

ECONOMICS MADE EASY



# A Journalism Workshop

## Data Interpretation

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THE FEDERAL RESERVE BANK OF RICHMOND

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# Numbers Do Not Speak for Themselves

- Timeliness of information
  - Dealing with data lags
- Bringing analysis to the local level
  - Lack of coverage
  - Seasonality
- Movements in data
  - Levels, absolute change, and percentage change
- Beyond the limits of the data
  - Correlation versus causation



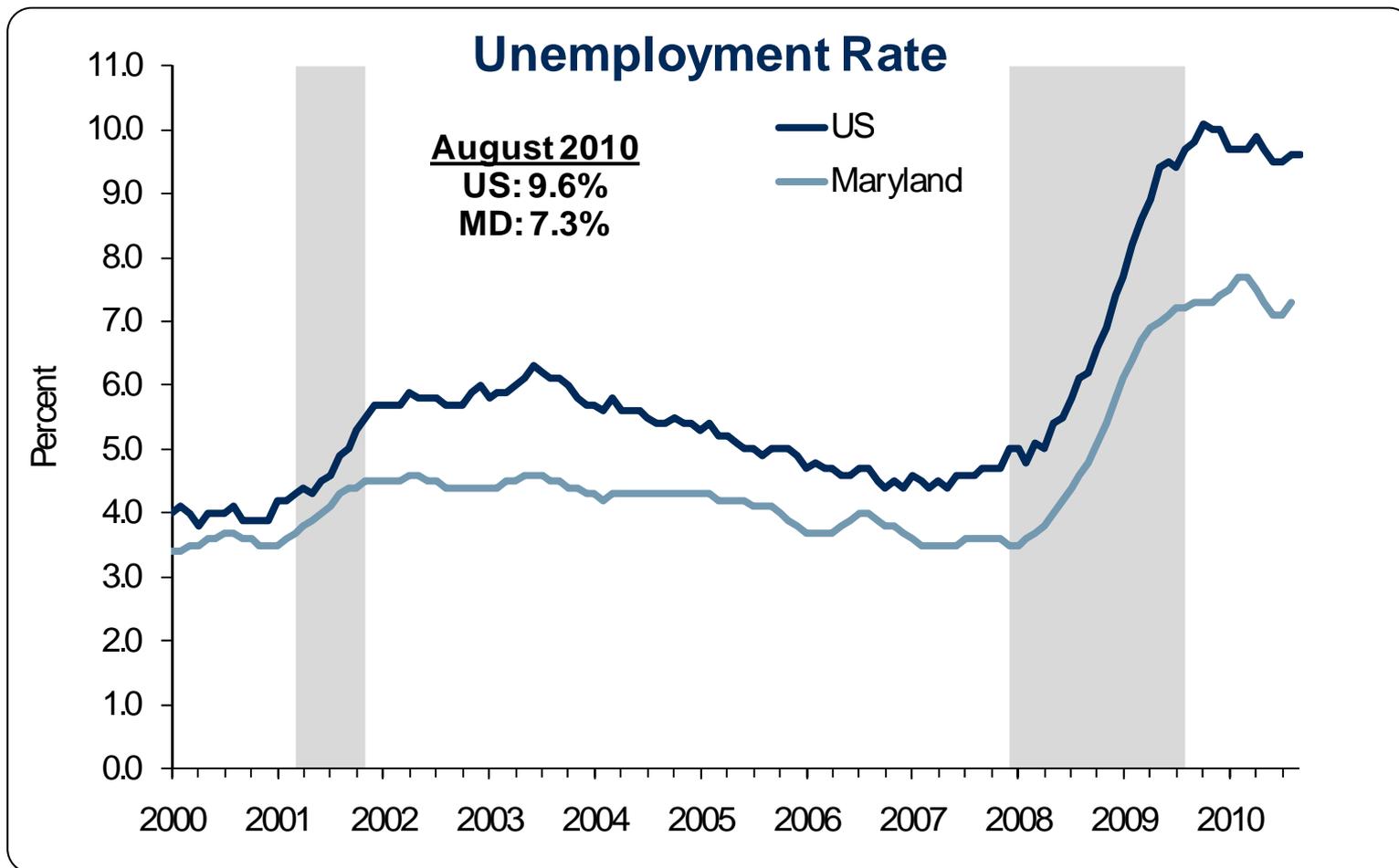


“A judicious man uses statistics, not to get knowledge, but to save himself from having ignorance foisted upon him.”

Thomas Carlyle  
Scottish Historian



# Timeliness of Information – Release Times Vary



Source: Bureau of Labor Statistics/Haver Analytics



# Timeliness of Information – Release Times Vary

**Data as of September 7, 2010**

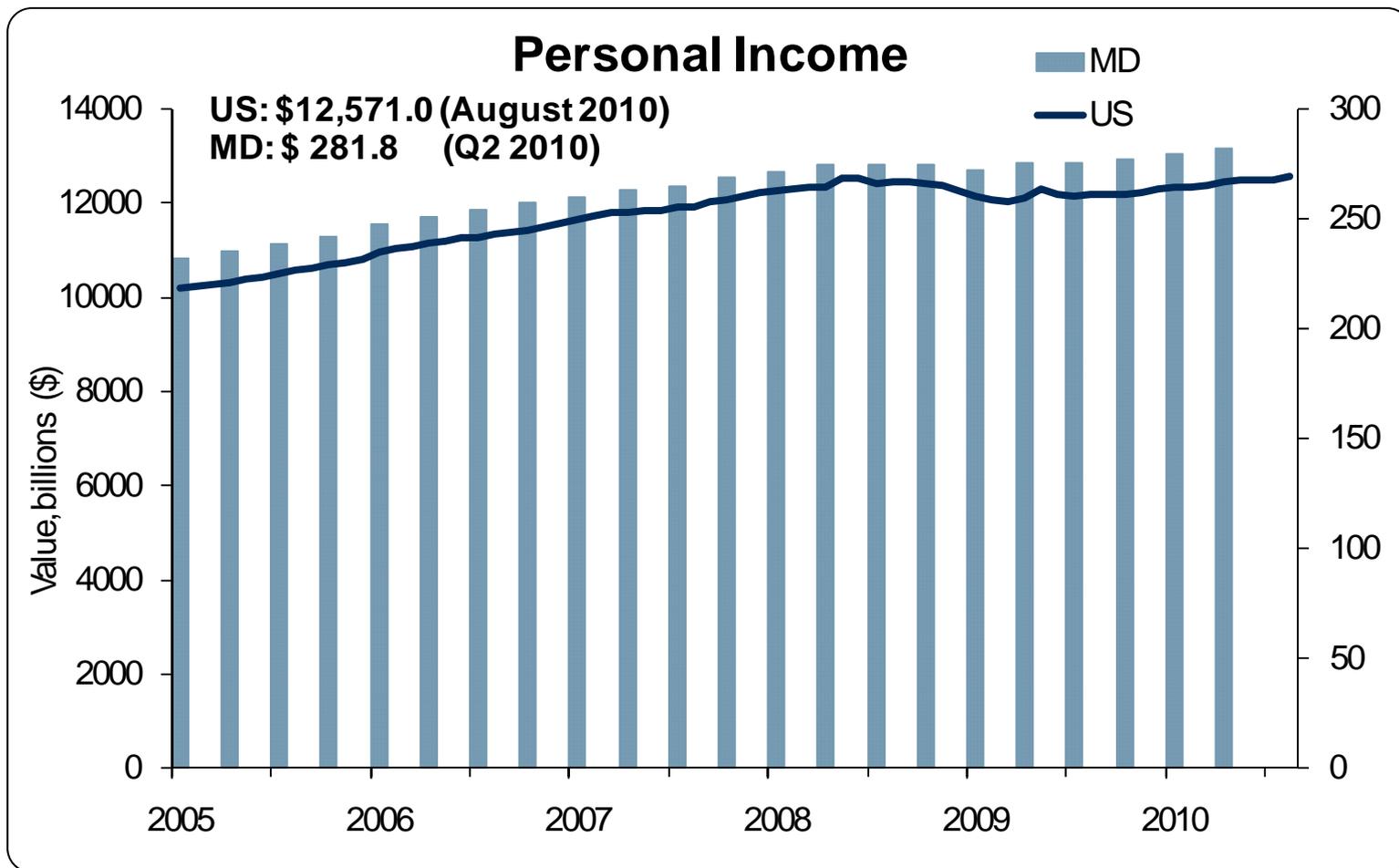
Region	“Current” Unemployment Rate	Release Date
US	9.6% (Aug.)	9/3/10
Maryland	7.1% (Jul.)	8/20/10
Washington Metro Area	6.3% (Jul.)	9/1/10
Prince George’s County	7.6% (Jul.)	9/1/10

Note: All data subject to revision

Source: Bureau of Labor Statistics/Haver Analytics

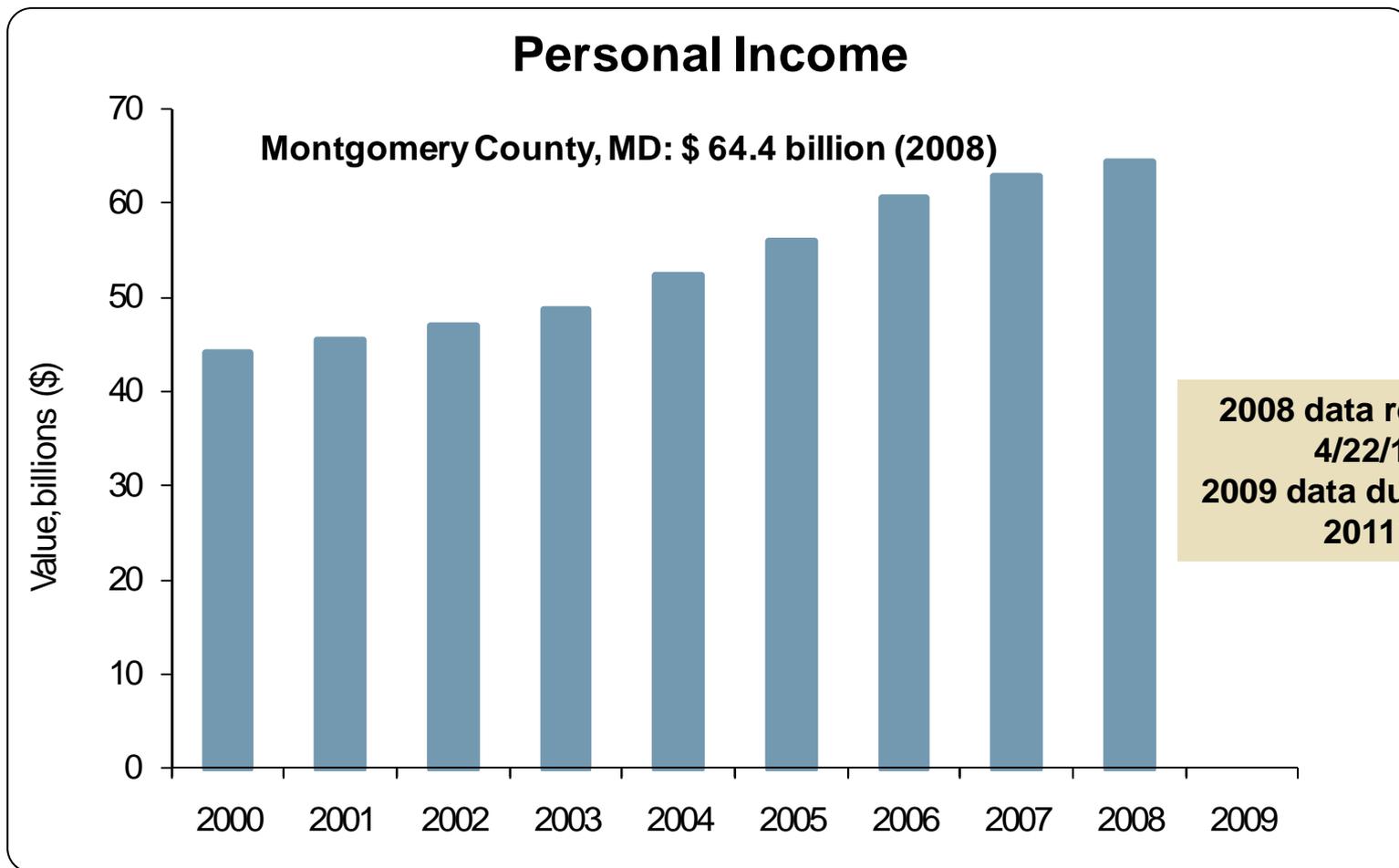


# Timeliness of Information – Frequency of Data



Source: Bureau of Economic Analysis/Haver Analytics

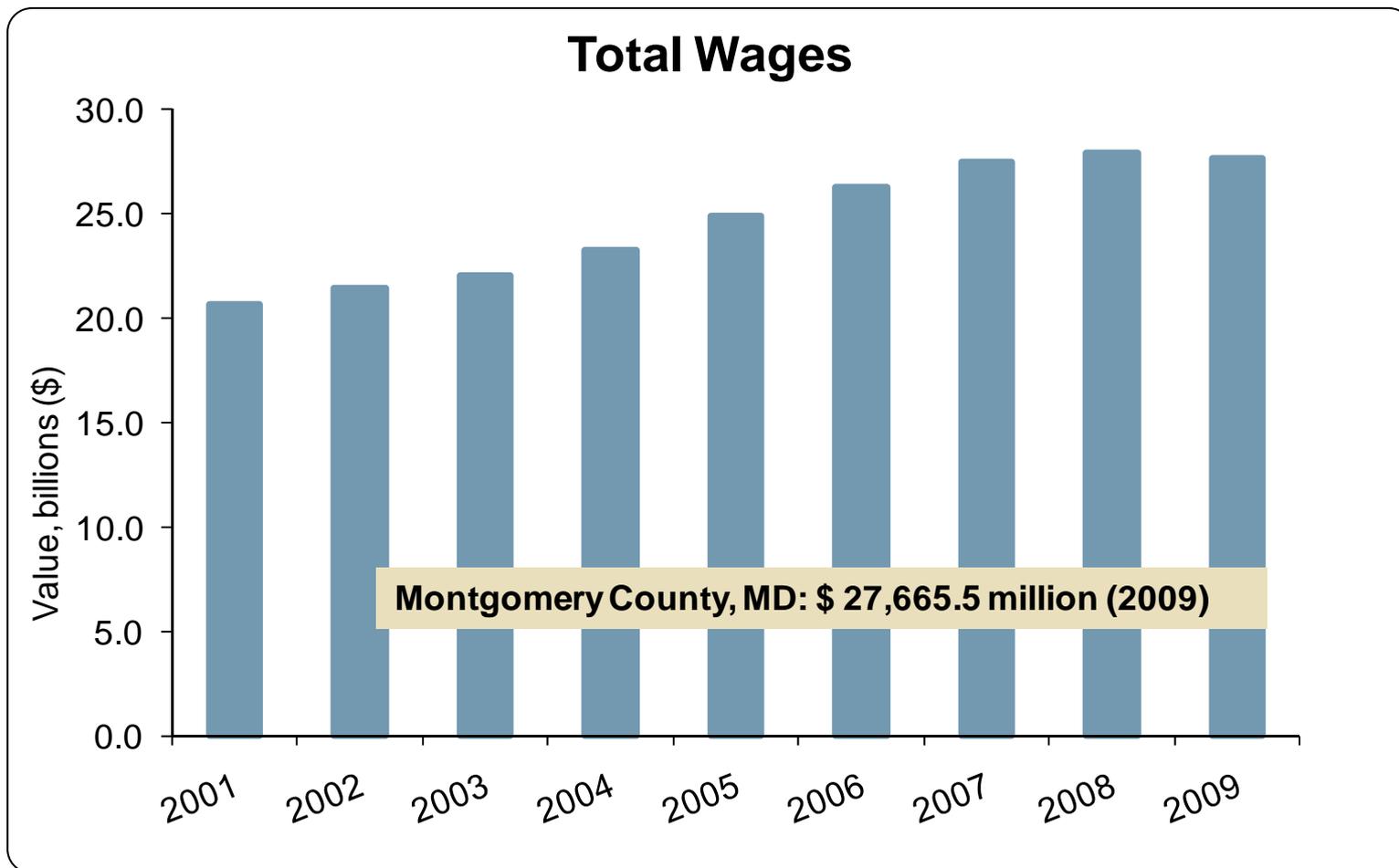
# Timeliness of Information – Frequency of Data



Source: Bureau of Economic Analysis/Haver Analytics



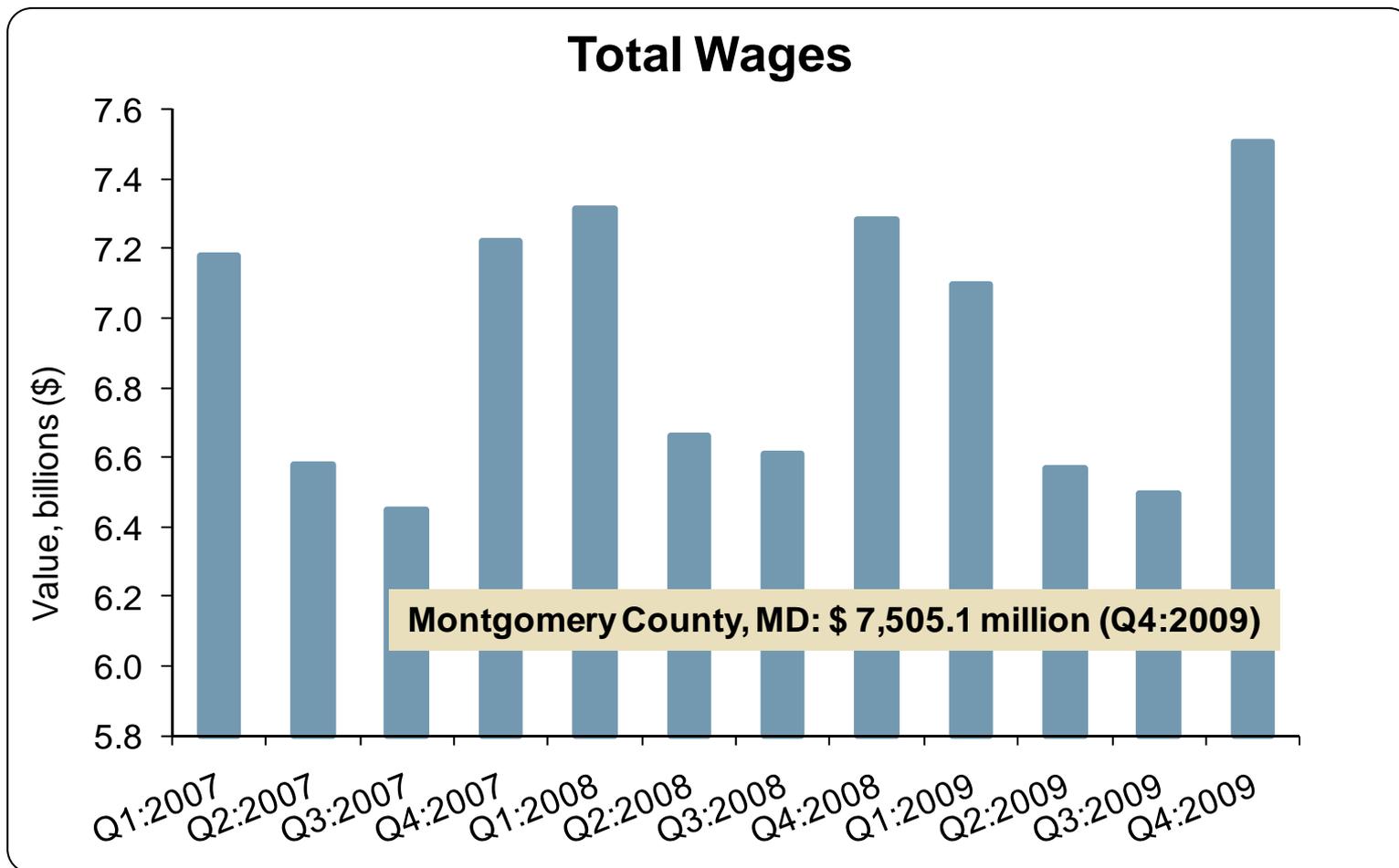
# Timeliness of Information – Frequency of Data



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics/Haver Analytics



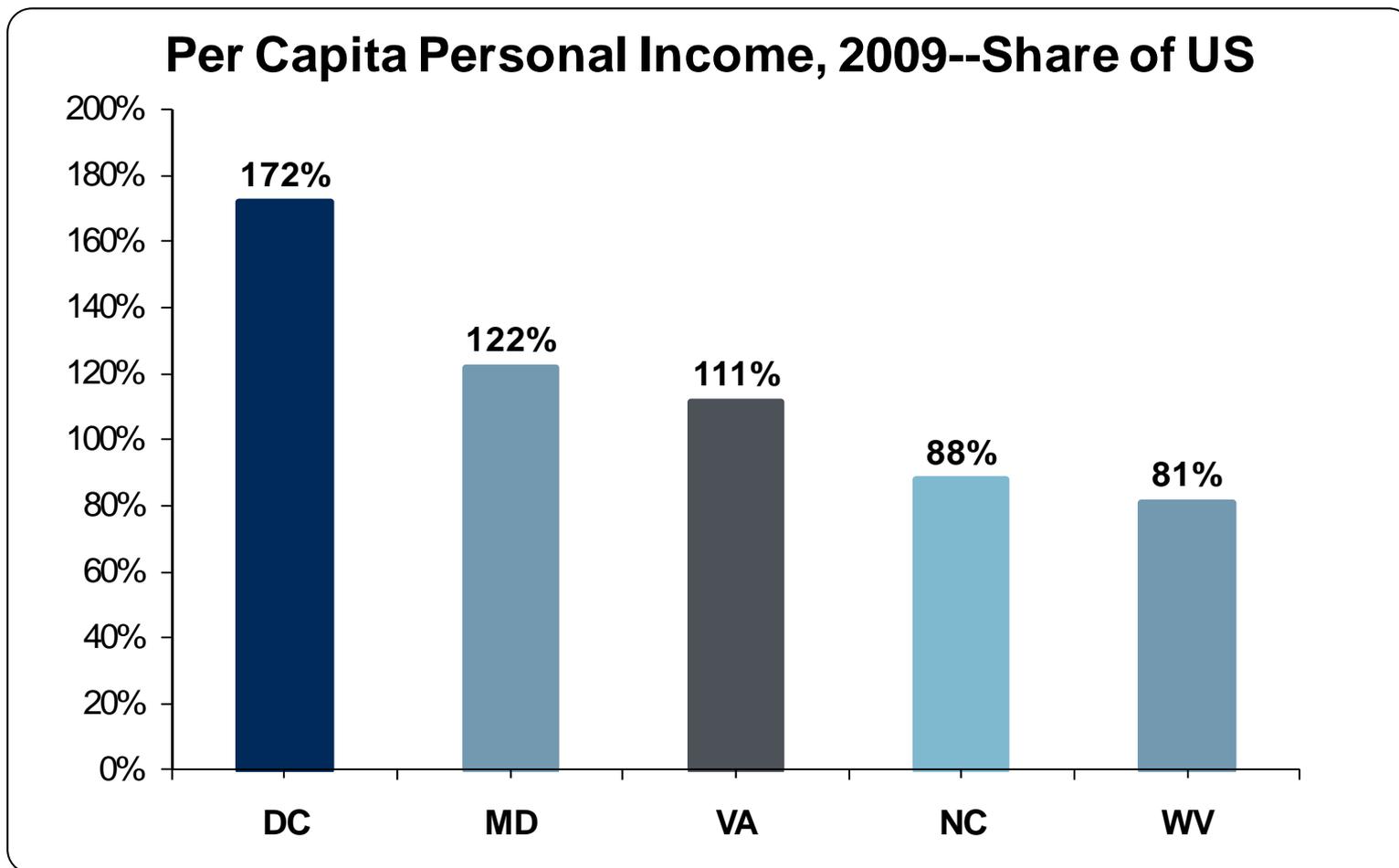
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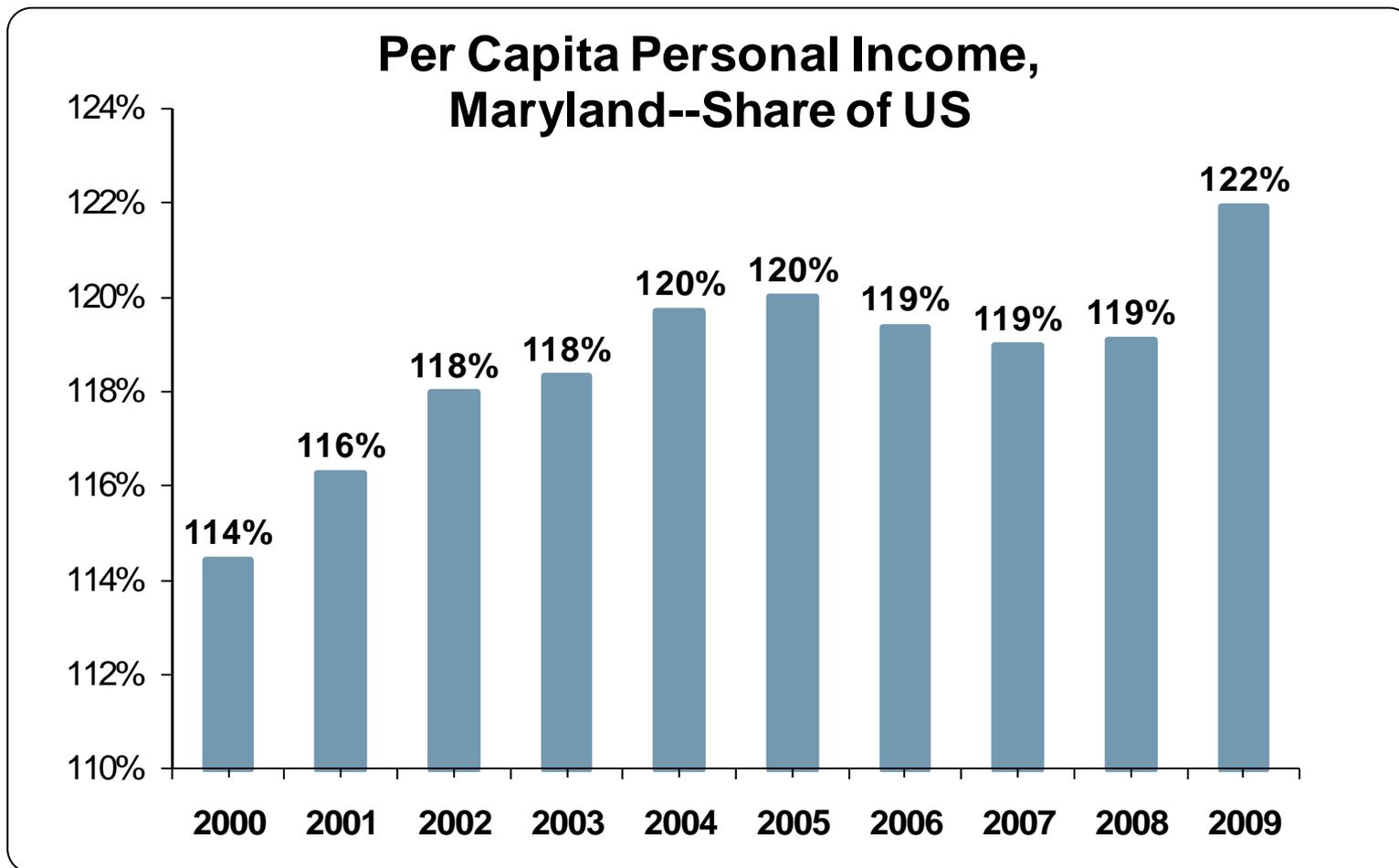
# Timeliness of Information – Frequency of Data



Source: Bureau of Economic Analysis/Haver Analytics



# Timeliness of Information – Frequency of Data



Source: Bureau of Economic Analysis/Haver Analytics





# Bringing Analysis to the Local Level

**How is the local economy doing by the broadest measure?**

Prefer to look at production as a measure of economic activity:

Nationally → GDP (quarterly)  
County → Nonexistent

**What are the fastest growing manufacturing industries in the county?**

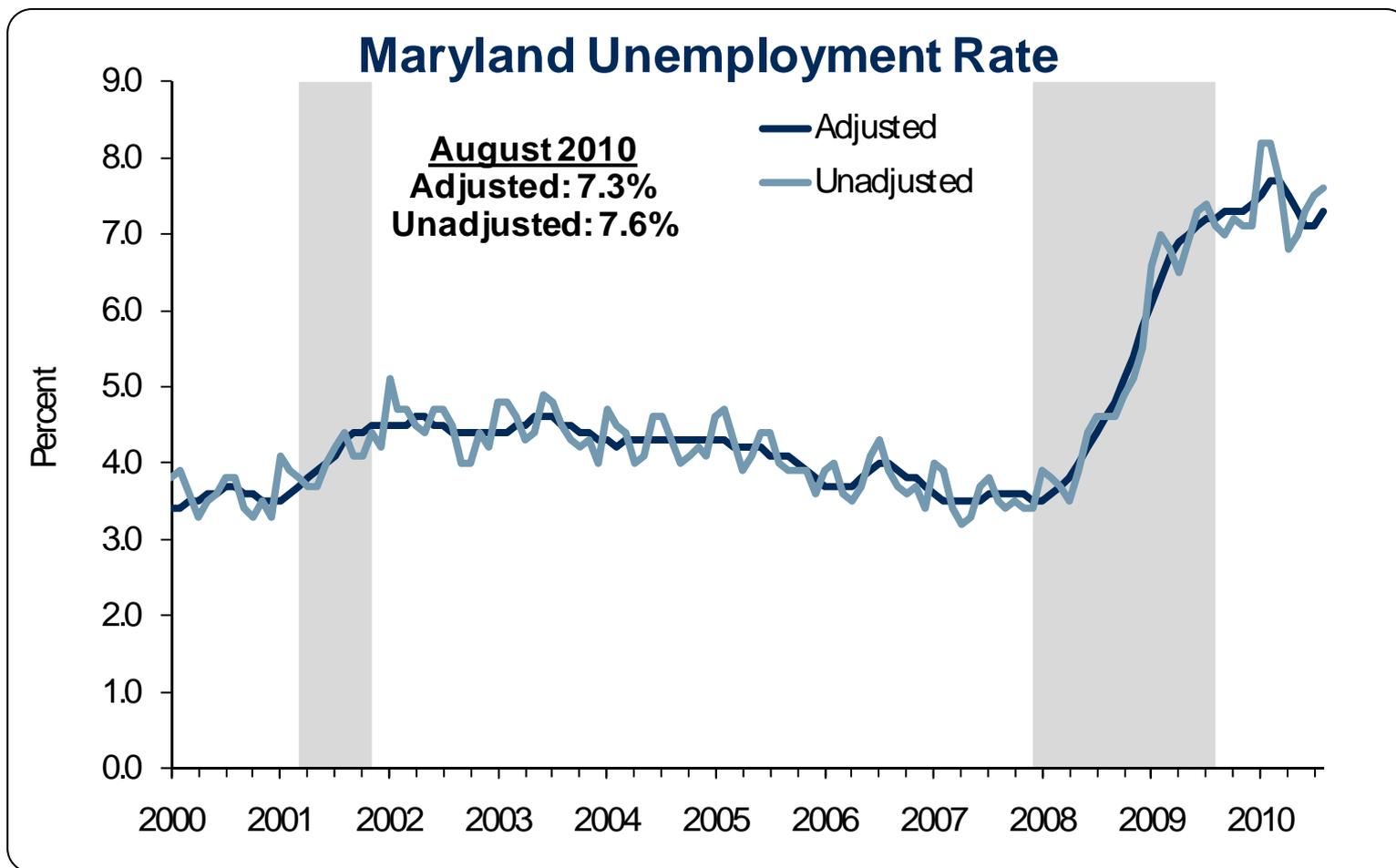
The smaller the geographic unit, the less we know due to confidentiality concerns:

Mfg detail such as plate work metal → SUPPRESSED

***Lack of coverage compounds the issues of frequency and lag***

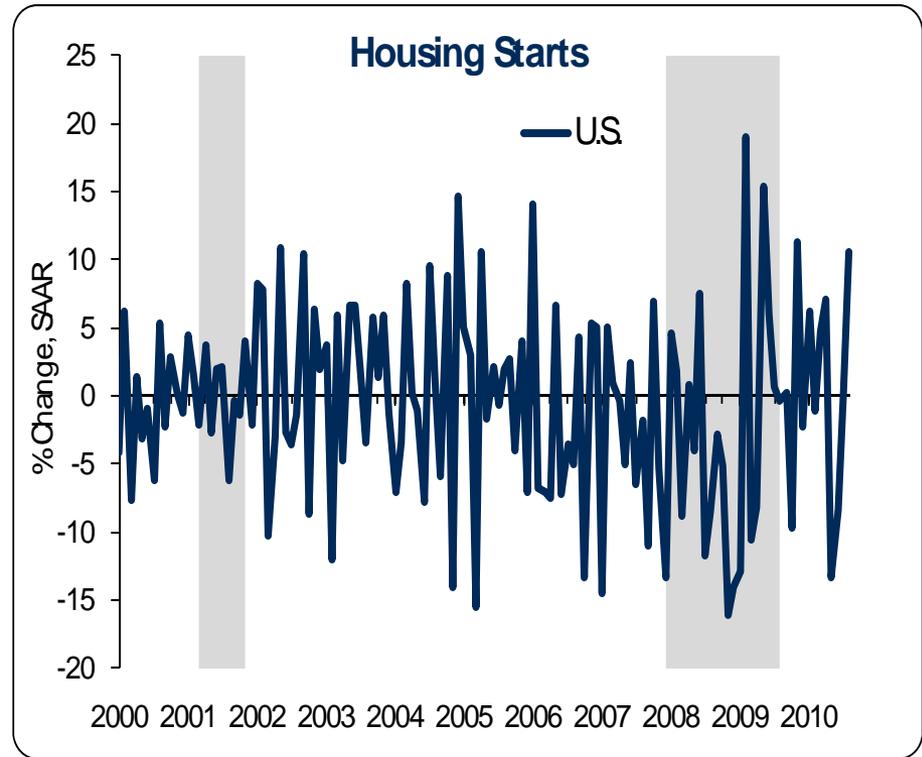
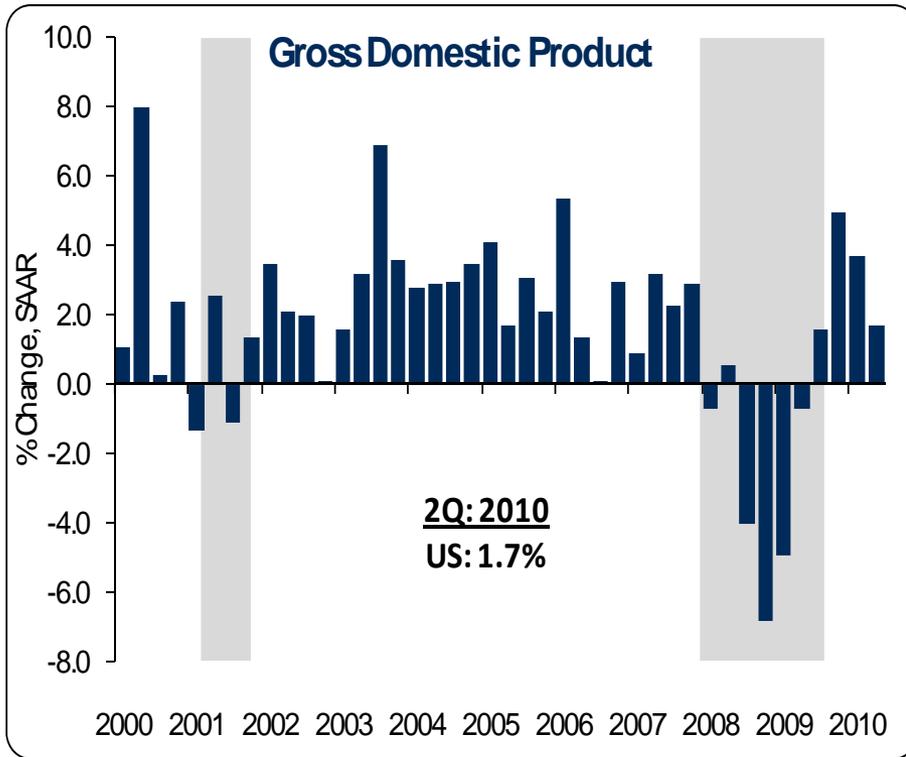


# Seasonality – Local (Unadjusted) Data



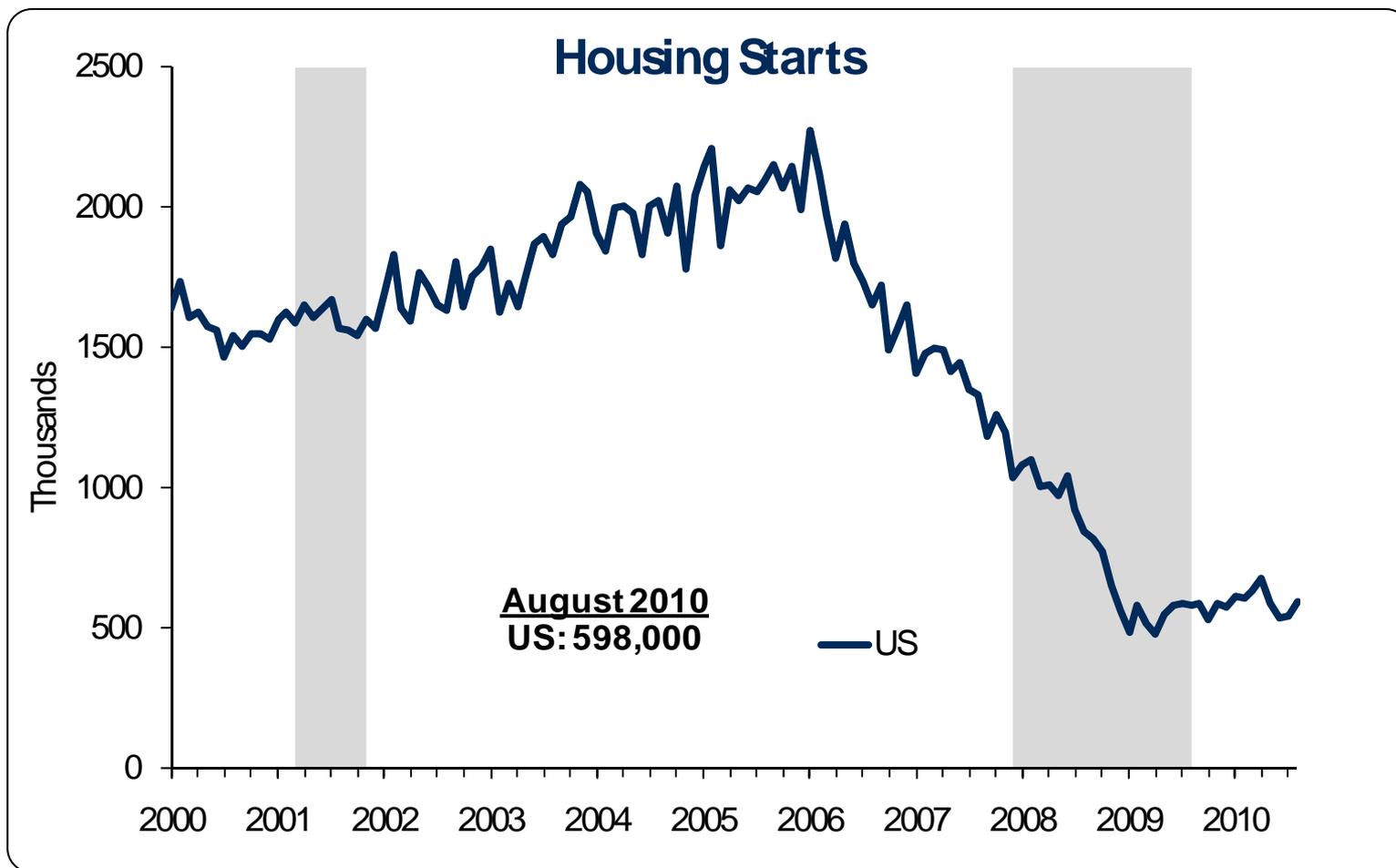
Source: Bureau of Labor Statistics/Haver Analytics

# Movements in Data – Levels



Sources: Bureau of Economic Analysis, Bank of Tokyo-Mitsubishi UFG, Haver Analytics

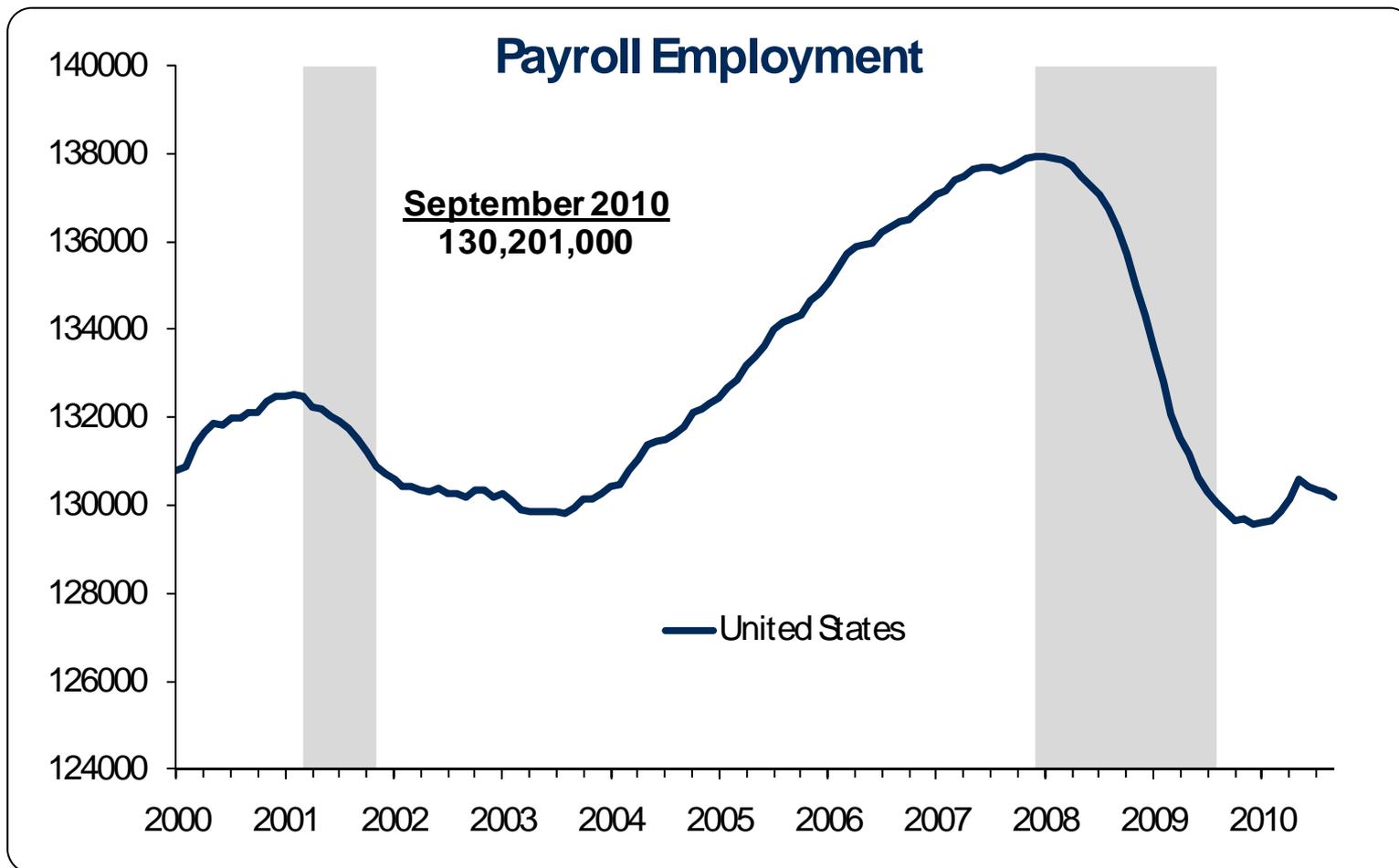
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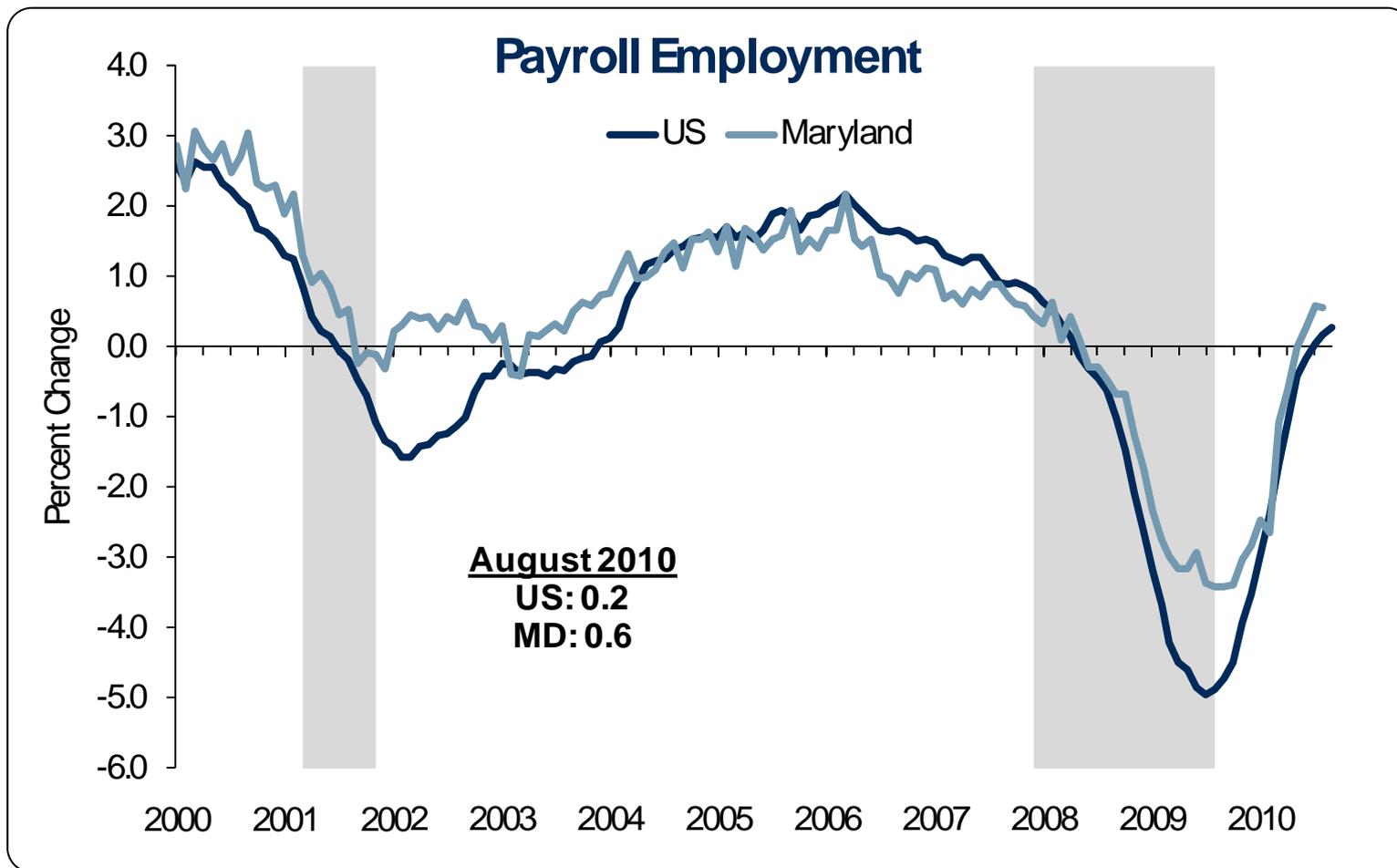
# Movements in Data – Levels



Source: Bureau of Labor Statistics/Haver Analytics

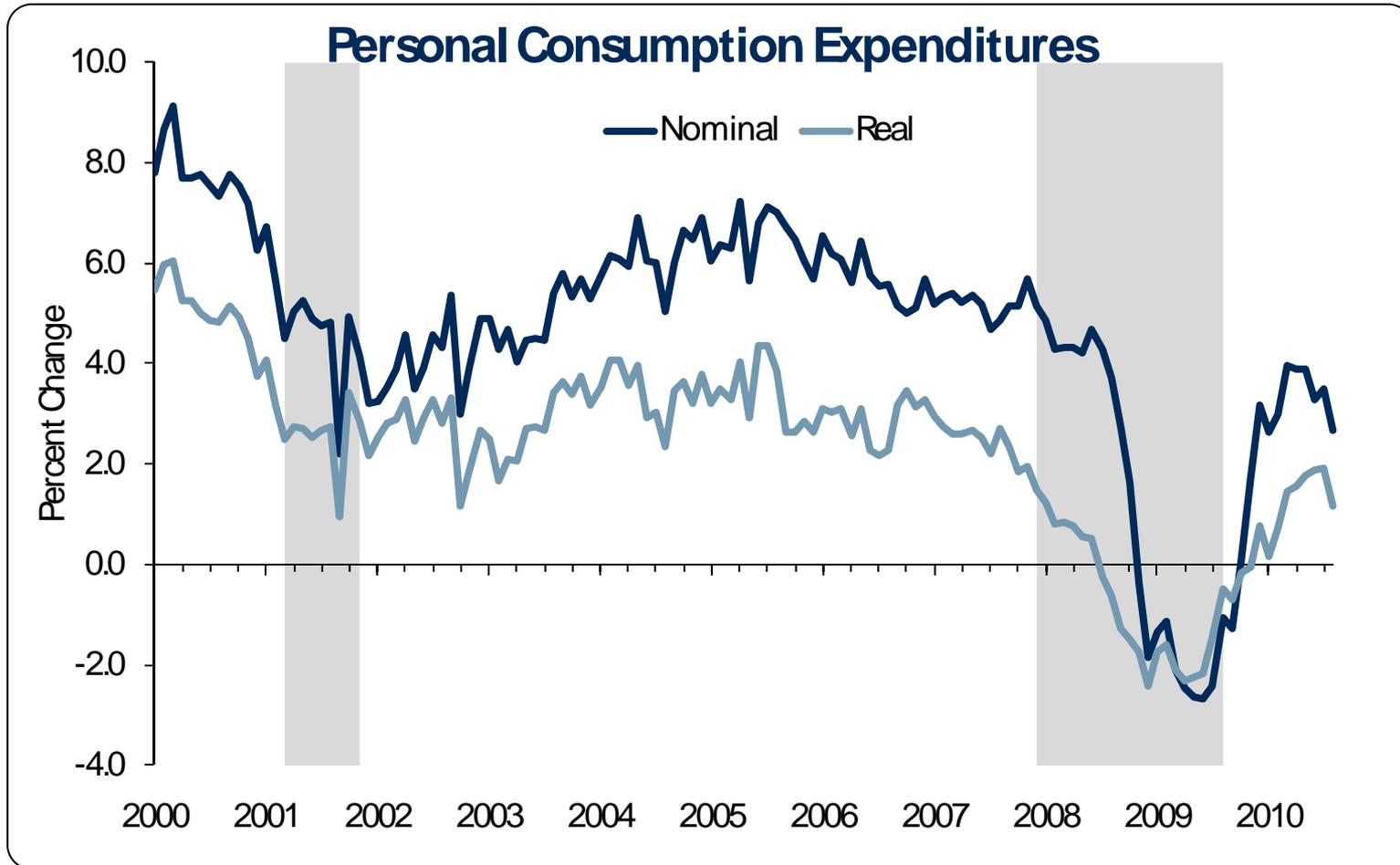


# Movements in Data – Percent Change



Source: Bureau of Labor Statistics/Haver Analytics

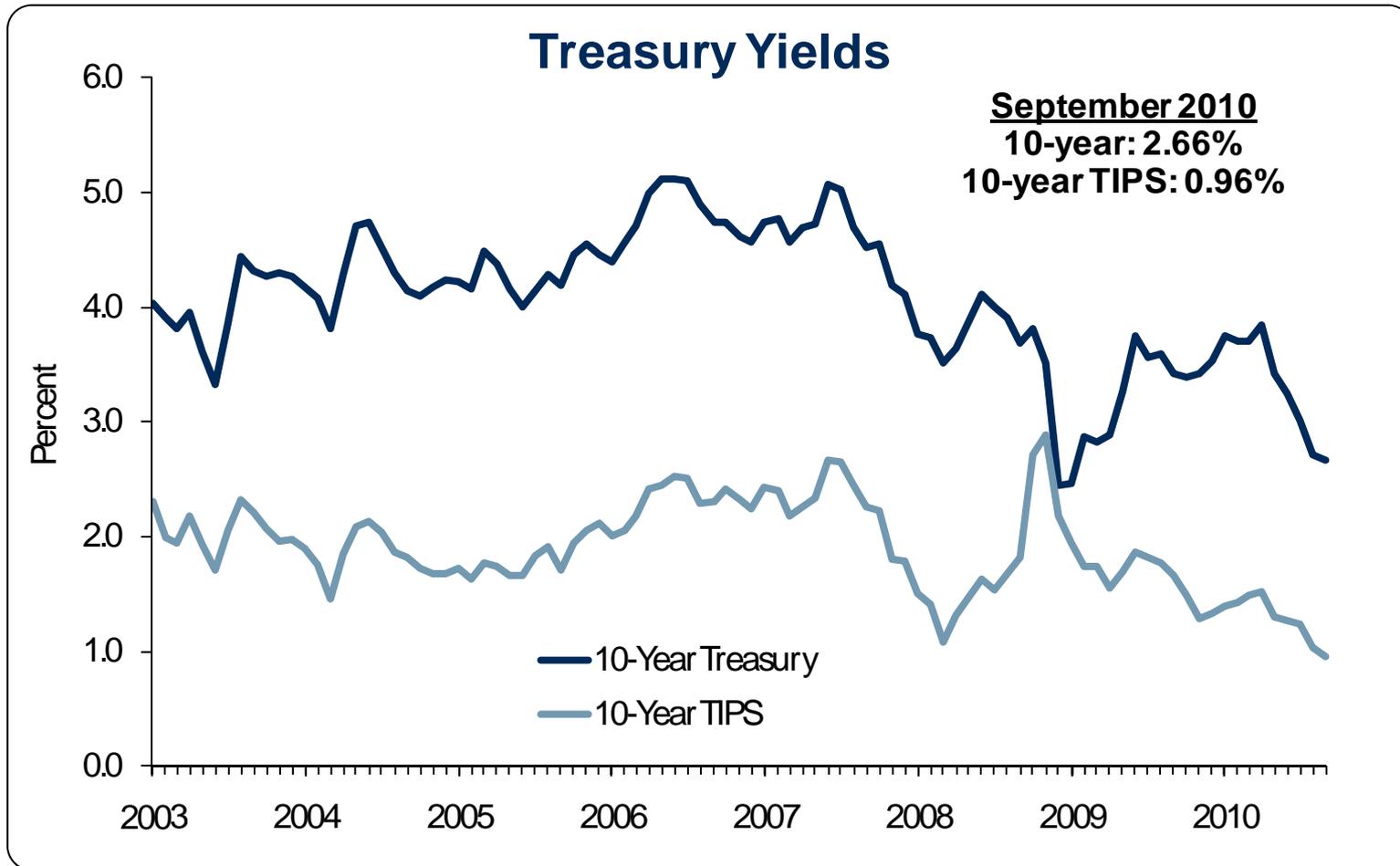
# Real versus Nominal Values



Source: Bureau of Labor Statistics/Haver Analytics



# Real versus Nominal Values



Source: Bureau of Labor Statistics/Haver Analytics



# Beyond the Limits of the Data

**Correlation versus Causation**

**Statistically Based Relationships**

**Over-interpretation**



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