

Myths and Facts About Housing

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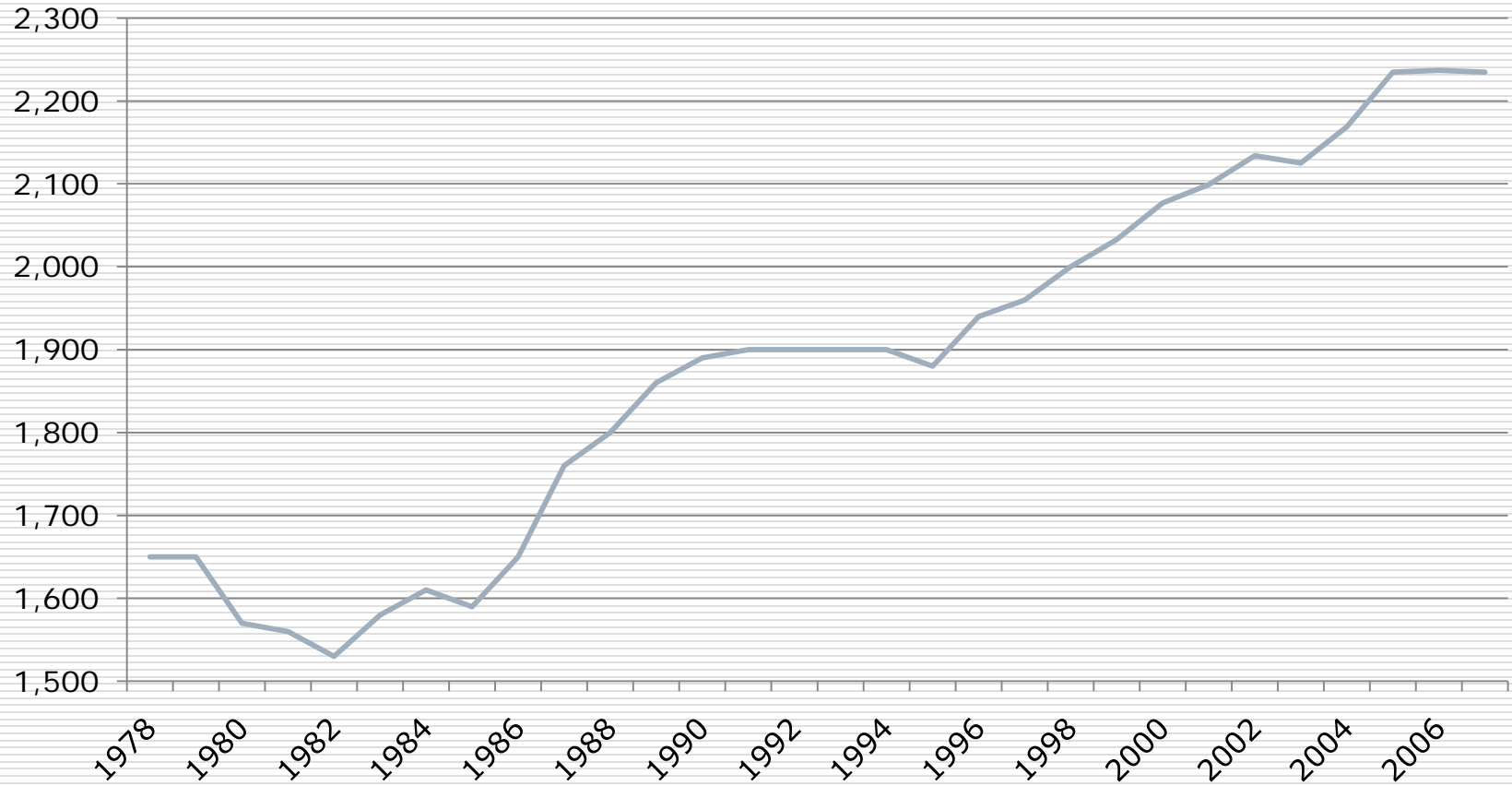
Chief Economist

National Association of Home Builders

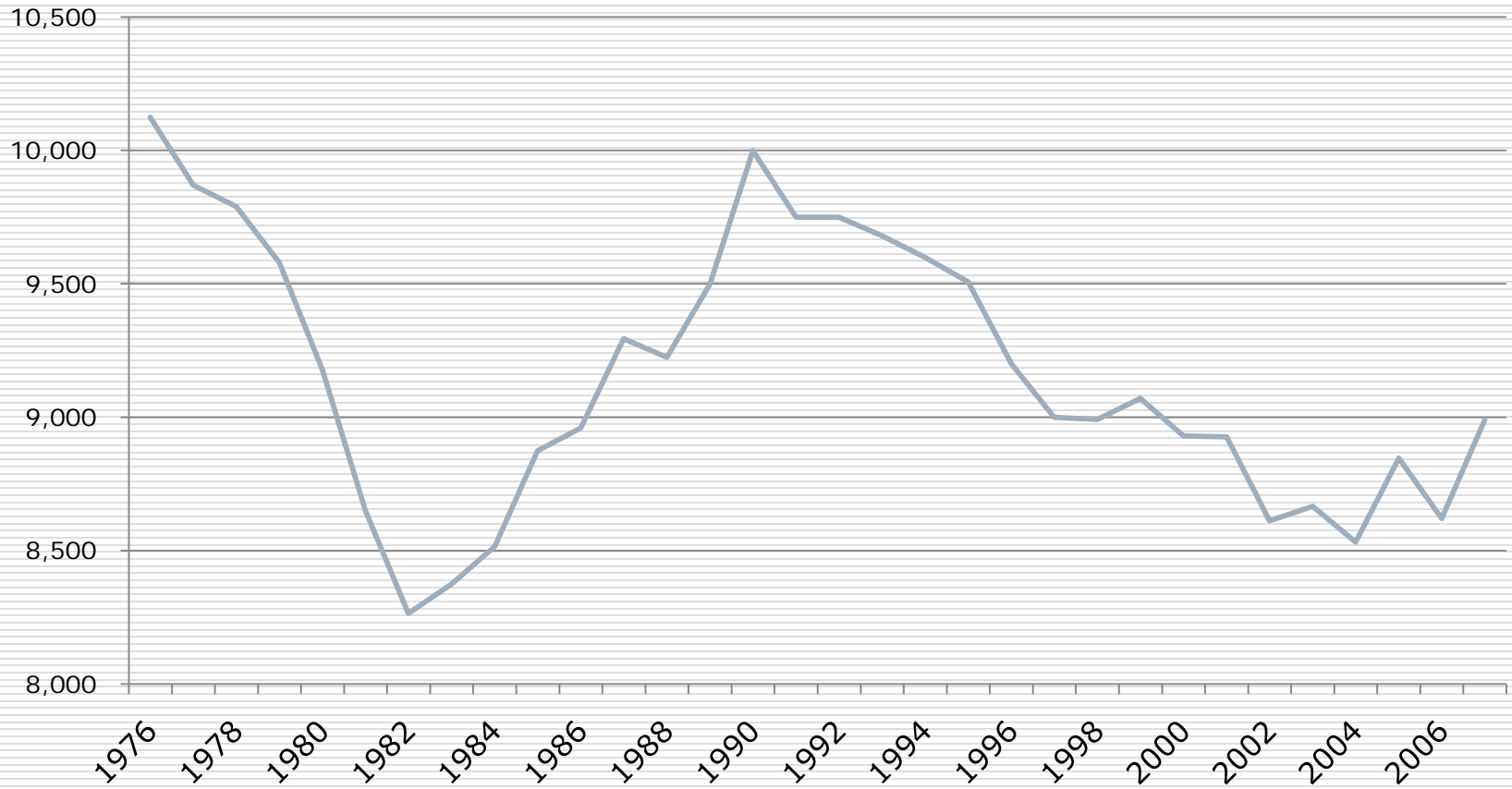
Myths

- Homes and lots are getting larger
 - Housing doesn't pay for itself
 - Homes are responsible for greenhouse gas emissions
 - Builders don't build what consumers want
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House Size in Sq Ft



Lot Size in Sq Ft



Fiscal Expenses per Housing Unit

(\$2004)

	Single Family	Multifamily
Education	1,418	825
Police Protection	446	332
Fire Protection	204	152
Corrections	143	107
Streets and Highways	55	38
Water Supply	154	81
Sewerage	85	44
Health	189	141
Recreation and Culture	212	158
Other General Government	691	514
Electric Utilities	149	111
Gas Utilities	19	14
Public Transit	12	9
Other Government Functions	6	5
Total	3,784	2,530

Housing's Net 'Cost'

□ Cost = schools + roads + EMS +
libraries +

$$= \$3,784$$

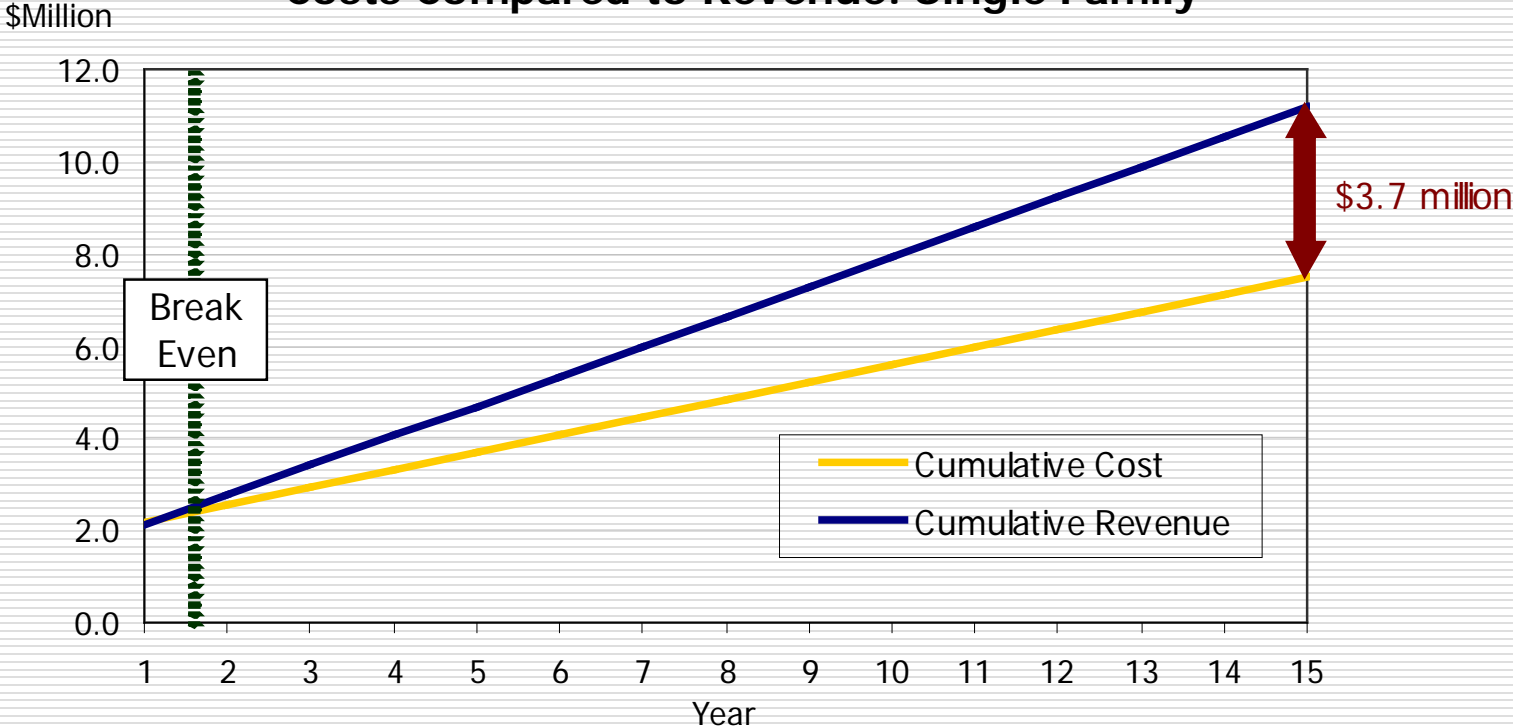
□ Revenue = \$200,000 * 1%

$$= \$2,000 \text{ property tax}$$

□ Net = **-\$1,784**

Real Net

Costs Compared to Revenue: Single Family



Energy and Greenhouse Gas Emissions in Housing

Sector	Energy Consumption		CO ₂ Emissions	
	(Trillion BTUs)		(Million Metric Tons)	
Industrial	31,982	32.0%	1,804	30.0%
Transportation	28,065	28.1%	1,877	31.2%
Residential	21,874	21.9%	1,266	21.1%
Commercial	17,968	18.0%	1,061	17.7%

Annual Energy Review and Emissions of Greenhouse Gases in the United States 2005, Energy Information Administration.

Energy Use by Age of House

	Before 1940	1950-1959	1970-1979	1990-2001
<i>I. Energy consumption per unit in 1000 Btu</i>				
Electricity consumed at the residence	5,647	7,861	14,906	13,355
Energy used to generate the electricity	16,882	23,503	44,563	39,928
Other energy used for HVAC	77,482	51,328	32,901	35,249
Total energy used for HVAC	100,011	82,693	92,370	88,531
<i>II. 1000 Btu per square foot of heated area</i>				
Electricity consumed at the residence	3.98	6.23	9.05	6.65
Energy used to generate the electricity	11.89	18.63	27.05	19.87
Other energy used for HVAC	47.39	31.80	19.18	16.48
Total energy used for HVAC	63.26	56.67	55.28	43.00
Average square feet of heated area	1,974	1,876	2,024	2,578
No. single family detached homes (1000s)	11,210	10,597	9,384	9,563

Other energy includes natural gas, fuel oil, liquified petroleum gas, kerosene, wood, and solar power

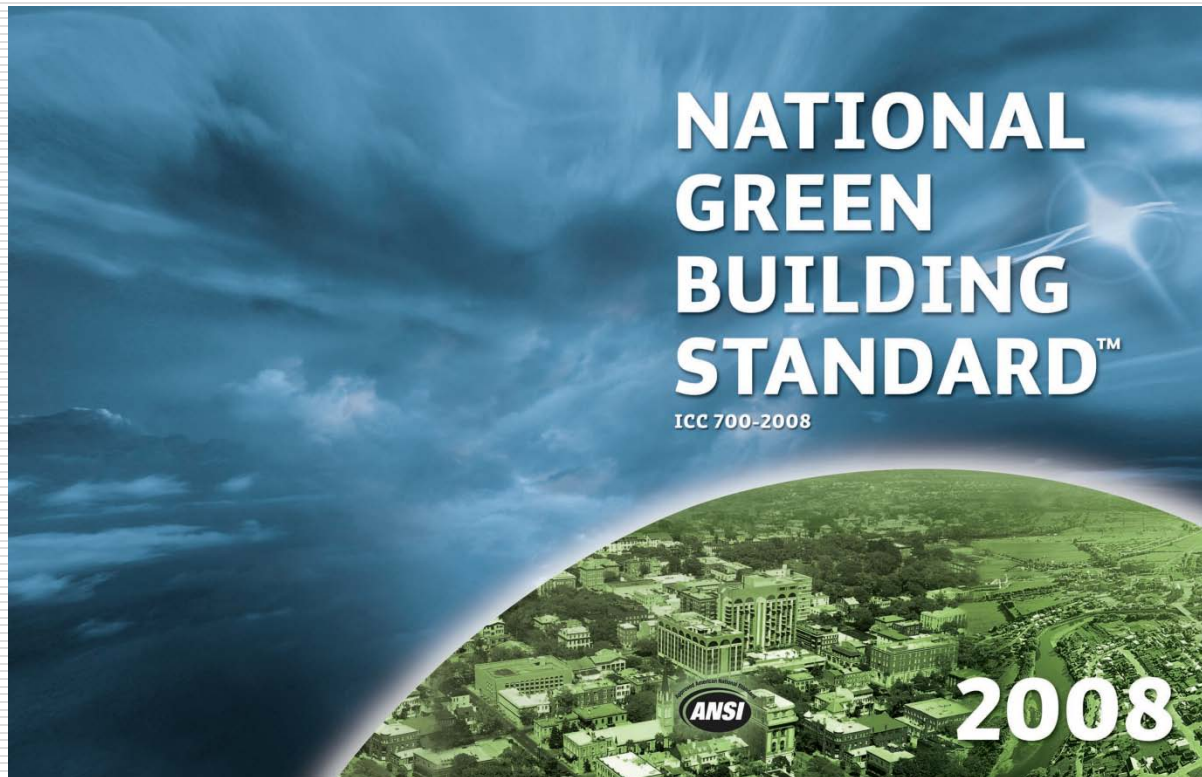
Changes to Base Model

one ceiling fan	3.1%	use electric stove at least once a day	10.9%
two ceiling fans	6.3%	leave the warmer of coffee maker on over 1 hour	10.6%
refrigerator with side by side doors	22.1%	use electric toaster	5.5%
two refrigerators rather than one	33.9%	use an old separate freezer	5.5%
separate freezer in addition to refrigerator	22.0%	use a large separate freezer	13.3%
hot tub or spa	50.8%	use dishwasher daily	41.0%
heated pool	131.4%	load clothes washer 2-4 times per week	1.9%
two DVD/VCRs instead of one	4.5%	load clothes washer 5-9 times per week	14.8%
three DVD/VCRs instead of one	6.8%	load clothes washer more than 10 times per week	43.7%
two TV sets instead of one	8.6%	have a separate fax machine or copier	9.3%
three TV sets instead of one	12.9%	have a personal computer	2.6%
use coffee maker at least once a day	4.3%	use PC 16-40 hours per week	11.5%

Annual Vehicle CO₂ Emissions per 100 Homes

Compactness of Subdivision* (housing units per acre)	CO ₂ emissions (1000 lbs)	Gasoline use (1000 gallons)	Vehicle Miles Traveled (1000 miles)	Average speed different from the optimal (45 mph)
Under 0.08	2,313.9	119.5	2,471.7	16.0
0.08 to 0.39	2,137.2	110.4	2,311.7	17.7
0.39 to 1.56	1,965.9	101.5	2,232.1	19.9
1.56 to 4.69	1,756.7	90.7	1,995.9	21.9
4.69 to 7.81	1,724.6	89.1	1,958.4	23.7
7.81 or more	1,542.9	79.7	1,763.3	25.4

NAHB ANSI-Approved Green Building Standard

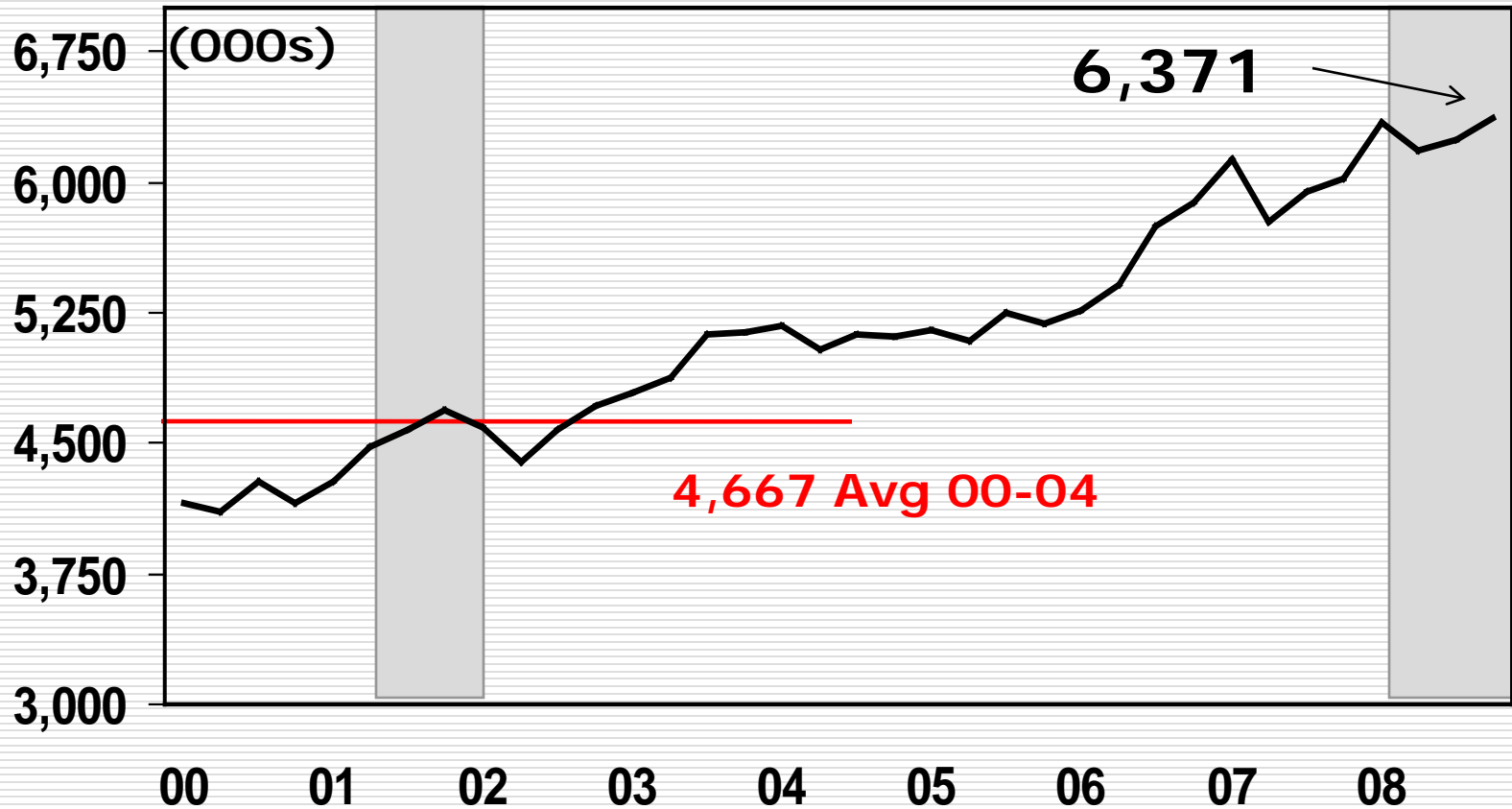


Industry of Small Companies

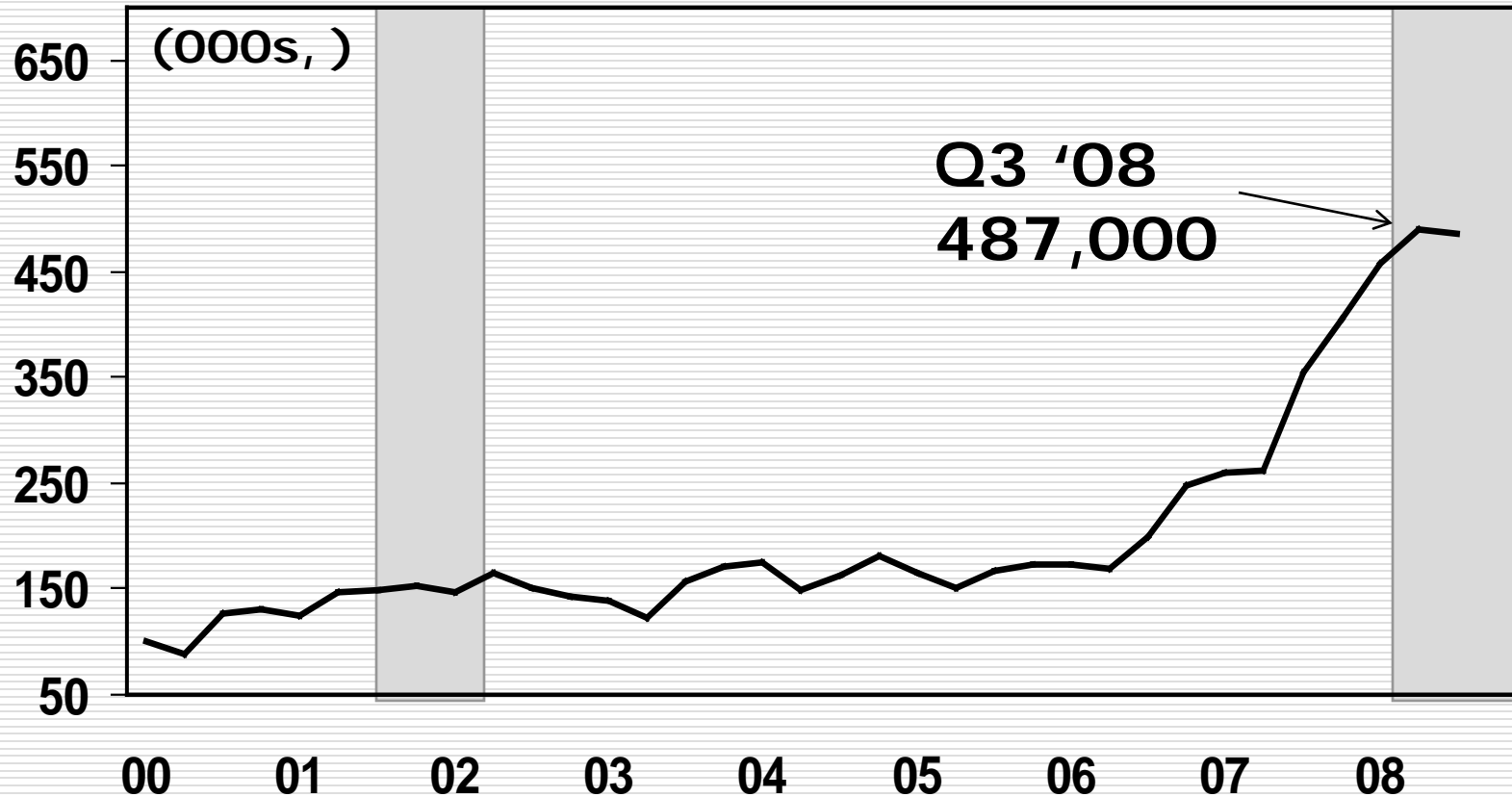
- 80 percent of firms produce 25 or fewer homes per year
 - 10 firms produce < 25% of for-sale homes
 - Intense competition
 - Location dependent on:
 - demand
 - Land approval process
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What Now?

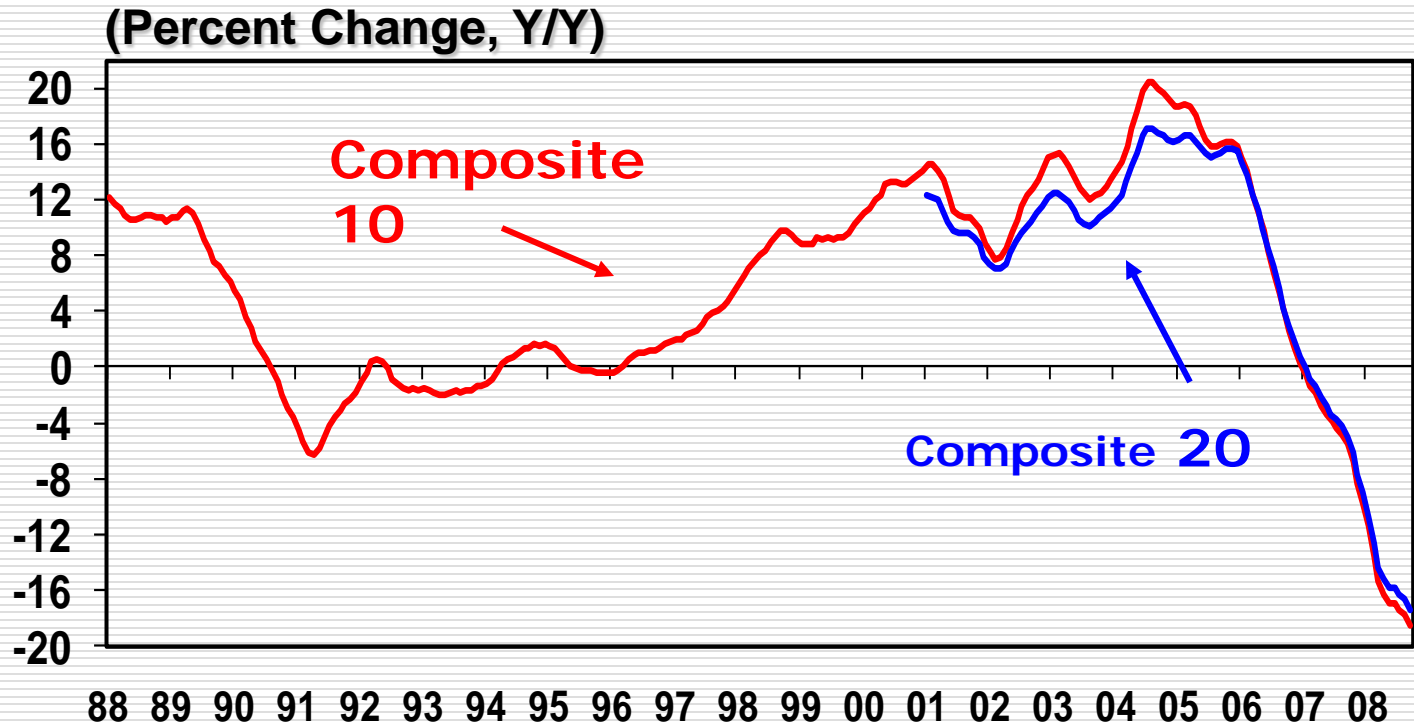
Vacant Year-Round Housing Units For-Sale & For-Rent



Number of Foreclosures (Started During Quarter)



S&P/Case-Shiller Home Price Index

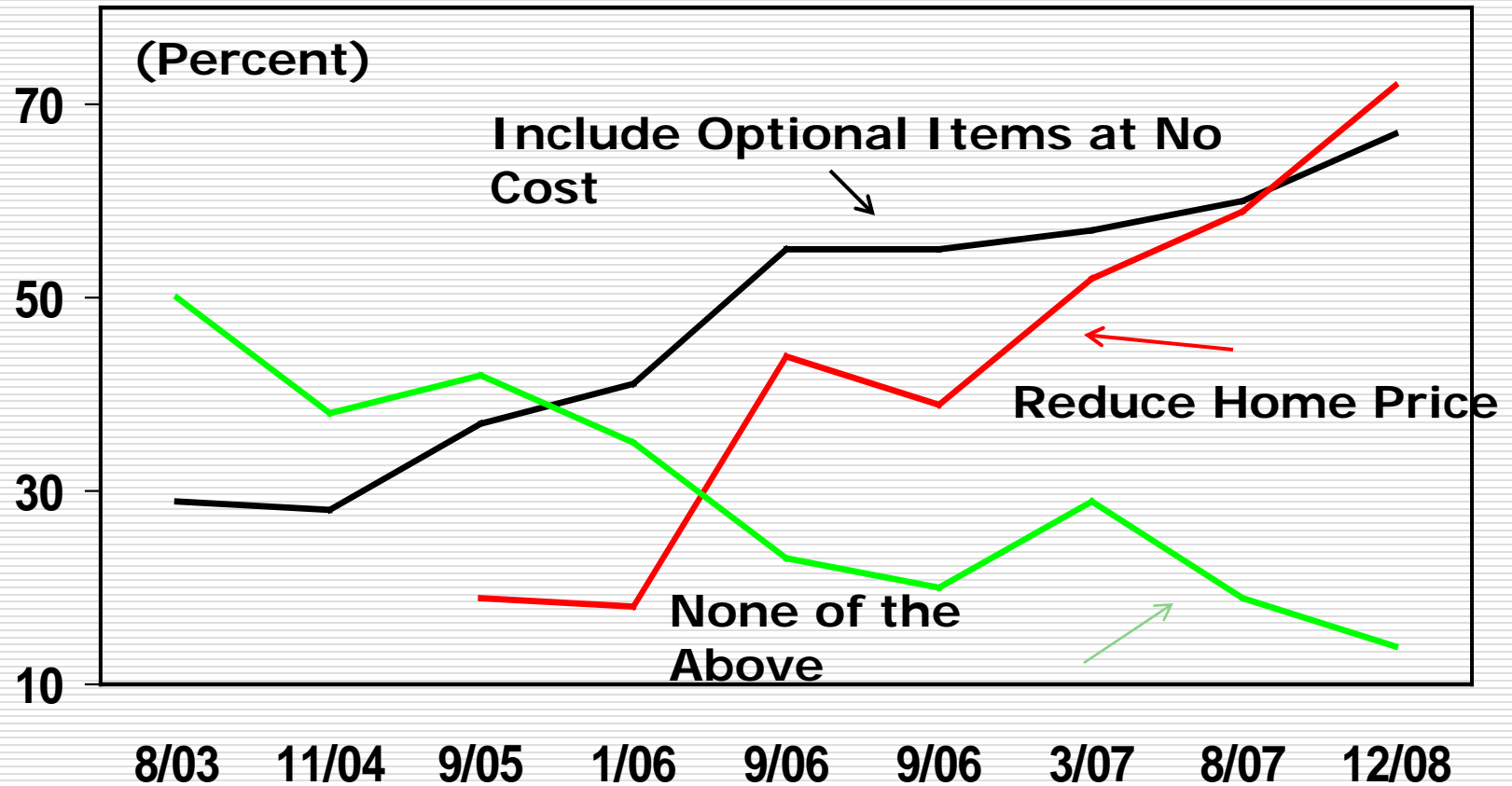


Peak to Trough: (May'06-
Dec'08)

CS-10: -28.2%

CS-20: -26.7%

Home Builder Incentives



Single-Family Housing Starts

(Thousands of Units, SAAR)



Housing Forecast

- 2009 starts will be almost half of 2008
 - 2010 will see 40+% increase
 - Turn should come mid-2009
 - Good News:
 - Low mortgage interest rates
 - Low house prices
 - High affordability
 - Strong demographics
 - Stimulus legislation
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