Discussion of "Financial Conditions and Density Forecasts for US Output and Inflation" by Piergiorgio Alessandri (Bank of Italy) with Haroon Mumtaz (Queen Mary)

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Questions from the paper

- Do financial conditions (measured by fci) improve forecast accuracy for US inflation, output (and other variables)?
- Do threshold VARs perform better?
- Did financial conditions provide a “credible warning” (in real time) of Great Recession? Raising normative issues ...

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- Do financial conditions (measured by fci) improve forecast accuracy for US inflation, output (and other variables)?
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- Did financial conditions provide a "credible warning" (in real time) of Great Recession? Raising normative issues ...
- Main results: Yes, Yes and Yes (please, next time policymakers)

Some questions of interest (to me))

- Can log score based evaluations of forecast densities mask predictive content?
- What additional steps—beyond log scores—might be useful to analyse forecast performance?
- What characteristics do policymakers want from a forecast when seeking advanced warnings?

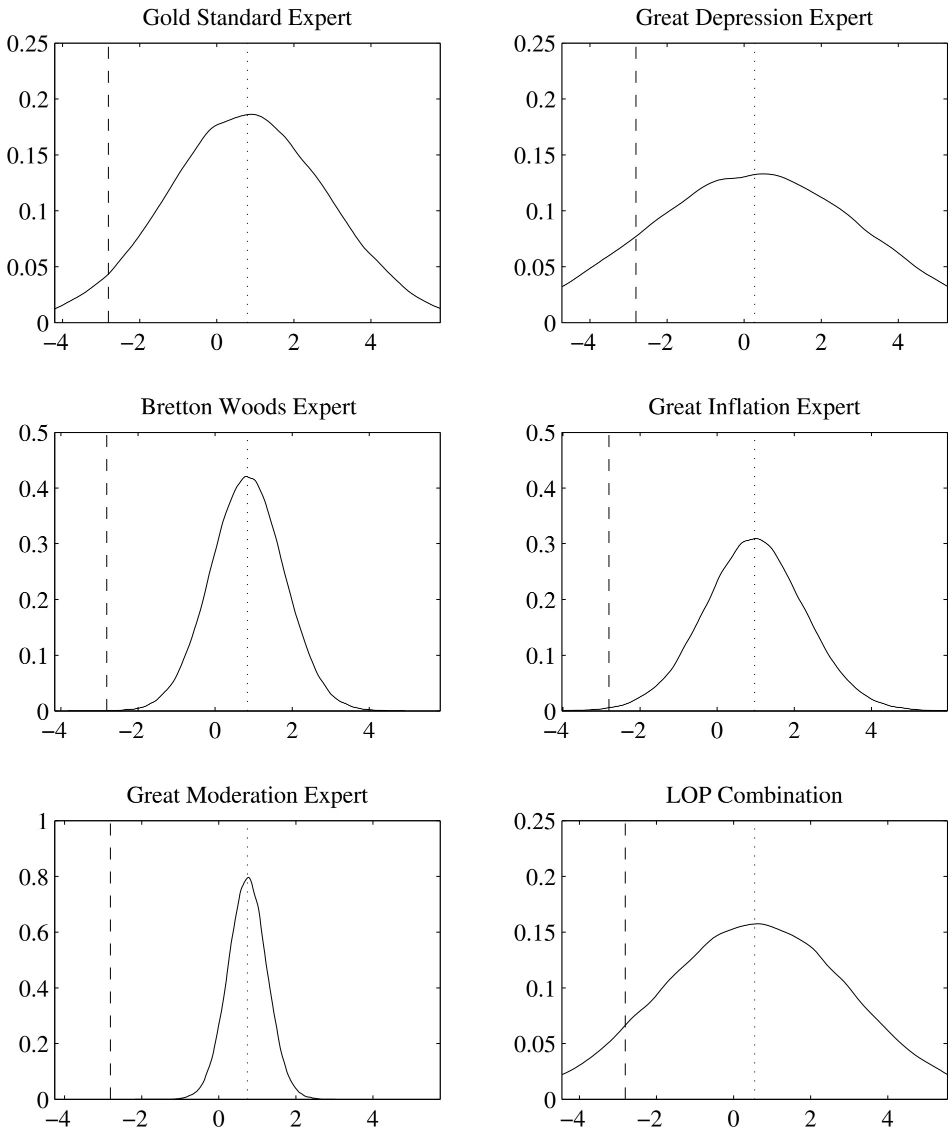
An example to illustrate some issues

- "Experts", Great Depression era, and Bretton Woods era, plus a few friends; each uses a bivariate VAR in inflation and output estimated on data only from relevant era
- Then, look at a bake-off between the two experts through Great Recession, and consider RMSFE, log scores
- In this example, despite a strong log score performance, the policymaker wouldn't want to bring back a defunct Great Depression expert to call the slump ...

Table 4: Log Scores Relative to Great Moderation Expert

	2005Q1-2010Q4	2005Q1-06Q4	2007Q1-08Q4	2009Q1-10Q4
(a) Output Growth				
Gold Standard	0.736*	0.833	0.600	0.841
Great Depression	0.723*	0.829	0.576	0.832
Bretton Woods	0.839*	0.872	0.770	0.907
Great Inflation	0.855*	0.903	0.743	0.973
Great Moderation	1.000	1.000	1.000	1.000
Linear Opinion Pool	0.726*	0.827	0.585	0.831

Figure 3: Output Growth Forecast Densities 2008Q4



Notes: The vertical dashed lines indicate the location of the realization in 2008Q4 and the vertical dotted lines indicate the means of the forecast densities.

Cost-loss approach with negative output growth events

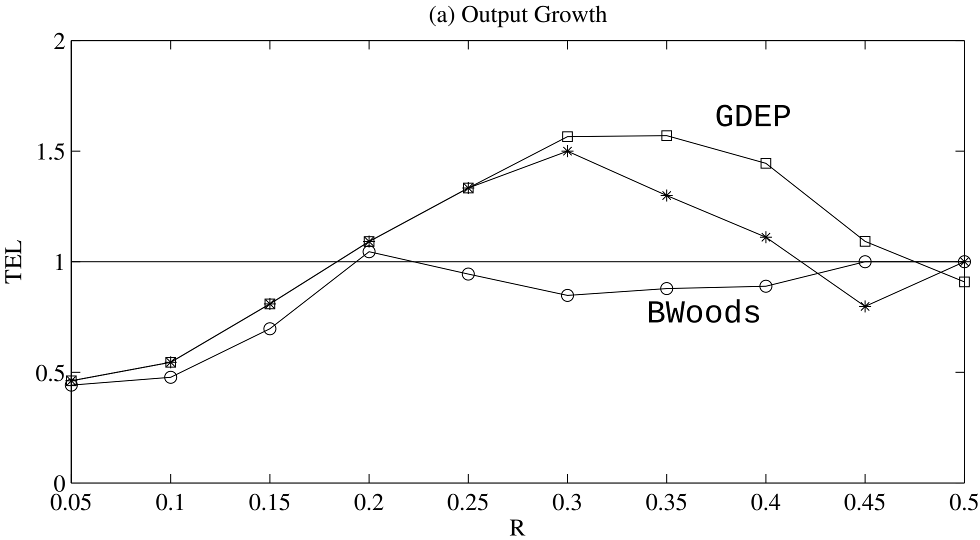
- Following eg Granger and Pesaran (2000), Berrocal et al (2010), relative cost of unanticipated contraction $R = C/L$, $0 < R < 1$, unknown

- Issue contraction warning only if $Pr(\Delta y < 0) > R$

- Define $TEL = n_{10}L \; + \; (n_{01} + n_{00})C$

	Event Observed	
Event Forecast	Yes	No
Yes	n_{00}	n_{01}
No	n_{10}	n_{11}

Figure 7: Economic Loss Relative to Great Moderation Expert



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- Yep. Strong relative log scores differentials aren't sufficient to indicate that the policymaker can use the model (expert) in real time to give an early warning indicator

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    3. Plot forecast densities and check out the shape (various moments could be "post-processed")

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- Utilise loss function, Granger-Pesaran (2000a, 2000b), Coe-Vahey (2014)
- With unknown loss function, need to check out calibration (reliability), as noted by Jore-Mitchell-Vahey (2010), plus resolution vNorden-Galbraith (2008) and/or sharpness

In summary

- An interesting paper and an important issue
- Perhaps a little more to do in describing and understanding the differences in forecast performance

Surely, density forecasting and loss-based evaluation is a promising route to deal with the quacks ...?

- John Kay (FT, September 21 2010):

  "There will always be a demand for forecasts, so there will always be a supply. But the reputation of economic forecasters, like other quacks and charlatans, depends more on the slickness of their presentations than the value of their work"