

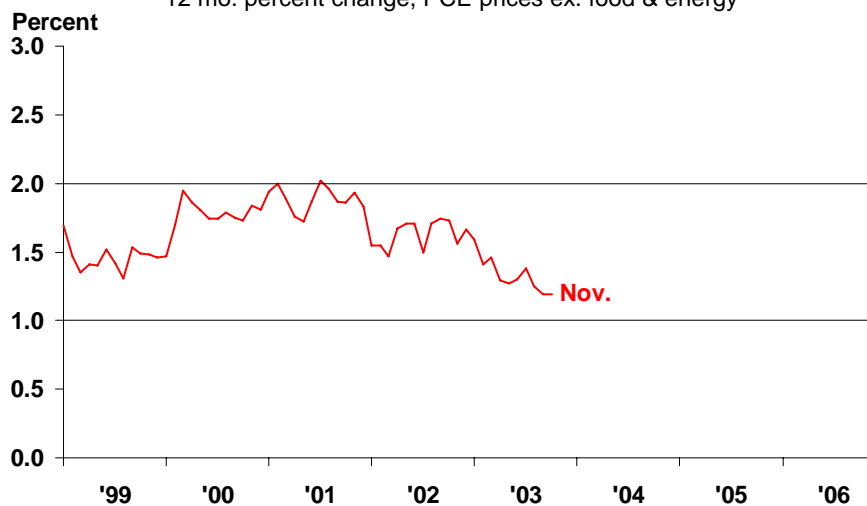
# Through a Glass, Darkly: How Data Revisions Complicate Monetary Policy

“Now we see through a glass, darkly; but then face to face: now I know in part; but then shall I know even as also I am known.”

*1 Corinthians 13:12*

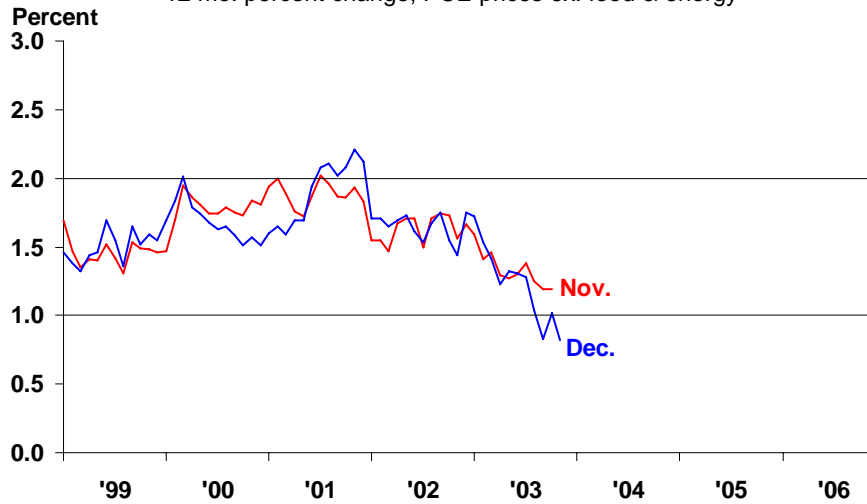
## The difference revisions can make: the elusive “comfort zone”

12 mo. percent change, PCE prices ex. food & energy



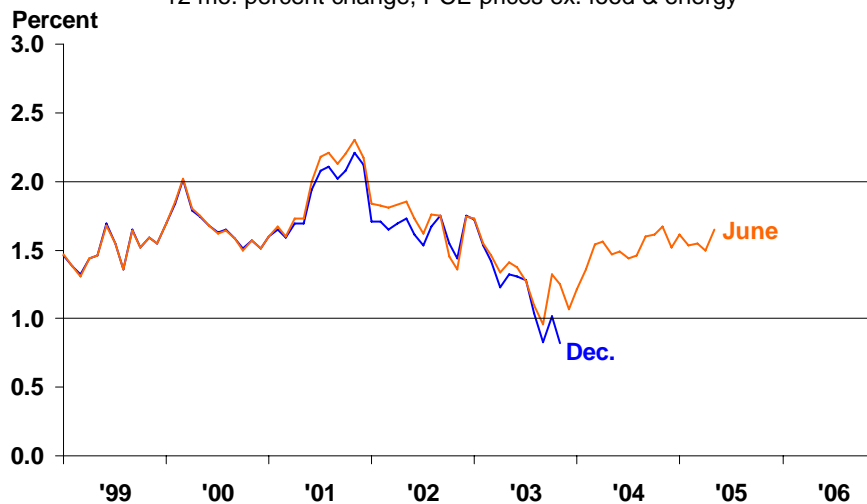
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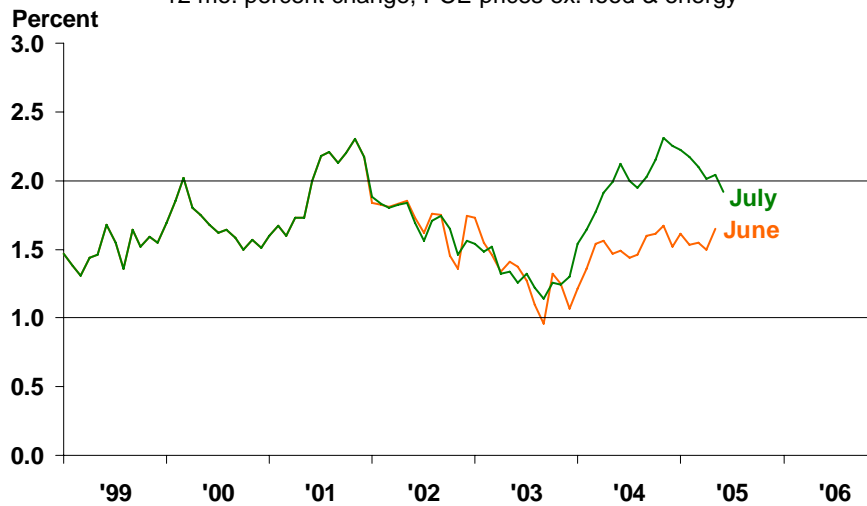
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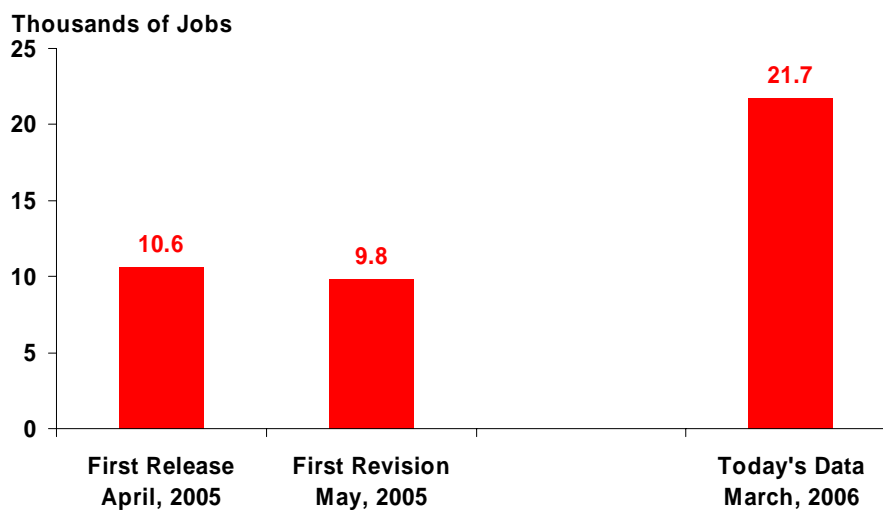
## Overview

- Types of revisions
- How reliable are official estimates?
- How uncritical use of data can lead one astray
- Suggestions for how to cope

## Three main sources of revisions

1. New estimates of seasonal patterns
  - extend over several years
  - usually small
2. More complete survey responses
  - some important series unaffected
  - initial burst, then regular intervals
  - responsible for most near-term changes

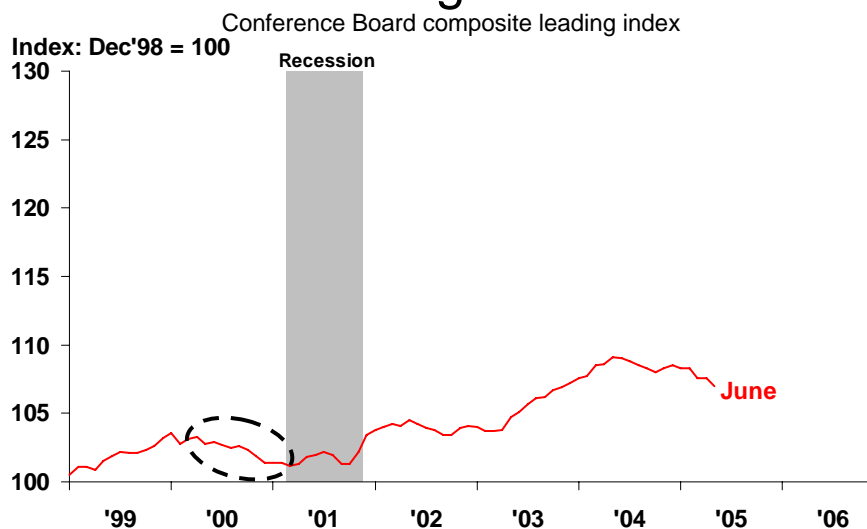
## Example: Revisions to March 2005 Texas jobs growth



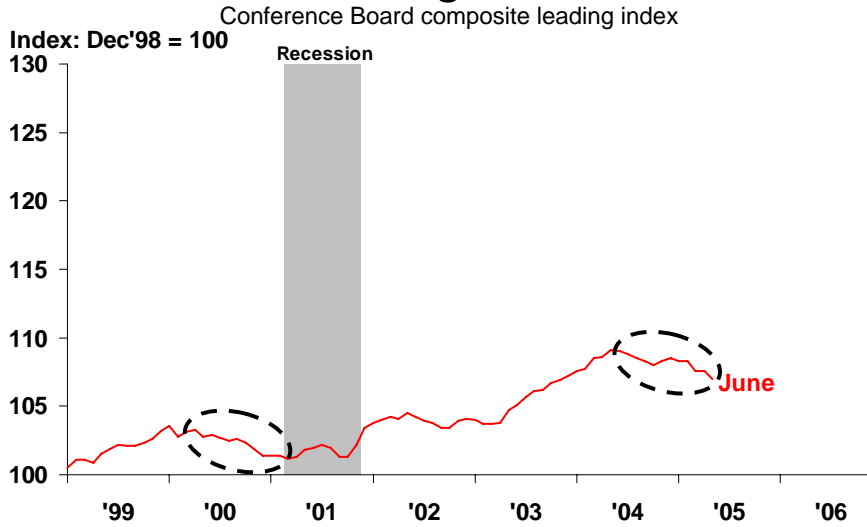
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3. New methods and definitions, applied retroactively
  - significant revisions infrequent, irregular

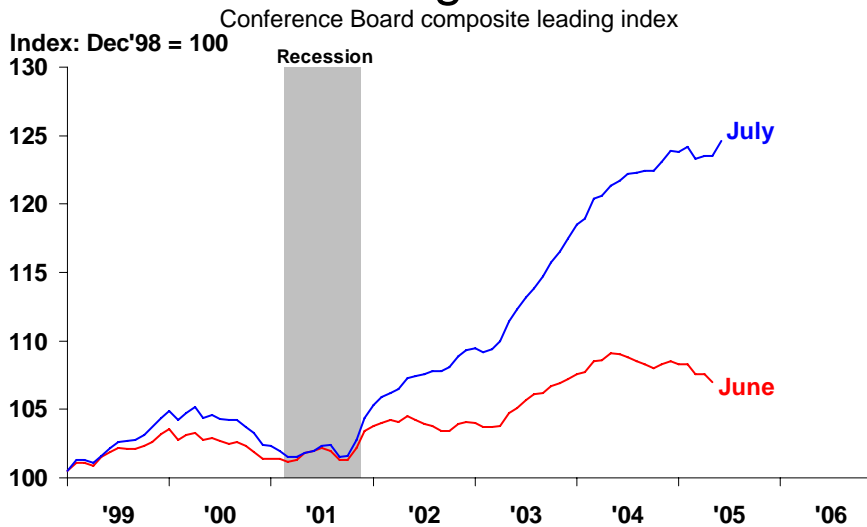
## Example: The case of the missing recession



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## How reliable are government data?

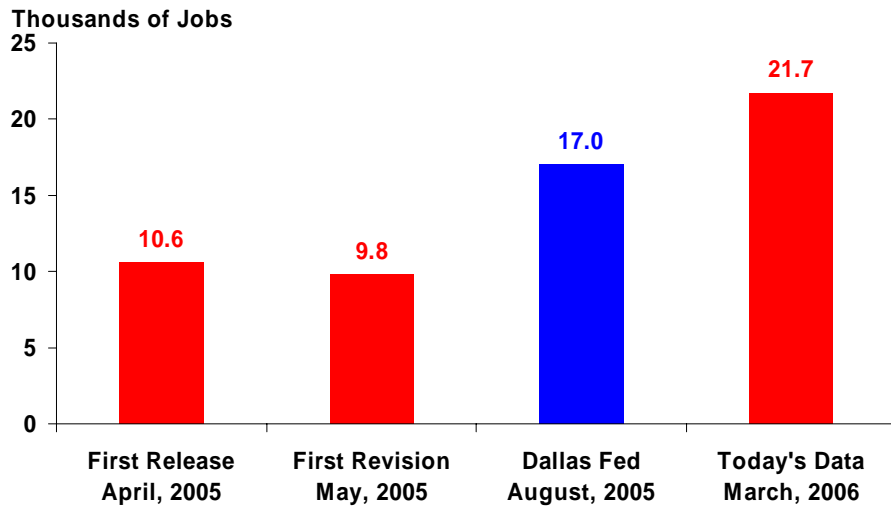
Fraction of Today's Variation Explained After:

Economic Indicator	1 <sup>st</sup> Release	1 Quarter	1 Year	2 Years
Slack:				
Capacity Utilization	0.87	0.88	0.89	0.94
Unemployment Rate	1.00	1.00	1.00	1.00
Growth:				
Real GDP	0.78	0.76	0.90	0.94
Industrial Production	0.82	0.80	0.82	0.86
Non-Farm Jobs	0.92	0.91	0.97	0.99
Inflation:				
GDP Prices	0.88	0.87	0.89	0.96
PCE Prices	0.94	0.94	0.89	0.93
CPI	0.99	1.00	1.00	1.00

## Useful supplements to government statistics

- Business and consumer surveys/  
anecdotal information
  - timely, but sometimes unscientific/hard to interpret
- Commodity and financial-asset prices
  - timely, but interpretation subject to change

## A success story: Anticipating revisions to Texas jobs growth



A recipe for trouble: confusing revised with 1<sup>st</sup>-release data

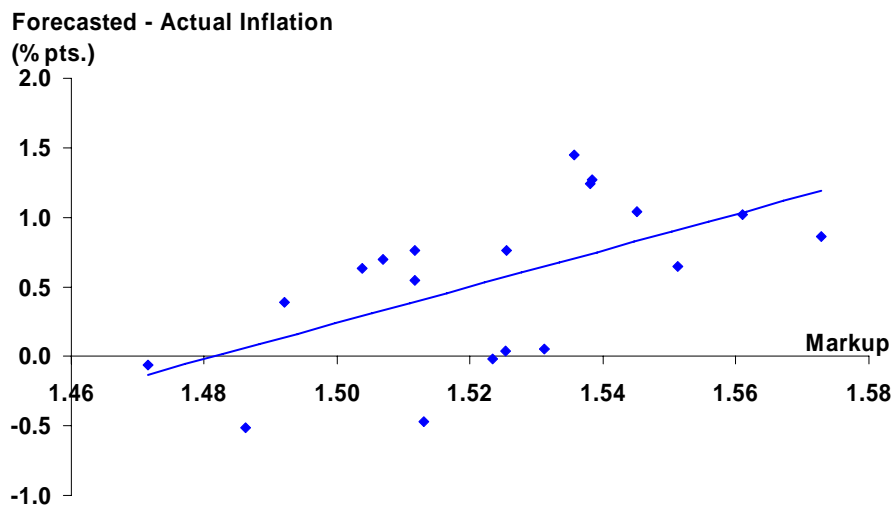
## Lies, damned lies, and the markup

Markup =

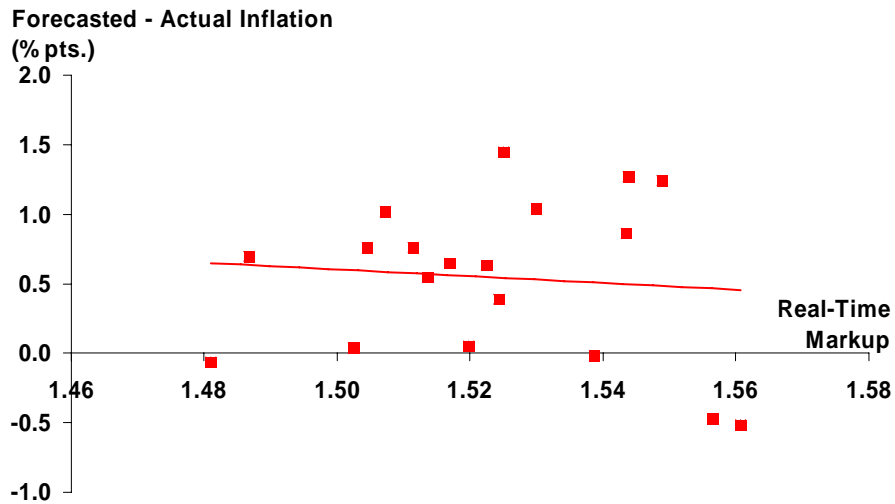
$$\frac{\text{Value of Production} - \text{Cost of Materials \& Supplies}}{\text{Labor Compensation}}$$

- Provides an (inverse) measure of labor's share
- Reflects growth in labor productivity relative to real wages
- Theory suggests that a high markup restrains inflation

At first glance, the markup  
appears to help forecast inflation



## But the markup is useless in real time

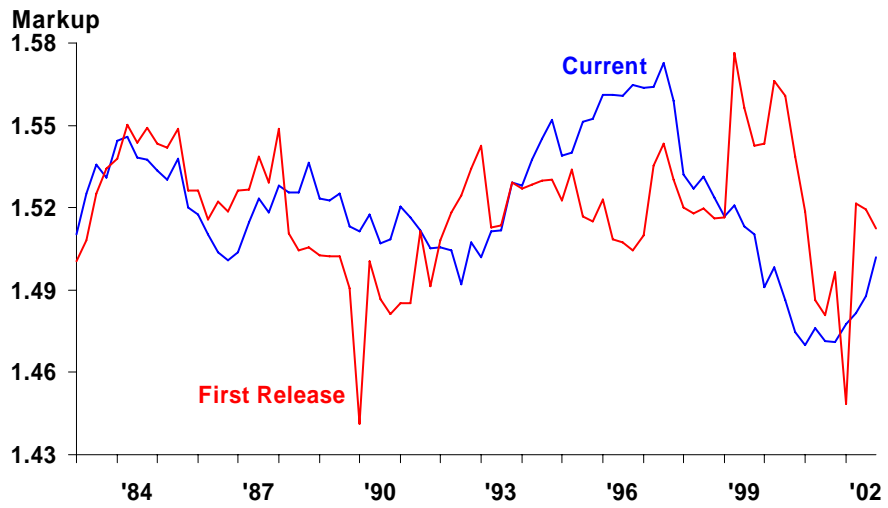


## Poor forecasts from mixing revised & 1<sup>st</sup>-release data

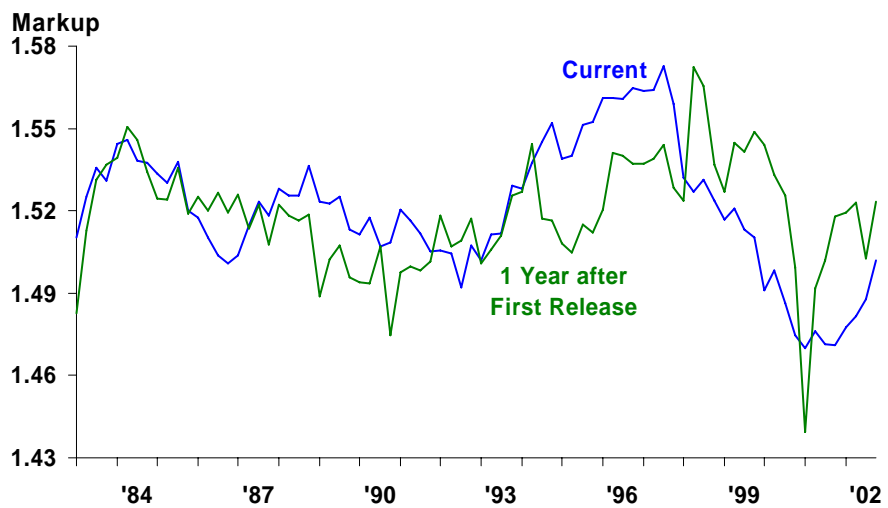
Fraction of Inflation Variation  
Forecasted By:

Blue Chip Alone	0.67
BC + Revised Markup	0.79
BC + Revised & 1 <sup>st</sup> -Release Mixed	0.56

## Early estimates of the markup nearly worthless



## Early estimates of the markup nearly worthless



## Summary

- Not all revisions are created equal
- Drawing on alternative information sources can improve accuracy
- Revised data a poor guide to forecasting performance
- For best forecasts, don't estimate with revised data

Looking ahead ...

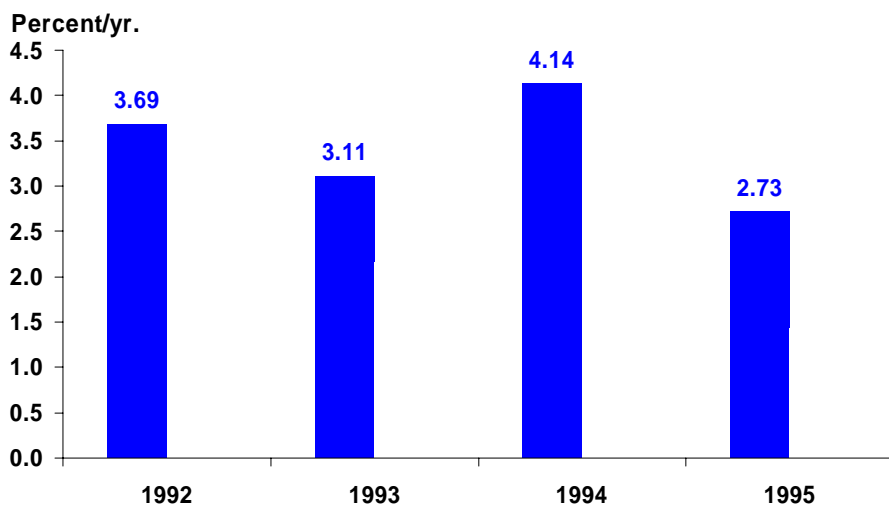
**FT.com**  
FINANCIAL TIMES

**THE SHORT VIEW**  
By John Authers  
Published: September 7 2006 03:00

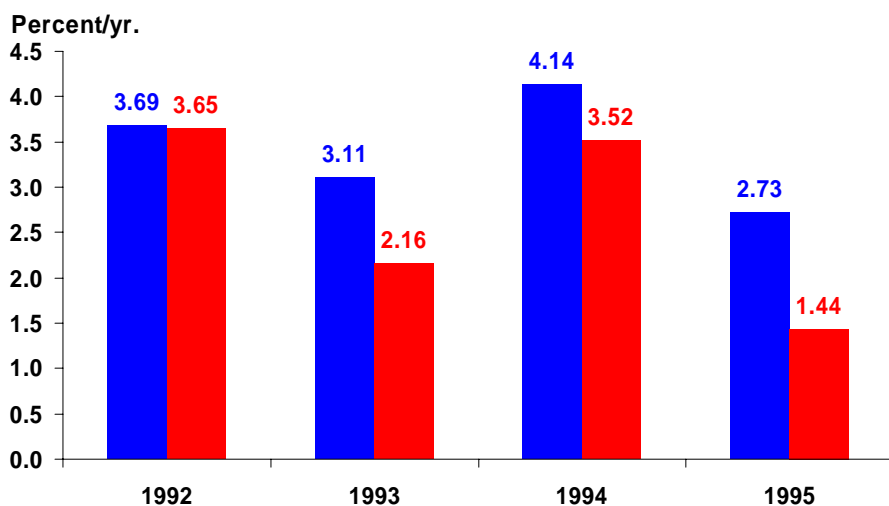
great damage has been done by the Fed under-estimate, then. But the incident is unsettling. The Fed says its rate decisions will be data-dependent. It would be nice, then, if the data were a little more dependable.

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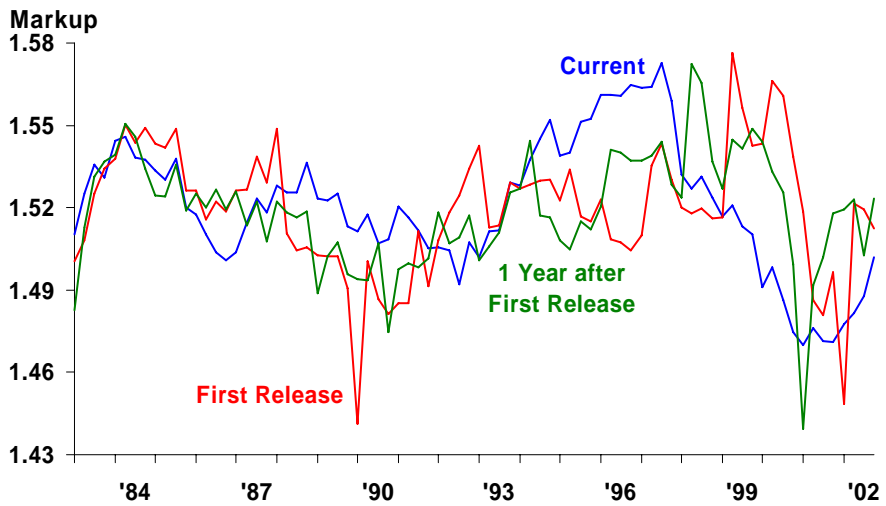
## GDP Growth Before 1995 Revision



## Effect of 1995 Revision on GDP Growth



## Early Estimates of the Markup Nearly Worthless



## How Reliable Are Markup Estimates?

### Fraction of Today's Markup Explained After:

1 <sup>st</sup> Release	1 Quarter	1 Year	2 Years
0.05	0.07	0.20	0.64

