

Supplementary Appendix to: Multistep Forecasting in the Presence of Location Shifts

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1 Additional Theoretical results

We provide in this section additional theoretical results where we consider the situation where the estimated model is either an AR(2) or an AR(p) with long lags.

1.1 Estimated AR(2)

Consider, first, the case where the DGP is as in the paper, but the following model is estimated by OLS:

$$y_t = \tau + \rho_1 y_{t-1} + \rho_2 y_{t-2} + \epsilon_t,$$

where the DGP implies $(\rho_1, \rho_2) = (\rho, 0)$. Notice that $\hat{\rho}_1 - \rho_1$ and $\hat{\rho}_2 - \rho_2$ asymptotically coincide (an abuse of notation leads us to use $\hat{\tau}$ for both models but the meaning should be clear each time, we also let $\int J = \int_0^1 J(r) dr$):

$$\begin{bmatrix} \hat{\tau} \\ \hat{\rho}_1 - \rho_1 \\ \hat{\rho}_2 - \rho_2 \end{bmatrix} \Rightarrow \frac{1}{(1 - \rho) \sigma_\epsilon^2 + 2 \left[\int J^2 - (\int J)^2 \right]} \begin{bmatrix} \sigma_\epsilon^2 \int_0^1 J \\ \int J^2 - (\int J)^2 \\ \int J^2 - (\int J)^2 \end{bmatrix}. \quad (\text{S.1})$$

Contrast with the case of an estimated AR(1):

$$\begin{bmatrix} \hat{\tau} \\ \hat{\rho} - \rho \end{bmatrix} \Rightarrow \frac{1}{(1 - \rho) \sigma_\epsilon^2 + (1 + \rho) \left[\int J^2 - (\int J)^2 \right]} \begin{bmatrix} \sigma_\epsilon^2 \int J \\ (1 + \rho) \left[\int J^2 - (\int J)^2 \right] \end{bmatrix}.$$

The previous expression shows that the intercept bias is lower under an estimated AR(2) rather than in an AR(1). This translates into the one-step forecast errors, which, conditional on event \mathcal{E}_{c_k} and in the absence of shifts over the forecast horizon, satisfy:

$$\begin{aligned} AR(2) : \tilde{e}_{T+1|T}^{AR(2)} - \epsilon_{T+1} &\Rightarrow \frac{\sigma_\epsilon^2 (1 - \rho - c_k) - 2c_k (1 - c_k) \gamma (\gamma \rho + Y)}{(1 - \rho) \sigma_\epsilon^2 + 2c_k (1 - c_k) \gamma^2} \gamma, \\ AR(1) : \tilde{e}_{T+1|T}^{AR(1)} - \epsilon_{T+1} &\Rightarrow \frac{\sigma_\epsilon^2 (1 - \rho - c_k) - (1 + \rho) c_k (1 - c_k) \gamma (\gamma \rho + Y)}{(1 - \rho) \sigma_\epsilon^2 + (1 + \rho) c_k (1 - c_k) \gamma^2} \gamma. \end{aligned} \quad (\text{S.2})$$

The only difference between the two is the coefficient $(1 + \rho)$ under correct AR(1) specification which becomes 2 for the AR(2). This entails a reduction in the forecast bias when $\gamma > 0$ and $c_k \rightarrow 0$ using an AR(2). The implications for IMS are that the estimated long-run mean, which under Proposition 4 governs forecast accuracy, is here $\hat{\tau} / (1 - \hat{\rho}_1 - \hat{\rho}_2) =$

$\hat{\tau}/[1 - \rho - (\hat{\rho}_1 - \rho_1) + (\hat{\rho}_2 - \rho_2)]$. Conditional on \mathcal{E}_{c_k} , this asymptotically implies:

$$\lim_{T \rightarrow \infty} \mathbb{E} \left(\hat{e}_{T+h|T}^{AR(2)} | \mathcal{E}_{c_k} \right) / \mu_y < \lim_{T \rightarrow \infty} \mathbb{E} \left(\hat{e}_{T+h|T}^{AR(1)} | \mathcal{E}_{c_k} \right) / \mu_y,$$

i.e. the AR(2) model performs better for IMS forecasting than the AR(1) since the forecast variance is not affected asymptotically. Following Proposition 5, IMSIC will perform similarly.

Results similar to expression (S.1) hold for DMS under model $y_t = \tau_h + \rho_{h,1}y_{t-h} + \rho_{h,2}y_{t-h-1} + w_{h,t}$, with $h + 1 < k$ in the sense that $\tilde{\rho}_{h,1} - \rho_{h,1}$ and $\tilde{\rho}_{h,2} - \rho_{h,2}$ coincide and $(1 + \rho)$ is then replaced by a 2 in the forecast errors. For DMS the forecast bias is directly given by an equivalent of (S.2) and hence using more lags reduces the forecast bias, yet at a cost of higher variance (as in Proposition 4). For DMSIC, Proposition 5 shows that the cost of the higher variance is magnified under an estimated AR(2) with little gain in terms of forecast bias.

The conclusions from this subsection are that in the presence of unmodeled location shifts, it is profitable in terms of forecast accuracy to estimate a model which uses more lags since this yields more degrees of freedom to capture the dynamics induced by the breaks. The next subsection explores the question of whether there is a benefit in extending the model further and include a *large* number of lags.

1.2 Large order AR(p)

We now extend the previous analysis to the case where the estimated model is an AR(p) where $p = \lfloor c_p T \rfloor$, $0 < c_p < c_k$. The model is estimated by OLS and the estimators are denoted $(\hat{\tau}, \hat{\rho}_1, \dots, \hat{\rho}_p)'$. The one-step forecast error is then given as (as before we assume no shifts over the forecast horizon):

$$\hat{e}_{T+1|T}^{AR(p)} = -(\hat{\tau} - \tau_T) - \sum_{j=1}^p (\hat{\rho}_j - \rho_j) y_{T-j+1} + \epsilon_{T+1}.$$

For ease of analytical expressions, we consider two cases where $\gamma \ll \sigma_\epsilon^2$ or $\gamma \gg \sigma_\epsilon^2$, i.e. $\lambda \ll 1$ or $\lambda \gg 1$, as this affects the matrix of empirical second moments. Conditional on event \mathcal{E}_{c_k} , we show in the appendix that

$$\lambda \gg 1 : \hat{e}_{T+1|T}^{AR(p)} - \epsilon_{T+1} \Rightarrow -(1 - \rho) Y; \tag{S.3a}$$

$$\lambda \ll 1 : T^{-1} \left(\hat{e}_{T+1|T}^{AR(p)} - \epsilon_{T+1} \right) \Rightarrow -2\gamma - \frac{\gamma^2}{2\sigma_\epsilon^2} (2c_k - c_p) c_p [\gamma + Y(1 - \rho)]. \tag{S.3b}$$

Similar results hold for DMS estimation replacing c_k with $c_k - c_h$ as long as $c_h + c_p < c_k$.

This results shows that the benefits from long lag regressions are crucially only present in the presence of large unmodeled location shifts. If the shifts are present but small, then forecast errors may diverge under an estimated $\text{AR}([\mathcal{L}_p T])$. Overall a forecaster may wish to consider increasing the lag order by a small amount, but she should resist using long lags.

1.3 Proof of Expression (S.3)

We consider the estimators

$$\begin{bmatrix} \hat{\tau} \\ \hat{\rho}_1 - \rho_1 \\ \vdots \\ \hat{\rho}_p - \rho_p \end{bmatrix} = \begin{bmatrix} T - p + 1 & \sum_{t=p}^T y_{t-1} & \cdots & \sum_{t=p}^T y_{t-p} \\ \sum_{t=p}^T y_{t-1} & \sum_{t=p}^T y_{t-1}^2 & \cdots & \sum_{t=p}^T y_{t-1} y_{t-p} \\ \vdots & \vdots & \ddots & \vdots \\ \sum_{t=p}^T y_{t-p} & \sum_{t=p}^T y_{t-1} y_{t-p} & & \sum_{t=p}^T y_{t-p}^2 \end{bmatrix}^{-1} \begin{bmatrix} \sum_{t=p}^T \tau_t + \epsilon_t \\ \sum_{t=p}^T y_{t-1} (\tau_t + \epsilon_t) \\ \vdots \\ \sum_{t=p}^T y_{t-p} (\tau_t + \epsilon_t) \end{bmatrix}.$$

Conditional on event \mathcal{E}_{c_k} , and assuming $p < k$ we know that the submatrix

$$\begin{bmatrix} \sum_{t=p}^T y_{t-1}^2 & \cdots & \sum_{t=p}^T y_{t-1} y_{t-p} \\ \vdots & \ddots & \vdots \\ \sum_{t=p}^T y_{t-1} y_{t-p} & \cdots & \sum_{t=p}^T y_{t-p}^2 \end{bmatrix} = \frac{\gamma^2}{(1-\rho)^2} \begin{bmatrix} k & k-1 & \cdots & k-p+1 \\ k-1 & k-1 & \cdots & k-p+1 \\ \vdots & \vdots & \ddots & \vdots \\ k-p+1 & k-p+1 & \cdots & k-p+1 \end{bmatrix} + \frac{T\sigma_\epsilon^2}{(1-\rho)^2} \begin{bmatrix} 1 & \cdots & \rho^{p-1} \\ \vdots & \ddots & \vdots \\ \rho^{p-1} & \cdots & 1 \end{bmatrix} + o(T).$$

Consider first the case where $\sigma_\epsilon^2 \ll \gamma^2$ so the first term on the right hand side above dominates. We then use the formula

$$\begin{aligned}
& \begin{bmatrix} a_1 & a_2 & a_3 & \cdots & a_{n-1} & a_n \\ a_2 & a_2 & a_3 & \cdots & a_{n-1} & a_n \\ a_3 & a_3 & a_3 & \ddots & a_{n-1} & a_n \\ \vdots & \vdots & \ddots & \ddots & a_{n-1} & a_n \\ a_{n-1} & a_{n-1} & a_{n-1} & a_{n-1} & a_{n-1} & a_n \\ a_n & a_n & a_n & a_n & a_n & a_n \end{bmatrix}^{-1} \\
&= \begin{bmatrix} \frac{1}{a_1-a_2} & \frac{1}{a_2-a_1} & 0 & \cdots & 0 & 0 \\ \frac{1}{a_2-a_1} & \frac{a_1-a_3}{(a_1-a_2)(a_2-a_3)} & \frac{1}{a_3-a_2} & 0 & \cdots & 0 \\ 0 & \frac{1}{a_3-a_2} & \frac{a_2-a_4}{(a_2-a_3)(a_3-a_4)} & \ddots & \ddots & 0 \\ 0 & 0 & \frac{1}{a_4-a_3} & \ddots & \ddots & 0 \\ \vdots & \vdots & \ddots & \ddots & \frac{a_{n-2}-a_n}{(a_{n-2}-a_{n-1})(a_{n-1}-a_n)} & \frac{1}{a_n-a_{n-1}} \\ 0 & 0 & 0 & 0 & \frac{1}{a_n-a_{n-1}} & \frac{a_{n-1}}{a_n} \frac{1}{a_n-a_{n-1}} \end{bmatrix},
\end{aligned}$$

i.e.

$$\begin{aligned}
& \begin{bmatrix} k & k-1 & \cdots & k-p+1 \\ k-1 & k-1 & \cdots & k-p+1 \\ \vdots & \vdots & \ddots & \vdots \\ k-p+1 & k-p+1 & \cdots & k-p+1 \end{bmatrix}^{-1} \\
&= \begin{bmatrix} 1 & -1 & 0 & \cdots & 0 \\ -1 & 2 & -1 & \ddots & \vdots \\ 0 & -1 & \ddots & \ddots & 0 \\ \vdots & \ddots & \ddots & 2 & -1 \\ 0 & \cdots & 0 & -1 & \frac{k-p+2}{k-p+1} \end{bmatrix}.
\end{aligned}$$

Hence

$$\begin{aligned} \begin{bmatrix} \widehat{\tau} \\ \widehat{\rho}_1 - \rho_1 \\ \vdots \\ \widehat{\rho}_p - \rho_p \end{bmatrix} &\rightarrow \begin{bmatrix} T - p + 1 \\ \frac{\gamma}{1 - \rho} \begin{bmatrix} k \\ \vdots \\ k - p + 1 \end{bmatrix} \end{bmatrix} \frac{\gamma^2}{(1 - \rho)^2} \begin{bmatrix} \frac{\gamma}{1 - \rho} [k \ \cdots \ k - p + 1] \\ k & k - 1 & \cdots & k - p + 1 \\ k - 1 & k - 1 & \cdots & k - p + 1 \\ \vdots & \vdots & \ddots & \vdots \\ k - p + 1 & k - p - 1 & \cdots & k - p + 1 \end{bmatrix}^{-1} \\ &\times \begin{bmatrix} (k + 1) \gamma \\ k \frac{\gamma^2}{1 - \rho} \\ \vdots \\ (k - p + 1) \frac{\gamma^2}{1 - \rho} \end{bmatrix}. \end{aligned}$$

Now we use the properties of inverses of partitioned matrices:

$$\begin{bmatrix} A & B \\ C & D \end{bmatrix}^{-1} = \begin{bmatrix} [M/D]^{-1} & -[M/D]^{-1} B D^{-1} \\ -D^{-1} C [M/D]^{-1} & D^{-1} + D^{-1} C [M/D]^{-1} B D^{-1} \end{bmatrix},$$

with $M/D = A - B D^{-1} C$. Using this formula for the matrix of OLS second empirical moments above, first letting

$$\begin{aligned} M/D &= (T - p + 1) - \left(\frac{\gamma}{1 - \rho} \right)^2 [k \ \cdots \ k - p + 1] D^{-1} \begin{bmatrix} k \\ \vdots \\ k - p + 1 \end{bmatrix} \\ &= (T - p + 1) - \begin{bmatrix} k \\ \vdots \\ k - p + 1 \end{bmatrix}' \begin{bmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{bmatrix} = T - p - k + 1, \end{aligned}$$

where we used

$$D^{-1} \begin{bmatrix} k \\ \vdots \\ k - p + 1 \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{bmatrix}.$$

Then

$$\begin{aligned}
& \left[\begin{array}{c} T-p+1 \\ \frac{\gamma}{1-\rho} \begin{bmatrix} k \\ \vdots \\ k-p+1 \end{bmatrix} \end{array} \right] \left[\begin{array}{cccc} \frac{\gamma}{1-\rho} [k \ \cdots \ k-p+1] \\ k & k-1 & \cdots & k-p+1 \\ k-1 & k-1 & \cdots & k-p+1 \\ \vdots & \vdots & \ddots & \vdots \\ k-p+1 & k-p-1 & \cdots & k-p+1 \end{array} \right]^{-1} \\
& = \left[\begin{array}{c} \frac{1}{T-p-k+1} \\ -\frac{(1-\rho)}{\gamma(T-p-k+1)} \begin{bmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{bmatrix} \end{array} \right] \left[\begin{array}{ccccc} -\frac{(1-\rho)}{\gamma(T-p-k+1)} [1 \ 0 \ \cdots \ 0] \\ 1 + \frac{1}{T-p-k+1} & -1 & 0 & \cdots & 0 \\ -1 & 2 & -1 & \ddots & \vdots \\ 0 & -1 & \ddots & \ddots & 0 \\ \vdots & \ddots & \ddots & 2 & -1 \\ 0 & \cdots & 0 & -1 & \frac{k-p+2}{k-p+1} \end{array} \right].
\end{aligned}$$

The limit of the OLS estimators is therefore

$$\begin{aligned}
& \begin{bmatrix} \widehat{\tau} \\ \widehat{\rho}_1 - \rho_1 \\ \vdots \\ \widehat{\rho}_p - \rho_p \end{bmatrix} \\
& \xrightarrow{p} \left[\begin{array}{c} \frac{(k+1)\gamma}{T-p-k+1} - \frac{(1-\rho)}{\gamma(T-p-k+1)} k \frac{\gamma^2}{1-\rho} \\ -\frac{(1-\rho)}{\gamma(T-p-k+1)} (k+1) \gamma + \frac{(1-\rho)^2}{\gamma^2} \left(1 + \frac{1}{T-p-k+1} \right) k \frac{\gamma^2}{1-\rho} - (k-1) \frac{(1-\rho)^2}{\gamma^2} \frac{\gamma^2}{1-\rho} \\ \frac{(1-\rho)^2}{\gamma^2} \left[-k \frac{\gamma^2}{1-\rho} + 2(k-1) \frac{\gamma^2}{1-\rho} - (k-2) \frac{\gamma^2}{1-\rho} \right] \\ \vdots \\ \frac{(1-\rho)^2}{\gamma^2} \left[-(k-p+3) \frac{\gamma^2}{1-\rho} + 2(k-p+2) \frac{\gamma^2}{1-\rho} - (k-p+1) \frac{\gamma^2}{1-\rho} \right] \\ \frac{(1-\rho)^2}{\gamma^2} \left[-(k-p+2) \frac{\gamma^2}{1-\rho} + \frac{k-p+2}{k-p+1} (k-p+1) \frac{\gamma^2}{1-\rho} \right] \end{array} \right] \\
& \times \begin{bmatrix} \frac{\gamma}{T-p-k+1} \\ (1-\rho) \frac{T-p-k}{T-p-k+1} \\ 0 \\ \vdots \\ 0 \\ 0 \end{bmatrix}.
\end{aligned}$$

Hence

$$\begin{aligned} \begin{bmatrix} \widehat{\tau} - \tau_T \\ \widehat{\rho}_1 - \rho_1 \\ \vdots \\ \widehat{\rho}_p - \rho_p \end{bmatrix}' \begin{bmatrix} 1 \\ y_{T-1} \\ \vdots \\ y_{T-p} \end{bmatrix} &= \frac{\gamma}{T-p-k+1} - \gamma + (1-\rho) \frac{T-p-k}{T-p-k+1} y_{T-1} \\ &\rightarrow -\gamma + (1-\rho) \left[\frac{\gamma}{1-\rho} + Y \right] = (1-\rho) Y. \end{aligned}$$

This proves the first result in expression (S.3a).

Now by contrast when $\sigma_\epsilon^2 \gg \gamma$, the inverse of the empirical second moment matrix uses:

$$\begin{bmatrix} 1 & \cdots & \rho^{p-1} \\ \vdots & \ddots & \vdots \\ \rho^{p-1} & \cdots & 1 \end{bmatrix}^{-1} = \begin{bmatrix} \frac{1}{1-\rho^2} & -\frac{\rho}{1-\rho^2} & 0 & \cdots & 0 \\ -\frac{\rho}{1-\rho^2} & \frac{1+\rho^2}{1-\rho^2} & -\frac{\rho}{1-\rho^2} & \ddots & \vdots \\ 0 & -\frac{\rho}{1-\rho^2} & \ddots & & 0 \\ \vdots & \ddots & \ddots & \frac{1+\rho^2}{1-\rho^2} & -\frac{\rho}{1-\rho^2} \\ 0 & \cdots & 0 & -\frac{\rho}{1-\rho^2} & \frac{1}{1-\rho^2} \end{bmatrix},$$

so the matrix of interest is approximately

$$\begin{bmatrix} T-p+1 & \frac{\gamma}{1-\rho} [k \ \cdots \ k-p+1] \\ \frac{\gamma}{1-\rho} \begin{bmatrix} k \\ \vdots \\ k-p+1 \end{bmatrix} & T \frac{\sigma_\epsilon^2}{(1-\rho)^2} \begin{bmatrix} 1 & \cdots & \rho^{p-1} \\ \vdots & \ddots & \vdots \\ \rho^{p-1} & \cdots & 1 \end{bmatrix} \end{bmatrix}^{-1}.$$

We now use the formula for the partitioned matrix inverse, first letting:

$$\begin{aligned} M/D &= (T-p+1) - \frac{\gamma^2}{(1-\rho^2) T \sigma_\epsilon^2} \begin{bmatrix} k \\ \vdots \\ k-p+1 \end{bmatrix}' \begin{bmatrix} (1-\rho)(k-1)+1 \\ (1-\rho^2)(k-1) \\ \vdots \\ (1-\rho^2)(k-p+2) \\ (1-\rho)(k-p+2)+1 \end{bmatrix} \\ &= (T-p+1) - \frac{\gamma^2}{(1+\rho) T \sigma_\epsilon^2} \left[k(k-1) \left[1 + (1+\rho) \frac{2k-1}{6} \right] \right. \\ &\quad \left. + (k-p+1)(k-p+2) \left[1 - (1+\rho) \frac{2(k-p)+3}{6} \right] \right] \\ &\quad - \frac{\gamma^2}{(1-\rho^2) T \sigma_\epsilon^2} [2k-p+1], \end{aligned}$$

i.e. when $k = \lfloor c_k T \rfloor$,

$$M/D \underset{T \rightarrow \infty}{\sim} (T - p + 1) - \frac{\gamma^2}{3\sigma_\epsilon^2} \left\{ \frac{k^3 - (k - p)^3}{T} \right\}.$$

It follows that the inverse of empirical second moments is given by a 2×2 matrix whose bottom-right element is:

$$\begin{aligned} & \frac{(1 - \rho)^2}{T\sigma_\epsilon^2} \begin{bmatrix} \frac{1}{1 - \rho^2} & -\frac{\rho}{1 - \rho^2} & 0 & \cdots & 0 \\ -\frac{\rho}{1 - \rho^2} & \frac{1 + \rho^2}{1 - \rho^2} & -\frac{\rho}{1 - \rho^2} & \ddots & \vdots \\ 0 & -\frac{\rho}{1 - \rho^2} & \ddots & & 0 \\ \vdots & \ddots & \ddots & \frac{1 + \rho^2}{1 - \rho^2} & -\frac{\rho}{1 - \rho^2} \\ 0 & \cdots & 0 & -\frac{\rho}{1 - \rho^2} & \frac{1}{1 - \rho^2} \end{bmatrix} \\ & + \frac{1}{T \left\{ k^3 - (k - p)^3 \right\}} \frac{3\gamma^2}{(1 + \rho)^2 \sigma_\epsilon^2} \begin{bmatrix} (1 - \rho)(k - 1) + 1 \\ (1 - \rho^2)(k - 1) \\ \vdots \\ (1 - \rho^2)(k - p + 2) \\ (1 - \rho)(k - p + 2) + 1 \end{bmatrix} \begin{bmatrix} (1 - \rho)(k - 1) + 1 \\ (1 - \rho^2)(k - 1) \\ \vdots \\ (1 - \rho^2)(k - p + 2) \\ (1 - \rho)(k - p + 2) + 1 \end{bmatrix}'. \end{aligned}$$

Hence the limit of the OLS is for large p (so $k^3 - (k - p)^3$ is truly $O(k^3)$)

$$\begin{bmatrix} O(k^{-3}) & O(Tk^{-2}) \\ O(Tk^{-2}) & D^{-1} + O(T^{-1}k^{-3}) \end{bmatrix} \begin{bmatrix} (k + 1)\gamma \\ k \frac{\gamma^2}{1 - \rho} \\ \vdots \\ (k - p + 1) \frac{\gamma^2}{1 - \rho} \end{bmatrix},$$

since, despite $\gamma \ll \sigma_\epsilon^2$, the vector

$$\begin{bmatrix} \sum_{t=p}^T \tau_t + \epsilon_t \\ \sum_{t=p}^T y_{t-1}(\tau_t + \epsilon_t) \\ \vdots \\ \sum_{t=p}^T y_{t-p}(\tau_t + \epsilon_t) \end{bmatrix} = \begin{bmatrix} \sum_{t=p}^T \tau_t \\ \sum_{t=p}^T y_{t-1}\tau_t \\ \vdots \\ \sum_{t=p}^T y_{t-p}\tau_t \end{bmatrix} + O_p(\sqrt{T}),$$

is dominated by the effect of the breaks. We see that

$$\begin{aligned}
& \frac{3T}{\gamma(1+\rho)\{k^3 - (k-p)^3\}} \begin{bmatrix} (1-\rho)(k-1)+1 \\ (1-\rho^2)(k-1) \\ \vdots \\ (1-\rho^2)(k-p+2) \\ (1-\rho)(k-p+2)+1 \end{bmatrix}' \begin{bmatrix} k \frac{\gamma^2}{1-\rho} \\ \vdots \\ (k-p+1) \frac{\gamma^2}{1-\rho} \end{bmatrix} \\
&= \frac{3T\gamma}{(1+\rho)\{k^3 - (k-p)^3\}} \left[\frac{\rho}{1-\rho} k - \rho k^2 \right. \\
&+ \left. (1+\rho) \left[\frac{k(k+1)(2k+1)}{6} - \frac{(k-p)(k-p+1)(2k-2p+1)}{6} \right] \right. \\
&\quad \left. + \left[-\rho(k-p+1)^2 + \frac{\rho}{1-\rho}(k-p+1) \right] \right] \\
&= 3T\gamma + O(T/k),
\end{aligned}$$

and

$$\begin{aligned}
\frac{\gamma^2}{1-\rho} D^{-1} \begin{bmatrix} k \\ \vdots \\ k-p+1 \end{bmatrix} &= \frac{\gamma^2}{1-\rho} \frac{(1-\rho)^2}{T\sigma_\epsilon^2} \frac{1}{1-\rho^2} \begin{bmatrix} (1-\rho)(k-1)+1 \\ (1-\rho^2)(k-1) \\ \vdots \\ (1-\rho^2)(k-p+2) \\ (1-\rho)(k-p+2)+1 \end{bmatrix} \\
&= \frac{\gamma^2}{T(1+\rho)\sigma_\epsilon^2} \begin{bmatrix} (1-\rho)(k-1)+1 \\ (1-\rho^2)(k-1) \\ \vdots \\ (1-\rho^2)(k-p+2) \\ (1-\rho)(k-p+2)+1 \end{bmatrix},
\end{aligned}$$

so

$$\begin{bmatrix} \hat{\tau} \\ \hat{\rho}_1 - \rho_1 \\ \vdots \\ \hat{\rho}_p - \rho_p \end{bmatrix} \sim \frac{\gamma^2}{\sigma_\epsilon^2} \begin{bmatrix} 3T\gamma \\ \frac{1-\rho}{1+\rho} \left(\frac{k-1}{T} \right) + 1 \\ (1-\rho) \left(\frac{k-1}{T} \right) \\ \vdots \\ (1-\rho) \left(\frac{k-p+2}{T} \right) \\ \frac{1-\rho}{1+\rho} \left(\frac{k-p+2}{T} \right) + 1 \end{bmatrix}. \tag{S.4}$$

Now the forecast errors are obtained from

$$\begin{aligned} & \begin{bmatrix} \widehat{\tau} - \tau_T \\ \widehat{\rho}_1 - \rho_1 \\ \vdots \\ \widehat{\rho}_p - \rho_p \end{bmatrix}' \begin{bmatrix} 1 \\ y_{T-1} \\ \vdots \\ y_{T-p} \end{bmatrix} \\ & \underset{T \rightarrow \infty}{\sim} T \left(2\gamma + \frac{\gamma^2}{\sigma_\epsilon^2} [\gamma + Y(1 - \rho)] \int_0^{c_p} (c_k - u) du \right) \\ & = T \left(2\gamma + \frac{\gamma^2}{2\sigma_\epsilon^2} (2c_k - c_p) c_p [\gamma + Y(1 - \rho)] \right), \end{aligned}$$

and hence expression (S.3b). Finally, when considering the multistep estimators, as long as $h + p < k$, the asymptotics is the same, replacing k with $k - h$, c_k with $c_k - c_h$.

2 Simulations and robustness checks

This section considers forecasting the AR(1) DGP with stochastic breaks presented in Section 2. The expected frequency of breaks is set to $\pi = 1$ per sample. We consider parameter combinations¹ of $(\gamma, \rho) \in (0, 4] \times [-.9, .9]$, and specify the errors as standard Gaussian white noise. Forecasts over horizons of $h = 1, 5$, and 10 periods are computed using an estimated AR(p) model with $p \in \{1, 2, 4\}$ over a sample of $T = 50$ observations. We perform 5,000 Monte Carlo replications. We consider imposing, or not, the presence of at least one shift in every simulated sample: i.e. potentially drawing from the unconditional distribution, in which case samples exhibit no breaks with probability $(1 - \pi/T)^T \rightarrow e^{-\pi}$ as $T \rightarrow \infty$, which is here equal to 0.36. Also we do not impose that no shifts occur over the forecast horizon. We discuss below the modifications that arise from changing these assumptions. Figures S.1 to S.5 report the log ratios of square-root MSFEs (RMSFE) for the forecasting techniques considered.

¹The simulations in Bai and Perron (2003) show some power (about 60%) for their test applied to an AR(1) process for a change in the intercept from 1 to 2 at mid-sample and $T = 100$ (the slope is 0.5 and errors are standard normal). Also the “tiny” target size for Impulse Indicator Saturation (IIS, see Santos, Hendry and Johansen, 2008) embedded in Oxmetrics 7.0 is 0.001, which corresponds to detecting outliers of an absolute value greater than $\gamma_0 \approx 3.3$. Hence values of $\gamma = 4$ correspond to values of a shift that should be detectable even when happening at the very end of the sample.

Figure S.1 presents results at horizon $h = 1$ so IMS and DMS coincide there. It shows that intercept correction only improves forecast accuracy when the model is an AR(4) and the shift magnitude γ is low. This corresponds to the case where expression (S.3b) showed that the non intercept corrected forecasts errors may be large, so intercept correction seems to perform its purpose of “anchoring” the forecasts. When extending the forecast horizons to $h = 5$ as in Figures S.2 and S.3, for estimated models that are respectively an AR(1) and an AR(2), we see that IMS performs best overall, except when the process y_t presents sufficient persistence (ρ close to 1 or -1). Contrasting the figures, we see that DMS performs even better relative to all methods when the estimated model is an AR(2) (unreported results show that this is the case also for an estimated AR(4)). Forecasting at longer horizons, at $h = 10$ in Figures S.4 and S.5, we see that DMS performs best for a wider range of parameter values. In particular, DMS performs best for large γ and $|\rho|$ (this is also the case when the estimated model is an AR(4)).

In Figures S.2 and S.4 the differences between IMS and IMSIC are not very strong when γ is not too close to zero (so that there is indeed a shift to correct for). By contrast, Figures S.3 and S.5 show a substantial loss in using IMSIC: this is due to the fact that the model is not correctly specified (absent the shift) since the DGP is an AR(1) but the estimated model is an AR(2). An issue arises with intercept correction in multistep ahead forecasting: putting the forecast ‘back on track’ requires also a correct specification of the underlying dynamics. DMSIC is more robust in this context.

In unreported simulations, we consider changing the parameter values above. Increasing the sample size to $T = 100$ does not qualitatively change the results, nor does increasing the frequency of shifts to $\pi = 5$. We also allow ϵ_t to follow an unmodeled MA(1) with parameter $\theta \in (-1, 1)$, the results are essentially the same to the exception that $\theta \ll 0$ improves the relative accuracy of IMSIC at long horizons, but that $\theta \gg 0$ tends to reduce it. We also consider imposing that no shifts occur over the forecast horizon, the relative performances are mostly unaffected, except for the case of forecasting at $h = 5$ using an estimated AR(1) in which case DMS no longer shows the very good performance witnessed above when γ is low and ρ close to unity, but DMS then performs better than IMS for parameters combinations such that $|\rho|$ is not too close to unity and γ not too close to zero.

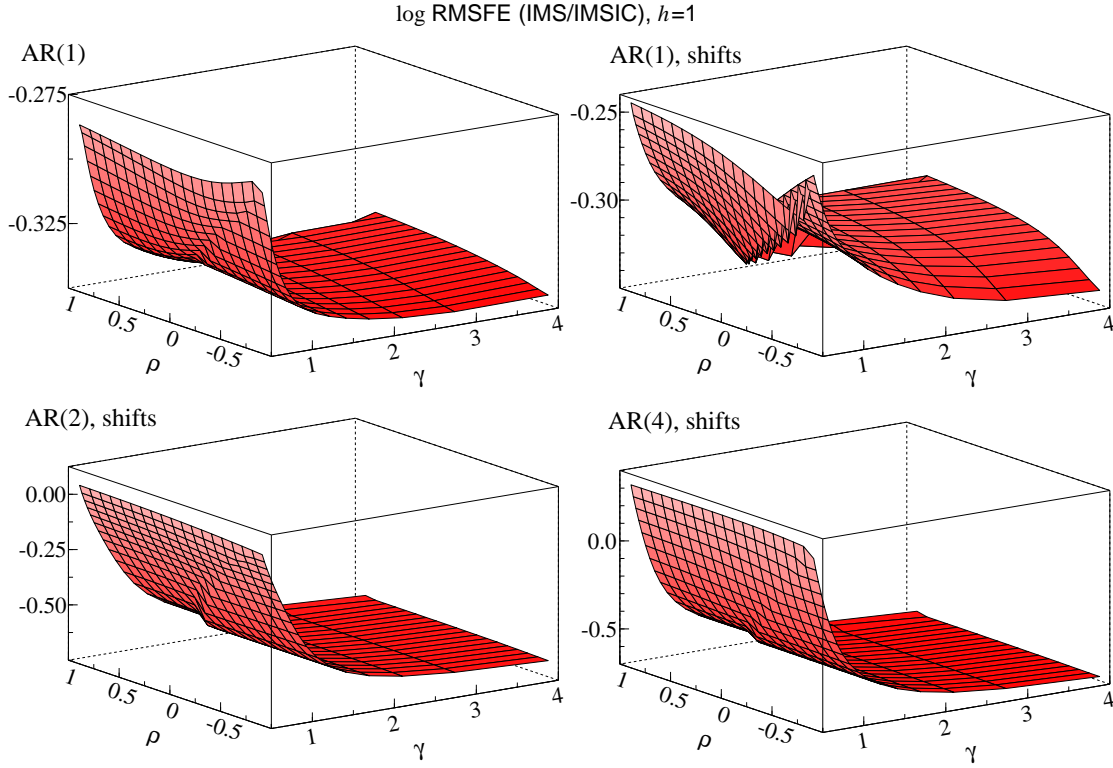


Figure S.1: The figure presents the logarithms of the ratios of simulated root-mean-square forecast errors (RMSFE) of the IMS and IMSIC techniques. The sample size is $T = 50$, the forecast horizon $h = 1$. The DGP is an AR(1) with coefficient ρ and, at each period a location shift of magnitude γ occurs (independently from the past) with probability $p_T = 1/T$. The number of Monte Carlo replications is 5,000. The top/left panel records results when the model is an AR(1) and simulated data may not exhibit shifts in every period; the top right panel considers simulations when shifts occur in every sample; bottom panels report results from estimated AR(2) (left) and AR(4) (right) models respectively and shifts occur in every sample.

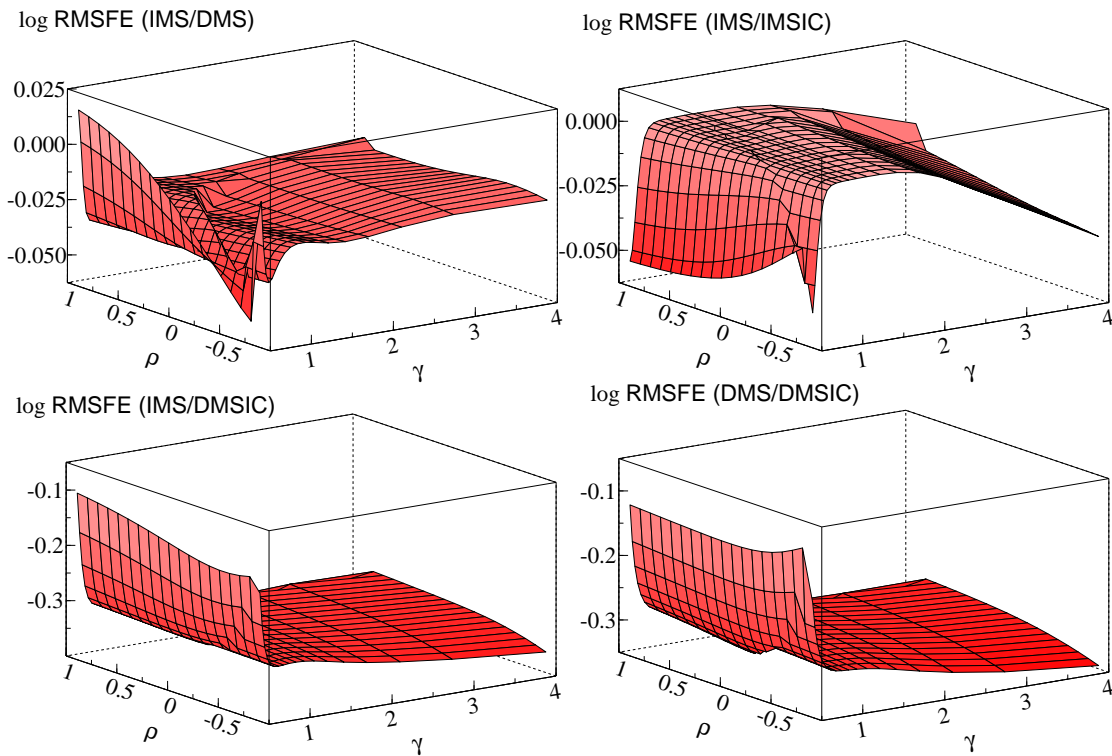


Figure S.2: The figure presents the logarithms of the ratios of simulated root-mean-square forecast errors (RMSFE) of the IMS, DMS, IMSIC and DMSIC techniques. The sample size is $T = 50$, the forecast horizon $h = 5$. The DGP is an AR(1) with coefficient ρ and, at each period a location shift of magnitude γ occurs (independently from the past) with probability $p_T = 1/T$. The number of Monte Carlo replications is 5,000. The estimated model is an AR(1) and all simulated samples present at least one shift.

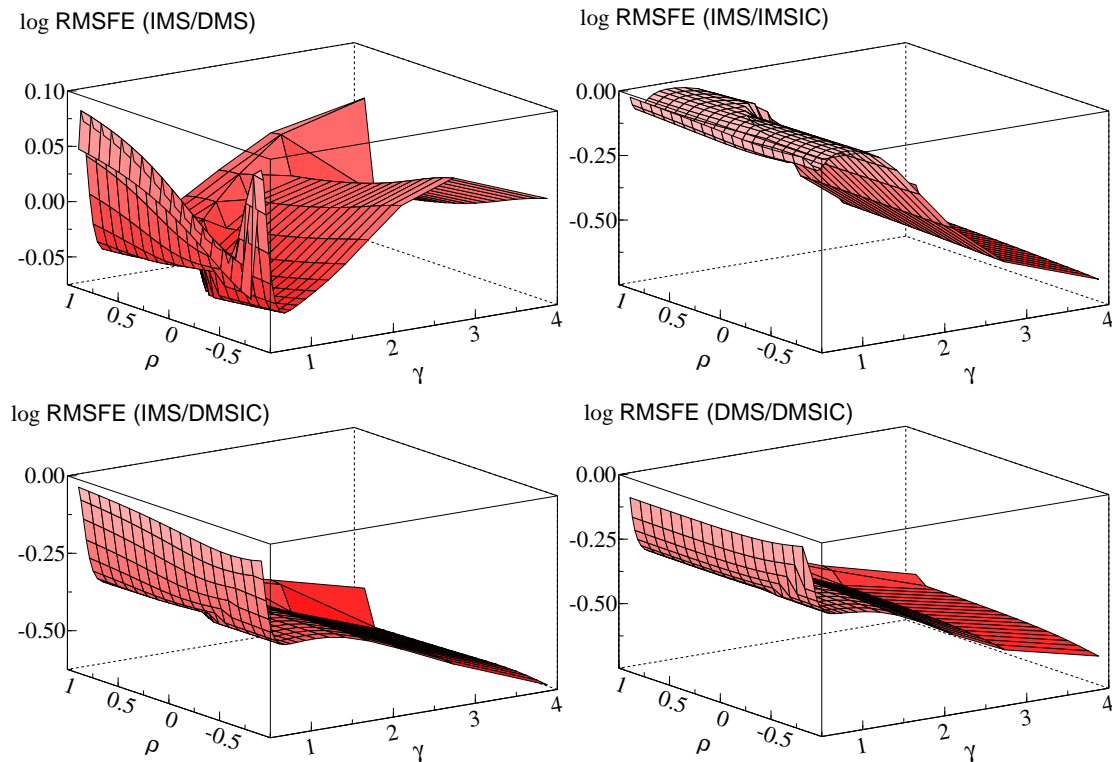


Figure S.3: The figure presents the logarithms of the ratios of simulated root-mean-square forecast errors (RMSFE) of the IMS, DMS, IMSIC and DMSIC techniques. The sample size is $T = 50$, the forecast horizon $h = 5$. The DGP is an AR(1) with coefficient ρ and, at each period a location shift of magnitude γ occurs (independently from the past) with probability $p_T = 1/T$. The number of Monte Carlo replications is 5,000. The estimated model is an AR(2) and all simulated samples present at least one shift.

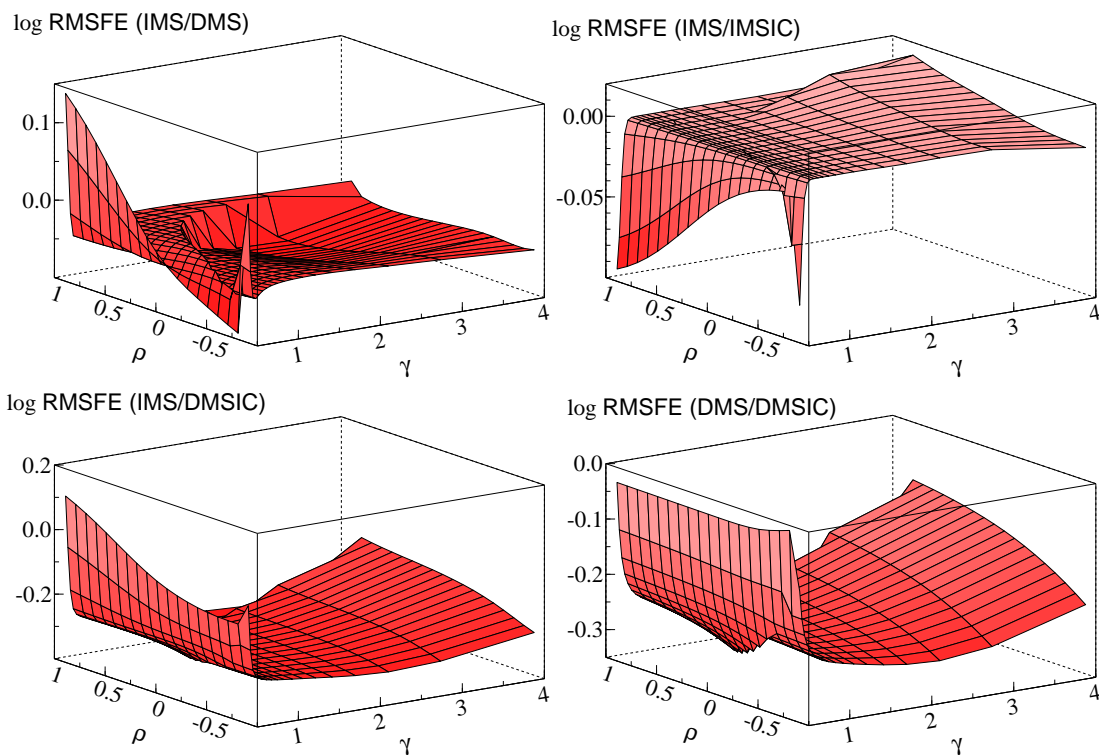


Figure S.4: The figure presents the logarithms of the ratios of simulated root-mean-square forecast errors (RMSFE) of the IMS, DMS, IMSIC and DMSIC techniques. The sample size is $T = 50$, the forecast horizon $h = 10$. The DGP is an AR(1) with coefficient ρ and, at each period a location shift of magnitude γ occurs (independently from the past) with probability $p_T = 1/T$. The number of Monte Carlo replications is 5,000. The estimated model is an AR(1) and all simulated samples present at least one shift.

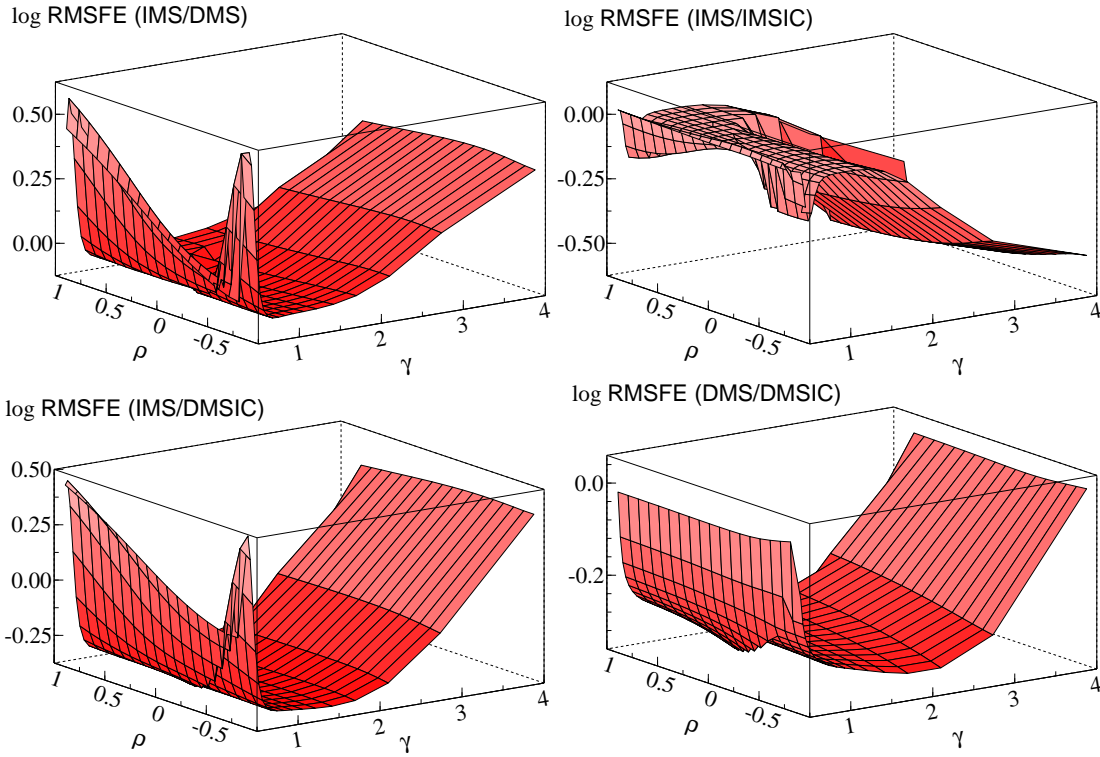


Figure S.5: The figure presents the logarithms of the ratios of simulated root-mean-square forecast errors (RMSFE) of the IMS, DMS, IMSIC and DMSIC techniques. The sample size is $T = 50$, the forecast horizon $h = 10$. The DGP is an AR(1) with coefficient ρ and, at each period a location shift of magnitude γ occurs (independently from the past) with probability $p_T = 1/T$. The number of Monte Carlo replications is 5,000. The estimated model is an AR(2) and all simulated samples present at least one shift.

In addition to the simulations above, we considered fixing the break date $T - k$ to see its impact on relative forecast accuracy. We considered values of k ranging from 0 to 15 in order to study recent shifts. At horizon $h = 1$, we find that imposing such recent breaks only has an impact on intercept correction – then a beneficial one – when the estimated model is an AR(4). For the other cases, the simulations were similar to those presented above. At longer horizons, the simulations show that a low k matters more. Figures S.6 and S.7 record the simulated log MSFE ratios of IMS over DMS. Each row corresponds to a different estimated AR(p) model, and each column to a different break date (no breaks occur over the forecast horizon). Figure S.6 reports simulations at forecast horizon $h = 5$ and Figure S.7 at $h = 10$. At horizon $h = 5$, DMS using the AR(1) model is only beneficial when γ is large enough and $|\rho|$ not too close to 1. Here the shift must occur relatively close to the forecast origin for DMS to be useful, as in expression (10). By contrast, under the AR(2), DMS performs better when γ is larger (or when it is close to zero and ρ is close to unity). When the model is an AR(4), the benefits from DMS are lost. These remarks are in line with the analytical results of Section 3.4, where the increasing the lag order (but not too much) improves the relative performance of DMS. Similar results hold at longer horizons, such as $h = 10$ in Figure S.7, and the benefits from using a higher order AR(4) are then retained.

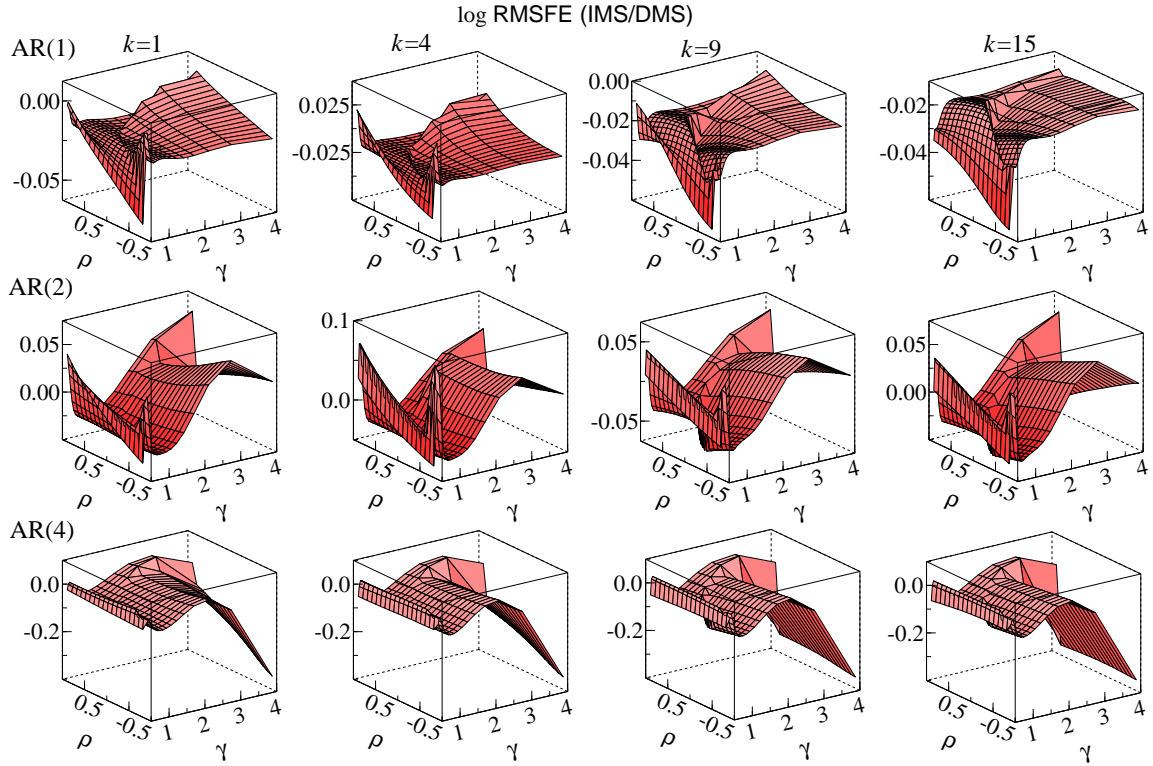


Figure S.6: The figure presents the logarithms of the ratios of simulated root-mean-square forecast error (RMSFE) of the IMS and DMS techniques. The sample size is $T = 50$, the forecast horizon $h = 5$. The DGP is an AR(1) with coefficient ρ and, at date $T - k$, a location shift of magnitude γ . The number of Monte Carlo replications is 5,000. The estimated model is an AR(p) with $p = 1$ (first row), $p = 2$ (second row) or $p = 4$ (third row). Graphs in the first to fourth columns report measures when $k = 1, 4, 9$ and 15 respectively.

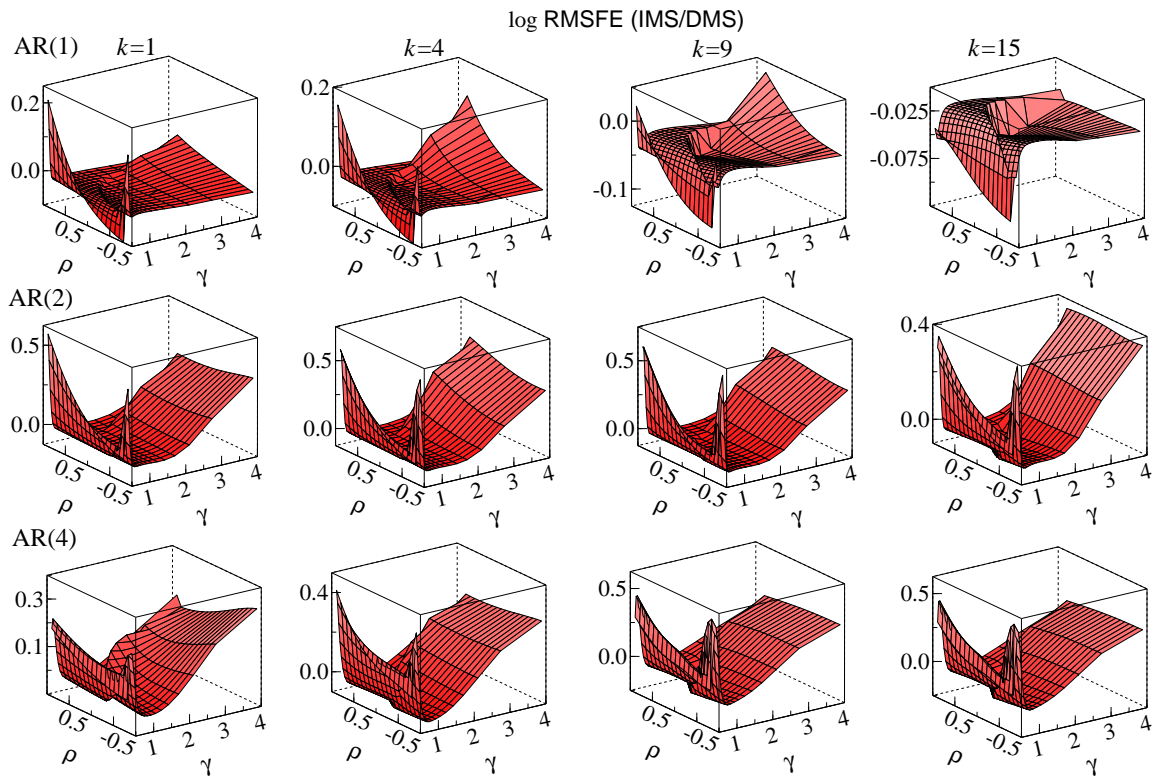


Figure S.7: The figure presents the logarithms of the ratios of simulated root-mean-square forecast error (RMSFE) of the IMS and DMS techniques. The sample size is $T = 50$, the forecast horizon $h = 10$. The DGP is an AR(1) with coefficient ρ and, at date $T - k$, a location shift of magnitude γ . The number of Monte Carlo replications is 5,000. The estimated model is an AR(p) with $p = 1$ (first row), $p = 2$ (second row) or $p = 4$ (third row). Graphs in the first to fourth columns report measures when $k = 1, 4, 9$ and 15 respectively.

3 Additional empirical results

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

3.1.1 Windows of 25 observations

		$h = 1$	2	4	8	12	1	2	4	8	12	1	2	4	8	12	1	2	4	8	12	1	2	4	8	12										
Without Intercept Correction																																				
		\bar{k}	\bar{b}	σ			mAFE IMS (x100)					mRAFE IMS/DMS					mRAFE IMS/IMSpre					mRAFE IMS/DMSpre					mRAFE IMS/IMSpost					mRAFE IMS/DMSpost				
<i>Inflation</i>																																				
Canada	13.1	0.65	0.84	0.29	0.27	0.38	0.56	0.58	1.00	0.99	0.95	0.94	0.89	0.50	0.66	0.84	0.99	0.79	0.50	0.53	0.40	0.38	0.45	0.94	0.91	0.90	0.86	0.97	0.94	0.66	0.65	0.65	0.45			
France	12.6	0.66	0.94	0.26	0.34	0.40	0.51	0.60	1.00	1.02	1.04	0.95	0.90	0.42	0.46	0.62	0.54	0.69	0.42	0.32	0.40	0.39	0.38	0.90	0.90	0.92	0.97	1.12	0.90	0.81	0.66	0.46	0.38			
Germany	14.4	0.55	0.56	0.25	0.41	0.47	0.58	0.55	1.00	1.01	0.97	0.82	0.83	0.62	0.69	0.81	0.89	0.98	0.62	0.70	0.66	0.58	0.53	0.98	0.89	0.88	0.83	0.82	0.98	0.78	0.62	0.54	0.53			
Japan	12.6	0.42	1.18	0.38	0.43	0.43	0.45	0.53	1.00	1.01	0.81	0.76	0.87	0.85	0.82	0.74	0.75	0.77	0.85	0.85	0.61	0.77	1.24	0.91	0.88	0.87	0.87	0.93	0.91	0.79	0.65	0.82	1.24			
UK	12.8	0.47	1.34	0.40	0.56	0.56	0.76	0.75	1.00	0.89	0.92	0.96	0.72	0.72	0.74	0.83	0.82	0.85	0.72	0.67	0.66	0.51	0.53	0.81	0.91	0.74	0.85	0.92	0.81	0.64	0.51	0.55	0.53			
US	13.8	0.59	0.78	0.21	0.33	0.52	0.67	0.72	1.00	1.00	0.97	0.94	0.91	0.53	0.73	0.81	0.78	0.69	0.53	0.54	0.46	0.45	0.47	1.03	0.95	0.88	0.90	0.90	1.03	0.85	0.69	0.50	0.47			
<i>Industrial production growth</i>																																				
Canada	12.5	0.34	1.75	1.23	1.15	1.21	1.18	1.06	1.00	1.01	0.97	1.11	0.79	0.91	0.95	0.84	0.94	0.94	0.91	1.12	1.07	0.80	0.95	0.82	0.93	0.91	0.76	0.81	0.82	0.91	0.97	0.80	0.95			
France	11.5	0.34	1.59	0.62	0.76	0.78	0.69	0.89	1.00	1.06	0.97	0.86	0.87	0.73	0.89	0.92	0.79	0.89	0.73	0.88	0.89	0.88	0.98	1.05	1.02	0.95	0.75	0.87	1.05	1.24	0.99	0.92	0.98			
Germany	11.1	0.38	1.91	0.98	1.15	0.96	1.10	1.11	1.00	0.98	0.96	0.98	0.83	1.03	0.98	1.01	1.06	0.95	1.03	0.95	1.00	0.98	0.96	0.91	0.94	0.89	0.88	0.86	0.91	0.88	1.05	1.04	0.96			
Japan	13.1	0.34	2.37	1.17	1.51	1.23	1.30	0.91	1.00	1.00	0.96	0.98	0.83	0.97	0.93	1.06	0.88	0.61	0.97	0.97	1.24	0.98	0.68	0.89	0.74	0.80	0.69	0.96	0.89	0.71	1.08	1.40	0.68			
UK	12.0	0.32	1.87	1.39	1.25	1.01	0.59	0.86	1.00	0.98	0.93	1.05	0.95	0.92	0.96	1.01	1.01	1.01	0.92	1.10	0.94	0.93	0.89	0.84	0.89	0.88	0.84	0.85	0.84	0.83	0.85	0.93	0.89			
US	11.6	0.27	1.75	0.57	0.71	1.01	0.83	0.78	1.00	1.03	1.00	0.83	0.77	0.95	0.68	1.14	1.21	0.82	0.95	0.78	1.22	0.78	0.77	0.83	0.88	0.75	0.74	0.66	0.83	0.91	0.76	0.78	0.77			
<i>Real GDP growth</i>																																				
Canada	12.8	0.34	0.97	0.59	0.59	0.53	0.46	0.65	1.00	1.02	1.02	0.81	0.79	0.89	0.88	0.72	0.82	1.11	0.89	0.77	0.77	0.55	0.64	1.00	0.87	1.07	0.89	0.86	1.00	0.82	0.87	0.52	0.64			
Germany	11.9	0.44	1.32	0.92	0.81	0.69	0.85	0.85	1.00	1.01	1.01	0.86	0.92	0.78	0.92	0.96	1.08	0.88	0.78	0.79	0.85	0.78	1.14	1.07	0.94	0.94	0.98	0.93	1.07	0.88	0.89	0.78	1.14			
Japan	12.9	0.47	1.36	0.50	0.52	0.50	0.57	0.45	1.00	0.97	0.99	0.93	0.80	0.72	0.85	0.84	0.90	0.90	0.72	0.83	0.76	0.59	0.35	1.14	1.04	0.81	0.95	0.79	1.14	0.73	0.65	0.56	0.35			
UK	11.4	0.40	1.05	0.55	0.73	0.79	0.81	0.59	1.00	0.98	0.90	0.83	0.71	0.78	0.82	0.89	0.85	0.75	0.78	0.78	0.70	0.72	0.67	0.99	1.14	0.96	1.13	1.41	0.99	1.11	0.87	0.87	0.67			
US	12.5	0.37	0.91	0.64	0.46	0.64	0.50	0.50	1.00	0.98	0.93	1.00	0.98	0.80	0.94	0.95	0.78	0.80	0.80	0.85	0.70	0.53	0.59	1.09	0.77	0.81	0.74	0.85	1.09	0.69	0.73	0.61	0.59			
<i>Interest rate</i>																																				
Canada	13.5	0.50	296	137	172	180	260	311	1.00	1.00	0.94	0.94	1.08	0.50	0.62	0.62	0.63	0.68	0.50	0.58	0.67	0.86	0.97	0.99	0.98	1.06	1.12	1.24	0.99	0.98	0.86	0.97	0.97			
France	12.5	0.76	311	105	112	117	197	260	1.00	1.02	0.95	1.13	1.06	0.44	0.37	0.57	0.52	0.45	0.44	0.35	0.33	0.32	0.35	1.07	1.11	1.08	1.13	1.12	1.07	0.97	0.94	0.83	0.35			
Germany	21.7	0.36	198	111	128	121	129	171	1.00	0.95	0.88	0.88	0.97	0.83	0.85	0.88	1.20	1.11	0.83	0.77	0.80	0.64	0.42	0.95	0.68	0.66	0.65	0.63	0.95	0.45	0.45	0.45	0.42			
UK	15.7	0.49	454	181	198	199	172	206	1.00	0.98	1.00	0.94	0.99	0.81	0.75	0.93	0.71	0.70	0.81	0.88	1.08	0.48	0.32	1.03	1.04	0.77	1.10	1.19	1.03	0.79	0.75	0.62	0.32			
US	13.3	0.71	235	113	143	168	167	177	1.00	1.00	0.97	1.00	1.05	0.52	0.72	0.75	0.78	0.77	0.52	0.58	0.78	0.86	0.92	1.17	1.12	1.07	1.06	1.02	1.17	1.05	0.95	0.78	0.92			
With Intercept Correction																																				
		\bar{b}	mRAFE IMS/IMSIC					mRAFE IMS/DMSIC					mRAFE IMS/IMSpreIC					mRAFE IMS/DMSpreIC					mRAFE IMS/IMSpostIC					mRAFE IMS/DMSpostIC								
<i>Inflation</i>																																				
Canada	13.1	0.65	0.70	0.78	0.76	1.07	0.88	0.70	0.79	0.76	0.96	0.89	0.73	0.48	0.56	0.51	0.37	0.73	0.64	0.68	1.17	0.90	0.69	0.61	0.46	0.42	0.46	0.69	0.58	0.69	0.70	0.90				
France	12.6	0.66	0.93	0.79	0.91	1.03	1.11	0.93	0.82	1.01	1.12	0.96	0.33	0.48	0.32	0.36	0.40	0.33	0.53	0.80	1.01	1.12	0.63	0.52	0.36	0.38	0.38	0.63	0.59	0.64	0.91	1.12				
Germany	14.4	0.55	0.86	1.02	1.19	1.07	0.86	0.86	0.98	1.18	0.89	0.98	0.76	0.56	0.65	0.52	0.53	0.76	0.78	1.05	1.09	0.86	0.82	0.84	0.74	0.67	0.46	0.82	0.89	1.13	1.12	0.86				
Japan	12.6	0.42	0.76	1.07	1.04	1.00	1.33	0.76	0.95	1.02	0.92	1.12	0.62	0.87	0.50	0.45	0.47	0.62	0.87	0.99	1.03	1.33	0.92	0.97	1.13	0.47	0.57	0.92	0.88	1.53	0.98	1.33				
UK	12.8	0.47	0.89	0.99	0.81	0.84	0.72	0.89	1.01	0.87	1.12	0.80	0.60	0.77	0.74	0.43	0.32	0.60	0.84	0.91	0.97	0.78	0.96	0.97	0.65	0.52	0.53	0.96	1.02	0.86	0.95	0.78				
US	13.8	0.59	0.99	0.91	0.87	0.83	0.84	0.99	1.10	0.94	0.93	0.96	0.45	0.77	0.79	0.60	0.36	0.45	0.80	0.94	0.88	0.92	0.57	0.77	0.61	0.55	0.52	0.57	0.88	0.82	0.86	0.92				
<i>Industrial production growth</i>																																				
Canada	12.5	0.34	0.75	0.98	0.81	0.65	0.75	0.75	0.97	0.77	0.73	0.67	0.77	0.86	0.65	0.62	0.63	0.77	0.82	0.97	0.65	0.75	0.76	0.80	0.60	0.72	0.75	0.76	1.04	0.81	0.65	0.75				
France	11.5	0.34	0.92	0.70	0.65	0.59	0.59	0.92	0.71	0.75	0.55	0.66	0.82	0.68	0.59	0.72	0.70	0.82	0.75	0.74	0.59	0.59	0.93	0.63	0.65	0.53	0.61	0.93	0.71	0.76	0.59	0.59				
Germany	11.1	0.38	0.84	0.63	0.81	0.70	0.78	0.84	0.65	0.91	0.76	0.84	0.76	0.65	0.94	0.68	0.69	0.76	0.76	0.80	0.71	0.78	0.89	0.62	0.80	0.55	0.60	0.89	0.67	0.85	0.71	0.78				
Japan	13.1	0.34	0.79	0.95	0.87	0.50	0.56	0.79	0.90	0.91	0.93	0.47	0.47	0.68	0.63	0.47	0.36	0.47	0.63	0.77	0.64	0.56	0.77	0.90	0.54	0.46	0.36	0.77	0.96	0.98	0.59	0.56				
UK	12.0	0.32	0.96	0.65	0.66	0.45	0.72	0.96	0.74	1.07	0.65	0.76	0.90	0.47	0.59	0.52	0.65	0.90	0.64	0.60	0.45	0.72	0.93	0.65	0.67	0.43	0.56	0.93	0.77	1.02	0.41	0.72				
US	11.6	0.27	0.60	0.78	0.89	0.87	0.71	0.60	0.80	0.92	0.93	0.73	0.59	0.69	0.62	0.90	0.79	0.59	0.80	0.95	0.87	0.71	0.59	0.77	0.78	0.51	0.45	0.59	0.93	1.00	0.89	0.71				
<i>Real GDP growth</i>																																				
Canada	12.8	0.34	0.90	0.69	0.66	0.56	0.73	0.90	0.69	0.70	0.80	0.75	0.72	0.67	0.61	0.59	1.06	0.72	0.59	0.75	0.56	0.73	0.81	0.68	0.63	0.49	0.47	0.81	0.79	0.67	0.60	0.73				
Germany	11.9	0.44	0.74	0.68	0.80	0.61	0.59	0.74	0.87	0.70	0.61	0.83	0.81	0.64	0.56	0.75	0.55	0.81	0.84	0.75	0.61	0.59	0.72	0.71	0.80	0.59	0.53	0.72	0.88	0.72	0.61	0.59				
Japan	12.9	0.47	0.84	0.90	0.73	0.76	0.68	0.84	0.98	0.75	0.88	0.63	0.90	0.75	0.42	0.58	0.39	0.90	0.75	0.72	0.84	0.68	0.95	0.88	0.70	0.68	0.42	0.95	0.83	0.80	0.76	0.68				
UK	11.4	0.40	1.20	0.81	1.31	1.12	1.33	1.20	0.81	1.23	1.20	1.20	1.33	0.59	0.90	0.70	0.57	1.33	1.06	1.09	0.99	1.33	1.03	0.84	1.19	0.90	0.83	1.03	0.89	1.12	1.12	1.33				

		$h = 1$	2	4	8	12	1	2	4	8	12	1	2	4	8	12	1	2	4	8	12	1	2	4	8	12								
Without Intercept Correction																																		
		\bar{k}	\bar{b}	σ	mAFE IMS (x100)					mRAFE IMS/DMS					mRAFE IMS/IMSpre					mRAFE IMS/DMSpre					mRAFE IMS/IMSpost					mRAFE IMS/DMSpost				
<i>Inflation</i>																																		
Canada	13.1	0.65	0.84	0.25	0.30	0.32	0.53	0.60	1.00	1.00	0.96	0.86	0.92	0.40	0.51	0.38	0.86	0.95	0.40	0.42	0.34	0.28	0.48	0.81	0.81	0.84	0.81	1.04	0.81	0.69	0.63	0.38	0.48	
France	12.6	0.66	0.94	0.26	0.33	0.36	0.45	0.54	1.00	1.00	1.00	0.87	0.80	0.29	0.38	0.60	0.54	0.60	0.29	0.30	0.44	0.34	0.37	0.76	0.73	0.76	0.89	1.08	0.76	0.71	0.56	0.36	0.37	
Germany	14.4	0.55	0.56	0.25	0.33	0.44	0.64	0.61	1.00	0.98	0.93	0.78	0.78	0.54	0.69	0.77	0.87	1.12	0.54	0.63	0.54	0.60	0.63	0.81	0.82	0.90	0.85	0.87	0.81	0.65	0.51	0.58	0.63	
Japan	12.6	0.42	1.18	0.38	0.48	0.44	0.46	0.53	1.00	1.02	0.77	0.67	0.81	0.77	0.77	0.73	0.73	0.85	0.77	0.76	0.52	0.82	1.26	1.04	1.25	1.33	0.83	1.46	1.04	0.75	1.14	0.82	1.26	
UK	12.8	0.47	1.34	0.52	0.70	0.69	0.81	0.75	1.00	0.98	0.97	0.96	0.81	0.60	0.71	0.80	0.86	0.76	0.60	0.70	0.60	0.53	0.56	0.75	0.70	0.74	0.87	1.01	0.75	0.57	0.49	0.55	0.56	
US	13.8	0.59	0.78	0.21	0.31	0.50	0.73	0.70	1.00	1.02	0.96	0.89	0.85	0.54	0.81	0.87	0.79	0.68	0.54	0.60	0.37	0.47	0.46	0.83	0.83	0.87	1.07	1.08	0.83	0.75	0.72	0.49	0.46	
<i>Industrial production growth</i>																																		
Canada	12.5	0.34	1.75	1.52	1.17	1.38	1.29	1.27	1.00	1.04	0.90	0.94	0.70	0.96	1.05	0.91	1.05	1.03	0.96	1.21	0.84	0.91	1.00	0.87	0.88	0.96	0.82	0.81	0.87	1.02	0.95	0.88	1.00	
France	11.5	0.34	1.59	0.65	0.73	0.91	0.65	0.87	1.00	1.00	0.93	0.76	0.84	0.63	0.86	0.91	0.96	0.95	0.63	0.85	0.97	0.94	1.02	0.95	1.09	0.84	0.72	0.85	0.95	0.99	0.96	0.88	1.02	
Germany	11.1	0.38	1.91	0.99	1.18	0.96	1.12	1.06	1.00	1.06	1.08	0.94	0.79	1.02	0.96	0.96	0.92	0.92	1.02	0.99	1.03	0.96	0.99	0.93	0.93	0.93	0.90	0.89	0.93	0.94	0.97	1.03	0.99	
Japan	13.1	0.34	2.37	1.19	1.37	1.38	1.31	0.95	1.00	1.01	0.88	1.14	0.75	0.92	0.90	1.06	0.99	0.67	0.92	0.80	1.01	1.26	0.74	0.53	0.70	0.83	0.78	0.98	0.53	0.70	0.98	1.61	0.74	
UK	12.0	0.32	1.87	1.39	1.26	0.95	0.65	0.96	1.00	1.04	0.89	0.89	0.93	1.00	1.15	1.07	1.02	1.01	1.00	1.30	0.98	1.12	0.96	0.74	0.90	0.85	0.82	0.84	0.74	0.99	0.86	1.16	0.96	
US	11.6	0.27	1.75	0.59	0.70	0.98	0.95	0.78	1.00	1.04	1.02	0.85	0.72	0.50	0.75	1.22	1.22	0.97	0.50	0.79	1.03	0.73	0.77	1.21	1.08	0.85	0.81	0.64	1.21	1.09	0.80	0.73	0.77	
<i>Real GDP growth</i>																																		
Canada	12.8	0.34	0.97	0.69	0.80	0.60	0.52	0.67	1.00	0.96	0.94	0.76	0.80	0.70	0.90	0.74	0.68	0.99	0.70	0.74	0.64	0.56	0.68	1.73	0.88	0.79	0.82	0.83	0.73	0.74	0.73	0.56	0.68	
Germany	11.9	0.44	1.32	0.87	0.90	0.76	0.85	0.85	1.00	1.00	0.99	0.90	0.89	0.80	0.90	0.80	0.94	0.81	0.80	1.04	0.90	0.77	1.15	1.20	0.94	0.85	0.95	0.85	1.20	0.95	0.76	0.79	1.15	
Japan	12.9	0.47	1.36	0.53	0.58	0.44	0.56	0.48	1.00	1.07	0.98	0.95	0.74	0.62	0.80	0.78	0.91	0.85	0.62	0.78	0.59	0.48	0.37	0.90	0.74	0.79	0.77	0.69	0.90	0.85	0.58	0.52	0.37	
UK	11.4	0.40	1.05	0.61	0.79	0.69	0.87	0.69	1.00	0.92	0.88	0.82	0.70	0.64	0.75	0.70	0.71	0.76	0.64	0.78	0.70	0.76	0.72	0.84	0.96	0.86	1.24	0.90	0.84	0.85	0.92	0.79	0.72	
US	12.5	0.37	0.91	0.64	0.55	0.69	0.50	0.58	1.00	0.97	0.92	0.79	0.82	0.85	0.92	0.88	0.76	0.81	0.85	0.72	0.76	0.56	0.61	0.88	0.81	0.73	0.76	0.74	0.88	0.82	0.72	0.65	0.61	
<i>Interest rate</i>																																		
Canada	13.5	0.50	296	145	160	177	223	350	1.00	1.00	0.97	0.92	1.10	0.53	0.65	0.60	0.57	0.72	0.53	0.75	0.72	0.86	1.16	0.93	0.93	0.95	1.13	1.25	0.93	0.91	0.78	0.80	1.16	
France	12.5	0.76	311	93	107	125	179	251	1.00	0.97	0.90	1.11	1.03	0.54	0.33	0.49	0.44	0.38	0.54	0.31	0.27	0.31	0.36	0.83	0.85	0.94	1.13	1.12	0.83	0.90	0.84	0.48	0.36	
Germany	21.7	0.36	198	120	134	137	133	167	1.00	0.97	0.94	0.83	0.86	0.80	0.86	0.95	1.08	1.01	0.80	0.88	0.63	0.60	0.43	0.59	0.55	0.61	0.56	0.60	0.59	0.44	0.41	0.45	0.43	
UK	15.7	0.49	454	183	190	208	183	174	1.00	1.00	0.95	1.04	0.93	0.62	0.80	1.07	0.72	0.77	0.62	0.75	0.94	0.33	0.48	0.86	0.75	0.71	1.03	1.17	0.86	0.77	0.76	0.43	0.48	
US	13.3	0.71	235	109	139	167	171	186	1.00	1.03	0.87	0.93	1.02	0.46	0.59	0.88	0.79	0.86	0.46	0.66	0.63	0.88	0.86	1.10	1.11	1.12	1.05	0.96	1.10	1.09	0.92	0.82	0.86	
With Intercept Correction																																		
		\bar{b}	mRAFE IMS/IMSIC					mRAFE IMS/DMSIC					mRAFE IMS/IMSpreIC					mRAFE IMS/DMSpreIC					mRAFE IMS/IMSpostIC					mRAFE IMS/DMSpostIC						
<i>Inflation</i>																																		
Canada	13.1	0.65	0.66	0.78	0.74	0.92	0.85	0.66	0.82	0.77	0.88	0.87	0.71	0.72	0.61	0.54	0.47	0.71	0.80	0.81	1.09	0.93	0.78	0.82	0.69	0.47	0.48	0.78	0.91	0.87	1.06	0.93		
France	12.6	0.66	0.88	0.76	0.88	0.92	1.04	0.88	0.82	0.90	0.92	0.90	0.69	0.86	0.86	0.36	0.43	0.69	0.95	0.95	1.10	1.10	1.06	1.08	0.64	0.42	0.35	1.06	0.94	1.04	1.00	1.10		
Germany	14.4	0.55	0.91	0.93	1.15	1.10	0.91	0.91	0.91	0.95	1.15	0.86	0.89	0.82	0.86	0.96	0.63	0.58	0.82	0.82	1.06	1.21	0.99	1.02	1.08	0.96	0.78	0.65	1.02	1.07	1.07	1.21	0.99	
Japan	12.6	0.42	0.78	1.16	1.05	1.04	1.26	0.78	1.10	1.15	0.87	0.96	0.55	1.13	0.53	0.55	0.54	0.55	0.89	1.10	1.04	1.36	1.12	1.19	0.82	0.66	0.65	1.12	1.20	1.15	1.04	1.36		
UK	12.8	0.47	0.93	1.03	0.81	0.94	0.84	0.93	1.05	0.90	0.96	0.75	1.03	0.82	0.67	0.43	0.35	1.03	0.92	1.16	1.10	0.89	1.02	1.13	0.84	0.82	0.67	1.02	1.21	0.83	1.07	0.89		
US	13.8	0.59	0.87	0.93	0.84	0.80	0.81	0.87	1.00	0.95	0.96	0.92	0.51	0.72	0.59	0.66	0.39	0.51	0.79	0.98	0.94	0.92	0.91	1.03	0.88	0.66	0.59	0.91	1.06	1.03	0.96	0.92		
<i>Industrial production growth</i>																																		
Canada	12.5	0.34	0.78	1.03	0.80	0.67	0.69	0.78	0.92	0.71	0.70	0.66	0.88	0.64	0.59	0.64	0.75	0.88	0.84	1.05	0.70	0.69	0.83	0.86	0.67	0.73	0.70	0.83	0.97	0.81	0.67	0.69		
France	11.5	0.34	1.00	0.65	0.67	0.54	0.62	1.00	0.61	0.73	0.53	0.71	0.74	0.62	0.54	0.72	0.63	0.74	0.49	0.68	0.54	0.62	1.04	0.72	0.72	0.54	0.53	1.04	0.76	0.59	0.61	0.62		
Germany	11.1	0.38	0.79	0.60	0.82	0.63	0.77	0.79	0.66	0.89	0.75	0.66	0.62	0.67	0.89	0.61	0.68	0.62	0.64	0.71	0.63	0.78	0.91	0.71	0.61	0.51	0.64	0.91	0.83	0.81	0.63	0.78		
Japan	13.1	0.34	0.70	0.85	0.72	0.52	0.56	0.70	0.83	0.89	0.87	0.43	0.43	0.84	0.70	0.49	0.36	0.43	0.69	1.01	0.60	0.56	0.80	0.94	1.01	0.51	0.41	0.80	0.93	1.10	0.55	0.56		
UK	12.0	0.32	0.78	0.82	0.68	0.45	0.71	0.78	0.80	0.68	0.68	0.64	0.69	0.61	0.60	0.67	0.71	0.69	0.64	0.70	0.45	0.71	0.77	0.80	0.96	0.45	0.59	0.77	0.76	0.68	0.64	0.71		
US	11.6	0.27	0.61	0.67	0.74	0.79	0.77	0.61	0.74	0.92	0.82	0.76	0.65	0.78	0.75	0.62	0.62	0.65	1.11	0.91	0.90	0.77	0.64	0.93	0.71	0.54	0.58	0.64	0.83	0.70	0.79	0.77		
<i>Real GDP growth</i>																																		
Canada	12.8	0.34	0.84	0.57	0.84	0.59	0.77	0.84	0.53	0.73	0.75	0.88	0.84	0.61	0.64	0.63	0.94	0.84	0.68	0.79	0.63	0.77	0.95	0.66	0.70	0.43	0.54	0.95	0.70	0.60	0.63	0.77		
Germany	11.9	0.44	0.76	0.89	0.79	0.63	0.56	0.76	0.79	0.72	0.64	0.73	0.56	0.73	0.83	0.88	0.55	0.56	0.74	0.79	0.63	0.56	0.98	0.81	0.75	0.62	0.53	0.98	0.96	0.84	0.63	0.56		
Japan	12.9	0.47	0.83	0.75	0.67	0.80	0.65	0.83	0.75	0.61	0.87	0.49	0.78	0.80	0.66	0.56	0.38	0.78	1.21	0.66	0.78	0.65	0.90	0.99	0.59	0.75	0.49	0.70	0.88	0.70	0.80	0.65		
UK	11.4	0.40	1.09	0.78	1.36	1.13	1.17	1.09	0.69	1.30	1.06	1.10	1.11	0.99	1.27	0.80	0.81	1.11	1.01	1.27	1.13	1.23	1.45	1.03	1.09	0.89	0.99	1.45	1.10					

3.1.2 Windows of 40 observations

3.1.3 Expanding windows of observations

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

3.2.1 Windows of 25 observations

3.2.2 Windows of 40 observations

	h = 1		2	5	10	20	1	2	5	10	20	1	2	5	10	20	1	2	5	10	20	1	2	5	10	20	1	2	5	10	20	
Without Intercept Correction																																
	\bar{k}	\bar{b}	RMSFE IMS / σ					RMSFE IMS/DMS					RMSFE IMS/IMSpre					RMSFE IMS/DMSpre					RMSFE IMS/IMSpost					RMSFE IMS/DMSpost				
<i>Inflation</i>																																
Canada	19.4	0.87	0.54	0.69	0.90	1.02	1.17	1.00	1.03	0.96	0.93	0.79	0.52	0.57	0.59	0.60	0.63	0.52	0.52	0.48	0.55	0.56	1.16	1.20	1.20	1.18	1.18	1.16	1.04	0.76	0.75	0.61
France	20.3	0.73	0.47	0.64	0.88	1.04	1.10	1.00	1.03	1.05	1.01	0.85	0.47	0.48	0.55	0.60	0.63	0.47	0.39	0.48	0.49	0.49	1.03	1.02	1.03	1.06	0.93	1.03	0.79	0.85	0.67	0.52
Germany	22.3	0.57	0.97	1.06	1.04	1.14	1.04	1.00	1.00	1.03	0.87	0.82	0.74	0.77	0.79	0.90	0.86	0.74	0.70	0.68	0.68	0.58	1.14	1.14	1.06	0.97	0.86	1.14	1.02	0.70	0.62	0.56
Japan	19.0	0.32	0.84	1.29	0.79	0.71	0.88	1.00	0.97	1.00	0.61	0.77	0.48	0.69	0.55	0.51	0.59	0.48	0.69	0.69	0.76	1.06	0.60	0.64	0.22	0.08	0.04	0.60	0.63	0.54	0.61	1.03
UK	20.1	0.50	0.54	0.81	1.05	1.29	1.50	1.00	1.01	0.98	1.05	1.00	0.55	0.61	0.68	0.77	0.80	0.55	0.64	0.61	0.71	0.81	1.12	1.15	1.13	1.10	1.21	1.12	0.82	0.67	0.70	0.70
US	19.4	0.52	0.59	0.73	0.90	1.18	1.27	1.00	1.01	1.01	1.02	1.01	0.55	0.55	0.59	0.67	0.66	0.55	0.52	0.56	0.65	0.68	1.10	1.08	0.99	0.74	0.62	1.10	0.66	0.60	0.85	0.66
<i>Industrial production growth</i>																																
Canada	15.7	0.20	0.75	1.07	0.99	0.96	0.49	1.00	0.99	0.96	0.93	1.06	1.00	0.94	1.02	0.76	0.39	1.00	0.99	1.38	0.96	0.85	0.74	0.73	0.64	0.76	0.56	0.74	0.89	0.66	0.78	0.80
France	22.9	0.18	0.72	0.80	1.30	0.76	0.79	1.00	1.02	0.96	0.94	0.87	0.78	0.91	1.05	0.88	1.07	0.78	0.91	1.12	0.86	0.92	1.24	0.99	0.94	0.86	0.86	1.24	0.94	0.89	1.01	0.96
Germany	20.4	0.21	1.05	0.93	0.96	0.88	0.93	1.00	0.96	0.94	0.94	0.86	0.81	0.83	0.69	0.28	0.07	0.81	0.89	0.90	1.00	0.80	1.24	0.96	0.62	0.56	0.55	1.24	0.84	0.96	0.90	1.04
Japan	23.6	0.15	0.83	1.07	0.99	0.68	0.59	1.00	0.99	0.97	0.87	0.86	0.79	0.83	0.81	0.56	0.52	0.79	0.88	1.12	0.65	0.76	1.17	0.95	0.44	0.18	0.11	1.17	0.93	0.96	0.75	1.18
UK	18.9	0.09	0.66	0.47	0.50	0.67	0.44	1.00	1.04	1.30	0.91	0.88	0.68	1.15	0.74	1.29	1.18	0.68	0.97	1.22	1.12	1.09	1.24	0.56	0.58	0.65	0.47	1.24	0.44	0.89	0.84	0.85
US	17.4	0.15	0.88	0.74	0.44	0.56	0.40	1.00	1.01	0.96	0.75	1.13	1.09	1.09	0.65	1.01	0.66	1.09	1.14	0.73	0.79	0.76	1.00	0.78	0.50	0.50	0.48	1.00	0.91	0.83	0.62	0.91
<i>Real GDP growth</i>																																
Canada	21.5	0.16	0.81	0.93	0.65	0.93	0.76	1.00	1.03	0.93	0.87	0.89	0.78	0.83	0.82	0.77	0.60	0.78	0.86	0.97	0.91	0.74	0.96	0.65	0.41	0.58	0.51	0.96	0.68	0.50	0.77	0.61
Germany	20.3	0.44	0.83	0.78	0.80	0.91	0.72	1.00	0.97	0.90	0.98	1.01	0.81	0.86	0.84	0.88	0.82	0.81	0.91	0.83	0.98	0.93	1.30	0.97	0.87	0.87	0.77	1.30	0.94	0.94	0.96	0.89
Japan	20.7	0.60	0.63	0.78	0.54	0.68	0.75	1.00	1.08	1.12	0.94	0.99	0.54	0.81	0.65	0.71	0.75	0.54	0.84	0.64	0.73	0.75	1.33	1.20	1.17	1.09	1.01	1.33	1.11	0.83	1.02	0.91
UK	21.4	0.18	0.60	0.56	0.64	0.60	0.45	1.00	0.95	1.00	0.88	0.82	0.66	0.75	1.01	1.33	0.93	0.66	0.63	0.99	1.16	0.90	1.20	0.89	0.78	0.61	0.50	1.20	0.67	0.76	0.61	0.51
US	18.2	0.20	1.34	1.36	1.13	1.03	1.09	1.00	0.98	0.90	0.93	1.02	0.89	0.88	0.83	0.88	0.83	0.89	0.98	0.82	1.00	0.96	1.11	0.96	0.80	0.83	0.89	1.11	0.88	0.85	0.85	1.20
<i>Interest rate</i>																																
Canada	19.4	0.56	0.68	0.88	1.13	1.16	1.28	1.00	1.04	0.99	1.02	0.97	0.57	0.64	0.73	0.73	0.78	0.57	0.68	0.61	0.66	0.70	1.06	1.07	1.11	1.15	1.09	1.06	1.06	1.06	0.97	0.83
France	22.4	0.76	0.57	0.77	0.86	1.06	1.13	1.00	0.99	1.25	0.96	0.97	0.44	0.50	0.52	0.60	0.62	0.44	0.45	0.49	0.51	0.63	1.24	1.40	1.54	1.64	1.44	1.24	1.00	0.74	0.72	0.74
Germany	12.5	0.27	0.55	1.67	0.67	0.78	0.98	1.00	0.98	0.89	0.78	1.18	0.41	0.87	0.75	0.69	0.61	0.41	0.71	0.40	0.49	0.48	0.98	1.13	0.76	1.06	1.00	0.98	0.71	0.68	1.59	0.85
UK	19.8	0.56	0.62	0.89	1.23	1.04	1.11	1.00	1.14	1.06	1.34	1.27	0.45	0.59	0.67	0.62	0.63	0.45	0.62	0.58	0.76	0.75	1.02	1.19	1.22	1.52	1.52	1.02	1.34	1.17	0.43	1.07
US	19.8	0.74	0.91	1.13	1.14	1.40	1.45	1.00	1.01	1.08	0.91	0.94	0.61	0.67	0.67	0.80	0.85	0.61	0.53	0.71	0.75	0.90	1.09	1.13	1.13	1.07	1.03	1.09	1.06	1.00	0.92	1.01
With Intercept Correction																																
	\bar{k}	\bar{b}	RMSFE IMS/IMSIC					RMSFE IMS/DMSIC					RMSFE IMS/IMSpreIC					RMSFE IMS/DMSpreIC					RMSFE IMS/IMSpostIC					RMSFE IMS/DMSpostIC				
<i>Inflation</i>																																
Canada	19.4	0.87	0.72	0.82	0.94	1.00	1.00	0.72	0.80	0.89	0.99	1.05	0.54	0.70	0.70	0.61	0.56	0.54	0.81	1.01	1.05	1.07	0.80	0.85	0.73	0.58	0.60	0.80	0.98	1.05	1.12	1.07
France	20.3	0.73	0.74	0.92	0.97	1.01	1.03	0.74	0.91	0.93	0.99	0.97	0.50	0.79	0.90	0.67	0.58	0.50	0.67	0.95	1.07	1.05	0.81	0.74	0.60	0.56	0.56	0.81	1.03	1.18	1.20	1.19
Germany	22.3	0.57	0.68	0.74	0.83	0.75	0.72	0.68	0.72	0.74	0.74	0.75	0.65	0.79	0.76	0.65	0.54	0.65	0.76	0.83	0.81	0.82	0.77	0.77	0.67	0.52	0.42	0.77	0.83	0.85	0.81	0.75
Japan	19.0	0.32	0.53	0.85	0.49	0.48	0.57	0.53	0.75	0.51	0.94	0.42	0.92	0.87	0.39	0.33	0.37	0.92	1.04	0.78	0.69	0.40	0.47	0.40	0.15	0.06	0.04	0.47	0.97	0.56	0.50	0.58
UK	20.1	0.50	0.85	1.00	1.38	1.04	1.13	0.85	0.98	1.33	1.10	1.02	0.75	0.91	0.90	0.76	0.74	0.75	1.05	1.32	1.04	1.15	0.88	1.03	0.82	0.76	0.95	0.88	1.06	1.28	1.13	1.17
US	19.4	0.52	0.66	0.69	0.77	0.69	0.76	0.66	0.69	0.77	0.89	0.98	0.42	0.56	0.52	0.52	0.50	0.42	0.61	0.67	0.92	1.02	0.74	0.59	0.41	0.38	0.38	0.74	0.89	0.93	0.98	0.96
<i>Industrial production growth</i>																																
Canada	15.7	0.20	0.86	0.71	0.66	0.63	0.39	0.86	0.67	0.72	0.65	0.44	0.66	0.63	0.53	0.49	0.26	0.66	0.69	0.67	0.63	0.40	0.89	0.58	0.56	0.60	0.32	0.89	0.70	0.67	0.55	0.36
France	22.9	0.18	0.93	0.91	0.95	0.64	0.88	0.93	0.85	0.91	0.60	0.97	0.95	0.85	0.90	0.63	0.83	0.95	0.93	0.98	0.62	0.97	1.00	0.88	0.92	0.56	0.72	1.00	0.86	0.91	0.66	0.88
Germany	20.4	0.21	1.16	0.90	0.62	0.62	0.69	1.16	0.88	0.58	0.70	0.79	1.25	0.73	0.51	0.26	0.07	1.25	0.92	0.58	0.71	0.79	1.16	0.74	0.43	0.39	0.40	1.16	0.85	0.63	0.62	0.72
Japan	23.6	0.15	0.78	0.95	0.56	0.38	0.45	0.78	0.95	0.71	0.58	0.35	0.66	0.80	0.55	0.36	0.39	0.66	0.74	0.67	0.63	0.50	0.79	0.74	0.33	0.15	0.10	0.79	1.05	0.70	0.43	0.47
UK	18.9	0.09	0.87	0.45	0.38	0.67	0.36	0.87	0.44	0.45	0.56	0.36	0.93	0.42	0.34	0.65	0.34	0.93	0.45	0.46	0.56	0.38	1.04	0.38	0.30	0.47	0.27	1.04	0.38	0.38	0.67	0.36
US	17.4	0.15	0.73	0.72	0.38	0.41	0.38	0.73	0.82	0.42	0.42	0.38	0.63	0.57	0.34	0.41	0.36	0.63	0.78	0.42	0.43	0.41	0.79	0.53	0.25	0.29	0.23	0.79	0.73	0.39	0.41	0.38
<i>Real GDP growth</i>																																
Canada	21.5	0.16	0.84	0.56	0.42	0.54	0.45	0.84	0.57	0.44	0.54	0.42	0.82	0.51	0.36	0.46	0.36	0.82	0.60	0.43	0.56	0.4										

		$h = 1$					2					5					10					20											
		1					2					5					10					20											
		1					2					5					10					20											
		1					2					5					10					20											
		1					2					5					10					20											
Without Intercept Correction																																	
		\bar{k}	\bar{b}	RMSFE IMS / σ					RMSFE IMS/DMS					RMSFE IMS/IMSpre					RMSFE IMS/DMSpre					RMSFE IMS/IMSpost					RMSFE IMS/DMSpost				
<i>Inflation</i>																																	
Canada	19.4	0.87	0.53	0.66	0.86	1.02	1.15	1.00	0.98	0.92	0.86	0.70	0.43	0.48	0.57	0.46	0.60	0.43	0.43	0.46	0.53	0.55	0.94	0.98	1.05	1.03	1.09	0.94	0.76	0.71	0.71	0.58	
France	20.3	0.73	0.47	0.62	0.87	1.06	1.16	1.00	0.96	0.95	0.99	0.87	0.36	0.38	0.58	0.62	0.66	0.36	0.35	0.47	0.49	0.53	0.72	0.75	0.96	1.02	0.86	0.72	0.65	0.76	0.62	0.54	
Germany	22.3	0.57	0.92	1.03	1.02	1.16	1.09	1.00	1.16	1.01	0.89	0.80	0.68	0.67	0.77	0.87	0.88	0.68	0.80	0.67	0.66	0.60	0.92	0.98	0.92	0.85	0.77	0.92	0.81	0.64	0.63	0.58	
Japan	19.0	0.32	0.89	1.43	1.54	1.85	2.44	1.00	0.90	1.61	1.40	1.05	0.45	0.82	1.15	1.25	1.49	0.45	1.13	1.05	2.30	3.38	0.58	0.70	1.15	1.32	1.42	0.58	0.72	1.03	1.61	2.90	
UK	20.1	0.50	0.54	0.78	1.02	1.27	1.50	1.00	0.99	1.00	1.07	1.01	0.54	0.63	0.66	0.78	0.83	0.54	0.62	0.56	0.70	0.78	0.70	0.80	0.93	1.04	1.16	0.70	0.57	0.62	0.67	0.69	
US	19.4	0.52	0.61	0.74	0.93	1.25	1.29	1.00	1.04	0.99	1.03	0.95	0.51	0.52	0.64	0.77	0.72	0.51	0.50	0.60	0.66	0.69	0.60	0.66	0.78	0.98	0.92	0.60	0.52	0.60	0.84	0.67	
<i>Industrial production growth</i>																																	
Canada	15.7	0.20	0.78	1.10	1.00	0.94	0.51	1.00	1.02	1.04	0.80	1.01	1.13	1.02	0.97	0.69	0.34	1.13	1.17	1.48	0.91	0.68	0.65	0.92	0.75	0.74	0.77	0.65	0.95	0.69	0.76	0.81	
France	22.9	0.18	0.70	0.78	1.30	0.76	0.80	1.00	0.98	0.94	0.88	0.80	0.72	0.92	1.13	0.85	1.23	0.72	0.94	1.12	0.80	0.89	1.04	0.90	0.92	0.83	0.84	1.04	0.86	0.92	0.99	0.97	
Germany	20.4	0.21	1.11	0.96	0.97	0.88	0.94	1.00	0.99	0.92	0.89	0.86	0.77	0.98	0.98	1.09	1.07	0.77	0.91	0.97	0.90	0.79	1.06	0.85	0.69	0.67	0.72	1.06	0.95	0.94	0.94	1.11	
Japan	23.6	0.15	0.81	1.06	1.06	0.76	0.64	1.00	0.96	1.00	1.02	0.82	0.77	0.89	0.86	0.60	0.53	0.77	0.97	1.13	0.72	0.81	0.93	0.91	0.71	0.46	0.45	0.93	0.92	1.16	0.84	1.30	
UK	18.9	0.09	0.66	0.47	0.50	0.65	0.42	1.00	0.84	1.17	0.85	0.99	0.79	0.92	1.13	1.05	1.04	0.79	0.83	1.09	1.01	1.18	0.66	0.43	0.49	0.52	0.36	0.66	0.91	0.92	0.81	0.78	
US	17.4	0.15	0.91	0.73	0.45	0.54	0.39	1.00	0.99	0.93	0.69	0.92	1.10	1.09	0.63	0.85	0.68	1.10	1.06	0.76	0.77	0.63	1.16	0.87	0.60	0.59	0.43	1.16	0.71	0.84	0.60	0.78	
<i>Real GDP growth</i>																																	
Canada	21.5	0.16	0.84	0.90	0.65	0.92	0.77	1.00	0.95	1.06	0.79	0.97	0.84	0.94	0.93	0.89	0.74	0.84	1.08	1.07	0.91	0.64	0.89	0.65	0.48	0.67	0.60	0.89	0.71	0.50	0.67	0.62	
Germany	20.3	0.44	0.79	0.81	0.81	0.92	0.73	1.00	0.98	0.91	0.97	0.99	0.75	0.88	0.71	0.34	0.05	0.75	0.78	0.82	1.02	0.95	1.06	0.98	0.82	0.80	0.52	1.06	1.04	0.93	0.96	0.93	
Japan	20.7	0.60	0.61	0.71	0.51	0.67	0.74	1.00	1.03	1.09	0.98	0.92	0.53	0.78	0.60	0.73	0.77	0.53	0.72	0.68	0.69	0.75	1.13	1.02	0.89	1.02	0.98	1.13	0.97	0.76	0.98	0.84	
UK	21.4	0.18	0.63	0.60	0.63	0.61	0.44	1.00	1.13	0.98	0.82	0.68	0.58	0.67	0.87	1.30	1.04	0.58	0.71	1.02	1.15	0.78	1.06	0.75	0.75	0.56	0.45	1.06	0.95	0.75	0.64	0.51	
US	18.2	0.20	1.27	1.39	1.21	1.05	1.07	1.00	1.00	0.98	0.97	0.93	0.85	1.04	1.03	0.85	0.88	0.85	0.92	1.07	0.86	0.92	1.00	0.90	0.84	0.83	0.92	1.00	0.93	0.88	0.84	1.13	
<i>Interest rate</i>																																	
Canada	19.4	0.56	0.66	0.83	1.08	1.11	1.22	1.00	1.00	0.97	0.90	0.79	0.48	0.69	0.65	0.71	0.71	0.48	0.70	0.62	0.63	0.69	0.94	0.98	1.06	1.11	1.03	0.94	0.80	0.97	0.88	0.73	
France	22.4	0.76	0.57	0.77	0.82	1.01	1.09	1.00	1.05	1.26	0.89	1.12	0.41	0.44	0.52	0.59	0.62	0.41	0.44	0.44	0.49	0.65	0.80	0.99	1.16	1.17	1.22	0.80	0.84	0.62	0.66	0.69	
Germany	12.5	0.27	0.56	1.70	0.73	0.81	0.95	1.00	1.03	1.01	0.74	1.19	0.27	0.75	0.85	0.64	0.55	0.27	0.75	0.51	0.52	0.46	0.45	0.72	0.75	0.60	0.90	0.45	0.72	0.74	0.60	0.82	
UK	19.8	0.56	0.54	0.75	1.09	0.92	1.02	1.00	1.00	0.97	1.31	1.19	0.43	0.50	0.57	0.56	0.58	0.43	0.48	0.47	0.65	0.76	1.08	1.13	1.15	1.61	1.74	1.08	1.05	1.01	1.16	0.93	
US	19.8	0.74	0.93	1.12	1.09	1.37	1.45	1.00	1.10	1.00	0.87	0.93	0.48	0.49	0.69	0.80	0.85	0.48	0.52	0.63	0.79	0.95	1.01	1.03	1.08	1.04	0.99	1.01	1.00	0.90	0.93	1.02	
With Intercept Correction																																	
		\bar{k}	\bar{b}	RMSFE IMS/IMSIC					RMSFE IMS/DMSIC					RMSFE IMS/IMSpreIC					RMSFE IMS/DMSpreIC					RMSFE IMS/IMSpostIC					RMSFE IMS/DMSpostIC				
<i>Inflation</i>																																	
Canada	19.4	0.87	0.76	0.78	0.86	0.85	0.85	0.76	0.79	0.88	0.95	0.89	0.48	0.55	0.67	0.51	0.54	0.48	0.63	0.89	1.04	1.05	0.89	0.79	0.53	0.53	0.56	0.89	0.94	1.03	1.11	1.06	
France	20.3	0.73	0.76	0.87	0.89	0.91	0.93	0.76	0.87	0.83	0.96	0.97	0.45	0.61	0.71	0.69	0.58	0.45	0.60	0.86	1.07	1.18	0.81	0.63	0.60	0.59	0.55	0.81	1.00	1.14	1.22	1.25	
Germany	22.3	0.57	0.69	0.72	0.79	0.75	0.72	0.69	0.80	0.77	0.83	0.82	0.67	0.61	0.68	0.60	0.55	0.67	0.67	0.81	0.82	0.82	0.74	0.79	0.64	0.50	0.43	0.74	0.84	0.85	0.87	0.79	
Japan	19.0	0.32	0.62	0.85	0.62	0.60	0.76	0.62	0.79	1.14	2.32	0.79	0.96	0.91	0.79	0.85	0.99	0.96	1.00	1.82	1.63	1.17	0.89	0.69	0.65	0.68	0.79	0.89	1.13	1.08	1.31	1.61	
UK	20.1	0.50	0.85	0.94	1.29	1.00	1.10	0.85	0.95	1.38	1.09	1.04	0.74	0.91	0.83	0.79	0.80	0.74	1.15	1.25	0.96	1.17	0.91	0.84	0.87	0.84	1.05	0.91	1.03	1.21	1.11	1.15	
US	19.4	0.52	0.70	0.70	0.77	0.67	0.72	0.70	0.79	0.80	0.91	0.90	0.44	0.51	0.52	0.59	0.53	0.44	0.60	0.62	0.98	1.01	0.79	0.56	0.48	0.51	0.53	0.79	0.99	0.92	1.03	0.97	
<i>Industrial production growth</i>																																	
Canada	15.7	0.20	0.88	0.71	0.66	0.62	0.41	0.88	0.72	0.80	0.63	0.48	0.64	0.59	0.54	0.45	0.24	0.64	0.70	0.74	0.62	0.38	0.88	0.73	0.68	0.63	0.40	0.88	0.67	0.67	0.56	0.36	
France	22.9	0.18	0.85	0.86	0.95	0.64	0.89	0.85	0.81	0.87	0.58	0.99	0.87	0.84	0.97	0.62	0.96	0.87	0.75	0.97	0.58	0.94	0.99	0.82	0.89	0.55	0.69	0.99	0.84	0.94	0.65	0.88	
Germany	20.4	0.21	1.20	0.91	0.62	0.63	0.70	1.20	0.83	0.58	0.76	0.82	1.17	0.86	0.65	0.65	0.73	1.17	0.80	0.63	0.76	0.80	1.07	0.77	0.48	0.46	0.49	1.07	0.89	0.63	0.63	0.73	
Japan	23.6	0.15	0.79	0.91	0.57	0.39	0.46	0.79	0.98	0.83	0.61	0.37	0.71	0.71	0.54	0.38	0.40	0.71	0.81	0.76	0.68	0.51	0.90	0.68	0.48	0.31	0.28	0.90	0.98	0.76	0.48	0.51	
UK	18.9	0.09	0.87	0.45	0.38	0.65	0.34	0.87	0.39	0.50	0.69	0.36	1.14	0.45	0.38	0.65	0.34	1.14	0.40	0.47	0.72	0.37	1.00	0.30	0.29	0.42	0.24	1.00	0.45	0.38	0.65	0.34	
US	17.4	0.15	0.75	0.72	0.40	0.40	0.37	0.75	0.67	0.38	0.41	0.33	0.74	0.83	0.37	0.41	0.39	0.74	0.71	0.41	0.45	0.37	0.85	0.66	0.29	0.33	0.25	0.85	0.72	0.39	0.40	0.37	
<i>Real GDP growth</i>																																	
Canada	21.5	0.16	0.85																														

			$h = 1$					2					5					10					20											
Without Intercept Correction																			1	2	5	10	20											
	\bar{k}	\bar{b}	RMSFE IMS / σ					RMSFE IMS/DMS					RMSFE IMS/IMSPre					RMSFE IMS/DMSPre					RMSFE IMS/IMSPost					RMSFE IMS/DMSPost						
<i>Inflation</i>																																		
Canada	19.4	0.87	0.55	0.72	0.94	1.09	1.19	1.00	0.99	0.91	0.79	0.59	0.59	0.29	0.38	0.39	0.13	0.03	0.00	0.09	0.40	0.44	0.57	0.57	0.64	0.78	0.85	0.42	0.15	0.64	0.65	0.73	0.71	0.57
France	20.3	0.73	0.48	0.66	0.91	1.25	1.63	1.00	0.96	0.96	1.06	1.06	1.06	0.09	0.02	0.00	0.00	0.00	0.09	0.34	0.48	0.56	0.75	0.52	0.67	0.72	0.36	0.12	0.52	0.65	0.71	0.67	0.74	
Germany	22.3	0.57	0.87	0.88	0.95	1.12	1.16	1.00	0.96	0.93	0.82	0.72	0.72	0.53	0.33	0.13	0.02	0.00	0.53	0.54	0.59	0.58	0.62	0.61	0.56	0.12	0.00	0.00	0.61	0.60	0.54	0.57	0.60	
Japan	19.0	0.32	1.06	1.59	2.79	6.46	16.9	1.00	1.08	2.32	4.99	4.51	4.51	0.66	1.08	2.35	9.78	23.55	0.66	1.03	2.72	4.06	19.13	0.66	0.79	1.70	5.35	10.99	0.66	0.75	1.92	5.58	19.32	
UK	20.1	0.50	0.55	0.76	1.01	1.31	1.61	1.00	1.02	1.01	1.14	1.05	1.05	0.43	0.47	0.53	0.76	0.48	0.43	0.47	0.52	0.73	0.82	0.42	0.51	0.58	0.15	0.04	0.42	0.51	0.59	0.68	0.74	
US	19.4	0.52	0.60	0.77	0.98	1.18	1.10	1.00	1.03	0.95	0.80	0.75	0.75	0.44	0.37	0.43	0.56	0.36	0.44	0.42	0.51	0.63	0.56	0.42	0.45	0.29	0.04	0.00	0.42	0.44	0.62	0.72	0.57	
<i>Industrial production growth</i>																																		
Canada	15.7	0.20	0.87	1.01	0.99	0.98	0.49	1.00	0.98	1.04	0.81	0.74	0.74	0.88	1.06	1.26	0.96	0.55	0.88	1.11	1.37	0.91	0.73	0.84	0.84	0.69	0.79	0.72	0.84	0.86	0.70	0.80	0.68	
France	22.9	0.18	0.68	0.82	1.40	0.78	0.85	1.00	0.98	0.96	0.87	0.66	0.66	0.75	0.99	1.17	0.86	1.09	0.75	0.82	1.14	0.78	1.08	0.96	0.83	0.77	0.42	0.85	0.96	0.93	1.03	0.96	1.10	
Germany	20.4	0.21	1.06	0.95	1.13	0.91	0.94	1.00	0.93	0.94	0.79	0.70	0.70	0.79	0.28	0.01	0.00	0.00	0.79	0.95	1.18	0.91	0.73	0.42	0.58	0.24	0.00	0.00	0.42	1.02	1.07	0.95	1.17	
Japan	23.6	0.15	0.90	1.02	0.98	0.65	0.68	1.00	0.92	1.06	0.86	0.68	0.68	0.89	0.92	1.02	0.82	0.43	0.89	0.89	1.05	0.63	0.96	0.69	0.81	0.66	0.07	0.01	0.69	0.88	1.24	0.71	1.25	
UK	18.9	0.09	0.67	0.47	0.39	0.66	0.43	1.00	1.02	0.58	0.99	0.90	0.90	0.64	0.73	0.99	1.15	1.08	0.64	0.65	0.70	1.10	0.73	1.22	0.95	0.68	0.84	0.84	1.22	0.88	0.67	0.88	0.72	
US	17.4	0.15	1.02	0.84	0.59	0.70	0.38	1.00	0.90	0.86	0.72	0.37	0.37	0.92	0.97	0.98	0.95	0.77	0.92	0.76	1.21	0.82	0.42	0.99	0.82	0.87	0.76	0.64	0.99	0.78	1.01	0.81	0.74	
<i>Real GDP growth</i>																																		
Canada	21.5	0.16	0.89	0.98	0.71	0.96	0.73	1.00	0.99	0.90	0.64	0.70	0.70	0.67	1.20	1.05	0.96	0.88	0.67	1.23	0.92	0.87	0.70	1.04	0.70	0.53	0.68	0.54	1.04	0.59	0.51	0.70	0.55	
Germany	20.3	0.44	0.75	0.83	0.89	0.98	0.77	1.00	1.05	1.02	0.90	0.99	0.99	0.72	0.98	0.79	0.30	0.07	0.72	0.79	0.87	1.01	0.80	0.93	0.89	0.84	0.32	0.07	0.93	1.13	0.98	0.95	0.92	
Japan	20.7	0.60	0.60	0.70	0.46	0.65	0.72	1.00	1.00	0.87	0.98	0.78	0.78	0.25	0.68	0.32	0.09	0.05	0.25	0.80	0.55	0.56	0.65	0.93	0.93	0.67	0.78	0.54	0.93	0.87	0.66	0.95	0.81	
UK	21.4	0.18	0.51	0.50	0.64	0.70	0.50	1.00	0.89	0.91	0.97	0.44	0.44	0.48	0.53	0.99	1.46	1.33	0.48	0.55	1.08	1.29	0.71	0.36	0.47	0.28	0.03	0.00	0.36	0.67	0.73	0.73	0.54	
US	18.2	0.20	1.28	1.42	1.33	1.12	1.05	1.00	1.03	1.11	1.00	0.85	0.85	0.88	0.89	0.91	0.68	0.86	0.88	0.90	1.07	0.92	0.90	0.93	0.92	0.99	0.94	0.87	0.93	0.91	0.85	0.86	0.99	
<i>Interest rate</i>																																		
Canada	19.4	0.56	0.68	0.88	1.17	1.16	1.25	1.00	1.02	0.98	0.83	0.61	0.61	0.36	0.58	0.48	0.58	0.46	0.36	0.40	0.58	0.49	0.68	0.68	0.79	0.90	0.45	0.19	0.68	0.80	0.94	0.85	0.72	
France	22.4	0.76	0.54	0.71	0.64	0.76	0.78	1.00	0.96	0.98	0.58	0.68	0.68	0.30	0.28	0.23	0.04	0.00	0.30	0.34	0.31	0.37	0.46	0.59	0.76	0.64	0.64	0.16	0.59	0.62	0.45	0.49	0.47	
Germany	12.5	0.27	0.58	1.66	0.76	0.85	0.93	1.00	0.95	0.87	0.73	1.15	1.15	0.02	0.01	0.00	0.00	0.00	0.02	0.61	0.57	0.54	0.45	0.46	0.71	0.76	0.63	0.87	0.46	0.71	0.72	0.62	0.60	
UK	19.8	0.56	0.54	0.76	1.10	0.92	0.99	1.00	1.00	1.08	1.35	1.26	1.26	0.35	0.44	0.52	0.32	0.10	0.35	0.36	0.51	0.67	0.79	1.07	1.02	1.05	1.53	1.72	1.07	0.99	1.05	1.00	0.88	
US	19.8	0.74	0.88	1.05	1.07	1.48	1.69	1.00	0.95	0.83	0.95	1.00	1.00	0.46	0.45	0.67	0.85	0.93	0.46	0.40	0.59	0.96	1.14	0.78	0.88	0.91	1.05	1.10	0.78	0.80	0.83	1.02	1.20	
With Intercept Correction																			1	2	5	10	20											
	\bar{k}	\bar{b}	RMSFE IMS/IMSIC					RMSFE IMS/DMSIC					RMSFE IMS/IMSPreIC					RMSFE IMS/DMSPreIC					RMSFE IMS/IMSPostIC					RMSFE IMS/DMSPostIC						
<i>Inflation</i>																																		
Canada	19.4	0.87	0.82	0.81	0.93	0.91	0.91	0.82	0.83	0.92	0.94	0.75	0.75	0.39	0.50	0.47	0.12	0.03	0.39	0.62	0.69	0.96	1.08	0.93	0.69	0.55	0.35	0.14	0.93	1.05	0.98	1.18	1.13	
France	20.3	0.73	0.77	0.91	0.87	0.89	0.95	0.77	0.90	0.88	1.12	1.18	1.18	0.10	0.02	0.00	0.00	0.00	0.10	0.48	0.87	1.20	1.65	0.80	0.74	0.59	0.35	0.12	0.80	1.06	1.10	1.47	1.74	
Germany	22.3	0.57	0.69	0.70	0.71	0.71	0.72	0.69	0.69	0.72	0.82	0.83	0.83	0.51	0.30	0.12	0.02	0.00	0.51	0.54	0.73	0.77	0.85	0.65	0.43	0.11	0.00	0.00	0.65	0.69	0.76	0.80	0.84	
Japan	19.0	0.32	0.82	0.99	0.78	0.79	1.01	0.82	1.04	1.79	5.43	4.20	4.20	1.06	1.28	2.39	4.07	9.25	1.06	1.46	2.20	7.28	8.26	0.90	0.99	1.18	3.21	6.62	0.90	1.11	2.02	4.58	11.06	
UK	20.1	0.50	0.85	0.94	1.21	0.94	1.05	0.85	0.97	1.29	1.11	1.11	1.11	0.69	0.66	0.67	0.87	0.46	0.69	0.80	0.92	0.93	1.26	0.80	0.60	0.56	0.14	0.04	0.80	0.98	1.20	1.16	1.24	
US	19.4	0.52	0.72	0.77	0.79	0.71	0.73	0.72	0.82	0.83	0.80	0.78	0.78	0.37	0.36	0.37	0.43	0.29	0.37	0.49	0.54	0.82	0.85	0.78	0.47	0.29	0.04	0.00	0.78	0.73	1.03	0.96	0.83	
<i>Industrial production growth</i>																																		
Canada	15.7	0.20	0.99	0.66	0.70	0.63	0.38	0.99	0.66	0.77	0.61	0.43	0.43	0.90	0.66	0.69	0.59	0.36	0.90	0.67	0.70	0.63	0.38	0.94	0.62	0.65	0.64	0.40	0.94	0.62	0.63	0.57	0.35	
France	22.9	0.18	0.90	0.91	0.98	0.64	0.91	0.90	0.91	0.92	0.60	0.83	0.83	0.66	0.68	0.96	0.60	0.89	0.66	0.63	0.92	0.54	1.00	0.85	0.82	0.76	0.38	0.67	0.85	0.90	1.01	0.64	0.95	
Germany	20.4	0.21	1.10	0.85	0.65	0.60	0.68	1.10	0.81	0.63	0.81	0.76	0.76	1.07	0.27	0.01	0.00	0.00	1.07	0.74	0.74	0.83	0.80	0.44	0.68	0.25	0.00	0.00	0.44	0.93	0.71	0.66	0.73	
Japan	23.6	0.15	0.79	0.98	0.65	0.43	0.53	0.79	1.03	0.78	0.52	0.32	0.32	0.75	0.75	0.62	0.41	0.37	0.75	0.73	0.61	0.54	0.52	0.91	0.88	0.52	0.07	0.01	0.91	0.99	0.73	0.41	0.51	
UK	18.9	0.09	0.90	0.44	0.33	0.64	0.35	0.90	0.45	0.37	0.75	0.37	0.37	0.97	0.51	0.34	0.61	0.35	0.97	0.52	0.37	0.76	0.33	0.96	0.44	0.30	0.66	0.35	0.96	0.44	0.30	0.67	0.34	
US	17.4	0.15	0.81	0.84	0.49	0.50	0.35	0.81	0.81	0.49	0.47	0.22	0.22	0.83	0.80	0.53	0.52	0.38	0.83	0.73	0.51	0.76	0.27	0.95	0.76	0.45	0.48	0.31	0.95	0.83	0.52	0.55	0.35	
<i>Real GDP growth</i>																																		
Canada	21.5	0.16	0.93	0.60	0.48	0.56	0.43	0.93	0.62	0.49	0.43	0.36	0.36	0.88	0.62	0.48	0.55	0.43	0.88	0.68	0.60	0.54	0.40	0.88	0.55	0.41	0.51	0.39	0.88	0.49	0.43	0.54	0.40	
Germany	20.3	0.44	0.96	0.83	0.70	0.71	0.57	0.96	0.86	0.73	0.72	0.62	0.62	0.78	0.74	0.57	0.28	0.07	0.78	0.71	0.75	0.84	0.62	0.80	0.73	0.66	0.29	0.07	0.80	0.90	0.73	0.72	0.64	
Japan	20.7	0.60	0.82	0.89	0.71	0.79	0.81	0.82	0.87	0.66	0.83	0.66	0.66	0.29	0.79	0.35	0.09	0.05	0.29	0.84	0.54	0.73	0.81	0.84	0.83	0.59	0.56	0.44	0.84	0.89	0.69	0.82	0.82	
UK	21.4	0.18	1.49	0.86	0.85	0.65	0.46	1.49	0.85	0.74	0.84	0.48	0.48	0.95	1.00	0.92	0.62	0.52	0.95	0.93	0.64	0.58	0.47	0.37	0.52	0.27	0.03	0.00	0.37	0.70	0.80	0.68	0.47	

3.2.3 Expanding windows of observations

		$h = 1$					$h = 2$					$h = 5$					$h = 10$					$h = 20$											
		\bar{k}	\bar{b}	1	2	5	10	20	1	2	5	10	20	1	2	5	10	20	1	2	5	10	20	1	2	5	10	20					
Without Intercept Correction																																	
<i>Inflation</i>																																	
Canada	21.0	0.15	0.53	0.79	1.42	1.80	1.88	1.00	1.18	1.23	1.17	1.17	0.40	0.57	0.77	0.82	0.83	0.40	0.52	0.89	0.70	0.70	0.96	1.03	1.11	1.14	1.16	0.96	1.13	1.12	0.92	0.70	
France	31.2	0.48	0.57	0.75	1.06	1.29	1.29	1.00	0.99	1.08	0.99	0.85	0.55	0.53	0.64	0.77	0.90	0.55	0.48	0.63	0.58	0.59	1.03	1.04	1.05	1.07	1.01	1.03	0.97	1.01	0.76	0.53	
Germany	29.0	0.01	0.32	0.16	0.37	0.80	1.60	1.00	0.89	1.06	1.01	0.98	0.68	7.89	1.62	1.22	1.10	0.68	7.22	1.92	1.48	0.60	1.39	0.41	0.50	0.69	0.82	1.39	0.32	0.26	0.43	0.60	
Japan	7.0	0.16	1.04	1.69	1.97	1.99	0.86	1.00	0.99	1.00	0.99	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.01	1.01	1.02	1.02	1.00	0.98	1.00	0.98	0.53	
UK	32.0	0.14	0.59	0.90	1.48	2.17	2.27	1.00	1.00	1.07	1.14	1.03	0.69	0.72	0.82	0.90	0.93	0.69	0.70	0.76	0.92	0.77	1.11	1.14	1.19	1.17	1.14	1.11	1.03	1.00	0.74	0.77	
US	30.0	1.00	0.62	0.78	1.04	1.24	1.20	1.00	0.99	0.99	1.03	0.94	0.45	0.50	0.64	0.77	0.79	0.45	0.77	1.02	0.90	0.62	1.00	0.99	0.97	0.99	0.99	1.00	0.97	0.94	0.78	0.60	
<i>Industrial production growth</i>																																	
Canada	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
France	6.0	0.67	0.96	1.02	0.75	0.98	0.93	1.00	1.02	1.00	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01	1.01	1.01	1.02	1.01	1.01	1.02	1.01	1.01	0.98	
Germany	34.0	0.03	0.66	0.57	0.63	0.83	2.02	1.00	0.94	1.13	1.05	1.05	0.92	0.98	1.32	1.06	1.09	0.92	0.92	1.55	1.05	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Japan	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
UK	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
US	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<i>Real GDP growth</i>																																	
Canada	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Germany	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UK	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
US	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Interest rate</i>																																	
Canada	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
France	8.0	0.58	0.72	1.15	1.69	1.66	0.96	1.00	0.80	1.44	1.59	0.93	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.96	0.97	1.01	1.04	1.08	0.96	0.81	1.36	1.45	1.11	
Germany	14.0	1.00	1.36	1.54	1.59	1.56	1.49	1.00	1.03	1.14	1.20	0.97	0.76	0.89	0.95	0.95	0.98	0.76	0.88	0.74	0.74	0.76	1.10	1.19	1.18	1.22	1.16	1.10	1.16	1.16	1.05	0.70	
UK	20.3	0.42	1.10	1.20	1.56	1.43	1.64	1.00	1.07	1.05	1.02	0.80	1.03	1.09	1.13	1.41	1.85	1.03	0.97	1.00	1.25	1.36	0.95	0.90	0.88	0.73	0.64	0.95	0.97	0.98	0.90	0.95	
US	30.3	0.30	0.90	1.14	1.34	1.52	1.78	1.00	1.03	1.00	0.95	0.80	0.60	0.83	0.93	1.00	1.13	0.60	0.97	1.00	0.97	1.03	0.95	0.98	0.96	0.95	0.94	0.95	0.99	0.91	0.93	0.93	
With Intercept Correction																																	
<i>Inflation</i>																																	
Canada	21.0	0.15	0.91	1.39	1.44	1.21	1.23	0.91	1.23	1.38	1.28	1.37	1.16	1.39	1.41	1.48	1.54	1.16	1.30	1.53	1.21	1.23	1.06	1.40	1.43	1.32	1.90	1.06	1.36	1.37	1.24	1.23	
France	31.2	0.48	0.75	0.87	1.04	1.04	0.91	0.75	0.87	0.98	0.92	0.65	0.58	0.97	1.17	1.09	0.67	0.58	1.06	1.17	1.12	0.92	0.77	0.87	0.93	1.10	0.73	0.77	0.89	1.00	0.95	0.75	
Germany	29.0	0.01	1.03	0.96	0.98	0.99	1.00	1.03	0.86	1.03	1.00	0.98	1.00	0.95	0.98	0.99	4.04	1.00	0.94	1.08	1.16	1.00	9.36	0.78	1.18	9.18	1.79	9.36	0.52	0.98	0.99	1.00	
Japan	7.0	0.16	1.02	1.24	1.03	0.96	0.62	1.02	1.24	1.02	0.99	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	1.24	1.03	0.96	0.62	1.05	1.24	1.01	0.95	0.67	
UK	32.0	0.14	1.00	1.13	1.47	1.26	1.18	1.00	1.13	1.62	1.38	1.18	0.95	1.26	1.45	1.26	1.39	0.95	1.26	1.33	1.28	1.18	1.02	1.13	1.12	1.67	1.36	1.02	1.16	1.54	1.26	1.18	
US	30.0	1.00	0.68	0.68	0.77	0.74	0.87	0.68	0.66	0.73	0.73	0.70	0.86	0.97	0.98	0.93	0.82	0.86	0.64	0.61	0.81	0.93	0.69	0.70	0.72	0.76	0.70	0.69	0.72	0.94	1.00	0.82	
<i>Industrial production growth</i>																																	
Canada	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
France	6.0	0.67	0.84	0.93	0.72	0.84	0.78	0.84	0.87	0.77	0.79	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.93	0.72	0.84	0.75	0.85	0.88	0.78	0.78	0.76	
Germany	34.0	0.03	0.73	0.57	0.54	0.65	0.89	0.73	0.52	0.58	0.70	0.93	0.68	0.56	0.54	0.65	0.72	0.68	0.49	0.57	0.66	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Japan	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
UK	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
US	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Real GDP growth</i>																																	
Canada	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Germany	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Japan	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UK	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
US	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Interest rate</i>																																	
Canada	0.0	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
France	8.0	0.58	1.77	2.19	2.15	1.96	0.78	1.77	1.93	1.54	1.16	0.34																					

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

3.3.1 Windows of 25 observations

Median Ratios of Absolute Forecast Errors																									
$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$																									
Without Intercept Correction																									
$k \in$	$mediank$	mAFE IMS / σ				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
With Intercept Correction																									
$k \in$	$mediank$	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
Ratios of the Root Mean Square Errors																									
$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$																									
Without Intercept Correction																									
$k \in$	\bar{k}	RMSFE IMS / σ				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
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			
[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 S.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																									
$h \in \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12] \{1\} \{2\} [3, 6] [7, 12]$																									
Without Intercept Correction																									
$k \in$	$mediank$	mAFE IMS / σ				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
With Intercept Correction																									
$k \in$	$mediank$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	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
Ratios of the Root Mean Square 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 / σ				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
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			
[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 S.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																									
$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$																									
Without Intercept Correction																									
$k \in$	$mediank$	mAFE IMS / σ				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
With Intercept Correction																									
$k \in$	$mediank$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	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
Ratios of Root Mean Square Errors																									
$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$																									
Without Intercept Correction																									
$k \in$	\bar{k}	RMSFE IMS / σ				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
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			
[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 S.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																									
		$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$							
Without Intercept Correction																									
$k \in$	$mediank$	mAFE IMS / σ				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
With Intercept Correction																									
$k \in$	$mediank$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	3.0	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
Ratios of Root Mean Square Errors																									
		$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$				$\{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$							
Without Intercept Correction																									
$k \in$	\bar{k}	RMSFE IMS / σ				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
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			
[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 S.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.

3.3.2 Windows of 40 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]				
Without Intercept Correction																									
$k \in$	<i>mediank</i>	mAFE IMS / σ				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
With Intercept Correction																									
		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
Ratios of Root Mean Square 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]				
Without Intercept Correction																									
$k \in$	\bar{k}	RMSFE IMS / σ				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
With Intercept Correction																									
		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 S.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.

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]				
Without Intercept Correction																									
$k \in$	$median_k$	mAFE IMS / σ				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
With Intercept Correction																									
		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
Ratios of Root Mean Square 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]				
Without Intercept Correction																									
$k \in$	\bar{k}	RMSFE IMS / σ				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
With Intercept Correction																									
		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 S.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.

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 / σ				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
With Intercept Correction																									
		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
Ratios of Root Mean Square 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 / σ				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
With Intercept Correction																									
		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 S.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.

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]				
Without Intercept Correction																									
$k \in$	\bar{k}	mAFE IMS / σ				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
[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
[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
[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
[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
[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
With Intercept Correction																									
$k \in$		mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC			
[1, 3]	6.0	1.28	1.17	0.64	0.61	1.28	1.16	0.67	0.71	1.31	1.19	0.67	0.69	1.31	1.14	0.67	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[4, 7]	9.0	1.00	0.97	1.00	0.81	1.00	0.87	0.91	0.85	1.05	0.91	1.04	0.82	1.05	0.84	1.00	0.95	0.58	0.26	0.20	0.16	0.58	0.63	0.66	0.47
[8, 11]	13.0	0.84	0.93	0.90	0.95	0.84	0.87	0.75	0.81	0.64	0.75	0.83	0.72	0.64	0.73	0.83	0.99	0.94	0.97	0.45	0.47	0.94	0.94	0.90	0.99
[12, 15]	18.0	0.74	0.93	0.97	1.03	0.74	0.91	0.84	1.09	0.64	0.75	0.97	0.51	0.64	0.98	0.89	1.09	0.85	1.14	0.89	0.61	0.85	0.98	0.89	1.10
[16, 19]	25.0	0.80	0.81	1.04	1.06	0.80	0.78	0.97	0.98	0.73	0.92	0.77	0.71	0.73	0.86	1.02	1.06	0.86	0.90	1.10	0.78	0.86	0.98	1.01	1.03
[30, 39]	33.0	0.73	0.95	1.22	0.97	0.73	0.93	1.21	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	1.00	1.23	0.97	0.77	0.91	1.10	0.92
Ratios of the Root Mean Square 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]				
Without Intercept Correction																									
$k \in$	\bar{k}	RMSFE IMS / σ				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
[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
[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
[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
[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
[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
With Intercept Correction																									
$k \in$		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
[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
[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
[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
[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
[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	0.84

Table S.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.

3.3.3 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																									
$k \in$	$\bar{median}k$	mRAFE IMS / σ				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, ∞)	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, ∞)	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 / σ				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, ∞)	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, ∞)	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 S.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																									
$h \in \{1\} \{2\} [3,6] [7,12] \{1\} \{2\} [3,6] [7,12] \{1\} \{2\} [3,6] [7,12] \{1\} \{2\} [3,6] [7,12] \{1\} \{2\} [3,6] [7,12] \{1\} \{2\} [3,6] [7,12]$																									
Without Intercept Correction																									
$k \in$	$median_k$	mAFE IMS / σ				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, ∞)	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
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	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, ∞)	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
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 / σ				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, ∞)	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
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	0.76	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, ∞)	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 S.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																																	
		$h \in \{1\}$				$\{2\}$				$\{3, 6\}$				$\{7, 12\}$				$\{1\}$				$\{2\}$				$\{3, 6\}$				$\{7, 12\}$			
Without Intercept Correction																																	
$k \in$	$\bar{median}k$	mAFE IMS / σ				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	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	1.06	1.12	1.15	1.31				
[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	0.93	1.16	1.05	1.22				
[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, ∞)	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								
With Intercept Correction																																	
		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	1.22	0.55	0.61	0.44				
[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	1.36	1.32	0.39	0.53				
[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	0.87	1.09	1.06	2.29				
[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	1.09	1.06	1.09	1.11				
[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, ∞)	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								
Ratios of Root Mean Square Forecast Errors																																	
		$h \in \{1\}$				$\{2\}$				$\{3, 6\}$				$\{7, 12\}$				$\{1\}$				$\{2\}$				$\{3, 6\}$				$\{7, 12\}$			
Without Intercept Correction																																	
$k \in$	\bar{k}	RMSFE IMS / σ				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	0.64	0.44	0.11	0.01				
[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	1.06	1.02	1.04	1.28				
[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	0.77	0.96	1.02	1.19				
[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, ∞)	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								
With Intercept Correction																																	
		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	1.23	1.33	0.42	0.63				
[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	1.23	1.33	0.42	0.63				
[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	0.73	0.81	0.82	1.33				
[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	0.95	0.89	0.82	0.67				
[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, ∞)	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 S.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.

Median Ratios of Absolute Forecast Errors																																		
$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$																																		
Without Intercept Correction																																		
$k \in$	$median_k$	mAFE IMS / σ				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	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	1.00	1.42	0.36	0.41	0.26	0.94	1.51	1.15	0.57	0.94	1.24	0.35	0.47
[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	1.24	0.35	0.47	1.22	1.26	1.43	1.23	1.22	1.31	0.55	0.69	
[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	1.31	0.55	0.69	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	1.01	1.16	0.74	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	1.16	1.00	1.06	0.97	1.04	0.87	1.12	0.97	1.16	1.00	1.06	
[35, ∞)	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	0.94	1.00	0.91	0.98	0.97	1.00	0.98	0.98	0.94	1.00	0.91	
With Intercept Correction																																		
$k \in$	$median_k$	mRAFE IMS/IMSIC				mRAFE IMS/DMSIC				mRAFE IMS/IMSpreIC				mRAFE IMS/DMSpreIC				mRAFE IMS/IMSpostIC				mRAFE IMS/DMSpostIC												
[4, 7]	6.5	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	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	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	1.35	0.27	0.53	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	1.02	0.95	2.37	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	1.14	1.18	1.14	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	0.81	0.74	1.01	0.86	0.82	0.91	1.05	
[35, ∞)	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	1.08	1.04	0.79	0.86	1.07	1.01	
Ratios of Root Mean Square Forecast Errors																																		
$h \in \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12] \quad \{1\} \quad \{2\} \quad [3, 6] \quad [7, 12]$																																		
Without Intercept Correction																																		
$k \in$	\bar{k}	RMSFE IMS / σ				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	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	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	1.12	0.93	1.22	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	1.17	1.17	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	1.05	1.04	0.97	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	1.01	0.92	1.03	1.06	1.09	0.94	0.86	
[35, ∞)	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	1.01	1.00	0.98	1.00	0.99	1.02	0.97	
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	0.00	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]	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	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	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	0.71	0.92	1.46	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	0.91	0.87	0.77	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	0.93	0.90	0.87	0.75	0.79	0.81	0.87	0.78	0.83	0.90	
[35, ∞)	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	0.86	1.00	0.93	0.75	0.87	0.95	0.94	

Table S.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.