

# Multistep Forecasting in the Presence of Location Shifts

## Empirical Application: supplementary tables

August, 2014

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# 1 Median Ratios of Absolute Forecast Errors (MRAFE) ordered by variables

## 1.1 Windows of 25 observations









## 1.2 Windows of 40 observations











### 1.3 Expanding windows of observations











## 2 Ratios of square-root MSFE (RMSFE) ordered by variables

### 2.1 Windows of 25 observations









## 2.2 Windows of 40 observations











## 2.3 Expanding windows of observations









### 3 Median ratios of Absolute Forecast Errors and Ratios of average square-root MSFE ordered according to break dates

#### 3.1 Windows of 25 observations



Median Ratios of Absolute Forecast Errors																									
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																									
<b>Without Intercept Correction</b>																									
$k \in$	$mediank$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[1, 3]	3.0	0.41	0.59	0.51	0.63	1.00	0.98	0.92	0.82	0.79	0.94	0.83	0.81	0.79	0.92	0.70	0.63	0.95	0.85	0.81	0.86	0.95	0.75	0.67	0.64
[4, 7]	5.0	0.46	0.45	0.53	0.58	1.00	0.99	0.95	0.89	0.65	0.74	0.72	0.72	0.65	0.63	0.64	0.60	1.00	0.93	0.98	1.01	1.00	0.86	0.83	0.67
[8, 11]	9.0	0.36	0.47	0.57	0.68	1.00	1.01	0.98	0.95	0.63	0.76	0.75	0.72	0.63	0.67	0.63	0.63	0.88	1.02	0.89	0.96	0.88	0.90	0.83	0.69
[12, 15]	13.0	0.44	0.53	0.61	0.69	1.00	1.01	1.00	0.99	0.67	0.69	0.80	0.87	0.67	0.58	0.77	0.63	1.06	0.96	0.90	0.95	1.06	0.84	0.70	0.63
[16, 19]	18.0	0.45	0.57	0.60	0.51	1.00	0.99	0.97	0.91	0.77	0.86	0.85	0.85	0.77	0.81	0.77	0.59	0.99	0.92	0.91	0.85	0.99	0.73	0.74	0.58
<b>With Intercept Correction</b>																									
$k \in$	$mediank$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	1.00	0.86	0.83	0.67	0.73	0.75	0.76	0.93	0.63	0.58	0.64	0.57	0.63	0.67	0.81	0.95	0.83	1.00	0.60	0.48	0.83	0.99	0.83	0.94
[4, 7]	5.0	0.88	0.90	0.83	0.69	0.70	0.79	0.87	0.93	0.57	0.60	0.67	0.60	0.57	0.79	0.87	0.88	0.71	0.65	0.65	0.51	0.71	0.74	0.82	0.86
[8, 11]	9.0	1.06	0.84	0.70	0.63	0.81	0.85	0.95	0.96	0.56	0.71	0.60	0.53	0.56	0.81	0.89	0.93	0.80	0.83	0.73	0.60	0.80	0.86	0.80	0.92
[12, 15]	13.0	0.99	0.73	0.74	0.58	0.93	1.02	0.92	0.89	0.89	0.70	0.67	0.60	0.89	0.76	0.85	0.91	0.91	0.78	0.65	0.60	0.91	0.93	0.86	0.92
[16, 19]	18.0	0.97	0.83	0.77	0.69	0.99	1.05	0.94	0.81	0.75	0.70	0.70	0.51	0.75	0.77	0.80	0.75	0.98	0.79	0.70	0.50	0.98	0.99	0.89	0.75
<b>Ratios of the Root Mean Square Errors</b>																									
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																									
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[1, 3]	3.0	0.82	1.04	0.96	1.04	1.00	0.96	0.91	0.79	0.74	0.94	0.82	0.24	0.74	0.79	0.73	0.69	0.78	0.57	0.23	0.02	0.78	0.89	0.74	0.70
[4, 7]	5.4	0.82	0.90	1.00	1.02	1.00	1.00	1.00	0.82	0.66	0.75	0.47	0.01	0.66	0.68	0.68	0.64	0.90	0.92	0.91	0.93	0.90	0.84	0.77	0.69
[8, 11]	9.5	0.76	0.90	1.20	1.89	1.00	1.03	1.21	1.57	0.67	0.71	0.24	0.01	0.67	0.72	0.79	1.17	0.74	0.88	1.04	1.60	0.74	0.85	0.96	1.21
[12, 15]	13.4	0.67	0.75	0.97	1.12	1.00	0.97	0.98	0.91	0.55	0.64	0.75	0.87	0.55	0.52	0.70	0.67	0.79	0.79	0.86	0.88	0.79	0.62	0.71	0.68
[16, 19]	17.6	0.79	0.95	1.06	0.93	1.00	1.00	0.95	0.82	0.68	0.83	0.84	0.82	0.68	0.77	0.75	0.66	0.84	0.90	0.94	0.88	0.84	0.82	0.76	0.66
<b>With Intercept Correction</b>																									
$k \in$	$mediank$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[1, 3]	3.0	0.76	0.76	0.80	0.81	0.56	0.62	0.68	0.84	0.50	0.53	0.64	0.24	0.50	0.57	0.73	0.80	0.57	0.39	0.21	0.02	0.57	0.76	0.74	0.75
[4, 7]	5.4	0.85	0.79	0.86	0.92	0.76	0.76	0.87	0.81	0.57	0.62	0.43	0.01	0.57	0.66	0.76	0.86	0.75	0.67	0.63	0.55	0.75	0.78	0.80	0.84
[8, 11]	9.5	0.93	0.91	0.87	0.81	0.85	0.82	1.03	1.50	0.60	0.60	0.23	0.01	0.60	0.69	0.88	1.54	0.85	0.75	0.77	0.99	0.85	0.85	0.91	1.49
[12, 15]	13.4	0.84	0.83	0.88	0.75	0.93	0.92	0.89	0.90	0.71	0.58	0.58	0.61	0.71	0.59	0.75	0.85	0.89	0.57	0.53	0.52	0.89	0.88	0.92	0.96
[16, 19]	17.6	0.82	0.79	0.79	0.76	0.84	0.80	0.83	0.72	0.67	0.54	0.56	0.57	0.67	0.57	0.59	0.77	0.78	0.72	0.65	0.51	0.78	0.86	0.86	0.80

Table 25: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(1) models estimated over windows of 25 observation.

Median Ratios of Absolute Forecast Errors																									
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																									
<b>Without Intercept Correction</b>																									
$k \in$	$median_k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[1, 3]	3.0	0.44	0.63	0.56	0.70	1.00	0.98	0.88	0.86	0.66	0.92	0.87	0.81	0.66	0.85	0.66	0.70	0.89	0.83	0.76	1.01	0.89	0.87	0.69	0.74
[4, 7]	5.0	0.45	0.48	0.55	0.62	1.00	0.99	0.93	0.85	0.62	0.69	0.68	0.70	0.62	0.68	0.59	0.61	0.88	0.93	0.92	1.00	0.88	0.84	0.77	0.66
[8, 11]	9.0	0.35	0.47	0.53	0.68	1.00	1.00	0.97	0.91	0.51	0.67	0.67	0.70	0.51	0.63	0.62	0.63	0.84	0.89	0.84	0.95	0.84	0.94	0.82	0.65
[12, 15]	13.0	0.43	0.48	0.60	0.68	1.00	1.02	0.99	0.97	0.58	0.63	0.82	0.90	0.58	0.65	0.75	0.60	0.78	0.78	0.79	0.89	0.78	0.72	0.68	0.60
[16, 19]	18.0	0.49	0.58	0.60	0.53	1.00	0.99	0.93	0.86	0.73	0.85	0.86	0.88	0.73	0.79	0.71	0.58	0.85	0.80	0.84	0.83	0.85	0.76	0.74	0.59
<b>With Intercept Correction</b>																									
		mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	0.88	0.84	0.77	0.66	0.66	0.85	0.82	0.96	0.51	0.62	0.59	0.53	0.51	0.79	0.92	1.01	0.76	0.93	0.74	0.60	0.76	0.87	0.87	1.01
[4, 7]	5.0	0.84	0.94	0.82	0.65	0.75	0.75	0.86	0.86	0.72	0.75	0.75	0.68	0.72	0.80	0.91	0.93	0.91	0.88	0.83	0.56	0.91	0.85	0.90	0.93
[8, 11]	9.0	0.78	0.72	0.68	0.60	0.83	0.79	0.94	0.92	0.73	0.81	0.76	0.63	0.73	0.90	0.97	0.94	0.87	0.91	0.85	0.64	0.87	0.97	0.97	0.94
[12, 15]	13.0	0.85	0.76	0.74	0.59	0.93	0.98	0.91	0.88	0.88	0.82	0.74	0.63	0.88	0.91	1.00	0.96	1.09	0.88	0.82	0.69	1.09	1.10	1.00	0.96
[16, 19]	18.0	0.88	0.87	0.77	0.68	0.88	0.97	0.89	0.79	0.95	0.95	0.76	0.51	0.95	0.91	0.99	0.81	0.94	0.98	0.82	0.55	0.94	1.05	0.94	0.81
<b>Ratios of the Root Mean Square Errors</b>																									
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																									
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[1, 3]	3.0	0.79	1.10	1.05	1.25	1.00	1.13	0.94	0.88	0.48	0.76	0.44	0.03	0.48	0.91	0.74	0.82	0.81	0.96	0.89	1.01	0.81	0.98	0.79	0.82
[4, 7]	5.4	0.88	0.92	1.04	1.11	1.00	0.92	0.98	0.79	0.60	0.50	0.07	0.00	0.60	0.70	0.68	0.70	0.80	0.86	0.93	1.01	0.80	0.72	0.76	0.72
[8, 11]	9.5	0.75	0.91	1.23	2.18	1.00	1.04	1.21	1.67	0.59	0.73	0.89	1.38	0.59	0.67	0.80	1.34	0.70	0.84	1.02	1.67	0.70	0.87	0.93	1.36
[12, 15]	13.4	0.71	0.77	1.00	1.28	1.00	1.02	0.90	0.94	0.50	0.53	0.76	0.96	0.50	0.53	0.70	0.76	0.59	0.63	0.79	0.98	0.59	0.56	0.70	0.76
[16, 19]	17.6	0.79	0.96	1.06	0.99	1.00	0.96	0.92	0.73	0.56	0.77	0.73	0.22	0.56	0.69	0.73	0.69	0.75	0.83	0.84	0.77	0.75	0.73	0.74	0.69
<b>With Intercept Correction</b>																									
		RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[1, 3]	3.0	0.81	0.77	0.80	0.80	0.58	0.74	0.74	0.93	0.42	0.57	0.41	0.03	0.42	0.71	0.75	0.92	0.72	0.81	0.65	0.61	0.72	0.82	0.83	0.93
[4, 7]	5.4	0.85	0.79	0.86	0.95	0.81	0.74	0.88	0.79	0.59	0.48	0.07	0.00	0.59	0.74	0.89	0.95	0.86	0.83	0.74	0.64	0.86	0.78	0.87	0.94
[8, 11]	9.5	0.95	0.93	0.84	0.82	0.85	0.84	1.05	1.64	0.69	0.75	0.76	1.05	0.69	0.83	1.09	1.77	0.99	0.93	0.86	1.13	0.99	1.01	1.14	1.77
[12, 15]	13.4	0.86	0.83	0.85	0.74	0.95	0.91	0.84	0.96	0.81	0.72	0.68	0.70	0.81	0.73	0.98	1.13	1.06	0.71	0.69	0.75	1.06	1.03	1.03	1.12
[16, 19]	17.6	0.83	0.78	0.78	0.75	0.86	0.79	0.82	0.70	0.75	0.75	0.65	0.22	0.75	0.72	0.88	0.85	0.85	0.79	0.68	0.53	0.85	0.85	0.90	0.84

Table 26: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(2) models estimated over windows of 25 observation.

Median Ratios of Absolute Forecast Errors																									
		$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$							
<b>Without Intercept Correction</b>																									
$k \in$	<i>mediank</i>	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[1, 3]	3.0	0.48	0.63	0.65	0.78	1.00	0.99	0.91	0.85	0.58	0.65	0.70	0.73	0.58	0.63	0.69	0.79	0.89	0.86	0.86	1.00	0.89	0.82	0.75	0.80
[4, 7]	5.0	0.46	0.56	0.60	0.66	1.00	0.94	0.91	0.86	0.52	0.66	0.63	0.65	0.52	0.57	0.62	0.68	0.86	0.90	0.91	0.98	0.86	0.76	0.78	0.70
[8, 11]	9.0	0.35	0.54	0.60	0.69	1.00	1.00	1.00	0.91	0.46	0.56	0.68	0.68	0.46	0.54	0.60	0.63	0.86	0.89	0.97	0.99	0.86	0.85	0.79	0.63
[12, 15]	13.0	0.49	0.45	0.61	0.67	1.00	1.00	0.96	0.90	0.49	0.64	0.74	0.81	0.49	0.56	0.68	0.57	0.64	0.69	0.80	0.86	0.64	0.70	0.70	0.58
[16, 19]	18.0	0.53	0.65	0.67	0.59	1.00	1.01	0.95	0.85	0.68	0.80	0.83	0.85	0.68	0.70	0.69	0.67	0.73	0.79	0.86	0.88	0.73	0.75	0.71	0.67
<b>With Intercept Correction</b>																									
		mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	0.86	0.76	0.78	0.70	0.86	0.70	0.90	0.95	0.60	0.64	0.75	0.74	0.60	0.65	1.06	1.16	0.90	0.76	0.74	0.57	0.90	0.87	0.91	1.16
[4, 7]	5.0	0.86	0.85	0.79	0.63	0.82	0.78	0.84	0.83	0.78	0.84	0.70	0.63	0.78	0.95	0.93	0.93	0.91	0.84	0.81	0.53	0.91	0.87	0.88	0.94
[8, 11]	9.0	0.64	0.70	0.70	0.58	0.87	0.77	0.91	0.85	0.65	0.76	0.80	0.72	0.65	0.81	0.98	0.93	0.90	0.93	0.84	0.60	0.90	0.88	0.98	0.93
[12, 15]	13.0	0.73	0.75	0.71	0.67	0.89	0.92	0.89	0.85	0.74	0.82	0.76	0.61	0.74	0.86	0.99	0.95	0.97	1.01	0.80	0.68	0.97	1.00	0.99	0.94
[16, 19]	18.0	0.77	0.90	0.73	0.73	0.93	0.97	0.94	0.80	0.86	0.87	0.83	0.55	0.86	0.93	1.05	0.89	1.00	1.00	0.86	0.61	1.00	1.04	1.05	0.89
<b>Ratios of Root Mean Square Errors</b>																									
		$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$							
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[1, 3]	3.0	0.90	1.07	1.29	1.73	1.00	1.01	1.05	0.96	0.65	0.75	0.62	0.10	0.65	0.68	0.84	1.12	0.85	0.89	1.02	0.86	0.85	0.84	0.92	1.12
[4, 7]	5.4	1.01	1.06	1.09	1.27	1.00	0.97	0.85	0.75	0.68	0.66	0.07	0.00	0.68	0.68	0.66	0.79	0.79	0.65	0.55	0.06	0.79	0.78	0.73	0.80
[8, 11]	9.5	0.91	0.97	1.34	2.82	1.00	1.01	1.09	1.67	0.57	0.55	0.15	0.01	0.57	0.56	0.84	1.72	0.82	0.92	1.10	1.95	0.82	0.87	0.95	1.73
[12, 15]	13.4	0.73	0.83	1.55	6.94	1.00	0.90	1.01	3.38	0.37	0.10	0.00	0.00	0.37	0.46	1.08	4.09	0.52	0.56	0.18	0.01	0.52	0.59	1.05	4.10
[16, 19]	17.6	0.83	1.03	1.21	1.31	1.00	1.02	0.93	0.67	0.41	0.45	0.00	0.00	0.41	0.69	0.75	0.91	0.68	0.75	0.76	0.36	0.68	0.78	0.80	0.91
<b>With Intercept Correction</b>																									
		RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[1, 3]	3.0	0.84	0.81	0.85	0.87	0.66	0.71	0.95	1.03	0.52	0.65	0.55	0.10	0.52	0.62	0.96	1.28	0.84	0.66	0.73	0.65	0.84	0.74	0.99	1.28
[4, 7]	5.4	0.93	0.80	0.87	0.98	0.84	0.80	0.81	0.72	0.76	0.66	0.07	0.00	0.76	0.75	0.86	1.06	0.91	0.60	0.49	0.06	0.91	0.88	0.84	1.07
[8, 11]	9.5	0.96	0.94	0.94	0.99	0.93	0.82	0.97	1.67	0.74	0.56	0.15	0.01	0.74	0.72	1.14	2.27	1.18	0.93	0.88	1.37	1.18	1.04	1.21	2.29
[12, 15]	13.4	0.86	0.85	0.88	0.83	0.96	0.87	0.95	3.48	0.47	0.10	0.00	0.00	0.47	0.55	1.51	6.05	1.04	0.79	0.18	0.01	1.04	1.06	1.57	6.09
[16, 19]	17.6	0.91	0.83	0.83	0.77	0.86	0.87	0.91	0.65	0.50	0.42	0.00	0.00	0.50	0.66	0.93	1.12	0.84	0.73	0.68	0.33	0.84	0.91	1.00	1.12

Table 27: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(4) models estimated over windows of 25 observation.

Median Ratios of Absolute Forecast Errors																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]
<b>Without Intercept Correction</b>																									
$k \in$	$median_k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[1, 3]	3.0	0.42	0.60	0.53	0.66	1.00	0.99	0.95	0.82	0.48	0.78	0.46	0.49	0.48	0.72	0.30	0.32	0.68	0.73	0.68	0.69	0.68	0.65	0.48	0.48
[4, 7]	5.0	0.47	0.52	0.57	0.61	1.00	0.98	0.96	0.90	0.30	0.22	0.25	0.21	0.30	0.17	0.20	0.16	0.77	0.79	0.82	0.76	0.77	0.68	0.61	0.43
[8, 11]	9.0	0.36	0.53	0.64	0.73	1.00	1.02	0.98	0.93	0.28	0.44	0.46	0.53	0.28	0.49	0.35	0.35	0.70	0.81	0.77	0.79	0.70	0.80	0.58	0.43
[12, 15]	13.0	0.45	0.53	0.66	0.75	1.00	1.02	0.99	0.96	0.49	0.55	0.67	0.72	0.49	0.48	0.54	0.47	0.64	0.57	0.51	0.59	0.64	0.43	0.29	0.23
[16, 19]	18.0	0.52	0.65	0.68	0.52	1.00	1.00	0.97	0.86	0.54	0.79	0.78	0.67	0.54	0.68	0.63	0.44	0.54	0.63	0.59	0.51	0.54	0.45	0.32	0.23
<b>With Intercept Correction</b>																									
$k \in$	$median_k$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	0.77	0.68	0.61	0.43	0.76	0.84	0.74	0.89	0.28	0.33	0.25	0.18	0.28	0.32	0.31	0.28	0.50	0.55	0.40	0.29	0.50	0.67	0.63	0.77
[4, 7]	5.0	0.70	0.80	0.58	0.43	0.80	0.81	0.90	0.92	0.13	0.11	0.12	0.09	0.13	0.14	0.24	0.25	0.55	0.50	0.50	0.30	0.55	0.58	0.68	0.65
[8, 11]	9.0	0.64	0.43	0.29	0.23	0.84	0.91	0.96	0.95	0.26	0.41	0.25	0.27	0.26	0.48	0.51	0.55	0.61	0.70	0.54	0.32	0.61	0.77	0.76	0.78
[12, 15]	13.0	0.54	0.45	0.32	0.23	0.91	1.08	0.90	0.87	0.59	0.58	0.43	0.33	0.59	0.76	0.70	0.73	0.50	0.36	0.27	0.22	0.50	0.45	0.44	0.48
[16, 19]	18.0	0.53	0.54	0.35	0.28	1.07	1.09	0.99	0.75	0.61	0.67	0.49	0.27	0.61	0.85	0.78	0.54	0.34	0.36	0.27	0.17	0.34	0.47	0.47	0.38
<b>Ratios of Root Mean Square Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[1, 3]	3.0	0.79	1.01	0.98	1.12	1.00	1.06	0.87	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[4, 7]	5.4	0.84	0.93	1.04	1.11	1.00	1.00	0.95	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	9.5	0.78	0.91	1.10	1.28	1.00	1.05	1.03	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[12, 15]	13.4	0.72	0.82	1.05	1.17	1.00	1.02	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[16, 19]	17.6	0.83	1.01	1.13	0.98	1.00	1.02	0.88	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>With Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[1, 3]	3.0	0.77	0.79	0.84	0.89	0.55	0.68	0.57	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[4, 7]	5.4	0.87	0.82	0.87	0.89	0.77	0.79	0.83	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	9.5	1.01	0.99	0.94	0.86	0.87	0.84	0.87	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[12, 15]	13.4	0.89	0.89	0.95	0.80	1.01	0.94	0.74	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[16, 19]	17.6	0.83	0.81	0.80	0.75	0.89	0.87	0.80	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 28: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR( $p$ ) models estimated over windows of 25 observation, where  $p$  is chosen by the AIC.

## 3.2 Windows of 40 observations

<b>Median Ratios of Absolute Forecast Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]				
<b>Without Intercept Correction</b>																									
$k \in$	<i>median</i> $k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[4, 7]	6.0	0.73	0.70	0.68	0.62	1.00	0.99	0.95	0.89	0.78	0.87	0.88	0.90	0.78	0.87	0.89	0.84	1.50	1.35	0.76	0.66	1.50	0.72	0.64	0.62
[8, 11]	9.0	0.53	0.62	0.65	0.62	1.00	1.01	1.03	0.88	0.66	0.79	0.79	0.83	0.66	0.77	0.79	0.74	1.39	1.50	1.35	0.82	1.39	1.33	0.67	0.62
[12, 15]	13.0	0.38	0.43	0.52	0.70	1.00	1.03	1.05	0.97	0.54	0.60	0.66	0.74	0.54	0.59	0.62	0.69	1.15	1.18	1.24	1.14	1.15	1.05	0.76	0.68
[16, 19]	18.0	0.38	0.38	0.58	0.70	1.00	1.04	1.12	1.08	0.53	0.48	0.53	0.57	0.53	0.50	0.51	0.52	1.13	1.36	1.38	1.38	1.13	1.17	1.23	0.61
[20, 29]	25.0	0.33	0.46	0.52	0.73	1.00	1.02	1.07	1.09	0.40	0.47	0.46	0.52	0.40	0.46	0.43	0.53	1.04	1.14	1.17	1.23	1.04	1.17	1.13	0.98
[30, 39]	32.5	0.41	0.49	0.53	0.58	1.00	1.03	1.02	1.09	0.37	0.42	0.39	0.40	0.37	0.41	0.52	0.60	1.02	1.05	1.02	1.12	1.02	0.98	0.95	1.06
<b>With Intercept Correction</b>																									
		mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	6.0	0.73	0.70	0.68	0.62	1.30	1.14	0.68	0.73	1.32	1.24	0.68	0.69	1.32	1.16	0.71	0.72	1.34	0.74	0.37	0.38	1.34	1.21	0.74	0.72
[4, 7]	9.0	0.53	0.62	0.65	0.62	1.03	0.90	0.98	0.89	1.08	0.96	1.10	0.84	1.08	0.94	1.08	0.96	1.08	1.08	0.63	0.38	1.08	1.37	1.11	0.85
[8, 11]	13.0	0.38	0.43	0.52	0.70	0.77	0.86	0.66	0.81	0.61	0.73	0.81	0.92	0.61	0.70	0.85	0.99	0.89	1.05	0.77	0.51	0.89	0.95	0.85	0.98
[12, 15]	18.0	0.38	0.38	0.58	0.70	0.71	0.87	0.87	1.13	0.63	0.88	0.98	1.00	0.63	0.92	0.95	1.09	0.78	1.04	1.04	0.77	0.78	1.06	0.97	1.13
[16, 19]	25.0	0.33	0.46	0.52	0.73	0.72	0.78	0.95	1.01	0.67	0.93	0.98	0.72	0.67	0.87	1.00	1.07	0.85	0.92	1.07	0.96	0.85	0.95	1.07	1.08
[30, 39]	33.0	0.41	0.49	0.53	0.58	0.70	0.80	1.09	0.94	0.64	0.68	0.41	0.36	0.64	0.81	1.04	0.99	0.75	0.88	1.08	0.98	0.75	0.88	1.09	1.01
<b>Ratios of Root Mean Square Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[4, 7]	6.4	1.03	1.39	1.07	1.07	1.00	1.00	0.92	0.88	0.79	0.89	0.92	0.95	0.79	0.88	0.90	0.86	1.10	0.93	0.43	0.14	1.10	0.74	0.64	0.71
[8, 11]	9.4	0.82	0.87	1.03	0.99	1.00	1.01	1.05	0.80	0.73	0.78	0.81	0.85	0.73	0.74	0.78	0.74	1.11	0.97	0.93	0.83	1.11	0.93	0.65	0.65
[12, 15]	13.5	0.59	0.79	0.87	1.14	1.00	1.05	1.09	0.93	0.62	0.67	0.68	0.79	0.62	0.63	0.64	0.69	1.07	1.10	1.08	0.99	1.07	1.04	0.85	0.69
[16, 19]	17.6	0.58	0.73	0.90	1.11	1.00	1.03	1.06	1.06	0.58	0.60	0.63	0.69	0.58	0.54	0.58	0.62	1.09	1.08	1.07	1.19	1.09	1.05	0.98	0.68
[20, 29]	24.6	0.65	0.78	0.96	1.17	1.00	1.02	1.05	1.06	0.53	0.57	0.61	0.69	0.53	0.50	0.56	0.65	1.02	1.04	1.05	1.04	1.02	1.02	1.04	0.87
[30, 39]	32.5	0.76	0.87	1.00	0.94	1.00	0.98	0.97	0.99	0.53	0.59	0.60	0.27	0.53	0.53	0.63	0.67	1.03	1.04	0.99	1.01	1.03	0.98	0.94	1.00
<b>With Intercept Correction</b>																									
		RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[4, 7]	6.4	0.97	1.00	0.67	0.68	0.97	0.97	0.66	0.69	1.01	1.03	0.73	0.75	1.01	1.06	0.70	0.74	0.91	0.59	0.28	0.13	0.91	1.04	0.75	0.75
[8, 11]	9.4	0.82	0.75	0.87	0.77	0.82	0.71	0.84	0.83	0.75	0.73	0.91	0.87	0.75	0.72	0.89	0.94	0.89	0.80	0.48	0.38	0.89	0.82	0.94	0.88
[12, 15]	13.5	0.80	0.92	0.98	0.98	0.80	0.89	0.82	0.90	0.61	0.89	0.98	0.94	0.61	0.90	0.95	0.99	0.90	1.01	0.72	0.57	0.90	0.98	0.96	1.00
[16, 19]	17.6	0.70	0.80	0.96	1.04	0.70	0.79	0.84	0.91	0.57	0.78	0.96	0.81	0.57	0.80	0.90	1.02	0.80	0.89	1.01	0.65	0.80	0.89	0.95	1.06
[20, 29]	24.6	0.67	0.78	0.91	0.93	0.67	0.75	0.85	0.88	0.63	0.84	0.79	0.64	0.63	0.79	0.89	0.94	0.74	0.85	0.95	0.83	0.74	0.88	0.96	0.95
[30, 39]	32.5	0.68	0.76	0.94	0.86	0.68	0.74	0.90	0.88	0.68	0.61	0.50	0.25	0.68	0.77	0.96	0.87	0.75	0.82	0.98	0.87	0.75	0.82	0.93	0.89

Table 29: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(1) models estimated over windows of 40 observation.

<b>Median Ratios of Absolute Forecast Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]				
<b>Without Intercept Correction</b>																									
$k \in$	<i>median</i> $k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[4, 7]	6.0	0.70	0.68	0.70	0.65	1.00	1.00	0.91	0.85	0.76	0.84	0.89	0.91	0.76	0.86	0.91	0.83	0.84	0.80	0.68	0.68	0.84	0.67	0.65	0.68
[8, 11]	9.0	0.46	0.56	0.63	0.66	1.00	1.03	0.99	0.78	0.61	0.72	0.77	0.83	0.61	0.80	0.74	0.72	1.22	1.07	1.10	0.85	1.22	0.92	0.59	0.65
[12, 15]	13.0	0.37	0.48	0.48	0.68	1.00	1.00	0.98	0.90	0.52	0.54	0.63	0.74	0.52	0.60	0.59	0.69	1.10	1.00	1.04	0.90	1.10	1.02	0.63	0.61
[16, 19]	18.0	0.38	0.35	0.51	0.66	1.00	0.98	0.99	1.02	0.55	0.42	0.52	0.54	0.55	0.50	0.45	0.49	0.98	0.95	1.02	1.26	0.98	0.95	0.87	0.51
[20, 29]	25.0	0.33	0.43	0.49	0.66	1.00	1.03	1.02	1.03	0.33	0.42	0.44	0.48	0.33	0.40	0.39	0.48	0.98	0.99	1.07	1.14	0.98	1.02	1.01	0.82
[30, 39]	32.5	0.40	0.48	0.53	0.57	1.00	1.03	0.97	1.04	0.34	0.42	0.44	0.46	0.34	0.50	0.52	0.59	0.97	0.97	0.97	1.05	0.97	0.95	0.93	1.02
<b>With Intercept Correction</b>																									
		mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	6.0	0.70	0.68	0.70	0.65	1.24	1.07	0.79	0.81	1.31	1.09	0.74	0.77	1.31	1.06	0.78	0.86	1.43	1.09	0.60	0.58	1.43	1.22	0.86	0.78
[4, 7]	9.0	0.46	0.56	0.63	0.66	1.06	0.97	0.98	0.81	0.97	0.84	0.98	0.85	0.97	0.79	1.09	1.03	1.01	0.97	0.47	0.37	1.01	1.07	1.13	0.87
[8, 11]	13.0	0.37	0.48	0.48	0.68	0.81	0.80	0.67	0.75	0.71	0.75	0.68	0.77	0.71	0.66	0.70	0.92	0.92	0.90	0.61	0.46	0.92	0.90	0.82	0.92
[12, 15]	18.0	0.38	0.35	0.51	0.66	0.65	0.82	0.83	0.90	0.65	0.61	0.84	0.76	0.65	0.65	0.77	1.02	0.79	0.97	0.94	0.60	0.79	0.91	0.92	1.03
[16, 19]	25.0	0.33	0.43	0.49	0.66	0.72	0.76	0.84	0.94	0.60	0.75	0.76	0.64	0.60	0.73	0.88	1.00	0.89	0.88	0.97	0.82	0.89	0.85	0.97	0.98
[30, 39]	33.0	0.40	0.48	0.53	0.57	0.68	0.80	1.02	0.88	0.77	0.66	0.56	0.50	0.77	0.90	1.03	0.92	0.72	0.94	1.02	0.91	0.72	0.98	1.01	0.93
<b>Ratios of Root Mean Square Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[4, 7]	6.4	1.01	1.39	1.26	1.47	1.00	0.99	1.00	1.06	0.74	0.88	1.08	1.30	0.74	0.95	1.03	1.11	0.68	0.74	0.79	0.92	0.68	0.64	0.74	0.98
[8, 11]	9.4	0.82	0.86	1.00	1.02	1.00	1.08	0.98	0.73	0.69	0.72	0.77	0.87	0.69	0.79	0.72	0.73	1.01	0.92	0.92	0.87	1.01	0.78	0.59	0.67
[12, 15]	13.5	0.58	0.74	0.82	1.11	1.00	1.00	1.01	0.84	0.57	0.58	0.65	0.78	0.57	0.61	0.58	0.65	1.02	0.95	0.97	0.91	1.02	0.93	0.69	0.68
[16, 19]	17.6	0.56	0.70	0.87	1.07	1.00	1.02	1.02	1.00	0.49	0.50	0.61	0.66	0.49	0.51	0.52	0.58	1.02	1.00	1.01	1.14	1.02	0.96	0.87	0.62
[20, 29]	24.6	0.64	0.76	0.93	1.14	1.00	1.02	1.02	1.03	0.43	0.48	0.59	0.63	0.43	0.45	0.52	0.63	0.95	0.98	1.01	1.01	0.95	0.98	0.99	0.78
[30, 39]	32.5	0.75	0.88	0.98	0.92	1.00	1.06	0.95	0.97	0.47	0.53	0.59	0.22	0.47	0.53	0.63	0.66	0.96	0.99	0.97	0.99	0.96	1.00	0.91	0.97
<b>With Intercept Correction</b>																									
		RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[4, 7]	6.4	0.97	0.97	0.67	0.70	0.97	0.94	0.77	0.88	1.00	1.05	0.84	1.01	1.00	1.02	0.82	1.00	1.19	0.81	0.61	0.65	1.19	1.07	0.88	1.03
[8, 11]	9.4	0.83	0.72	0.81	0.72	0.83	0.75	0.82	0.79	0.74	0.70	0.86	0.89	0.74	0.69	0.86	0.94	0.93	0.55	0.43	0.39	0.93	0.88	0.93	0.90
[12, 15]	13.5	0.81	0.85	0.89	0.90	0.81	0.84	0.79	0.85	0.59	0.80	0.88	0.85	0.59	0.76	0.82	0.91	0.94	0.96	0.54	0.53	0.94	0.94	0.95	0.98
[16, 19]	17.6	0.72	0.77	0.90	0.96	0.72	0.78	0.84	0.87	0.57	0.70	0.88	0.71	0.57	0.71	0.77	0.96	0.82	0.86	0.87	0.59	0.82	0.85	0.93	1.02
[20, 29]	24.6	0.70	0.73	0.86	0.89	0.70	0.75	0.83	0.86	0.57	0.69	0.65	0.57	0.57	0.66	0.83	0.91	0.77	0.86	0.93	0.76	0.77	0.85	0.90	0.92
[30, 39]	32.5	0.70	0.75	0.92	0.84	0.70	0.82	0.90	0.87	0.70	0.53	0.53	0.21	0.70	0.74	0.96	0.85	0.75	0.81	0.96	0.85	0.75	0.83	0.89	0.86

Table 30: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(2) models estimated over windows of 40 observation.

<b>Median Ratios of Absolute Forecast Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]				
<b>Without Intercept Correction</b>																									
$k \in$	<i>median</i> $k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[4, 7]	6.0	0.70	0.87	0.79	0.72	1.00	0.96	0.91	0.77	0.76	0.87	0.97	0.94	0.76	0.86	0.92	0.75	0.62	0.72	0.76	0.71	0.62	0.72	0.76	0.71
[8, 11]	9.0	0.43	0.44	0.61	0.61	1.00	0.96	0.87	0.53	0.56	0.69	0.77	0.83	0.56	0.70	0.70	0.62	0.74	0.67	0.64	0.56	0.74	0.56	0.54	0.60
[12, 15]	13.0	0.34	0.51	0.51	0.71	1.00	0.99	0.95	0.76	0.53	0.58	0.59	0.80	0.53	0.56	0.56	0.68	0.89	0.90	0.82	0.85	0.89	0.80	0.58	0.68
[16, 19]	18.0	0.34	0.39	0.53	0.67	1.00	1.00	0.98	0.96	0.40	0.36	0.47	0.56	0.40	0.35	0.40	0.51	0.87	0.88	0.95	1.09	0.87	0.91	0.74	0.50
[20, 29]	25.0	0.33	0.44	0.51	0.68	1.00	1.02	1.02	1.02	0.25	0.33	0.39	0.46	0.25	0.29	0.38	0.46	0.87	0.93	0.97	1.04	0.87	0.97	0.95	0.68
[30, 39]	32.5	0.39	0.45	0.52	0.53	1.00	1.01	0.96	0.98	0.33	0.44	0.44	0.47	0.33	0.41	0.50	0.56	0.98	0.93	0.97	0.97	0.98	0.97	0.91	0.91
<b>With Intercept Correction</b>																									
$h \in$		mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	6.0	0.70	0.87	0.79	0.72	1.32	1.21	0.92	0.79	1.20	1.14	0.97	0.91	1.20	1.16	0.99	0.88	1.47	1.30	1.05	0.97	1.47	1.30	1.05	0.97
[4, 7]	9.0	0.43	0.44	0.61	0.61	0.96	0.72	0.79	0.62	0.84	0.63	0.87	0.80	0.84	0.62	0.84	0.81	1.06	0.52	0.44	0.38	1.06	0.93	1.02	0.84
[8, 11]	13.0	0.34	0.51	0.51	0.71	0.81	0.79	0.72	0.71	0.59	0.71	0.81	0.70	0.59	0.69	0.70	0.90	0.86	0.92	0.50	0.49	0.86	0.84	0.84	0.96
[12, 15]	18.0	0.34	0.39	0.53	0.67	0.78	0.88	0.87	0.84	0.66	0.71	0.87	0.68	0.66	0.66	0.61	1.00	0.83	1.00	0.91	0.51	0.83	0.97	0.93	1.01
[16, 19]	25.0	0.33	0.44	0.51	0.68	0.72	0.72	0.82	0.94	0.51	0.60	0.62	0.54	0.51	0.49	0.80	0.97	0.87	0.87	0.96	0.73	0.87	0.86	0.89	0.96
[30, 39]	33.0	0.39	0.45	0.52	0.53	0.75	0.82	1.00	0.87	0.80	0.76	0.78	0.65	0.80	0.93	0.99	0.85	0.78	0.88	0.98	0.85	0.78	0.92	0.93	0.87
<b>Ratios of Root Mean Square Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[4, 7]	6.4	1.03	1.43	1.89	5.35	1.00	0.99	1.33	3.21	0.81	0.94	1.59	4.71	0.81	0.92	1.47	3.73	0.56	0.66	1.12	3.56	0.56	0.66	1.12	3.56
[8, 11]	9.4	0.76	0.80	0.93	0.94	1.00	0.94	0.77	0.52	0.65	0.66	0.69	0.81	0.65	0.64	0.60	0.61	0.42	0.48	0.03	0.00	0.42	0.49	0.54	0.62
[12, 15]	13.5	0.58	0.76	0.81	1.13	1.00	0.98	0.93	0.71	0.55	0.59	0.58	0.78	0.55	0.57	0.50	0.61	0.80	0.87	0.65	0.19	0.80	0.74	0.58	0.69
[16, 19]	17.6	0.54	0.68	0.87	1.06	1.00	0.97	0.97	0.91	0.40	0.41	0.52	0.66	0.40	0.37	0.43	0.57	0.91	0.89	0.93	1.09	0.91	0.86	0.70	0.60
[20, 29]	24.6	0.66	0.76	0.95	1.15	1.00	1.01	1.01	1.00	0.32	0.38	0.43	0.11	0.32	0.32	0.48	0.63	0.90	0.93	0.99	1.01	0.90	0.93	0.91	0.72
[30, 39]	32.5	0.76	0.85	1.01	0.92	1.00	0.99	0.97	0.97	0.09	0.01	0.00	0.00	0.09	0.57	0.65	0.66	0.95	0.93	0.97	0.96	0.95	0.91	0.93	0.90
<b>With Intercept Correction</b>																									
$h \in$		RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[4, 7]	6.4	1.06	1.01	0.77	0.94	1.06	1.06	1.21	2.89	1.00	1.08	1.24	3.64	1.00	1.11	1.30	3.66	1.24	1.09	1.32	3.74	1.24	1.09	1.32	3.74
[8, 11]	9.4	0.84	0.72	0.73	0.64	0.84	0.69	0.72	0.56	0.70	0.65	0.78	0.77	0.70	0.63	0.75	0.79	0.49	0.34	0.03	0.00	0.49	0.72	0.86	0.83
[12, 15]	13.5	0.82	0.87	0.83	0.85	0.82	0.85	0.78	0.78	0.57	0.78	0.81	0.79	0.57	0.73	0.69	0.83	0.79	0.87	0.40	0.18	0.79	0.76	0.85	1.00
[16, 19]	17.6	0.77	0.77	0.89	0.95	0.77	0.77	0.84	0.84	0.50	0.62	0.79	0.65	0.50	0.52	0.56	0.87	0.87	0.86	0.67	0.58	0.87	0.83	0.83	1.02
[20, 29]	24.6	0.72	0.75	0.84	0.89	0.72	0.77	0.84	0.86	0.44	0.52	0.44	0.11	0.44	0.40	0.71	0.93	0.76	0.83	0.91	0.72	0.76	0.84	0.86	0.92
[30, 39]	32.5	0.73	0.80	0.94	0.84	0.73	0.81	0.94	0.87	0.09	0.01	0.00	0.00	0.09	0.84	0.99	0.85	0.75	0.81	0.93	0.81	0.75	0.78	0.89	0.82

Table 31: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(4) models estimated over windows of 40 observation.



<b>Median Ratios of Absolute Forecast Errors</b>																														
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																														
<b>Without Intercept Correction</b>																														
$k \in$	$median_k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost								
[4, 7]	6.0	0.74	0.72	0.68	0.63	1.00	0.99	0.95	0.89	0.80	0.88	0.88	0.90	0.80	0.88	0.91	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	9.0	0.50	0.62	0.63	0.65	1.00	0.99	1.01	0.88	0.68	0.80	0.78	0.79	0.68	0.78	0.77	0.73	0.81	0.61	0.51	0.36	0.81	0.33	0.37	0.37	0.81	0.33	0.37	0.37	
[12, 15]	13.0	0.38	0.50	0.52	0.72	1.00	1.02	1.05	0.97	0.58	0.65	0.63	0.71	0.58	0.62	0.63	0.71	1.15	0.91	0.81	0.82	1.15	1.05	0.62	0.70	1.15	1.05	0.62	0.70	
[16, 19]	18.0	0.37	0.40	0.60	0.70	1.00	0.99	1.13	1.09	0.50	0.48	0.55	0.56	0.50	0.49	0.55	0.57	1.13	1.09	1.08	1.18	1.13	0.96	0.71	0.59	1.13	0.96	0.71	0.59	
[20, 29]	25.0	0.35	0.47	0.56	0.81	1.00	1.01	1.09	1.10	0.41	0.50	0.48	0.59	0.41	0.47	0.51	0.63	1.01	1.07	1.08	1.16	1.01	1.11	1.01	0.75	1.01	1.11	1.01	0.75	
[30, 39]	32.5	0.45	0.51	0.62	0.62	1.00	1.03	1.03	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	1.06	1.07	1.14	1.02	1.04	1.02	1.06	1.02	1.04	1.02	1.06	
<b>With Intercept Correction</b>																														
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																														
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost								
[4, 7]	6.4	1.03	1.37	1.08	1.08	1.00	0.99	0.90	0.87	0.80	0.88	0.92	0.94	0.80	0.86	0.89	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	9.4	0.81	0.86	1.02	0.98	1.00	0.98	1.00	0.80	0.74	0.78	0.80	0.79	0.74	0.73	0.76	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[12, 15]	13.5	0.62	0.83	0.90	1.15	1.00	1.00	1.12	0.92	0.67	0.73	0.69	0.73	0.67	0.69	0.66	0.70	0.90	1.00	0.88	0.79	0.90	1.03	0.68	0.70	0.90	1.03	0.68	0.70	
[16, 19]	17.6	0.60	0.77	0.93	1.09	1.00	0.97	1.08	1.07	0.55	0.57	0.60	0.60	0.55	0.51	0.58	0.61	1.04	1.02	1.00	0.98	1.04	1.09	0.81	0.62	1.04	1.09	0.81	0.62	
[20, 29]	24.6	0.69	0.83	0.98	1.21	1.00	1.03	1.07	1.09	0.49	0.59	0.58	0.55	0.49	0.52	0.58	0.67	0.93	0.95	0.94	0.99	0.93	1.04	1.01	0.77	0.93	1.04	1.01	0.77	
[30, 39]	32.5	0.77	0.89	1.04	0.96	1.00	0.97	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.01	1.04	1.02	1.00	0.95	0.99	1.02	1.00	0.95	0.99	
<b>With Intercept Correction</b>																														
$h \in \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]   \{1\} \{2\} [3, 6] [7, 12]$																														
$k \in$	$\bar{k}$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC								
[4, 7]	6.4	0.97	0.99	0.68	0.68	0.97	1.01	0.66	0.69	1.01	1.02	0.73	0.75	1.01	1.06	0.70	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	9.4	0.82	0.75	0.87	0.77	0.82	0.73	0.80	0.80	0.72	0.70	0.90	0.82	0.72	0.72	0.84	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[12, 15]	13.5	0.85	0.99	1.03	0.99	0.85	0.95	0.86	0.89	0.58	0.85	0.99	0.79	0.58	0.91	0.97	0.97	0.96	1.05	0.47	0.48	0.96	0.94	1.02	1.01	0.96	0.94	1.02	1.01	
[16, 19]	17.6	0.75	0.87	1.01	1.03	0.75	0.87	0.88	0.92	0.59	0.81	0.97	0.61	0.59	0.84	0.77	0.99	0.88	0.94	0.70	0.52	0.88	0.88	0.88	1.05	0.88	0.88	0.88	1.05	
[20, 29]	24.6	0.73	0.83	0.94	0.96	0.73	0.82	0.86	0.89	0.64	0.85	0.62	0.52	0.64	0.73	0.86	0.98	0.77	0.88	0.97	0.71	0.77	0.91	0.90	0.96	0.77	0.91	0.90	0.96	
[30, 39]	32.5	0.68	0.79	0.99	0.89	0.68	0.75	0.93	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.84	1.02	0.87	0.76	0.82	0.89	0.87	0.76	0.82	0.89	0.84	

Table 32: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR( $p$ ) models estimated over windows of 40 observation, where  $p$  is chosen by the AIC.

### 3.3 Expanding windows of observations

Median Ratios of Absolute Forecast Errors																									
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																									
Without Intercept Correction																									
$k \in$	$median_k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[4, 7]	6.5	0.37	0.33	0.71	0.54	1.00	0.55	1.03	1.33	13.56	1.08	1.31	1.26	13.56	0.67	1.32	1.98	0.33	0.28	0.55	0.46	0.33	0.24	1.52	1.62
[8, 11]	10.0	0.38	0.44	0.58	0.36	1.00	0.98	1.03	0.94	0.80	0.84	0.90	0.76	0.80	0.82	0.93	0.69	1.64	1.73	1.32	1.34	1.64	1.58	0.60	0.43
[12, 15]	14.0	0.41	0.37	0.25	0.54	1.00	0.98	0.98	0.98	0.58	0.71	0.67	0.78	0.58	0.76	0.66	0.71	0.98	1.37	1.34	1.40	0.98	1.26	0.74	0.48
[16, 19]	18.0	0.26	0.21	0.41	1.73	1.00	0.99	1.05	1.05	0.58	0.43	0.68	0.88	0.58	0.66	0.71	0.87	1.27	1.30	1.42	1.27	1.27	1.33	1.35	0.73
[20, 29]	25.0	0.56	0.74	1.31	1.24	1.00	1.03	1.08	1.06	0.57	0.65	0.77	0.83	0.57	0.70	0.76	0.79	1.05	1.09	1.16	1.17	1.05	1.07	1.20	1.09
[30, 39]	32.1	0.48	0.74	0.75	0.95	1.00	1.02	0.99	1.13	0.51	0.62	0.68	0.68	0.51	0.64	0.69	0.60	0.98	1.00	0.84	1.12	0.98	1.14	0.85	1.03
[35, $\infty$ )	58.5	0.39	0.50	0.64	0.75	1.00	1.03	1.05	1.02	0.43	0.60	0.60	0.70	0.43	0.64	0.56	0.68	1.01	0.98	1.01	0.94	1.01	0.98	0.97	0.89
With Intercept Correction																									
$k \in$	$\bar{k}$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[4, 7]	6.5	0.37	0.33	0.71	0.54	0.83	0.22	0.41	0.50	0.50	0.24	0.43	0.37	0.50	0.21	0.40	0.44	0.43	0.22	0.24	0.19	0.43	0.20	0.43	0.37
[8, 11]	10.0	0.38	0.44	0.58	0.36	1.16	0.93	1.09	0.88	2.38	1.72	1.17	0.90	2.38	0.97	1.25	0.86	1.03	1.49	0.64	0.37	1.03	1.39	1.20	0.90
[12, 15]	14.0	0.41	0.37	0.25	0.54	0.62	1.17	0.47	1.07	0.75	1.20	0.55	1.29	0.75	0.72	0.50	1.36	0.65	1.42	0.47	0.58	0.65	1.63	0.59	1.29
[16, 19]	18.0	0.26	0.21	0.41	1.73	0.79	0.91	1.08	1.25	0.80	0.84	1.21	1.15	0.80	0.82	1.14	1.14	1.01	1.02	1.17	1.92	1.01	1.26	1.21	1.15
[20, 29]	25.0	0.56	0.74	1.31	1.24	1.09	1.05	1.25	1.09	1.17	1.18	1.24	1.13	1.17	1.26	1.25	1.10	1.08	1.19	1.17	1.11	1.08	1.17	1.28	1.17
[30, 39]	32.1	0.48	0.74	0.75	0.95	0.88	0.71	0.55	0.72	0.89	0.98	0.79	1.08	0.89	0.88	0.91	1.00	0.97	0.72	0.60	0.83	0.97	0.74	0.75	0.93
[35, $\infty$ )	58.5	0.39	0.50	0.64	0.75	0.74	0.73	0.93	0.91	0.74	0.83	0.91	0.89	0.74	0.80	1.05	1.03	0.76	0.78	1.04	1.01	0.76	0.78	1.00	0.99
Ratios of Root Mean Square Forecast Errors																									
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																									
Without Intercept Correction																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[4, 7]	6.5	0.50	0.42	0.75	0.75	1.00	0.78	1.05	1.24	0.85	1.41	1.06	1.11	0.85	0.92	1.05	1.21	0.95	0.41	0.66	0.62	0.95	0.35	0.88	1.04
[8, 11]	10.0	0.48	0.49	0.70	0.67	1.00	1.10	1.06	0.85	0.71	0.65	0.85	0.93	0.71	0.83	0.90	0.90	0.95	1.20	0.97	0.91	0.95	0.99	0.63	0.52
[12, 15]	13.7	0.54	0.59	0.49	0.95	1.00	0.96	0.80	0.96	0.64	0.66	0.70	0.82	0.64	0.78	0.72	0.80	1.19	1.23	1.04	1.28	1.19	1.20	0.74	0.60
[16, 19]	17.5	0.34	0.39	0.96	1.88	1.00	1.02	1.02	1.06	0.62	0.65	0.82	0.89	0.62	0.64	0.79	0.87	0.95	0.97	1.13	1.22	0.95	0.96	1.10	0.78
[20, 29]	24.5	0.86	1.27	1.90	2.67	1.00	1.07	1.21	1.60	0.64	0.78	0.95	1.34	0.64	0.83	0.92	1.26	1.02	1.03	1.02	0.86	1.02	1.07	1.29	1.44
[30, 34]	32.1	0.74	1.01	1.09	1.34	1.00	1.02	0.97	1.09	0.46	0.64	0.77	0.77	0.46	0.71	0.73	0.69	1.01	1.01	0.97	1.03	1.01	1.04	0.96	0.93
[35, $\infty$ )	67.3	0.90	1.05	1.12	1.29	1.00	1.00	1.03	1.02	0.58	0.75	0.72	0.84	0.58	0.80	0.67	0.77	1.01	1.00	0.98	0.97	1.01	1.00	0.98	0.95
With Intercept Correction																									
$k \in$	$\bar{k}$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[4, 7]	6.5	0.79	0.34	0.54	0.51	0.79	0.30	0.55	0.62	0.56	0.33	0.54	0.51	0.56	0.28	0.53	0.59	0.74	0.20	0.28	0.27	0.74	0.29	0.54	0.51
[8, 11]	10.0	0.74	0.98	1.24	0.93	0.74	0.91	1.00	0.68	0.76	0.98	1.26	0.95	0.76	0.88	1.20	0.94	0.76	0.94	0.61	0.47	0.76	1.19	1.21	0.95
[12, 15]	13.7	0.94	1.04	0.78	1.24	0.94	0.90	0.54	0.85	1.07	1.06	0.82	1.27	1.07	0.74	0.68	1.23	1.02	1.04	0.51	0.65	1.02	1.15	0.73	1.27
[16, 19]	17.5	0.69	0.70	1.13	1.17	0.69	0.66	1.06	1.21	0.67	0.78	1.15	1.16	0.67	0.77	1.07	1.15	0.77	0.74	1.11	1.52	0.77	0.75	1.09	1.17
[20, 29]	24.5	0.89	0.89	0.91	0.90	0.89	0.92	1.07	1.38	0.81	1.10	1.28	1.60	0.81	1.18	1.28	1.57	0.92	0.89	0.88	0.78	0.92	0.97	1.22	1.63
[30, 34]	32.1	0.83	0.75	0.76	0.80	0.83	0.72	0.65	0.72	0.79	0.94	0.88	1.02	0.79	0.76	0.83	0.99	0.85	0.76	0.76	0.78	0.85	0.77	0.79	0.95
[35, $\infty$ )	67.3	0.71	0.78	0.89	0.86	0.71	0.76	0.83	0.81	0.78	0.82	0.84	0.83	0.78	0.84	0.93	0.91	0.74	0.82	0.91	0.88	0.74	0.80	0.90	0.90

Table 33: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(1) models estimated over expanding windows of observation.

Median Ratios of Absolute Forecast Errors																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]				
<b>Without Intercept Correction</b>																									
$k \in$	$median\ k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[4, 7]	6.5	0.52	0.49	0.70	0.53	1.00	1.32	1.13	1.87	1.31	1.29	1.33	1.35	1.31	2.90	1.00	1.37	0.41	0.43	1.02	0.54	0.41	2.33	1.59	1.60
[8, 11]	10.0	0.24	0.28	0.48	0.46	1.00	1.01	0.99	0.82	0.78	0.84	0.92	0.86	0.78	0.85	0.87	0.76	1.22	1.01	1.25	1.30	1.22	0.99	0.55	0.48
[12, 15]	14.0	0.41	0.48	0.38	0.71	1.00	1.06	0.87	0.94	0.72	0.86	0.83	0.85	0.72	0.99	0.76	0.76	0.94	1.23	1.33	1.30	0.94	1.24	0.74	0.57
[16, 19]	18.0	0.21	0.19	0.42	1.72	1.00	0.97	1.02	1.06	0.55	0.53	0.71	0.88	0.55	0.76	0.68	0.85	1.16	1.10	1.28	1.26	1.16	0.98	1.09	0.69
[20, 29]	25.0	0.64	0.73	1.32	1.33	1.00	0.99	1.06	1.06	0.63	0.68	0.78	0.84	0.63	0.78	0.76	0.78	1.00	0.96	1.14	1.18	1.00	0.88	1.18	0.97
[30, 39]	32.1	0.59	0.69	0.81	1.02	1.00	1.00	0.97	1.10	0.41	0.54	0.74	0.71	0.41	0.61	0.64	0.62	0.90	0.98	1.01	1.12	0.90	1.06	0.81	0.96
[35, $\infty$ )	59.0	0.38	0.52	0.61	0.74	1.00	1.02	1.01	0.99	0.58	0.66	0.60	0.77	0.58	0.75	0.56	0.67	1.01	1.01	0.98	0.94	1.01	1.00	0.94	0.86
<b>With Intercept Correction</b>																									
$k \in$	$median\ k$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[4, 7]	6.5	1.14	0.38	0.45	0.37	1.14	0.39	0.44	0.58	0.35	0.24	0.41	0.37	0.35	0.25	0.39	0.50	0.70	0.24	0.34	0.29	0.70	0.39	0.44	0.37
[8, 11]	10.0	1.17	0.85	1.03	0.86	1.17	0.83	1.06	0.82	1.02	1.71	0.99	0.89	1.02	0.84	0.98	0.95	1.45	1.09	0.51	0.36	1.45	1.50	1.11	0.98
[12, 15]	14.0	0.71	1.05	0.80	1.18	0.71	1.13	0.65	0.88	0.83	0.74	0.66	1.10	0.83	0.57	0.83	1.33	1.26	1.18	0.68	0.55	1.26	1.29	0.91	1.11
[16, 19]	18.0	0.77	0.73	1.17	1.13	0.77	0.76	1.25	1.19	0.76	0.82	1.16	1.15	0.76	0.41	1.05	1.11	0.81	1.07	1.16	2.36	0.81	1.03	1.31	1.14
[20, 29]	25.0	0.94	1.00	1.11	0.98	0.94	1.05	1.16	1.01	1.19	1.01	1.21	1.16	1.19	1.08	1.15	1.07	1.24	1.09	1.14	1.03	1.24	1.12	1.23	1.17
[30, 39]	32.1	0.85	0.84	0.63	0.67	0.85	0.78	0.64	0.76	0.81	0.79	0.84	1.18	0.81	0.75	0.93	0.98	1.06	0.82	0.79	0.87	1.06	0.85	0.84	0.78
[35, $\infty$ )	59.0	0.72	0.74	0.92	0.93	0.72	0.77	0.90	0.89	0.67	0.76	0.99	0.97	0.67	0.82	0.92	0.96	0.75	0.80	0.96	0.98	0.75	0.81	0.94	0.99
<b>Ratios of Root Mean Square Forecast Errors</b>																									
$h \in$		{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]	{1}	{2}	[3, 6]	[7, 12]				
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[4, 7]	6.5	0.52	0.55	0.74	0.75	1.00	1.09	1.11	1.20	0.88	1.20	1.09	1.13	0.88	1.45	1.00	1.09	0.41	0.48	0.67	0.66	0.41	1.12	0.88	1.03
[8, 11]	10.0	0.49	0.43	0.67	0.73	1.00	0.99	0.95	0.78	0.84	0.77	0.91	1.04	0.84	0.86	0.86	0.92	0.94	0.87	0.88	0.94	0.94	0.59	0.56	0.57
[12, 15]	13.7	0.54	0.61	0.60	0.95	1.00	1.06	0.82	0.84	0.77	0.81	1.00	0.87	0.77	0.89	0.82	0.81	1.18	1.26	1.18	1.26	1.18	1.22	0.67	0.61
[16, 19]	17.5	0.35	0.38	0.95	1.84	1.00	0.89	1.01	1.07	0.65	0.62	0.81	0.88	0.65	0.63	0.75	0.86	0.83	0.94	1.11	1.21	0.83	0.86	0.99	0.74
[20, 29]	24.5	0.88	1.24	1.99	3.36	1.00	1.03	1.25	1.97	0.69	0.81	1.02	1.71	0.69	0.86	0.95	1.55	0.99	0.98	1.02	0.94	0.99	1.02	1.29	1.67
[30, 34]	32.1	0.76	0.99	1.23	1.57	1.00	1.00	0.98	1.17	0.58	0.70	0.93	0.92	0.58	0.70	0.77	0.75	1.01	1.00	1.06	1.19	1.01	1.03	0.99	0.95
[35, $\infty$ )	67.3	0.91	1.03	1.10	1.29	1.00	1.02	1.01	1.01	0.78	0.79	0.76	0.89	0.78	0.72	0.65	0.75	1.00	0.99	0.97	0.98	1.00	1.00	0.95	0.94
<b>With Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[4, 7]	6.5	0.76	0.44	0.54	0.51	0.76	0.46	0.56	0.70	0.36	0.27	0.51	0.51	0.36	0.28	0.48	0.60	0.94	0.24	0.33	0.32	0.94	0.45	0.54	0.51
[8, 11]	10.0	0.73	0.77	1.12	0.85	0.73	0.77	0.97	0.66	0.72	0.93	1.09	0.99	0.72	0.80	0.94	0.96	0.86	0.99	0.51	0.50	0.86	1.02	1.22	1.03
[12, 15]	13.7	1.00	1.02	0.89	1.06	1.00	1.06	0.72	0.77	0.94	0.85	0.79	1.22	0.94	0.67	0.68	1.22	1.20	1.27	0.48	0.63	1.20	1.37	0.94	1.28
[16, 19]	17.5	0.76	0.67	1.08	1.12	0.76	0.62	1.06	1.19	0.71	0.83	1.11	1.15	0.71	0.65	1.00	1.13	0.85	0.76	1.04	1.49	0.85	0.73	1.08	1.15
[20, 29]	24.5	0.90	0.85	0.88	0.91	0.90	0.91	1.10	1.69	0.85	1.15	1.37	2.02	0.85	1.10	1.30	1.92	0.93	0.87	0.90	0.84	0.93	0.94	1.26	1.99
[30, 34]	32.1	0.86	0.73	0.75	0.72	0.86	0.75	0.72	0.76	0.67	0.75	0.86	1.16	0.67	0.58	0.79	1.07	0.90	0.77	0.85	0.90	0.90	0.81	0.87	0.94
[35, $\infty$ )	67.3	0.74	0.77	0.84	0.82	0.74	0.80	0.84	0.82	0.77	0.84	0.90	0.90	0.77	0.77	0.83	0.89	0.76	0.80	0.89	0.88	0.76	0.84	0.88	0.90

Table 34: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(2) models estimated over expanding windows of observation.

Median Ratios of Absolute Forecast Errors																									
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																									
<b>Without Intercept Correction</b>																									
$k \in$	$median \bar{k}$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost			
[4, 7]	6.5	0.52	0.50	0.65	0.51	1.00	1.22	1.43	1.58	2.17	2.25	1.67	1.58	2.17	1.42	1.41	1.33	2.12	2.22	1.76	1.49	2.12	2.22	1.76	1.49
[8, 11]	10.0	0.27	0.39	0.53	0.50	1.00	1.13	0.96	0.75	0.68	0.76	0.94	0.87	0.68	0.81	0.87	0.74	0.66	0.70	1.29	1.25	0.66	0.60	0.46	0.52
[12, 15]	14.0	0.37	0.49	0.44	0.84	1.00	0.81	0.79	0.85	0.73	0.82	0.85	0.85	0.73	0.64	0.70	0.75	1.06	1.12	1.15	1.31	1.06	1.08	0.66	0.58
[16, 19]	18.0	0.18	0.25	0.51	1.70	1.00	0.99	1.03	1.08	0.67	0.66	0.69	0.89	0.67	0.75	0.61	0.83	0.93	1.16	1.05	1.22	0.93	0.75	0.75	0.68
[20, 29]	25.0	0.53	0.70	1.25	1.56	1.00	1.00	1.04	1.07	0.66	0.72	0.78	0.86	0.66	0.74	0.72	0.77	0.99	0.96	1.11	1.14	0.99	0.93	1.11	0.75
[30, 39]	32.1	0.60	0.70	1.04	1.32	1.00	1.05	0.95	1.06	0.39	0.49	0.78	0.80	0.39	0.50	0.62	0.67	0.91	0.90	0.81	1.01	0.91	0.86	0.76	0.81
[35, $\infty$ )	59.0	0.39	0.48	0.59	0.78	1.00	1.00	0.99	0.94	0.54	0.64	0.66	0.83	0.54	0.54	0.55	0.66	0.99	0.99	0.98	0.96	0.99	0.96	0.92	0.84
<b>With Intercept Correction</b>																									
$k \in$	$median \bar{k}$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[4, 7]	6.5	0.52	0.50	0.65	0.51	1.47	0.45	0.87	0.77	0.44	0.28	0.42	0.35	0.44	0.27	0.60	0.55	0.86	0.40	0.48	0.35	0.86	0.40	0.48	0.35
[8, 11]	10.0	0.27	0.39	0.53	0.50	0.86	1.25	0.98	0.86	1.02	0.56	1.02	0.98	1.02	0.61	0.89	0.99	1.22	0.55	0.61	0.44	1.22	0.83	1.40	1.01
[12, 15]	14.0	0.37	0.49	0.44	0.84	0.80	1.13	0.71	0.78	0.89	0.76	0.71	1.16	0.89	0.48	0.86	1.15	1.36	1.32	0.39	0.53	1.36	1.09	1.33	1.52
[16, 19]	18.0	0.18	0.25	0.51	1.70	0.96	0.71	1.21	1.19	0.88	0.94	1.12	1.15	0.88	0.63	0.74	1.10	0.87	1.09	1.06	2.29	0.87	1.15	1.08	1.13
[20, 29]	25.0	0.53	0.70	1.25	1.56	1.04	1.10	1.11	1.01	0.91	1.00	1.18	1.20	0.91	0.94	1.07	1.14	1.09	1.06	1.09	1.11	1.09	1.15	1.19	1.16
[30, 39]	32.1	0.60	0.70	1.04	1.32	0.92	0.80	0.72	0.71	0.62	0.75	0.75	1.18	0.62	0.72	1.06	0.89	1.11	0.85	0.78	0.84	1.11	0.88	0.81	0.66
[35, $\infty$ )	59.0	0.39	0.48	0.59	0.78	0.71	0.74	0.90	0.91	0.69	0.74	0.90	0.92	0.69	0.70	0.88	0.92	0.75	0.77	0.91	0.99	0.75	0.73	0.94	0.95
<b>Ratios of Root Mean Square Forecast Errors</b>																									
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																									
<b>Without Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost			
[4, 7]	6.5	0.46	0.54	0.73	0.73	1.00	1.16	1.31	1.02	0.78	1.80	1.12	1.13	0.78	1.45	1.34	0.94	0.39	1.09	0.86	1.02	0.39	1.09	0.86	1.02
[8, 11]	10.0	0.48	0.44	0.69	0.88	1.00	1.01	0.91	0.84	0.83	0.80	0.97	1.29	0.83	0.84	0.87	1.02	0.64	0.44	0.11	0.01	0.64	0.45	0.54	0.69
[12, 15]	13.7	0.51	0.59	0.67	1.05	1.00	0.86	0.77	0.76	0.80	0.84	1.16	1.00	0.80	0.62	0.77	0.85	1.06	1.02	1.04	1.28	1.06	0.94	0.66	0.67
[16, 19]	17.5	0.35	0.45	0.95	1.81	1.00	1.05	1.00	1.10	0.65	0.70	0.80	0.88	0.65	0.65	0.65	0.86	0.77	0.96	1.02	1.19	0.77	0.86	0.84	0.72
[20, 29]	24.5	0.95	1.34	2.01	3.66	1.00	1.01	1.24	2.00	0.70	0.84	1.06	1.91	0.70	0.84	0.91	1.71	0.95	0.96	0.93	0.74	0.95	0.98	1.17	1.59
[30, 34]	32.1	0.77	1.02	1.33	1.67	1.00	0.97	1.00	1.06	0.48	0.62	0.93	0.99	0.48	0.58	0.75	0.77	1.03	0.95	0.85	0.70	1.03	0.94	0.79	0.60
[35, $\infty$ )	67.3	0.93	1.04	1.11	1.31	1.00	0.99	1.01	0.99	0.60	0.63	0.70	0.85	0.60	0.62	0.66	0.74	0.98	0.97	0.96	0.98	0.98	0.96	0.94	0.90
<b>With Intercept Correction</b>																									
$k \in$	$\bar{k}$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC			
[4, 7]	6.5	0.72	0.45	0.52	0.49	0.72	0.48	0.83	0.75	0.36	0.30	0.49	0.50	0.36	0.28	0.51	0.59	0.74	0.43	0.53	0.50	0.74	0.43	0.53	0.50
[8, 11]	10.0	0.75	0.81	1.12	0.90	0.75	0.75	0.94	0.79	0.80	0.78	0.99	1.08	0.80	0.60	0.79	0.97	0.60	0.37	0.11	0.01	0.60	0.88	1.25	1.25
[12, 15]	13.7	1.04	1.08	0.93	1.02	1.04	0.94	0.78	0.73	0.86	0.76	0.74	1.13	0.86	0.49	0.64	1.00	1.23	1.33	0.42	0.63	1.23	1.20	1.09	1.40
[16, 19]	17.5	0.84	0.69	1.03	1.10	0.84	0.73	1.06	1.21	0.69	0.76	1.08	1.14	0.69	0.64	0.86	1.13	0.73	0.81	0.82	1.33	0.73	0.78	1.02	1.13
[20, 29]	24.5	0.94	0.92	0.86	0.93	0.94	0.98	1.11	1.82	0.81	1.03	1.22	2.15	0.81	0.98	1.29	2.03	0.95	0.89	0.82	0.67	0.95	0.95	1.17	2.05
[30, 34]	32.1	0.91	0.77	0.77	0.73	0.91	0.78	0.80	0.74	0.55	0.67	0.74	1.08	0.55	0.49	0.76	0.95	1.01	0.82	0.75	0.61	1.01	0.84	0.80	0.61
[35, $\infty$ )	67.3	0.78	0.81	0.83	0.81	0.78	0.80	0.85	0.83	0.72	0.76	0.79	0.84	0.72	0.64	0.79	0.83	0.78	0.83	0.86	0.87	0.78	0.82	0.89	0.90

Table 35: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR(4) models estimated over expanding windows of observation.

<b>Median Ratios of Absolute Forecast Errors</b>																													
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																													
<b>Without Intercept Correction</b>																													
$k \in$	$median k$	mAFE IMS / $\sigma$				mRAFE IMS/DMS				mRAFE IMS/IMSpre				mRAFE IMS/DMSpre				mRAFE IMS/IMSpost				mRAFE IMS/DMSpost							
[4, 7]	6.5	0.37	0.33	0.71	0.54	1.00	0.55	1.03	1.33	13.56	1.08	1.31	1.26	13.56	0.67	1.32	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
[8, 11]	10.0	0.35	0.40	0.54	0.32	1.00	1.15	1.01	0.71	0.73	0.84	0.87	0.69	0.73	0.82	0.89	0.57	1.42	0.67	1.00	1.00	1.42	0.67	1.00	1.00	1.42	0.36	0.41	0.26
[12, 15]	14.0	0.37	0.37	0.22	0.50	1.00	0.98	0.90	0.90	0.52	0.67	0.59	0.74	0.52	0.81	0.57	0.61	0.83	1.22	0.81	1.25	0.83	1.22	0.81	1.25	0.83	1.24	0.35	0.47
[16, 19]	18.0	0.25	0.21	0.37	1.70	1.00	0.94	0.99	1.00	0.57	0.38	0.69	0.83	0.57	0.58	0.71	0.82	1.22	1.26	1.43	1.23	1.22	1.26	1.43	1.23	1.22	1.31	0.55	0.69
[20, 29]	25.0	0.59	0.83	1.36	1.15	1.00	1.03	1.08	1.07	0.61	0.66	0.75	0.82	0.61	0.71	0.73	0.73	1.07	1.05	1.16	1.16	1.07	1.05	1.16	1.16	1.07	1.01	1.16	0.74
[30, 39]	32.1	0.53	0.73	0.69	0.98	1.00	1.15	1.13	1.23	0.47	0.60	0.76	0.79	0.47	0.63	0.62	0.66	0.97	1.04	0.87	1.12	0.97	1.04	0.87	1.12	0.97	1.16	1.00	1.06
[35, $\infty$ )	59.0	0.46	0.55	0.68	0.79	1.00	1.00	1.06	1.02	0.21	0.29	0.31	0.45	0.21	0.38	0.30	0.38	0.98	0.97	1.00	0.98	0.98	0.97	1.00	0.98	0.98	0.94	1.00	0.91
<b>With Intercept Correction</b>																													
$k \in$	$k$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC							
[4, 7]	6.5	0.83	0.24	0.43	0.37	0.83	0.22	0.41	0.50	0.50	0.24	0.43	0.37	0.50	0.21	0.40	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	10.0	1.16	1.32	1.24	0.67	1.16	0.88	1.24	0.57	2.54	1.72	1.25	0.70	2.54	0.95	1.34	0.81	0.94	0.36	0.45	0.22	0.94	1.51	1.15	0.57	0.94	1.51	1.15	0.57
[12, 15]	14.0	0.77	1.35	0.51	1.18	0.77	1.14	0.50	0.97	0.99	1.10	0.49	1.18	0.99	0.72	0.46	1.15	0.66	1.35	0.27	0.53	0.66	1.63	0.51	1.18	0.66	1.63	0.51	1.18
[16, 19]	18.0	0.73	0.81	1.04	1.10	0.73	0.96	0.98	1.15	0.74	0.85	1.15	1.12	0.74	0.86	1.09	1.09	0.90	1.02	0.95	2.37	0.90	1.01	1.02	1.13	0.90	1.01	1.02	1.13
[20, 29]	25.0	1.09	1.05	1.05	1.00	1.09	1.06	1.05	1.04	1.17	1.07	1.14	1.13	1.17	1.08	1.14	1.04	1.11	1.11	1.06	1.00	1.11	1.11	1.06	1.00	1.11	1.14	1.18	1.14
[30, 39]	32.1	0.77	0.78	0.74	1.01	0.77	0.76	0.75	0.85	0.80	0.98	0.82	1.06	0.80	0.94	1.03	1.01	0.86	0.81	0.74	1.01	0.86	0.82	0.91	1.05	0.86	0.82	0.91	1.05
[35, $\infty$ )	59.0	0.81	0.83	1.06	1.01	0.81	0.86	0.99	0.95	0.42	0.56	0.60	0.54	0.42	0.43	0.58	0.62	0.79	0.86	1.08	1.04	0.79	0.86	1.07	1.01	0.79	0.86	1.07	1.01
<b>Ratios of Root Mean Square Forecast Errors</b>																													
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																													
<b>Without Intercept Correction</b>																													
$k \in$	$\bar{k}$	RMSFE IMS / $\sigma$				RMSFE IMS/DMS				RMSFE IMS/IMSpre				RMSFE IMS/DMSpre				RMSFE IMS/IMSpost				RMSFE IMS/DMSpost							
[4, 7]	6.5	0.50	0.42	0.75	0.75	1.00	0.78	1.05	1.24	0.85	1.41	1.06	1.11	0.85	0.92	1.05	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	10.0	0.47	0.47	0.68	0.66	1.00	1.09	1.01	0.80	0.71	0.63	0.82	0.91	0.71	0.81	0.86	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[12, 15]	13.7	0.53	0.58	0.47	0.93	1.00	0.98	0.79	0.88	0.63	0.64	0.67	0.80	0.63	0.76	0.69	0.74	0.93	1.12	0.93	1.22	0.93	1.18	0.47	0.59	0.93	1.18	0.47	0.59
[16, 19]	17.5	0.33	0.37	0.95	1.83	1.00	0.98	1.02	1.03	0.58	0.62	0.79	0.86	0.58	0.60	0.74	0.83	0.90	0.94	1.17	1.17	0.90	0.94	0.87	0.72	0.90	0.94	0.87	0.72
[20, 29]	24.5	0.87	1.22	1.64	1.78	1.00	1.08	1.07	1.08	0.64	0.74	0.81	0.89	0.64	0.78	0.78	0.83	1.02	1.05	1.04	0.97	1.02	1.06	1.09	0.83	1.02	1.06	1.09	0.83
[30, 34]	32.1	0.75	0.97	1.12	1.39	1.00	1.06	1.02	1.14	0.47	0.61	0.79	0.79	0.47	0.68	0.74	0.70	1.06	1.01	0.92	1.03	1.06	1.09	0.94	0.86	1.06	1.09	0.94	0.86
[35, $\infty$ )	67.3	0.91	1.09	1.22	1.36	1.00	0.98	1.07	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.01	1.00	0.98	1.00	0.99	1.02	0.97	1.00	0.99	1.02	0.97
<b>With Intercept Correction</b>																													
$k \in$	$k$	RMSFE IMS/IMSIC				RMSFE IMS/DMSIC				RMSFE IMS/IMSpreIC				RMSFE IMS/DMSpreIC				RMSFE IMS/IMSpostIC				RMSFE IMS/DMSpostIC							
[4, 7]	6.5	0.79	0.34	0.54	0.51	0.79	0.30	0.55	0.62	0.56	0.33	0.54	0.51	0.56	0.28	0.53	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[8, 11]	10.0	0.73	0.96	1.20	0.92	0.73	0.88	0.99	0.66	0.76	0.96	1.22	0.93	0.76	0.85	1.14	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[12, 15]	13.7	0.93	1.02	0.75	1.21	0.93	0.92	0.55	0.80	1.05	1.03	0.78	1.25	1.05	0.71	0.65	1.17	0.97	0.89	0.32	0.63	0.97	1.10	0.75	1.24	0.97	1.10	0.75	1.24
[16, 19]	17.5	0.66	0.68	1.11	1.13	0.66	0.64	1.07	1.14	0.65	0.75	1.14	1.13	0.65	0.74	1.00	1.10	0.71	0.71	0.92	1.46	0.71	0.70	1.04	1.14	0.71	0.70	1.04	1.14
[20, 29]	24.5	0.92	0.91	0.90	0.89	0.92	0.93	0.90	0.92	0.82	1.07	1.10	1.09	0.82	1.17	1.15	1.03	0.94	0.91	0.87	0.77	0.94	0.95	1.00	1.07	0.94	0.95	1.00	1.07
[30, 34]	32.1	0.88	0.75	0.78	0.83	0.88	0.71	0.69	0.79	0.80	0.91	0.88	1.09	0.80	0.73	0.87	1.01	0.87	0.75	0.79	0.81	0.87	0.78	0.83	0.90	0.87	0.78	0.83	0.90
[35, $\infty$ )	67.3	0.75	0.86	0.98	0.91	0.75	0.83	0.90	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.86	1.00	0.93	0.75	0.87	0.95	0.94	0.75	0.87	0.95	0.94

Table 36: Out-of-sample performance ordered by post-break window size: the table reports the median ratios of Absolute Forecast Errors and the ratios of square-root Mean Square Forecast Errors (the latter weighted by the variances of the variables) for AR( $p$ ) models estimated over expanding windows of observations, with  $p$  chosen by the AIC.