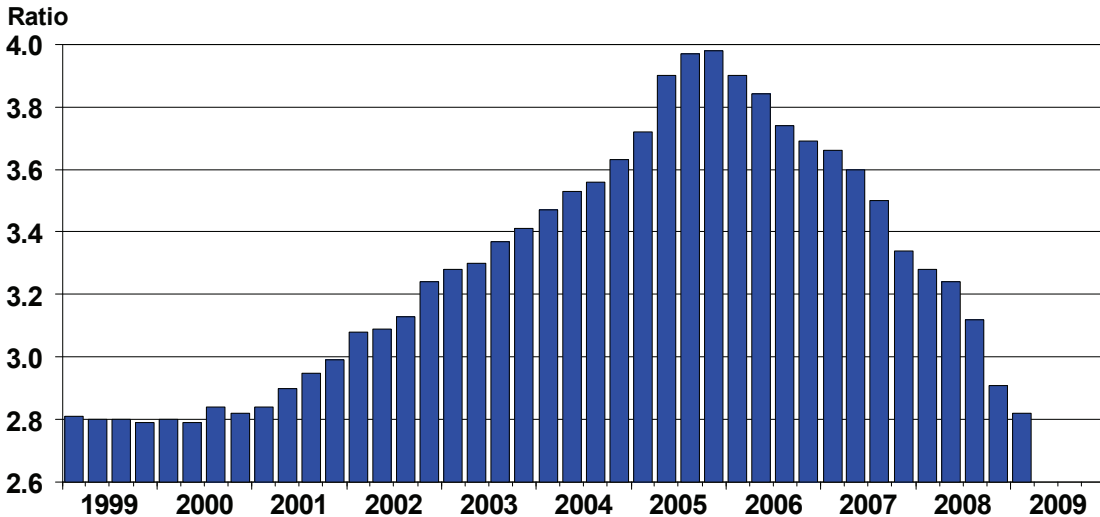
Sources: BLS, FHFA, Moody's Economy.com. Milken Institute.

# Median home price to median family income ratio

*United States*



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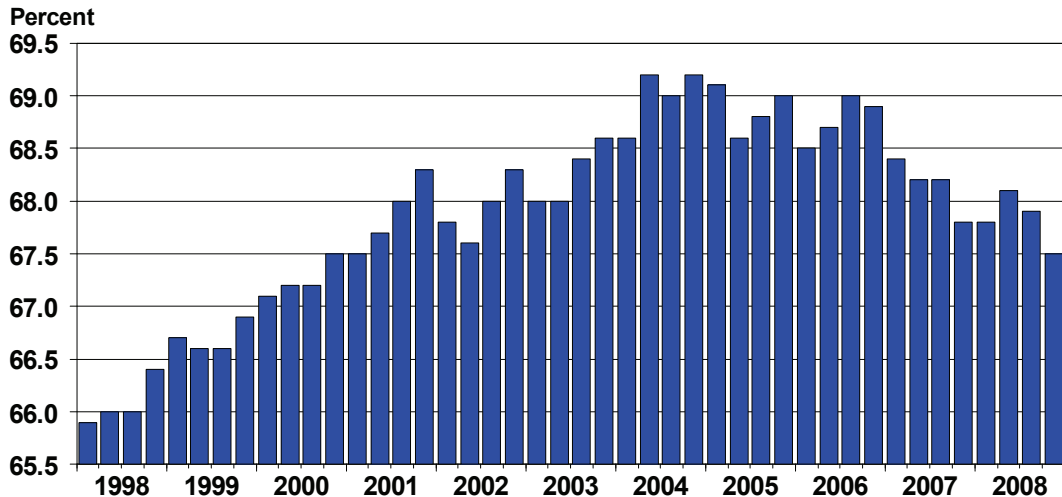
Sources: U.S. Census, NAR, Moody's Economy.com

# Homeownership rates

## United States



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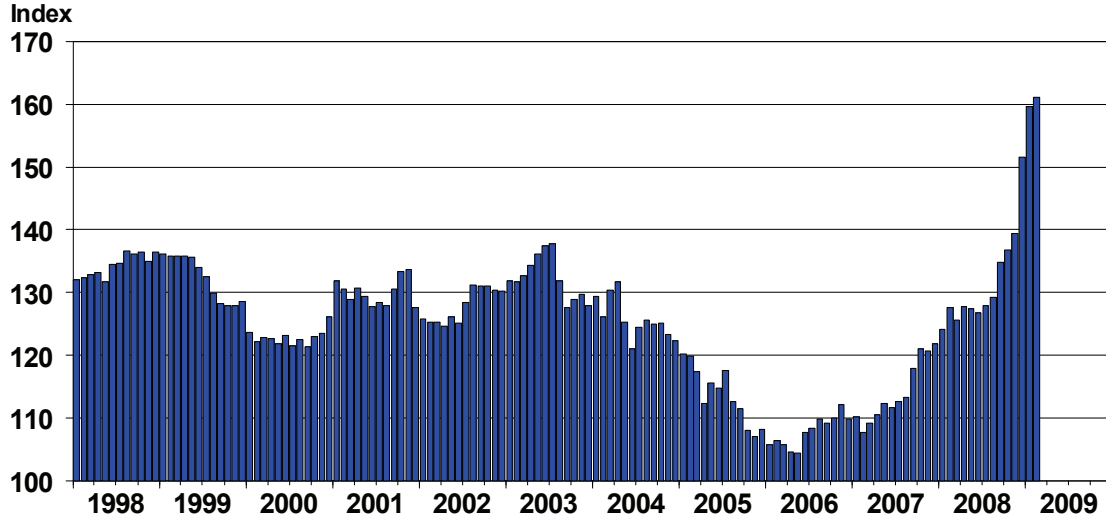
Sources: U.S. Census, Moody's Economy.com.

# Housing Affordability rates

*United States*



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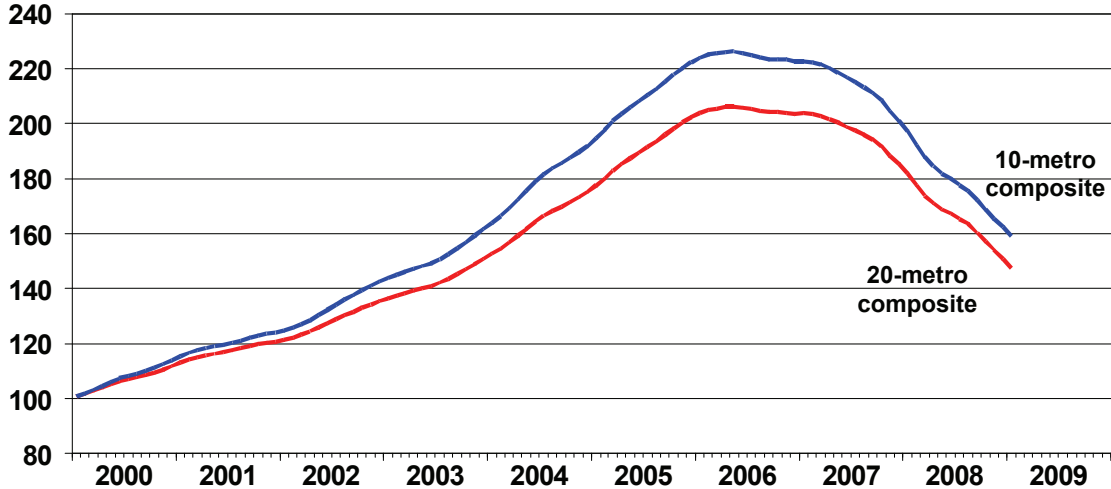
Sources: U.S. Census, Moody's Economy.com

# S&P/Case Shiller index

## Home price index



Index Jan. 2000=100, 3 month ending

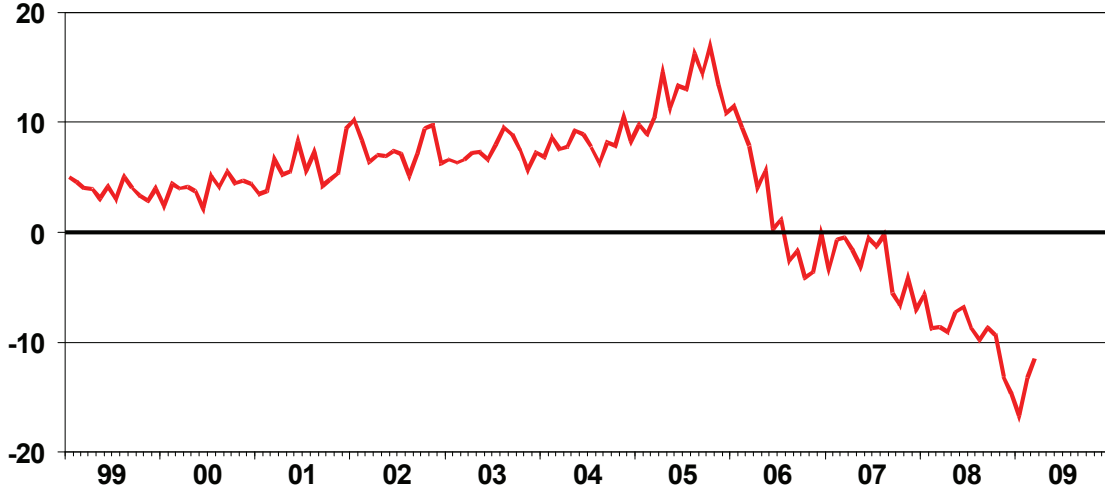


Sources: Standard & Poor's and Fiserv, Inc., Moody's Economy.com.

# Median existing single-family home price

*United States*

Percent change, year ago



Sources: National Association of Realtors, Moody's Economy.com.



# Median home prices in most expensive metros



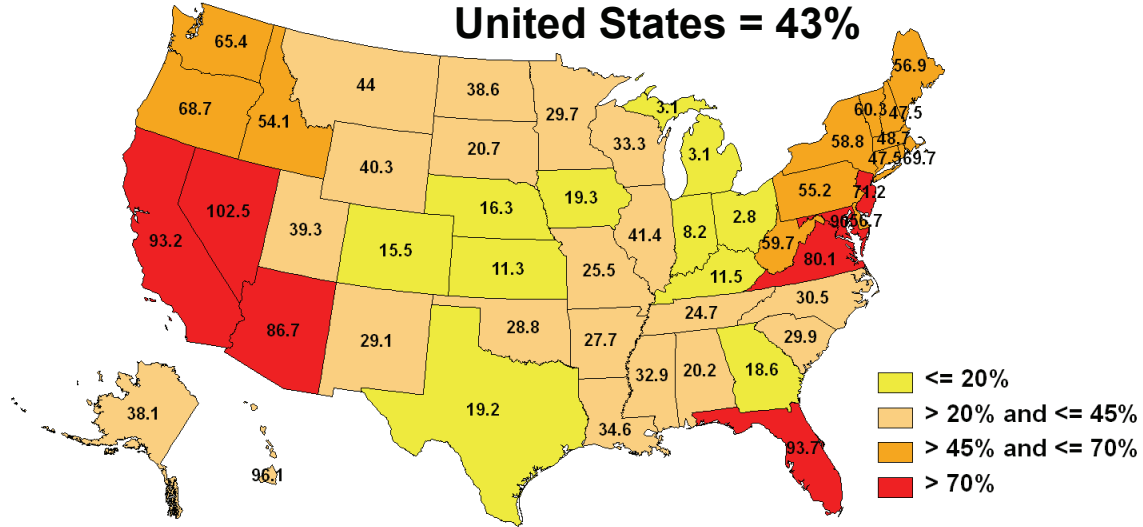
*Ranked by biggest decline in 1-year period*

MSA	2008Q4	10-yr growth	5-yr growth	1-yr growth
Santa Cruz-Watsonville, CA	\$402	10.1%	-30.6%	-48.5%
San Francisco-Oakland-Fremont, CA	\$496	47.7%	-15.4%	-37.4%
San Jose-Sunnyvale-Santa Clara, CA	\$533	43.9%	-7.7%	-37.3%
San Diego-Carlsbad-San Marcos, CA	\$340	61.4%	-27.0%	-36.3%
Los Angeles-Long Beach-Santa Ana, CA	\$352	88.3%	-6.8%	-31.4%
Santa Rosa-Petaluma, CA	\$431	68.4%	-17.0%	-25.3%
Santa Barbara-Santa Maria-Goleta, CA	\$353	36.3%	-20.4%	-24.1%
Naples-Marco Island, FL	\$395	114.0%	23.6%	-21.8%
Bridgeport-Stamford-Norwalk, CT	\$390	19.2%	-8.2%	-17.5%
Barnstable Town, MA	\$325	62.7%	-7.0%	-14.9%
New York-Northern New Jersey-Long Island, NY-NJ-PA	\$397	112.6%	11.8%	-14.7%
Seattle-Tacoma-Bellevue, WA	\$330	84.9%	33.4%	-13.4%
Boulder, CO	\$329	29.7%	1.2%	-12.7%
Boston-Cambridge-Quincy, MA-NH	\$343	60.7%	-7.1%	-12.0%
Honolulu, HI	\$619	110.0%	53.6%	-2.4%
<i>U.S. average</i>	<i>\$173</i>	<i>36.8%</i>	<i>-2.9%</i>	<i>-15.7%</i>

Sources: NAR, Moody's Economy.com.

# All states had home price increases

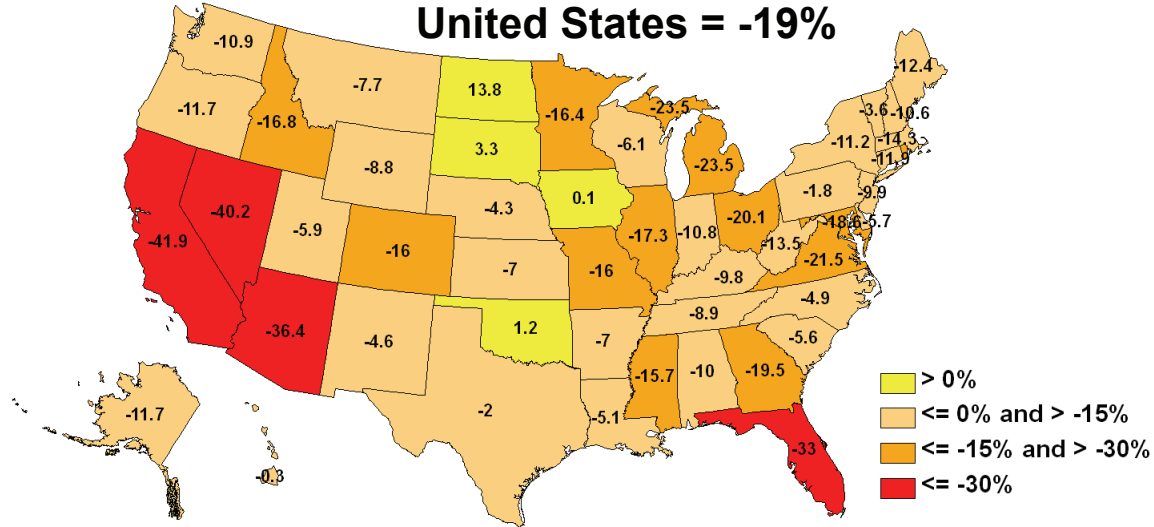
From 4Q 2001 to 4Q 2006



Sources: Moody's Economy.com, Milken Institute.

# Forty-seven states had home price declines

From 4Q 2006 to 4Q 2008



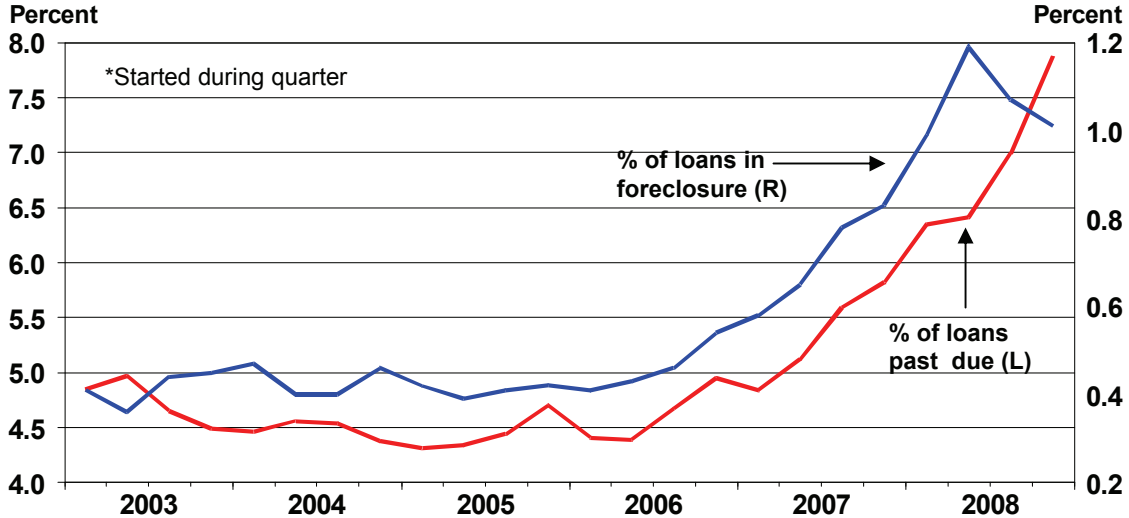
Sources: Moody's Economy.com, Milken Institute.

# Percent of all loans delinquent vs. in foreclosure\*

United States



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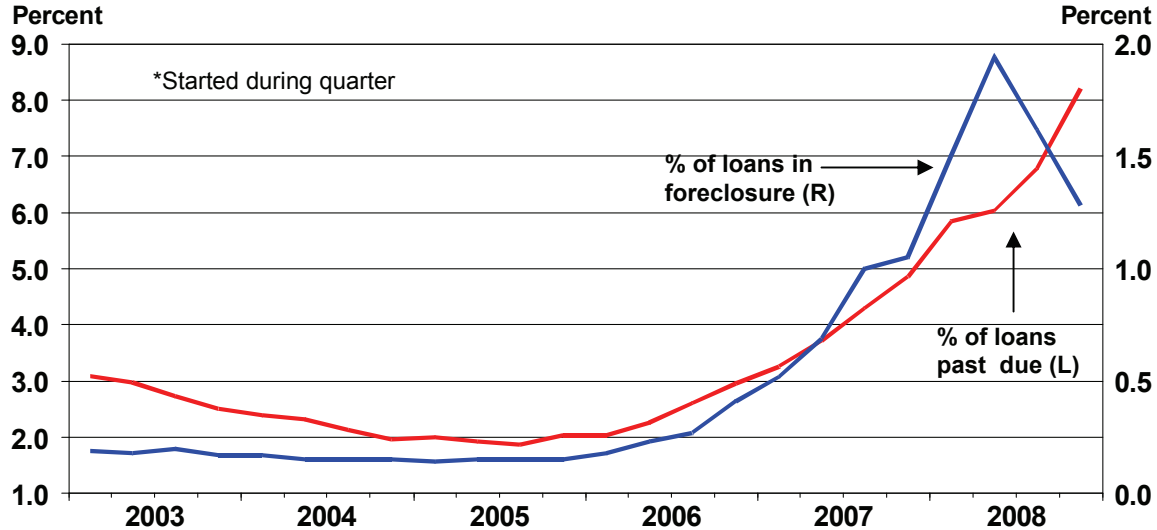
Sources: Mortgage Bankers Association, Moody's Economy.com.

# Percent of all loans delinquent vs. in foreclosure\*

California



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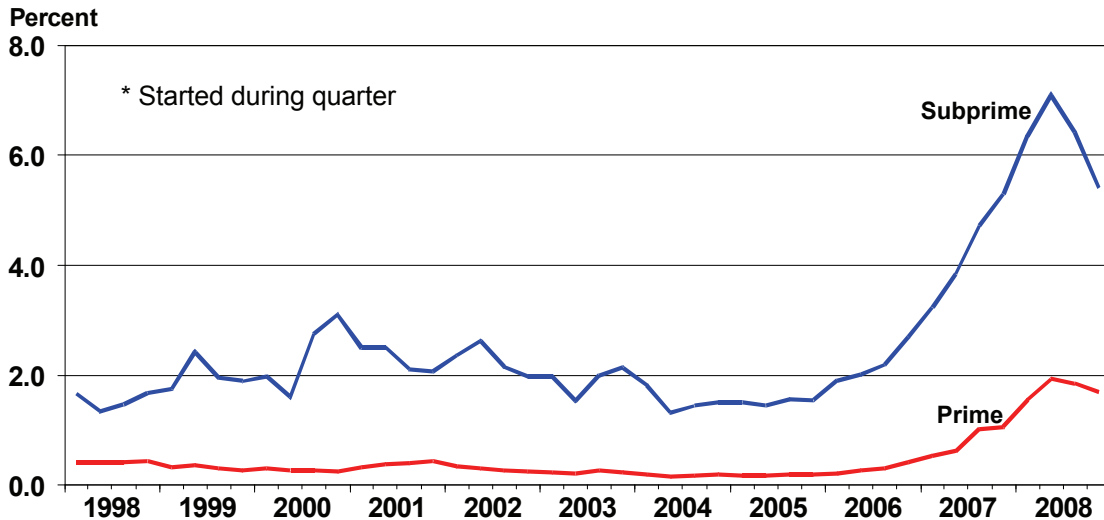
Sources: Mortgage Bankers Association, Moody's Economy.com.

# Foreclosure rates\* on ARM loans



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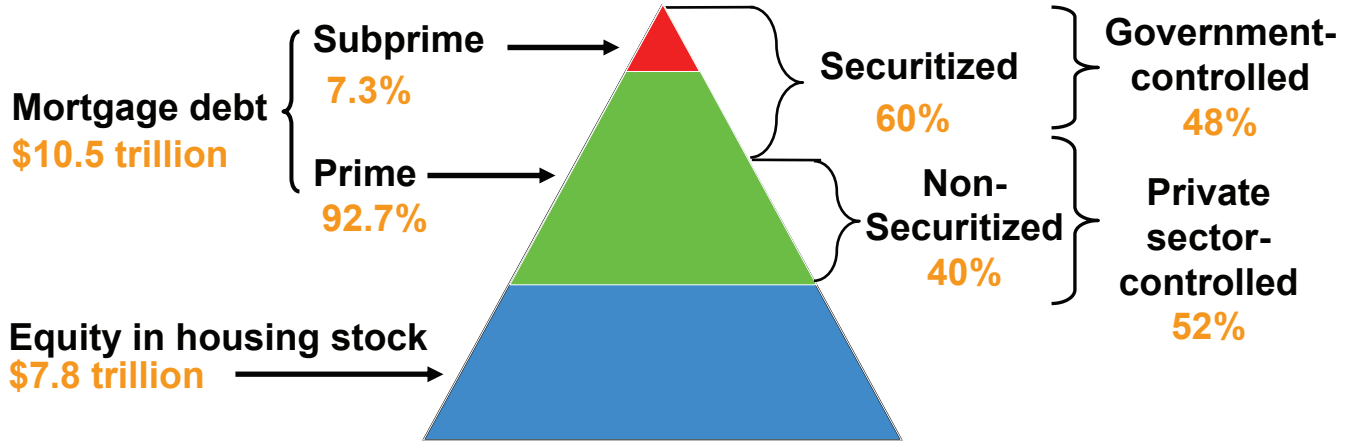
United States



Sources: Mortgage Bankers Association, Moody's Economy.com.

# Overview of the housing market

Total value of housing stock = \$18.3 trillion



Note: total residential and commercial mortgages = \$14.6 trillion at year-end 2008.

Sources: Federal Reserve, Milken Institute.



# The mortgage problem in perspective

**80 million houses** →  
*25 million or 31% are paid off*

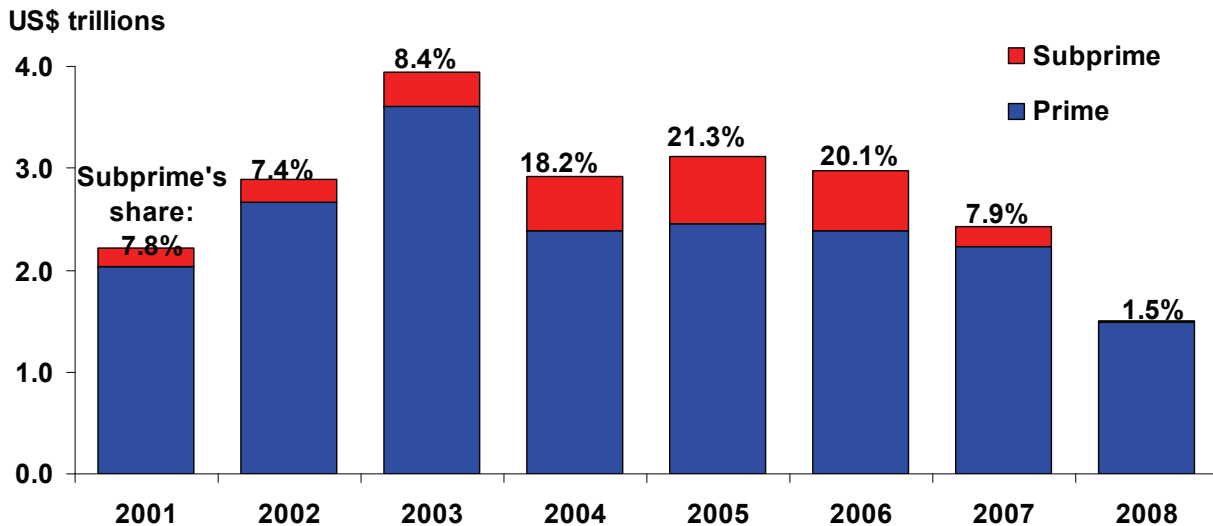
**55 million have mortgages** →  
*49 million or 89% are paying on time*

**6 million are behind** →  
*11% of 55 million with 3% in foreclosure*

***This compares to 50% seriously delinquent in the 1930s.***



# Subprimes take an increasing share of all home mortgage originations

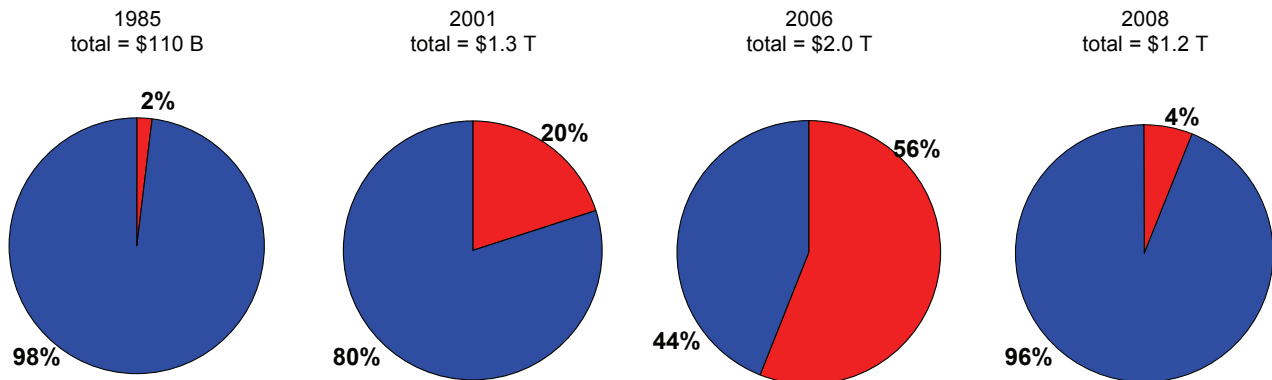


Sources: Inside Mortgage Finance, Milken Institute.

# The rise and fall of private-label securitizers

## *New securities issuance*

 Private-label       Fannie Mae, Freddie Mac, Ginnie Mae



Sources: Federal Reserve, Milken Institute.

# Estimated potential losses

*From unsecuritized loans*



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<b>October 2008 US\$ billions</b>	<b>Outstanding</b>	<b>Estimated Loss</b>
<b>Subprime</b>	<b>300</b>	<b>50</b>
<b>Alt-A</b>	<b>600</b>	<b>35</b>
<b>Prime</b>	<b>3,800</b>	<b>85</b>
<b>Commercial real estate</b>	<b>2,400</b>	<b>90</b>
<b>Consumer loans</b>	<b>1,400</b>	<b>45</b>
<b>Corporate loans</b>	<b>3,700</b>	<b>110</b>
<b>Leveraged loans</b>	<b>170</b>	<b>10</b>
<b>Total for loans</b>	<b>12,370</b>	<b>425</b>

Source: International Monetary Fund.

## Loss projections by vintage and credit grade

	2004	2005	2006	2007
<b>Prime</b>	<b>0.8%</b>	<b>2.0%</b>	<b>3.1%</b>	<b>3.4%</b>
<b>Alt-A</b>	<b>2.3%</b>	<b>7.1%</b>	<b>14.0%</b>	<b>13.8%</b>
<b>Alt-B</b>	<b>2.8%</b>	<b>10.3%</b>	<b>14.0%</b>	<b>19.3%</b>
<b>Subprime</b>	<b>3.1%</b>	<b>10.0%</b>	<b>20.7%</b>	<b>24.1%</b>

Sources: Loan Performance, Wachovia Capital Markets, LLC.

# 30+ Re-default rates

*2008Q1 loans by loan category*



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	Three months after modification (30+ days delinquent)	Six months after modification (30+ days delinquent)
<b>Prime</b>	<b>23.7%</b>	<b>38.5%</b>
<b>Alt-A</b>	<b>36.3%</b>	<b>53.2%</b>
<b>Subprime</b>	<b>42.9%</b>	<b>61.3%</b>
<b>Other</b>	<b>44.1%</b>	<b>61.0%</b>

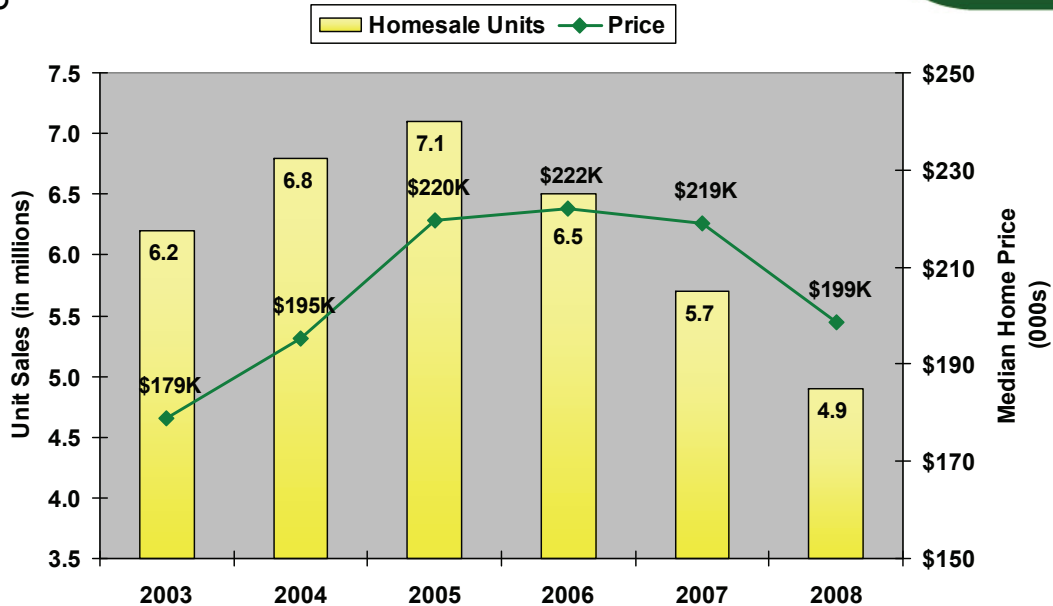
Source: Comptroller of the Currency Administrator of National Banks.

# Existing Home Sales Trends

2003-2008



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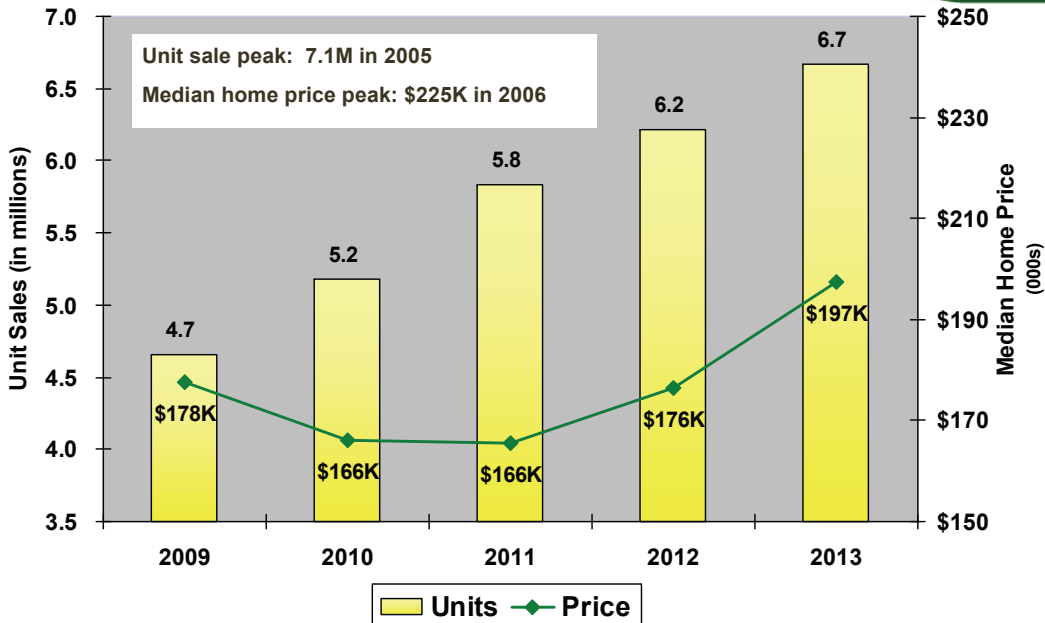
Source: National Association of Realtors.

# Fannie Mae Housing Forecast

2009-2013



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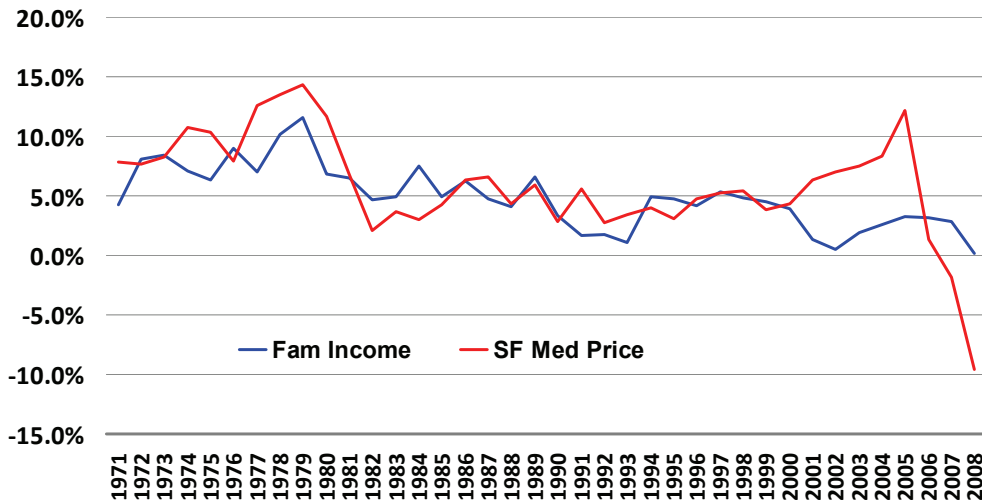


Source: Fannie Mae.

# Housing Affordability

## Key Determinants

Family Income vs Single Family Median Price  
Change vs Prior Year

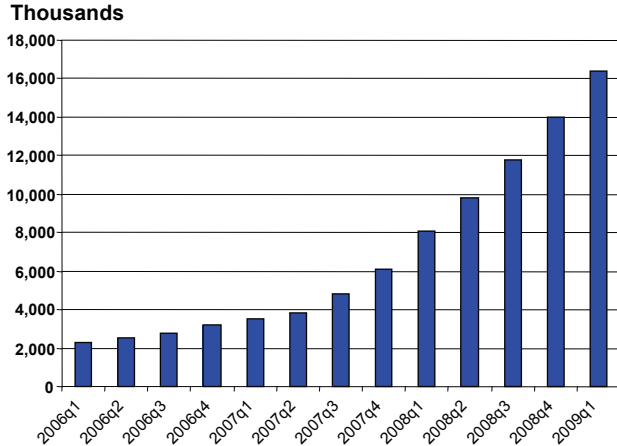


Source: NAR HAI Index.



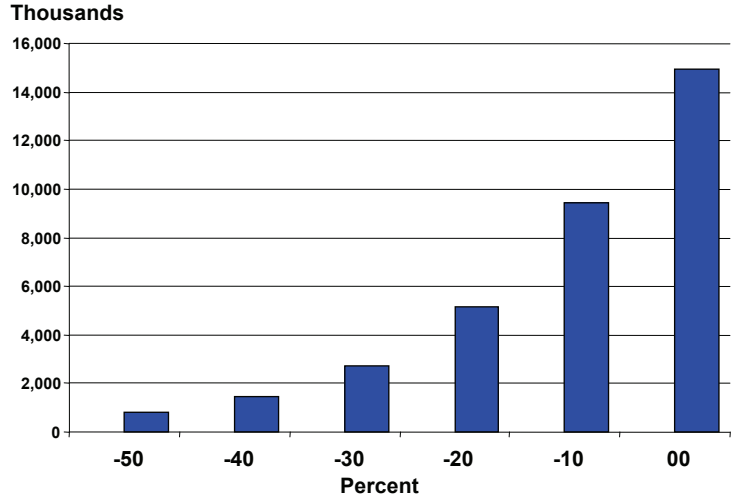


## Millions of homeowners are underwater.....



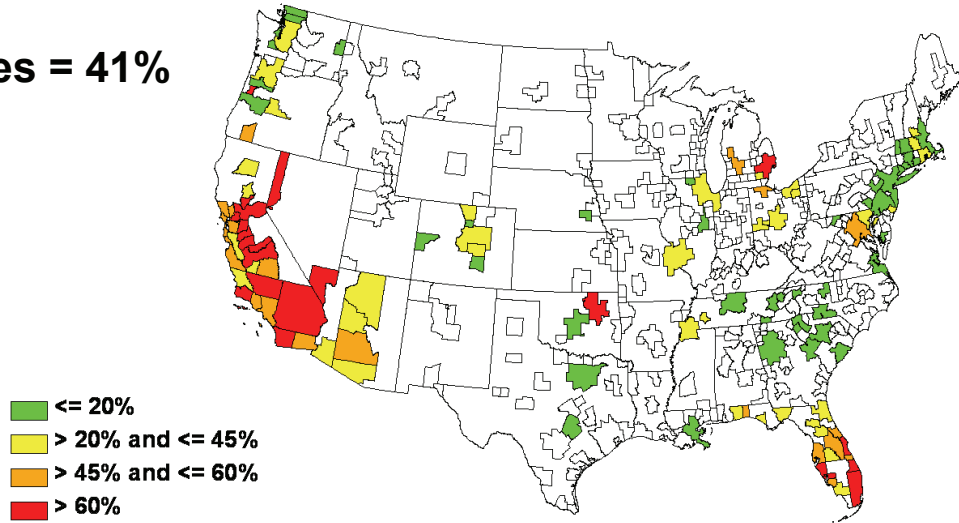
Sources: Equifax, Case-Schiller, Moody's Economy.com, Milken Institute.

## .....Some deeply underwater Homeowners with % equity, March 2008



## Percentage of homes purchased between 2004 and 2008 that now have negative equity

United States = 41%



# Impact of 10 percent decline in housing sales

*Impact over next four quarters*

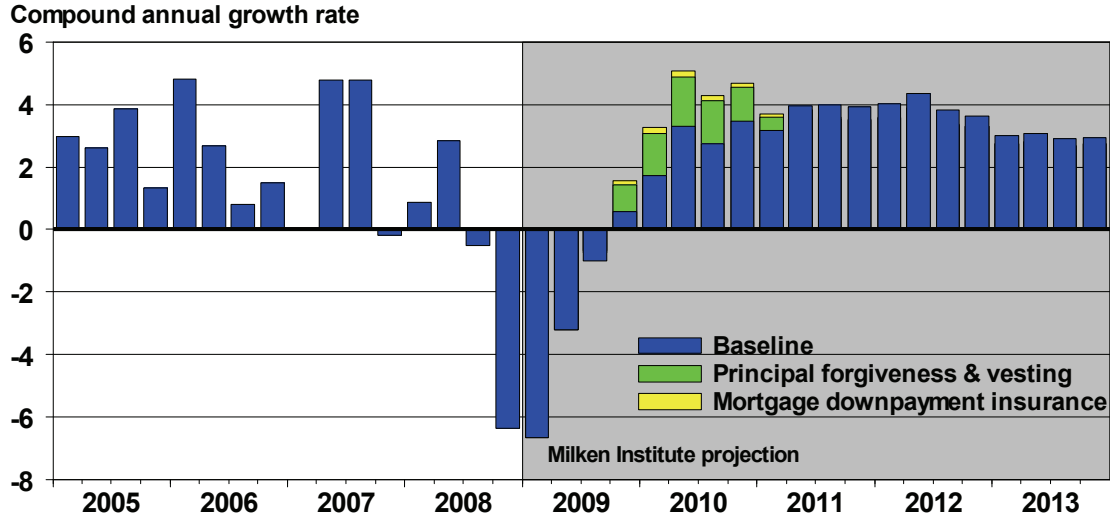


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<u>Category</u>	<u>Percent Decline</u>
<i>Housing Market</i>	
Real Gross Private Residential Investment	-7.2
Real Gross Private Residential Investment in Equipment	-6.9
Median Sales Price of New Single-Family Homes	-2.2
Average Sales Price of Existing Single-Family Homes	-2.1
<i>Consumer Markets</i>	
Real Consumer Spending on Furniture and Appliances	-3.9
Real Consumer Spending on Other Durables Plus Med. Devices	-1.8
Real Consumer Spending on Motor Vehicles and Parts	-2.2
Consumer Spending on All Goods and Services	-0.7
<i>Business Investment</i>	
Real Gross Private Nonresidential Investment in Equipment and Software	-1.5
Real Gross Private Investment in Nonresidential Structures	-1.4
Real Gross Private Fixed Nonresidential Investment	-1.5
<i>Employment</i>	
Total Nonfarm	-0.5
Civilian Unemployment Rate (DIFF)	0.4
<i>Real Gross Domestic Product</i>	-0.8

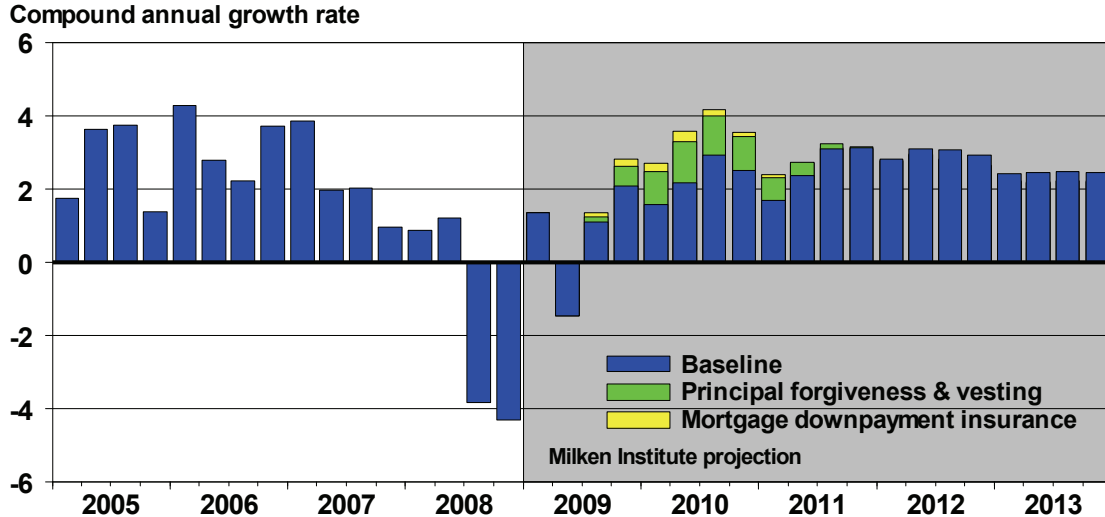
Source: Milken Institute.

# Projected impact of alternative housing proposals on real gross domestic product



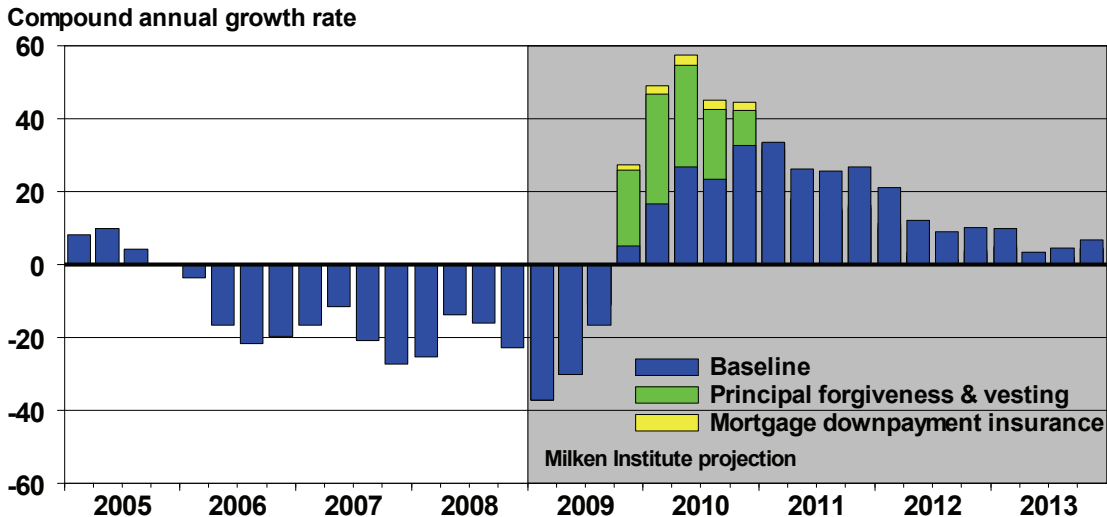
Sources: BEA, IHS Global Insight, Milken Institute.

# Projected impact of alternative housing proposals on real consumer spending



Sources: BEA, IHS Global Insight, Milken Institute.

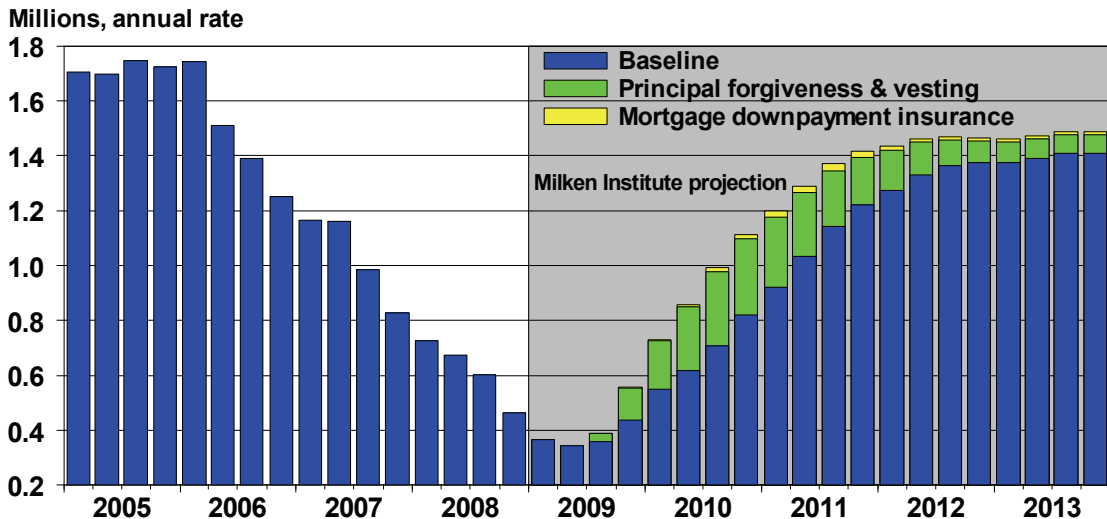
# Projected impact of alternative housing proposals on real residential investment in structures



Sources: BEA, IHS Global Insight, Milken Institute.



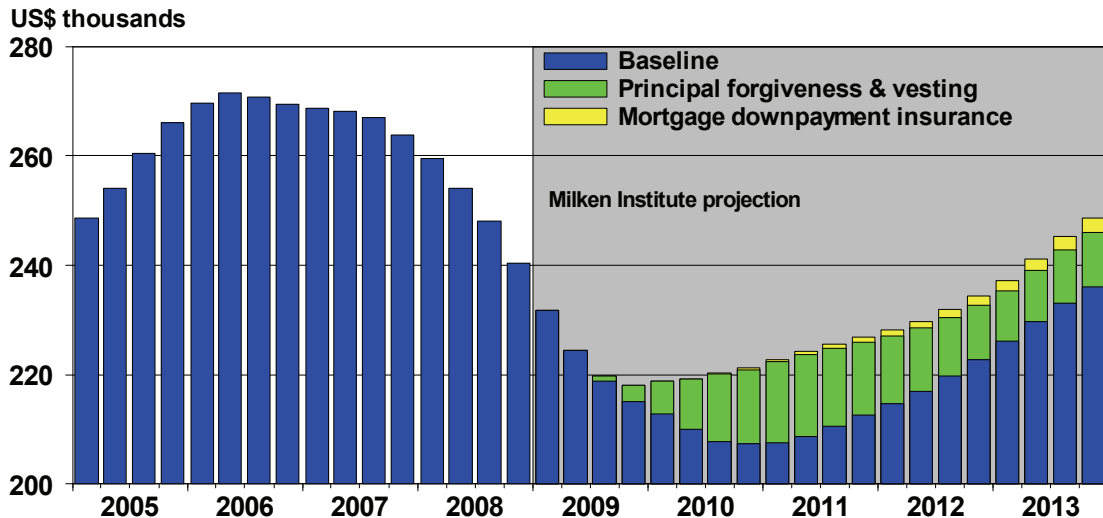
# Projected impact of alternative housing proposals on single-family housing starts



Sources: U.S. Census, IHS Global Insight, Milken Institute.

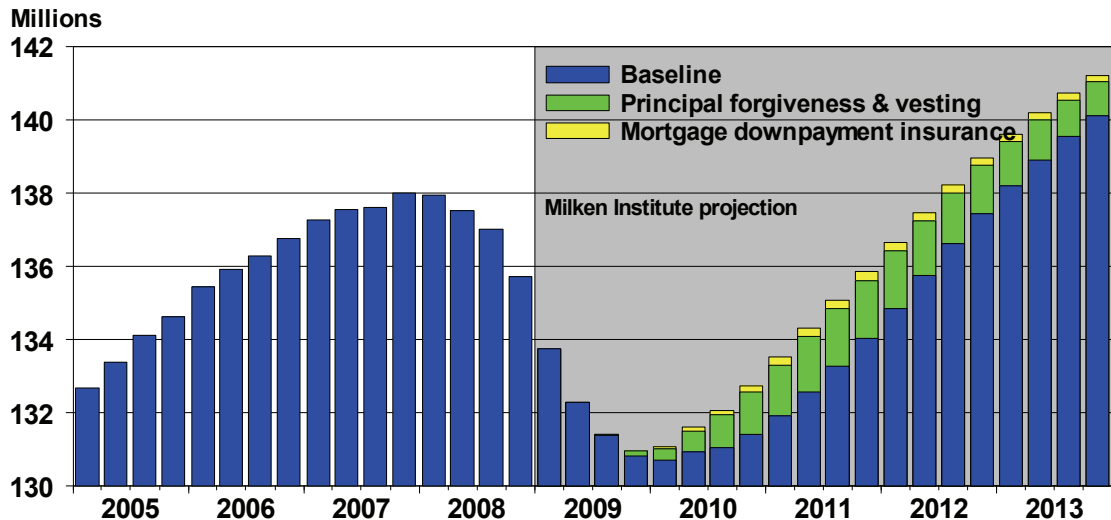


# Projected impact of alternative housing proposals on average sales price of existing single-family homes



Sources: NAR, IHS Global Insight, Milken Institute.

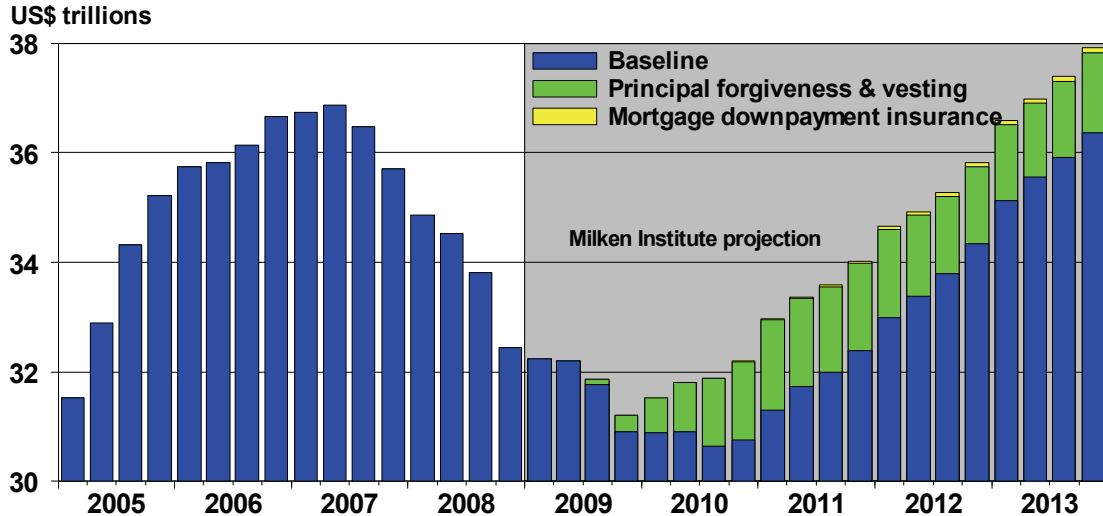
# Projected impact of alternative housing proposals on total non-farm payrolls



Sources: BLS, IHS Global Insight, Milken Institute.

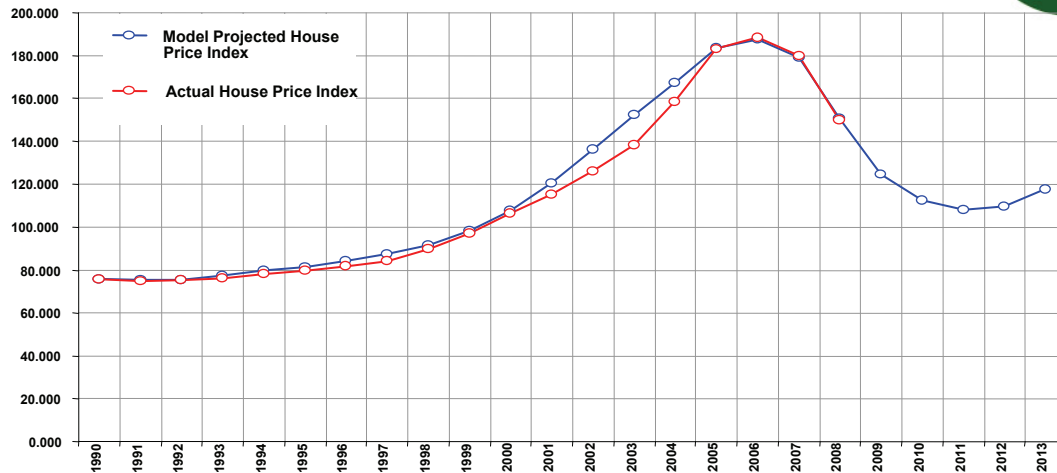


# Projected impact of alternative housing proposals on household holdings of real estate and other nonfinancial assets



Sources: IHS Global Insight, Milken Institute.

# SPM Model Projections of House Prices



- The SPM *Cumulative Excess Housing Supply* model projects house prices falling through 2010, stabilizing in 2011 and 2012 (at about -42% below the 2006 peak), before climbing in 2013.
- The projected changes are -17% in 2009, -9% in 2010, -4% in 2011, +1.5% in 2012, and +7% in 2013.

Source: Structured Portfolio Management, LLC.

# How should the government support housing?

<b>Loans</b>	<b>Loan Refinancing / Modifications</b>	<b>Yes.</b> Reduce foreclosures	<b>No.</b> Cost: HUGE Benefit: small
	<b>Home Purchase Loans</b>	[Non starter]	<b>Yes.</b> Support housing market
		<b>Delinquent</b>	<b>Current / Credit worthy</b>
		<b>Borrowers</b>	