



# Old Dominion University 2008 Economic Forecast

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[www.odu.edu/forecasting](http://www.odu.edu/forecasting)

# 2008: The Year of Atonement

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Housing Price Bubble Offspring:

Mortgage Equity Withdrawal Bubble

Sub-Prime Lending Bubble

Imported Energy Dependence

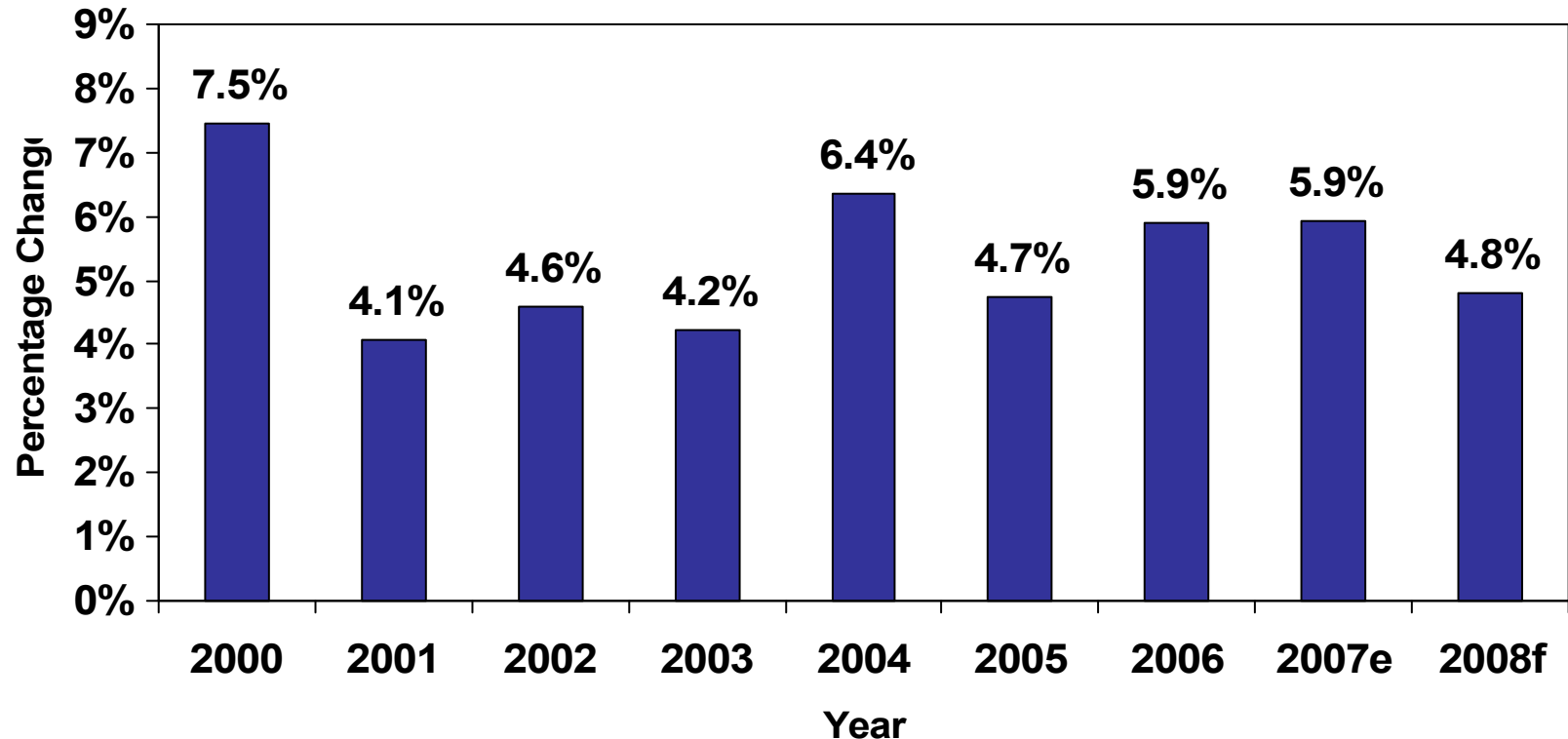
## Old Dominion University 2007 National Scorecard

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	<b>Actual 2007</b>	<b>Predicted 2007</b>
Real U.S. GDP Growth Rate	2.3%	2.4%
Urban Consumer Price Index	2.9%	1.7%

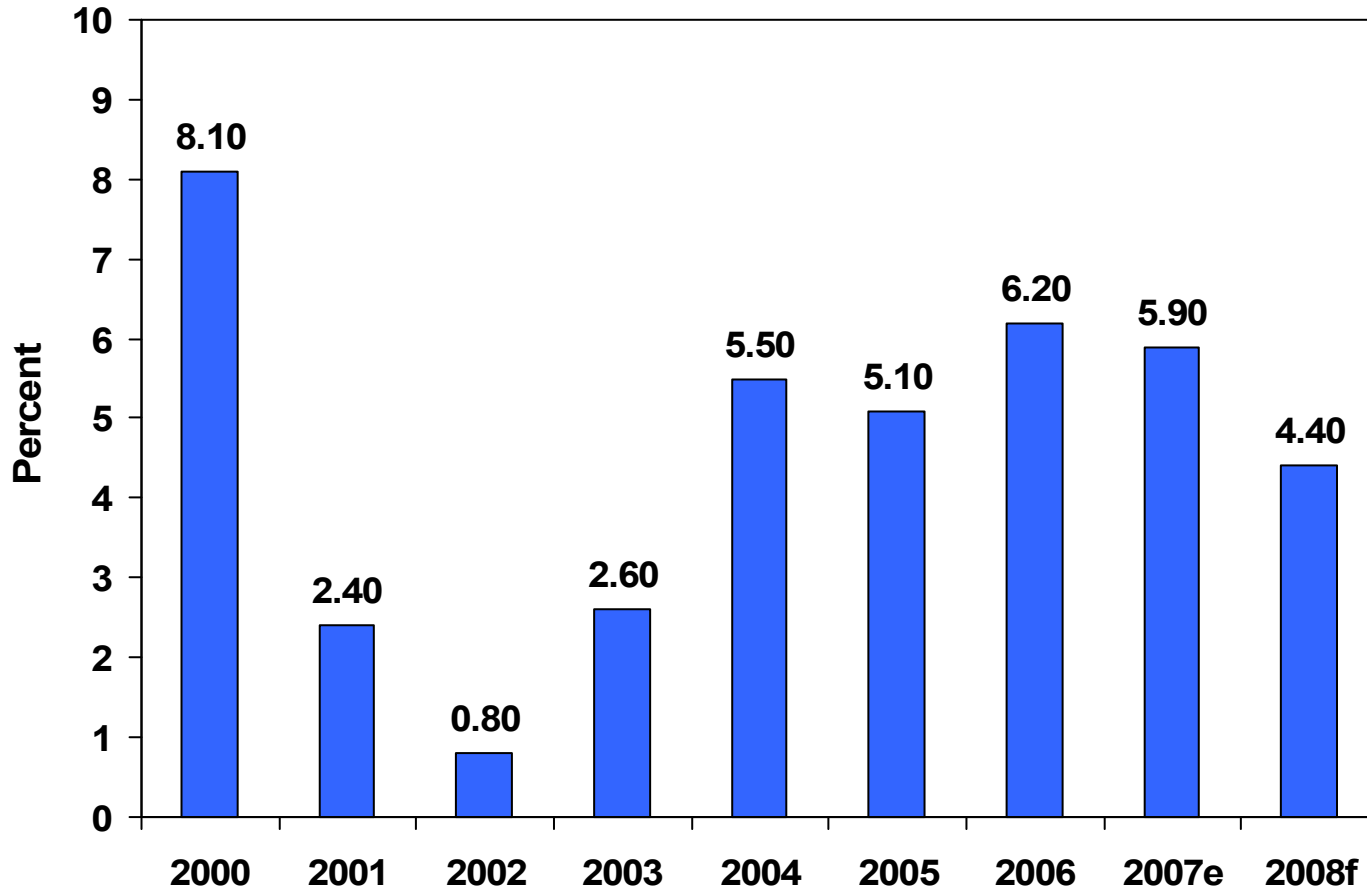
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# Annual Increase in Nominal U.S. Disposable Income\*



\*Assumes an average of \$1,000 per household tax rebate started in June and completed by August. Source: U.S. Department of Commerce and the Old Dominion University Forecasting Project. e: estimated f: forecasted

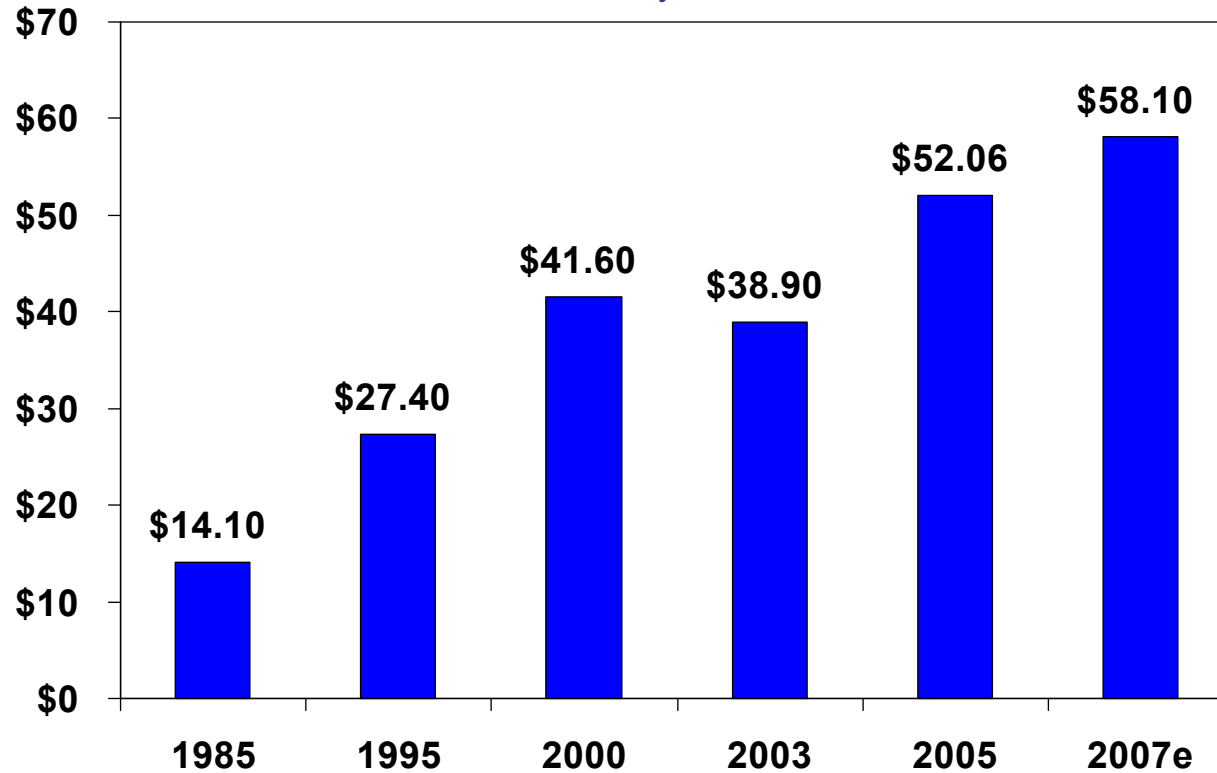
## Annual Percentage Increase in Nominal US Wage and Salary Disbursements (2000 to 2008)



Source: U.S. Dept of Commerce and Old Dominion University Economic Forecasting Project  
 e: estimated f: forecasted

# U.S. Household Net Worth (Trillions of Dollars)

Household net worth increased by an estimated 6.7% from 2006 to 2007



Source: Federal Reserve Bank and the Old Dominion University  
Economic Forecasting Project

e: estimated

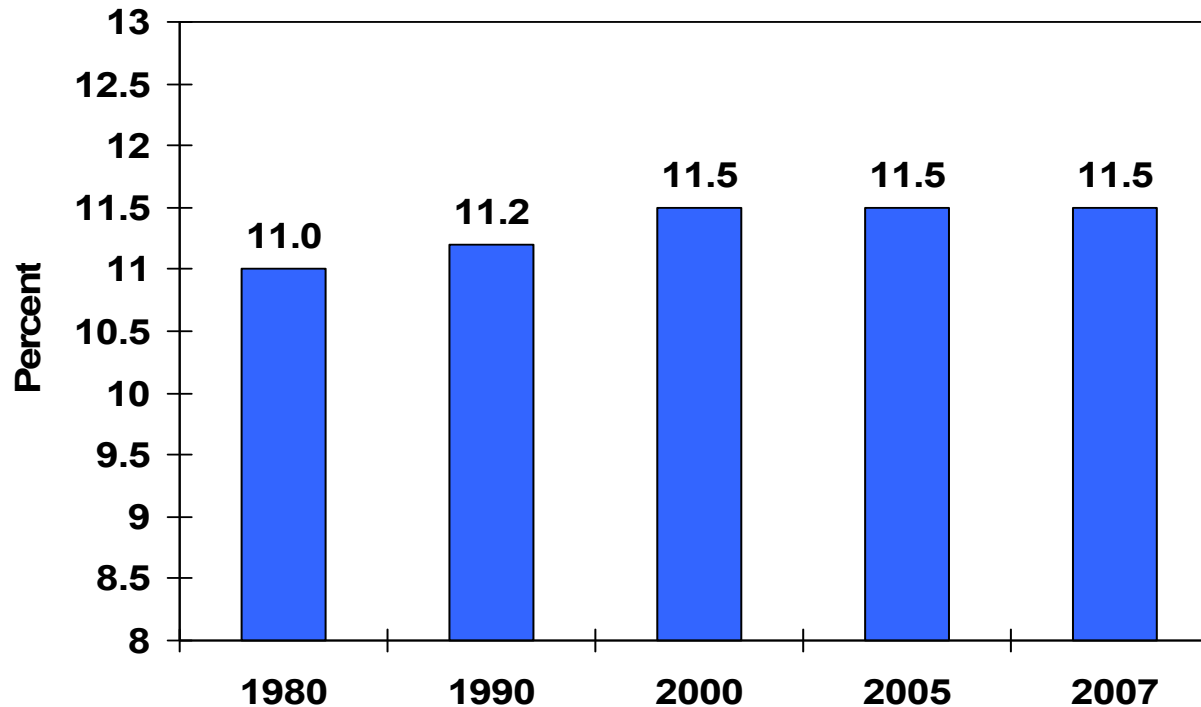
## Distribution of Household Financial Liabilities 1997 and 2007 for Selected Categories

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	<b>Mortgage Debt as a Percentage of Liabilities</b>	<b>Consumer Credit &amp; non-Mortgage Loans as a Percentage of Liabilities</b>
1997	65.5%	26.2%
2007	73.6%	20.2%

Source: Federal Reserve Bank, Old Dominion University Economic Forecasting Project

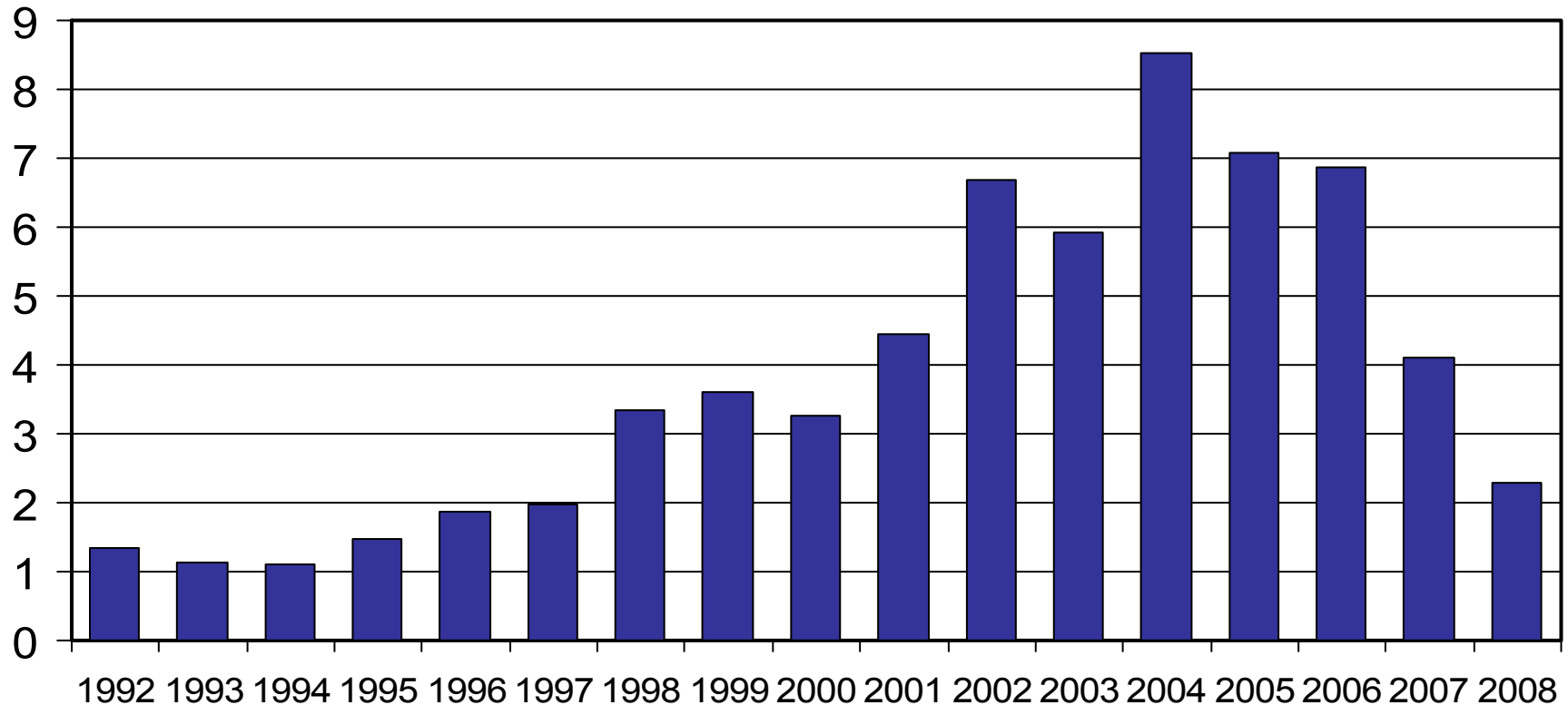
## Estimated Household Debt Service as a Percent of Disposable Personal Income After-Tax Adjustment for the Incremental Change in Household Mortgage to Total Liabilities Ratio (1980=100)



Source: Old Dominion University Economic Forecasting Project

# Mortgage Equity Withdrawal

(Percent of disposable income)



■ Net Equity Extraction

Source: Federal Reserve - Kennedy/Greenspan data updated as of September 2007 and the Old Dominion University Economic Forecasting Project. 2007 and 2008 are estimated based on K/G data and Mortgage Bankers Association Jan. 2008 MBA Mortgage Finance Forecast of mortgage refinancing.

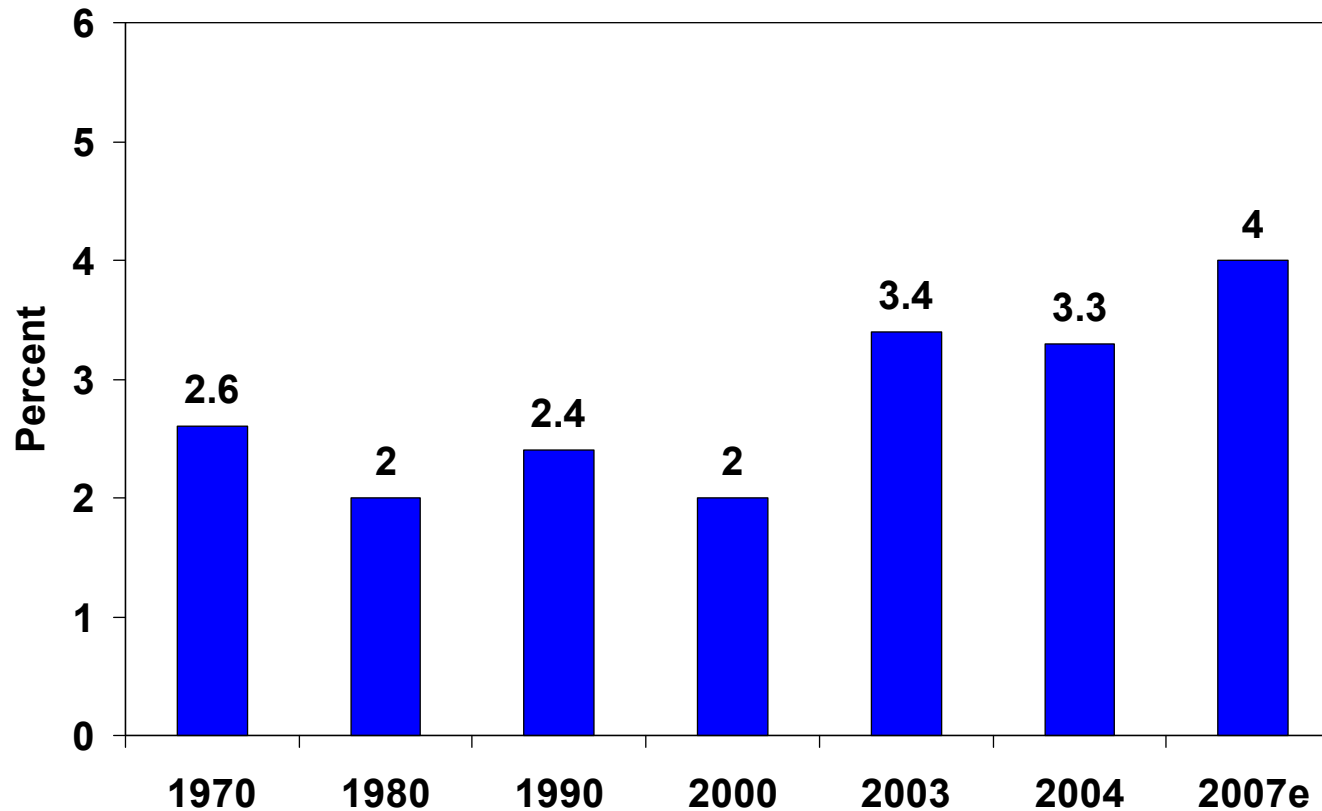
## Household Credit Tightening: Estimated Mortgage and Home Equity Loan Delinquency Rates

	2002	2005	2007
Mortgage: Sub-Prime	15.0%	10.5%	20.1%
Mortgage: Prime	2.9%	2.5%	3.1%
Home Equity: Loans	4.8%	3.1%	4.6%
Home Equity: Line of Credit	1.8%	.6%	2.0%

Sources: Federal Reserve Bank, Wall Street Journal, Mortgage Bankers Association, Equifax and Moody's Economy.com.

# U.S. Corporate Retained Earnings as a Proportion of GDP (Selected Years)

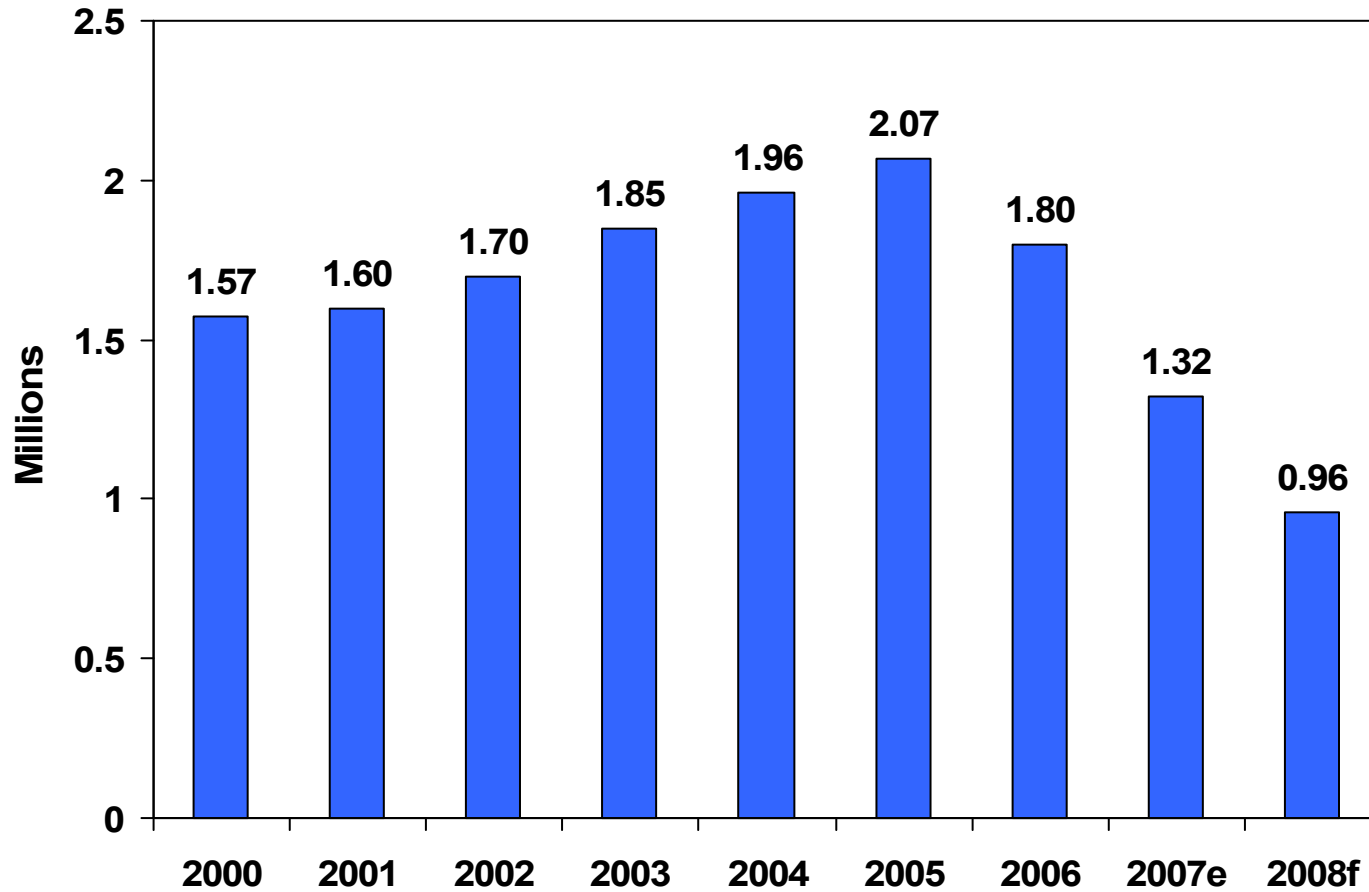
**2007 retained earnings estimate: \$597.1 Billion\***



Source: U.S. Department of Commerce and Old Dominion University Economic Forecasting Project.

•Without CCA and IVA adjustments. e: estimated

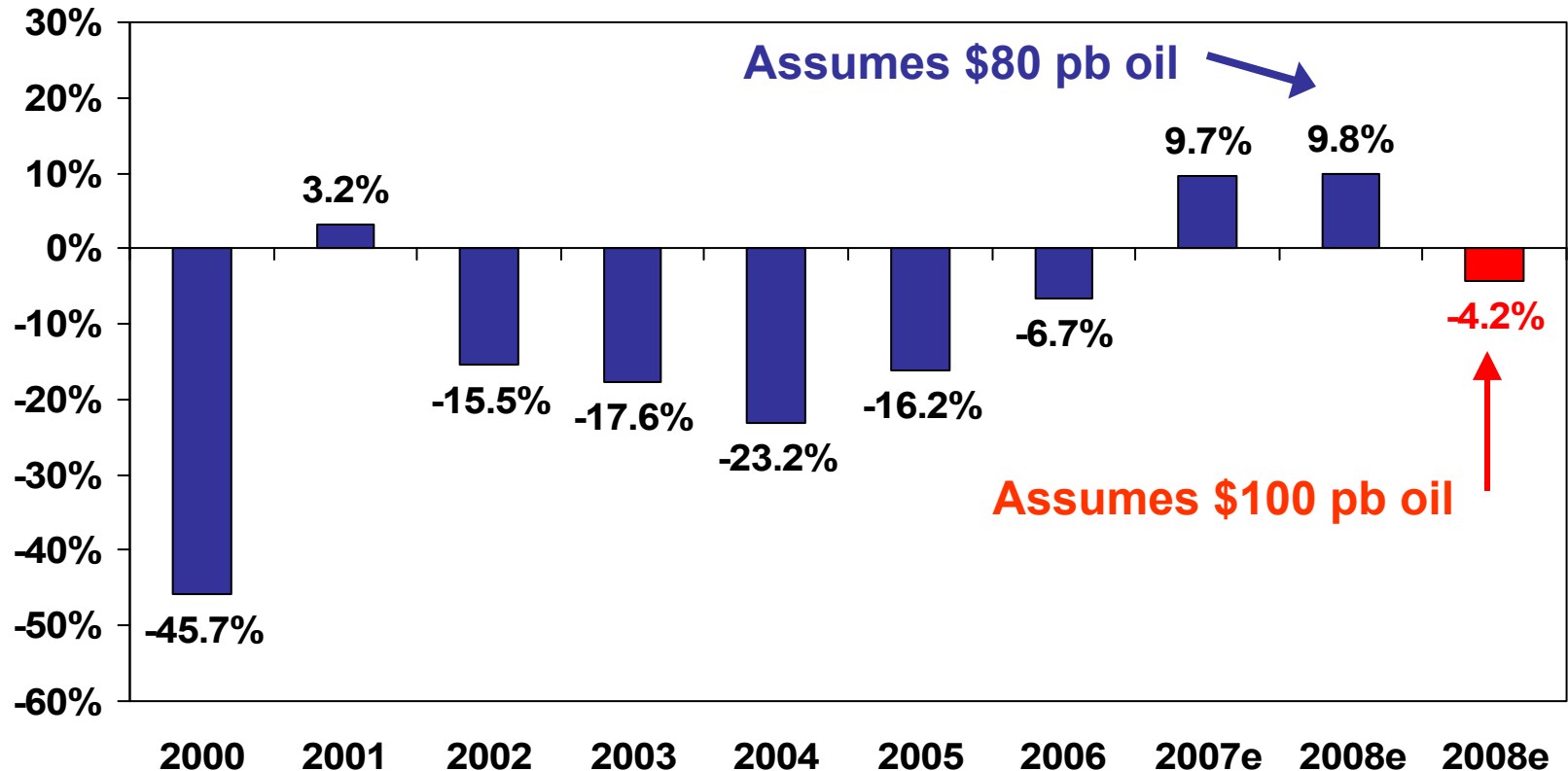
# U.S. Annual Housing Starts (2000 to 2008)



Source: U.S. Bureau of the Census and Old Dominion University Economic Forecasting Project. e: estimated f: forecasted

# Percent Change in U.S. Net Exports (Net Exports = Exports-Imports)

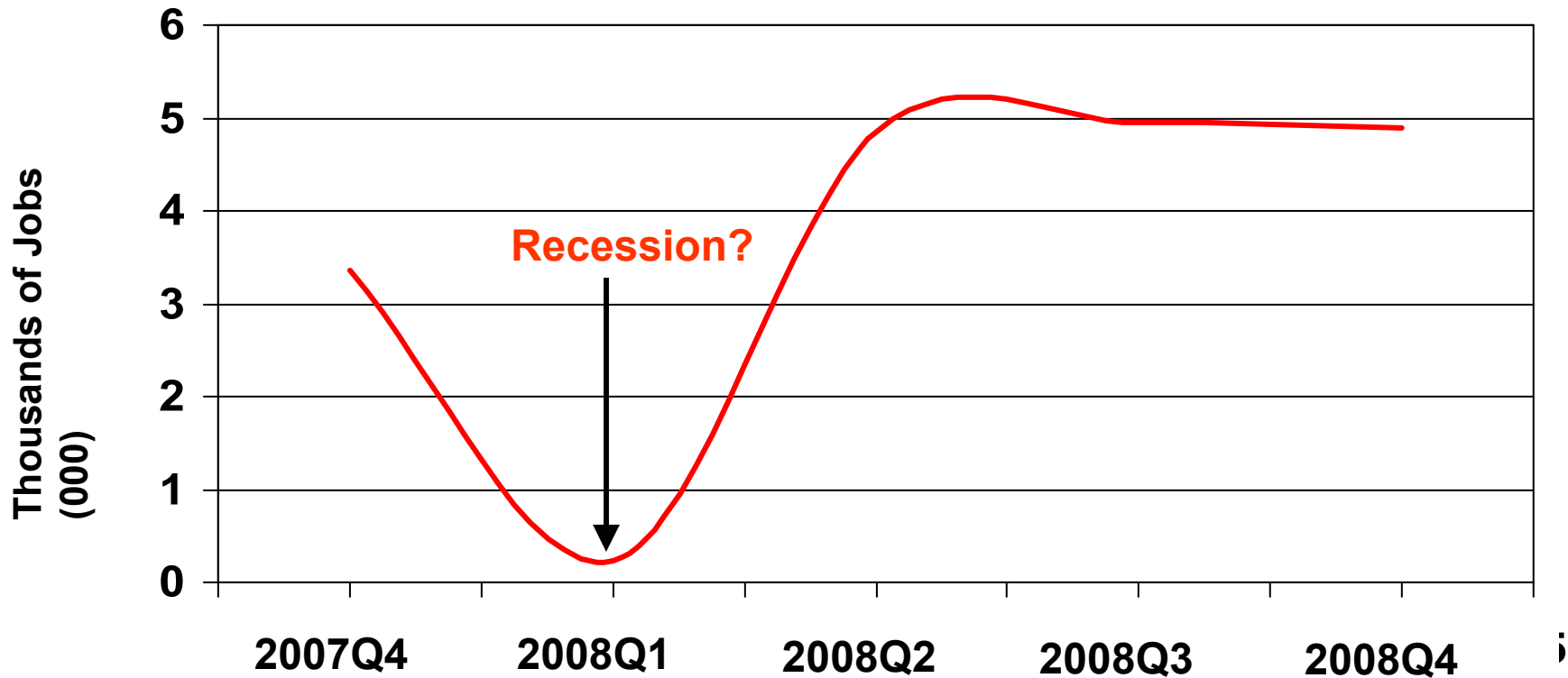
Relative to 2007, an \$80 pb oil price average in 2008 will act like a \$60B tax on the economy



Source: U.S. Department of Commerce and the Old Dominion University Economic Forecasting Project

e: estimated

# Change in U.S. Quarterly Employment (Thousands of Jobs)



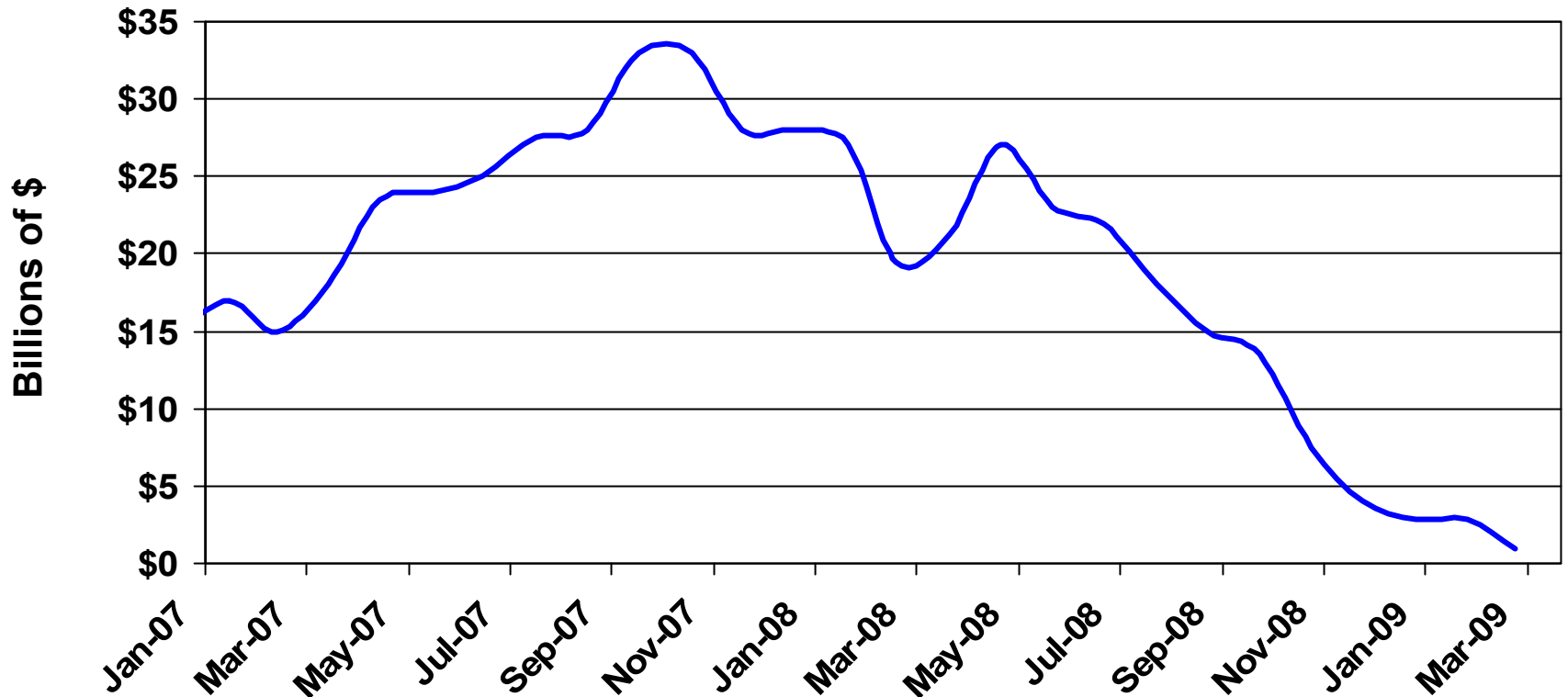
Source: U.S. Department of Labor and the Old dominion University Economic Forecasting Project.

## Old Dominion University 2007 National Scorecard

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	<b>Actual 2007 (December)</b>	<b>Predicted 2007 (December)</b>
3 Month T-Bill Rate	3.0%	5.1%
Prime Rate	7.3%	8.2%
10 Year T-Bond Rate	4.1%	5.2%
30 Year Conventional Mortgage Rate	6.2%	6.5%

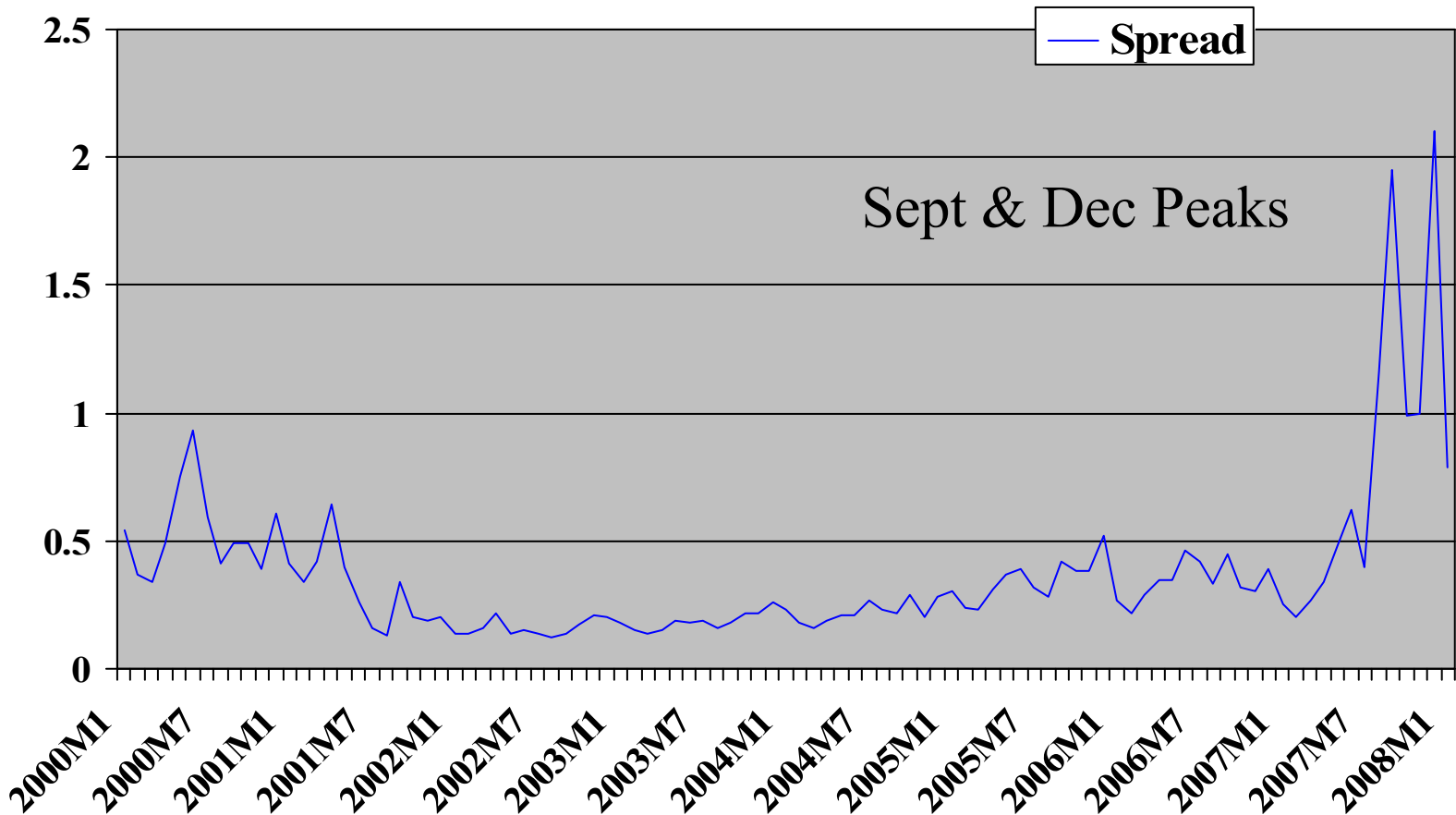
# Estimated Sub-Prime ARM First Resets (Billions of \$)



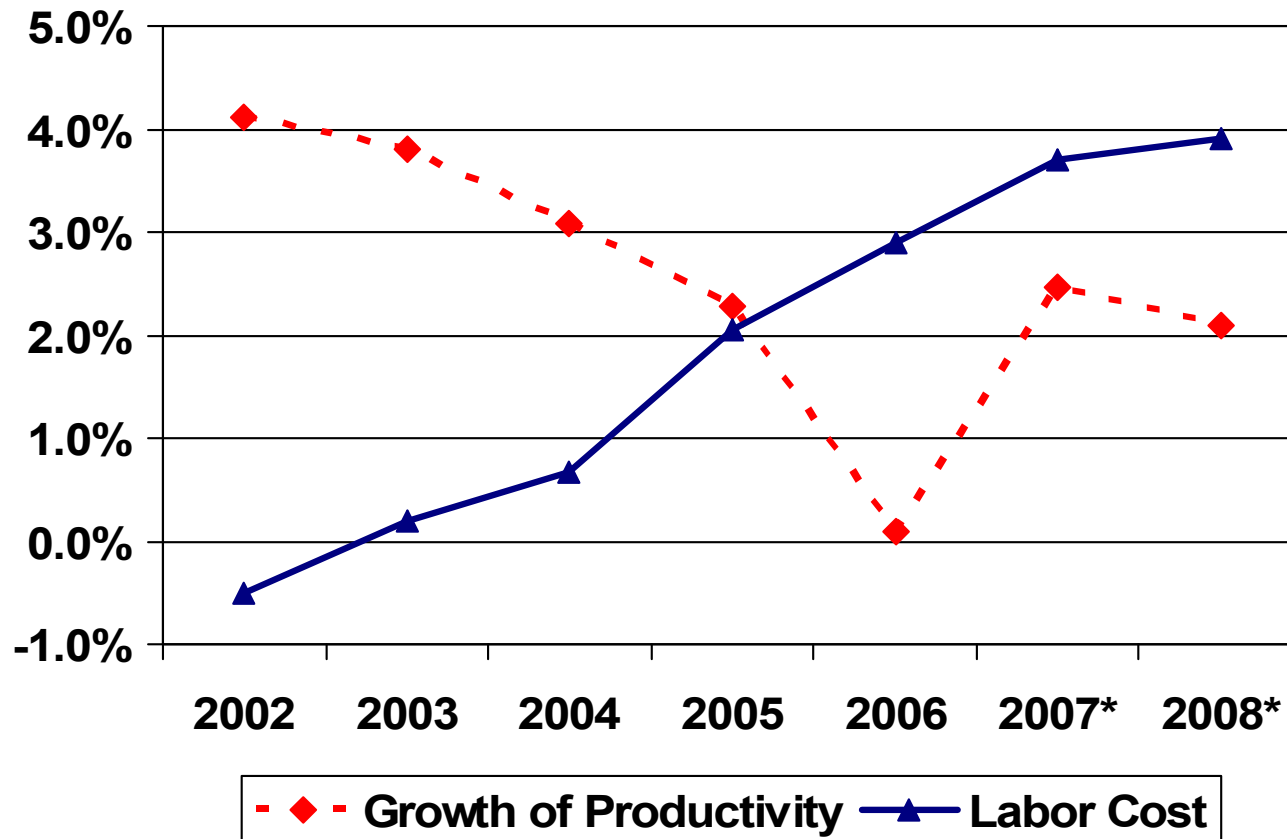
Source: International Monetary Fund, Credit Suisse and the Old dominion University Economic Forecasting Project. Data are approximations.

# Risk Spread

## LIBOR (3-month) vs. T-Bill (3-month) or the “Fear Meter”



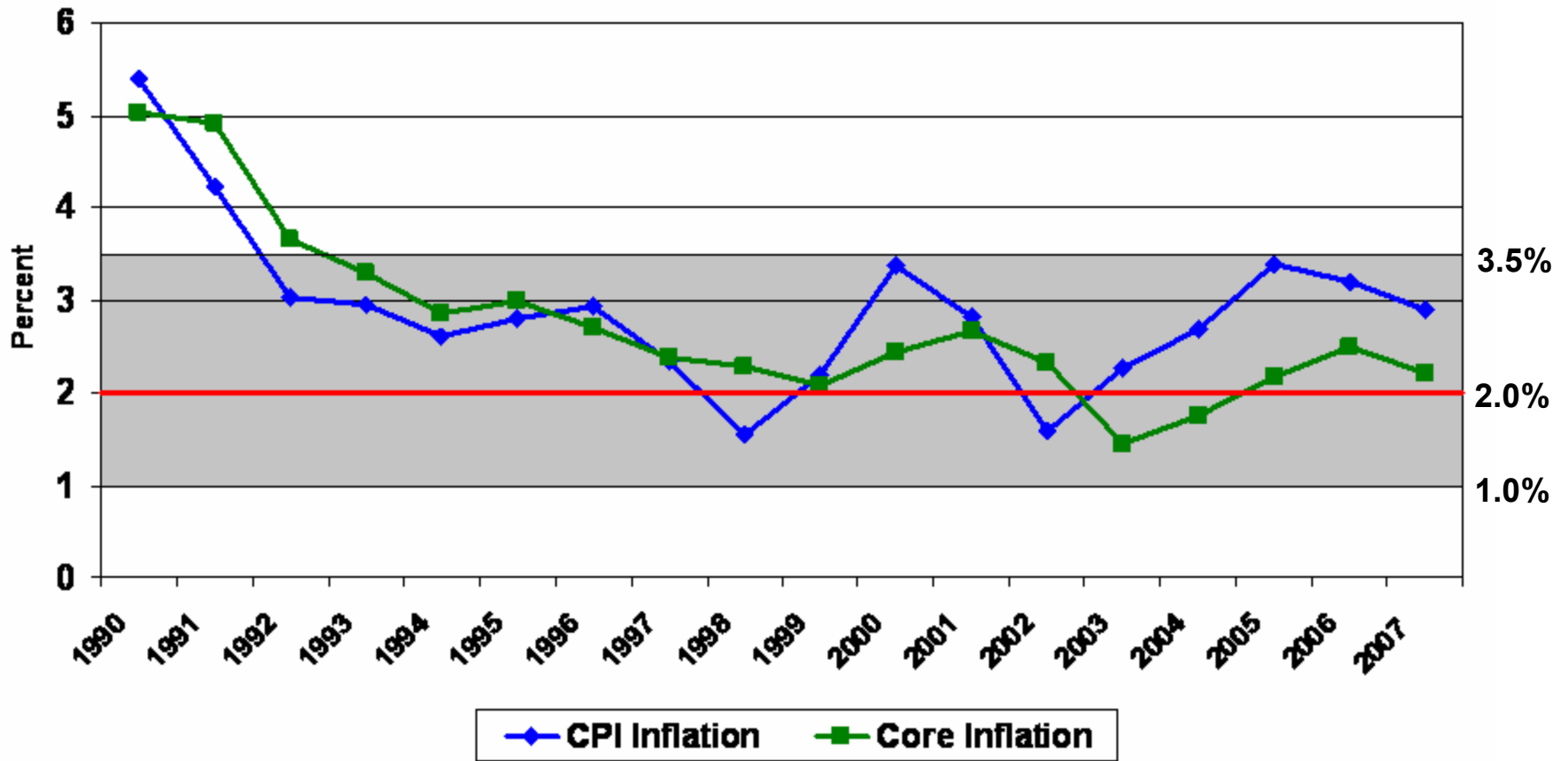
# Percentage Growth in U.S. Labor Productivity and Nominal Unit Labor Cost (2002-2008)



\*Estimated

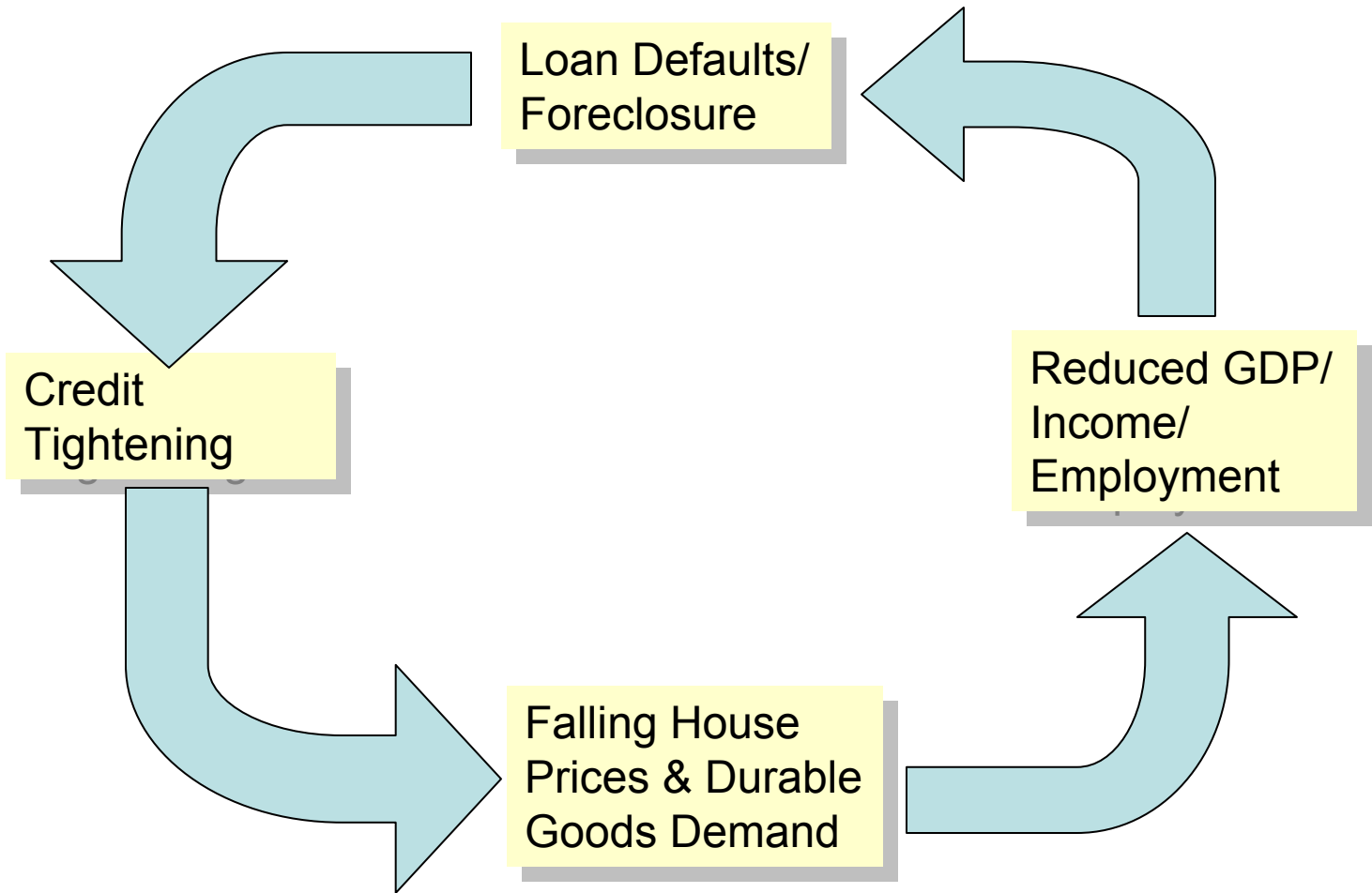
Source: U.S. Department of Labor and Old Dominion University Economic Forecasting Project

# Annual CPI and Core Inflation Rate and Long-Run Inflation Objective Upper and Lower Limits (1990 to 2007)



Source: U.S. Department of Labor, Federal Reserve Bank of St. Louis and Old Dominion University Economic Forecasting Project

## Danger: Potential For An Economic “Do Loop”





# **Old Dominion University 2008 National Forecast**

# Old Dominion University 2008 National Economic Forecast for Selected Categories

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Real U.S. GDP	2.0%
Urban CPI	2.3%
3 Month T-Bill Rate	2.8%
Prime Rate	6.0%
10 Year Treasury Bond	3.9%
30 Year Conventional Mortgage Rate	5.7%

# 2008 National Summary

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1. 2008 US economic activity is expected to be heavily influenced by adjustments to previous financial market economic excesses and energy dependence.
2. Expect considerably below average trend GDP growth with the likely avoidance of a shallow “hairsplitting” recession through the first three quarters of 2008.
3. We estimate that a \$100pb, or higher, average oil price in early 2008 is likely to create an “unambiguous” recession.
4. Danger: The US economy faces the possibility of a credit default cycle that could negatively affect economic growth over the next few years along with monetary policy options that are for now limited by the prospect of inflation. Insurance against the default cycle include aggressive rate reduction by the central bank as well as rapid and federal fiscal policy and regulatory action.



**Old Dominion University  
2008 Regional Forecast for  
Hampton Roads MSA**

## Old Dominion University 2007 Hampton Roads Scorecard

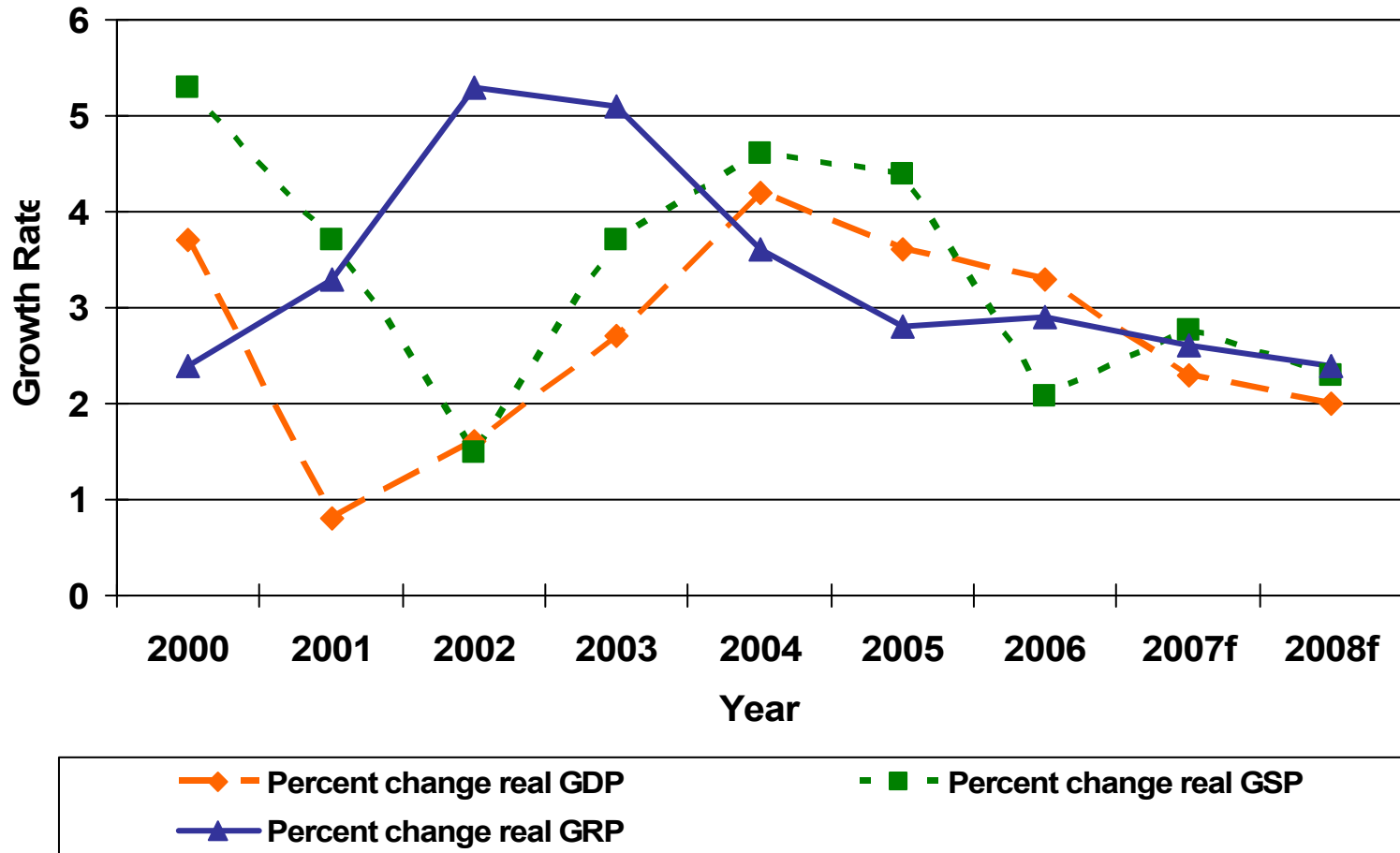
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	<b>Actual Change 2007*</b>	<b>Predicted Change 2007</b>
Real GRP (2000=100)	2.63%	2.6%

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\*Figures for calendar year 2007 include predicted values for December 2007.

## Rate of Growth of GDP(US), GSP(VA) and GRP(HR)



Source: Old Dominion University Economic Forecasting Project  
f: forecasted

## Old Dominion University 2007 Hampton Roads Scorecard

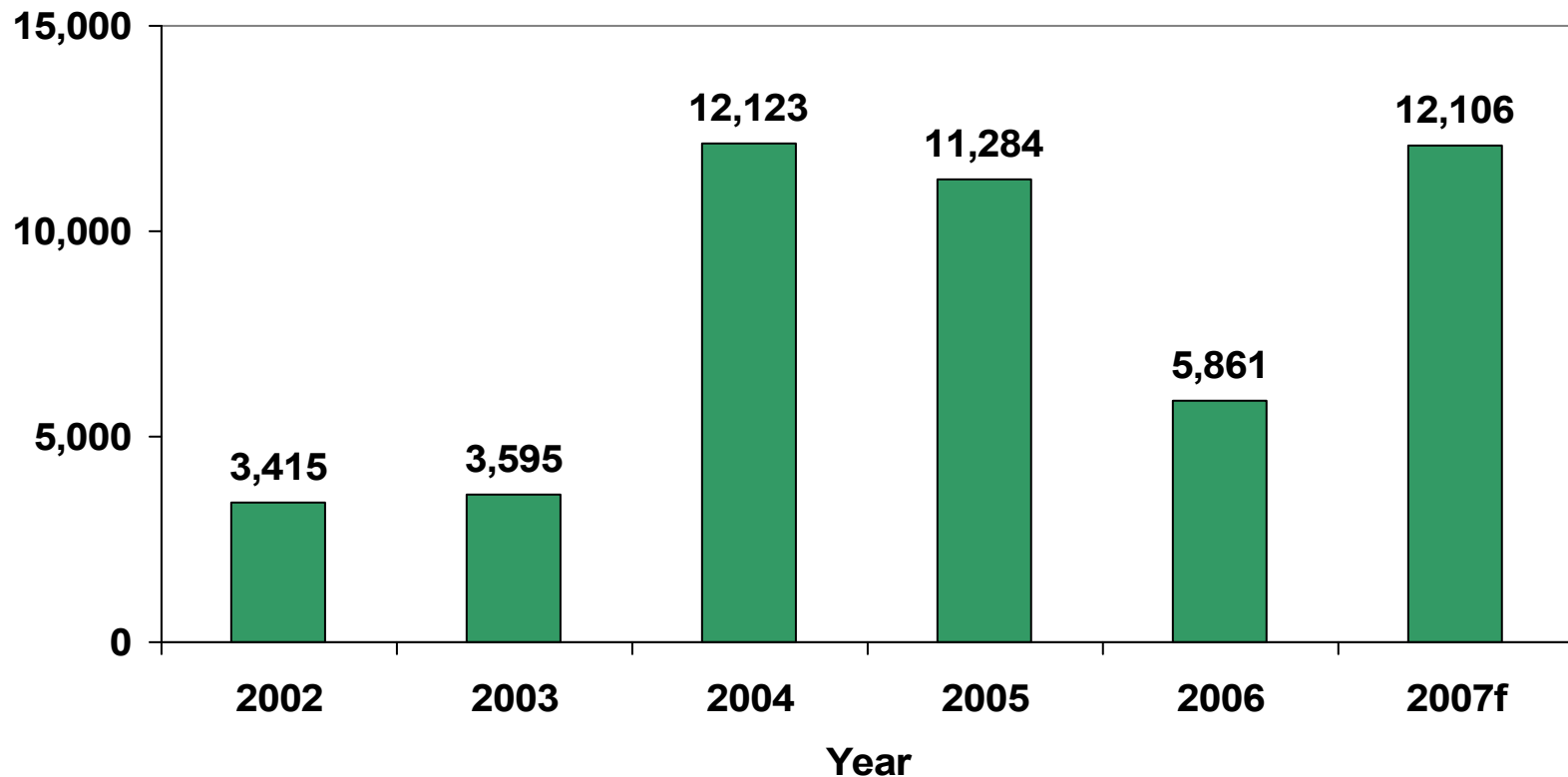
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	<b>Actual Change 2007*</b>	<b>Predicted Change 2007</b>
Civilian Employment**	1.6%	0.8%
Unemployment Rate	3.2%	3.7%

\*Figures for calendar year 2007 include predicted values for December 2007.

\*\*Employment data will be revised by U.S. BLS in March 2008.

# Net New Jobs Created in Hampton Roads 2002-2007



Source: Department of Labor and the Old Dominion University Economic Forecasting Project.

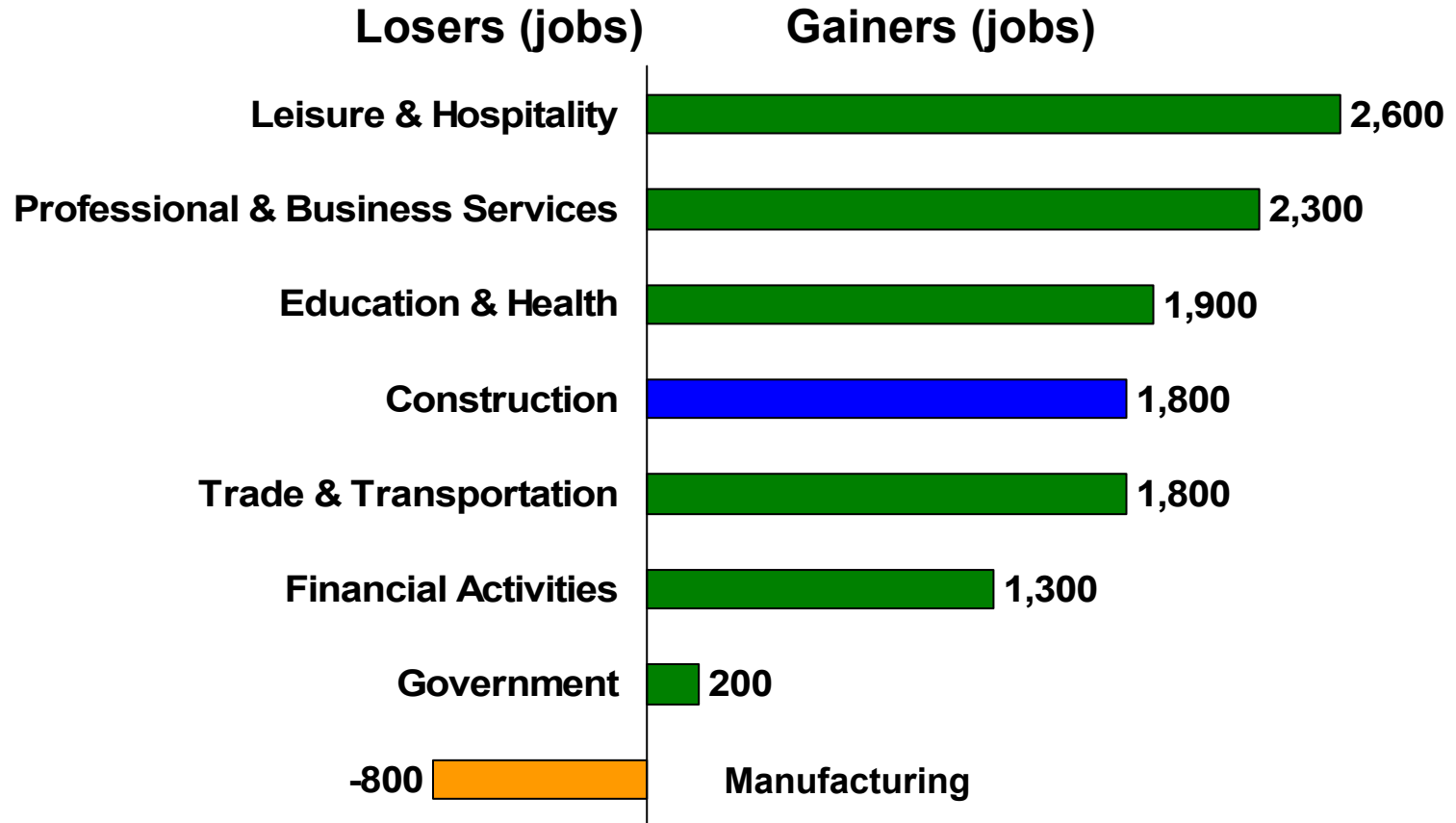
## Estimated Ford Plant and BRAC Long Term Economic Outcome (2007 Dollars)

	<b>GRP Loss</b>	<b>Job Loss</b>	<b>Jobs as a Percent of MSA total*</b>	<b>Percent GRP Loss</b>
Ford Plant	\$0.6 Billion	6,380	0.63%	0.8%
BRAC	\$0.9 Billion	9,099	0.90%	1.2%
<b>Total</b>	<b>\$1.5 Billion</b>	<b>15,479</b>	<b>1.52%</b>	<b>2.0%</b>

Source: Old Dominion University Economic Forecasting Project

\*As a percent of all civilian and military employment

## Employment Gains and Loses in Hampton Roads in 2007\*



Source: U.S. Department of Labor and the Old Dominion University Economic Forecasting Project

\*Estimated

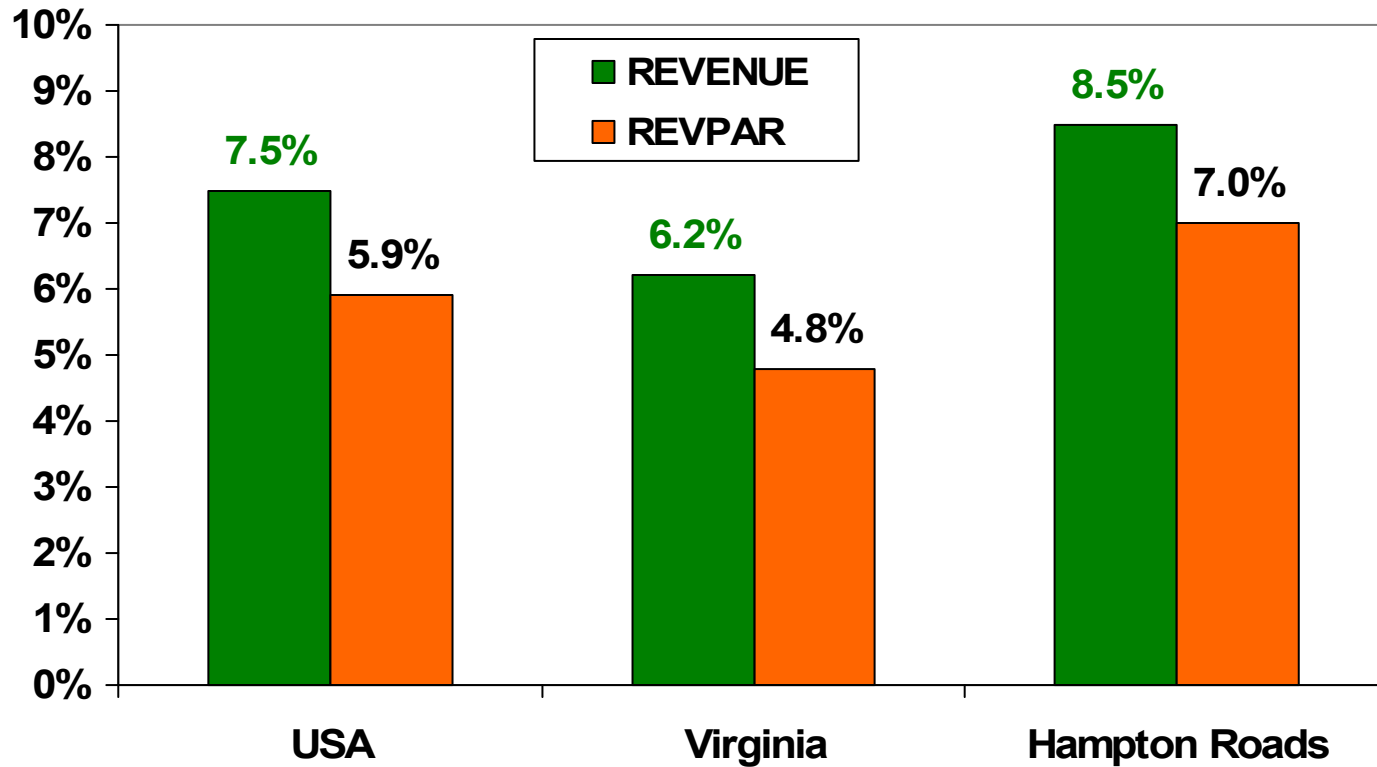
## Old Dominion University 2007 Hampton Roads Scorecard

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	<b>Actual Change 2007*</b>	<b>Predicted Change 2007</b>
Taxable Sales	4.0%	4.4%
Hotel Revenue	8.5%	2.8%

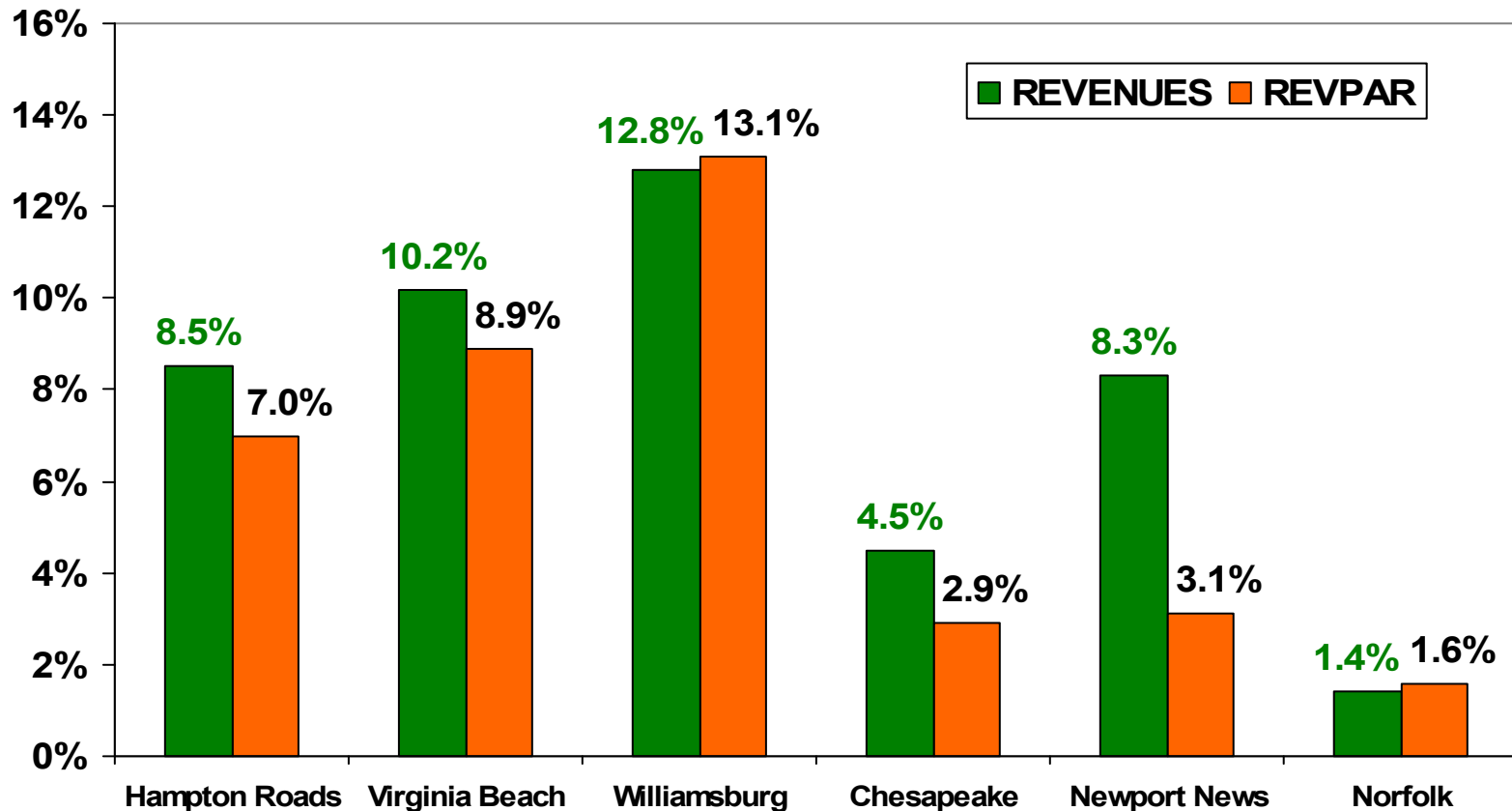
\*Figures for calendar year 2007 include predicted values for December 2007.

# Growth in Hotel Revenue and REVPAR in Selected Areas from 2006 to 2007



Source: Smith Travel Research Trend Report December 27, 2007 and the Old Dominion University Economic Forecasting Project.

# Growth in Hotel Revenues and REVPAR within Hampton Roads from 2006 to 2007



Source: Smith Travel Research Trend Report December 27, 2007 and the Old Dominion University Economic Forecasting Project.

## Old Dominion University 2007 Hampton Roads Scorecard

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	<b>Actual Change 2007</b>	<b>Predicted Change 2007</b>
Cargo Tonnage	6.9%	4.3%

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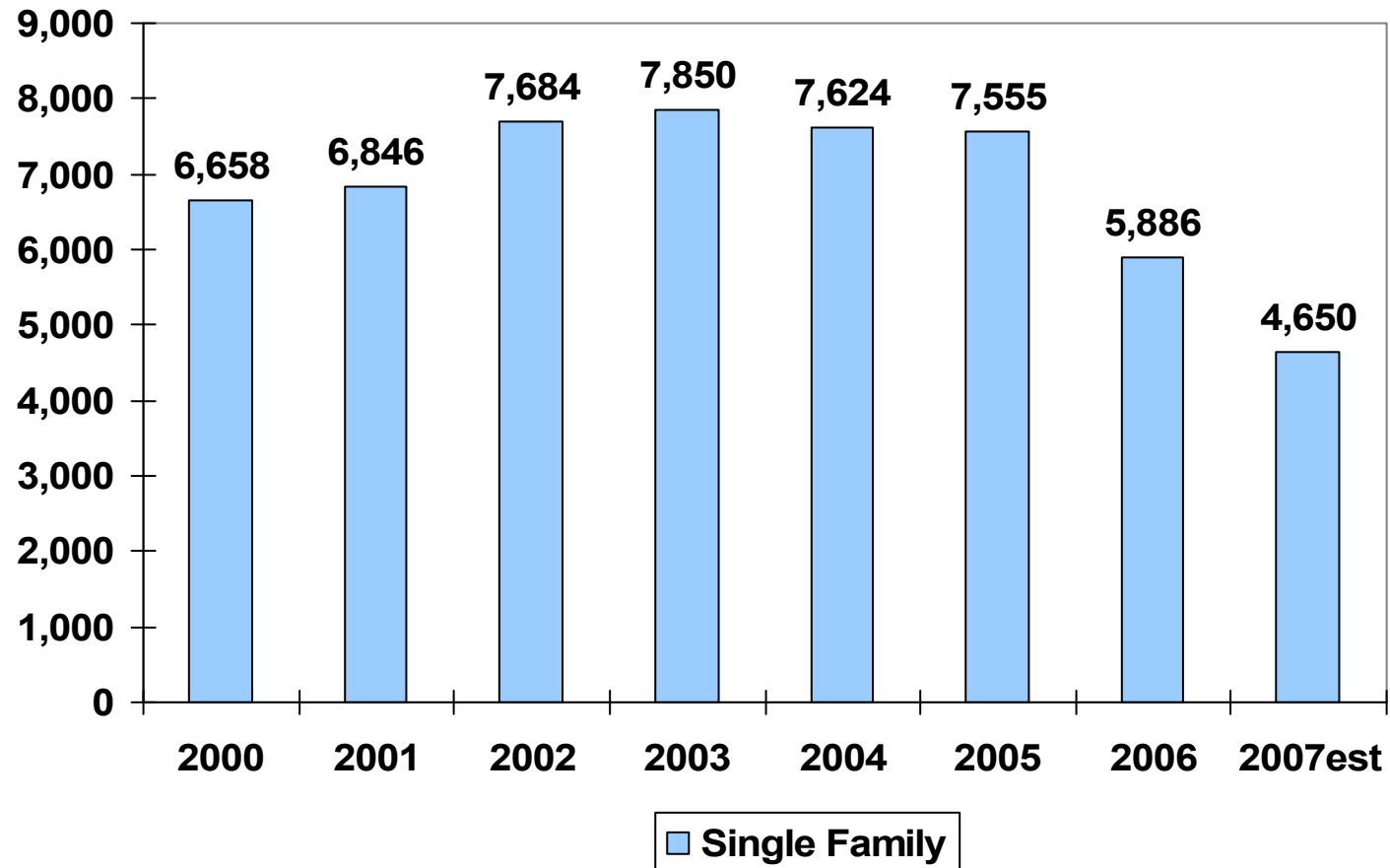
## Old Dominion University 2007 Hampton Roads Scorecard

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	<b>Actual Change 2007*</b>	<b>Predicted Change 2007</b>
Single Family Housing Building Permit Value	-14.9%	-12.9%

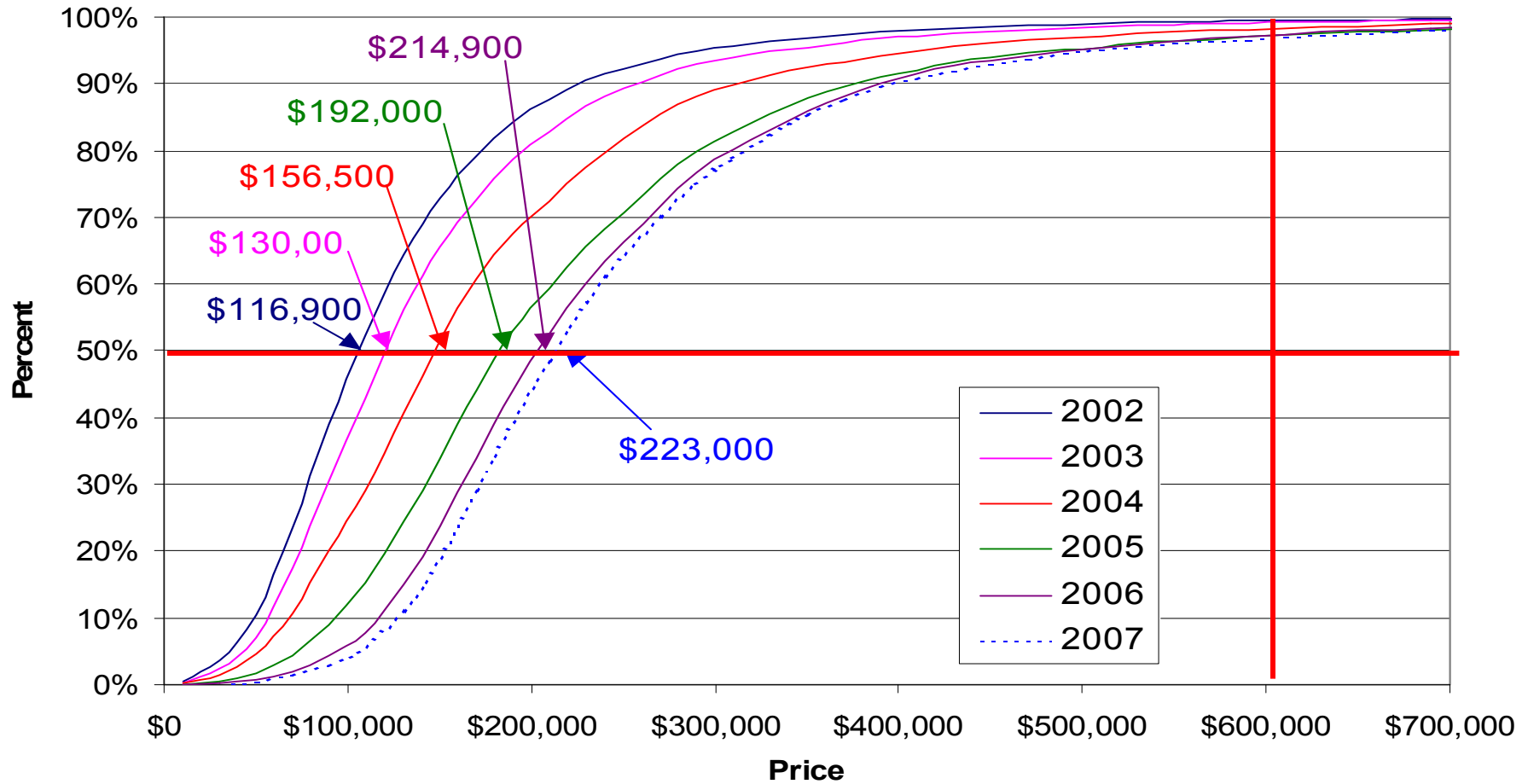
\*Figures for calendar year 2007 include predicted values for December 2007.

# Building Permits for Single Family Homes in Hampton Roads (2000 to 2007)



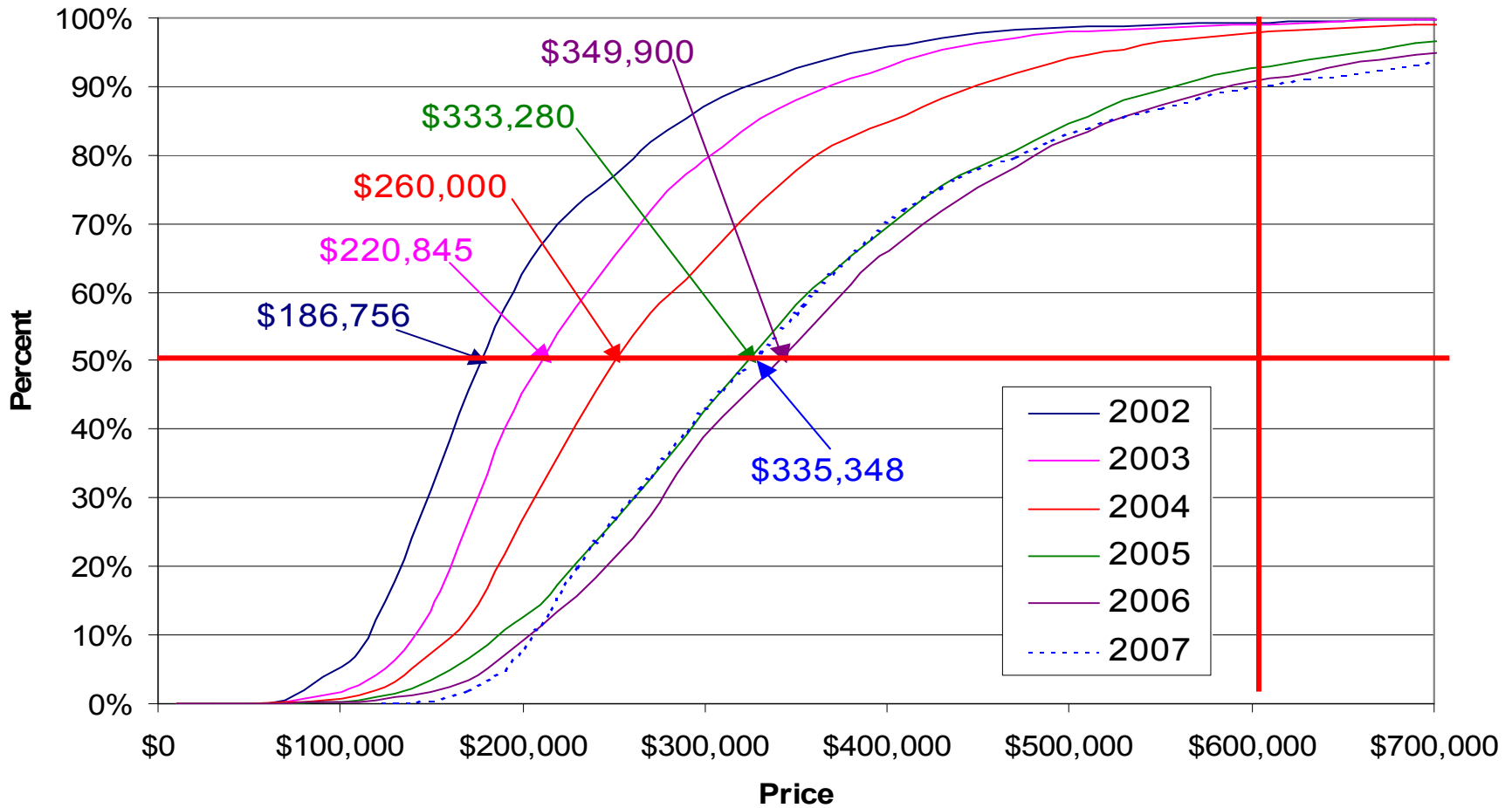
Source: US Bureau of the Census and Old Dominion University Economic Forecasting Project

# Cumulative Price Distribution of All Residential Resale Homes (Detached, Attached) Sold in 2002-2007



Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.

# Cumulative Price Distribution of All New Construction Residential (Detached, Attached) Homes Sold in 2002-2007



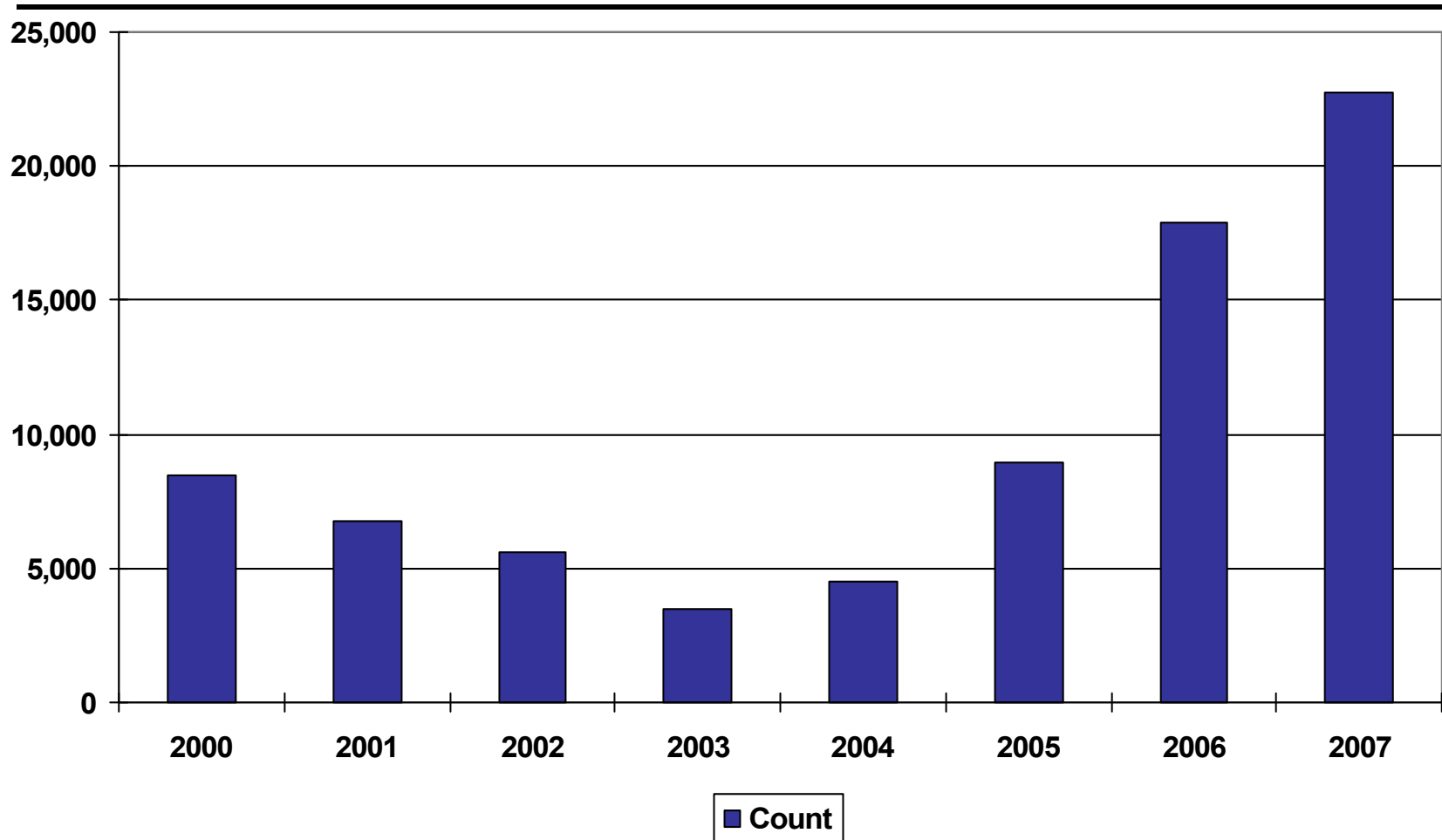
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all new construction activity in our region.

# Growth in Median Price of Homes (Detached, Attached) Sold (2004-2007)

	All Resale	All New Construction
From 2004 to 2005	22.7%	27.8%
From 2005 to 2006	11.9%	5.3%
From 2006 to 2007	3.8%	-4.2%

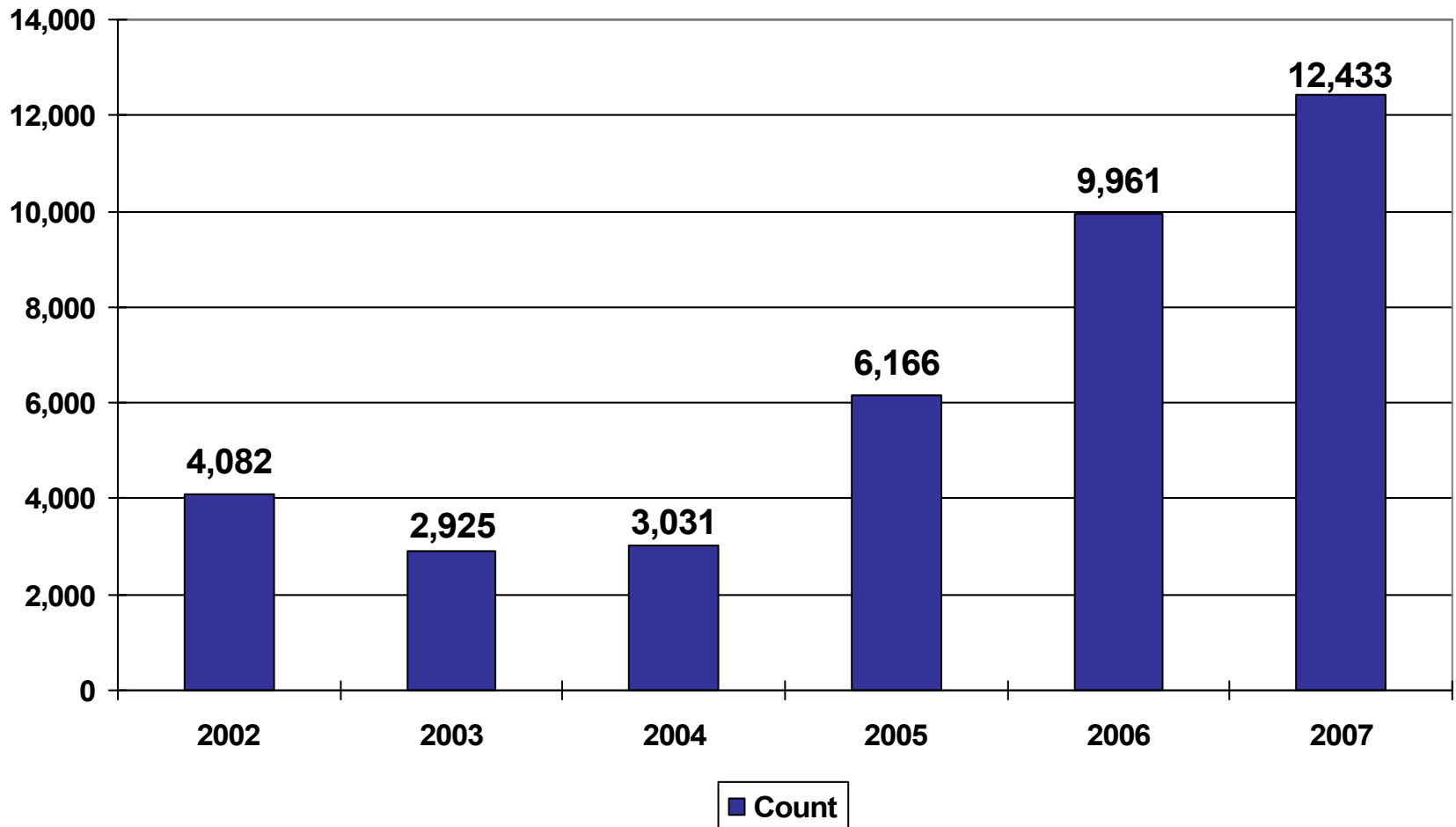
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures for New Construction reported here represent only those properties that are listed through REIN by REIN members and may not represent all new construction activity in our region.

# Hampton Roads Count of All Unsold Residential (Detached, Attached) Homes During Each Year (2000-2007)



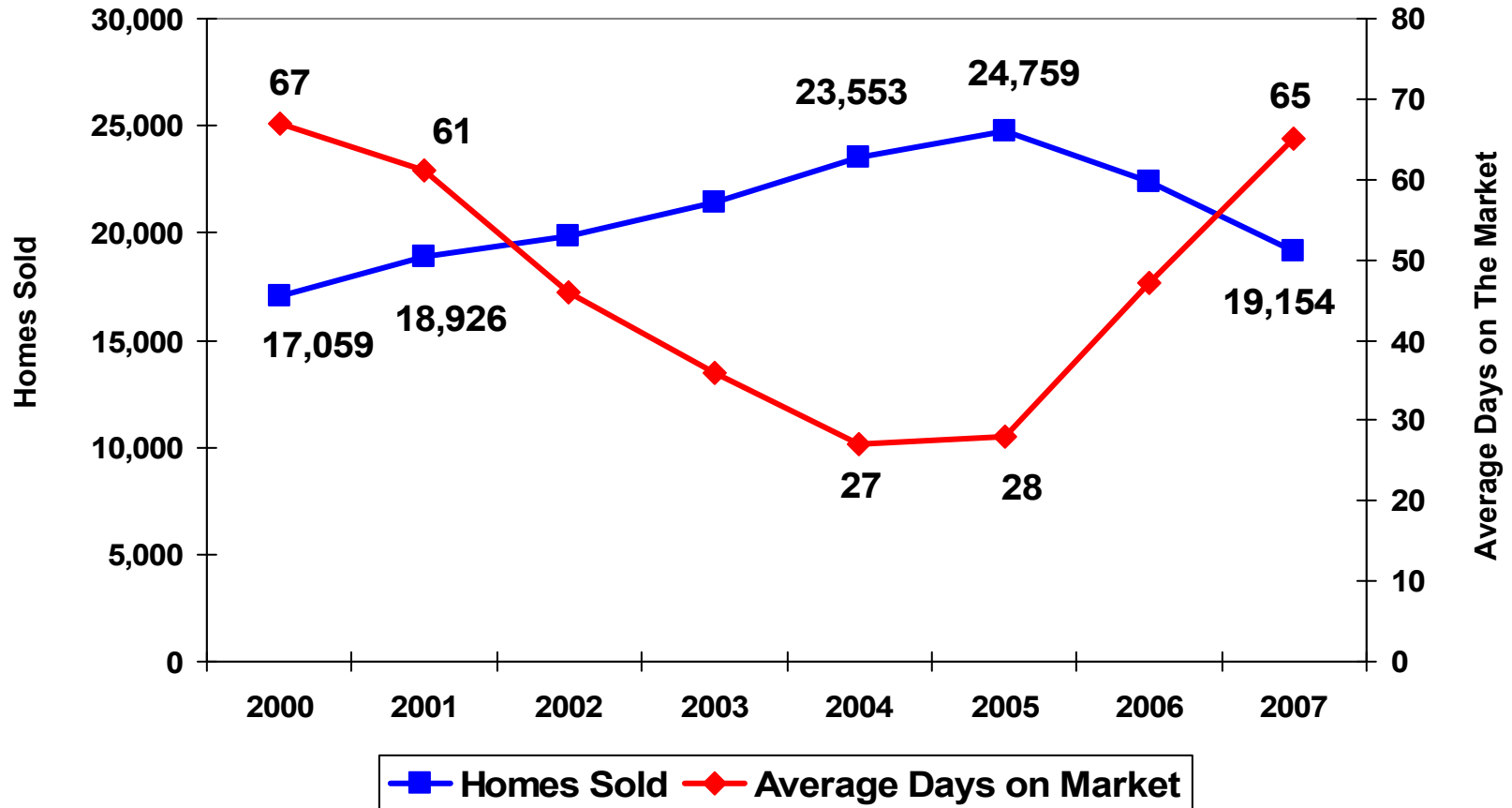
Source: Real Estate Information Network Inc. and the Old Dominion University Economic Forecasting Project. Information deemed reliable but not guaranteed. Data reported above may include relisted properties that previously did not sell and were withdrawn and re-entered as a new listing and therefore may be counted more than once.

# Hampton Roads Count of All Unsold Residential (Detached, Attached) Homes as measured by active Listings as of December 31 each year



Source: Real Estate Information Network Inc. and the Old Dominion University Economic Forecasting Project. Information deemed reliable but not guaranteed.

# Hampton Roads Resale (Detached, Attached) Homes Sold and Average Number of Days on The Market (2000-2007)



Source: Real Estate Information Network Inc. and the Old Dominion University Economic Forecasting Project. Information deemed reliable but not guaranteed. Days on Market is calculated from the Date Listed to the Date under contract date for existing homes sold.

# Percentage Change in Median Price of Single Family Resale Homes: 3<sup>rd</sup> Quarter 2007 from a year ago



	Change
U.S.	-2.0%
Hampton Roads	4.6%
Richmond	3.2%
Washington DC area	1.3%

Source: National Association of Realtors



**Old Dominion University  
2008 Regional Forecast for  
Hampton Roads MSA**

## **Old Dominion University 2008 Forecast for the Hampton Roads MSA**

<b>Nominal Gross Regional Product 2008</b>	<b>\$77.90B</b>
<b>Real Gross Regional Product 2008 (In 2000 Prices)</b>	<b>\$63.71B</b>
<b>Real GRP Growth Rate</b>	<b>2.40%</b>

## Old Dominion University 2008 Forecast for Hampton Roads MSA

### **Civilian Employment**

**786,094**

**+0.9%**

## Old Dominion University 2008 Forecast for Hampton Roads MSA

### **Unemployment Rate**

**3.4%**

# Old Dominion University 2008 Forecast for Hampton Roads MSA

**Taxable Sales**

**\$21.31B**

**+3.1%**

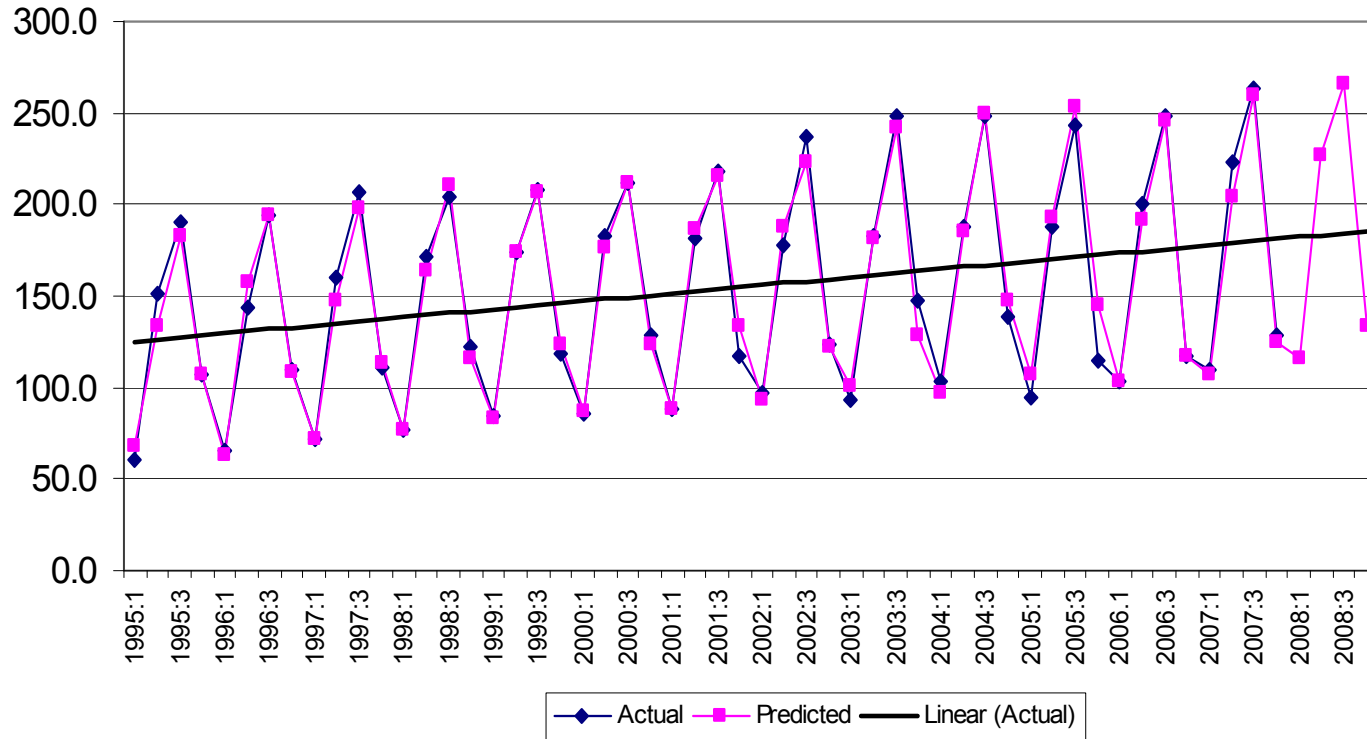
# Old Dominion University 2008 Forecast for Hampton Roads MSA

## **Hotel Revenue**

**\$743.4M**

**+2.4%**

# Hotel Revenues (Millions of Dollars)



## Old Dominion University 2008 Forecast for Hampton Roads MSA

### **General Cargo Tonnage**

**18.45M**

**+4.1%**

## Old Dominion University 2008 Forecast for Hampton Roads MSA

### **Single Family Housing Permit Value**

**\$687.4M**

**-24.2%**

## Old Dominion University 2008 Forecast for Hampton Roads MSA

	2007*	2008	% Change
Nominal Gross Regional Product	\$74.30B	\$77.90B	
Real Gross Regional Product (2000=100)	\$62.22B	\$63.71B	+2.4
Civilian Employment	779,082	786,094	+0.9
Unemployment Rate	3.2 %	3.4 %	
Taxable Sales	\$20.67B	\$21.31B	+3.1
Hotel Revenue	\$726.0M	\$743.4M	+2.4
General Cargo Tonnage	17.73M	18.45M	+4.1
Housing Permit Value	\$906.9M	\$687.4M	-24.2

\*Figures for calendar year 2007 include predicted values for Dec. 2007.

## 2008 Regional Summary

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1. Look for regional economic growth to be below its half-century annual average of 3.4 percent but above that of the nation.
2. Lingering effects of Ford plant closing (June 2007), implementation of BRAC's decisions in 2008, and continued decline in residential home building will dampen growth in 2008.
3. Growth in defense spending, the port, health-care industries and tourism are likely to fuel the region's economic expansion in 2008.
4. 2008 price changes in single-family homes are likely to be flat to slightly negative. New residential construction home prices are likely to continue their decline.



# Old Dominion University 2008 Economic Forecast

January 23, 2008

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