

June 2010

## US Economics

**Bank of America**  
**Merrill Lynch**



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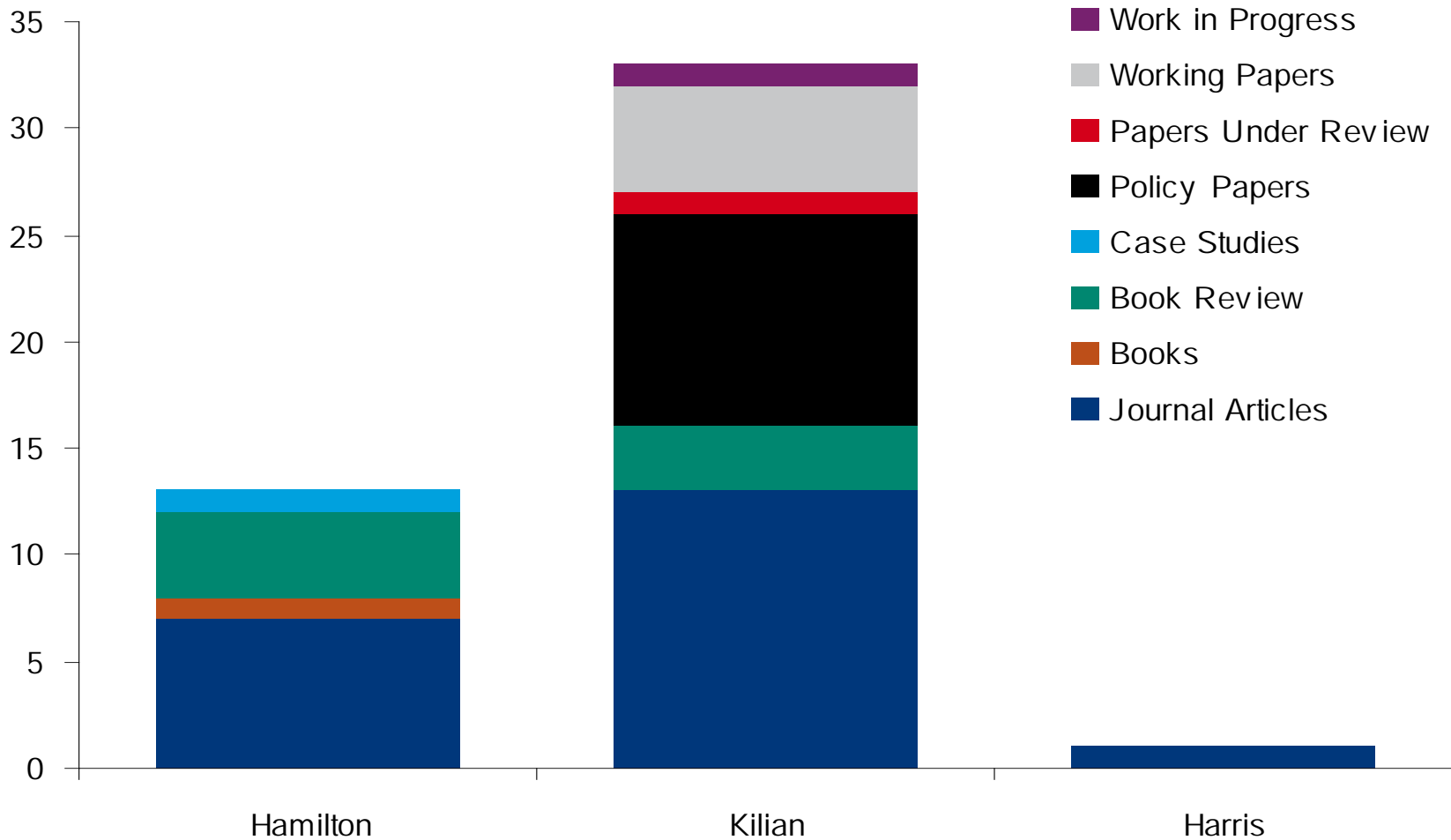
# Nonlinear nonlinearities

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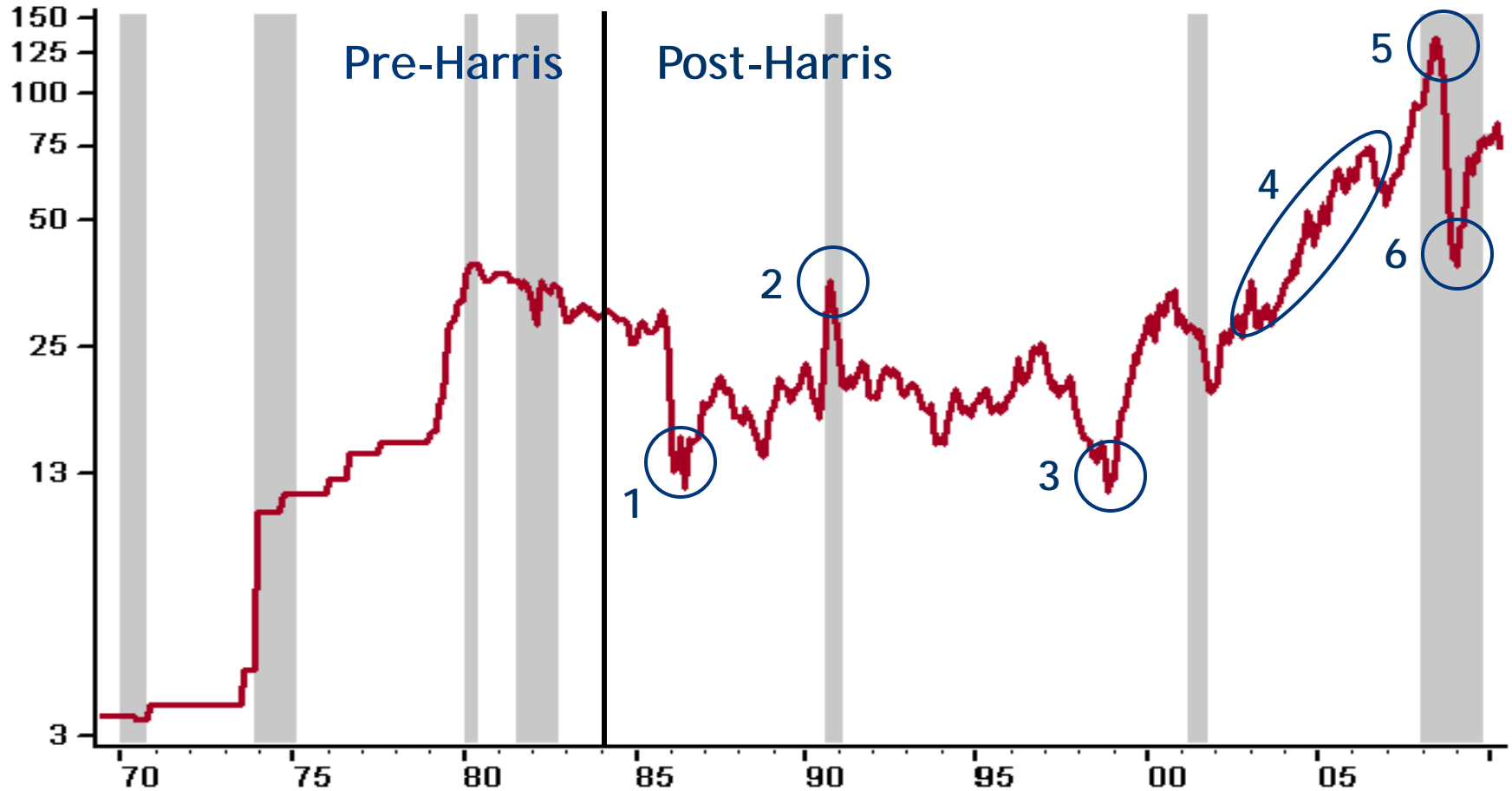
## Scholarly works on oil

(amount)



## Six oil episodes

West Texas intermediate spot oil price  
(\$ per bbl, Log scale)



## Two topics

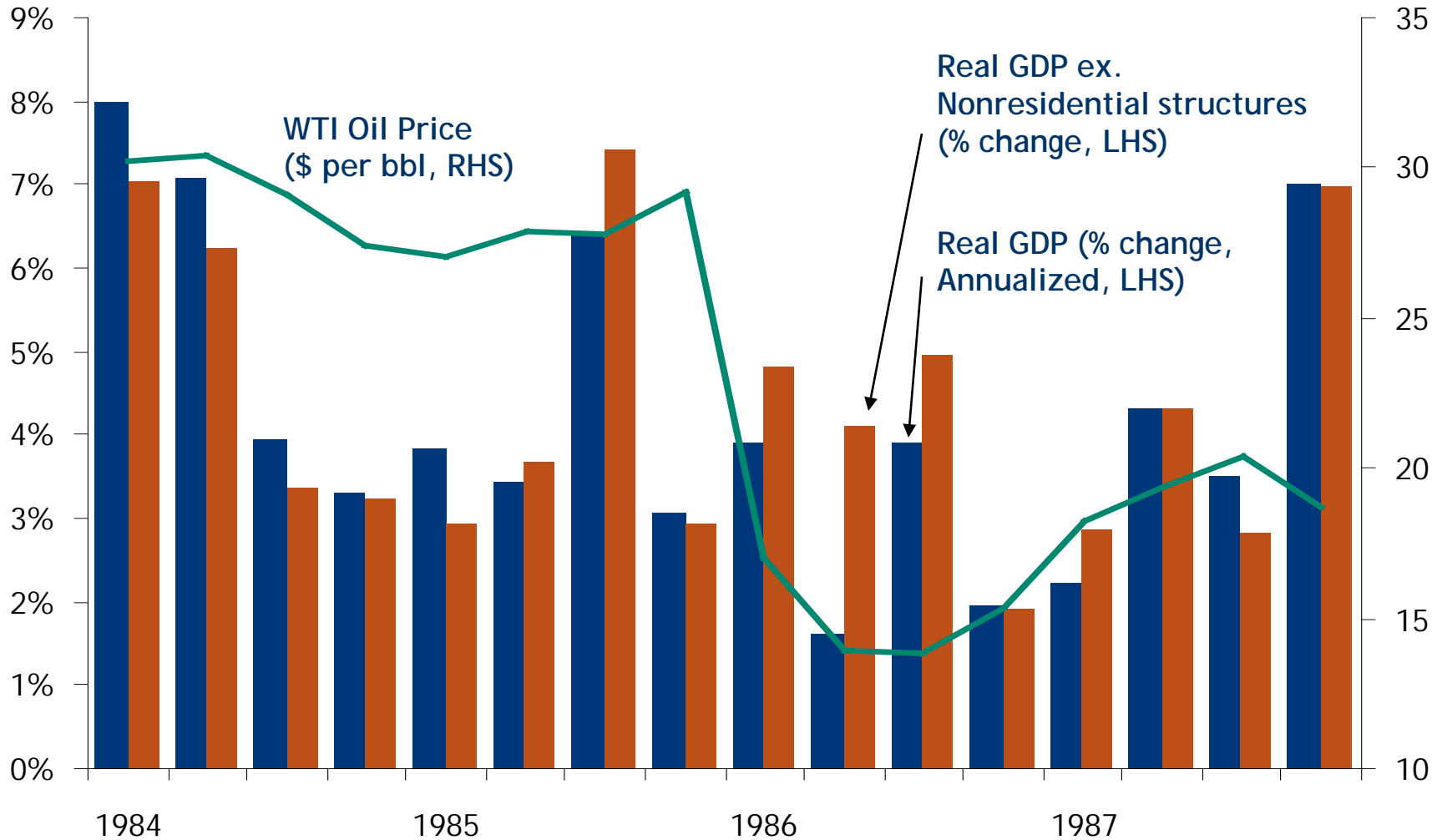
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- *Lessons from six episodes*
- *Lessons from monetary policy*

## A slippery link: Oil & the economy

- *Identification: supply vs. demand*
- *Reaction function*
  - *Threshold effects: Only large shocks matter*
  - *Asymmetry: Only increases matter*
  - *Volatility: Big change is bad in either direction*
  - *Duration: Only persistent moves matter*
  - *Framing: The context or cause of the price change matters*

# Episode #1: Lower oil prices... hurt growth

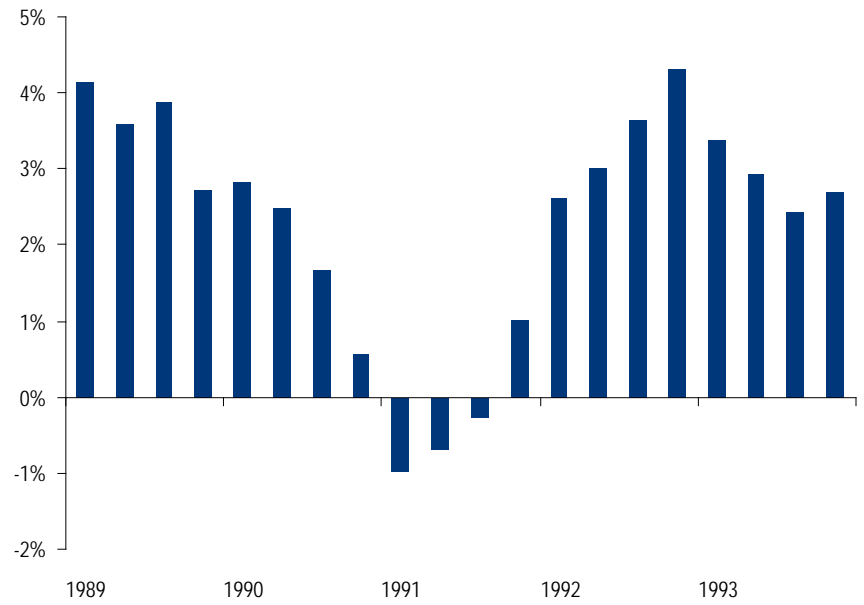
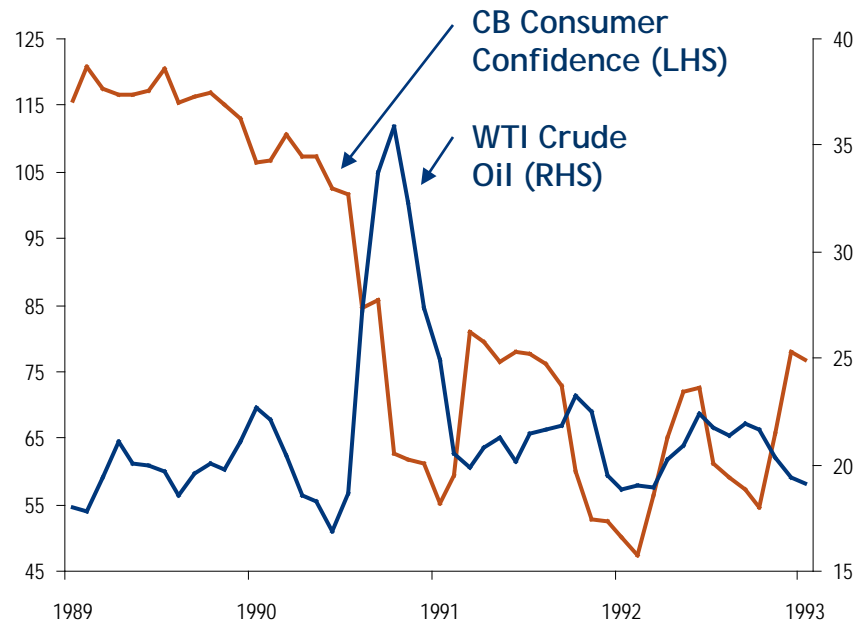


# Episodes #2: Oil, confidence and growth

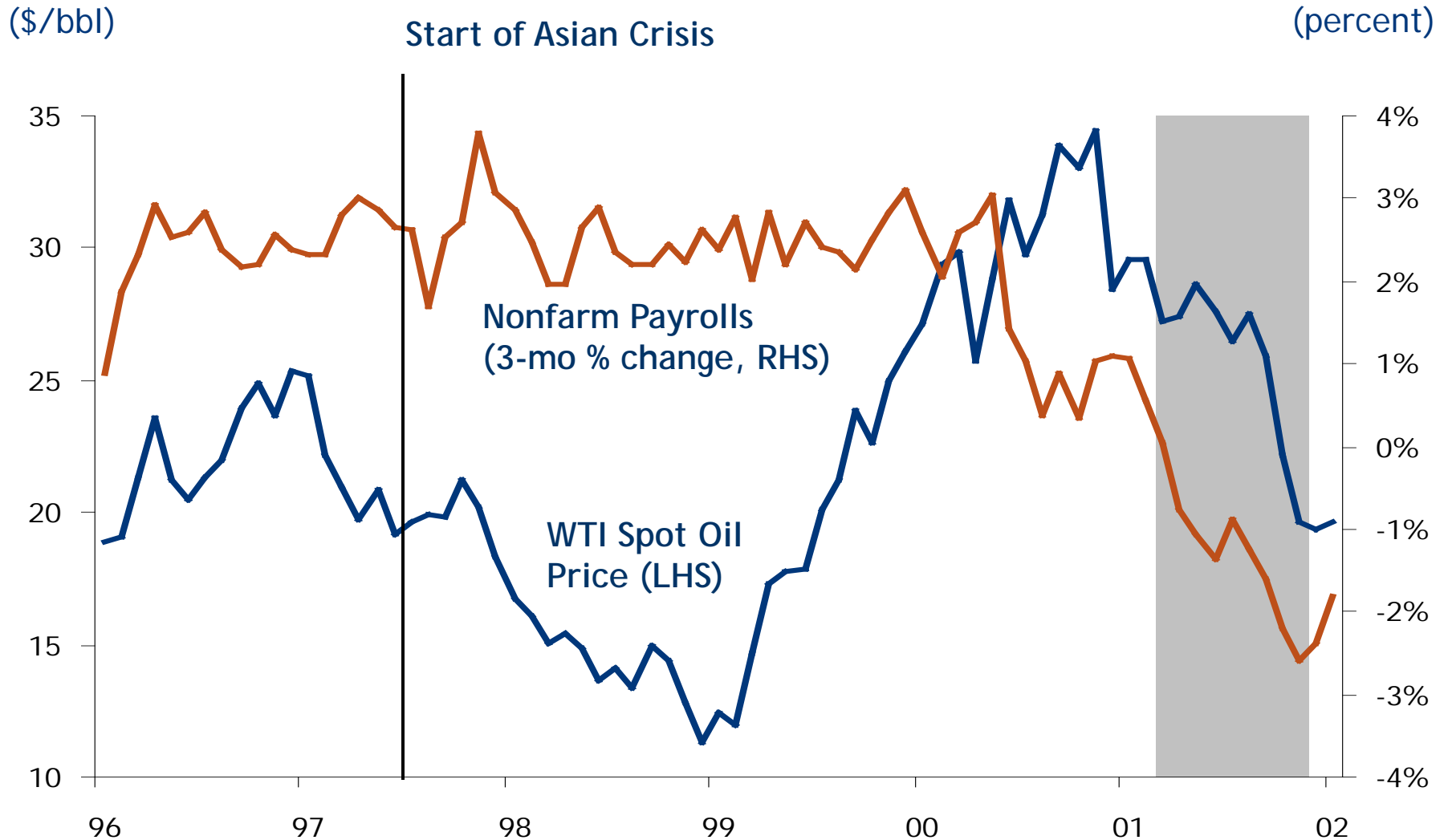
(index level)

(\$/bbl)

Real GDP growth  
(YoY % change)



# Episode #3: Oil - Asia = 0



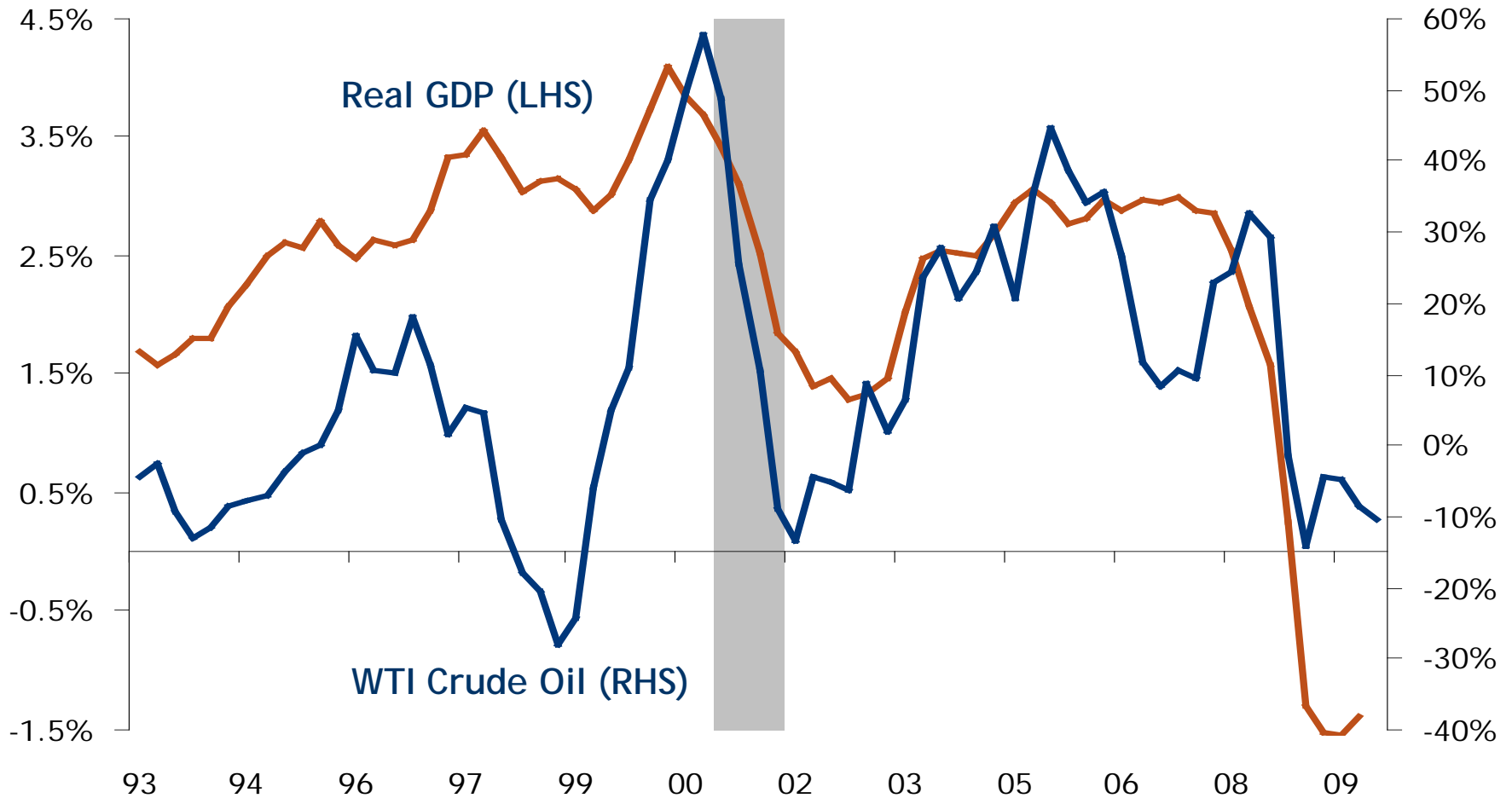
WTI refers to West Texas Intermediate crude oil  
Source: Wall Street Journal, Bureau of Labor Statistics, BofA Merrill Lynch Global Research



# Episode #4: Global GDP & oil prices

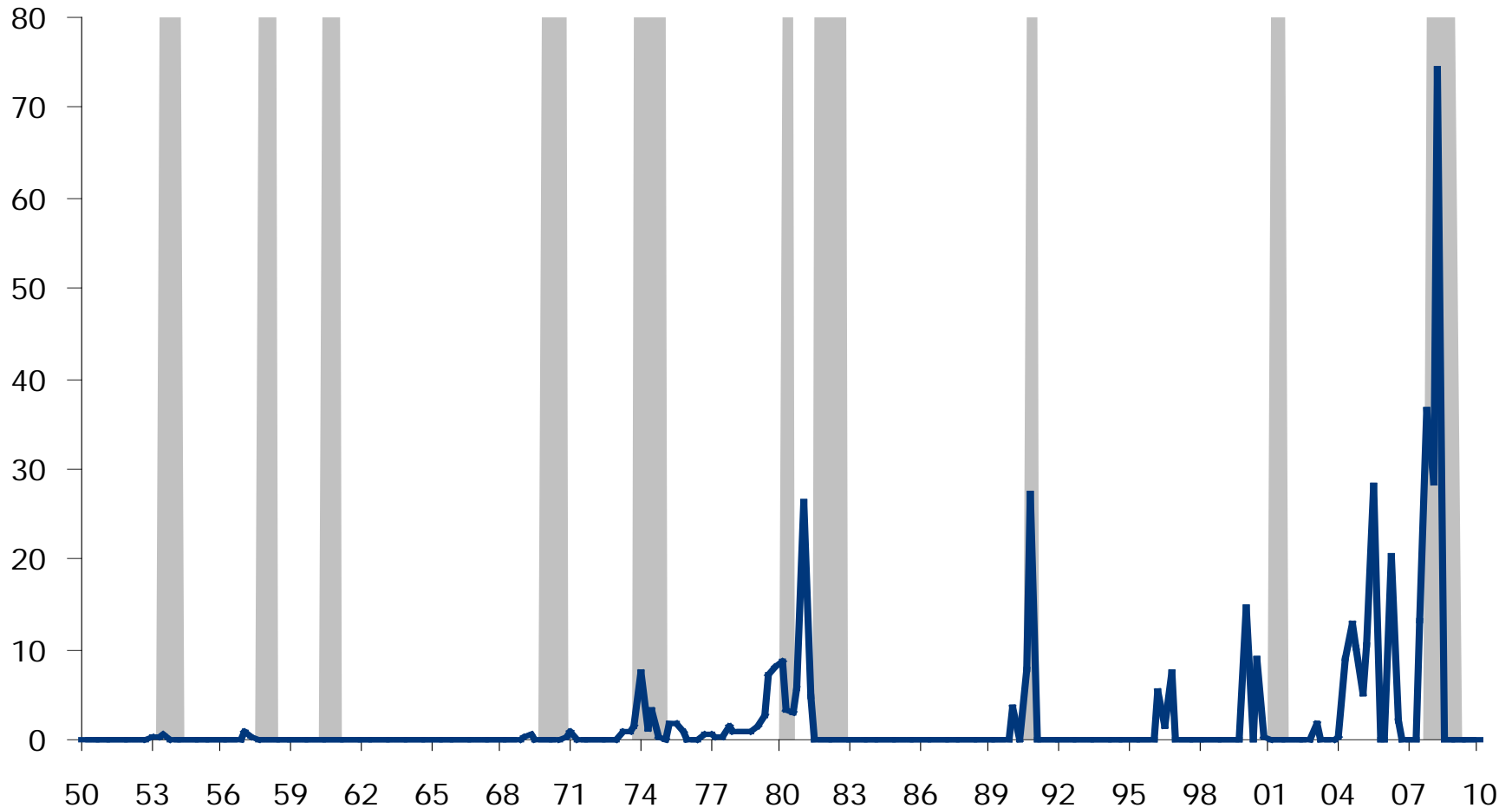
(% change)

(% change)



# Episode #4: Net oil price increase

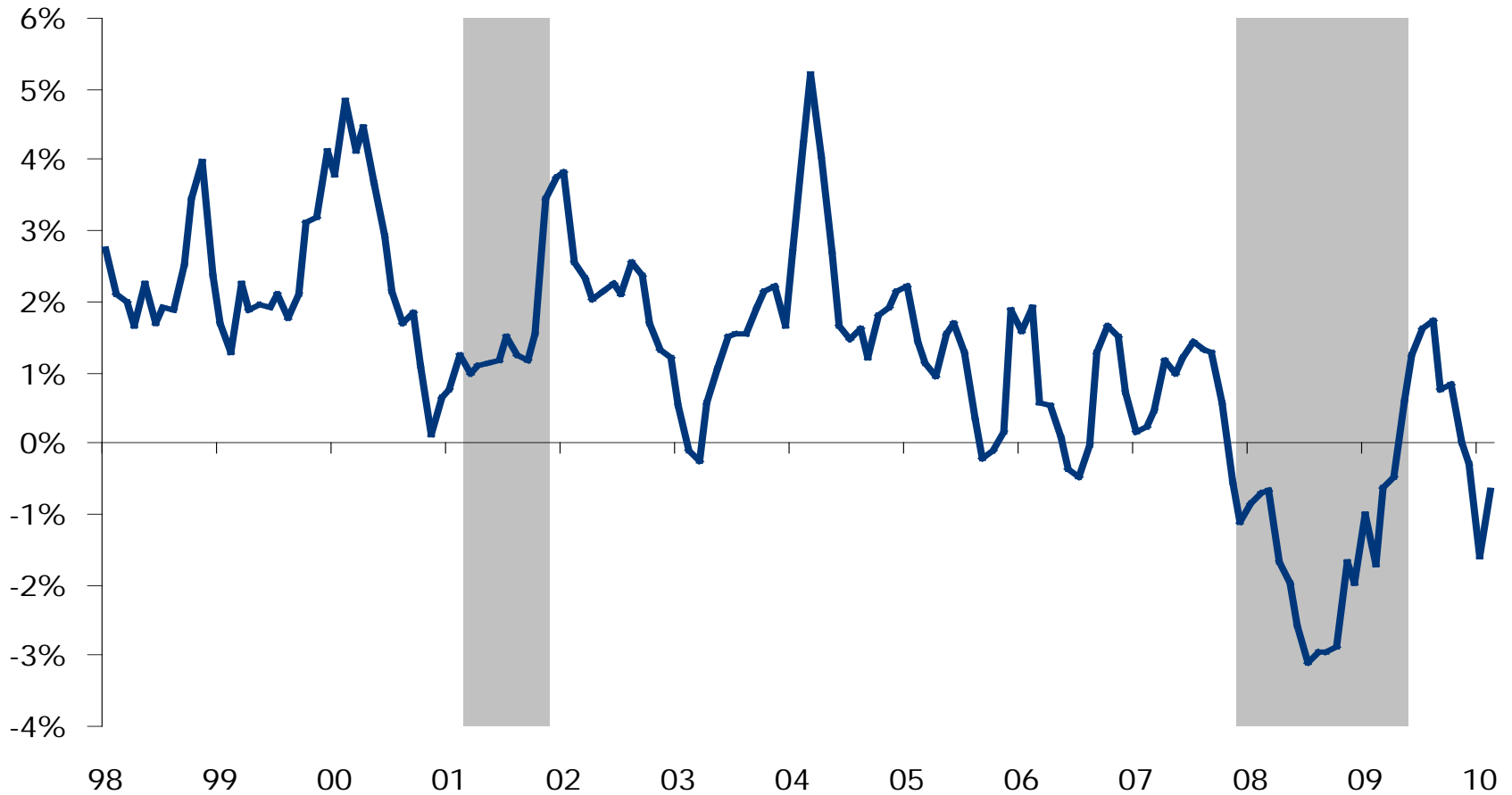
PPI: crude petroleum  
(percent)



Footnote: Measured as net increase in oil prices over the previous peak value in the previous twelve quarters  
Source: Bureau of Labor, BofA Merrill Lynch Global Research

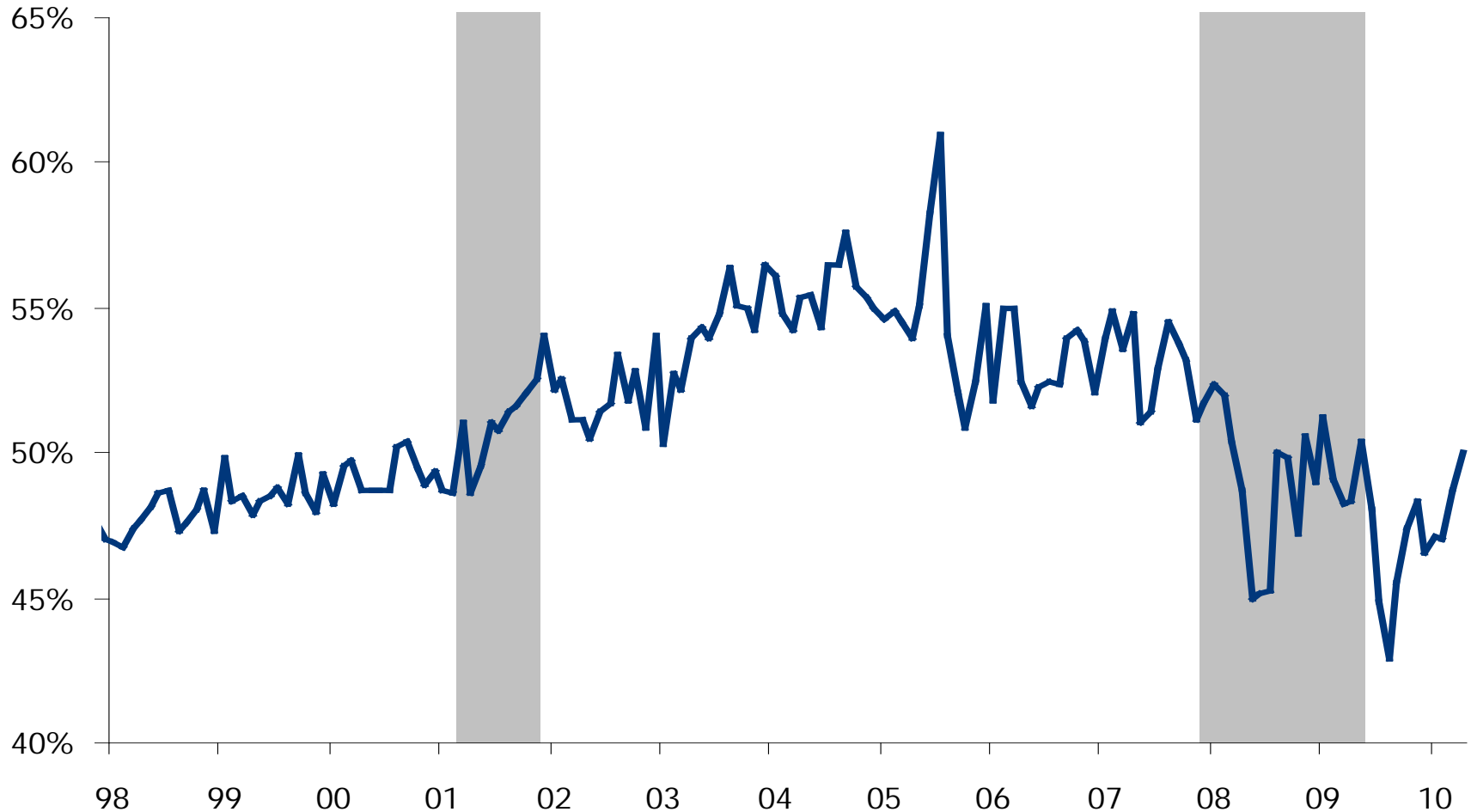
# Episode #5: Vehicle miles of travel

Vehicle miles of travel  
(year/year % change of the 3-month moving average)



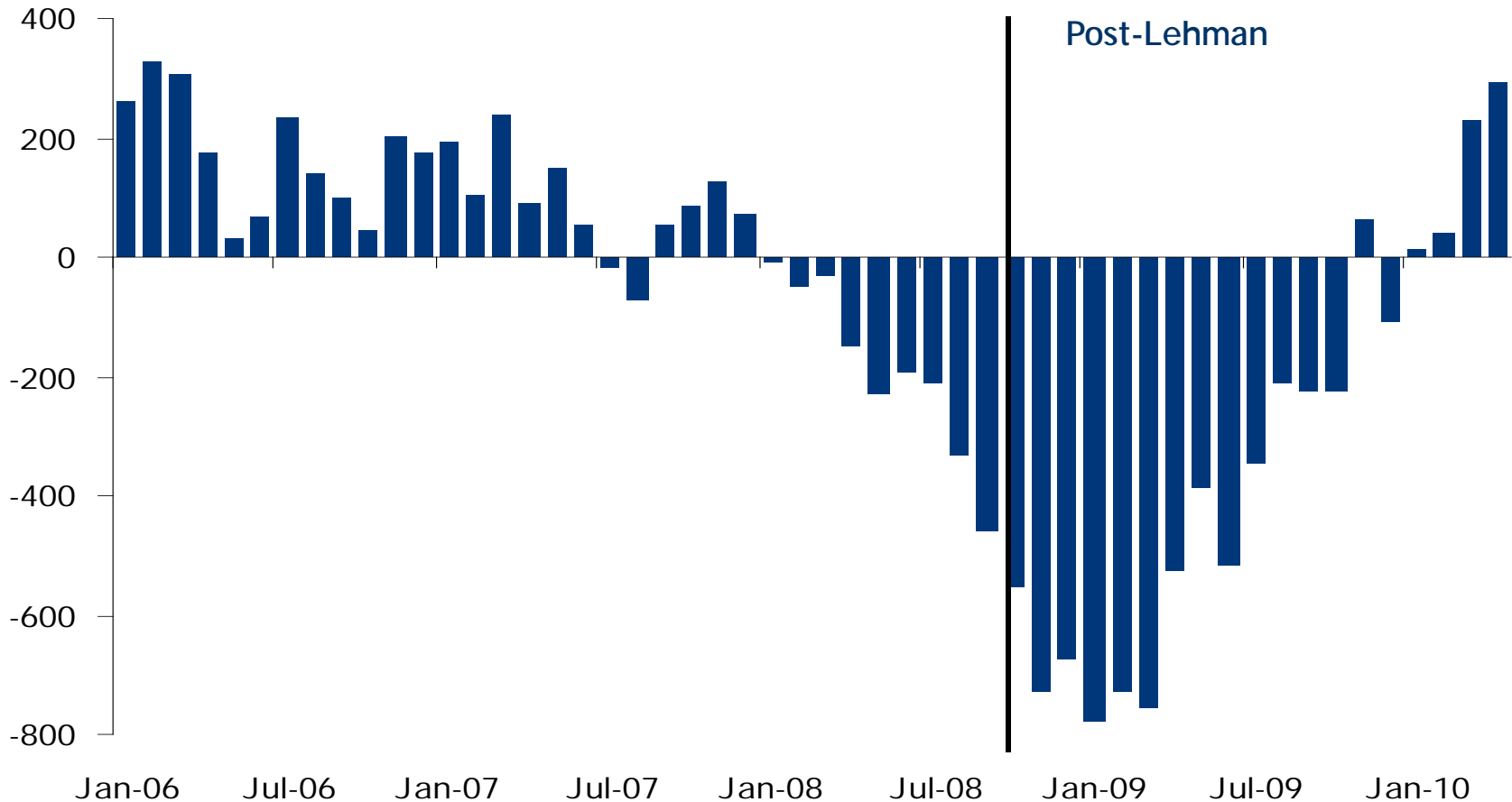
# Episode #5: Share of ugly vehicles (SUVs)

Trucks as a % of light vehicle sales  
(percent)



# Episode #5: Pre-Lehman job losses

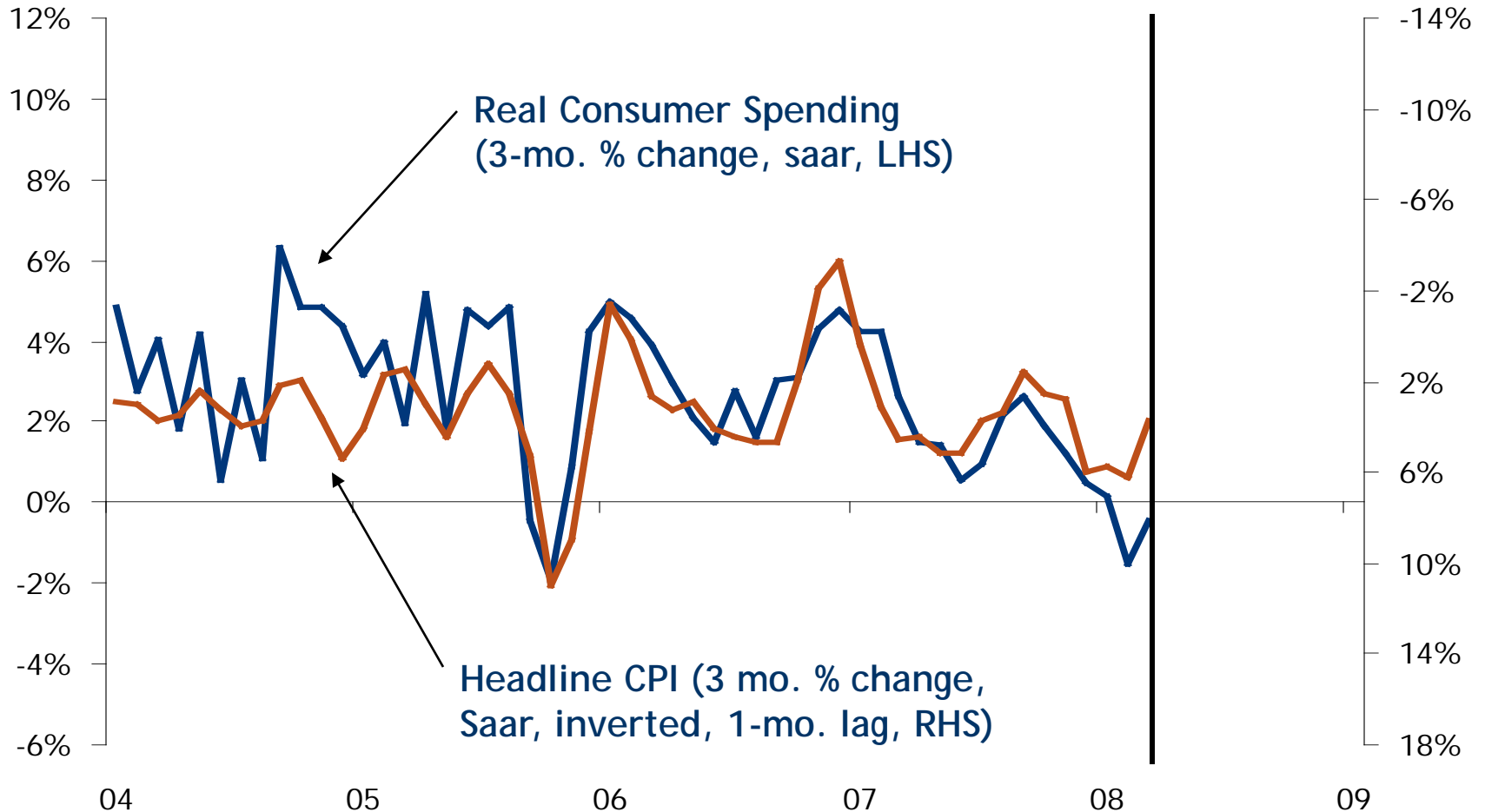
Change in total nonfarm employment  
(3-month moving average, year/year % change)



# Episode #6: Inflation drives consumption?

(percent)

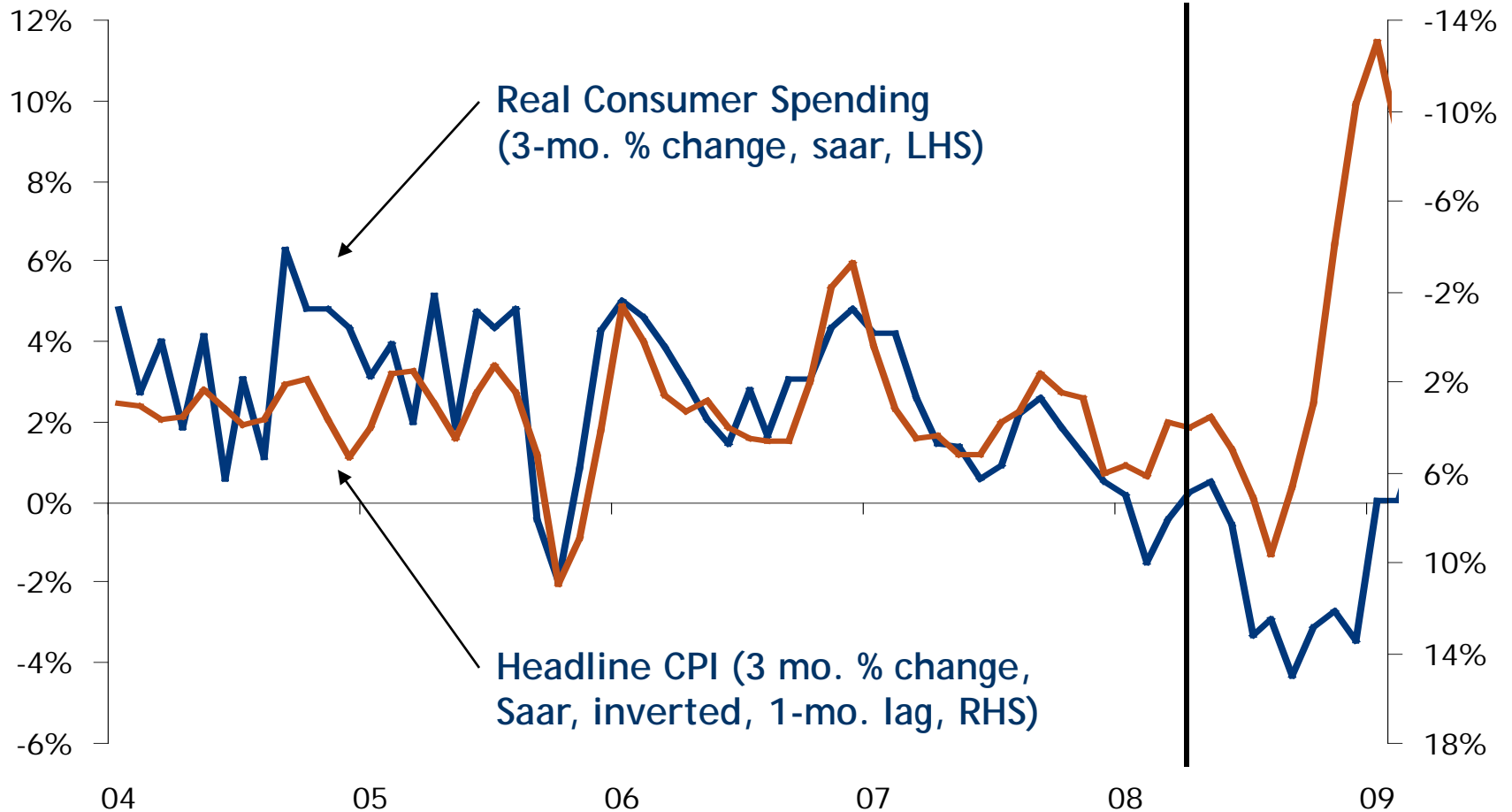
(percent)



# Episode #6: Reduced form rubble

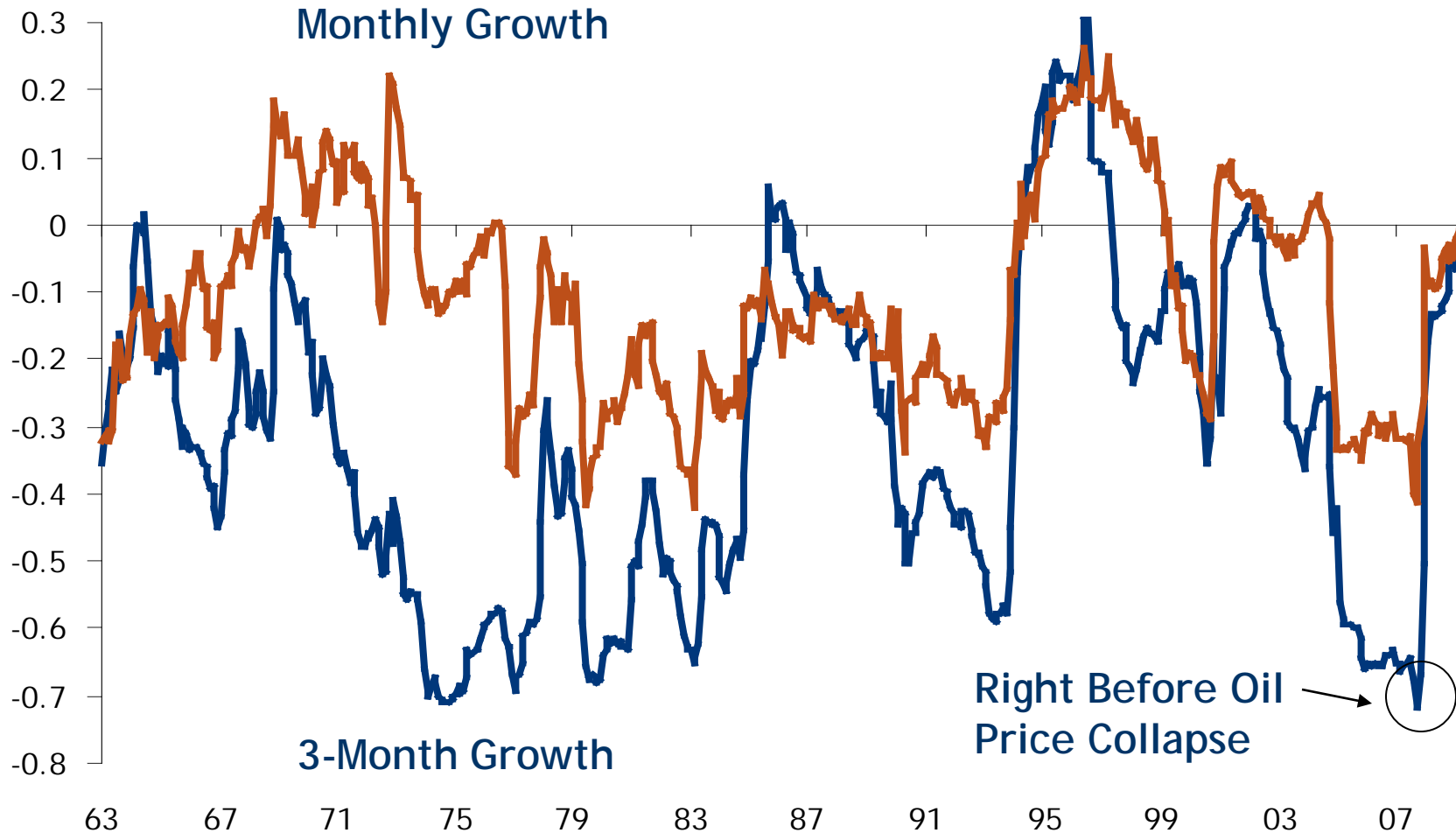
(percent)

(percent)



# Episode #6: Unfortunate timing

PCE growth vs. CPI inflation\*, 48 month rolling correlation



\*CPI data is lagged one month  
Source: BofA Merrill Lynch Global Research



## History lessons

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- *1986: Sectoral effect - Hurts oil patch more than rest of country*
- *1991: Framing effect - Memories of 1970s accentuate the shock*
- *1998: Temporary down and up makes less potent*
- *2002-7: Slow price increase ignored*
- *2008: \$4 gas gets noticed*
- *2009: Importance of supply/demand in interpreting reduced form*

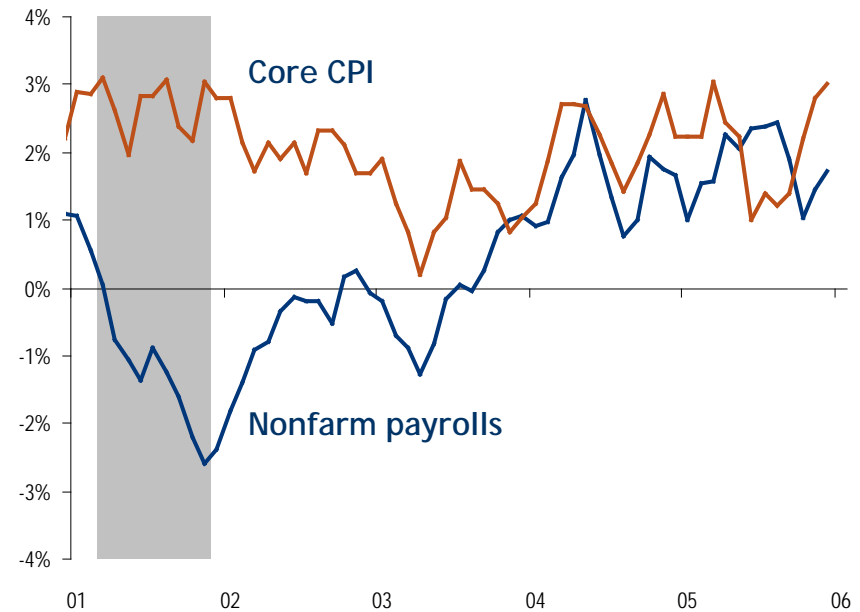
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# Oil & Monetary Policy

# 1. Cut funds rate to 1%

- *Appropriate use of risk management given...*
- *Low and falling core inflation*
- *Risk that recovery would falter*

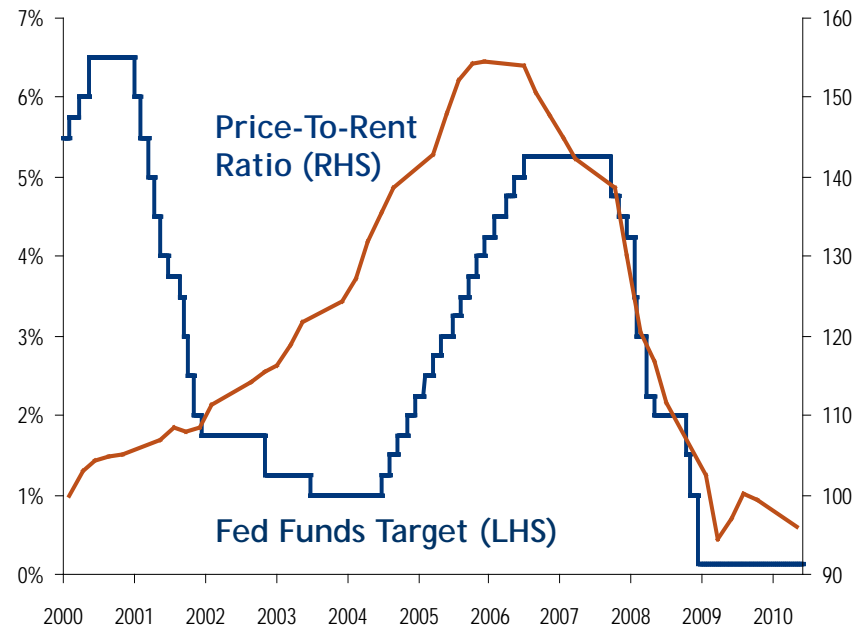
(3-mo % change annualized)



## 2. Perfectly predictable policy

- *Poor risk management given...*
- *Continued easing of financial conditions*
- *Signs of bubble behavior in credit & housing*
- *Forgiving a lot of oil-driven inflation*
- *Not a good time to risk anti-inflation credibility*
- *=> Should have put fear of the Fed with 50 bp hike*

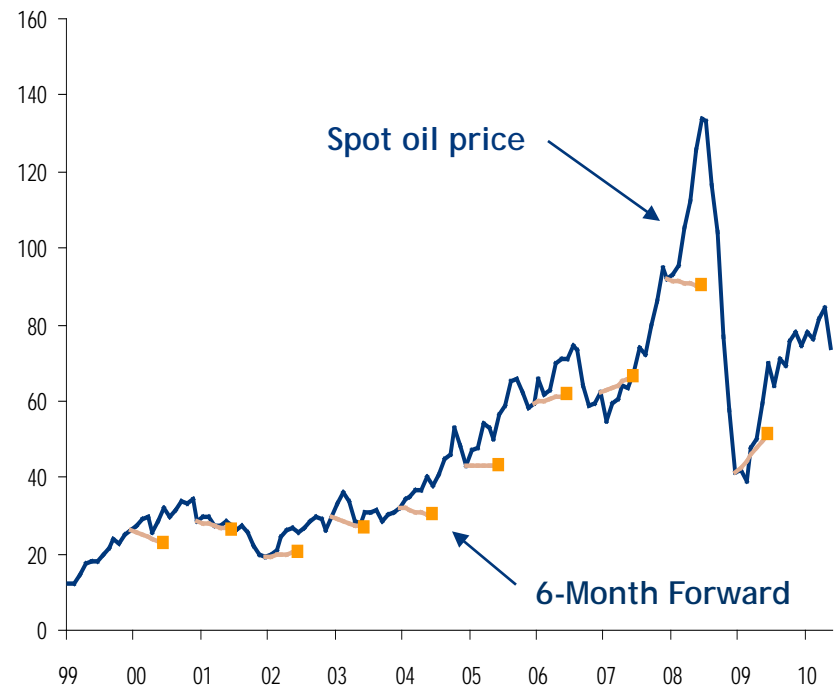
(percent)



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(\$/bbl)



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CPI inflation 2002-07  
(percent)

	1.75 Target	Core	Headline
Average	1.75	2.1	3.1
Cummulative	9.1	11	16.3

### 3. The summer of '08: Delaying game

- *Good risk management given...*
- *Contained inflation expectations*
- *High risk of full blown recession*
- *High probability of pop in oil prices*
- *A good time to risk anti-inflation credibility*

Inflation expectations  
(percent)

