Online appendix: the financial cycle and recession risk[1]

Alternative measures to evaluate forecast performance					Annex Table 1
	Financial cycle[1]	DSR	Term spread	Financial cycle and term spread	DSR and term spread
Advanced economies					
1 year	MAE	0.24	0.25	0.24	0.27	0.23
	RMSE	0.35	0.36	0.35	0.37	0.35
	LPS	0.40	0.41	0.40	0.45	0.39
2 years	MAE	0.25	0.28	0.28	0.29	0.25
	RMSE	0.36	0.38	0.38	0.39	0.38
	LPS	0.42	0.45	0.45	0.47	0.41
3 years	MAE	0.28	0.30	0.30	0.30	0.28
	RMSE	0.38	0.39	0.39	0.39	0.38
	LPS	0.45	0.48	0.48	0.49	0.45
Emerging market economies					
1 year	MAE	0.28	0.26	0.27	0.27	0.26
	RMSE	0.37	0.37	0.37	0.37	0.37
	LPS	0.45	0.43	0.44	0.45	0.43
2 years	MAE	0.26	0.26	0.26	0.26	0.26
	RMSE	0.37	0.37	0.37	0.37	0.37
	LPS	0.44	0.44	0.44	0.44	0.44

The table reports various measures of forecast accuracy for probit models: the mean absolute error (MAE), the root mean squared error (RMSE), and the log probability score (LPS). They are calculated as defined in Rudebusch and Williams (2009).

[1] Financial cycles are measured by the composite financial cycle proxy.

Source: Authors' calculations.

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[1]   This appendix accompanies C Borio, M Drehmann and D Xia, "The financial cycle and recession risk", *BIS Quarterly Review*, December 2018.

Alternative measures to evaluate forecast performance in real time[1]

In advanced economies

		Financial cycle[2]	DSR	Term spread	Financial cycle and term spread	DSR and term spread
		Real-time data[3]				
1 year	MAE	0.25	0.27	0.23	0.21	0.23
	RMSE	0.40	0.41	0.37	0.38	0.39
	LPS	0.72	0.60	0.45	0.77	0.57
2 year	MAE	0.28	0.30	0.29	0.28	0.29
	RMSE	0.40	0.39	0.38	0.40	0.38
	LPS	0.55	0.48	0.47	0.54	0.46
3 year	MAE	0.34	0.35	s0.37	0.37	0.37
	RMSE	0.40	0.40	0.40	0.42	0.40
	LPS	0.49	0.50	0.51	0.54	0.51
		Real-time data and recursively estimated model parameters[4]				
1 year	MAE	0.25	0.25	0.23	0.21	0.23
	RMSE	0.39	0.38	0.38	0.38	0.38
	LPS	0.57	0.53	0.51	0.60	0.53
2 year	MAE	0.26	0.27	0.26	0.25	0.26
	RMSE	0.39	0.38	0.39	0.39	0.38
	LPS	0.53	0.48	0.51	0.54	0.49
3 year	MAE	0.29	0.31	0.30	0.30	0.31
	RMSE	0.39	0.39	0.40	0.40	0.40
	LPS	0.49	0.49	0.50	0.51	0.51

The table reports various measures of forecast accuracy for probit models: the mean absolute error (MAE), the root mean squared error (RMSE), and the log probability score (LPS). They are calculated as defined in Rudebusch and Williams (2009).

[1] We start the forecasting exercise in Q1 1995.   [2] Financial cycles are measured by the composite financial cycle proxy.   [3] Forecasts are calculated using real-time data and fixed parameters estimated with data up to Q1 1995.   [4] Forecasts are calculated with real-time data and recursively estimated model parameters, ie by adding one observation at a time.

Source: Authors' calculations.