Online Appendix to "Stochastic Volatility Models with ARMA Innovations: An Application to G7 Inflation Forecasts"

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1 Lag Length Selection

We first present results based on Bayesian information criterion (BIC) for selecting the lag length in the autoregressive models.

Table 1: Lag length selection for AR(m) models using the BIC.

Country	CPI inflation	GDP deflator inflation
Canada	4	5
France	5	6
Germany	4	4
Italy	4	1
Japan	8	1
UK	5	3
US	3	2

2 Additional Forecasting Results

Here we provide additional forecasting results. In particular, we report both point and density forecast performance of all the models for each G7 country and each forecast horizon.

Table 2: MSFEs relative to AR benchmark: Canada CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	0.99	0.97**	0.95**	0.93**	0.90*
AR-ARMA	0.99	0.96	0.85	0.77	0.70*
AR-MA-SV	0.99	0.97**	0.95**	0.93**	0.89*
AR-ARMA-SV	**0.97**	**0.95**	**0.82**	**0.73**	**0.67***
UC	1.01	0.99	0.95**	0.91**	0.88*
UC-SV	1.05*	1.03	0.96	0.89	0.88
UC-ARMA	1.02	0.96	0.88*	0.80*	0.74*
UC-MA-SV	1.01	1.04	0.96	0.88	0.87*
UC-ARMA-SV	1.02	1.03	0.90	0.80*	0.74*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 3: MSFEs relative to AR benchmark: France CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	0.95**	0.91**	0.86**	0.83**	0.83**
AR-ARMA	0.82**	0.87	0.89**	0.93*	0.95*
AR-MA-SV	0.83**	0.89**	0.85**	0.82**	0.83*
AR-ARMA-SV	**0.81****	0.88	0.90**	0.94*	0.95
UC	0.84**	0.82**	0.79*	0.81	0.82
UC-SV	0.91**	0.93	0.88	0.87	0.85
UC-ARMA	0.85**	0.77**	0.66**	0.63**	0.59*
UC-MA-SV	0.93**	1.02	0.91	0.87	0.84
UC-ARMA-SV	0.84**	**0.73****	**0.57****	**0.52****	**0.46***

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 4: MSFEs relative to AR benchmark: Germany CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	**1.00**	1.00	1.00	1.00	1.00
AR-SV	1.01	**0.98**	**0.96**	0.92	0.88
AR-ARMA	1.01	1.01	1.00	0.97	0.88
AR-MA-SV	1.01	0.99	**0.96**	0.92	0.88
AR-ARMA-SV	1.01	1.01	0.98	0.95	0.89
UC	1.08*	1.10*	1.01	0.95	0.89
UC-SV	1.13**	1.14*	1.00	0.93	0.85
UC-ARMA	1.14**	1.16*	1.00	0.92	0.83
UC-MA-SV	1.14**	1.15*	0.99	**0.91**	**0.83**
UC-ARMA-SV	1.14**	1.15*	0.99	**0.91**	**0.83**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 5: MSFEs relative to AR benchmark: Italy CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	**0.89**	0.67**	0.63**	0.60**	0.57**
AR-ARMA	0.93	0.65**	0.59*	0.55**	0.49
AR-MA-SV	**0.89**	0.67**	0.63**	0.61**	0.58**
AR-ARMA-SV	**0.89**	0.63	0.56	0.50**	0.43**
UC	1.00	0.77**	0.79	0.83	0.86
UC-SV	1.11*	0.89	0.87	0.86	0.84
UC-ARMA	1.04	0.67**	0.70*	0.75	0.81
UC-MA-SV	1.08**	0.95	0.86	0.81	0.75
UC-ARMA-SV	0.99	**0.60****	**0.51****	**0.47****	**0.41****

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 6: MSFEs relative to AR benchmark: Japan CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	1.04	0.83**	**0.72****	0.76**	**0.73***
AR-ARMA	**0.70****	0.79*	0.94	0.95	0.99
AR-MA-SV	1.06**	0.82**	**0.72****	0.75**	**0.73***
AR-ARMA-SV	**0.70****	0.79	0.94	0.95	0.99
UC	0.78**	**0.76****	0.78**	**0.74****	0.75*
UC-SV	0.80**	0.81**	0.83**	0.77**	0.76*
UC-ARMA	0.83**	0.79**	0.87**	0.83**	0.84*
UC-MA-SV	0.80**	0.81**	0.82**	0.77**	0.75*
UC-ARMA-SV	0.73**	0.80**	0.84**	0.76**	0.74*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 7: MSFEs relative to AR benchmark: UK CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	0.97	0.95**	0.77**	0.77**	0.76**
AR-ARMA	**0.75**	0.65	0.85	0.89	0.94
AR-MA-SV	0.86**	0.91**	0.78**	0.77**	0.76**
AR-ARMA-SV	**0.75***	0.65**	0.85**	0.89**	0.94**
UC	0.96	0.74**	0.80	0.79	0.81
UC-SV	0.99	0.81**	0.81**	0.75**	0.73*
UC-ARMA	0.99	0.68**	0.70**	**0.64****	**0.63****
UC-MA-SV	1.02	0.79**	0.78**	0.72**	0.69**
UC-ARMA-SV	0.98	**0.63****	**0.68****	**0.64****	0.64**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 8: MSFEs relative to AR benchmark: US CPI inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	0.99	0.97	0.86*	0.84	0.82
AR-ARMA	1.03	1.01	0.88	0.83	0.75
AR-MA-SV	0.99	0.97	0.86*	0.84	0.80
AR-ARMA-SV	1.00	0.97	**0.82**	**0.73**	**0.63**
UC	0.99	0.97	0.88**	0.91	0.91*
UC-SV	0.96	**0.93**	0.92	0.97	0.88*
UC-ARMA	1.00	0.97	0.83*	0.79	0.70
UC-MA-SV	**0.94**	0.94	0.90	0.92	0.81*
UC-ARMA-SV	1.00	1.07	0.86	0.79	0.70

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 9: MSFEs relative to AR benchmark: Canada GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	1.01	0.97**	0.93**	0.92**	0.91*
AR-ARMA	0.95**	0.96**	0.93	0.83	0.78
AR-MA-SV	0.96	0.97**	0.93**	0.92**	0.91
AR-ARMA-SV	0.96**	0.95**	**0.90**	**0.78**	**0.73**
UC	0.94	0.98	0.96	0.91	0.89
UC-SV	0.95	**0.94**	0.93	0.89	0.86
UC-ARMA	0.92	0.97	0.91	0.82**	0.78**
UC-MA-SV	**0.89****	0.95	0.93	0.89	0.86
UC-ARMA-SV	0.92	1.15	0.98	0.84**	0.81*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 10: MSFEs relative to AR benchmark: France GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	1.00	0.91**	0.89	0.88	0.87
AR-ARMA	0.71**	0.94*	0.96	0.98	0.99
AR-MA-SV	1.18**	0.91**	0.88	0.88	0.87
AR-ARMA-SV	**0.66****	0.82*	0.80	0.81	0.83
UC	1.18*	0.98	0.92	0.89	0.87
UC-SV	1.18**	1.02	0.95	0.90	0.88
UC-ARMA	0.70**	0.78**	0.71**	0.67*	0.64
UC-MA-SV	0.70	1.04	0.96	0.91	0.89
UC-ARMA-SV	0.67**	**0.77**	**0.66***	**0.61***	**0.55**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 11: MSFEs relative to AR benchmark: Germany GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	1.00	**0.98**	**0.95***	**0.95***	0.94
AR-ARMA	0.98	1.06**	1.18**	1.30**	1.42*
AR-MA-SV	0.98	0.99	0.96	**0.95***	0.95
AR-ARMA-SV	**0.96**	1.01	1.06*	1.13	1.15
UC	**0.96**	1.02	0.97	0.96	0.95
UC-SV	**0.96**	1.02	0.97	0.96	0.95
UC-ARMA	1.01	1.04	0.99	0.98	0.96
UC-MA-SV	1.01	1.01	**0.95**	**0.95**	0.94
UC-ARMA-SV	1.00	1.01	**0.95**	**0.95**	**0.93**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 12: MSFEs relative to AR benchmark: Italy GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	1.00**	1.01**	1.01*	1.01	1.01
AR-ARMA	1.13**	0.92*	0.97	1.00	1.00
AR-MA-SV	1.13	1.01*	1.01*	1.01	1.01
AR-ARMA-SV	1.23**	0.98	1.00	1.01	1.01
UC	1.23	0.75**	0.76*	**0.75**	**0.74**
UC-SV	1.23*	0.78**	0.79*	0.81	0.81
UC-ARMA	**0.96****	0.75**	0.76*	0.76	0.75
UC-MA-SV	1.23**	0.76**	0.77	0.77	0.78
UC-ARMA-SV	0.97**	**0.73****	**0.75***	0.76	0.77

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 13: MSFEs relative to AR benchmark: Japan GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	**1.00**
AR-SV	1.00**	1.01	1.00	1.00	1.00
AR-ARMA	**0.93**	**0.92**	**0.93**	**0.93**	1.01
AR-MA-SV	**0.93****	1.01	1.00	1.00	1.00
AR-ARMA-SV	1.04*	1.00*	1.00	1.00	1.00
UC	1.00	0.98	1.03	1.06	1.06
UC-SV	1.00	0.98	1.02	1.04	1.04
UC-ARMA	1.00	0.99	1.04	1.08	1.08
UC-MA-SV	1.00	0.98	1.02	1.05	1.04
UC-ARMA-SV	1.00	0.98	1.02	1.05	1.04

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 14: MSFEs relative to AR benchmark: UK GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	**1.00**	1.00	1.00	1.00	1.00
AR-SV	1.00**	0.96**	0.91**	0.87**	0.83**
AR-ARMA	1.04	1.03	1.00	0.97	0.93
AR-MA-SV	1.04**	0.95**	0.90**	0.86**	0.82**
AR-ARMA-SV	1.02*	1.03	1.01	0.98	0.94
UC	1.00	0.92	0.89	0.91	0.87
UC-SV	1.00	0.98	0.89*	0.84**	0.78*
UC-ARMA	1.02	**0.90****	**0.81****	**0.75***	**0.68***
UC-MA-SV	1.02	0.98	0.88**	0.83**	0.77**
UC-ARMA-SV	1.00**	1.09	0.95	0.83*	0.72*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 15: MSFEs relative to AR benchmark: US GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	1.00	1.00	1.00	1.00	1.00
AR-SV	0.97**	0.87**	0.81**	0.80**	0.78**
AR-ARMA	0.97**	0.86*	0.73*	0.64*	0.60*
AR-MA-SV	0.96**	0.87**	0.82**	0.82**	0.82*
AR-ARMA-SV	0.95*	**0.84**	**0.67***	**0.54***	**0.49***
UC	**0.93**	0.89	0.87	0.92	0.93
UC-SV	0.99**	0.98	0.98	0.98	0.96
UC-ARMA	0.96*	0.88**	0.83**	0.80**	0.77**
UC-MA-SV	1.05**	1.07	1.02	0.97	0.94
UC-ARMA-SV	0.96	0.88	0.82**	0.77**	0.75*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 16: Sum of log predictive likelihoods relative to AR benchmark: Canada CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	5.5**	9.6**	5.7**	9.6	3.4*
AR-ARMA	**8.6****	**17.1***	**30.7***	**46.0****	**49.3****
AR-MA-SV	5.4**	9.5**	5.9**	9.6	3.6*
AR-ARMA-SV	4.4**	7.2*	18.2*	29.7	30.2*
UC	-2.5**	1.7**	5.9*	8.6*	9.9**
UC-SV	-1.5**	7.4**	9.4**	15.5*	8.4*
UC-ARMA	-3.3**	4.3**	13.8*	21.7*	26.4*
UC-MA-SV	0.6**	5.1**	9.6**	17.0*	10.2**
UC-ARMA-SV	-0.8**	-11.9**	-4.4*	6.5	4.9**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 17: Sum of log predictive likelihoods relative to AR benchmark: France CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	5.0**	15.9**	25.0**	27.5**	31.2*
AR-ARMA	15.2**	24.1**	9.5**	-13.8**	-33.6*
AR-MA-SV	22.9**	15.5**	23.4**	25.9**	29.6*
AR-ARMA-SV	**24.0****	17.8**	7.5**	-6.1**	-13.5*
UC	18.4**	22.0**	30.4**	28.3**	26.5*
UC-SV	17.3**	27.9**	38.6**	37.6**	40.1**
UC-ARMA	18.6**	21.3**	34.7*	40.9**	47.7*
UC-MA-SV	14.1**	21.6**	36.0**	39.8**	43.7**
UC-ARMA-SV	21.1**	**30.1****	**55.2****	**65.4****	**77.6****

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 18: Sum of log predictive likelihoods relative to AR benchmark: Germany CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	2.0*	-2.4**	-1.4**	4.8**	11.4**
AR-ARMA	**3.8****	**0.3****	-1.2**	-0.8**	0.5**
AR-MA-SV	1.6**	-3.1**	-2.8**	3.3**	9.7**
AR-ARMA-SV	-0.1*	-11.4**	-12.1**	-8.9**	-1.7*
UC	-12.0**	-13.2**	-2.4**	2.3*	6.6
UC-SV	-11.7**	-14.0**	**0.4****	**12.3****	**24.1****
UC-ARMA	-17.1**	-18.4**	-3.1*	5.0	12.9
UC-MA-SV	-12.9**	-17.3**	-1.9**	9.2**	22.3*
UC-ARMA-SV	-12.8**	-16.8**	-2.1**	9.2**	22.0

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 19: Sum of log predictive likelihoods relative to AR benchmark: Italy CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	63.9**	84.7**	90.1**	88.0**	88.5*
AR-ARMA	25.0**	57.2**	69.9**	79.0**	87.3**
AR-MA-SV	**65.2****	84.7**	89.9**	86.8**	86.3*
AR-ARMA-SV	59.9**	80.1**	88.8**	92.8**	100.3*
UC	0.5**	27.0**	29.7**	25.6**	20.0*
UC-SV	38.2**	66.9**	63.6**	56.1**	49.5**
UC-ARMA	0.4	4.4**	0.4**	-4.5**	-9.9**
UC-MA-SV	48.7**	70.1**	77.8**	78.4**	78.6**
UC-ARMA-SV	46.9**	**87.5****	**102.0****	**105.9****	**110.9***

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 20: Sum of log predictive likelihoods relative to AR benchmark: Japan CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	-26.4**	50.1**	**68.7****	60.6**	63.2**
AR-ARMA	47.1**	53.1**	39.1**	33.3**	24.2**
AR-MA-SV	-27.5**	51.4**	67.1**	60.6**	62.0**
AR-ARMA-SV	**47.8****	50.1**	32.3**	19.0*	5.1
UC	11.5**	29.8**	31.5**	35.9**	35.6**
UC-SV	33.4**	55.8**	57.7**	66.2**	**68.9***
UC-ARMA	11.3**	25.4**	22.3**	25.9**	26.1**
UC-MA-SV	32.9**	**56.5****	57.0**	**64.5****	66.8*
UC-ARMA-SV	46.8**	52.2**	41.2**	40.7**	37.4**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 21: Sum of log predictive likelihoods relative to AR benchmark: UK CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	21.1**	17.3**	60.8**	51.7**	51.9*
AR-ARMA	45.3**	69.7**	48.3**	37.9**	26.2**
AR-MA-SV	41.8**	21.1**	59.2**	50.9**	51.3*
AR-ARMA-SV	**57.7****	**72.3****	34.4**	15.0**	-0.9*
UC	-7.6**	29.3**	34.2**	34.8**	31.3**
UC-SV	20.9**	63.0**	**68.7****	**71.2****	**70.7***
UC-ARMA	-4.7**	31.6**	36.0**	39.8**	40.4**
UC-MA-SV	17.4**	62.6**	68.3**	70.3**	69.3*
UC-ARMA-SV	31.2**	59.7**	53.5**	50.5**	46.3*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 22: Sum of log predictive likelihoods relative to AR benchmark: US CPI inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	30.8	18.5	19.4	22.5	35.4
AR-ARMA	11.1	5.1**	27.3**	39.0*	55.0
AR-MA-SV	30.6	17.0	17.8	20.0	34.4
AR-ARMA-SV	28.6	22.6	30.6*	**40.9**	**61.2**
UC	-0.6**	-0.3**	11.5	2.9	9.3
UC-SV	**32.3**	25.9	26.2	25.2	36.9
UC-ARMA	-0.2**	2.8**	17.5*	18.7*	37.8
UC-MA-SV	30.5	**27.4**	**31.7***	34.6	50.8
UC-ARMA-SV	26.3	13.6	26.8	37.4	55.7

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 23: Sum of log predictive likelihoods relative to AR benchmark: Canada GDP deflator inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	28.5	6.8	1.3*	3.7*	4.0
AR-ARMA	11.9**	3.4**	-2.6**	25.8**	33.0**
AR-MA-SV	33.7	6.1	0.8*	2.9*	3.1
AR-ARMA-SV	35.5**	**15.1****	**13.9****	**28.7****	**35.4****
UC	-67.2**	-68.4**	-60.3**	-57.1**	-46.1**
UC-SV	33.0	14.4	6.9**	9.8**	11.1*
UC-ARMA	14.0**	-0.3**	13.8**	26.6	31.7*
UC-MA-SV	35.5	12.1	6.5**	11.4**	11.2*
UC-ARMA-SV	**37.2**	0.1	2.3**	10.7**	15.1*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 24: Sum of log predictive likelihoods relative to AR benchmark: France GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	66.7**	60.0**	65.1**	57.7**	58.2*
AR-ARMA	19.7**	-2.8**	2.3**	8.2**	14.3**
AR-MA-SV	68.3**	59.8**	64.6**	57.4**	58.4*
AR-ARMA-SV	74.0**	57.6**	**66.2****	**69.4***	**72.3**
UC	-3.8**	4.6**	17.4**	23.1**	25.5**
UC-SV	69.7**	**59.9****	64.3**	59.9**	56.5**
UC-ARMA	3.1**	9.6**	23.5**	31.9**	37.8*
UC-MA-SV	**70.6****	58.0**	62.4**	58.8**	56.1**
UC-ARMA-SV	3.1**	9.6**	23.5**	31.9**	37.8**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 25: Sum of log predictive likelihoods relative to AR benchmark: Germany GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	**15.5****	**15.0****	19.5**	17.3*	16.8*
AR-ARMA	4.3**	-12.1**	-20.9**	-29.4**	-36.0**
AR-MA-SV	15.4**	14.2**	18.0**	15.6**	15.3*
AR-ARMA-SV	11.2**	2.3**	1.8**	-2.8**	-3.7*
UC	-5.2**	-3.0**	4.3**	4.2**	4.5*
UC-SV	13.4**	13.7**	**21.6****	**20.3***	**21.4**
UC-ARMA	-3.1**	-3.2**	4.5**	6.1*	7.9*
UC-MA-SV	13.4**	14.0**	20.9**	19.3**	20.3
UC-ARMA-SV	13.9**	13.9**	19.8**	18.0**	19.1*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 26: Sum of log predictive likelihoods relative to AR benchmark: Italy GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	-1.8**	-1.6*	-2.0*	-3.6	-3.8
AR-ARMA	6.6**	1.4*	0.3	-0.8	-1.1
AR-MA-SV	-0.5**	-1.6*	-2.1*	-3.8	-3.8
AR-ARMA-SV	3.5**	-0.4*	-1.6*	-3.4	-3.6
UC	7.6**	4.1**	3.8*	3.7	3.4
UC-SV	11.8**	7.5**	5.8	3.5	2.3
UC-ARMA	10.2**	6.9**	6.5*	**6.5**	**6.3**
UC-MA-SV	13.0**	9.5**	7.9	5.2	4.1
UC-ARMA-SV	**11.9****	**10.3****	**8.7**	6.1	4.9

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 27: Sum of log predictive likelihoods relative to AR benchmark: Japan GDP deflator inflation

	$k=1$	$k=4$	$k=8$	$k=12$	$k=16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	7.9	5.7	7.5	10.6	8.3
AR-ARMA	-9.1	-1.7	-6.0	-2.7	-18.4
AR-MA-SV	8.0	5.9	7.5	10.8	8.4
AR-ARMA-SV	8.4	7.0	8.8	**12.3**	**9.0**
UC	8.1	**9.1**	7.4	6.3	3.6
UC-SV	7.7	7.3	9.3	11.1	9.1
UC-ARMA	-4.9*	-3.9*	-6.0	-9.5	-5.9
UC-MA-SV	**9.0**	7.3	9.1	10.8	8.7
UC-ARMA-SV	8.6	7.4	**9.5**	11.0	8.8

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 28: Sum of log predictive likelihoods relative to AR benchmark: UK GDP deflator inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	21.1**	17.3**	**60.8****	**51.7****	**51.9***
AR-ARMA	45.3**	69.7**	48.3**	37.9**	26.2**
AR-MA-SV	41.8**	21.1**	59.2**	50.9**	51.3*
AR-ARMA-SV	**57.7****	**72.3****	34.4**	15.0**	-0.9*
UC	-10.2**	23.8**	27.5**	25.9*	23.9*
UC-SV	8.0**	42.6**	48.8**	52.3**	55.3*
UC-ARMA	-7.5**	23.8**	27.0**	29.3**	29.9*
UC-MA-SV	6.8**	42.0**	48.1**	52.6**	55.0*
UC-ARMA-SV	8.1**	10.1**	9.7**	12.2**	16.3**

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

Table 29: Sum of log predictive likelihoods relative to AR benchmark: US GDP deflator inflation

	$k = 1$	$k = 4$	$k = 8$	$k = 12$	$k = 16$
AR	0.0	0.0	0.0	0.0	0.0
AR-SV	15.5**	34.6**	38.3**	38.9*	42.0
AR-ARMA	13.2**	35.4**	48.6**	60.9**	68.8**
AR-MA-SV	17.2**	28.1**	29.9**	29.6*	31.6
AR-ARMA-SV	**18.8****	**40.7****	**59.7****	**71.6****	**80.8****
UC	-4.8**	13.8*	17.3	10.5	6.3
UC-SV	17.5**	35.3**	35.0**	28.3*	25.2
UC-ARMA	4.9**	13.5**	17.3**	19.2**	20.6**
UC-MA-SV	14.1**	31.6**	33.3**	31.5**	32.2*
UC-ARMA-SV	18.1**	40.7**	49.6**	54.6**	58.6*

Note: ** and * indicate rejection of equal forecast accuracy relative to AR(m) at significance level 0.05 and 0.1, respectively, when using an asymptotic test in Diebold and Mariano (1995).

References

Francis X. Diebold and Roberto S. Mariano. Comparing predictive accuracy. *Journal of Business and Econometric Statistics*, 13(3):134–144, 1995.