OLD AND NEW CHALLENGES FOR FORECASTING: RECESSIONS, BOOMS, AND BIG DATA

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ECONOMIC FORECASTS FAIL MISERABLY AT KEY TIMES
Example: US Employment Forecasts


Mid 2009: Overestimated by over 7M jobs!
Real GDP Forecasts

PCE Inflation Forecasts

Forecasts fail particularly at recessions

- Even for the Fed
  - Systematic bias where recessions identified by the bias: Ericsson et al, JSM Proceedings (2015)
- And even for the latest recession
BUT WHY DO FORECASTS MISS TURNING POINTS?
The Old Challenges

1. Not enough data in real time.

2. Not enough data on turning points.

3. Not enough data, period.
1. Data Revisions
# U.S. Real GDP Growth Estimates

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<tr>
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~ 40% of advance numbers are from “trend” models!
Revisions Between Quarterly Annualized Percent Changes of U.S. Real GDP

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<th>Revision</th>
<th>Average</th>
<th>Absolute Average</th>
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<tr>
<td>Advance to Second</td>
<td>0.1</td>
<td>0.5</td>
</tr>
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<td>Advance to Third</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Second to Third</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Advance to Latest</td>
<td>-0.1</td>
<td>1.2 (highlight)</td>
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Based on the period from 1993 through 2013. The average growth rate in this period (based on today’s data) was 2.6%.
“Economists put decimal points in their forecasts to show they have a sense of humor.”

- William Gilmore Simms
2. Turning Points
2.a. Why aren’t we over-predicting recessions?
Josh Zumbrun @JoshZumbrun  ·  Nov 27

Why recessions are so hard to predict:

Goodbushel @Goodbushel

Good paragraph from JP Morgan on predicting recessions.
Goodbushel
@Goodbushel

Good paragraph from JP Morgan on predicting recessions.

- Foremost, we need to think of recessions as accidents or misjudgments. There is nothing automatic about them; even we consider them part of the cycle. If we all agree that a particular accident is coming our way, then market participants and policy makers will take evasive action and the accident thus won’t happen. For recessions to have their well-own non-linear impact on economies and markets, they need to be a surprise. We thus can’t forecast the accident that will bring about the recession and the one we have in mind is thus unlikely to be the one. However, what we can do is to define times and conditions where such accidents are more likely to happen.
If central banks were changing economic outcomes based on their forecasts, I would expect **over-prediction of recessions**.
2.b. What about \textbf{booms}?
Credible forecasts of **booms** should become **self-fulfilling prophesies**.
3. Lack of Data
Will Big Data solve our problems?
The Big Data Revolution

More Maze

Than Map?
The world is shifting from **too little data, too late** to **too much data, all the time**.
The New Challenges

• We have too much data with too few economists looking at it.

• We need to identify good forecasters.

• We need to think about the value of economic forecasts.
1. Data scientists are coming for *our jobs*!
“Data Scientist: The Sexiest Job of the 21st Century”
2. Are there any good forecasters?
Bürgi and Sinclair, 2015 WP

“A Nonparametric Approach to Identifying a Subset of Forecasters that Outperforms the Simple Average”

Forecasters often beat the survey mean by chance, but there are some that have better forecasts, especially for less-watched variables.
3. Do forecasts even really matter?
“Do Fed Forecast Errors Matter?”

SGSR (IJoF 2012): Fed forecast errors are frequent and big (in MAE sense)

But, they may not have large economic costs.

So what does that suggest about policy?
FINAL THOUGHTS
1. Forecasts fail when we need them most.
2. We should think more about booms.
3. Big data brings new challenges.
THANK YOU!

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