Overview of the Administration Economic Forecast

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(The views in this presentation are those of the author and do not necessarily reflect those of the Treasury Department.)

Overview

- Organization
  - The Troika Process and Budget Estimates
  - Basic Assumptions
- Forecast issues
  - Three questions
  - Underlying issues: forecast assumptions
  - Long term GDP growth has been historically stable
  - Components of trend output
  - Fiscal drag
- How have data and models Improved?
  - Advances in price and unemployment data
- Putting it all together: forecast accuracy
- Further information

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Organization

- The Troika is the Council of Economic Advisers (CEA), the Office of Management and Budget (OMB) and the Treasury (Economic Policy)
- The Troika creates the economic assumptions used to forecast federal receipts and outlays for the next ten years
- Calendar
  - Semi-annual forecast
  - Budget (preparation starts October for Feb release)
  - Mid-session review (preparation starts April for July release)

Organization (cont'd)

- The model and software used to create the Troika forecast is from Macroeconomic Advisers (MA), a traditional quarterly macro-econometric model of the U.S.

- The work is largely done by CEA and consists of repeated iterations of the model software, varying individual equation adjustment factors to achieve the top-line figures. Staff at Treasury and OMB review the CEA work for errors and consistency.

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The Troika Process and Budget Estimates

- The Treasury Office of Tax Analysis (OTA) is the key receipts estimator
- The Office of Management and Budget and other federal agencies use various parts of the forecast to mainly predict spending.
- Key variables include wage and salary growth, personal income growth, inflation, interest rates, the unemployment rate and GDP growth.
- The focus of the forecast is on the INCOME side of the National Income and Product Accounts (NIPA).
- **Variables not available from consensus forecasts (like Blue Chip consensus) play key role in the receipts forecast. Chief among these variables are the shares of national income accruing to taxable and non-taxable components**.

Basic Assumptions

- Troika forecast is a “current policy” forecast – it assumes the policies proposed in the budget will be passed (tax cuts will be extended for all but high income individuals, indexation of tax brackets, etc.)

- CBO economic forecast is a “current law” forecast (expiration of tax cuts, no indexation of tax brackets, etc.)

- Blue Chip consensus based on forecaster expectations – possibly between “current law” and “current policy”

- That goes some way in explaining the differences in the forecasts

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Forecast Issues

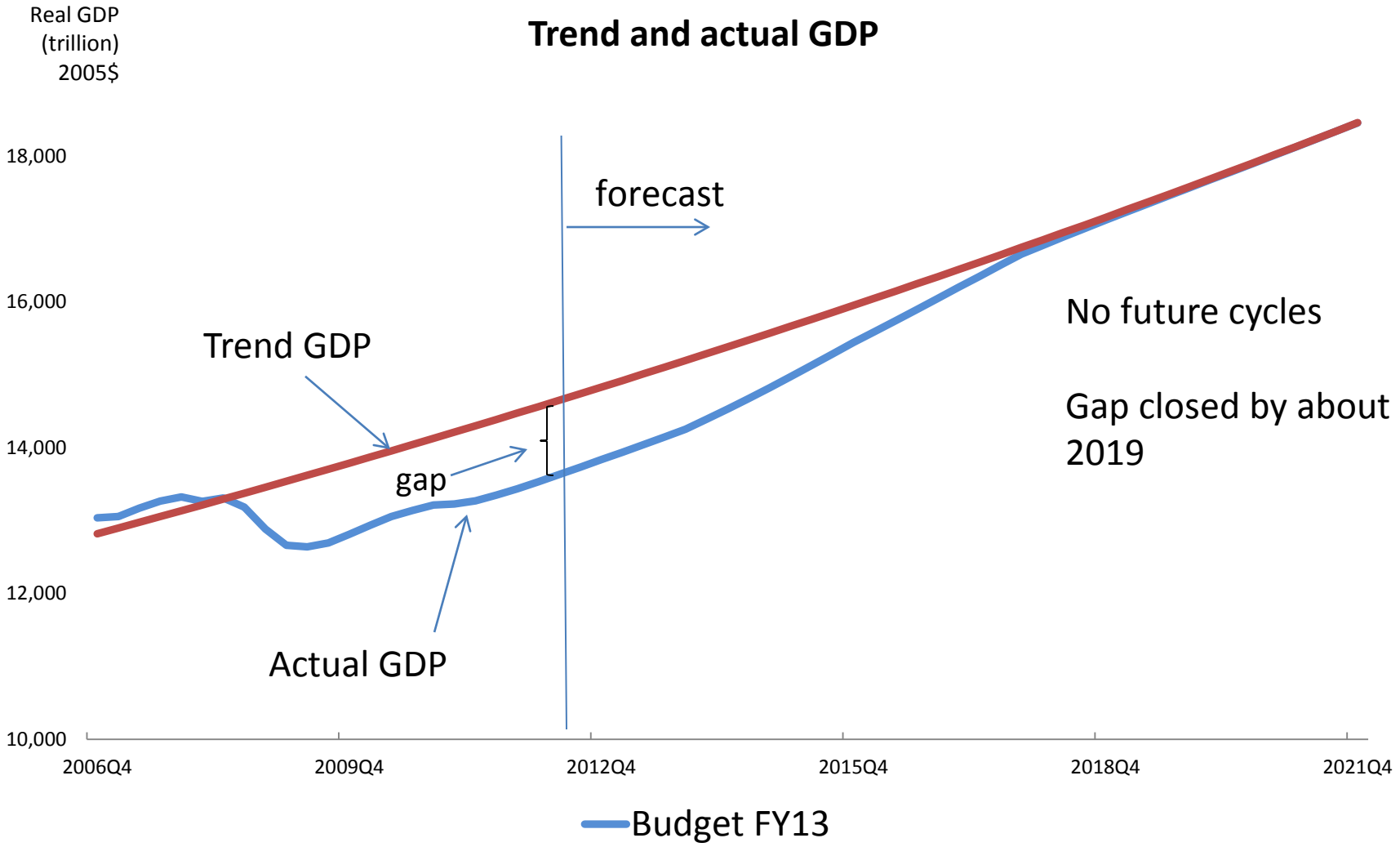
THREE QUESTIONS

- **Where are we?** (or what is current gap between trend output and actual output?
- **Where are we headed?** (or how fast can trend output grow over the forecast horizon?)
- **How fast will we get there?** (or how fast will the gap between actual and trend output be closed?)

FACTORS TO CONSIDER

- **Unemployment Rate and Inflation:** the forecast is conditioned on the relationships in the variables
- **Fiscal drag (withdrawal of stimulus spending):** many programs are winding down which may temporarily slow spending if the private sector does not fill the gap.
- **Interest rates:** futures markets
- **Wealth:** stock market and house prices impact on consumer spending
- **Foreign sector:** trade weighted foreign GDP growth
- **Energy/Oil prices:** futures market

Where are we now?
Where are we headed?
How fast will we get there?



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Underlying issues: forecast assumptions

- Is potential GDP growth constant (red line)?
- How certain is the size of the gap?
  - Many alternatives
- How will data revisions affect estimates of the gap?

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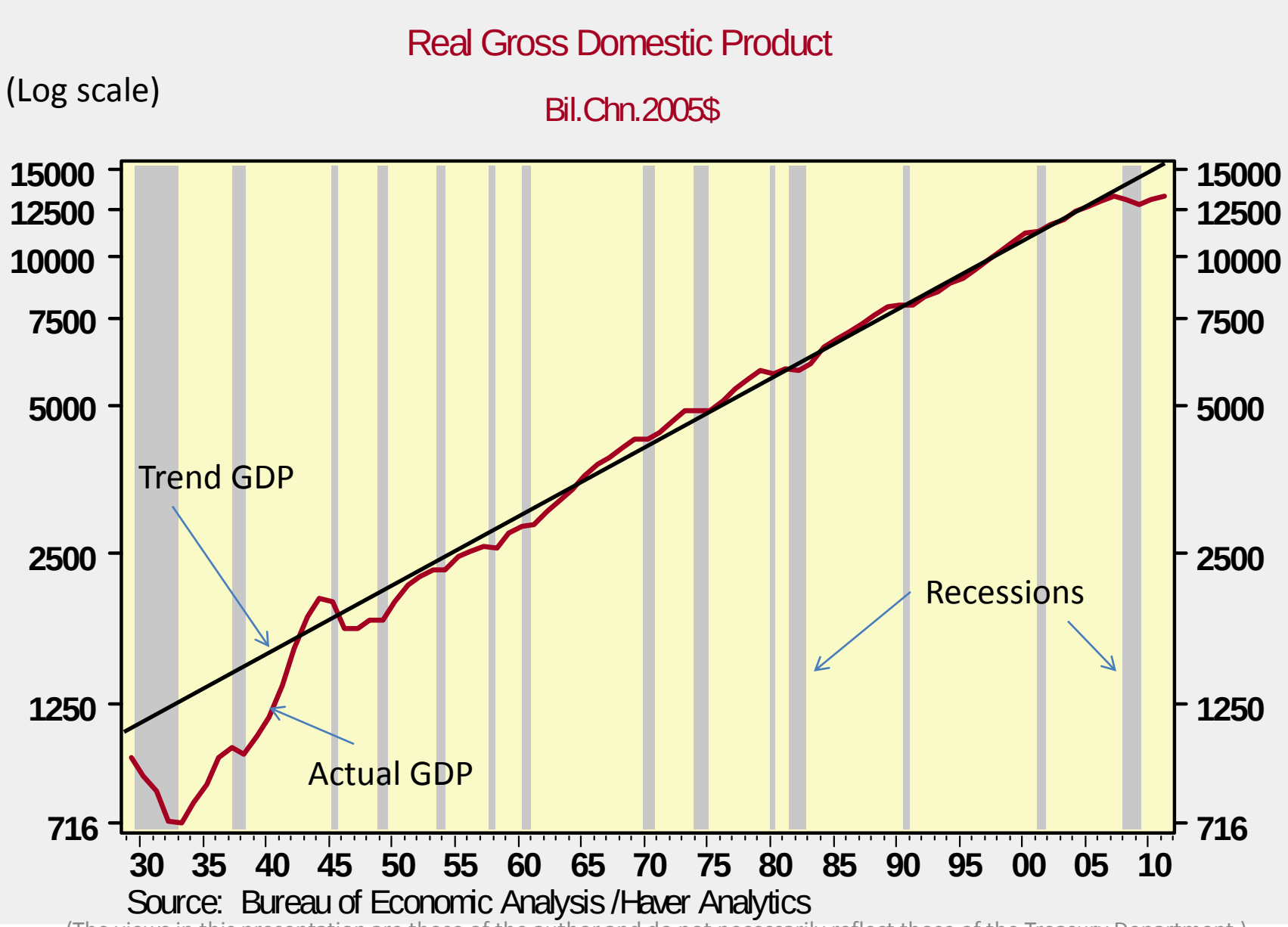
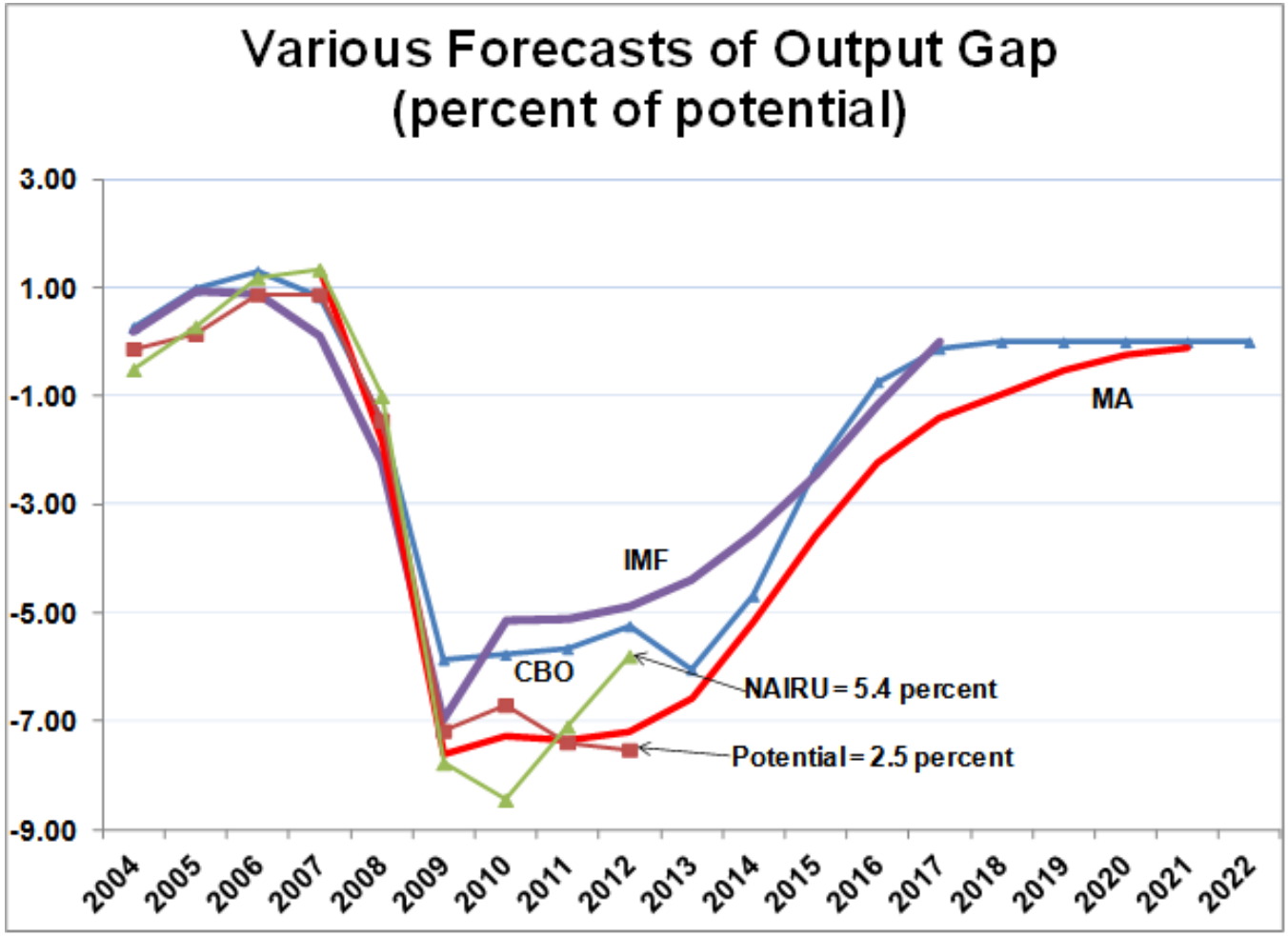
Long term trend GDP growth has been historically stable

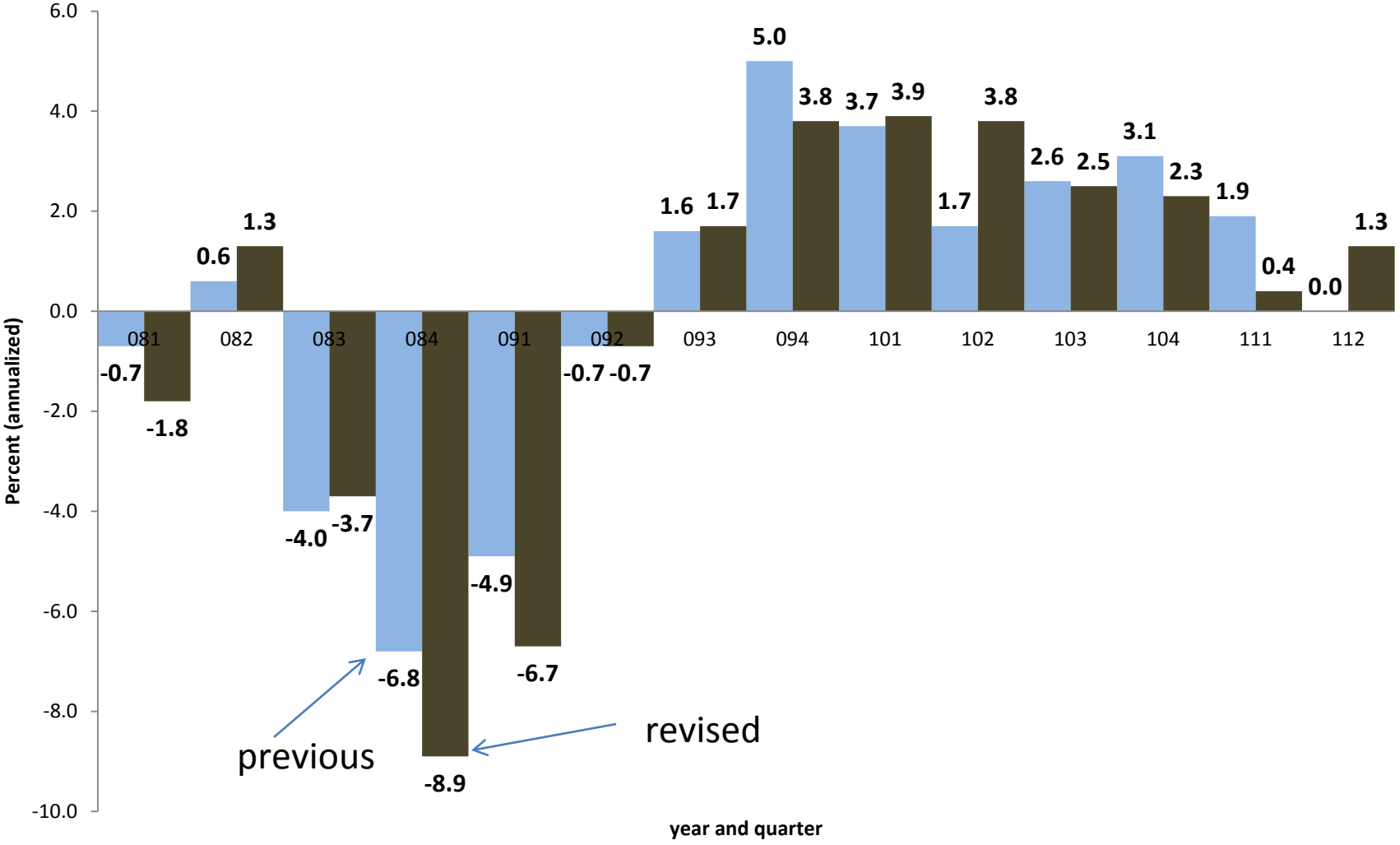


…but estimates and forecasts of the gap vary considerably



….one issue is the data can be historically revised

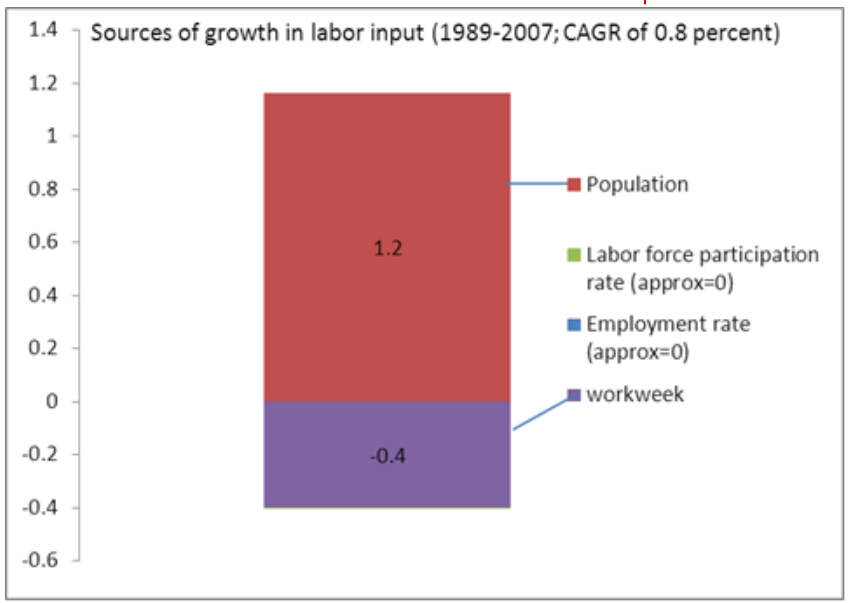
Comprehensive revision to GDP from August 2011

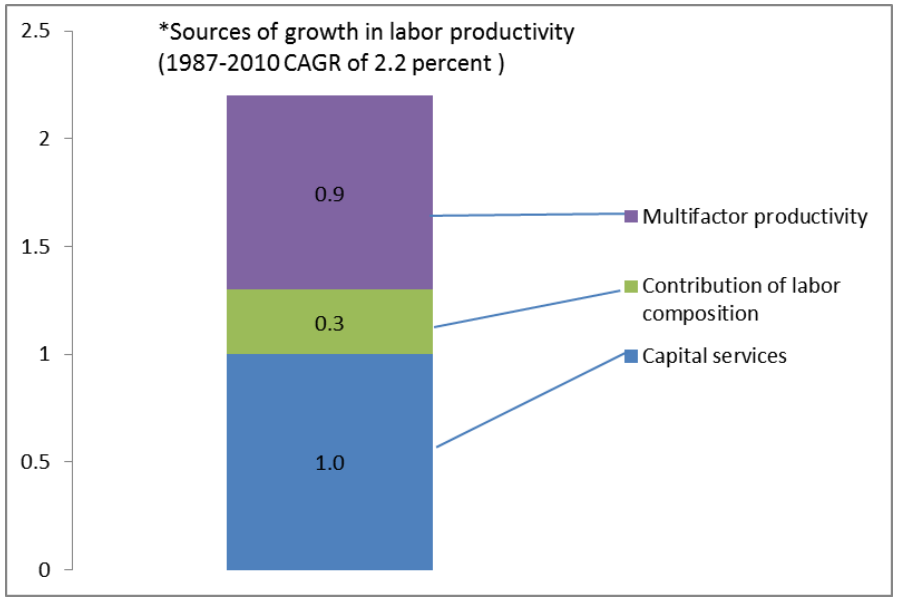


…another is different assumptions in the future components of trend output

Estimates of the output gap depend on estimates of trend output.

%Δ GDP	=	%Δ Population	+	%Δ Labor Force Participation Rate	+	%Δ Employment Rate = (1-unemployment rate)	+	%Δ Work Week	+	%Δ Labor Productivity	+	%Δ Technical Adjustments





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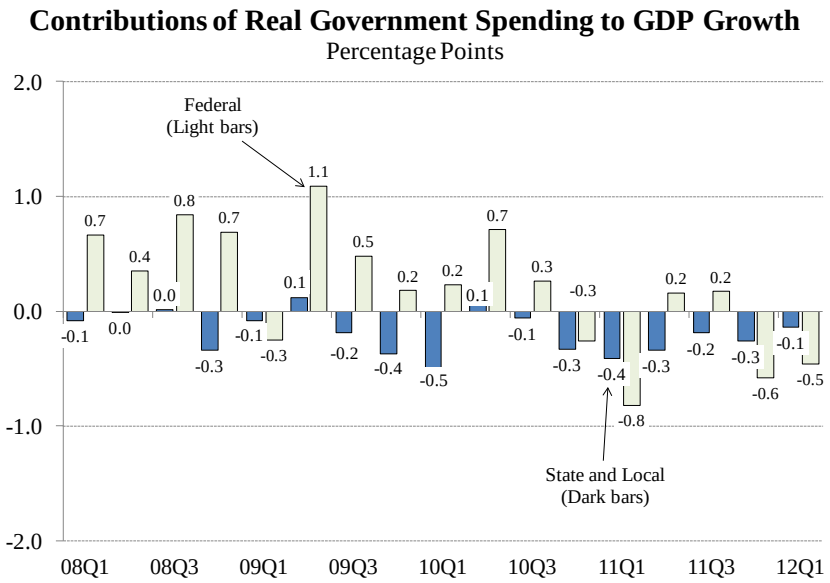
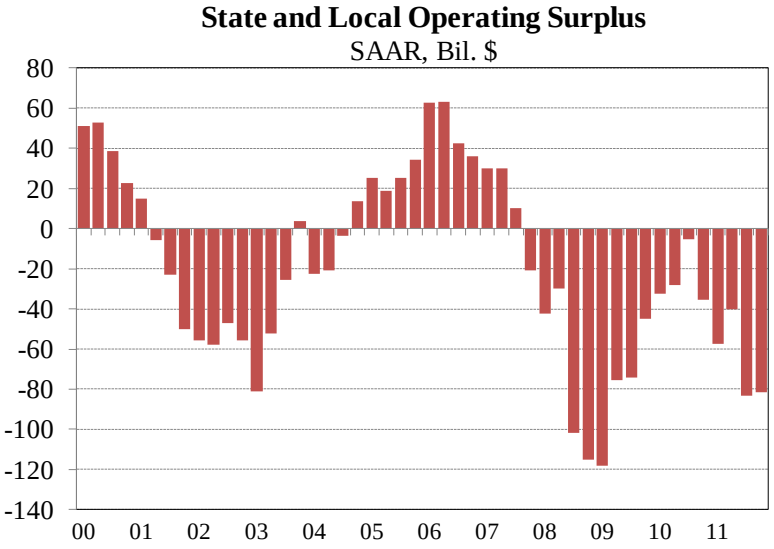
…another is different assumptions about Fiscal Drag on total spending



Real federal government spending subtracted 0.5 percentage points from GDP growth in 2012Q1 and 0.6 percentage points from growth in 2011Q4. State and local spending has been a drag on growth for the past seven quarters.

In the aggregate, states and localities have posted an operating deficit since the end of 2007.

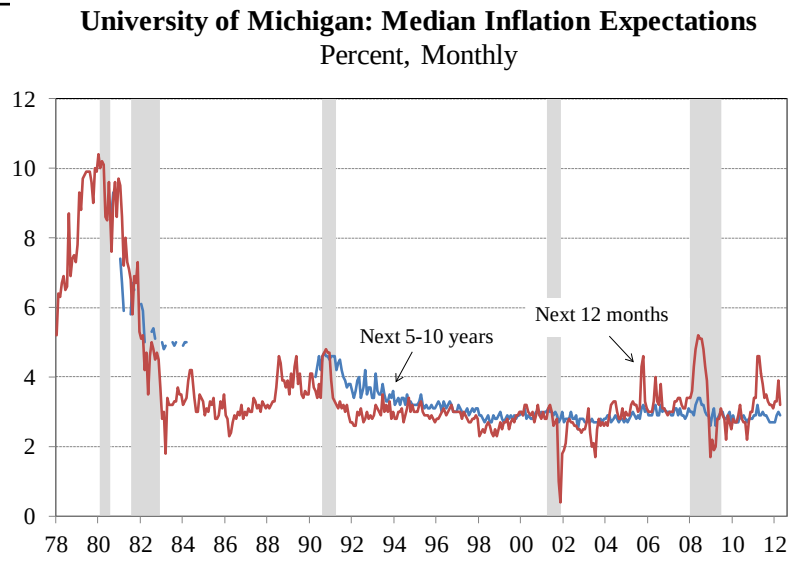


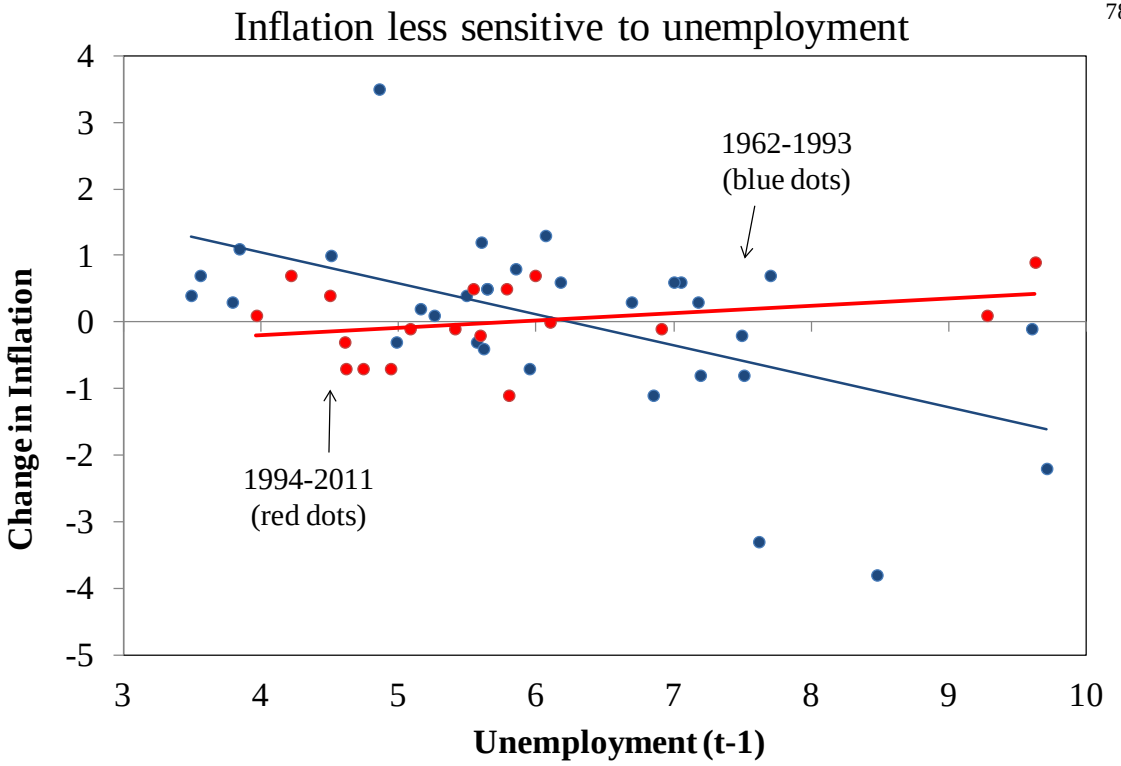
How have data and models improved?

- Technology:
  - simulation turnaround is almost instantaneous on a PC (Macro Economic Advisers model of the US economy)
  - Data availability is much better than in the past (Bureau of Economic Analysis website: http://www.bea.gov/)
- Advances in modeling (a bit wonk-ish)
  - Role of expectations, adaptation to energy price shocks (anchored inflation expectations)
  - Attention to subtle long run and short relationships amongst variables (co-integration)

Advances in price and unemployment data

- The aggregate price data have become less informative as measures of slack over time.
- The Phillips Curve, which maps inflation to the level of the unemployment rate, has flattened out, particularly over the last two decades (the red dots).





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…putting it all together, forecast accuracy

Table 3-2 Analytical Perspectives (abridged, pp 25)
Forecast Errors: Jan 1982 to present

REAL GDP ERRORS 6-Year Average Annual real GDP Growth	Admin.	CBO	Blue Chip
Mean Error	0.1	-0.2	-0.2
Mean Absolute Error	0.8	0.8	0.8
Root Mean Square Error	1.0	1.0	1.0
INFLATION ERRORS 6-Year Average Annual Change in the GDP Price index			
Mean Error	0.4	0.6	0.8
Mean Absolute Error	0.7	0.9	1.1
Root Mean Square Error	0.9	1.0	1.3

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Further Information

Fiscal year 2013, Analytical Perspectives, Budget of the U.S. Government
Chapter 2, p 9-21.

http://www.whitehouse.gov/omb/budget/Analytical_Perspectives

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