

Deryugina, Ponomarenko, Porshakov, Sinyakov: Nowcasting and Short-Term Forecasting of Russian GDP

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Comment 1: Robustness

- Absolute forecast performance of DFM depends on choice of out-of-sample.

RMSE from Tables 1 and II.2	Forecast quarter T+2			Forecast quarter T+1			Nowcast			Backcast
	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1
(A) 2012Q1-2014Q3: Full sample	0.47	0.43	0.37	0.41	0.26	0.4	0.35	0.24	0.19	0.16
(B) 2006Q1-2014Q3: Full sample	0.67	0.63	0.62	0.77	0.76	0.7	0.54	0.44	0.35	0.27
100 * (B - A) / A	42.6	46.5	67.6	87.8	192.3	75.0	54.3	83.3	84.2	68.8

- Does DFM forecast performance *relative* to benchmark models also depend on out-of-sample choice?
- Why do we want to know? – Is DFM robustly better than alternative models?

Comment 1: Robustness *continued*

- 2012Q1-2014Q3: Survey data block outperforms hard data block.
- 2006Q1-2014Q3: Hard data block outperforms survey data block.

RMSE from Tables 1 and II.2	Forecast quarter T+2			Forecast quarter T+1			Nowcast			Backcast
	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1
(A) 2012Q1-2014Q3: Survey data	0.55	0.56	0.54	0.46	0.34	0.42	0.33	0.33	0.38	0.35
(B) 2012Q1-2014Q3: Hard data	0.69	0.65	0.58	0.60	0.59	0.39	0.38	0.36	0.21	0.20
$100 * (B - A) / A$	25.5	16.1	7.4	30.4	73.5	-7.1	15.2	9.1	-44.7	-42.9
(C) 2006Q1-2014Q3: Survey data	1.98	2.04	1.80	1.29	1.31	1.22	0.69	0.75	0.70	0.50
(D) 2006Q1-2014Q3: Hard data	0.67	0.63	0.55	0.56	0.59	0.42	0.36	0.32	0.20	0.20
$100 * (D - C) / C$	-66.2	-69.1	-69.4	-56.6	-55.0	-65.6	-47.8	-57.3	-71.4	-60.0

Comment 2: Benchmark models

- Bridge equation approach

$$y_t = \alpha + \gamma y_{t-1} + \sum_{i=0}^I \beta_i x_{t-i} + \varepsilon_t$$

- What we want to know: Does a forecasting model outperform an alternative forecasting model *for a certain information set*?
- This question is not answered in the paper:
 - DFM forecast exercise bases on 116 indicators
 - Bridge equations forecast exercise bases substantially less (4 ?) indicators

Comment 2: Benchmark models *continued*

- DFM vs. “Bridge forecast pooling”:
 - DFM forecasting exercise based on set of I indicators.
 - Bridge equation forecasting exercise for each of the I indicators individually. Forecast pooling using appropriate weighting scheme.
 - Compare RMSE.

Comment 3: Iterative vs. direct forecasting

- Forecast z_{t+h} given Ω_t
- DFM (Kalman filter) and Bridge equation approach achieve this task by iterating one-step ahead forecast h times:

$$z_{\tau+1|\tau} \text{ for } \tau = t, \dots, t+h-1$$

- Depending on type of data generating process direct forecast strategy may (or may not) deliver better results:

$$z_{t+h|t} \text{ for } t$$

Further comments

- Page 5: “[...] Sample picked for estimating equation (3) [...] is 2003Q1 – 2014Q3 [...]” You perform pseudo-out-of sample analysis (see pp. 7ff). Hence, shouldn’t the estimation sample be 2003Q1 – τ , where τ is the last period for which data are available when forecasting $y_{\tau+h}$? τ is different for any pseudo out-of-sample period.
- Page 7, line 1: Use of term “training sample” to refer to the *out-of-sample* period range?!
- Table 2: Shares of DFM against benchmarks models (or the other way round) instead of absolute RMSE in order to facilitate (quick) reading.

Further comments *continued*

- Page 11: Diebold-Mariano test has been subject to criticism. Harvey, Leybourne and Newbold (1997, 1998), Giacomini and White (2006) and Clark and West (2007), e.g., provide alternatives.
- Page 13: Random walk model: Iterative or direct forecast in case $k > 1$?
- Page 13: Bridge equations: Why choice of ARMA(2,2)?
- Page 20: “Unlike the results presented in some recent studies, which advocate against inclusion of too many predictors into the factor model [...]” Please cite the studies.

Thank you ...

... to the presenter!

... to the organizers of the workshop!

... to Suomen Pankki!