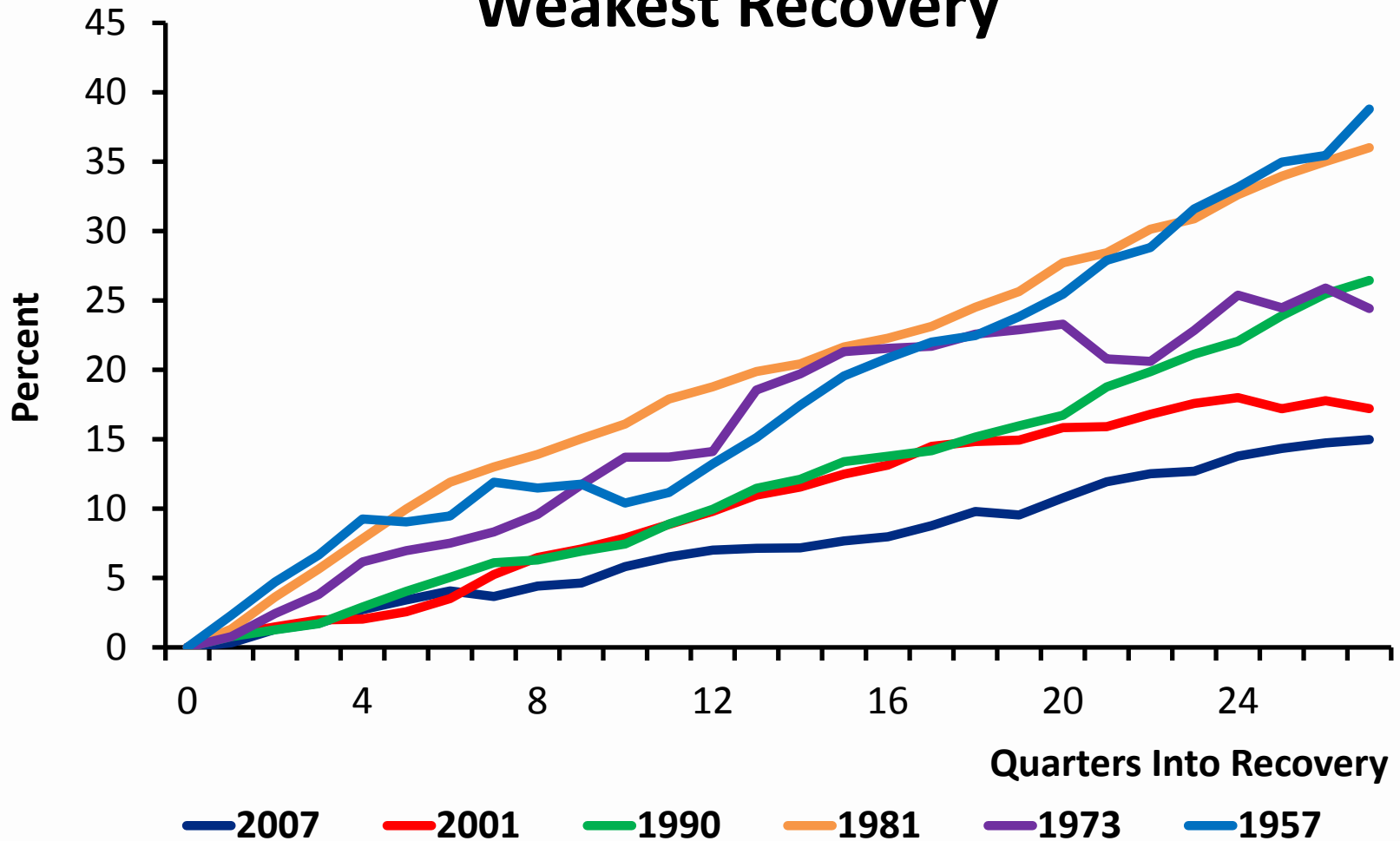


# NAI Global Economic Briefing

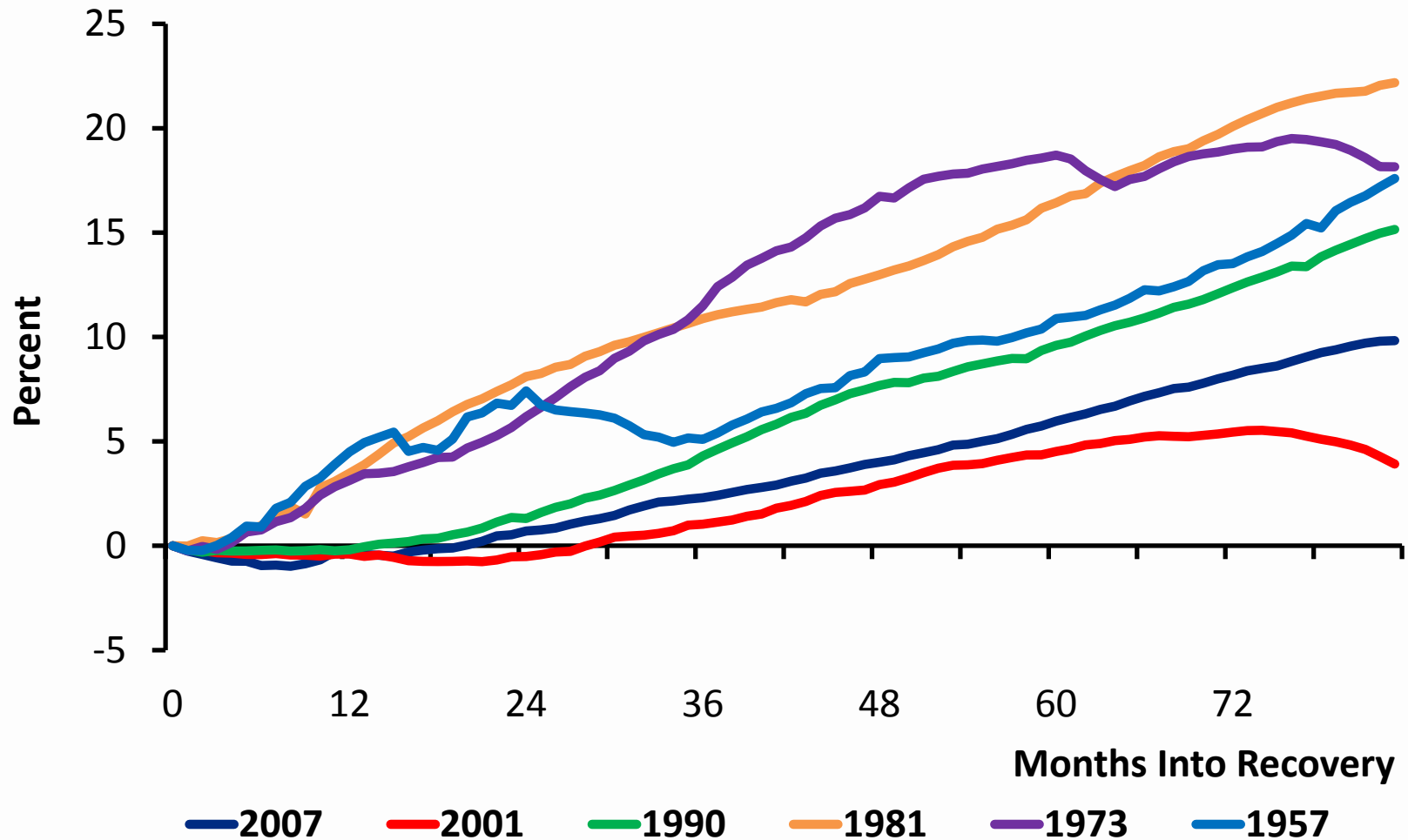
With Dr. Peter Linneman – Aug 2, 2016



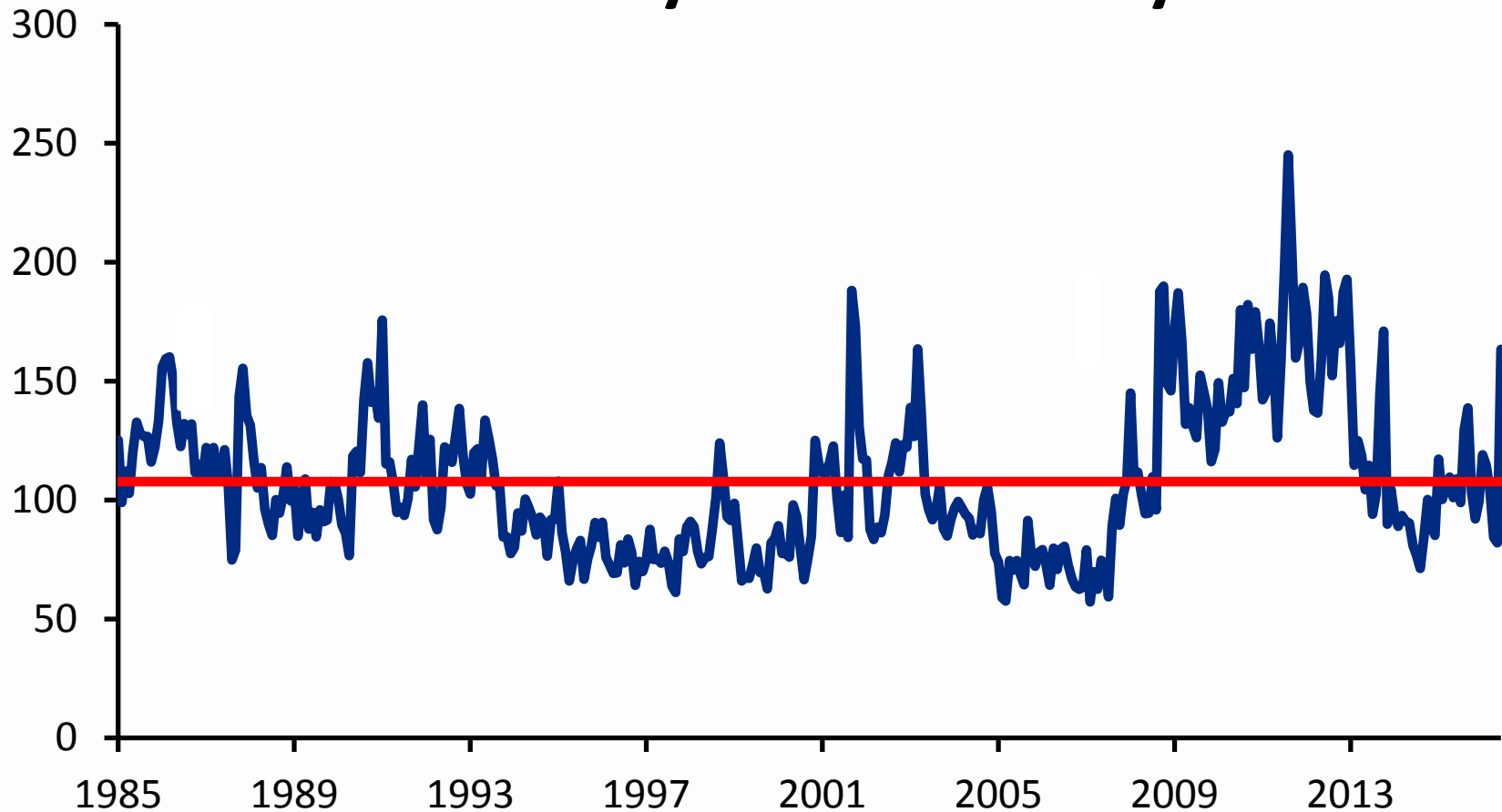
# Cumulative Percent Increase in Real GDP from Start of Recovery: Remains The Weakest Recovery



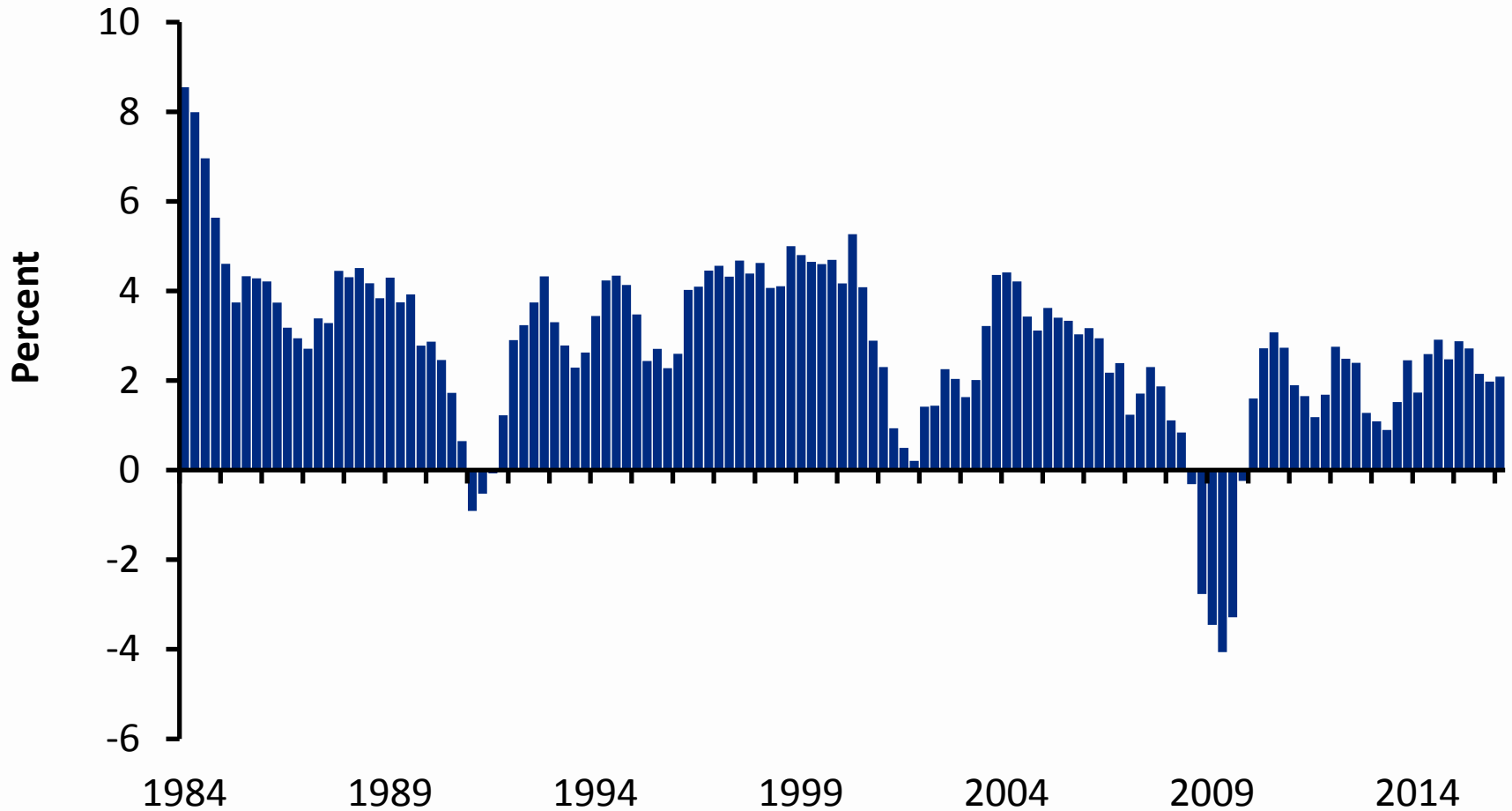
# Cumulative Percent Employment Increase from Start of Recovery: Second Weakest



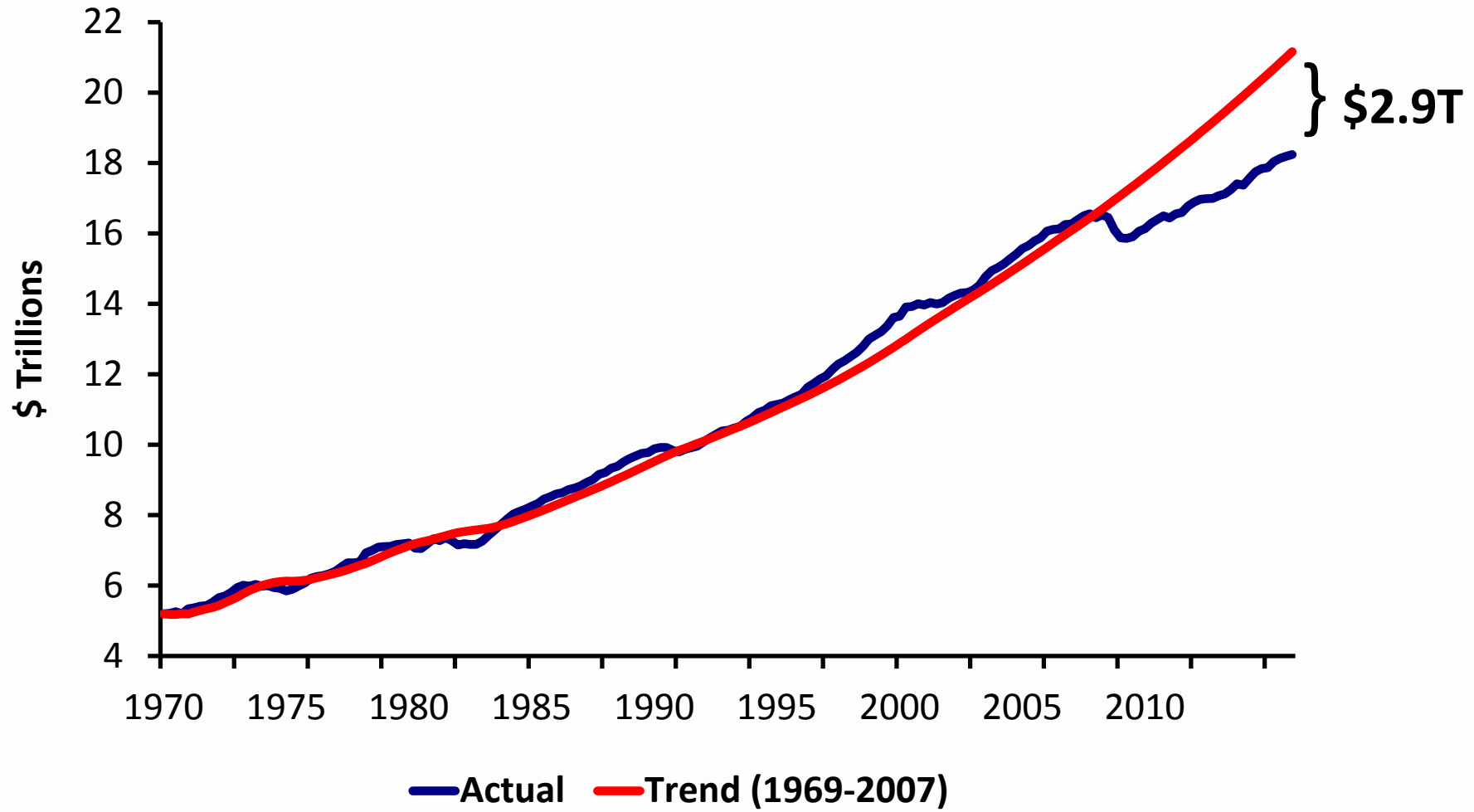
# Economic Policy Uncertainty Index: Election Cycle Uncertainty



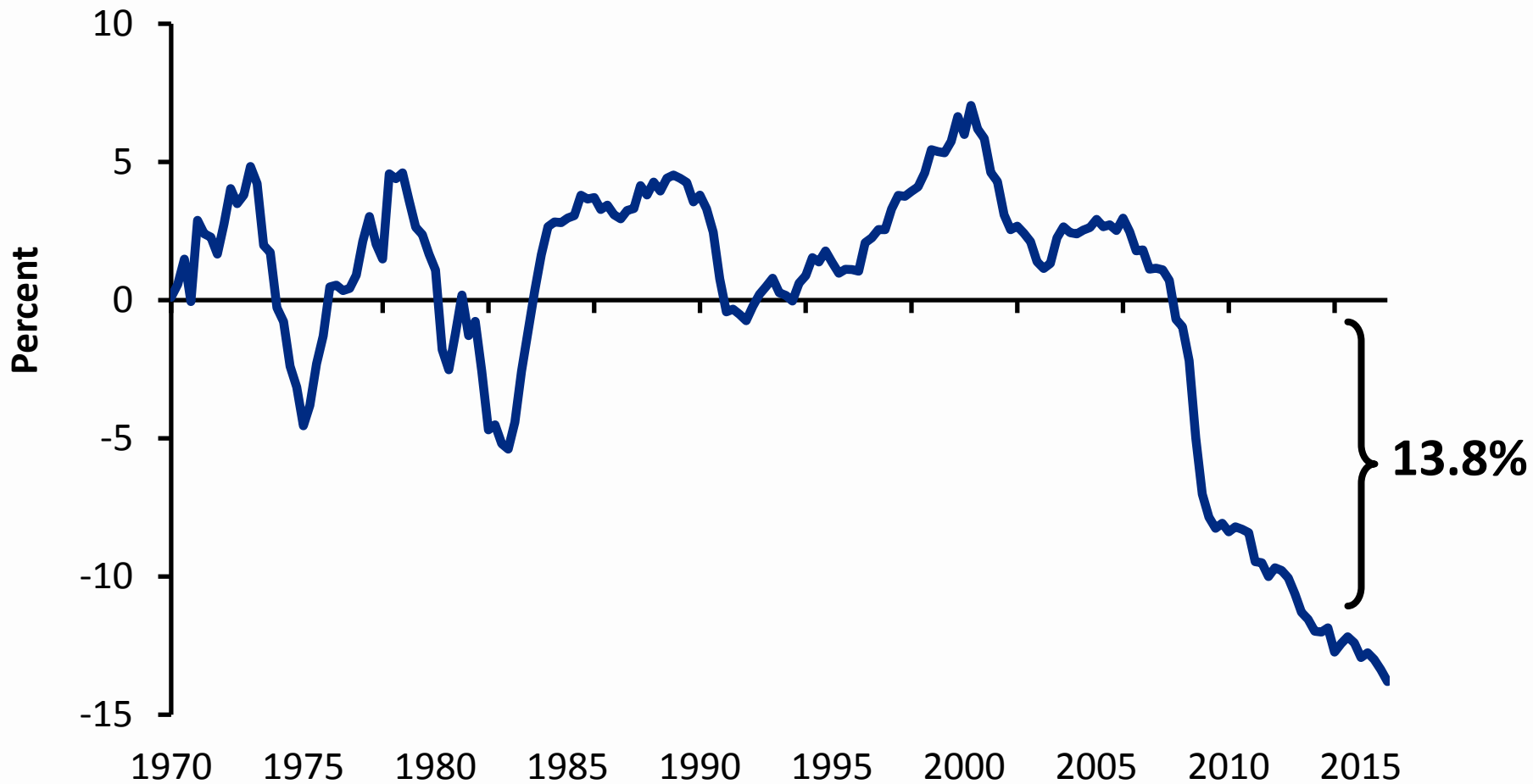
# Real GDP YOY Percent Growth: Adequate But Not Great



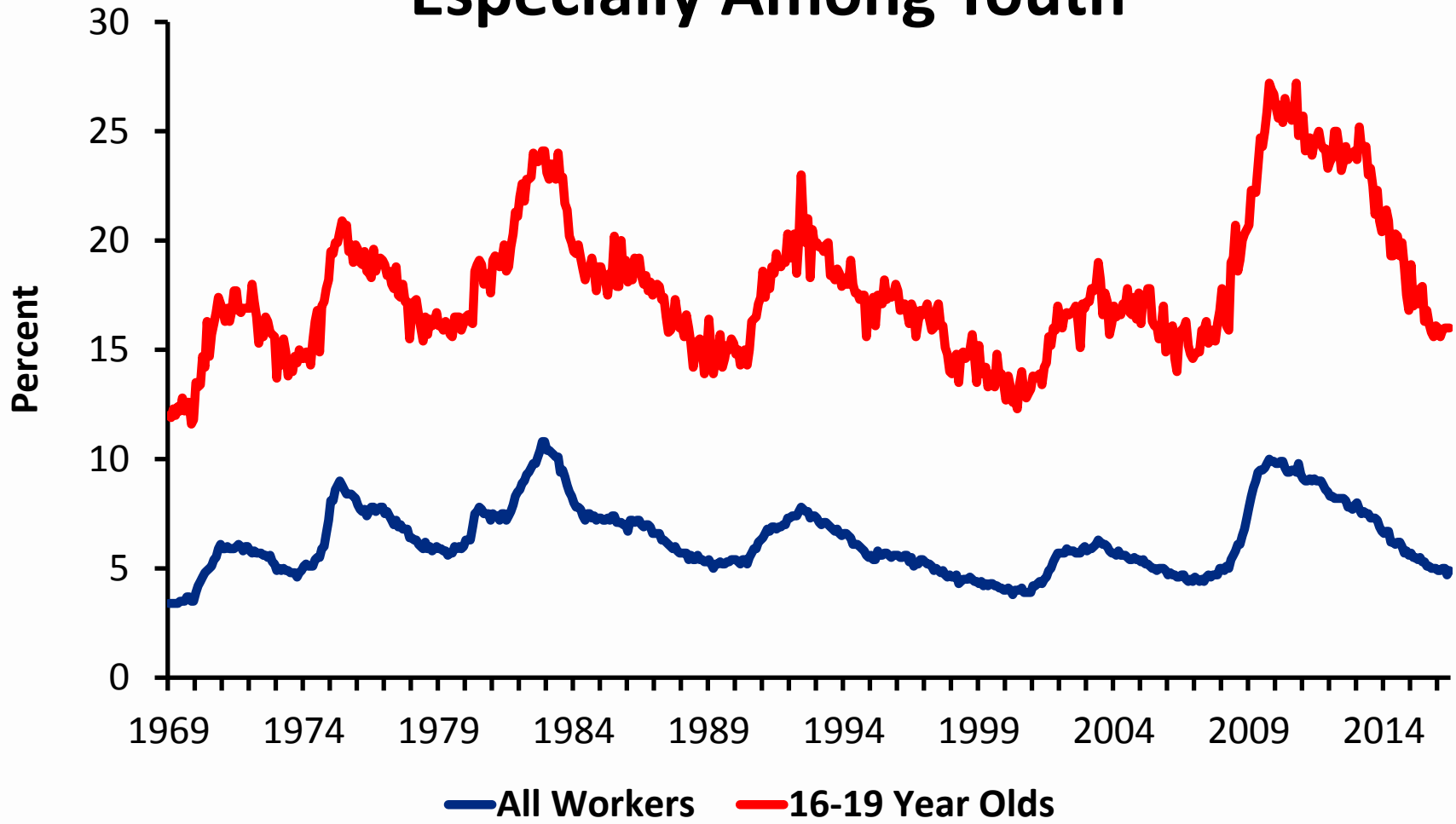
# Actual vs. Trend Real GDP: A Huge Gap Mostly About Housing



# Actual vs. Trend Real GDP Percent Deviation: Low Rates Have Killed The Recovery

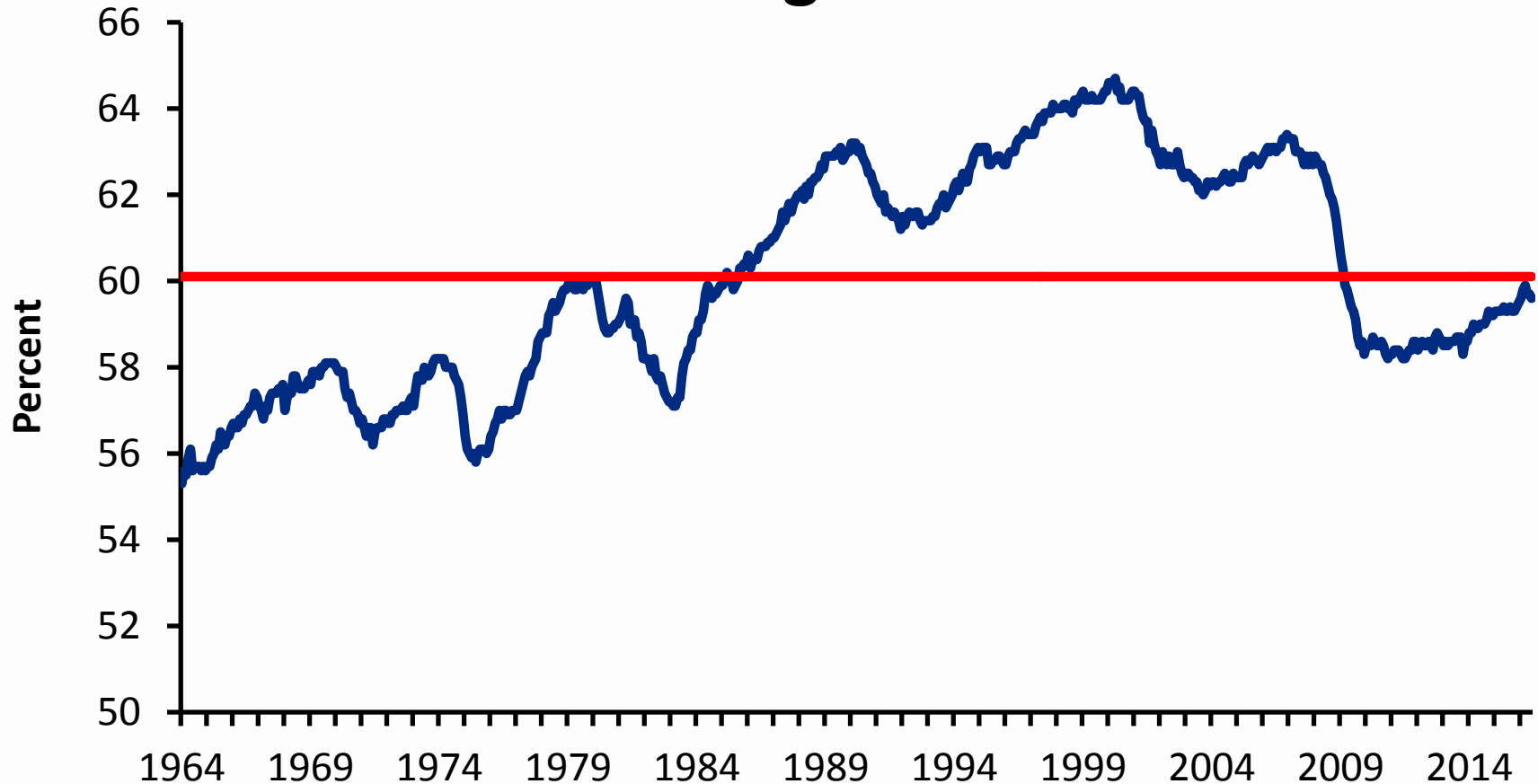


# Civilian Unemployment Rate: Recovering Especially Among Youth

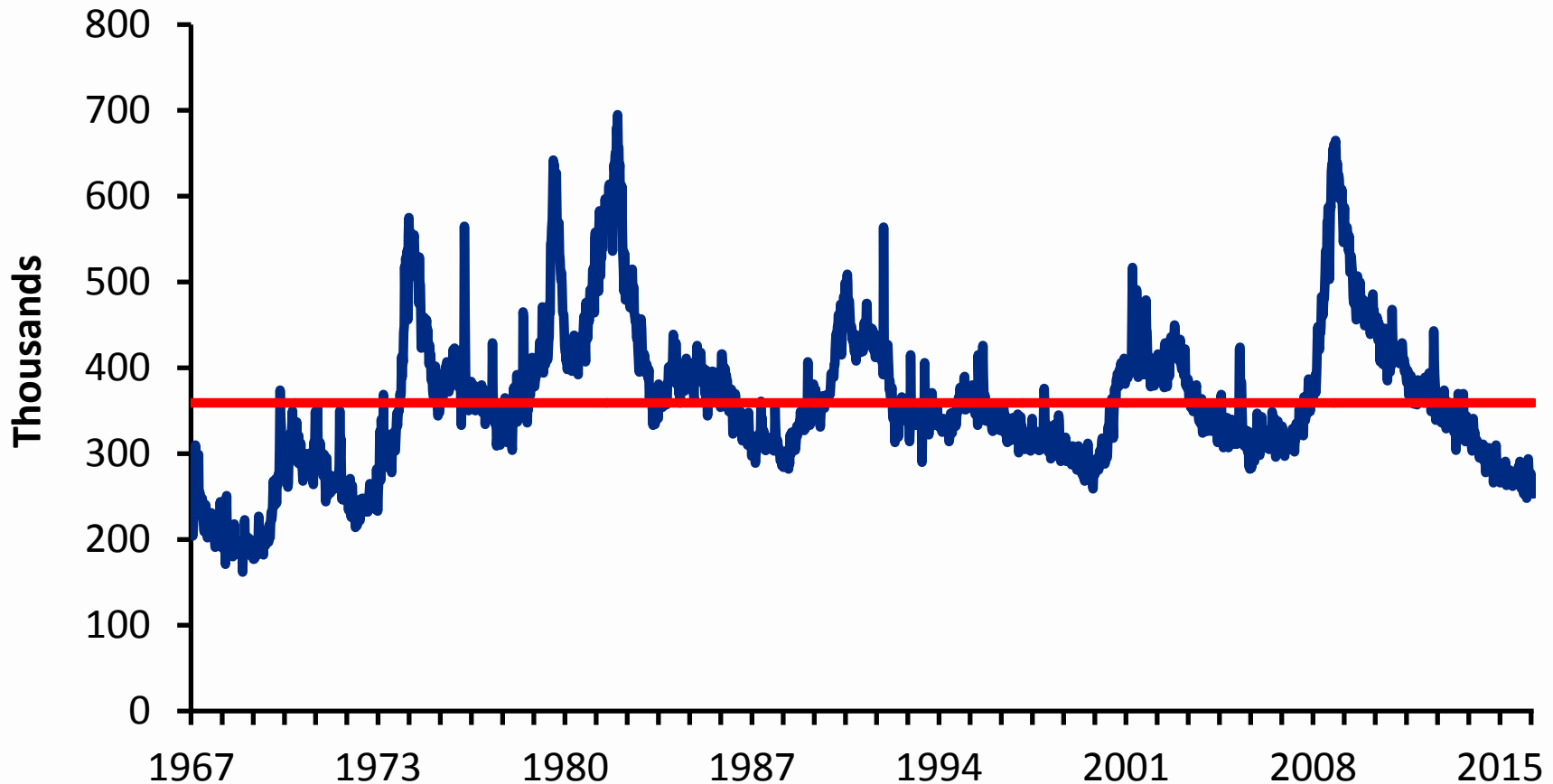




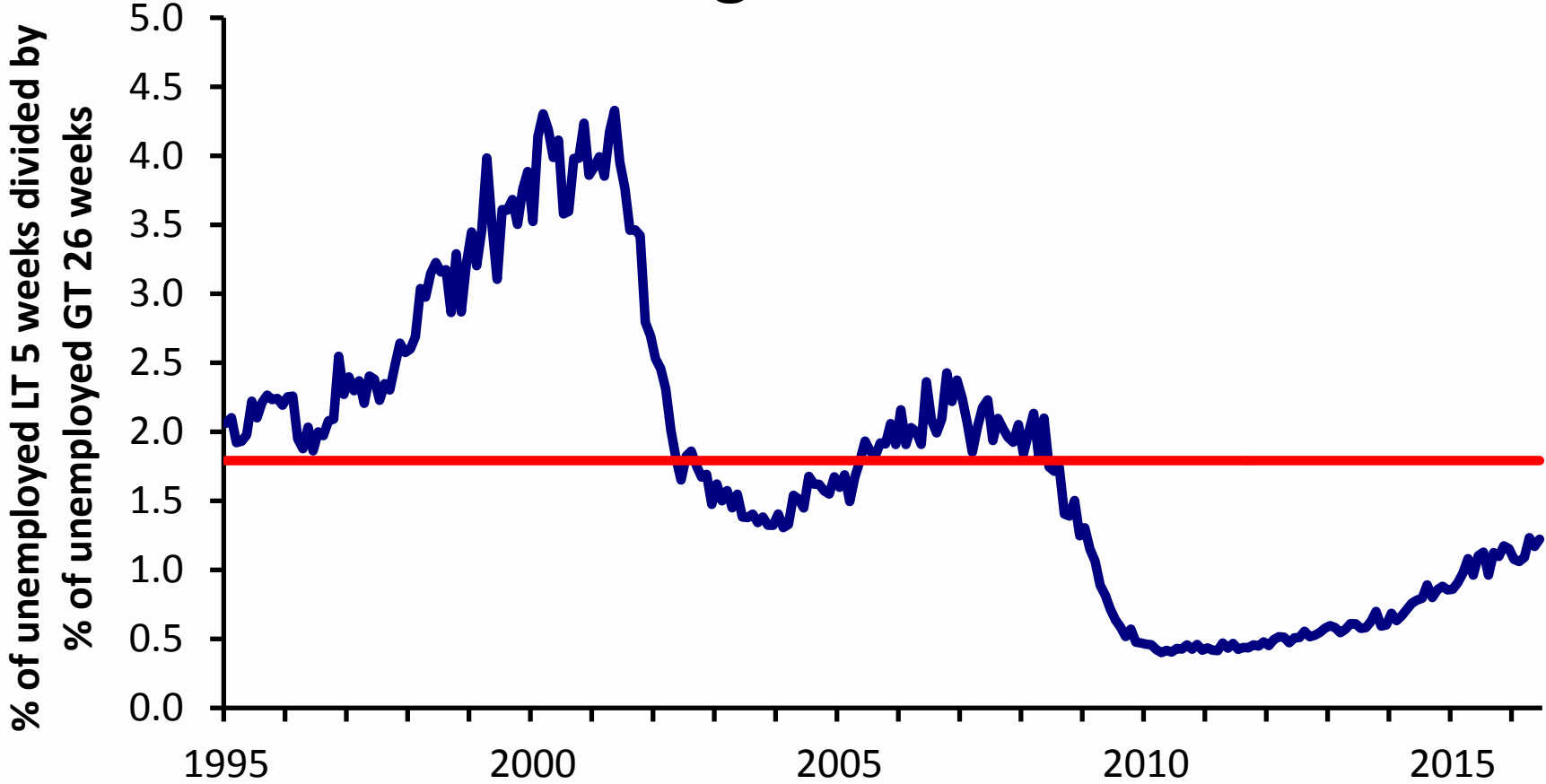
# Employment-to-Population Ratio: Rebounding But Still Low



# Weekly Initial Unemployment Insurance Claims: Shows Great Strength



# Percent Unemployed By Duration: Returning To More Normal



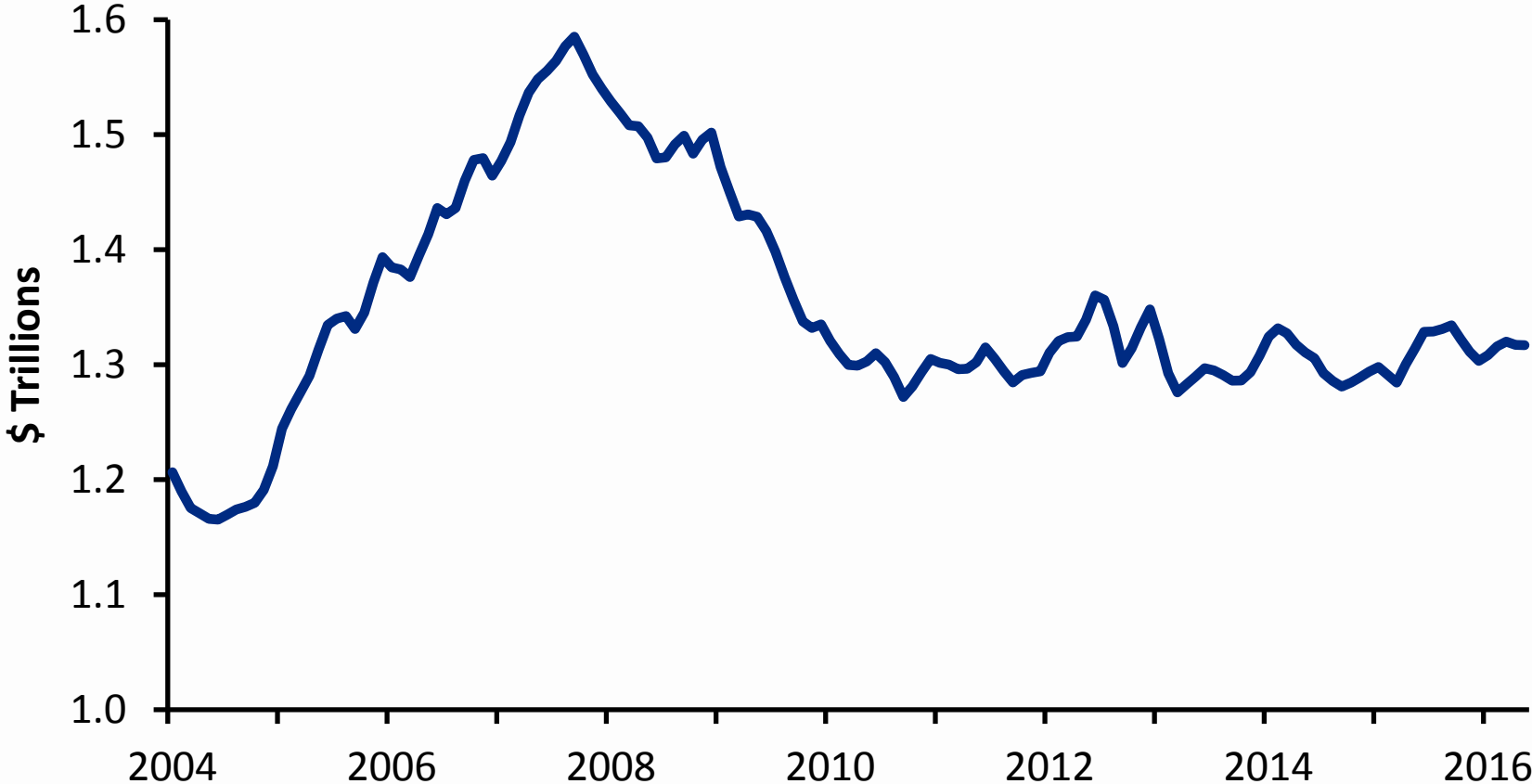
## Auto & Light Truck Production Shortfall

Average Value per Vehicle	\$32,560	
Production Shortfall Since 2003	7,602,758	vehicles
Multiplier	1.5	
<b>Pent-up Production Value</b>	<b>\$371</b>	<b>billion</b>
GDP Gap	\$2,920	billion
<b>Pent-up Auto % of GDP Gap</b>	<b>12.7%</b>	

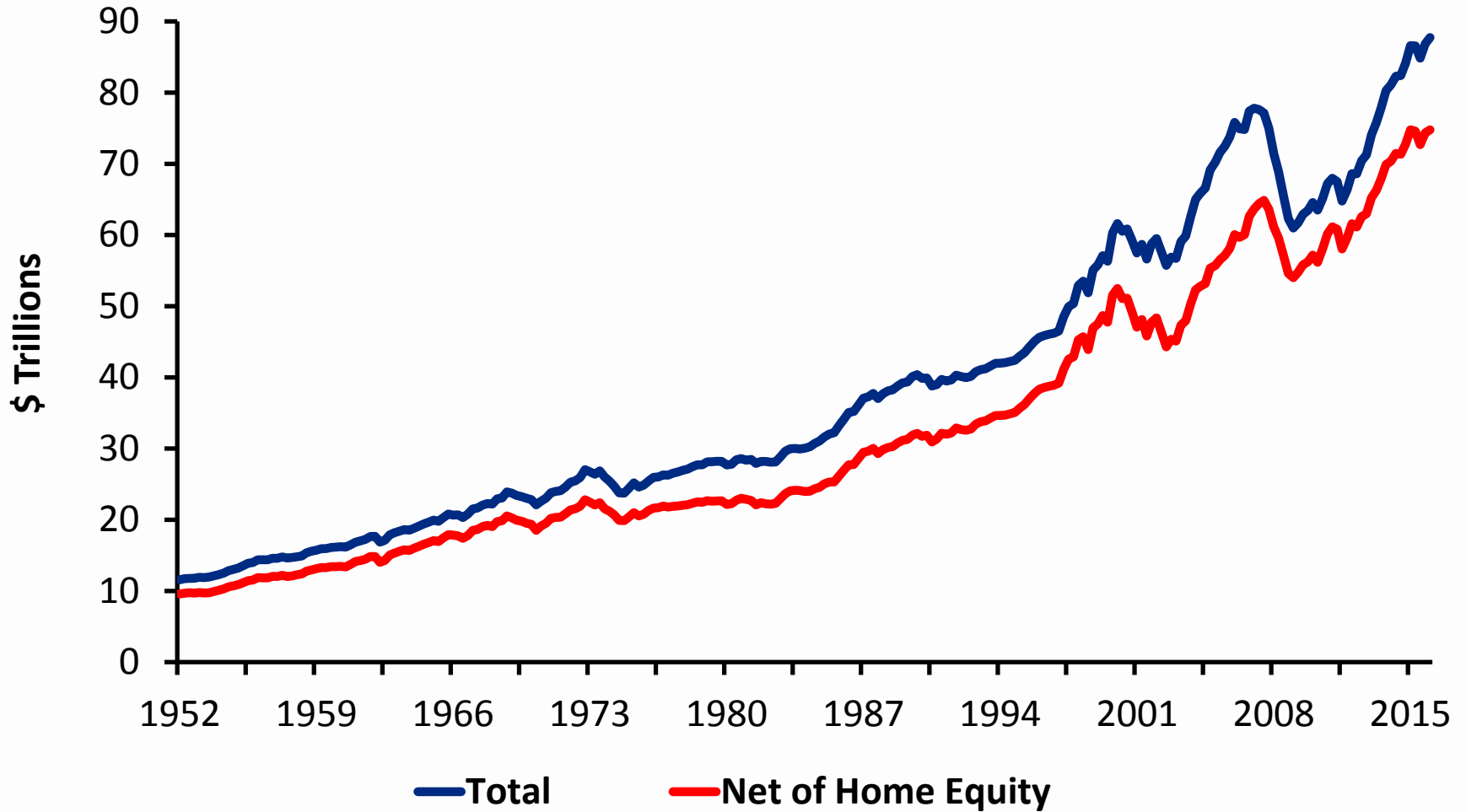
## Housing Production Shortfall

Multifamily Shortfall (units)	966,848	
Multifamily Average Cost	\$144,552	
MF Shortfall Value	\$139.8	billion
Single Family Shortfall (units)	2,397,808	
Latest SF Average Cost (new)	290,144	
SF Shortfall Value	\$695.7	billion
MF+SF Shortfall Value	\$835	billion
Multiplier	1.5	
<b>Total Value of Pent-up Housing</b>	<b>\$1,253.20</b>	<b>billion</b>
GDP Gap	\$2,920	billion
<b>Pent-up Housing as % of GDP Gap</b>	<b>42.9%</b>	

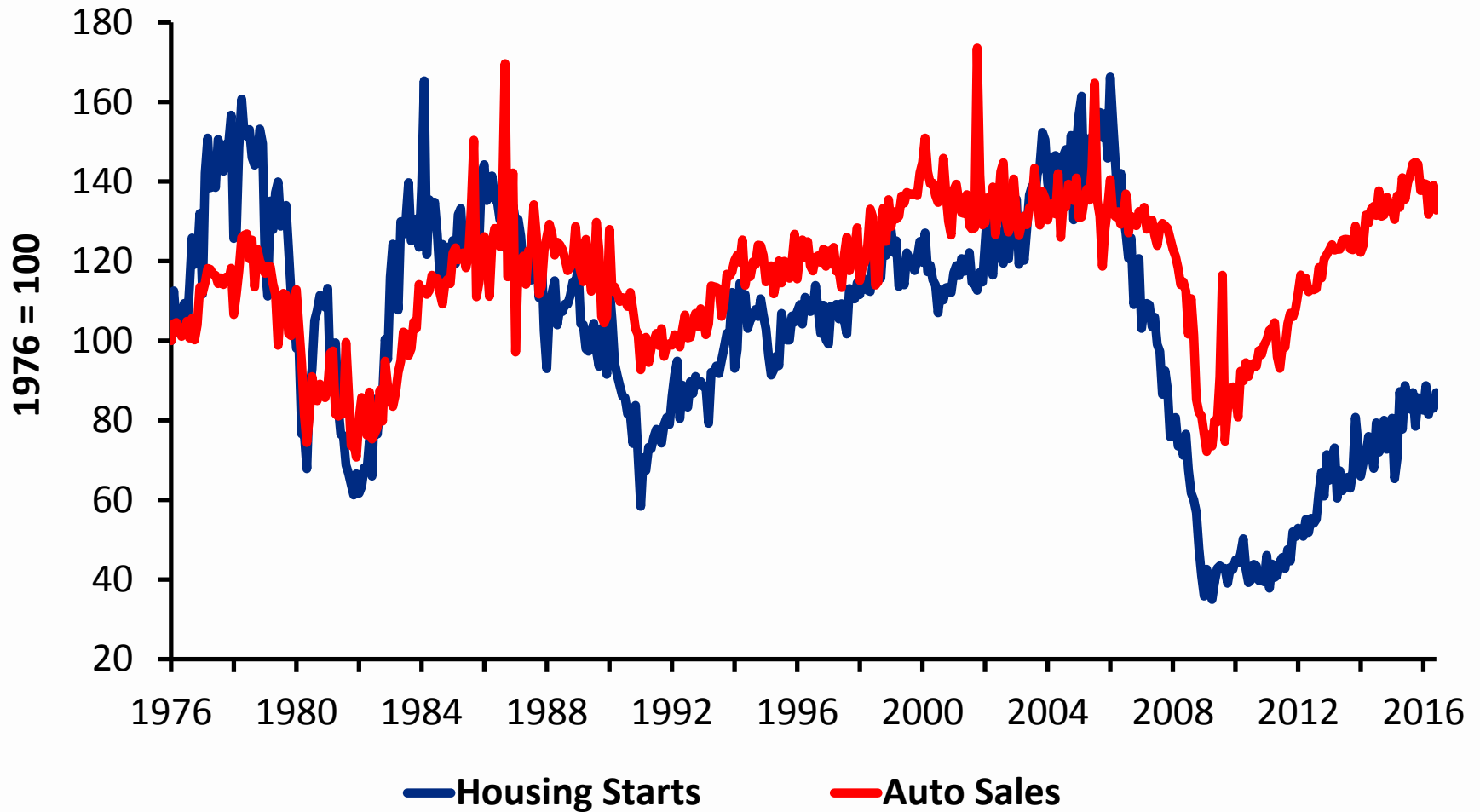
# Real Income from Interest Payments: Savers Have Been Robbed By The Fed



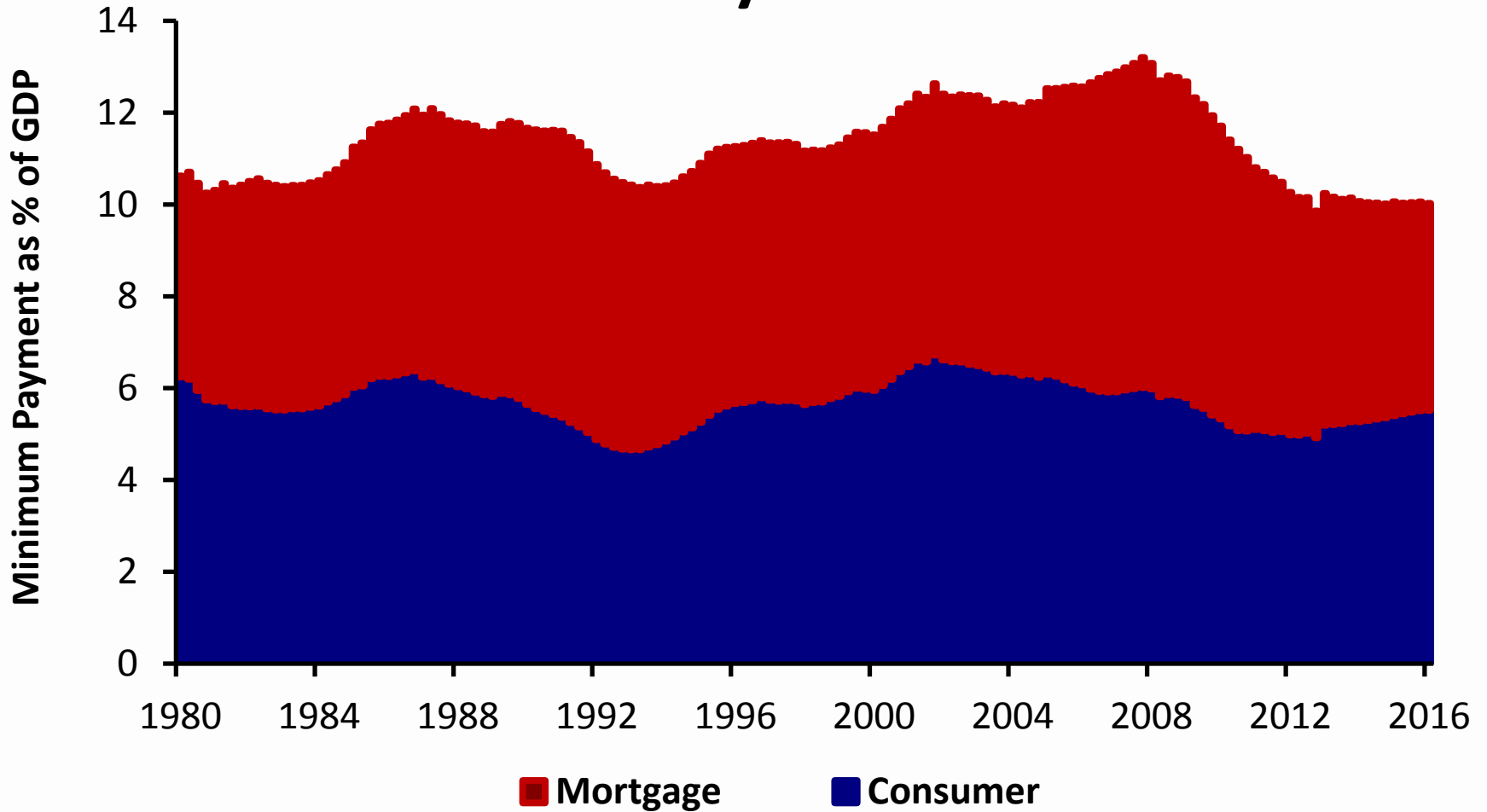
# Real Household Net Worth: A New High (But Median Lags Still)



# Housing Starts and Auto Sales: Rebounding But Housing Lags

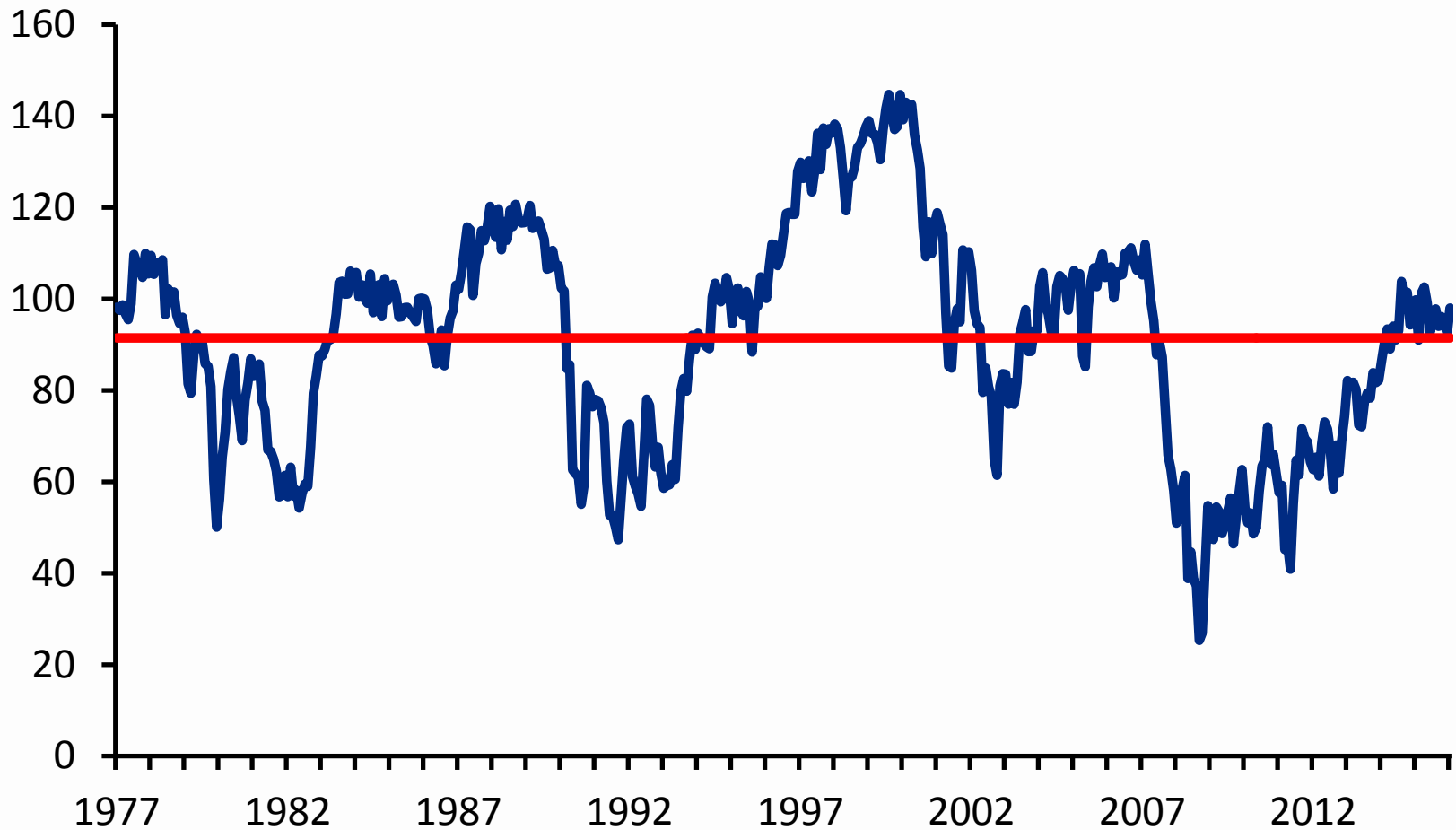


# Household Debt Service Ratio: Notably Delevered

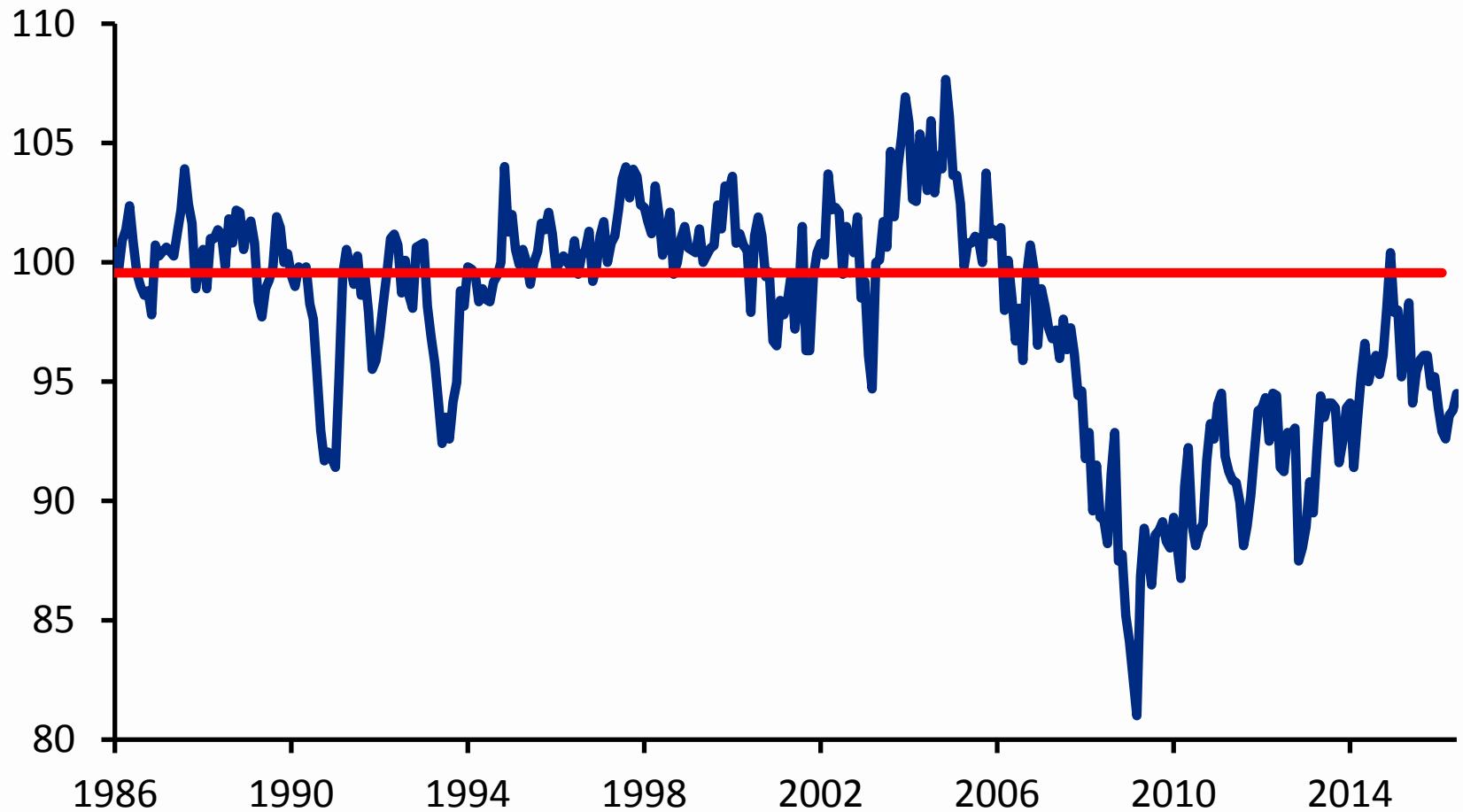




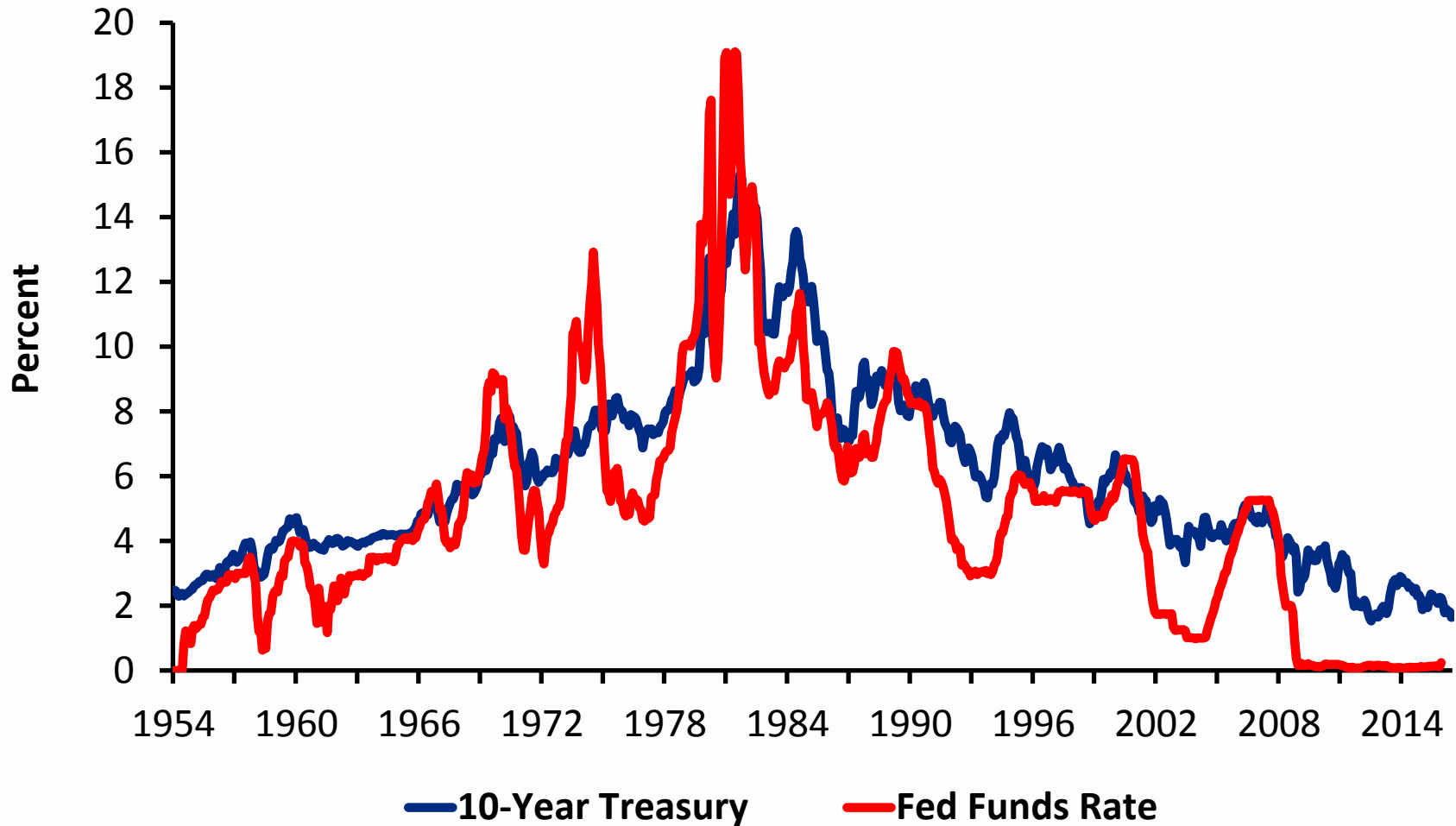
# Consumer Confidence Index: Only About Average



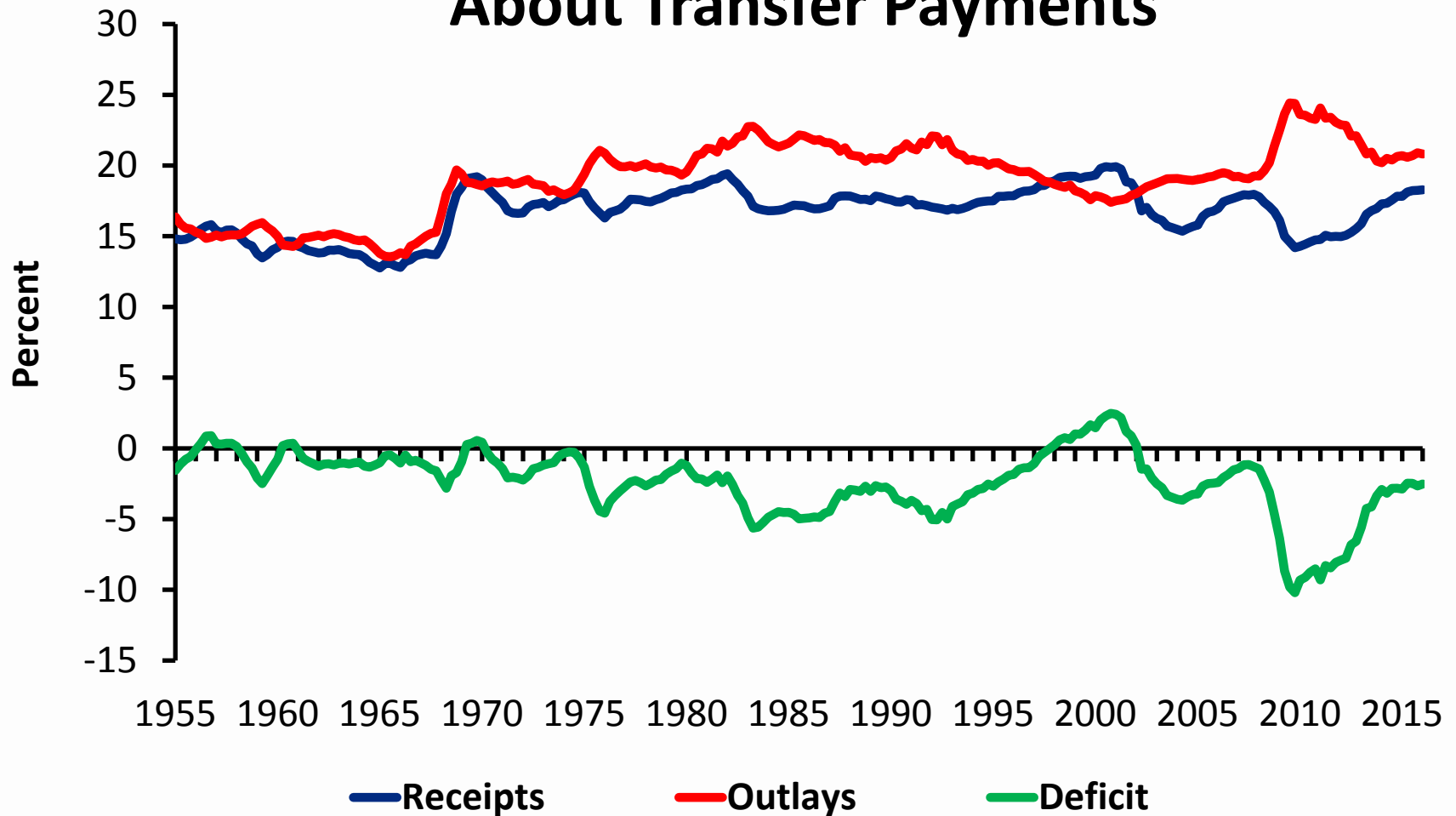
# Small Business Optimism Index: Remains Well Below Average



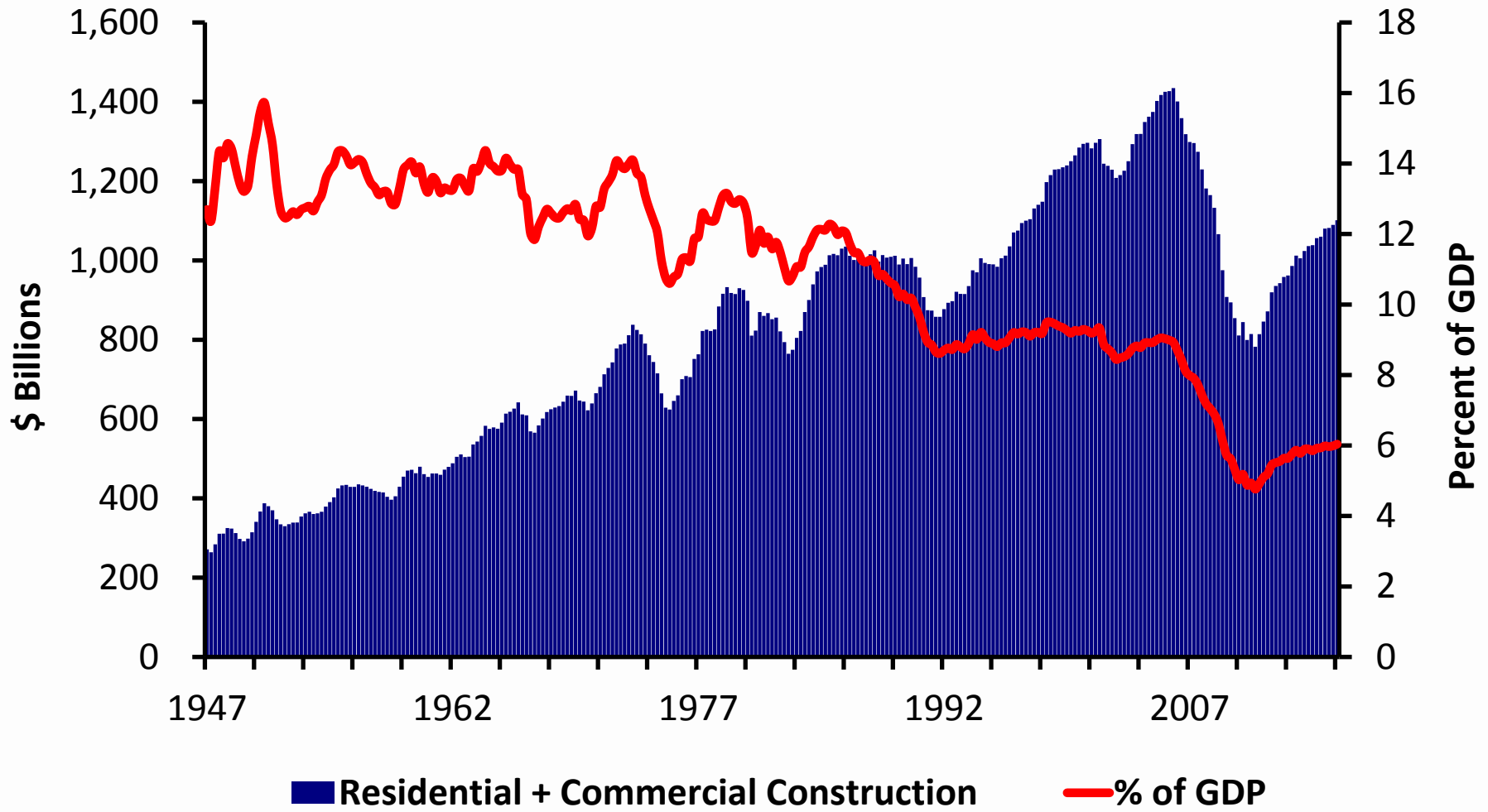
# 10-Year Treasury vs. Fed Funds Rate: No Penalty To Holding Cash



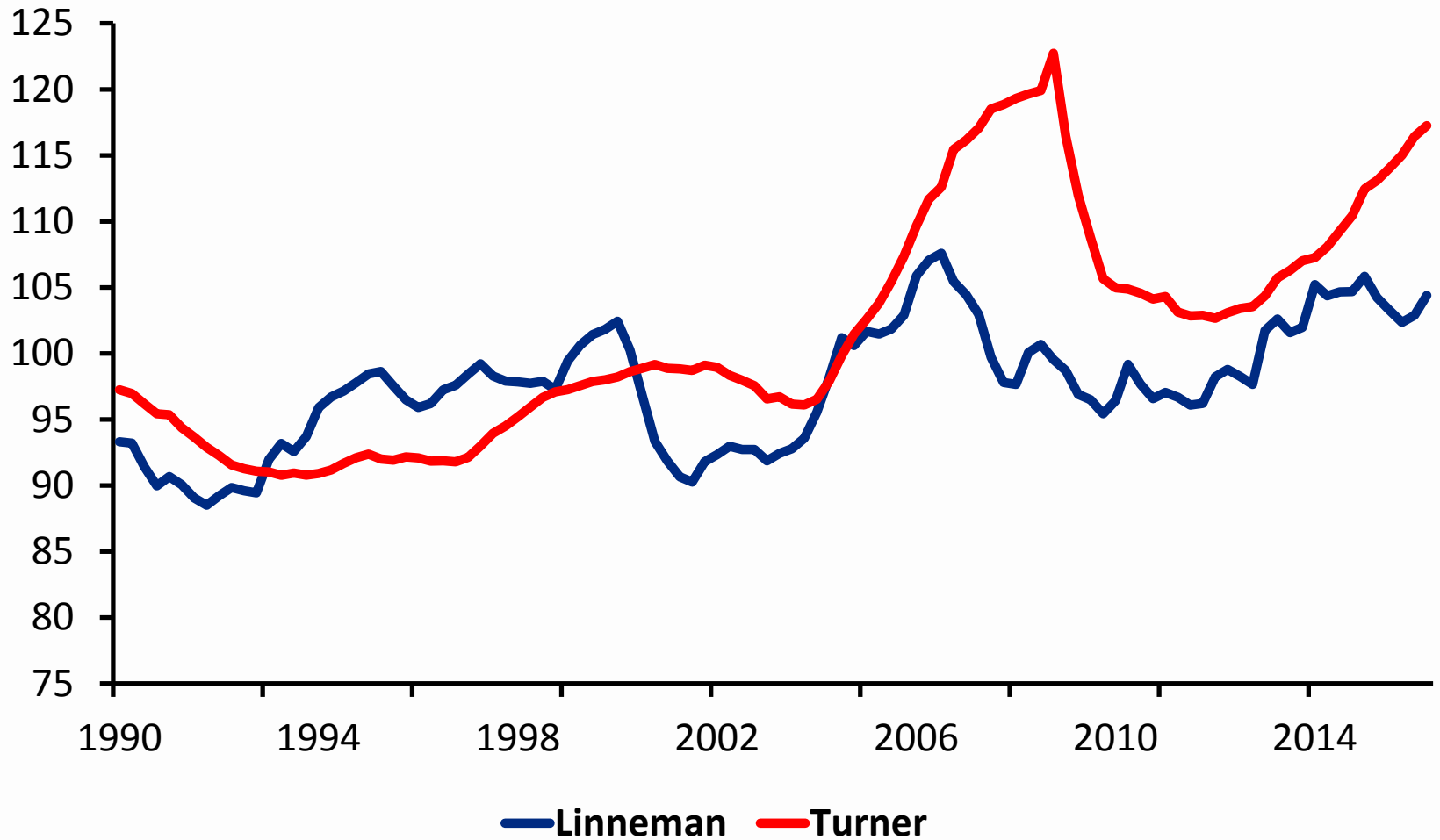
# Government Receipts, Outlays, and Deficit as a Percent of GDP: Deficit Normal But About Transfer Payments



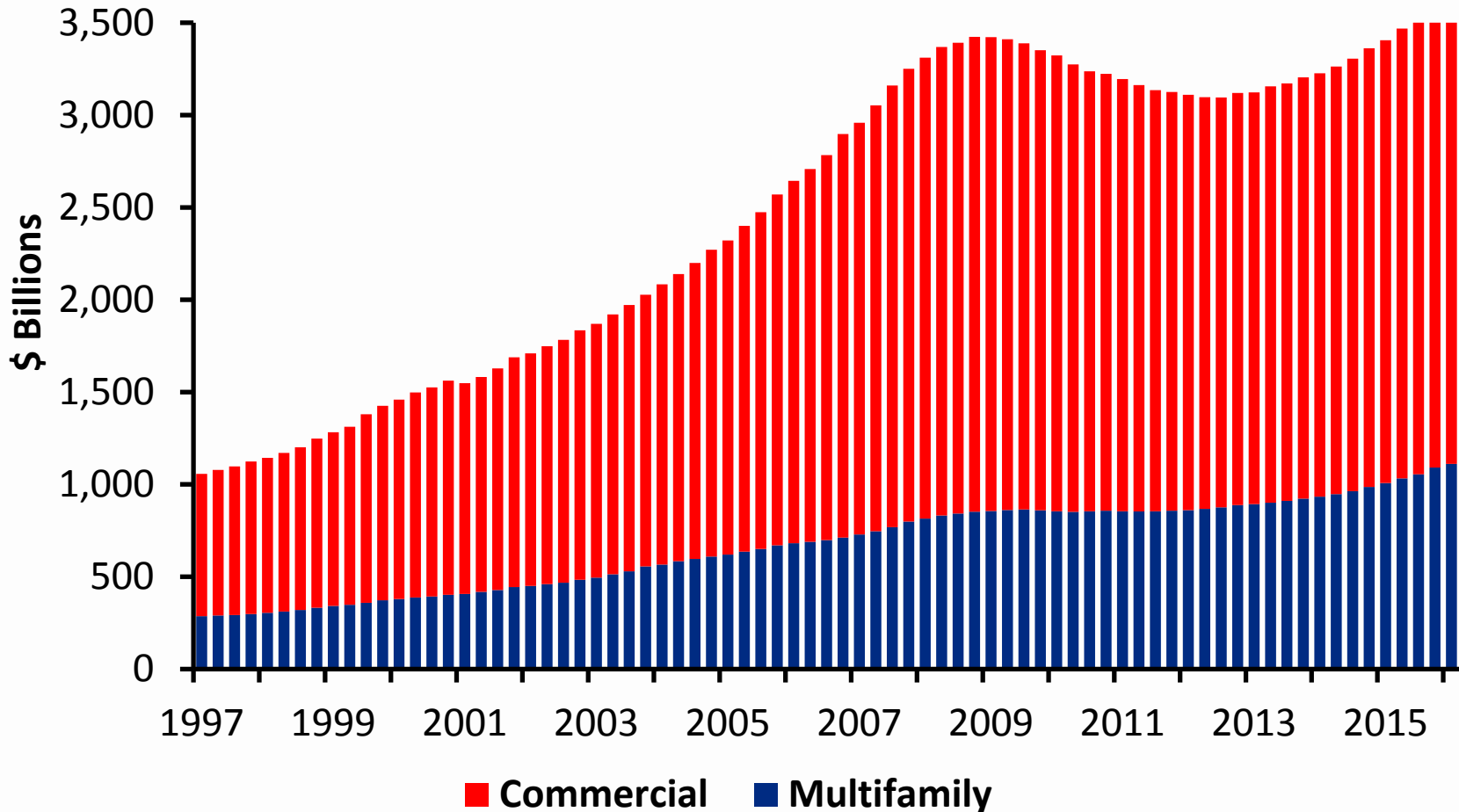
# Real Residential and Commercial Construction: Recovering But Lots To Catch Up



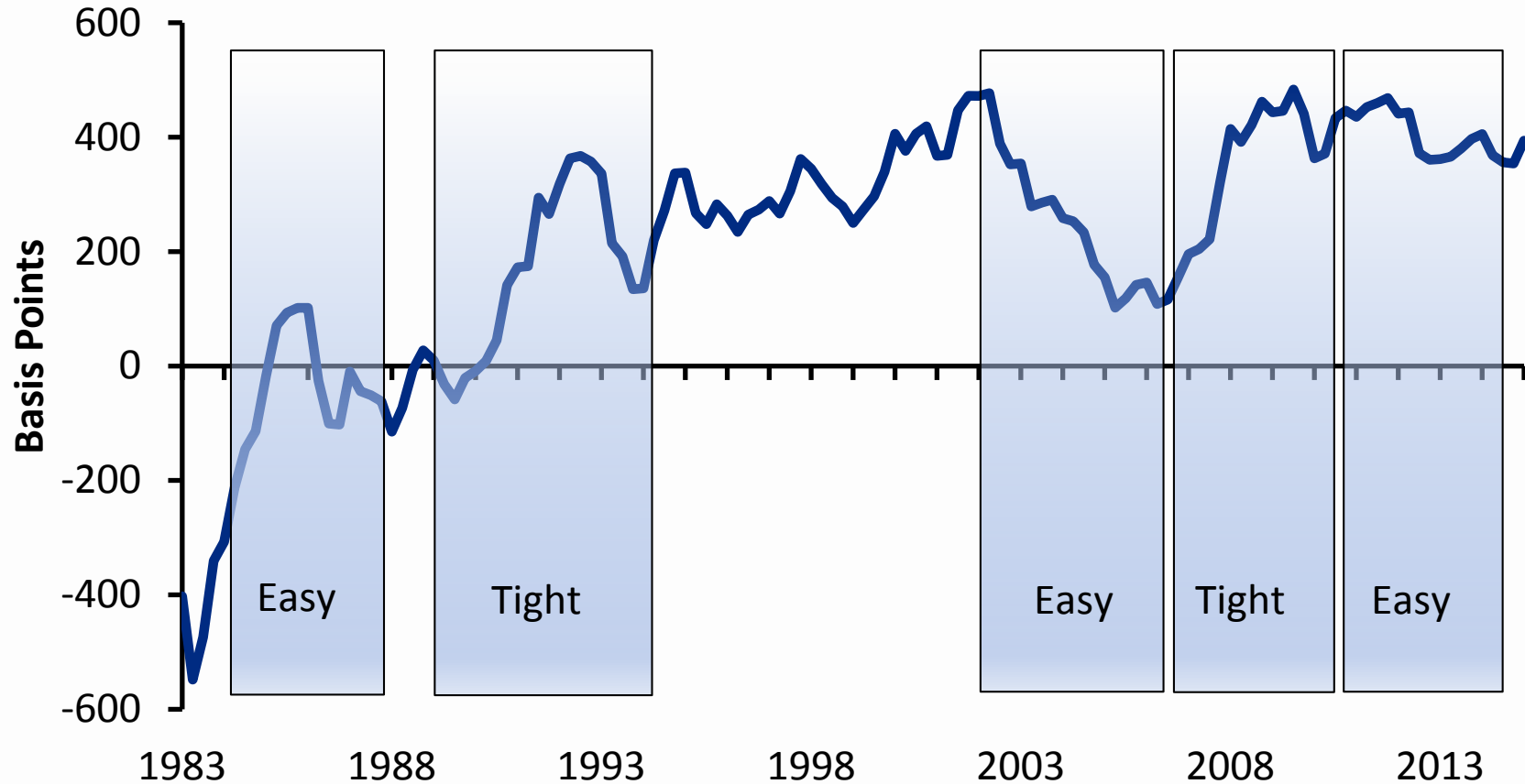
# Real Construction Cost Indices: Moving Back Up



# Multifamily and Commercial Mortgages Outstanding: The Capital Cycle Is Underway



# NCREIF Transaction Cap Rates Over 10-Year Treasury Rates: Still Wide

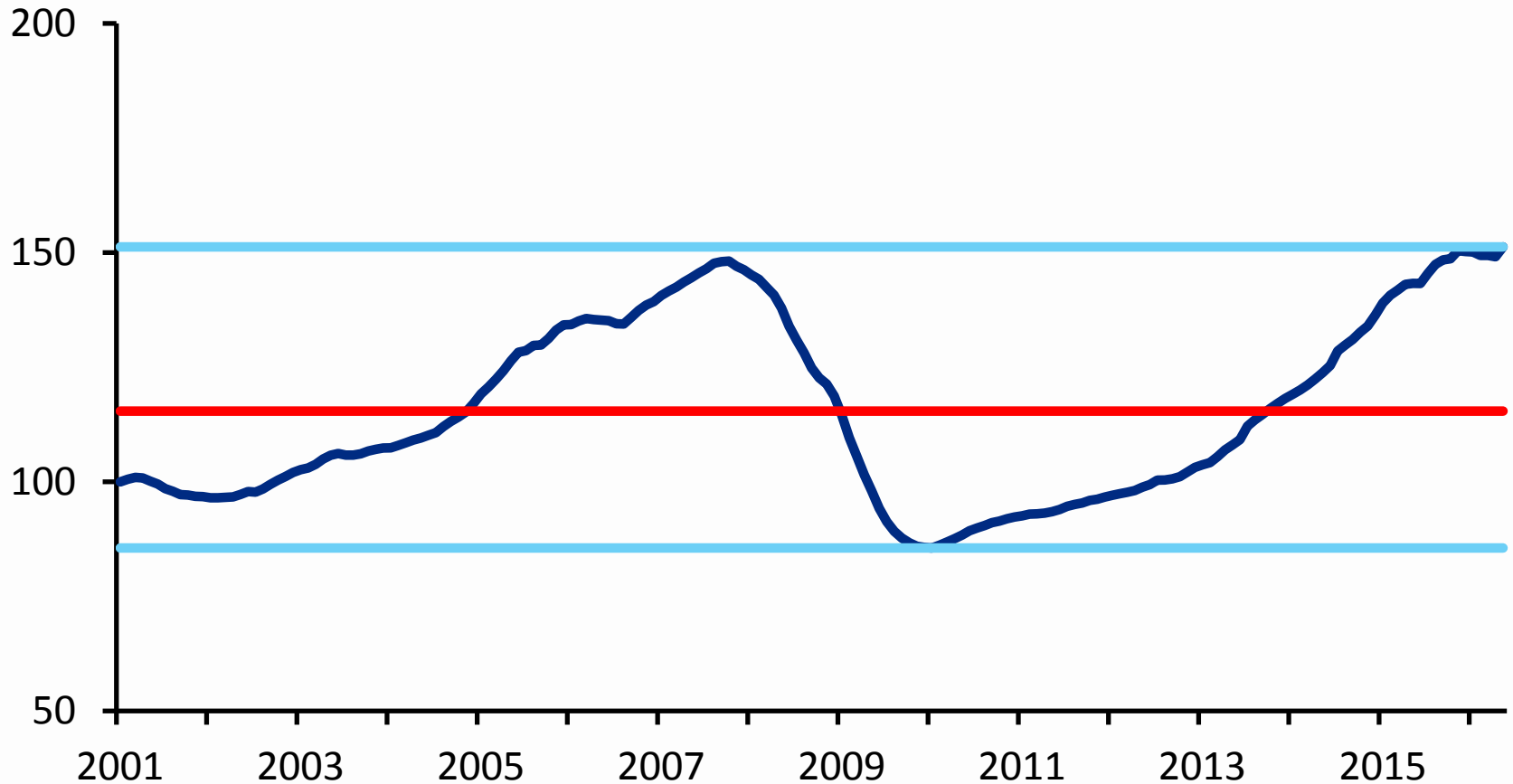




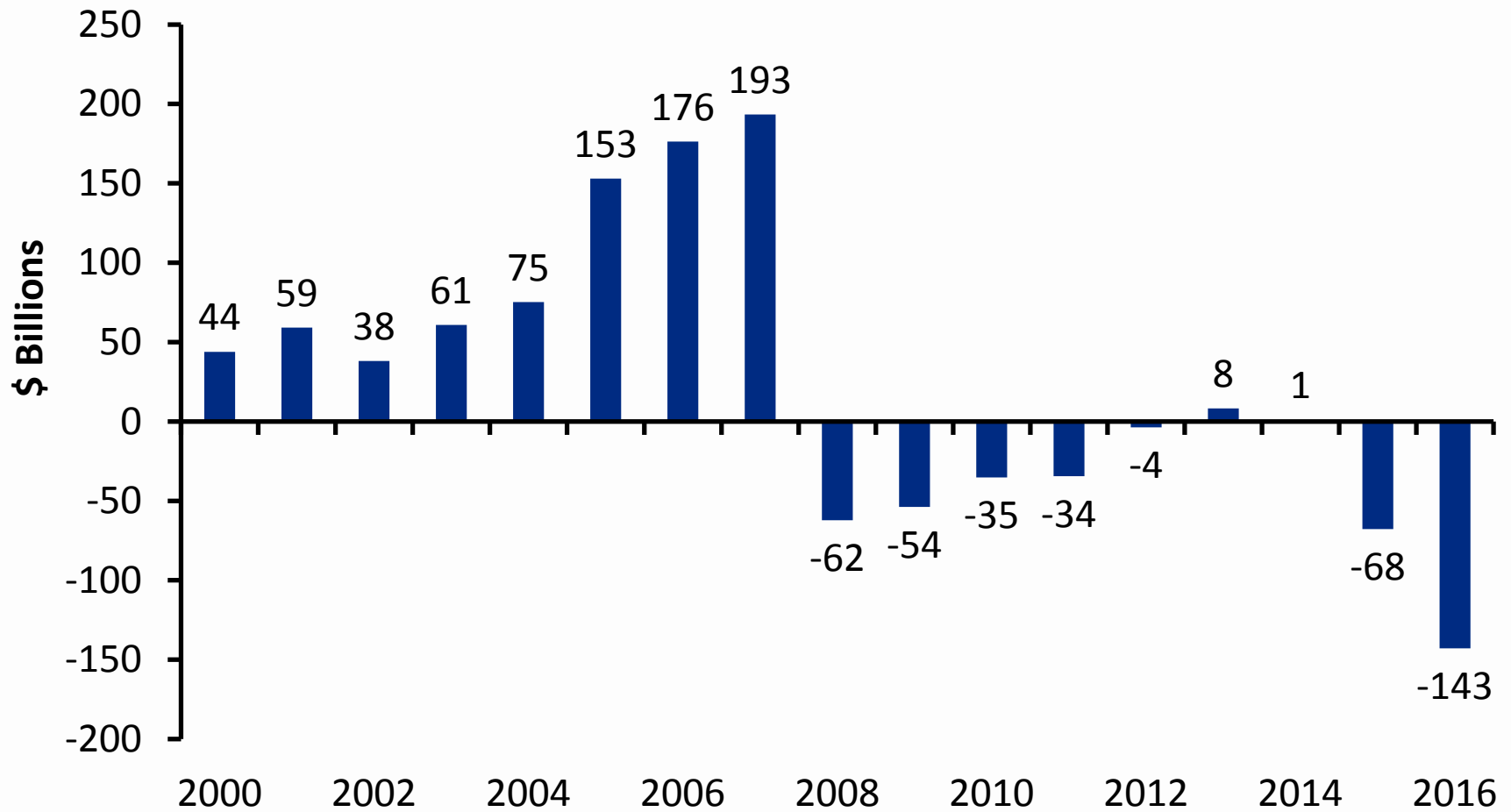
# Real Public Market Commercial Real Estate Values: Still Below Peak



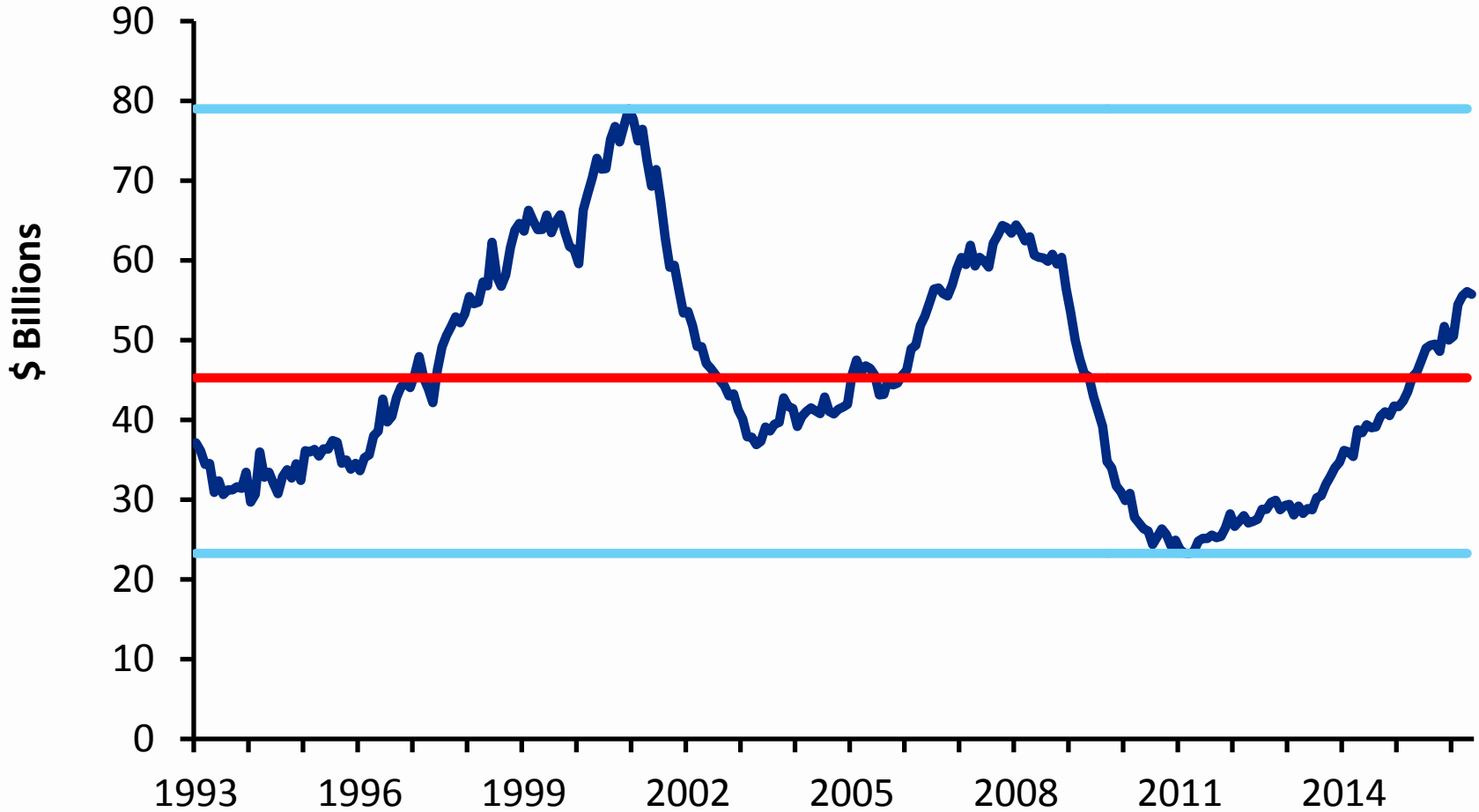
# Real Private Market Commercial Real Estate Values: At New Peak



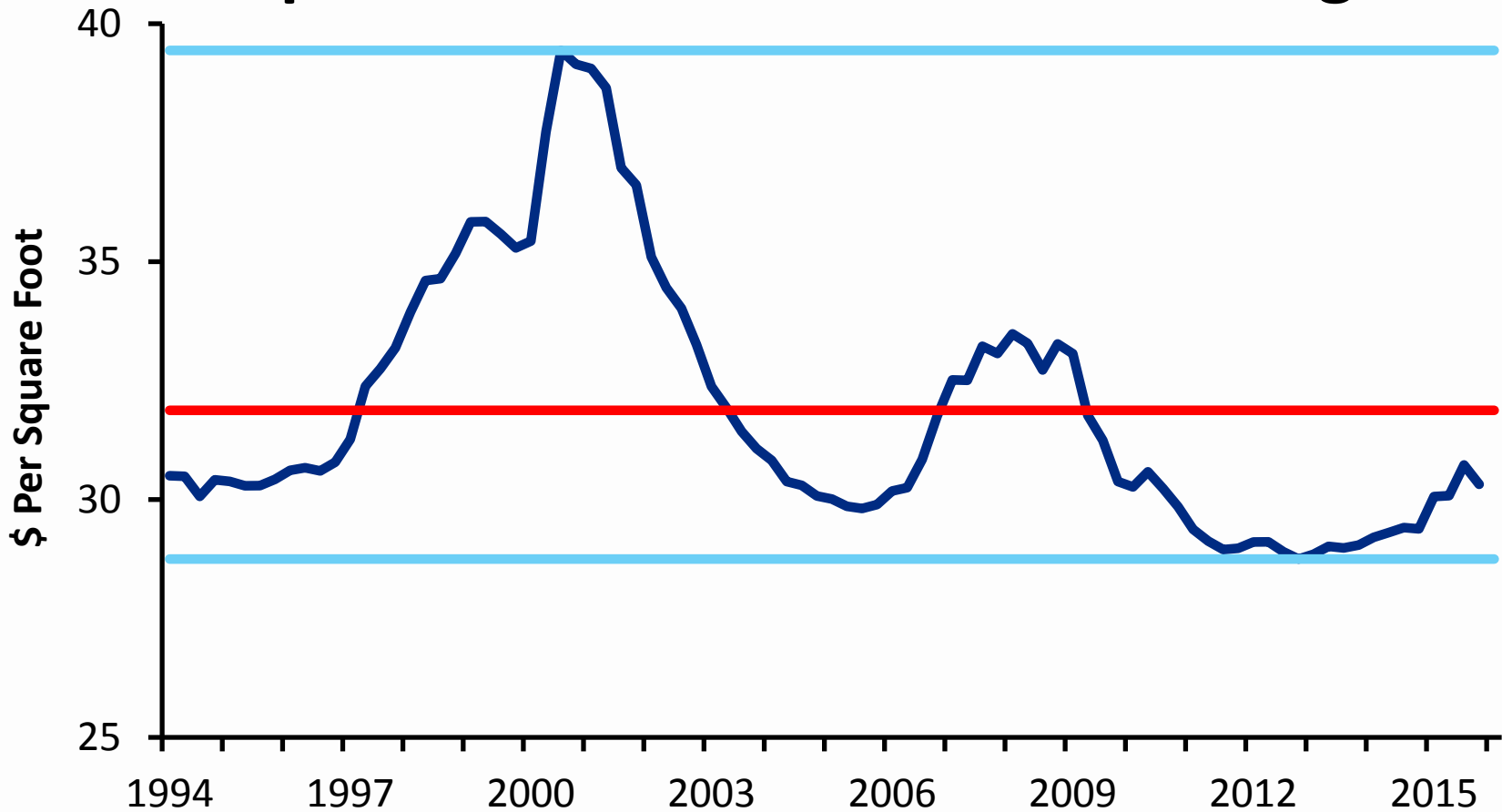
# Net U.S. CMBS Issuance Versus A Decade Earlier



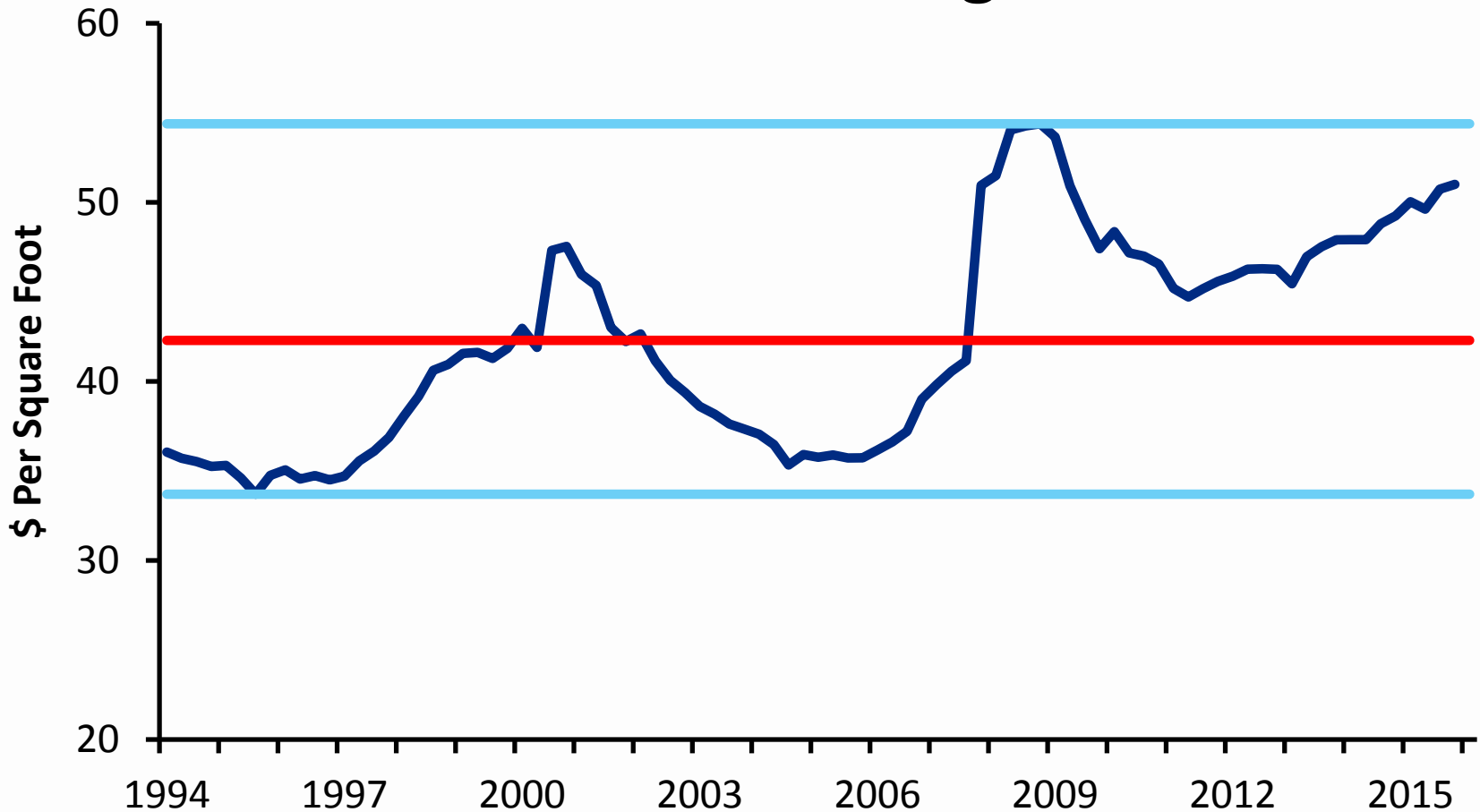
# Real Office Construction: Above Average



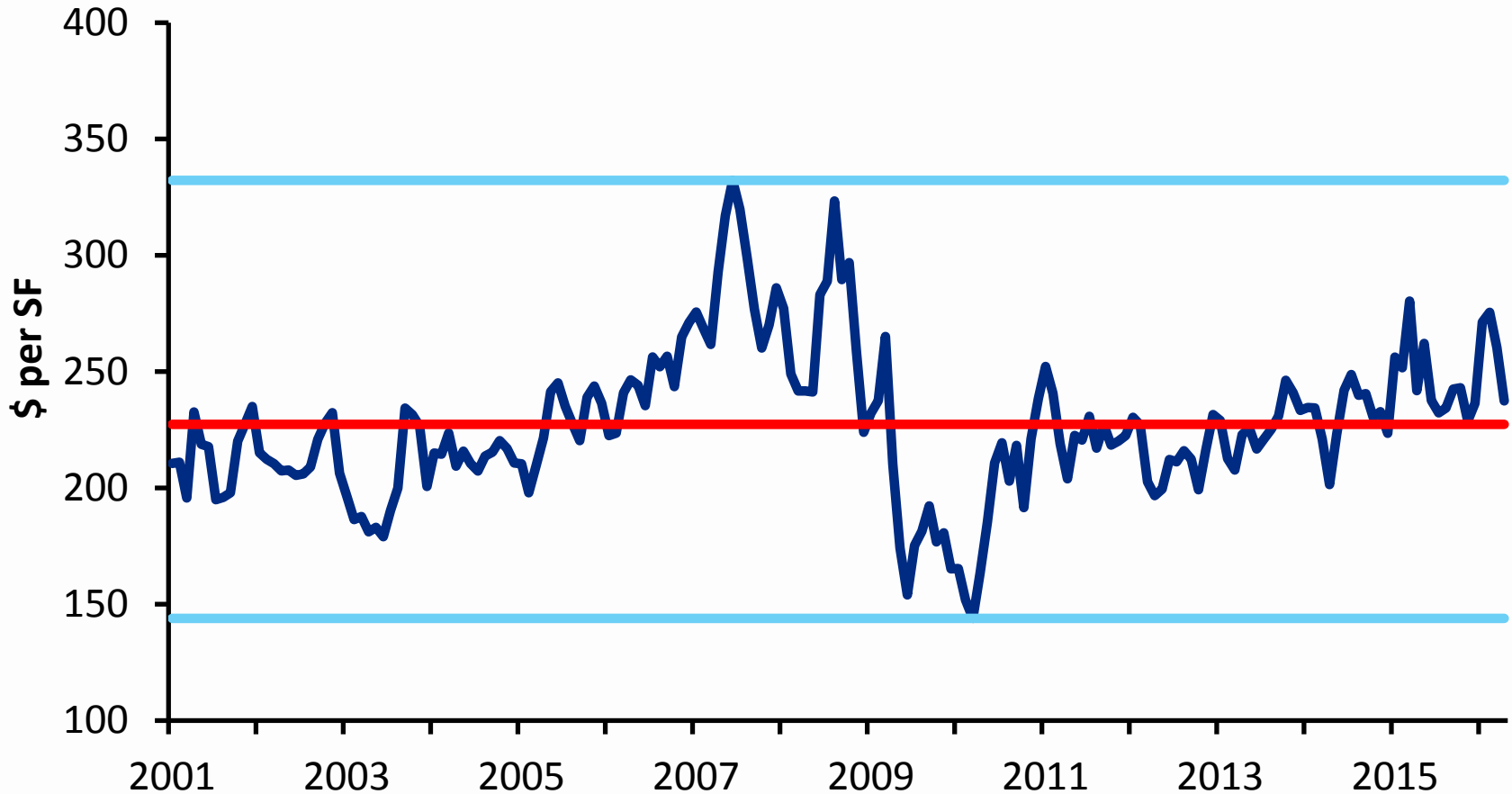
# Real Class A Suburban Office Rent: Up From Bottom But Below Average



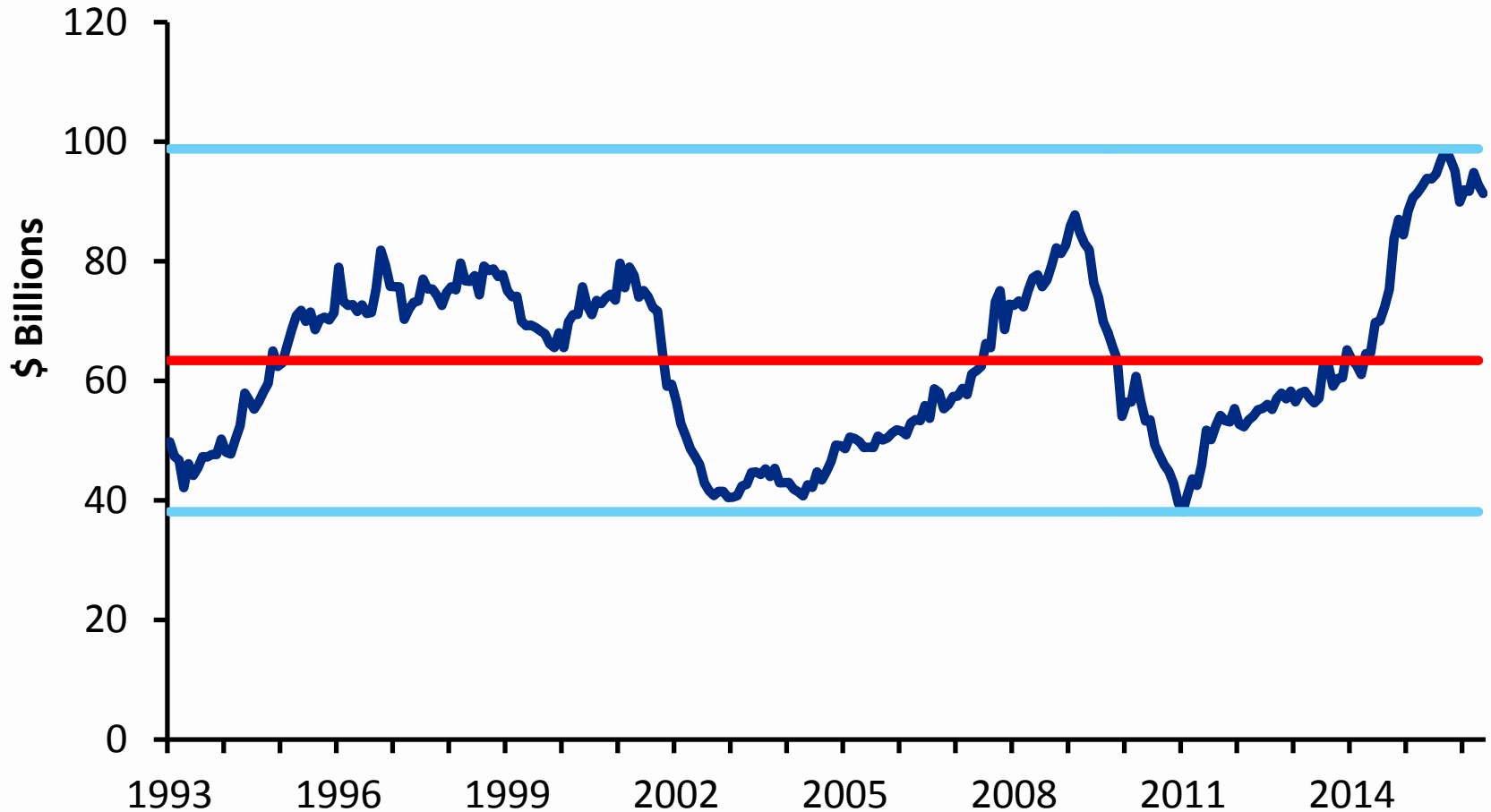
# Real Class A Office CBD Rent: Above Average



# Real RCA Office Private Real Estate Values: Around Average

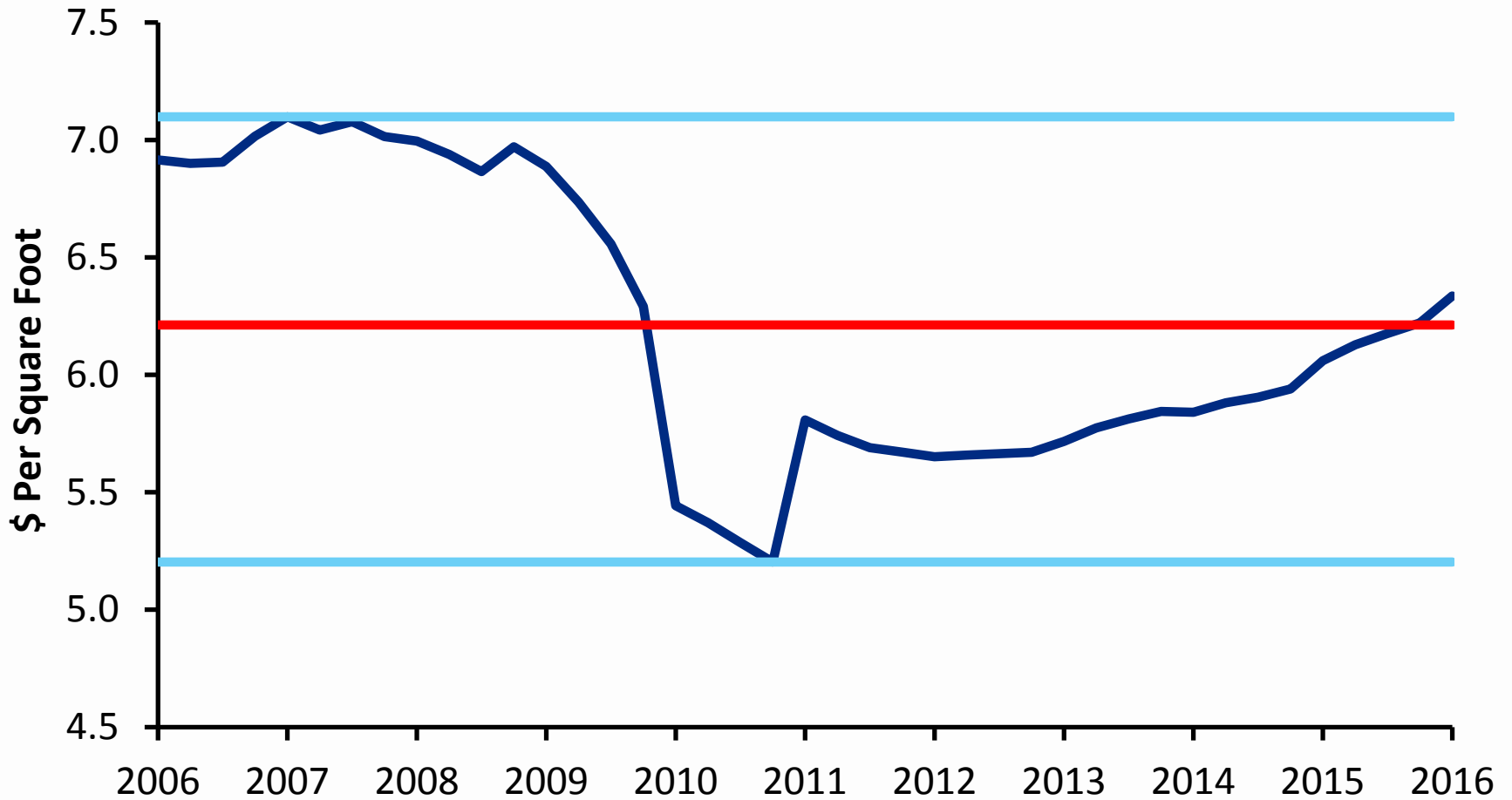


# Industrial Construction: Near New High

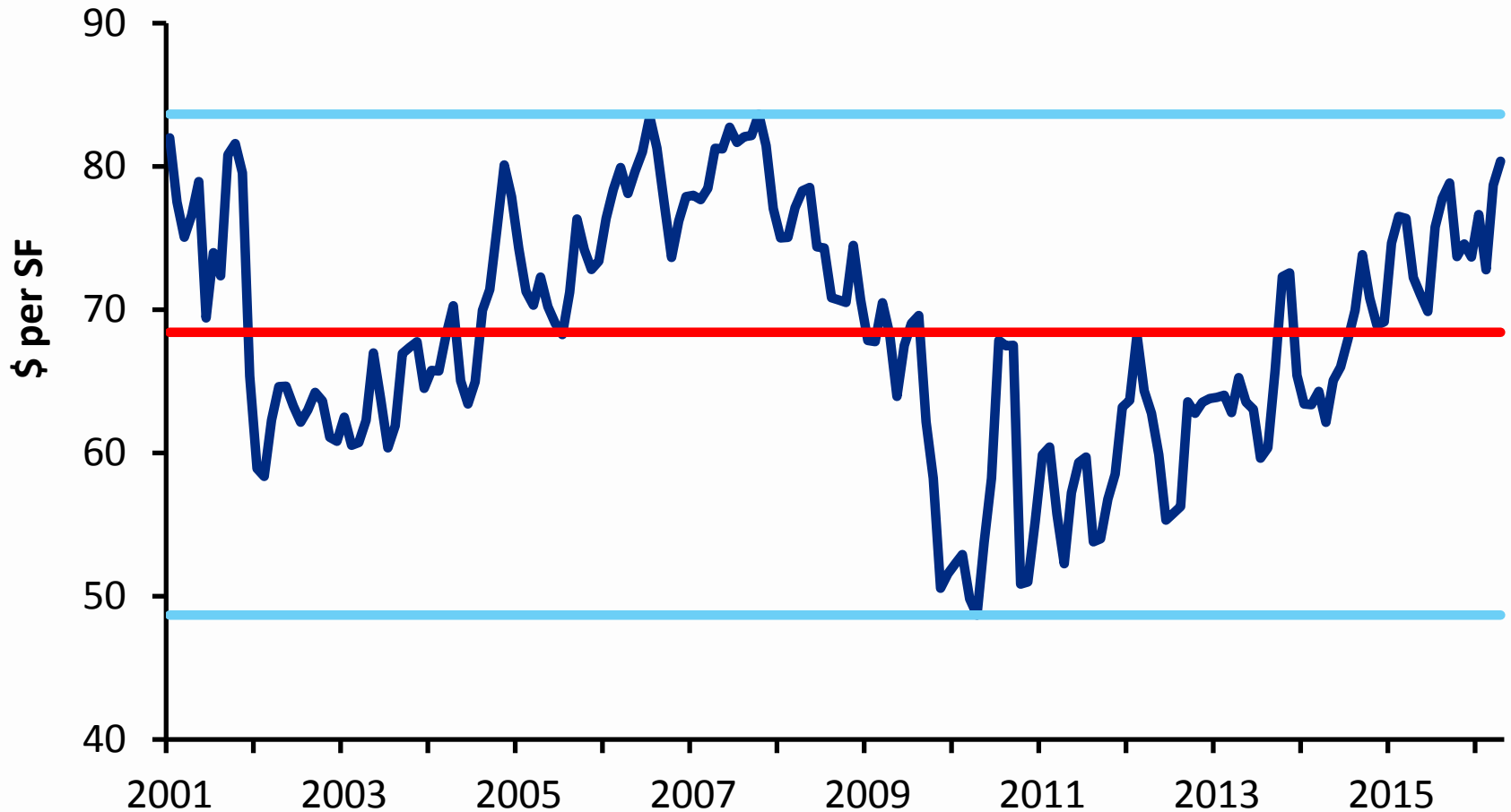




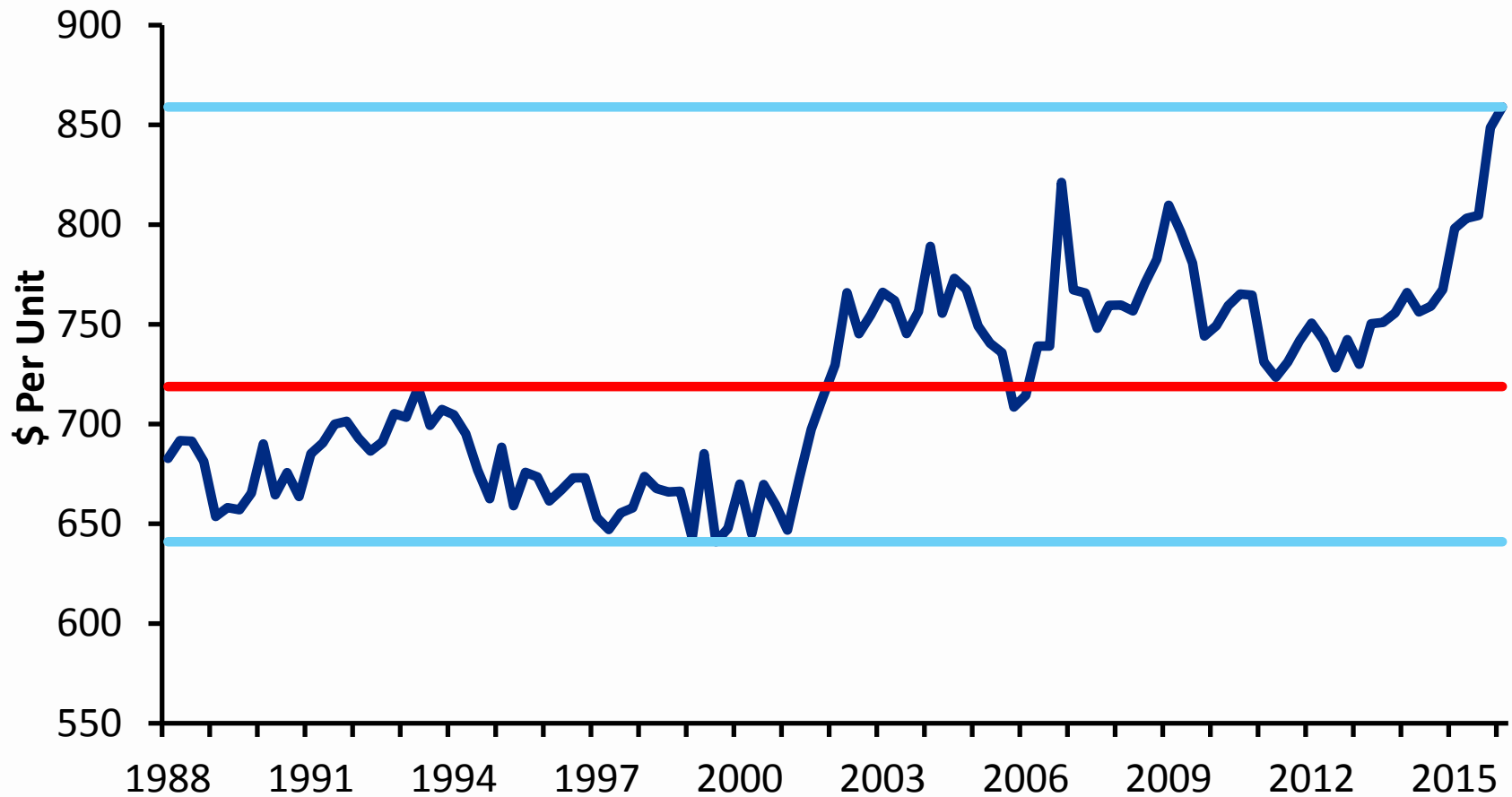
# Real Industrial Rent: Around Average



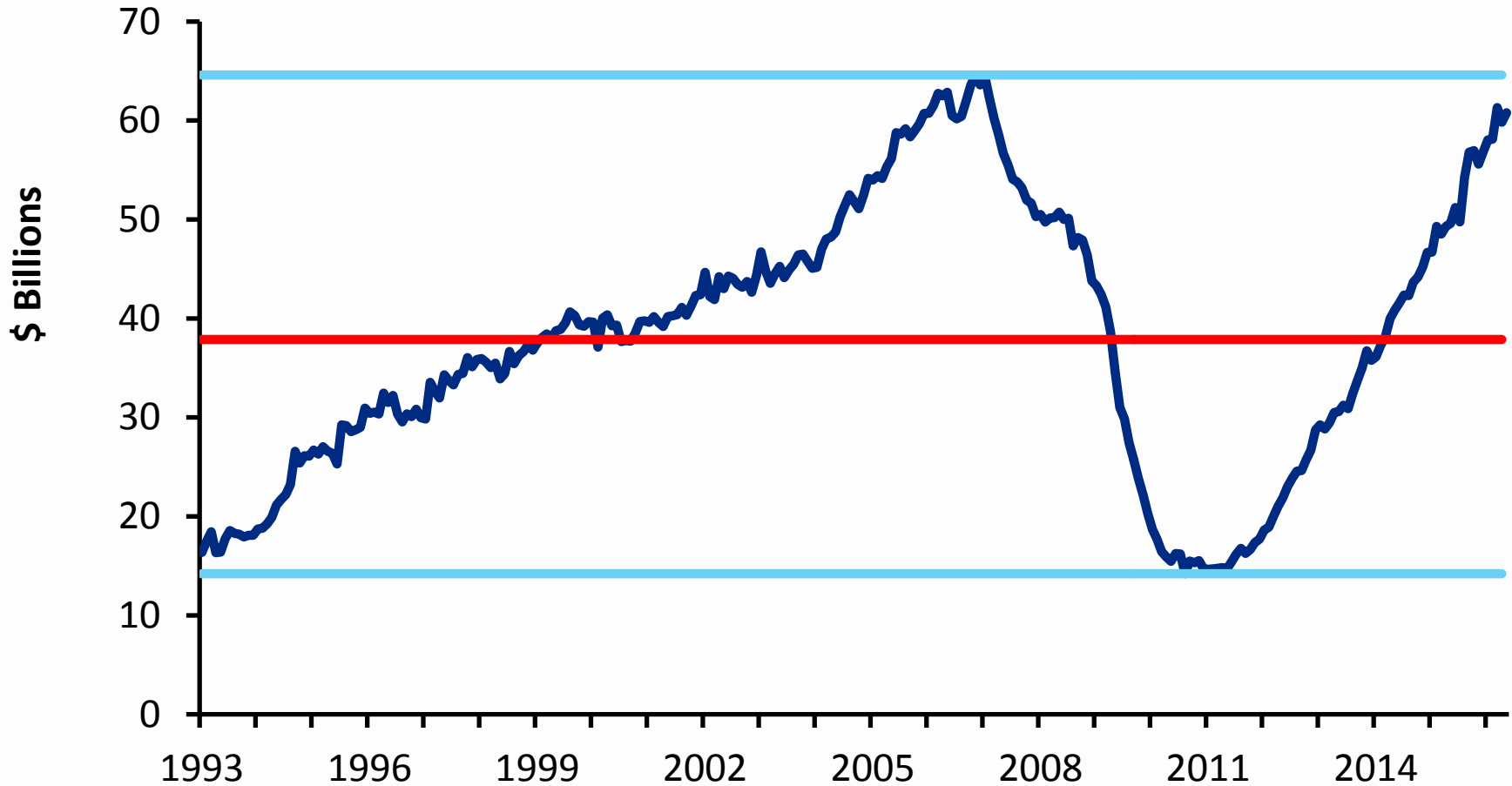
# Real RCA Industrial Private Real Estate Values: Above Average



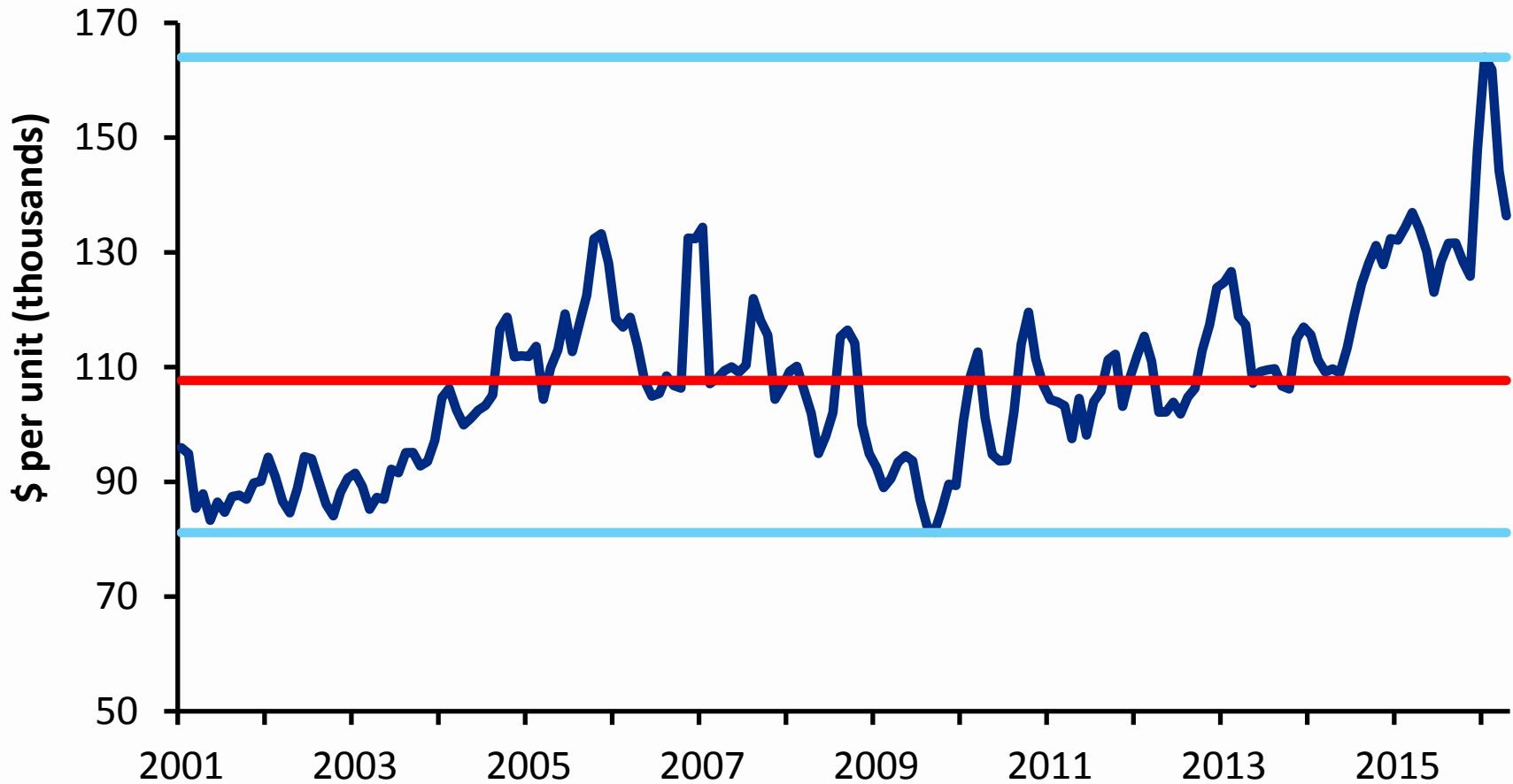
# Real Multifamily Rent: At New Peak



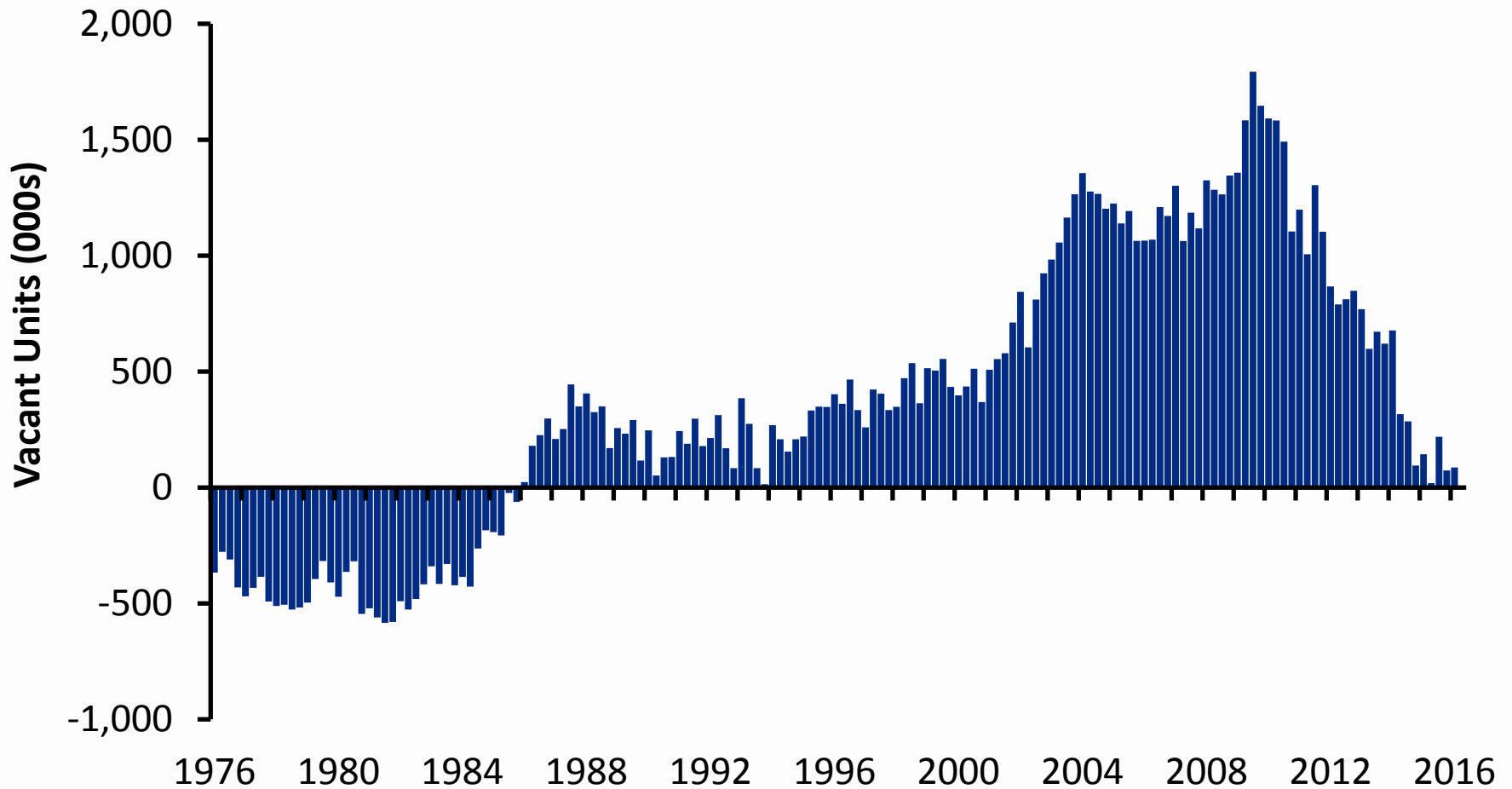
# Real Multifamily Construction: Approaching A New High



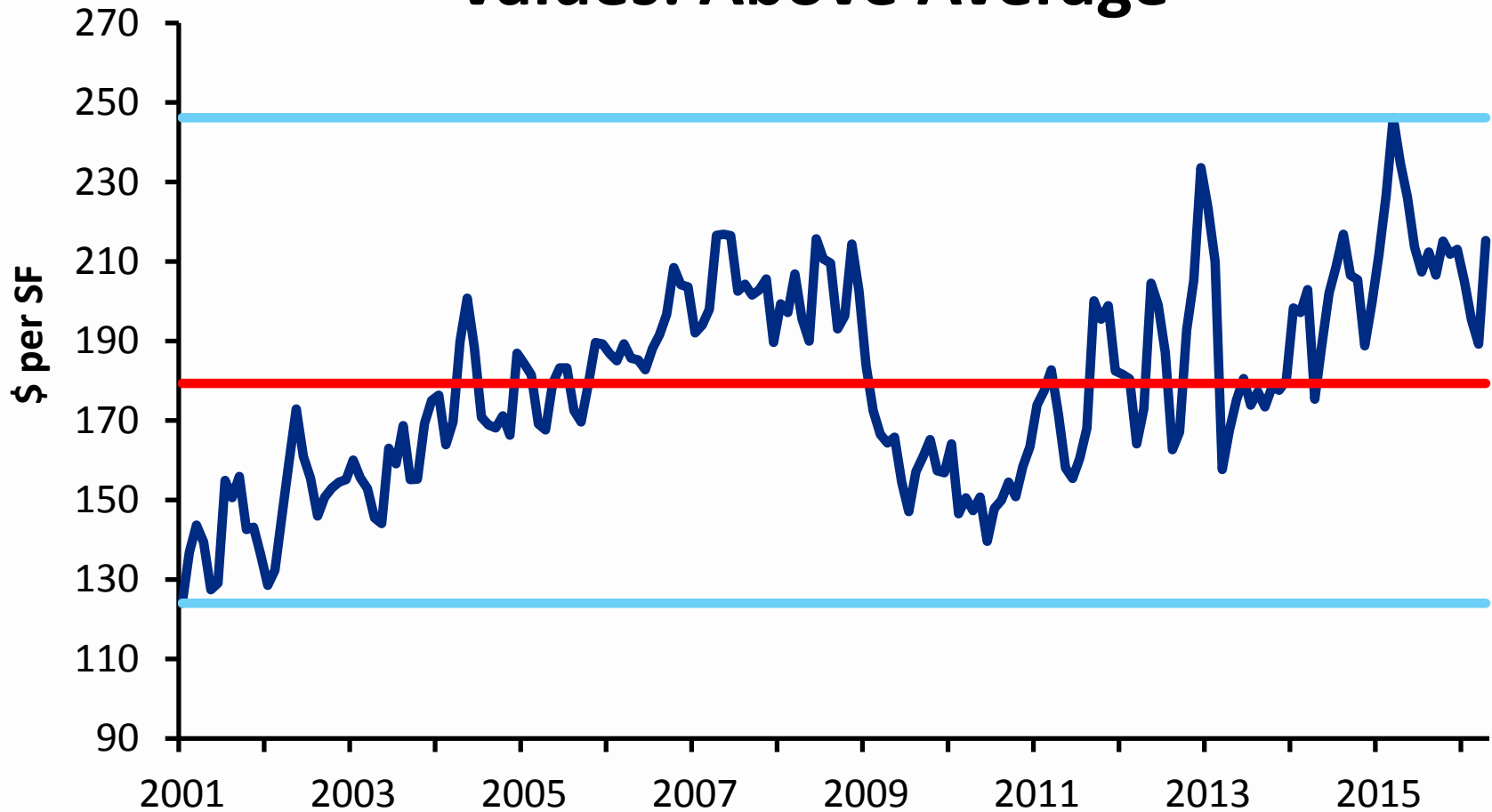
# Real RCA Multifamily Private Real Estate Values: Well Above Average



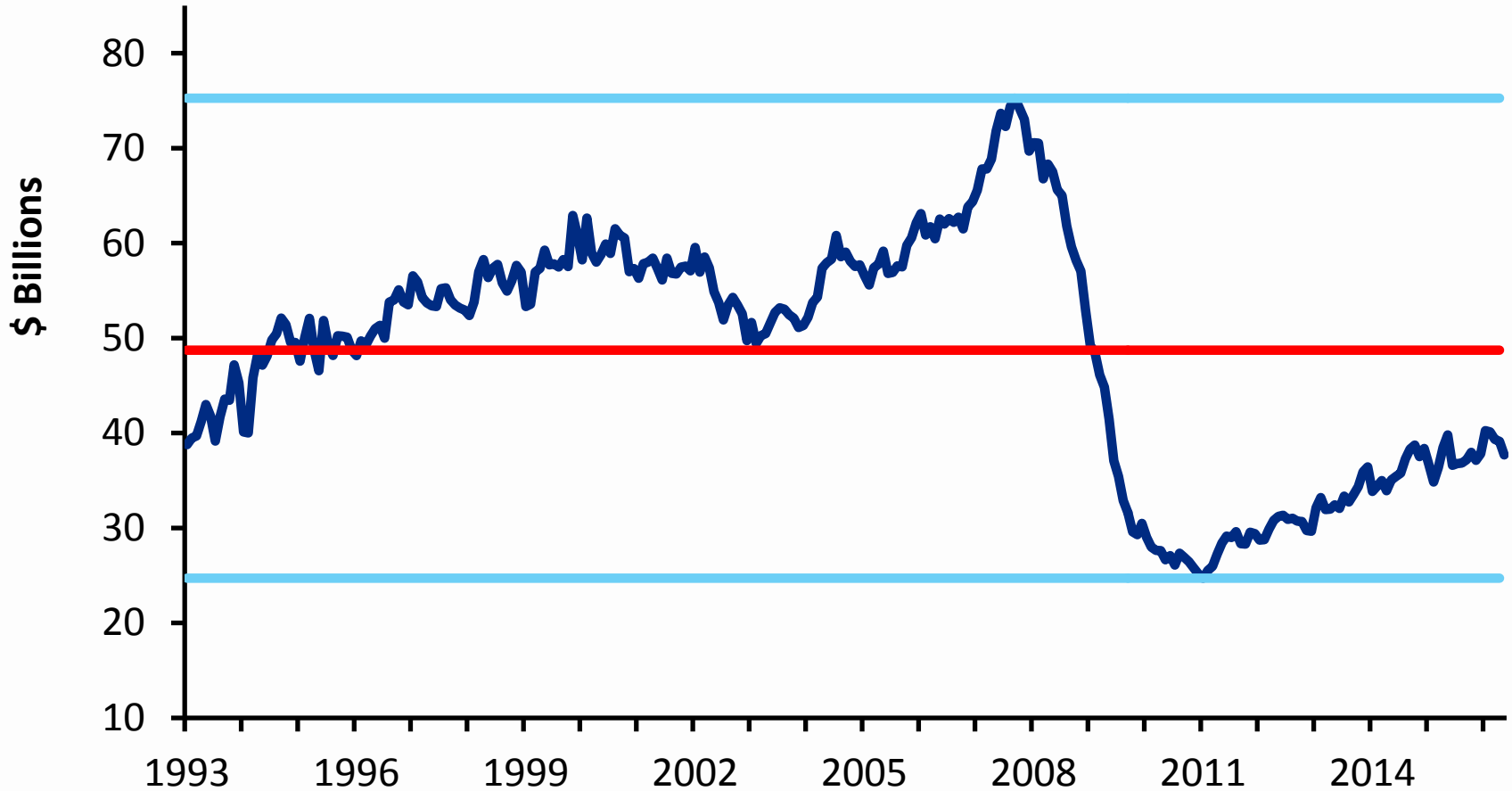
# Excess Rental Unit Vacancy: It Is All Gone



# Real RCA Retail Private Real Estate Values: Above Average

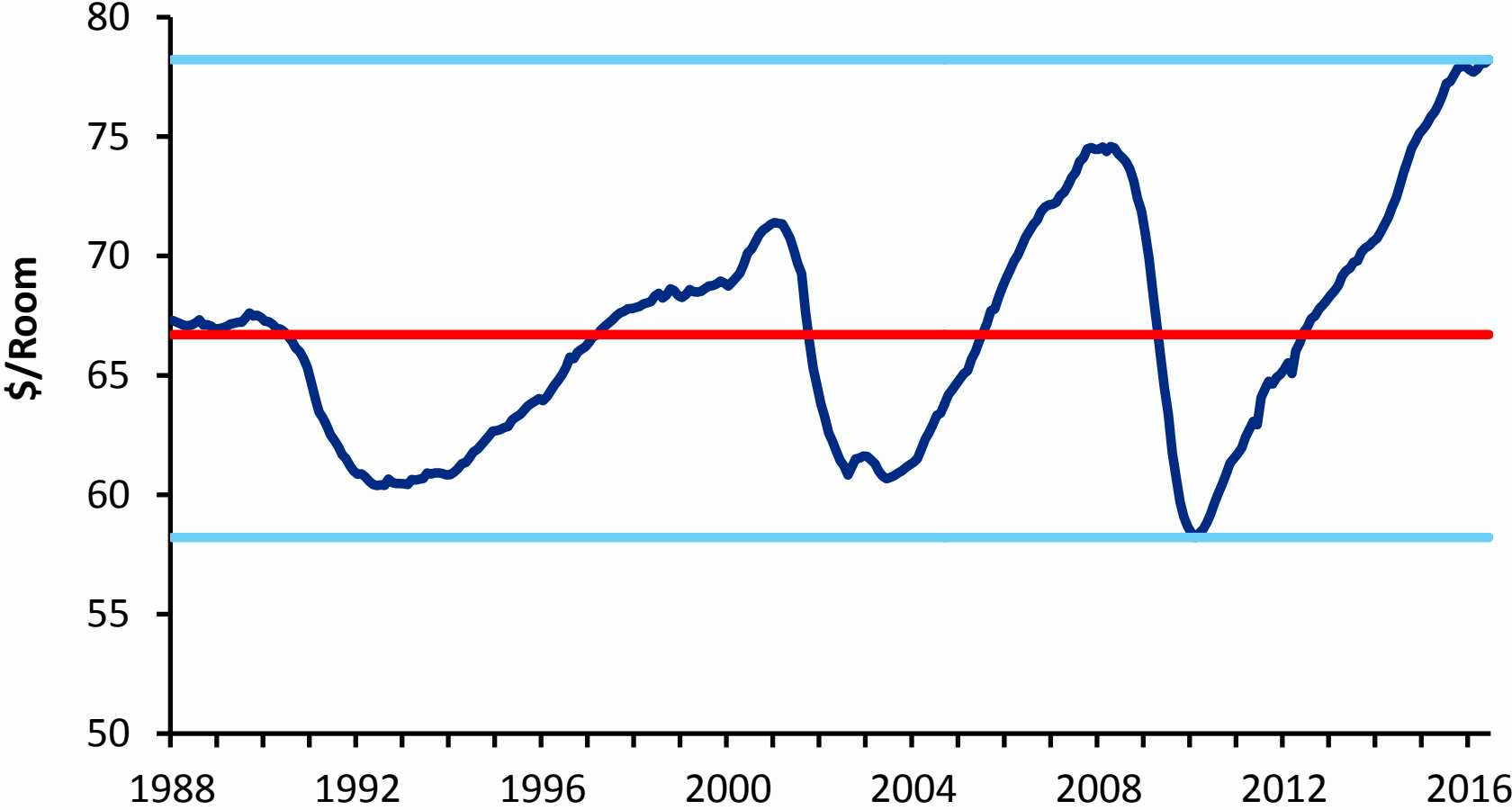


# Real Retail Construction: Below Average

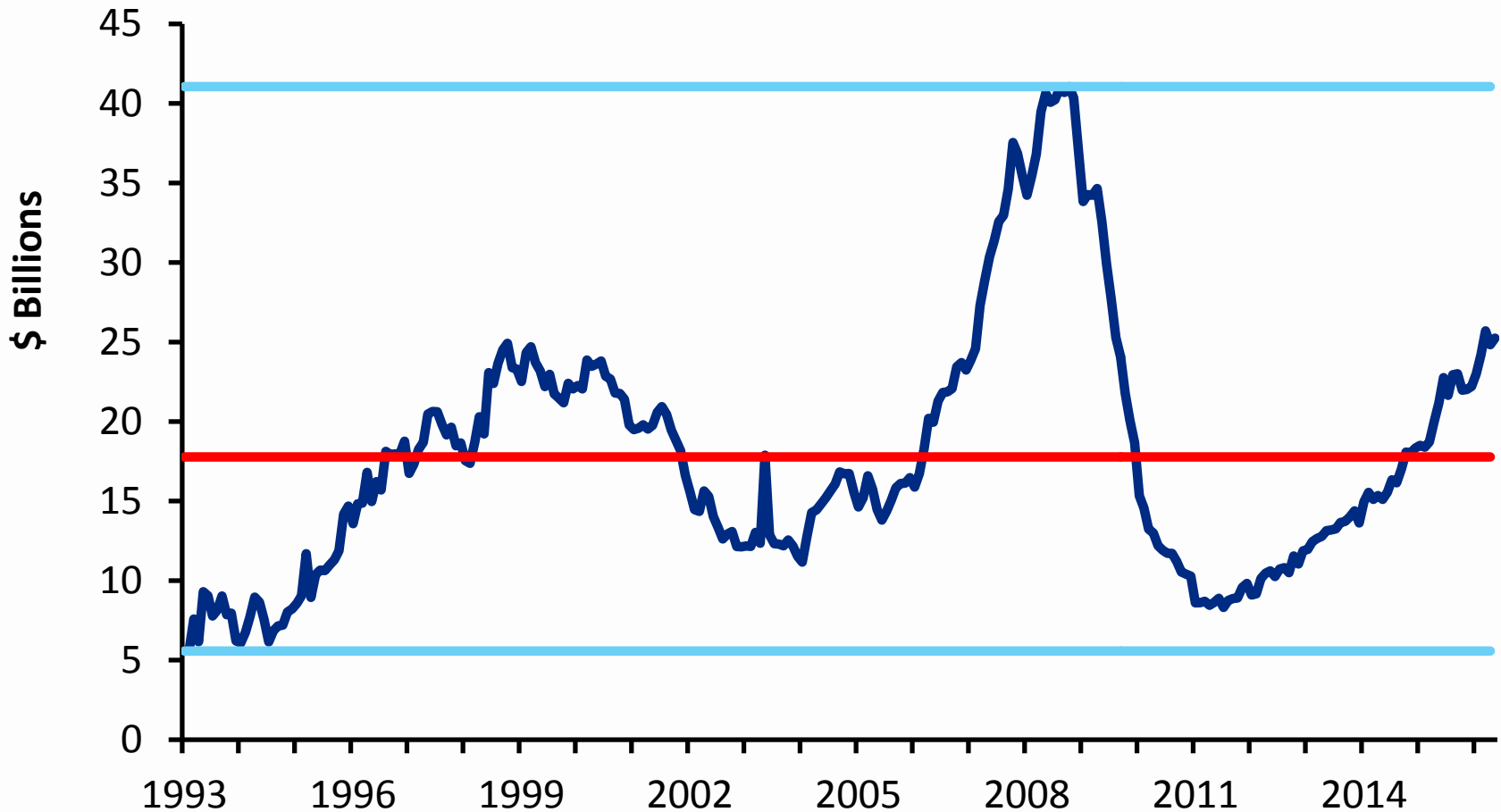




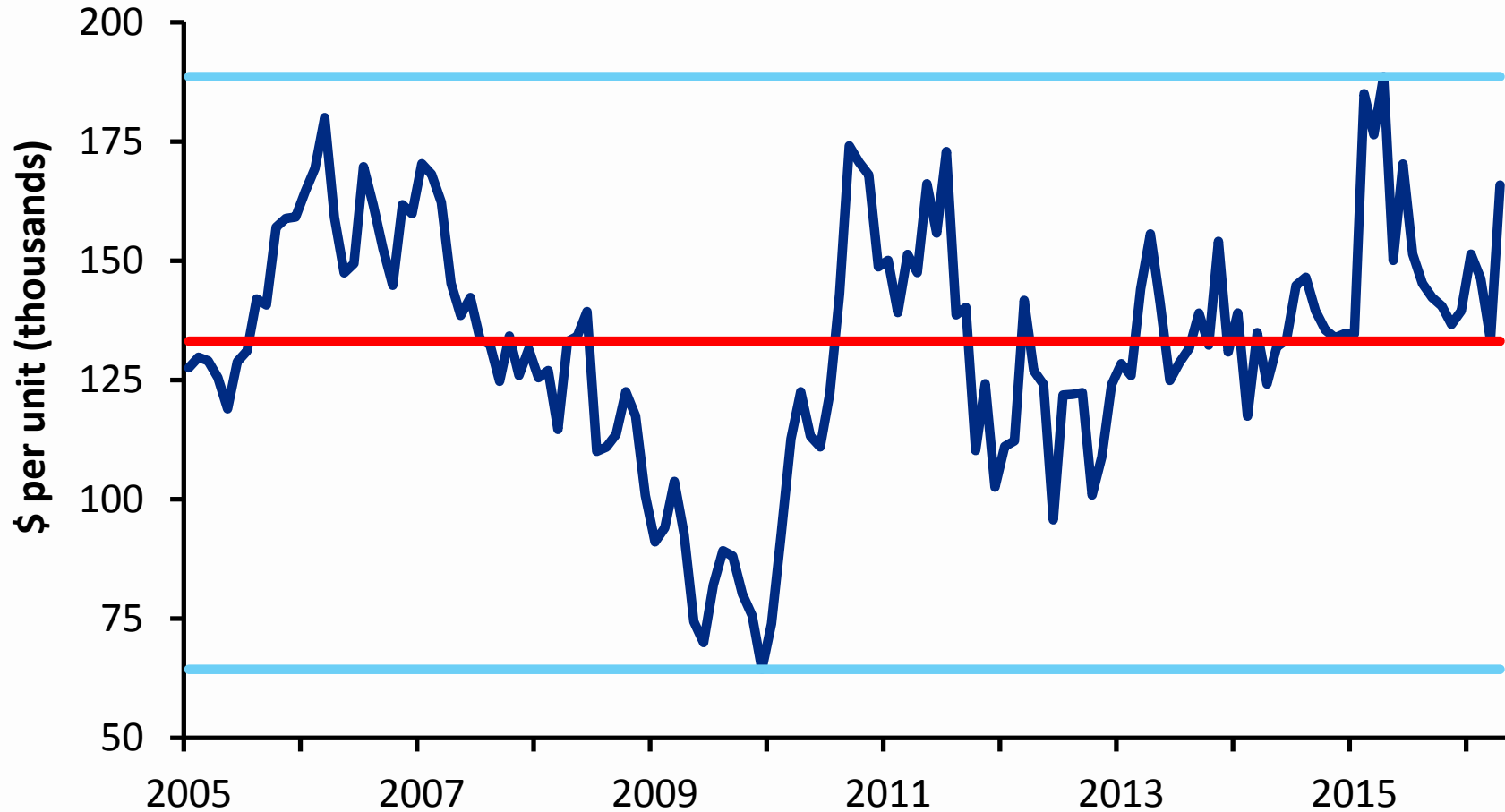
# Real Hotel RevPar: A New Peak



# Real U.S. Hotel Construction: Above Average



# Real RCA Hotel Private Real Estate Values: Above Average



An aerial photograph of San Francisco, California, showing a dense urban landscape with various colored buildings and a prominent skyscraper (the Transamerica Pyramid) in the background. A white rectangular box is centered over the image, containing the text "Thank You". The image is overlaid with several white geometric lines: a diagonal line in the top left, a vertical line on the left, a horizontal line above the text box, a vertical line to the right of the text box, and a large semi-circle on the right side. A solid red rectangle is located in the top right corner.

Thank You