Appendix B. Further Details of Theoretical and Empirical Results

Exact covariances of the estimators from group $A^{(j)} = \{RV_{AC_1}, RV\}$ starting from jth intradaily price and $\overline{RV}$, RV_{TS} for integers H and k are:

$$
\begin{aligned}
\operatorname{Cov}\left(RV^{A^{(j)}}_{t+H,H}, RV^{A^{(j)}}_{t-k,1}\right) &= \sum_{i=1}^{p} \frac{a_i^2}{\lambda_i^2}\left(1-e^{-\lambda_i \overline{M}h}\right)^2 \frac{1-e^{-\lambda_i H}}{1-e^{-\lambda_i}} e^{-\lambda_i (h+k)} \\
\operatorname{Cov}\left(RV^{A^{(j)}}_{t+H,H}, \overline{RV}_{t-k,1}\right) &= \sum_{s=0}^{H-1} \operatorname{Cov}\left(IV_{t+s+j'/M+\overline{M}h,\overline{M}h}, \frac{1}{m}\sum_{j=0}^{m-1} IV_{t-k-1+j/M+\overline{M}h,\overline{M}h}\right) \\
&= \frac{1}{m}\sum_{i=1}^{p} \frac{a_i^2}{\lambda_i^2}\left(1-e^{-\lambda_i \overline{M}h}\right)^2 \frac{\left(1-e^{-\lambda_i h}\right)\left(1-e^{-\lambda_i H}\right)}{\left(1-e^{\lambda_i/M}\right)\left(1-e^{-\lambda_i}\right)} e^{-\lambda_i (k+j'/M)} \\
\operatorname{Cov}\left(RV^{A^{(j)}}_{t+H,H}, RV^{TS}_{t-k,1}\right) &= \frac{M}{M-\overline{M}}\left(\operatorname{Cov}\left(RV^{A^{(j)}}_{t+H,H}, \overline{RV}_{t-k,1}\right) - \frac{\overline{M}}{M}\operatorname{Cov}\left(RV^{A^{(j)}}_{t+H,H}, IV_{t-k,1}\right)\right) \\
\operatorname{Cov}\left(\overline{RV}_{t+H,H}, \overline{RV}_{t-k,1}\right) &= \sum_{s=0}^{H-1} \operatorname{Cov}\left(\frac{1}{m}\sum_{j'=0}^{m-1} IV_{t+k+j'/M+\overline{M}h,\overline{M}h}, \frac{1}{m}\sum_{j=0}^{m-1} IV_{t-k-1+j/M+\overline{M}h,\overline{M}h}\right) \\
&= \frac{1}{m^2}\sum_{i=1}^{p} \frac{a_i^2}{\lambda_i^2}\left(1-e^{-\lambda_i \overline{M}h}\right)^2 \frac{\left(1-e^{-\lambda_i h}\right)^2\left(1-e^{-\lambda_i H}\right)}{\left(1-e^{\lambda_i/M}\right)^2\left(1-e^{-\lambda_i}\right)} e^{-\lambda_i k} \\
\operatorname{Cov}\left(\overline{RV}_{t+H,H}, RV^{TS}_{t-k,1}\right) &= \frac{M}{M-\overline{M}}\left(\operatorname{Cov}\left(\overline{RV}_{t+H,H}, \overline{RV}_{t-k,1}\right) - \frac{\overline{M}}{M}\operatorname{Cov}\left(\overline{RV}_{t+H,H}, IV_{t-k,1}\right)\right) \\
\operatorname{Cov}\left(RV^{TS}_{t+H,H}, RV^{TS}_{t-k,1}\right) &= \frac{M}{M-\overline{M}}\left(\operatorname{Cov}\left(\overline{RV}_{t+H,H}, RV^{TS}_{t-k,1}\right) - \frac{\overline{M}}{M}\operatorname{Cov}\left(IV_{t+H,H}, RV^{TS}_{t-k,1}\right)\right)
\end{aligned}
\tag{0.1}
$$

As $1/M, 1/\overline{M}, \overline{M}/M \downarrow 0$, $\overline{M}h = \overline{M}m/M = \overline{M}(M+1)/((\overline{M}+1)M) \uparrow 1$, $(1-e^{-\lambda_i h})/(1-e^{-\lambda_i/M}) \to m$ and $\operatorname{Cov}\left(RV^{S}_{t+H,H}, RV^{T}_{t-k,1}\right) \to \operatorname{Cov}\left(IV_{t+H,H}, IV_{t-k,1}\right)$, $S,T \in \{A_j \bigcup B\}$ with

$$
\operatorname{Cov}\left(IV_{t+H,H}, IV_{t-k,1}\right) = \sum_{i=1}^{p} \frac{a_i^2}{\lambda_i^2}\left(1-e^{-\lambda_i}\right)\left(1-e^{-\lambda_i H}\right)e^{-\lambda_i k}
$$

To summarize the findings, we present all covariances in the following table. For convenience we define four terms: $V_E^i = \frac{a_i^2}{\lambda_i^2}\left(1-e^{-\lambda_i H}\right)^2$, $A_i = \frac{1-e^{-\lambda_i \overline{M}h}}{1-e^{-\lambda_i}}$, $C_{IV}^i = \frac{a_i^2}{\lambda_i^2}(1-e^{-\lambda_i})(1-e^{-\lambda_i H})e^{-\lambda_i k}$ and $B_i = \frac{1-e^{-\lambda_i h}}{(1-e^{-\lambda_i/M})m}$. The values associated with the individual eigenvalues of the covariances of the form $\operatorname{Cov}\left(RV_{t+H,H}, RV_{t-k,1}\right)$ can be represented as:

	$\operatorname{Var}\left(\operatorname{E}\left(\cdot\,|S_\tau\right)\right)$	$\operatorname{Cov}\left(\cdot, IV_{t-k,1}\right)$	$\operatorname{Cov}\left(\cdot, RV^{A^{(j)}}_{t-k,1}\right)$	$\operatorname{Cov}\left(\cdot, \overline{RV}_{t-k,1}\right)$	$\operatorname{Cov}\left(\cdot, RV^{TS}_{t-k,1}\right)$
$IV_{t+H,H}$	V_E^i	C_{IV}^i	$C_{IV}^i A_i e^{-\lambda_i (m-1-j)/M}$	$C_{IV}^i A_i B_i$	$\frac{M\{1,3\}-\overline{M}\{1,1\}}{M-\overline{M}}$
$RV^{A^{(j)}}_{t+H,H}$	$V_E^i A_i^2 e^{-\lambda_i \frac{2j}{M}}$	$C_{IV}^i A_i e^{-\lambda_i \frac{j}{M}}$	$C_{IV}^i A_i^2 e^{-\lambda_i \frac{m-1}{M}}$	$C_{IV}^i A_i^2 B_i e^{-\lambda_i \frac{j}{M}}$	$\frac{M\{2,3\}-\overline{M}\{2,1\}}{M-\overline{M}}$
$\overline{RV}_{t+H,H}$	$V_E^i A_i^2 B_i^2$	$C_{IV}^i A_i B_i$	$C_{IV}^i A_i^2 B_i e^{-\lambda_i \frac{m-1-j}{M}}$	$C_{IV}^i A_i^2 B_i^2$	$\frac{M\{3,3\}-\overline{M}\{3,1\}}{M-\overline{M}}$
$RV^{TS}_{t+H,H}$	$V_E^i \left(\frac{M A_i B_i - \overline{M}}{M-\overline{M}}\right)^2$	$\frac{M\{3,1\}-\overline{M}\{1,1\}}{M-\overline{M}}$	$\frac{M\{3,2\}-\overline{M}\{1,2\}}{M-\overline{M}}$	$\frac{M\{3,3\}-\overline{M}\{1,3\}}{M-\overline{M}}$	$\frac{M\{3,4\}-\overline{M}\{1,4\}}{M-\overline{M}}$

Term $\{1,1\}$ corresponds to C_{IV}^i, $\{1,3\}$ corresponds to $C_{IV}^i A_i B_i$, etc. Using this table, we can construct the covariances of interest by summing up the terms in the table from 1 to p. For example, $\operatorname{Cov}\left(RV^{A^{(j)}}_{t+H,H}, IV_{t-k,1}\right) = \sum_{i=1}^{p} C_{IV}^i A_i e^{-\lambda_i \frac{j}{M}}$, and $\operatorname{Cov}\left(\overline{RV}_{t+H,H}, RV^{TS}_{t-k,1}\right) = \sum_{i=1}^{p} C_{IV}^i A_i B_i \frac{M A_i B_i - \overline{M}}{M-\overline{M}}$.

Table B-1: Theoretical R^2 Comparison of MIDAS approach for the M1 – M3 models, Infeasible IV regression.

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
LHS: IV, σ^2 =0.0000, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.799	0.686	0.822	0.817	**0.874**	0.822	0.776	0.834	0.830	**0.874**	0.822	0.776	0.834	0.830
$M1^{1min}$	**0.891**	**0.871**	0.856	0.827	0.861	0.832	**0.874**	0.856	0.836	0.861	0.839	**0.874**	0.856	0.836	0.861	0.839
$M1^{20sec}$	**0.891**	**0.871**	**0.866**	0.856	**0.867**	0.783	**0.874**	**0.866**	0.856	**0.868**	0.814	**0.874**	**0.866**	0.856	**0.868**	0.814
$M2^{5min}$	**0.586**	**0.445**	0.346	0.240	0.375	0.372	**0.460**	0.390	0.327	0.407	0.406	**0.460**	0.390	0.328	0.407	0.406
$M2^{1min}$	**0.586**	**0.445**	0.422	0.381	0.429	0.415	**0.460**	0.439	0.411	0.445	0.434	**0.460**	0.439	0.411	0.445	0.434
$M2^{20sec}$	**0.586**	**0.445**	**0.437**	0.422	**0.440**	0.396	**0.460**	**0.452**	0.439	**0.454**	0.421	**0.460**	**0.452**	0.439	**0.454**	0.421
$M3^{5min}$	**0.945**	**0.934**	0.875	0.775	0.894	0.888	**0.936**	0.900	0.869	0.908	0.905	**0.936**	0.900	0.869	0.908	0.905
$M3^{1min}$	**0.945**	**0.934**	0.922	0.898	**0.926**	0.895	**0.936**	0.923	0.910	**0.926**	0.908	**0.936**	0.923	0.910	**0.926**	0.908
$M3^{20sec}$	**0.945**	**0.934**	**0.930**	0.922	**0.932**	0.841	**0.936**	**0.930**	0.923	**0.932**	0.888	**0.936**	**0.930**	0.923	**0.932**	0.888
LHS: IV, σ^2 =0.0050, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.663	0.572	0.822	0.816	**0.874**	0.768	0.736	0.833	0.830	**0.874**	0.768	0.736	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.574	0.521	0.854	0.823	**0.874**	0.737	0.718	0.854	0.834	**0.874**	0.737	0.718	0.854	0.834
$M1^{20sec}$	**0.891**	**0.871**	0.395	0.340	0.819	0.721	**0.874**	0.668	0.642	0.832	0.789	**0.874**	0.668	0.642	0.832	0.789
$M2^{5min}$	**0.586**	**0.445**	0.177	0.136	0.374	0.371	**0.460**	0.284	0.251	0.407	0.405	**0.460**	0.285	0.252	0.407	0.405
$M2^{1min}$	**0.586**	**0.445**	0.110	0.090	0.409	0.390	**0.460**	0.225	0.202	0.430	0.417	**0.460**	0.226	0.204	0.430	0.417
$M2^{20sec}$	**0.586**	**0.445**	0.053	0.041	0.321	0.259	**0.460**	0.146	0.125	0.376	0.339	**0.460**	0.149	0.128	0.376	0.340
$M3^{5min}$	**0.945**	**0.934**	0.748	0.661	0.893	0.887	**0.936**	0.862	0.840	0.908	0.905	**0.936**	0.862	0.840	0.908	0.905
$M3^{1min}$	**0.945**	**0.934**	0.648	0.593	0.920	0.887	**0.936**	0.837	0.822	0.921	0.905	**0.936**	0.837	0.823	0.921	0.905
$M3^{20sec}$	**0.945**	**0.934**	0.455	0.393	0.885	0.782	**0.936**	0.782	0.761	0.904	0.871	**0.936**	0.784	0.763	0.904	0.871
LHS: IV, σ^2 =0.0100, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.519	0.442	0.821	0.815	**0.874**	0.717	0.688	0.833	0.830	**0.874**	0.717	0.688	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.321	0.270	0.837	0.802	**0.874**	0.632	0.602	0.842	0.823	**0.874**	0.632	0.603	0.842	0.823
$M1^{20sec}$	**0.891**	**0.871**	0.159	0.126	0.709	0.591	**0.874**	0.507	0.464	0.785	0.743	**0.874**	0.514	0.475	0.785	0.743
$M2^{5min}$	**0.586**	**0.445**	0.096	0.075	0.371	0.368	**0.460**	0.209	0.183	0.405	0.403	**0.460**	0.210	0.184	0.405	0.403
$M2^{1min}$	**0.586**	**0.445**	0.039	0.030	0.367	0.339	**0.460**	0.119	0.100	0.403	0.386	**0.460**	0.122	0.103	0.403	0.386
$M2^{20sec}$	**0.586**	**0.445**	0.015	0.012	0.183	0.131	**0.460**	0.057	0.046	0.290	0.246	**0.460**	0.060	0.048	0.290	0.247
$M3^{5min}$	**0.945**	**0.934**	0.600	0.521	0.893	0.886	**0.936**	0.824	0.803	0.907	0.905	**0.936**	0.824	0.803	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.375	0.317	0.904	0.867	**0.936**	0.753	0.728	0.913	0.897	**0.936**	0.757	0.734	0.913	0.897
$M3^{20sec}$	**0.945**	**0.934**	0.188	0.150	0.778	0.653	**0.936**	0.637	0.593	0.870	0.838	**0.936**	0.659	0.626	0.870	0.838
LHS: IV, σ^2 =0.0150, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.399	0.334	0.819	0.813	**0.874**	0.669	0.639	0.832	0.829	**0.874**	0.670	0.639	0.832	0.829
$M1^{1min}$	**0.891**	**0.871**	0.189	0.152	0.813	0.771	**0.874**	0.539	0.500	0.828	0.809	**0.874**	0.543	0.507	0.828	0.809
$M1^{20sec}$	**0.891**	**0.871**	0.080	0.062	0.582	0.456	**0.874**	0.378	0.330	0.740	0.693	**0.874**	0.399	0.356	0.740	0.693

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
$M2^{5min}$	**0.586**	**0.445**	0.058	0.045	0.368	0.364	**0.460**	0.156	0.133	0.403	0.401	**0.460**	0.158	0.136	0.403	0.401
$M2^{1min}$	**0.586**	**0.445**	0.019	0.015	0.316	0.280	**0.460**	0.069	0.056	0.372	0.351	**0.460**	0.072	0.058	0.373	0.352
$M2^{20sec}$	**0.586**	**0.445**	0.007	0.005	0.108	0.072	**0.460**	0.029	0.022	0.223	0.178	**0.460**	0.031	0.024	0.224	0.180
$M3^{5min}$	**0.945**	**0.934**	0.470	0.399	0.891	0.885	**0.936**	0.787	0.763	0.907	0.904	**0.936**	0.788	0.765	0.907	0.904
$M3^{1min}$	**0.945**	**0.934**	0.224	0.181	0.880	0.837	**0.936**	0.669	0.630	0.902	0.887	**0.936**	0.685	0.654	0.902	0.887
$M3^{20sec}$	**0.945**	**0.934**	0.096	0.074	0.649	0.513	**0.936**	0.498	0.442	0.837	0.800	**0.936**	0.556	0.514	0.837	0.801
LHS: IV, σ^2 =0.0200, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.308	0.253	0.818	0.811	**0.874**	0.624	0.591	0.831	0.828	**0.874**	0.625	0.592	0.831	0.828
$M1^{1min}$	**0.891**	**0.871**	0.121	0.095	0.781	0.732	**0.874**	0.456	0.411	0.814	0.793	**0.874**	0.468	0.428	0.814	0.793
$M1^{20sec}$	**0.891**	**0.871**	0.048	0.036	0.466	0.346	**0.874**	0.282	0.237	0.697	0.645	**0.874**	0.313	0.271	0.697	0.645
$M2^{5min}$	**0.586**	**0.445**	0.038	0.030	0.364	0.359	**0.460**	0.118	0.099	0.401	0.398	**0.460**	0.121	0.102	0.401	0.398
$M2^{1min}$	**0.586**	**0.445**	0.011	0.009	0.264	0.225	**0.460**	0.044	0.035	0.342	0.318	**0.460**	0.047	0.037	0.343	0.319
$M2^{20sec}$	**0.586**	**0.445**	0.004	0.003	0.068	0.044	**0.460**	0.017	0.013	0.172	0.131	**0.460**	0.018	0.014	0.175	0.133
$M3^{5min}$	**0.945**	**0.934**	0.367	0.305	0.890	0.883	**0.936**	0.750	0.721	0.906	0.903	**0.936**	0.754	0.728	0.906	0.903
$M3^{1min}$	**0.945**	**0.934**	0.145	0.114	0.850	0.798	**0.936**	0.586	0.536	0.891	0.876	**0.936**	0.620	0.584	0.891	0.876
$M3^{20sec}$	**0.945**	**0.934**	0.057	0.044	0.527	0.396	**0.936**	0.384	0.328	0.804	0.762	**0.936**	0.469	0.422	0.805	0.764
LHS: IV, σ^2 =0.0250, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.241	0.195	0.816	0.809	**0.874**	0.582	0.545	0.830	0.826	**0.874**	0.584	0.549	0.830	0.826
$M1^{1min}$	**0.891**	**0.871**	0.083	0.065	0.745	0.687	**0.874**	0.385	0.337	0.798	0.777	**0.874**	0.404	0.363	0.798	0.777
$M1^{20sec}$	**0.891**	**0.871**	0.031	0.024	0.371	0.264	**0.874**	0.213	0.174	0.657	0.598	**0.874**	0.248	0.210	0.657	0.600
$M2^{5min}$	**0.586**	**0.445**	0.027	0.021	0.360	0.353	**0.460**	0.091	0.075	0.398	0.394	**0.460**	0.095	0.078	0.398	0.394
$M2^{1min}$	**0.586**	**0.445**	0.007	0.006	0.219	0.180	**0.460**	0.030	0.023	0.314	0.287	**0.460**	0.032	0.025	0.315	0.288
$M2^{20sec}$	**0.586**	**0.445**	0.003	0.002	0.047	0.030	**0.460**	0.011	0.009	0.135	0.098	**0.460**	0.012	0.009	0.138	0.101
$M3^{5min}$	**0.945**	**0.934**	0.289	0.236	0.888	0.880	**0.936**	0.712	0.678	0.905	0.902	**0.936**	0.721	0.692	0.905	0.902
$M3^{1min}$	**0.945**	**0.934**	0.100	0.077	0.814	0.754	**0.936**	0.507	0.452	0.880	0.864	**0.936**	0.562	0.521	0.880	0.864
$M3^{20sec}$	**0.945**	**0.934**	0.038	0.029	0.425	0.306	**0.936**	0.297	0.246	0.772	0.722	**0.936**	0.395	0.347	0.774	0.729
LHS: IV, σ^2 =0.0300, κ =1.5																
$M1^{5min}$	**0.891**	**0.871**	0.192	0.154	0.813	0.806	**0.874**	0.541	0.501	0.829	0.825	**0.874**	0.546	0.508	0.829	0.825
$M1^{1min}$	**0.891**	**0.871**	0.060	0.046	0.704	0.640	**0.874**	0.324	0.277	0.783	0.760	**0.874**	0.351	0.309	0.783	0.760
$M1^{20sec}$	**0.891**	**0.871**	0.022	0.017	0.297	0.205	**0.874**	0.164	0.132	0.619	0.554	**0.874**	0.200	0.166	0.619	0.557
$M2^{5min}$	**0.586**	**0.445**	0.020	0.015	0.354	0.346	**0.460**	0.072	0.058	0.395	0.390	**0.460**	0.075	0.061	0.395	0.390
$M2^{1min}$	**0.586**	**0.445**	0.005	0.004	0.181	0.145	**0.460**	0.022	0.017	0.288	0.259	**0.460**	0.023	0.018	0.289	0.260
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.001	0.034	0.021	**0.460**	0.008	0.006	0.107	0.075	**0.460**	0.009	0.007	0.110	0.078
$M3^{5min}$	**0.945**	**0.934**	0.231	0.186	0.886	0.877	**0.936**	0.675	0.635	0.904	0.901	**0.936**	0.689	0.658	0.904	0.901
$M3^{1min}$	**0.945**	**0.934**	0.072	0.056	0.774	0.707	**0.936**	0.436	0.379	0.869	0.852	**0.936**	0.509	0.465	0.869	0.852
$M3^{20sec}$	**0.945**	**0.934**	0.026	0.020	0.344	0.239	**0.936**	0.233	0.189	0.740	0.681	**0.936**	0.334	0.286	0.745	0.694

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
LHS: IV, σ^2 =0.0050, κ =2.0																
$M1^{5min}$	**0.891**	**0.871**	0.652	0.572	0.822	0.816	**0.874**	0.764	0.736	0.833	0.830	**0.874**	0.764	0.736	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.533	0.521	0.852	0.823	**0.874**	0.722	0.718	0.853	0.834	**0.874**	0.722	0.718	0.853	0.834
$M1^{20sec}$	**0.891**	**0.871**	0.341	0.340	0.805	0.721	**0.874**	0.642	0.642	0.825	0.789	**0.874**	0.643	0.642	0.825	0.789
$M2^{5min}$	**0.586**	**0.445**	0.167	0.136	0.373	0.371	**0.460**	0.277	0.251	0.406	0.405	**0.460**	0.277	0.252	0.407	0.405
$M2^{1min}$	**0.586**	**0.445**	0.093	0.090	0.405	0.390	**0.460**	0.205	0.202	0.427	0.417	**0.460**	0.207	0.204	0.427	0.417
$M2^{20sec}$	**0.586**	**0.445**	0.042	0.041	0.297	0.259	**0.460**	0.125	0.125	0.362	0.339	**0.460**	0.128	0.128	0.362	0.340
$M3^{5min}$	**0.945**	**0.934**	0.735	0.661	0.893	0.887	**0.936**	0.859	0.840	0.908	0.905	**0.936**	0.859	0.840	0.908	0.905
$M3^{1min}$	**0.945**	**0.934**	0.604	0.593	0.918	0.887	**0.936**	0.825	0.822	0.920	0.905	**0.936**	0.826	0.823	0.920	0.905
$M3^{20sec}$	**0.945**	**0.934**	0.395	0.393	0.872	0.782	**0.936**	0.761	0.761	0.899	0.871	**0.936**	0.764	0.763	0.899	0.871
LHS: IV, σ^2 =0.0100, κ =2.0																
$M1^{5min}$	**0.891**	**0.871**	0.492	0.442	0.820	0.815	**0.874**	0.707	0.688	0.833	0.830	**0.874**	0.707	0.688	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.274	0.270	0.831	0.802	**0.874**	0.604	0.602	0.839	0.823	**0.874**	0.606	0.603	0.839	0.823
$M1^{20sec}$	**0.891**	**0.871**	0.127	0.126	0.671	0.591	**0.874**	0.465	0.464	0.771	0.743	**0.874**	0.476	0.475	0.771	0.743
$M2^{5min}$	**0.586**	**0.445**	0.085	0.075	0.371	0.368	**0.460**	0.196	0.182	0.405	0.403	**0.460**	0.197	0.184	0.405	0.403
$M2^{1min}$	**0.586**	**0.445**	0.031	0.030	0.353	0.339	**0.460**	0.101	0.100	0.394	0.386	**0.460**	0.104	0.103	0.394	0.386
$M2^{20sec}$	**0.586**	**0.445**	0.012	0.012	0.155	0.131	**0.460**	0.046	0.046	0.267	0.246	**0.460**	0.048	0.048	0.268	0.247
$M3^{5min}$	**0.945**	**0.934**	0.570	0.521	0.892	0.886	**0.936**	0.816	0.803	0.907	0.905	**0.936**	0.816	0.803	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.321	0.317	0.898	0.867	**0.936**	0.729	0.727	0.910	0.897	**0.936**	0.735	0.734	0.910	0.897
$M3^{20sec}$	**0.945**	**0.934**	0.150	0.150	0.740	0.653	**0.936**	0.594	0.593	0.860	0.838	**0.936**	0.626	0.626	0.860	0.838
LHS: IV, σ^2 =0.0150, κ =2.0																
$M1^{5min}$	**0.891**	**0.871**	0.364	0.334	0.819	0.813	**0.874**	0.653	0.638	0.832	0.829	**0.874**	0.654	0.639	0.832	0.829
$M1^{1min}$	**0.891**	**0.871**	0.154	0.152	0.800	0.771	**0.874**	0.501	0.500	0.822	0.809	**0.874**	0.509	0.507	0.822	0.809
$M1^{20sec}$	**0.891**	**0.871**	0.062	0.062	0.527	0.456	**0.874**	0.330	0.330	0.720	0.693	**0.874**	0.357	0.356	0.720	0.693
$M2^{5min}$	**0.586**	**0.445**	0.049	0.045	0.367	0.364	**0.460**	0.140	0.133	0.402	0.401	**0.460**	0.143	0.136	0.403	0.401
$M2^{1min}$	**0.586**	**0.445**	0.015	0.015	0.292	0.280	**0.460**	0.056	0.056	0.359	0.351	**0.460**	0.059	0.058	0.359	0.352
$M2^{20sec}$	**0.586**	**0.445**	0.005	0.005	0.087	0.072	**0.460**	0.022	0.022	0.198	0.178	**0.460**	0.024	0.024	0.200	0.180
$M3^{5min}$	**0.945**	**0.934**	0.429	0.399	0.891	0.885	**0.936**	0.774	0.763	0.906	0.904	**0.936**	0.776	0.765	0.906	0.904
$M3^{1min}$	**0.945**	**0.934**	0.183	0.181	0.867	0.837	**0.936**	0.632	0.630	0.897	0.887	**0.936**	0.656	0.654	0.897	0.887
$M3^{20sec}$	**0.945**	**0.934**	0.074	0.074	0.591	0.513	**0.936**	0.443	0.442	0.822	0.800	**0.936**	0.514	0.514	0.822	0.801
LHS: IV, σ^2 =0.0200, κ =2.0																
$M1^{5min}$	**0.891**	**0.871**	0.272	0.253	0.817	0.811	**0.874**	0.603	0.591	0.831	0.828	**0.874**	0.604	0.592	0.831	0.828
$M1^{1min}$	**0.891**	**0.871**	0.096	0.095	0.760	0.732	**0.874**	0.413	0.411	0.805	0.793	**0.874**	0.429	0.428	0.805	0.793
$M1^{20sec}$	**0.891**	**0.871**	0.036	0.036	0.405	0.346	**0.874**	0.237	0.237	0.672	0.645	**0.874**	0.271	0.271	0.673	0.645
$M2^{5min}$	**0.586**	**0.445**	0.032	0.030	0.362	0.359	**0.460**	0.103	0.099	0.399	0.398	**0.460**	0.106	0.102	0.400	0.398
$M2^{1min}$	**0.586**	**0.445**	0.009	0.009	0.237	0.225	**0.460**	0.035	0.035	0.325	0.318	**0.460**	0.037	0.037	0.326	0.319
$M2^{20sec}$	**0.586**	**0.445**	0.003	0.003	0.054	0.044	**0.460**	0.013	0.013	0.148	0.131	**0.460**	0.014	0.014	0.151	0.133

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
$M3^{5min}$	**0.945**	**0.934**	0.324	0.305	0.889	0.883	**0.936**	0.731	0.721	0.906	0.903	**0.936**	0.737	0.728	0.906	0.903
$M3^{1min}$	**0.945**	**0.934**	0.115	0.114	0.829	0.798	**0.936**	0.538	0.536	0.885	0.876	**0.936**	0.585	0.584	0.885	0.876
$M3^{20sec}$	**0.945**	**0.934**	0.044	0.044	0.462	0.396	**0.936**	0.328	0.328	0.785	0.762	**0.936**	0.422	0.422	0.786	0.764
LHS: IV, σ^2 =0.0250, κ =2.0																
$M1^{5min}$	**0.891**	**0.871**	0.207	0.195	0.814	0.809	**0.874**	0.555	0.545	0.829	0.826	**0.874**	0.559	0.549	0.829	0.826
$M1^{1min}$	**0.891**	**0.871**	0.065	0.065	0.715	0.687	**0.874**	0.339	0.337	0.787	0.777	**0.874**	0.364	0.362	0.787	0.777
$M1^{20sec}$	**0.891**	**0.871**	0.024	0.024	0.313	0.264	**0.874**	0.174	0.174	0.627	0.598	**0.874**	0.210	0.210	0.628	0.600
$M2^{5min}$	**0.586**	**0.445**	0.022	0.021	0.356	0.353	**0.460**	0.078	0.075	0.396	0.394	**0.460**	0.081	0.078	0.396	0.394
$M2^{1min}$	**0.586**	**0.445**	0.006	0.006	0.190	0.180	**0.460**	0.024	0.023	0.294	0.287	**0.460**	0.025	0.025	0.295	0.288
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.002	0.036	0.030	**0.460**	0.009	0.009	0.113	0.098	**0.460**	0.009	0.009	0.116	0.101
$M3^{5min}$	**0.945**	**0.934**	0.249	0.236	0.886	0.880	**0.936**	0.687	0.678	0.905	0.902	**0.936**	0.700	0.692	0.905	0.902
$M3^{1min}$	**0.945**	**0.934**	0.078	0.077	0.784	0.754	**0.936**	0.453	0.452	0.872	0.864	**0.936**	0.522	0.521	0.872	0.864
$M3^{20sec}$	**0.945**	**0.934**	0.029	0.029	0.361	0.306	**0.936**	0.246	0.246	0.748	0.722	**0.936**	0.347	0.347	0.752	0.729
LHS: IV, σ^2 =0.0300, κ =2.0																
$M1^{5min}$	**0.891**	**0.871**	0.162	0.153	0.811	0.806	**0.874**	0.510	0.501	0.828	0.825	**0.874**	0.517	0.508	0.828	0.825
$M1^{1min}$	**0.891**	**0.871**	0.047	0.046	0.667	0.640	**0.874**	0.279	0.277	0.770	0.760	**0.874**	0.310	0.309	0.770	0.760
$M1^{20sec}$	**0.891**	**0.871**	0.017	0.017	0.245	0.205	**0.874**	0.132	0.132	0.585	0.554	**0.874**	0.166	0.166	0.587	0.557
$M2^{5min}$	**0.586**	**0.445**	0.016	0.015	0.349	0.346	**0.460**	0.060	0.058	0.392	0.390	**0.460**	0.063	0.061	0.392	0.390
$M2^{1min}$	**0.586**	**0.445**	0.004	0.004	0.154	0.145	**0.460**	0.017	0.017	0.266	0.259	**0.460**	0.018	0.018	0.267	0.260
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.001	0.026	0.021	**0.460**	0.006	0.006	0.088	0.075	**0.460**	0.007	0.007	0.091	0.078
$M3^{5min}$	**0.945**	**0.934**	0.195	0.186	0.883	0.877	**0.936**	0.644	0.635	0.903	0.901	**0.936**	0.665	0.658	0.903	0.901
$M3^{1min}$	**0.945**	**0.934**	0.056	0.056	0.736	0.706	**0.936**	0.381	0.379	0.859	0.852	**0.936**	0.466	0.465	0.859	0.852
$M3^{20sec}$	**0.945**	**0.934**	0.020	0.020	0.285	0.239	**0.936**	0.189	0.189	0.710	0.681	**0.936**	0.287	0.286	0.719	0.694

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
LHS: IV, σ^2 =0.0050, κ =2.5																
$M1^{5min}$	**0.891**	**0.871**	0.640	0.572	0.822	0.816	**0.874**	0.760	0.736	0.833	0.830	**0.874**	0.760	0.736	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.498	0.521	0.850	0.823	**0.874**	0.709	0.718	0.852	0.834	**0.874**	0.709	0.718	0.852	0.834
$M1^{20sec}$	**0.891**	**0.871**	0.300	0.340	0.793	0.721	**0.874**	0.620	0.642	0.819	0.789	**0.874**	0.621	0.642	0.819	0.789
$M2^{5min}$	**0.586**	**0.445**	0.158	0.136	0.373	0.371	**0.460**	0.270	0.251	0.406	0.405	**0.460**	0.270	0.252	0.406	0.405
$M2^{1min}$	**0.586**	**0.445**	0.080	0.090	0.400	0.390	**0.460**	0.190	0.202	0.424	0.417	**0.460**	0.191	0.204	0.424	0.417
$M2^{20sec}$	**0.586**	**0.445**	0.034	0.041	0.277	0.259	**0.460**	0.109	0.125	0.350	0.339	**0.460**	0.112	0.128	0.350	0.340
$M3^{5min}$	**0.945**	**0.934**	0.724	0.661	0.893	0.887	**0.936**	0.856	0.840	0.908	0.905	**0.936**	0.856	0.840	0.908	0.905
$M3^{1min}$	**0.945**	**0.934**	0.566	0.593	0.916	0.887	**0.936**	0.815	0.822	0.919	0.905	**0.936**	0.816	0.823	0.919	0.905
$M3^{20sec}$	**0.945**	**0.934**	0.349	0.393	0.860	0.782	**0.936**	0.743	0.761	0.895	0.871	**0.936**	0.747	0.763	0.895	0.871
LHS: IV, σ^2 =0.0100, κ =2.5																
$M1^{5min}$	**0.891**	**0.871**	0.467	0.442	0.820	0.815	**0.874**	0.698	0.688	0.832	0.830	**0.874**	0.698	0.688	0.832	0.830
$M1^{1min}$	**0.891**	**0.871**	0.239	0.270	0.825	0.802	**0.874**	0.580	0.602	0.835	0.823	**0.874**	0.583	0.603	0.835	0.823
$M1^{20sec}$	**0.891**	**0.871**	0.105	0.126	0.637	0.591	**0.874**	0.430	0.464	0.759	0.743	**0.874**	0.445	0.475	0.759	0.743
$M2^{5min}$	**0.586**	**0.445**	0.076	0.075	0.370	0.368	**0.460**	0.184	0.182	0.404	0.403	**0.460**	0.186	0.184	0.405	0.403
$M2^{1min}$	**0.586**	**0.445**	0.025	0.030	0.340	0.339	**0.460**	0.087	0.100	0.386	0.386	**0.460**	0.090	0.103	0.386	0.386
$M2^{20sec}$	**0.586**	**0.445**	0.009	0.012	0.134	0.131	**0.460**	0.038	0.046	0.249	0.246	**0.460**	0.040	0.048	0.250	0.247
$M3^{5min}$	**0.945**	**0.934**	0.542	0.521	0.892	0.886	**0.936**	0.809	0.803	0.907	0.905	**0.936**	0.809	0.803	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.281	0.317	0.892	0.867	**0.936**	0.708	0.727	0.907	0.897	**0.936**	0.717	0.734	0.907	0.897
$M3^{20sec}$	**0.945**	**0.934**	0.125	0.150	0.705	0.653	**0.936**	0.556	0.593	0.851	0.838	**0.936**	0.598	0.626	0.851	0.838
LHS: IV, σ^2 =0.0150, κ =2.5																
$M1^{5min}$	**0.891**	**0.871**	0.335	0.334	0.818	0.813	**0.874**	0.639	0.638	0.831	0.829	**0.874**	0.639	0.639	0.831	0.829
$M1^{1min}$	**0.891**	**0.871**	0.130	0.152	0.787	0.771	**0.874**	0.470	0.499	0.816	0.809	**0.874**	0.480	0.507	0.816	0.809
$M1^{20sec}$	**0.891**	**0.871**	0.051	0.062	0.481	0.456	**0.874**	0.294	0.330	0.703	0.693	**0.874**	0.324	0.356	0.703	0.693
$M2^{5min}$	**0.586**	**0.445**	0.043	0.045	0.366	0.364	**0.460**	0.128	0.133	0.402	0.401	**0.460**	0.131	0.135	0.402	0.401
$M2^{1min}$	**0.586**	**0.445**	0.012	0.015	0.273	0.280	**0.460**	0.047	0.056	0.347	0.351	**0.460**	0.050	0.058	0.348	0.352
$M2^{20sec}$	**0.586**	**0.445**	0.004	0.005	0.072	0.072	**0.460**	0.018	0.022	0.179	0.178	**0.460**	0.020	0.024	0.181	0.180
$M3^{5min}$	**0.945**	**0.934**	0.395	0.398	0.890	0.885	**0.936**	0.761	0.763	0.906	0.904	**0.936**	0.764	0.765	0.906	0.904
$M3^{1min}$	**0.945**	**0.934**	0.155	0.181	0.855	0.837	**0.936**	0.599	0.630	0.893	0.887	**0.936**	0.631	0.654	0.893	0.887
$M3^{20sec}$	**0.945**	**0.934**	0.061	0.074	0.543	0.513	**0.936**	0.398	0.442	0.809	0.800	**0.936**	0.480	0.514	0.809	0.801
LHS: IV, σ^2 =0.0200, κ =2.5																
$M1^{5min}$	**0.891**	**0.871**	0.244	0.253	0.816	0.811	**0.874**	0.584	0.590	0.830	0.828	**0.874**	0.586	0.592	0.830	0.828
$M1^{1min}$	**0.891**	**0.871**	0.080	0.095	0.740	0.732	**0.874**	0.377	0.411	0.797	0.793	**0.874**	0.398	0.428	0.797	0.793
$M1^{20sec}$	**0.891**	**0.871**	0.030	0.036	0.359	0.346	**0.874**	0.205	0.237	0.651	0.645	**0.874**	0.240	0.271	0.651	0.645
$M2^{5min}$	**0.586**	**0.445**	0.027	0.030	0.360	0.359	**0.460**	0.092	0.098	0.398	0.398	**0.460**	0.095	0.102	0.398	0.398
$M2^{1min}$	**0.586**	**0.445**	0.007	0.009	0.214	0.225	**0.460**	0.029	0.035	0.311	0.318	**0.460**	0.031	0.037	0.311	0.318
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.003	0.044	0.044	**0.460**	0.011	0.013	0.130	0.131	**0.460**	0.011	0.014	0.133	0.133

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
$M3^{5min}$	**0.945**	**0.934**	0.291	0.304	0.888	0.883	**0.936**	0.713	0.721	0.905	0.903	**0.936**	0.721	0.728	0.905	0.903
$M3^{1min}$	**0.945**	**0.934**	0.095	0.114	0.809	0.798	**0.936**	0.498	0.536	0.879	0.876	**0.936**	0.555	0.584	0.879	0.876
$M3^{20sec}$	**0.945**	**0.934**	0.035	0.044	0.412	0.396	**0.936**	0.286	0.328	0.768	0.762	**0.936**	0.385	0.422	0.770	0.764
LHS: IV, σ^2 =0.0250, κ =2.5																
$M1^{5min}$	**0.891**	**0.871**	0.182	0.195	0.813	0.809	**0.874**	0.532	0.544	0.828	0.826	**0.874**	0.537	0.548	0.828	0.826
$M1^{1min}$	**0.891**	**0.871**	0.053	0.064	0.688	0.687	**0.874**	0.303	0.337	0.777	0.777	**0.874**	0.332	0.362	0.777	0.777
$M1^{20sec}$	**0.891**	**0.871**	0.019	0.024	0.271	0.264	**0.874**	0.147	0.174	0.602	0.598	**0.874**	0.183	0.210	0.604	0.600
$M2^{5min}$	**0.586**	**0.445**	0.019	0.021	0.352	0.353	**0.460**	0.068	0.075	0.394	0.394	**0.460**	0.071	0.078	0.394	0.394
$M2^{1min}$	**0.586**	**0.445**	0.005	0.006	0.168	0.180	**0.460**	0.019	0.023	0.278	0.287	**0.460**	0.021	0.025	0.278	0.288
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.002	0.029	0.030	**0.460**	0.007	0.009	0.097	0.098	**0.460**	0.007	0.009	0.101	0.101
$M3^{5min}$	**0.945**	**0.934**	0.219	0.236	0.885	0.880	**0.936**	0.665	0.678	0.904	0.902	**0.936**	0.681	0.692	0.904	0.902
$M3^{1min}$	**0.945**	**0.934**	0.064	0.077	0.757	0.754	**0.936**	0.410	0.452	0.864	0.864	**0.936**	0.489	0.521	0.865	0.864
$M3^{20sec}$	**0.945**	**0.934**	0.023	0.029	0.314	0.306	**0.936**	0.210	0.246	0.726	0.722	**0.936**	0.310	0.347	0.732	0.729
LHS: IV, σ^2 =0.0300, κ =2.5																
$M1^{5min}$	**0.891**	**0.871**	0.140	0.153	0.809	0.806	**0.874**	0.484	0.501	0.827	0.825	**0.874**	0.493	0.508	0.827	0.825
$M1^{1min}$	**0.891**	**0.871**	0.038	0.046	0.633	0.640	**0.874**	0.244	0.277	0.758	0.760	**0.874**	0.278	0.309	0.758	0.760
$M1^{20sec}$	**0.891**	**0.871**	0.013	0.017	0.208	0.205	**0.874**	0.110	0.132	0.556	0.554	**0.874**	0.142	0.166	0.560	0.557
$M2^{5min}$	**0.586**	**0.445**	0.013	0.015	0.344	0.346	**0.460**	0.052	0.058	0.389	0.390	**0.460**	0.055	0.061	0.389	0.390
$M2^{1min}$	**0.586**	**0.445**	0.003	0.004	0.133	0.145	**0.460**	0.014	0.017	0.248	0.259	**0.460**	0.015	0.018	0.249	0.260
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.001	0.021	0.021	**0.460**	0.005	0.006	0.075	0.075	**0.460**	0.005	0.007	0.078	0.078
$M3^{5min}$	**0.945**	**0.934**	0.169	0.186	0.881	0.877	**0.936**	0.616	0.635	0.903	0.901	**0.936**	0.643	0.658	0.903	0.901
$M3^{1min}$	**0.945**	**0.934**	0.046	0.056	0.701	0.706	**0.936**	0.338	0.379	0.850	0.852	**0.936**	0.431	0.465	0.850	0.852
$M3^{20sec}$	**0.945**	**0.934**	0.016	0.020	0.244	0.239	**0.936**	0.159	0.189	0.684	0.681	**0.936**	0.251	0.286	0.697	0.694

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
LHS: IV, σ^2 =0.0050, κ =3.0																
$M1^{5min}$	**0.891**	**0.871**	0.630	0.572	0.821	0.816	**0.874**	0.756	0.736	0.833	0.830	**0.874**	0.756	0.736	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.467	0.521	0.849	0.823	**0.874**	0.698	0.718	0.851	0.834	**0.874**	0.698	0.718	0.851	0.834
$M1^{20sec}$	**0.891**	**0.871**	0.268	0.340	0.780	0.721	**0.874**	0.601	0.642	0.813	0.789	**0.874**	0.602	0.642	0.813	0.789
$M2^{5min}$	**0.586**	**0.445**	0.150	0.136	0.373	0.371	**0.460**	0.263	0.251	0.406	0.405	**0.460**	0.264	0.252	0.406	0.405
$M2^{1min}$	**0.586**	**0.445**	0.071	0.090	0.396	0.390	**0.460**	0.176	0.202	0.421	0.417	**0.460**	0.178	0.204	0.421	0.417
$M2^{20sec}$	**0.586**	**0.445**	0.029	0.041	0.259	0.259	**0.460**	0.097	0.125	0.339	0.339	**0.460**	0.100	0.128	0.339	0.340
$M3^{5min}$	**0.945**	**0.934**	0.712	0.661	0.893	0.887	**0.936**	0.853	0.840	0.908	0.905	**0.936**	0.853	0.840	0.908	0.905
$M3^{1min}$	**0.945**	**0.934**	0.533	0.593	0.915	0.887	**0.936**	0.806	0.822	0.918	0.905	**0.936**	0.807	0.823	0.919	0.905
$M3^{20sec}$	**0.945**	**0.934**	0.313	0.393	0.848	0.782	**0.936**	0.725	0.761	0.891	0.871	**0.936**	0.732	0.763	0.891	0.871
LHS: IV, σ^2 =0.0100, κ =3.0																
$M1^{5min}$	**0.891**	**0.871**	0.445	0.442	0.820	0.815	**0.874**	0.689	0.688	0.832	0.830	**0.874**	0.689	0.688	0.832	0.830
$M1^{1min}$	**0.891**	**0.871**	0.212	0.270	0.819	0.802	**0.874**	0.559	0.602	0.832	0.823	**0.874**	0.563	0.603	0.832	0.823
$M1^{20sec}$	**0.891**	**0.871**	0.090	0.126	0.606	0.591	**0.874**	0.400	0.464	0.748	0.743	**0.874**	0.418	0.475	0.748	0.743
$M2^{5min}$	**0.586**	**0.445**	0.069	0.075	0.370	0.368	**0.460**	0.173	0.182	0.404	0.403	**0.460**	0.176	0.184	0.404	0.403
$M2^{1min}$	**0.586**	**0.445**	0.022	0.030	0.327	0.339	**0.460**	0.077	0.100	0.379	0.386	**0.460**	0.080	0.103	0.379	0.386
$M2^{20sec}$	**0.586**	**0.445**	0.008	0.012	0.118	0.131	**0.460**	0.032	0.046	0.234	0.246	**0.460**	0.035	0.048	0.235	0.247
$M3^{5min}$	**0.945**	**0.934**	0.517	0.521	0.892	0.886	**0.936**	0.801	0.802	0.907	0.905	**0.936**	0.802	0.803	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.250	0.317	0.886	0.867	**0.936**	0.688	0.727	0.905	0.897	**0.936**	0.700	0.734	0.905	0.897
$M3^{20sec}$	**0.945**	**0.934**	0.107	0.150	0.673	0.653	**0.936**	0.523	0.593	0.843	0.838	**0.936**	0.574	0.626	0.843	0.838
LHS: IV, σ^2 =0.0150, κ =3.0																
$M1^{5min}$	**0.891**	**0.871**	0.310	0.334	0.818	0.813	**0.874**	0.625	0.638	0.831	0.829	**0.874**	0.626	0.639	0.831	0.829
$M1^{1min}$	**0.891**	**0.871**	0.112	0.152	0.775	0.771	**0.874**	0.442	0.499	0.811	0.809	**0.874**	0.456	0.507	0.811	0.809
$M1^{20sec}$	**0.891**	**0.871**	0.043	0.062	0.443	0.456	**0.874**	0.264	0.330	0.688	0.693	**0.874**	0.297	0.356	0.688	0.693
$M2^{5min}$	**0.586**	**0.445**	0.038	0.045	0.364	0.364	**0.460**	0.117	0.133	0.401	0.401	**0.460**	0.120	0.135	0.401	0.401
$M2^{1min}$	**0.586**	**0.445**	0.010	0.015	0.255	0.280	**0.460**	0.041	0.056	0.337	0.351	**0.460**	0.043	0.058	0.337	0.352
$M2^{20sec}$	**0.586**	**0.445**	0.004	0.005	0.062	0.072	**0.460**	0.015	0.022	0.163	0.178	**0.460**	0.017	0.024	0.165	0.180
$M3^{5min}$	**0.945**	**0.934**	0.366	0.398	0.890	0.885	**0.936**	0.750	0.762	0.906	0.904	**0.936**	0.753	0.765	0.906	0.904
$M3^{1min}$	**0.945**	**0.934**	0.134	0.181	0.843	0.837	**0.936**	0.570	0.630	0.889	0.887	**0.936**	0.609	0.654	0.889	0.887
$M3^{20sec}$	**0.945**	**0.934**	0.051	0.074	0.502	0.513	**0.936**	0.362	0.442	0.797	0.800	**0.936**	0.451	0.514	0.798	0.801
LHS: IV, σ^2 =0.0200, κ =3.0																
$M1^{5min}$	**0.891**	**0.871**	0.220	0.253	0.815	0.811	**0.874**	0.566	0.590	0.830	0.828	**0.874**	0.569	0.592	0.830	0.828
$M1^{1min}$	**0.891**	**0.871**	0.068	0.095	0.721	0.732	**0.874**	0.347	0.411	0.789	0.793	**0.874**	0.372	0.428	0.789	0.793
$M1^{20sec}$	**0.891**	**0.871**	0.025	0.036	0.322	0.346	**0.874**	0.180	0.237	0.632	0.645	**0.874**	0.216	0.271	0.633	0.645
$M2^{5min}$	**0.586**	**0.445**	0.024	0.030	0.357	0.359	**0.460**	0.082	0.098	0.397	0.398	**0.460**	0.086	0.101	0.397	0.398
$M2^{1min}$	**0.586**	**0.445**	0.006	0.009	0.195	0.225	**0.460**	0.025	0.035	0.298	0.318	**0.460**	0.026	0.037	0.299	0.318
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.003	0.038	0.044	**0.460**	0.009	0.013	0.116	0.131	**0.460**	0.010	0.014	0.119	0.133

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
$M3^{5min}$	**0.945**	**0.934**	0.263	0.304	0.887	0.883	**0.936**	0.697	0.721	0.905	0.903	**0.936**	0.708	0.728	0.905	0.903
$M3^{1min}$	**0.945**	**0.934**	0.082	0.114	0.790	0.798	**0.936**	0.463	0.536	0.873	0.876	**0.936**	0.530	0.584	0.873	0.876
$M3^{20sec}$	**0.945**	**0.934**	0.030	0.044	0.371	0.396	**0.936**	0.254	0.327	0.752	0.762	**0.936**	0.355	0.422	0.755	0.764
LHS: IV, σ^2 =0.0250, κ =3.0																
$M1^{5min}$	**0.891**	**0.871**	0.162	0.195	0.811	0.809	**0.874**	0.511	0.544	0.828	0.826	**0.874**	0.518	0.548	0.828	0.826
$M1^{1min}$	**0.891**	**0.871**	0.045	0.064	0.662	0.687	**0.874**	0.274	0.337	0.768	0.777	**0.874**	0.305	0.362	0.768	0.777
$M1^{20sec}$	**0.891**	**0.871**	0.016	0.024	0.238	0.264	**0.874**	0.128	0.174	0.580	0.598	**0.874**	0.162	0.210	0.582	0.600
$M2^{5min}$	**0.586**	**0.445**	0.016	0.021	0.349	0.353	**0.460**	0.060	0.075	0.392	0.394	**0.460**	0.063	0.078	0.392	0.394
$M2^{1min}$	**0.586**	**0.445**	0.004	0.006	0.150	0.180	**0.460**	0.016	0.023	0.264	0.287	**0.460**	0.018	0.025	0.264	0.288
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.002	0.025	0.030	**0.460**	0.006	0.009	0.086	0.098	**0.460**	0.006	0.009	0.089	0.101
$M3^{5min}$	**0.945**	**0.934**	0.195	0.235	0.883	0.880	**0.936**	0.644	0.678	0.903	0.902	**0.936**	0.665	0.692	0.903	0.902
$M3^{1min}$	**0.945**	**0.934**	0.054	0.077	0.731	0.754	**0.936**	0.374	0.451	0.858	0.864	**0.936**	0.461	0.521	0.858	0.864
$M3^{20sec}$	**0.945**	**0.934**	0.019	0.029	0.278	0.306	**0.936**	0.183	0.246	0.706	0.722	**0.936**	0.280	0.347	0.715	0.729
LHS: IV, σ^2 =0.0300, κ =3.0																
$M1^{5min}$	**0.891**	**0.871**	0.123	0.153	0.807	0.806	**0.874**	0.460	0.500	0.826	0.825	**0.874**	0.471	0.508	0.826	0.825
$M1^{1min}$	**0.891**	**0.871**	0.032	0.046	0.603	0.640	**0.874**	0.218	0.277	0.747	0.760	**0.874**	0.253	0.309	0.747	0.760
$M1^{20sec}$	**0.891**	**0.871**	0.011	0.017	0.181	0.205	**0.874**	0.094	0.132	0.531	0.553	**0.874**	0.124	0.166	0.536	0.557
$M2^{5min}$	**0.586**	**0.445**	0.012	0.015	0.340	0.346	**0.460**	0.045	0.058	0.386	0.390	**0.460**	0.048	0.061	0.386	0.390
$M2^{1min}$	**0.586**	**0.445**	0.003	0.004	0.117	0.145	**0.460**	0.012	0.017	0.233	0.259	**0.460**	0.013	0.018	0.234	0.260
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.001	0.018	0.021	**0.460**	0.004	0.006	0.065	0.075	**0.460**	0.004	0.007	0.068	0.078
$M3^{5min}$	**0.945**	**0.934**	0.148	0.185	0.879	0.877	**0.936**	0.591	0.634	0.902	0.901	**0.936**	0.624	0.657	0.902	0.901
$M3^{1min}$	**0.945**	**0.934**	0.039	0.056	0.670	0.706	**0.936**	0.303	0.379	0.842	0.852	**0.936**	0.401	0.465	0.842	0.852
$M3^{20sec}$	**0.945**	**0.934**	0.014	0.020	0.213	0.239	**0.936**	0.137	0.189	0.660	0.681	**0.936**	0.224	0.286	0.677	0.694

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
LHS: IV, σ^2 =0.0050, κ =3.5																
$M1^{5min}$	**0.891**	**0.871**	0.619	0.572	0.821	0.816	**0.874**	0.753	0.736	0.833	0.830	**0.874**	0.753	0.736	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.439	0.520	0.847	0.823	**0.874**	0.687	0.718	0.849	0.834	**0.874**	0.687	0.718	0.849	0.834
$M1^{20sec}$	**0.891**	**0.871**	0.242	0.340	0.768	0.721	**0.874**	0.583	0.641	0.808	0.789	**0.874**	0.585	0.642	0.808	0.789
$M2^{5min}$	**0.586**	**0.445**	0.143	0.136	0.373	0.371	**0.460**	0.257	0.251	0.406	0.405	**0.460**	0.258	0.252	0.406	0.405
$M2^{1min}$	**0.586**	**0.445**	0.063	0.090	0.392	0.390	**0.460**	0.165	0.202	0.418	0.417	**0.460**	0.167	0.204	0.418	0.417
$M2^{20sec}$	**0.586**	**0.445**	0.026	0.041	0.243	0.259	**0.460**	0.088	0.125	0.330	0.339	**0.460**	0.091	0.128	0.330	0.340
$M3^{5min}$	**0.945**	**0.934**	0.701	0.661	0.893	0.887	**0.936**	0.850	0.840	0.908	0.905	**0.936**	0.850	0.840	0.908	0.905
$M3^{1min}$	**0.945**	**0.934**	0.503	0.593	0.913	0.887	**0.936**	0.797	0.822	0.918	0.905	**0.936**	0.798	0.823	0.918	0.905
$M3^{20sec}$	**0.945**	**0.934**	0.283	0.393	0.836	0.782	**0.936**	0.709	0.761	0.887	0.871	**0.936**	0.718	0.763	0.887	0.871
LHS: IV, σ^2 =0.0100, κ =3.5																
$M1^{5min}$	**0.891**	**0.871**	0.425	0.442	0.820	0.815	**0.874**	0.680	0.688	0.832	0.830	**0.874**	0.680	0.688	0.832	0.830
$M1^{1min}$	**0.891**	**0.871**	0.190	0.270	0.813	0.802	**0.874**	0.540	0.602	0.829	0.823	**0.874**	0.545	0.603	0.829	0.823
$M1^{20sec}$	**0.891**	**0.871**	0.079	0.126	0.578	0.591	**0.874**	0.375	0.464	0.739	0.743	**0.874**	0.396	0.475	0.739	0.743
$M2^{5min}$	**0.586**	**0.445**	0.063	0.075	0.369	0.368	**0.460**	0.164	0.182	0.404	0.403	**0.460**	0.167	0.184	0.404	0.403
$M2^{1min}$	**0.586**	**0.445**	0.019	0.030	0.316	0.339	**0.460**	0.069	0.100	0.372	0.386	**0.460**	0.072	0.103	0.373	0.386
$M2^{20sec}$	**0.586**	**0.445**	0.007	0.012	0.106	0.131	**0.460**	0.028	0.046	0.221	0.246	**0.460**	0.030	0.048	0.222	0.247
$M3^{5min}$	**0.945**	**0.934**	0.494	0.521	0.892	0.886	**0.936**	0.795	0.802	0.907	0.905	**0.936**	0.796	0.803	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.225	0.317	0.880	0.867	**0.936**	0.670	0.727	0.902	0.897	**0.936**	0.685	0.734	0.902	0.897
$M3^{20sec}$	**0.945**	**0.934**	0.094	0.150	0.644	0.653	**0.936**	0.494	0.593	0.836	0.838	**0.936**	0.553	0.626	0.836	0.838
LHS: IV, σ^2 =0.0150, κ =3.5																
$M1^{5min}$	**0.891**	**0.871**	0.288	0.333	0.817	0.813	**0.874**	0.613	0.638	0.831	0.829	**0.874**	0.614	0.639	0.831	0.829
$M1^{1min}$	**0.891**	**0.871**	0.099	0.152	0.763	0.771	**0.874**	0.418	0.499	0.806	0.809	**0.874**	0.434	0.507	0.806	0.809
$M1^{20sec}$	**0.891**	**0.871**	0.037	0.062	0.410	0.456	**0.874**	0.240	0.330	0.674	0.693	**0.874**	0.275	0.356	0.675	0.693
$M2^{5min}$	**0.586**	**0.445**	0.034	0.045	0.363	0.364	**0.460**	0.109	0.133	0.400	0.401	**0.460**	0.112	0.135	0.400	0.401
$M2^{1min}$	**0.586**	**0.445**	0.009	0.015	0.240	0.279	**0.460**	0.036	0.056	0.327	0.351	**0.460**	0.038	0.058	0.328	0.352
$M2^{20sec}$	**0.586**	**0.445**	0.003	0.005	0.055	0.072	**0.460**	0.013	0.022	0.150	0.178	**0.460**	0.014	0.024	0.153	0.180
$M3^{5min}$	**0.945**	**0.934**	0.341	0.398	0.889	0.885	**0.936**	0.739	0.762	0.906	0.904	**0.936**	0.744	0.765	0.906	0.904
$M3^{1min}$	**0.945**	**0.934**	0.118	0.181	0.831	0.837	**0.936**	0.544	0.630	0.886	0.887	**0.936**	0.589	0.654	0.886	0.887
$M3^{20sec}$	**0.945**	**0.934**	0.045	0.074	0.467	0.513	**0.936**	0.332	0.442	0.786	0.800	**0.936**	0.426	0.514	0.788	0.801
LHS: IV, σ^2 =0.0200, κ =3.5																
$M1^{5min}$	**0.891**	**0.871**	0.201	0.253	0.814	0.811	**0.874**	0.550	0.590	0.829	0.828	**0.874**	0.554	0.592	0.829	0.828
$M1^{1min}$	**0.891**	**0.871**	0.059	0.095	0.703	0.732	**0.874**	0.322	0.411	0.783	0.793	**0.874**	0.349	0.428	0.783	0.793
$M1^{20sec}$	**0.891**	**0.871**	0.021	0.036	0.292	0.346	**0.874**	0.161	0.237	0.615	0.645	**0.874**	0.196	0.271	0.616	0.645
$M2^{5min}$	**0.586**	**0.445**	0.021	0.030	0.355	0.359	**0.460**	0.075	0.098	0.395	0.398	**0.460**	0.078	0.101	0.395	0.398
$M2^{1min}$	**0.586**	**0.445**	0.005	0.009	0.180	0.225	**0.460**	0.021	0.035	0.287	0.318	**0.460**	0.023	0.037	0.287	0.318
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.003	0.033	0.044	**0.460**	0.008	0.013	0.105	0.131	**0.460**	0.008	0.014	0.108	0.133

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
$M3^{5min}$	**0.945**	**0.934**	0.241	0.304	0.886	0.883	**0.936**	0.682	0.721	0.904	0.903	**0.936**	0.695	0.728	0.904	0.903
$M3^{1min}$	**0.945**	**0.934**	0.071	0.114	0.772	0.798	**0.936**	0.433	0.536	0.869	0.876	**0.936**	0.507	0.584	0.869	0.876
$M3^{20sec}$	**0.945**	**0.934**	0.026	0.044	0.338	0.396	**0.936**	0.228	0.327	0.737	0.762	**0.936**	0.329	0.422	0.742	0.764
LHS: IV, σ^2 =0.0250, κ =3.5																
$M1^{5min}$	**0.891**	**0.871**	0.146	0.195	0.810	0.809	**0.874**	0.492	0.544	0.827	0.826	**0.874**	0.500	0.548	0.827	0.826
$M1^{1min}$	**0.891**	**0.871**	0.039	0.064	0.639	0.687	**0.874**	0.250	0.337	0.760	0.777	**0.874**	0.283	0.362	0.760	0.777
$M1^{20sec}$	**0.891**	**0.871**	0.014	0.024	0.213	0.264	**0.874**	0.113	0.174	0.560	0.598	**0.874**	0.145	0.210	0.563	0.600
$M2^{5min}$	**0.586**	**0.445**	0.014	0.021	0.346	0.353	**0.460**	0.054	0.075	0.390	0.394	**0.460**	0.057	0.078	0.390	0.394
$M2^{1min}$	**0.586**	**0.445**	0.003	0.006	0.136	0.180	**0.460**	0.014	0.023	0.251	0.287	**0.460**	0.015	0.025	0.252	0.288
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.002	0.021	0.030	**0.460**	0.005	0.009	0.076	0.098	**0.460**	0.005	0.009	0.080	0.101
$M3^{5min}$	**0.945**	**0.934**	0.176	0.235	0.882	0.880	**0.936**	0.624	0.678	0.903	0.902	**0.936**	0.649	0.692	0.903	0.902
$M3^{1min}$	**0.945**	**0.934**	0.047	0.077	0.707	0.754	**0.936**	0.344	0.451	0.852	0.864	**0.936**	0.436	0.521	0.852	0.864
$M3^{20sec}$	**0.945**	**0.934**	0.017	0.029	0.249	0.306	**0.936**	0.163	0.246	0.688	0.722	**0.936**	0.256	0.347	0.700	0.729
LHS: IV, σ^2 =0.0300, κ =3.5																
$M1^{5min}$	**0.891**	**0.871**	0.110	0.153	0.805	0.806	**0.874**	0.439	0.500	0.825	0.825	**0.874**	0.452	0.508	0.825	0.825
$M1^{1min}$	**0.891**	**0.871**	0.028	0.046	0.575	0.640	**0.874**	0.196	0.277	0.737	0.760	**0.874**	0.232	0.309	0.737	0.760
$M1^{20sec}$	**0.891**	**0.871**	0.010	0.017	0.160	0.205	**0.874**	0.083	0.131	0.509	0.553	**0.874**	0.110	0.165	0.516	0.557
$M2^{5min}$	**0.586**	**0.445**	0.010	0.015	0.335	0.346	**0.460**	0.040	0.058	0.384	0.390	**0.460**	0.043	0.061	0.384	0.390
$M2^{1min}$	**0.586**	**0.445**	0.002	0.004	0.105	0.145	**0.460**	0.010	0.017	0.220	0.259	**0.460**	0.011	0.018	0.221	0.260
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.001	0.015	0.021	**0.460**	0.003	0.006	0.057	0.075	**0.460**	0.004	0.007	0.060	0.078
$M3^{5min}$	**0.945**	**0.934**	0.133	0.185	0.877	0.877	**0.936**	0.568	0.634	0.901	0.901	**0.936**	0.607	0.657	0.901	0.901
$M3^{1min}$	**0.945**	**0.934**	0.034	0.056	0.642	0.706	**0.936**	0.275	0.379	0.835	0.852	**0.936**	0.375	0.465	0.835	0.852
$M3^{20sec}$	**0.945**	**0.934**	0.012	0.020	0.189	0.239	**0.936**	0.121	0.189	0.638	0.681	**0.936**	0.202	0.286	0.660	0.694

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
LHS: IV, σ^2 =0.0050, κ =4.0																
$M1^{5min}$	**0.891**	**0.871**	0.609	0.572	0.821	0.816	**0.874**	0.749	0.736	0.833	0.830	**0.874**	0.749	0.736	0.833	0.830
$M1^{1min}$	**0.891**	**0.871**	0.415	0.520	0.846	0.823	**0.874**	0.676	0.718	0.848	0.834	**0.874**	0.677	0.718	0.848	0.834
$M1^{20sec}$	**0.891**	**0.871**	0.221	0.340	0.757	0.721	**0.874**	0.567	0.641	0.803	0.789	**0.874**	0.570	0.642	0.803	0.789
$M2^{5min}$	**0.586**	**0.445**	0.136	0.136	0.373	0.371	**0.460**	0.251	0.251	0.406	0.405	**0.460**	0.252	0.252	0.406	0.405
$M2^{1min}$	**0.586**	**0.445**	0.057	0.090	0.387	0.390	**0.460**	0.155	0.202	0.415	0.417	**0.460**	0.157	0.204	0.415	0.417
$M2^{20sec}$	**0.586**	**0.445**	0.023	0.041	0.229	0.259	**0.460**	0.080	0.125	0.321	0.339	**0.460**	0.083	0.128	0.321	0.340
$M3^{5min}$	**0.945**	**0.934**	0.690	0.661	0.893	0.887	**0.936**	0.847	0.840	0.907	0.905	**0.936**	0.847	0.840	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.477	0.593	0.912	0.887	**0.936**	0.789	0.822	0.917	0.905	**0.936**	0.790	0.823	0.917	0.905
$M3^{20sec}$	**0.945**	**0.934**	0.259	0.393	0.825	0.782	**0.936**	0.694	0.761	0.883	0.871	**0.936**	0.705	0.763	0.883	0.871
LHS: IV, σ^2 =0.0100, κ =4.0																
$M1^{5min}$	**0.891**	**0.871**	0.406	0.442	0.819	0.815	**0.874**	0.672	0.687	0.832	0.830	**0.874**	0.673	0.688	0.832	0.830
$M1^{1min}$	**0.891**	**0.871**	0.173	0.270	0.807	0.802	**0.874**	0.523	0.602	0.826	0.823	**0.874**	0.528	0.603	0.826	0.823
$M1^{20sec}$	**0.891**	**0.871**	0.070	0.126	0.553	0.591	**0.874**	0.352	0.464	0.730	0.743	**0.874**	0.376	0.475	0.730	0.743
$M2^{5min}$	**0.586**	**0.445**	0.058	0.075	0.368	0.368	**0.460**	0.156	0.182	0.403	0.403	**0.460**	0.159	0.184	0.403	0.403
$M2^{1min}$	**0.586**	**0.445**	0.017	0.030	0.305	0.339	**0.460**	0.063	0.100	0.366	0.386	**0.460**	0.066	0.103	0.366	0.386
$M2^{20sec}$	**0.586**	**0.445**	0.006	0.012	0.096	0.131	**0.460**	0.025	0.046	0.209	0.246	**0.460**	0.027	0.048	0.210	0.247
$M3^{5min}$	**0.945**	**0.934**	0.473	0.520	0.891	0.886	**0.936**	0.788	0.802	0.907	0.905	**0.936**	0.789	0.803	0.907	0.905
$M3^{1min}$	**0.945**	**0.934**	0.205	0.317	0.875	0.867	**0.936**	0.653	0.727	0.900	0.897	**0.936**	0.672	0.734	0.900	0.897
$M3^{20sec}$	**0.945**	**0.934**	0.084	0.150	0.618	0.653	**0.936**	0.468	0.593	0.829	0.838	**0.936**	0.533	0.626	0.829	0.838
LHS: IV, σ^2 =0.0150, κ =4.0																
$M1^{5min}$	**0.891**	**0.871**	0.269	0.333	0.817	0.813	**0.874**	0.601	0.638	0.831	0.829	**0.874**	0.603	0.639	0.831	0.829
$M1^{1min}$	**0.891**	**0.871**	0.089	0.152	0.752	0.771	**0.874**	0.397	0.499	0.801	0.809	**0.874**	0.415	0.507	0.801	0.809
$M1^{20sec}$	**0.891**	**0.871**	0.033	0.062	0.382	0.456	**0.874**	0.220	0.330	0.662	0.693	**0.874**	0.256	0.356	0.662	0.693
$M2^{5min}$	**0.586**	**0.445**	0.031	0.045	0.362	0.364	**0.460**	0.101	0.133	0.399	0.401	**0.460**	0.104	0.135	0.399	0.401
$M2^{1min}$	**0.586**	**0.445**	0.008	0.015	0.226	0.279	**0.460**	0.032	0.056	0.319	0.351	**0.460**	0.034	0.058	0.319	0.352
$M2^{20sec}$	**0.586**	**0.445**	0.003	0.005	0.049	0.072	**0.460**	0.012	0.022	0.139	0.178	**0.460**	0.013	0.024	0.142	0.180
$M3^{5min}$	**0.945**	**0.934**	0.319	0.398	0.889	0.885	**0.936**	0.728	0.762	0.906	0.904	**0.936**	0.734	0.765	0.906	0.904
$M3^{1min}$	**0.945**	**0.934**	0.106	0.181	0.820	0.837	**0.936**	0.520	0.630	0.882	0.887	**0.936**	0.572	0.654	0.882	0.887
$M3^{20sec}$	**0.945**	**0.934**	0.039	0.074	0.437	0.513	**0.936**	0.307	0.442	0.776	0.800	**0.936**	0.404	0.514	0.778	0.801
LHS: IV, σ^2 =0.0200, κ =4.0																
$M1^{5min}$	**0.891**	**0.871**	0.185	0.253	0.813	0.811	**0.874**	0.535	0.590	0.829	0.828	**0.874**	0.540	0.592	0.829	0.828
$M1^{1min}$	**0.891**	**0.871**	0.053	0.095	0.686	0.732	**0.874**	0.300	0.411	0.776	0.793	**0.874**	0.330	0.428	0.776	0.793
$M1^{20sec}$	**0.891**	**0.871**	0.019	0.036	0.267	0.346	**0.874**	0.145	0.237	0.600	0.645	**0.874**	0.180	0.271	0.601	0.645
$M2^{5min}$	**0.586**	**0.445**	0.019	0.030	0.353	0.359	**0.460**	0.069	0.098	0.394	0.398	**0.460**	0.072	0.101	0.394	0.398
$M2^{1min}$	**0.586**	**0.445**	0.004	0.009	0.166	0.225	**0.460**	0.019	0.035	0.277	0.318	**0.460**	0.020	0.037	0.277	0.318
$M2^{20sec}$	**0.586**	**0.445**	0.002	0.003	0.029	0.044	**0.460**	0.007	0.013	0.096	0.130	**0.460**	0.007	0.014	0.099	0.133

	R^2_{best}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 1 Lag	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 15 Lags	R^2_{av}	R^2_{TS}	R^2_{iv}	R^2_{pl}	$R^2_{AC_1}$ 50 Lags	R^2_{av}	R^2_{TS}
$M3^{5min}$	**0.945**	**0.934**	0.222	0.304	0.885	0.883	**0.936**	0.667	0.720	0.904	0.903	**0.936**	0.683	0.728	0.904	0.903
$M3^{1min}$	**0.945**	**0.934**	0.063	0.114	0.755	0.798	**0.936**	0.407	0.536	0.864	0.876	**0.936**	0.487	0.584	0.864	0.876
$M3^{20sec}$	**0.945**	**0.934**	0.023	0.044	0.310	0.395	**0.936**	0.207	0.327	0.724	0.762	**0.936**	0.307	0.422	0.730	0.764
LHS: IV, σ^2 =0.0250, κ =4.0																
$M1^{5min}$	**0.891**	**0.871**	0.133	0.195	0.808	0.809	**0.874**	0.474	0.544	0.826	0.826	**0.874**	0.484	0.548	0.826	0.826
$M1^{1min}$	**0.891**	**0.871**	0.035	0.064	0.617	0.687	**0.874**	0.230	0.337	0.752	0.777	**0.874**	0.265	0.362	0.752	0.777
$M1^{20sec}$	**0.891**	**0.871**	0.012	0.024	0.193	0.264	**0.874**	0.101	0.174	0.542	0.598	**0.874**	0.131	0.210	0.546	0.600
$M2^{5min}$	**0.586**	**0.445**	0.013	0.021	0.342	0.353	**0.460**	0.049	0.075	0.388	0.394	**0.460**	0.052	0.078	0.388	0.394
$M2^{1min}$	**0.586**	**0.445**	0.003	0.006	0.124	0.180	**0.460**	0.013	0.023	0.240	0.287	**0.460**	0.014	0.025	0.241	0.288
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.002	0.019	0.030	**0.460**	0.004	0.009	0.069	0.098	**0.460**	0.005	0.009	0.072	0.101
$M3^{5min}$	**0.945**	**0.934**	0.160	0.235	0.881	0.880	**0.936**	0.606	0.677	0.902	0.902	**0.936**	0.636	0.691	0.902	0.902
$M3^{1min}$	**0.945**	**0.934**	0.042	0.077	0.685	0.754	**0.936**	0.319	0.451	0.846	0.864	**0.936**	0.414	0.521	0.846	0.864
$M3^{20sec}$	**0.945**	**0.934**	0.015	0.029	0.226	0.306	**0.936**	0.146	0.246	0.670	0.722	**0.936**	0.236	0.347	0.686	0.728
LHS: IV, σ^2 =0.0300, κ =4.0																
$M1^{5min}$	**0.891**	**0.871**	0.100	0.153	0.803	0.805	**0.874**	0.419	0.500	0.824	0.825	**0.874**	0.435	0.507	0.824	0.825
$M1^{1min}$	**0.891**	**0.871**	0.025	0.046	0.550	0.640	**0.874**	0.179	0.277	0.728	0.760	**0.874**	0.215	0.309	0.728	0.760
$M1^{20sec}$	**0.891**	**0.871**	0.009	0.017	0.144	0.205	**0.874**	0.074	0.131	0.489	0.553	**0.874**	0.099	0.165	0.497	0.557
$M2^{5min}$	**0.586**	**0.445**	0.009	0.015	0.331	0.346	**0.460**	0.036	0.058	0.381	0.390	**0.460**	0.039	0.061	0.381	0.390
$M2^{1min}$	**0.586**	**0.445**	0.002	0.004	0.095	0.145	**0.460**	0.009	0.017	0.208	0.259	**0.460**	0.010	0.018	0.210	0.260
$M2^{20sec}$	**0.586**	**0.445**	0.001	0.001	0.013	0.021	**0.460**	0.003	0.006	0.051	0.075	**0.460**	0.003	0.007	0.054	0.078
$M3^{5min}$	**0.945**	**0.934**	0.120	0.185	0.875	0.877	**0.936**	0.547	0.634	0.900	0.901	**0.936**	0.591	0.657	0.900	0.901
$M3^{1min}$	**0.945**	**0.934**	0.030	0.056	0.615	0.706	**0.936**	0.252	0.379	0.828	0.851	**0.936**	0.353	0.465	0.828	0.852
$M3^{20sec}$	**0.945**	**0.934**	0.010	0.020	0.169	0.239	**0.936**	0.108	0.189	0.617	0.681	**0.936**	0.184	0.286	0.644	0.694

Table B-2: R^2 Comparison of MIDAS Models for the Individual DJIA Stocks, Three-Year Subsample

Each entry in the table corresponds to the R^2 for the different models (Section 2) and the different return sampling frequencies. The regressions are run on a weekly (5 days) data sampling scheme. The names of the variables are consistent with the section describing realized volatility estimators. To preserve the table format, RV_{NWAC} is replaced by RV_{NW}. Every column in the panel corresponds to the explanatory power of the different left-hand side variables for the same right-hand side variable. The first panel contains results for the regressions constructed exclusively using one-minutes returns, the second contains results for the five-minutes returns.

	One-minute returns						Five-minute returns					
	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
					Stock: AA							
RV	**0.757**	0.640	**0.764**	**0.759**	0.716	**0.760**	0.622	0.579	0.630	**0.655**	0.613	**0.656**
RV_{AC1}	0.645	**0.668**	0.604	0.648	**0.672**	0.646	0.536	0.516	**0.566**	**0.572**	0.538	**0.573**
RV_{TS}	**0.765**	0.649	**0.771**	**0.767**	0.725	**0.768**	0.614	0.573	0.623	**0.653**	0.613	**0.654**
RV_{TSd}	**0.724**	0.684	0.700	**0.726**	**0.724**	**0.726**	0.560	0.529	0.551	**0.602**	0.571	**0.603**
$\overline{RV}$	**0.765**	0.646	**0.773**	**0.767**	0.723	**0.769**	0.615	0.573	0.625	**0.653**	0.613	**0.654**
					Stock: AXP							
RV	**0.708**	0.679	**0.707**	**0.707**	0.696	**0.707**	0.605	0.563	0.610	0.609	0.588	0.609
RV_{AC1}	**0.658**	**0.657**	0.646	**0.657**	**0.656**	**0.656**	**0.563**	0.516	0.560	**0.566**	0.548	**0.567**
RV_{TS}	**0.707**	0.679	**0.705**	**0.706**	0.695	**0.706**	0.627	0.583	0.628	**0.630**	0.609	**0.631**
RV_{TSd}	**0.690**	0.672	0.678	**0.688**	**0.687**	**0.688**	**0.597**	0.555	0.585	**0.600**	0.584	**0.600**
$\overline{RV}$	**0.708**	0.679	**0.707**	**0.707**	0.696	**0.707**	0.628	0.583	0.629	**0.631**	0.609	**0.631**
					Stock: BA							
RV	**0.685**	0.635	0.674	**0.685**	0.675	**0.685**	**0.623**	0.515	0.552	0.608	0.572	0.608
RV_{AC1}	0.593	**0.626**	0.559	0.599	**0.620**	0.597	**0.494**	0.426	0.394	0.480	0.473	0.480
RV_{TS}	**0.686**	0.641	0.674	**0.688**	**0.680**	**0.688**	**0.615**	0.504	0.534	0.599	0.566	0.599
RV_{TSd}	0.656	0.646	0.627	0.660	**0.671**	0.659	**0.568**	0.481	0.454	0.553	0.540	0.553
$\overline{RV}$	**0.688**	0.640	0.676	**0.689**	**0.680**	**0.689**	**0.615**	0.504	0.535	0.599	0.566	0.600
					Stock: C							
RV	0.563	0.560	0.550	0.556	0.554	0.556	0.568	0.487	0.462	0.535	0.553	0.535
RV_{AC1}	0.521	0.532	0.501	0.512	0.515	0.512	**0.499**	0.424	0.379	0.462	0.487	0.462
RV_{TS}	0.571	0.566	0.557	0.563	0.561	0.564	**0.578**	0.495	0.471	0.545	0.564	0.545
RV_{TSd}	0.551	0.553	0.528	0.543	0.548	0.542	**0.547**	0.470	0.429	0.514	0.537	0.514
$\overline{RV}$	0.574	0.568	0.561	0.566	0.563	0.566	**0.579**	0.496	0.473	0.546	0.565	0.546
					Stock: CAT							
RV	**0.815**	0.722	**0.815**	**0.816**	0.789	**0.817**	**0.681**	0.646	0.620	**0.682**	0.664	**0.683**
RV_{AC1}	0.663	**0.700**	0.620	0.667	**0.694**	0.665	**0.580**	0.569	0.505	**0.581**	**0.578**	**0.581**
RV_{TS}	**0.813**	0.722	**0.811**	**0.813**	0.787	**0.814**	**0.675**	0.642	0.618	**0.676**	0.656	**0.676**
RV_{TSd}	**0.762**	0.729	0.738	**0.765**	**0.766**	**0.764**	**0.611**	0.591	0.528	**0.612**	**0.607**	**0.612**
$\overline{RV}$	**0.814**	0.721	**0.813**	**0.815**	0.788	**0.816**	**0.676**	0.643	0.620	**0.676**	0.656	**0.677**

Three-Year Subsample (cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: DD						
RV	**0.852**	0.758	**0.848**	**0.856**	0.809	**0.856**	**0.765**	0.690	0.676	0.759	0.727	**0.760**
RV_{AC1}	0.725	**0.781**	0.663	0.729	0.763	0.725	**0.693**	0.620	0.581	0.683	0.663	0.683
RV_{TS}	**0.847**	0.754	**0.844**	**0.852**	0.805	**0.852**	**0.775**	0.691	0.681	**0.773**	0.742	**0.773**
RV_{TSd}	0.796	0.794	0.750	**0.800**	**0.807**	**0.798**	**0.728**	0.653	0.601	**0.730**	0.713	**0.730**
$\overline{RV}$	**0.848**	0.750	**0.847**	**0.852**	0.803	**0.853**	**0.775**	0.692	0.683	**0.773**	0.742	**0.773**
						Stock: DIS						
RV	**0.785**	0.732	**0.781**	**0.787**	0.758	**0.788**	0.672	0.637	**0.690**	**0.693**	0.642	**0.694**
RV_{AC1}	0.698	**0.729**	0.669	0.699	0.704	0.699	0.567	0.577	**0.594**	**0.586**	0.544	**0.587**
RV_{TS}	**0.784**	0.733	**0.778**	**0.784**	0.755	**0.785**	0.660	0.628	**0.679**	**0.683**	0.633	**0.684**
RV_{TSd}	**0.752**	**0.747**	0.724	**0.754**	**0.757**	**0.754**	0.609	0.599	0.618	**0.633**	0.592	**0.634**
$\overline{RV}$	**0.785**	0.733	**0.780**	**0.785**	0.755	**0.786**	0.661	0.628	**0.681**	**0.684**	0.633	**0.685**
						Stock: EK						
RV	**0.566**	0.539	**0.569**	**0.566**	0.548	**0.567**	**0.491**	0.462	0.467	**0.492**	0.474	**0.492**
RV_{AC1}	0.503	**0.529**	0.487	0.507	0.512	0.507	**0.362**	0.343	0.342	**0.357**	0.347	**0.357**
RV_{TS}	**0.550**	0.526	**0.551**	**0.551**	0.535	**0.551**	**0.482**	0.448	0.458	**0.481**	0.464	**0.481**
RV_{TSd}	**0.528**	**0.532**	0.516	**0.530**	**0.528**	**0.530**	**0.447**	0.421	0.410	**0.441**	0.429	**0.441**
$\overline{RV}$	**0.550**	0.525	**0.552**	**0.551**	0.534	**0.551**	**0.482**	0.448	0.459	**0.481**	0.464	**0.481**
						Stock: GE						
RV	**0.726**	0.657	**0.727**	**0.730**	0.695	**0.731**	0.601	0.548	0.598	0.619	0.598	0.619
RV_{AC1}	0.623	0.624	0.594	**0.635**	**0.644**	0.633	0.504	0.469	0.490	0.522	0.509	0.522
RV_{TS}	**0.716**	0.653	**0.714**	**0.721**	0.690	**0.722**	0.590	0.537	0.581	0.609	0.590	0.609
RV_{TSd}	0.665	0.643	0.630	**0.675**	**0.683**	0.672	0.563	0.513	0.532	**0.586**	0.571	**0.586**
$\overline{RV}$	**0.719**	0.652	**0.721**	**0.724**	0.689	**0.726**	0.592	0.538	0.584	0.610	0.590	0.610
						Stock: GM						
RV	**0.731**	0.691	**0.735**	**0.730**	0.719	**0.730**	0.600	0.615	0.621	0.610	0.596	0.610
RV_{AC1}	**0.638**	0.619	**0.641**	**0.638**	0.629	**0.638**	0.541	0.560	0.548	0.553	0.543	0.553
RV_{TS}	**0.729**	0.688	**0.733**	**0.727**	0.716	**0.728**	0.607	0.625	0.625	0.617	0.604	0.617
RV_{TSd}	**0.703**	0.665	**0.705**	**0.702**	0.694	**0.702**	0.565	0.588	0.571	0.577	0.570	0.577
$\overline{RV}$	**0.730**	0.690	**0.734**	**0.728**	0.718	**0.729**	0.607	0.625	0.626	0.618	0.605	0.618

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Three-Year Subsample (cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: HD						
RV	**0.774**	0.732	**0.765**	**0.768**	0.737	**0.769**	0.701	0.640	0.674	0.693	0.677	0.694
RV_{AC1}	**0.707**	**0.712**	0.668	**0.704**	**0.707**	**0.702**	0.614	0.563	0.584	0.600	0.589	0.601
RV_{TS}	**0.773**	0.735	0.760	**0.767**	0.739	**0.768**	0.692	0.629	0.661	0.685	0.671	0.686
RV_{TSd}	**0.737**	**0.730**	0.697	**0.733**	**0.737**	**0.732**	**0.663**	0.604	0.621	0.658	0.647	0.658
$\overline{RV}$	**0.775**	0.733	0.765	**0.768**	0.738	**0.769**	0.692	0.630	0.663	0.686	0.672	0.686
						Stock: HON						
RV	**0.513**	0.474	**0.511**	**0.508**	0.492	**0.509**	0.427	0.443	0.429	0.449	0.441	0.449
RV_{AC1}	**0.468**	**0.466**	0.444	**0.462**	**0.466**	**0.461**	0.396	0.411	0.391	0.418	0.413	0.418
RV_{TS}	**0.518**	0.480	**0.515**	**0.513**	0.498	**0.513**	0.447	0.462	0.444	0.471	0.464	0.471
RV_{TSd}	**0.480**	0.461	0.465	**0.475**	**0.472**	**0.475**	0.422	0.443	0.408	0.447	0.444	0.447
$\overline{RV}$	**0.520**	0.481	**0.517**	**0.515**	0.499	**0.515**	0.447	0.463	0.445	0.472	0.464	0.472
						Stock: HPQ						
RV	0.615	0.583	0.636	0.627	0.608	0.628	0.537	0.445	0.553	0.526	0.508	0.527
RV_{AC1}	0.556	0.537	0.565	0.567	0.560	0.567	0.453	0.403	0.450	0.444	0.434	0.444
RV_{TS}	0.628	0.596	0.647	0.639	0.620	0.639	0.538	0.443	0.562	0.529	0.508	0.529
RV_{TSd}	0.590	0.565	0.601	0.601	0.591	0.601	0.495	0.409	0.513	0.486	0.468	0.487
$\overline{RV}$	0.630	0.597	0.649	0.640	0.621	0.641	0.538	0.443	0.563	0.529	0.508	0.530
						Stock: IBM						
RV	0.728	0.729	0.727	0.726	0.721	0.727	0.615	0.594	0.634	0.630	0.622	0.631
RV_{AC1}	0.666	**0.680**	0.661	0.663	0.660	0.663	0.546	0.527	0.561	0.558	0.551	0.558
RV_{TS}	0.731	0.731	0.729	0.729	0.724	0.729	0.627	0.609	0.642	0.643	0.635	0.643
RV_{TSd}	0.708	0.713	0.703	0.706	0.704	0.706	0.591	0.575	0.603	0.606	0.600	0.607
$\overline{RV}$	0.732	0.733	0.731	0.730	0.726	0.731	0.628	0.610	0.643	0.644	0.636	0.644
						Stock: INTC						
RV	0.751	0.723	0.747	0.741	0.731	0.752	0.716	0.710	0.669	0.716	0.715	0.718
RV_{AC1}	0.664	**0.697**	0.643	0.654	0.658	0.668	0.689	0.687	0.633	0.688	0.688	**0.691**
RV_{TS}	0.737	0.712	0.721	0.737	0.730	0.736	0.711	0.704	0.662	0.710	0.710	0.712
RV_{TSd}	0.718	0.709	0.693	0.720	0.719	0.717	0.707	0.702	0.653	0.707	0.707	0.708
$\overline{RV}$	0.755	0.728	0.751	0.742	0.733	0.756	0.714	0.708	0.668	0.714	0.713	0.716

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Three-Year Subsample (cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: IP						
RV	**0.797**	0.728	**0.804**	**0.800**	0.779	**0.801**	0.726	**0.755**	0.724	**0.748**	0.745	**0.749**
RV_{AC1}	0.710	0.705	0.692	0.715	**0.726**	0.714	0.663	**0.697**	0.674	0.673	0.669	0.673
RV_{TS}	**0.805**	0.735	**0.810**	**0.808**	0.787	**0.808**	0.719	**0.740**	0.717	**0.735**	0.729	**0.735**
RV_{TSd}	**0.767**	0.732	0.759	**0.771**	**0.768**	**0.770**	0.677	**0.706**	0.660	0.691	0.690	0.691
$\overline{RV}$	**0.806**	0.734	**0.812**	**0.809**	0.787	**0.809**	0.719	**0.740**	0.719	**0.736**	0.729	**0.736**
						Stock: JNJ						
RV	**0.802**	0.748	**0.795**	**0.793**	0.772	**0.794**	**0.721**	0.658	**0.712**	**0.719**	0.692	**0.719**
RV_{AC1}	**0.768**	0.753	0.749	**0.764**	**0.758**	**0.764**	**0.673**	0.624	0.651	**0.674**	0.651	**0.674**
RV_{TS}	**0.806**	0.754	**0.799**	**0.797**	0.778	**0.799**	**0.728**	0.661	**0.725**	**0.728**	0.698	**0.728**
RV_{TSd}	**0.797**	0.764	0.774	**0.790**	0.784	**0.790**	**0.703**	0.645	0.675	**0.705**	0.682	**0.705**
$\overline{RV}$	**0.807**	0.753	**0.800**	**0.797**	0.777	**0.799**	**0.728**	0.661	**0.726**	**0.728**	0.698	**0.728**
						Stock: JPM						
RV	0.476	0.443	**0.524**	0.503	0.478	0.504	0.321	0.213	**0.469**	0.391	0.356	0.391
RV_{AC1}	0.461	0.443	**0.505**	0.491	0.471	0.491	0.215	0.141	**0.356**	0.283	0.256	0.284
RV_{TS}	0.474	0.442	**0.522**	0.501	0.476	0.503	0.314	0.212	**0.459**	0.382	0.348	0.383
RV_{TSd}	0.471	0.445	**0.517**	0.499	0.477	0.500	0.275	0.178	**0.416**	0.345	0.314	0.345
$\overline{RV}$	0.476	0.444	**0.524**	0.503	0.478	0.504	0.314	0.212	**0.459**	0.383	0.349	0.383
						Stock: KO						
RV	**0.815**	0.728	**0.807**	**0.809**	0.766	**0.811**	0.728	0.721	0.695	**0.746**	0.736	**0.746**
RV_{AC1}	0.717	**0.730**	0.667	0.715	**0.728**	0.714	0.648	**0.660**	0.647	**0.662**	**0.654**	**0.663**
RV_{TS}	**0.815**	0.733	0.804	**0.809**	0.770	**0.811**	0.726	0.721	0.691	**0.743**	0.733	**0.743**
RV_{TSd}	**0.776**	0.758	0.730	**0.774**	**0.777**	**0.773**	0.685	0.692	0.634	**0.702**	**0.702**	**0.702**
$\overline{RV}$	**0.816**	0.730	**0.807**	**0.810**	0.768	**0.812**	0.726	0.721	0.692	**0.743**	0.733	**0.743**
						Stock: MCD						
RV	0.688	0.481	**0.722**	0.707	0.628	0.709	0.484	0.319	0.451	0.464	0.413	0.465
RV_{AC1}	0.459	0.474	0.443	0.496	**0.527**	0.494	0.338	0.270	0.295	0.334	0.300	0.334
RV_{TS}	0.686	0.489	**0.716**	0.704	0.630	**0.706**	0.483	0.328	0.456	0.466	0.412	0.467
RV_{TSd}	0.589	0.515	0.590	0.620	0.610	0.620	0.410	0.275	0.336	0.397	0.363	0.397
$\overline{RV}$	0.689	0.487	**0.720**	0.707	0.630	0.709	0.484	0.329	0.460	0.467	0.412	0.468

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Three-Year Subsample (cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: MMM						
RV	**0.715**	**0.707**	**0.708**	**0.714**	**0.715**	**0.714**	**0.664**	0.644	0.641	**0.659**	0.650	**0.659**
RV_{AC1}	**0.690**	**0.699**	0.678	0.687	**0.692**	0.687	**0.584**	**0.578**	0.551	**0.576**	**0.576**	**0.576**
RV_{TS}	**0.719**	**0.711**	**0.711**	**0.718**	**0.719**	**0.717**	**0.664**	0.642	0.644	**0.663**	0.652	**0.663**
RV_{TSd}	**0.711**	**0.706**	0.701	**0.709**	**0.713**	**0.709**	**0.618**	0.603	0.589	**0.614**	0.606	**0.614**
$\overline{RV}$	**0.719**	**0.711**	**0.712**	**0.718**	**0.720**	**0.718**	**0.665**	0.642	0.644	**0.663**	0.652	**0.663**
						Stock: MO						
RV	0.686	0.493	**0.717**	0.681	0.580	0.684	0.409	0.419	**0.464**	0.421	0.393	0.423
RV_{AC1}	0.425	0.343	0.423	0.418	0.374	0.420	0.267	0.267	0.328	0.270	0.251	0.271
RV_{TS}	0.672	0.489	**0.701**	0.667	0.572	0.671	0.405	0.409	**0.478**	0.414	0.384	0.416
RV_{TSd}	0.536	0.419	0.546	0.532	0.472	0.535	0.339	0.345	0.387	0.349	0.327	0.351
$\overline{RV}$	0.677	0.490	**0.707**	0.672	0.575	0.676	0.407	0.411	**0.482**	0.416	0.386	0.418
						Stock: MRK						
RV	**0.626**	0.589	**0.622**	**0.620**	0.605	**0.621**	0.528	0.469	**0.571**	0.539	0.512	0.540
RV_{AC1}	**0.620**	0.598	0.602	**0.613**	**0.610**	**0.613**	0.472	0.420	**0.518**	0.479	0.455	0.479
RV_{TS}	**0.625**	0.587	**0.619**	**0.619**	0.605	**0.619**	0.554	0.484	**0.601**	0.565	0.535	0.566
RV_{TSd}	**0.614**	0.591	0.592	**0.607**	**0.608**	**0.607**	0.541	0.458	**0.580**	0.553	0.527	0.553
$\overline{RV}$	**0.625**	0.587	**0.621**	**0.619**	0.604	**0.620**	0.554	0.485	**0.602**	0.565	0.535	0.566
						Stock: MSFT						
RV	**0.735**	0.701	**0.737**	0.719	0.705	0.727	**0.666**	0.624	**0.664**	**0.659**	**0.658**	**0.660**
RV_{AC1}	**0.677**	**0.672**	**0.680**	0.655	0.647	**0.672**	**0.650**	0.626	0.622	0.633	0.633	0.636
RV_{TS}	**0.725**	0.688	**0.720**	0.714	0.702	0.715	**0.685**	0.645	**0.678**	**0.678**	**0.677**	**0.679**
RV_{TSd}	**0.713**	0.683	**0.704**	**0.704**	0.695	**0.704**	**0.682**	0.643	**0.672**	**0.675**	**0.674**	**0.677**
$\overline{RV}$	**0.733**	0.705	**0.738**	0.716	0.703	0.727	**0.687**	0.648	**0.680**	**0.680**	**0.679**	**0.682**
						Stock: PG						
RV	0.802	0.739	**0.818**	0.807	0.771	**0.808**	**0.683**	0.636	**0.688**	0.667	0.641	0.667
RV_{AC1}	**0.702**	0.691	0.694	**0.709**	**0.701**	**0.709**	**0.607**	0.569	**0.603**	0.585	0.564	0.586
RV_{TS}	0.800	0.737	**0.815**	0.805	0.770	**0.806**	**0.692**	0.645	**0.695**	0.675	0.648	0.675
RV_{TSd}	**0.755**	0.721	**0.753**	**0.762**	0.747	**0.762**	**0.638**	0.591	0.623	0.616	0.592	0.617
$\overline{RV}$	0.802	0.738	**0.818**	0.807	0.770	**0.808**	**0.693**	0.646	**0.697**	0.676	0.648	0.676

Table continued on next page ...

Three-Year Subsample (end)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: SBC						
RV	**0.817**	0.798	**0.808**	**0.817**	0.807	**0.817**	0.719	0.672	0.684	**0.732**	0.720	**0.732**
RV_{AC1}	0.752	**0.778**	0.719	0.752	0.764	0.751	**0.667**	0.632	0.603	**0.674**	**0.674**	**0.674**
RV_{TS}	**0.818**	0.800	0.807	**0.818**	**0.809**	**0.818**	0.738	0.693	0.698	**0.750**	0.739	**0.750**
RV_{TSd}	**0.796**	**0.802**	0.768	**0.797**	**0.806**	**0.796**	0.691	0.658	0.628	**0.703**	**0.702**	**0.703**
$\overline{RV}$	**0.819**	0.800	0.809	**0.818**	0.808	**0.818**	0.738	0.693	0.699	**0.751**	0.739	**0.751**
						Stock: T						
RV	0.727	0.557	**0.743**	0.724	0.601	0.731	0.543	0.447	0.509	0.539	0.499	0.541
RV_{AC1}	0.518	0.544	0.450	0.530	**0.566**	0.522	0.458	0.399	0.350	**0.461**	0.447	0.460
RV_{TS}	**0.719**	0.570	**0.723**	**0.719**	0.613	**0.723**	0.543	0.446	0.494	0.542	0.505	0.543
RV_{TSd}	0.577	0.578	0.511	0.589	**0.608**	0.582	0.495	0.411	0.412	0.499	0.476	0.499
$\overline{RV}$	0.725	0.561	**0.737**	0.723	0.605	**0.729**	0.545	0.447	0.502	0.543	0.505	0.544
						Stock: UTX						
RV	0.521	0.528	0.518	0.520	0.520	0.520	0.510	0.512	0.480	0.518	0.530	0.518
RV_{AC1}	0.498	**0.517**	0.491	0.497	0.501	0.497	0.434	0.444	0.398	0.442	0.459	0.442
RV_{TS}	0.517	0.525	0.514	0.517	0.517	0.517	0.506	0.503	0.478	0.513	0.522	0.513
RV_{TSd}	0.506	0.517	0.501	0.506	0.508	0.506	0.477	0.478	0.442	0.482	0.495	0.482
$\overline{RV}$	0.518	0.525	0.515	0.517	0.517	0.517	0.506	0.503	0.478	0.513	0.522	0.513
						Stock: WMT						
RV	**0.784**	0.759	**0.785**	**0.784**	0.754	**0.785**	**0.686**	0.678	0.675	**0.686**	0.680	**0.686**
RV_{AC1}	0.707	**0.717**	0.688	**0.711**	0.704	**0.709**	0.602	**0.613**	**0.608**	0.598	0.595	0.598
RV_{TS}	**0.783**	0.761	**0.781**	**0.784**	0.756	**0.785**	**0.696**	**0.689**	0.682	**0.696**	**0.691**	**0.697**
RV_{TSd}	**0.738**	**0.746**	0.710	**0.742**	**0.743**	**0.740**	**0.652**	**0.651**	0.631	**0.651**	**0.650**	**0.652**
$\overline{RV}$	**0.785**	0.760	**0.786**	**0.786**	0.756	**0.787**	**0.697**	**0.690**	0.684	**0.697**	**0.692**	**0.698**
						Stock: XOM						
RV	**0.771**	0.698	**0.770**	**0.768**	0.756	**0.768**	**0.659**	0.564	0.630	0.638	0.602	0.638
RV_{AC1}	**0.689**	0.666	**0.680**	**0.685**	**0.681**	**0.686**	**0.580**	0.522	0.512	0.562	0.547	0.563
RV_{TS}	**0.775**	0.704	**0.774**	**0.773**	0.761	**0.773**	**0.664**	0.566	0.632	0.643	0.607	0.643
RV_{TSd}	**0.764**	0.703	**0.756**	**0.761**	**0.756**	**0.761**	**0.608**	0.539	0.554	0.590	0.568	0.590
$\overline{RV}$	**0.776**	0.704	**0.775**	**0.773**	0.761	**0.773**	**0.664**	0.567	0.633	0.643	0.607	0.644

Table B-3: R^2 Comparison of MIDAS Models for the Individual DJIA Stocks, Full Sample

Each entry in the table corresponds to the R^2 for the different models (Section 2) and the different return sampling frequencies. The regressions are run on a weekly (5 days) data sampling scheme. The names of the variables are consistent with the section describing realized volatility estimators. To preserve the table format, RV_{NWAC} is replaced by RV_{NW}. Every column in the panel corresponds to the explanatory power of the different left-hand side variables for the same right-hand side variable. The first panel contains results for the regressions constructed exclusively using one-minutes returns, the second contains results for the five-minutes returns.

	One-minute returns						Five-minute returns					
	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
Stock: AA												
RV	**0.721**	0.576	**0.720**	**0.729**	0.682	**0.730**	0.577	0.536	0.549	**0.615**	0.567	**0.616**
RV_{AC1}	0.548	**0.623**	0.484	0.560	**0.619**	0.557	0.507	0.480	0.465	**0.541**	0.507	**0.541**
RV_{TS}	**0.722**	0.580	0.721	**0.731**	0.684	**0.731**	0.572	0.520	0.533	**0.612**	0.561	**0.612**
RV_{TSd}	0.649	0.621	0.608	0.660	**0.674**	0.658	0.524	0.496	0.456	**0.571**	0.533	**0.571**
$\overline{RV}$	**0.724**	0.577	**0.725**	**0.732**	0.683	**0.733**	0.573	0.521	0.536	**0.612**	0.562	**0.613**
Stock: AXP												
RV	**0.524**	0.504	0.516	**0.522**	0.515	**0.523**	0.465	0.441	0.456	**0.488**	0.473	**0.488**
RV_{AC1}	0.486	**0.506**	0.459	0.484	0.494	0.483	0.401	0.378	0.387	**0.422**	0.410	**0.422**
RV_{TS}	**0.528**	0.509	**0.519**	**0.526**	**0.519**	**0.526**	0.476	0.452	0.463	**0.501**	0.487	**0.501**
RV_{TSd}	**0.510**	**0.512**	0.487	**0.508**	**0.515**	**0.508**	0.462	0.447	0.436	**0.487**	**0.478**	**0.487**
$\overline{RV}$	**0.529**	0.509	**0.521**	**0.527**	**0.519**	**0.527**	0.476	0.452	0.464	**0.501**	0.487	**0.501**
Stock: BA												
RV	**0.590**	0.526	**0.580**	**0.588**	0.574	**0.589**	**0.500**	0.397	0.468	**0.495**	0.440	**0.495**
RV_{AC1}	0.508	**0.533**	0.467	0.511	**0.534**	0.509	**0.365**	0.294	0.303	0.349	0.323	0.350
RV_{TS}	**0.587**	0.530	0.574	**0.586**	0.575	**0.586**	**0.493**	0.381	0.447	**0.483**	0.432	**0.483**
RV_{TSd}	0.556	0.541	0.523	0.558	**0.569**	0.556	**0.465**	0.369	0.386	0.453	0.420	0.453
$\overline{RV}$	**0.589**	0.529	0.577	**0.587**	0.575	**0.587**	**0.493**	0.381	0.448	**0.483**	0.432	**0.484**
Stock: C												
RV	0.396	0.405	0.370	0.386	0.392	0.385	0.438	0.362	0.293	0.398	0.428	0.398
RV_{AC1}	0.363	0.385	0.331	0.352	0.363	0.351	0.390	0.318	0.243	0.348	0.381	0.348
RV_{TS}	0.404	0.410	0.377	0.393	0.399	0.392	0.451	0.372	0.305	0.412	0.442	0.412
RV_{TSd}	0.393	0.406	0.358	0.382	0.395	0.381	0.426	0.352	0.273	0.387	0.421	0.387
$\overline{RV}$	0.406	0.411	0.380	0.395	0.400	0.394	0.451	0.372	0.306	0.412	0.442	0.412
Stock: CAT												
RV	**0.749**	0.593	**0.748**	**0.747**	0.706	**0.748**	**0.568**	0.530	0.488	**0.568**	0.551	**0.569**
RV_{AC1}	0.537	**0.577**	0.485	0.538	**0.578**	0.536	**0.456**	**0.449**	0.359	**0.455**	**0.457**	**0.455**
RV_{TS}	**0.745**	0.592	**0.742**	**0.743**	0.703	**0.744**	**0.558**	0.522	0.485	**0.558**	0.538	**0.558**
RV_{TSd}	**0.675**	0.611	0.642	**0.675**	**0.675**	**0.674**	**0.490**	0.472	0.396	**0.490**	**0.489**	**0.490**
$\overline{RV}$	**0.747**	0.590	**0.746**	**0.745**	0.704	**0.746**	**0.559**	0.523	0.487	**0.558**	0.539	**0.559**

Full Sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: DD						
RV	**0.763**	0.613	**0.762**	**0.768**	0.693	**0.769**	**0.623**	0.521	0.514	**0.620**	0.583	**0.620**
RV_{AC1}	0.578	**0.656**	0.502	0.581	0.631	0.576	0.541	0.445	0.408	0.531	0.512	0.531
RV_{TS}	**0.755**	0.606	**0.757**	**0.761**	0.685	**0.762**	**0.647**	0.536	0.529	**0.649**	0.616	**0.649**
RV_{TSd}	0.680	0.674	0.622	**0.684**	**0.693**	0.681	**0.590**	0.494	0.430	**0.598**	0.582	**0.597**
$\overline{RV}$	**0.756**	0.600	**0.762**	**0.762**	0.682	**0.764**	**0.647**	0.536	0.532	**0.649**	0.615	**0.650**
						Stock: DIS						
RV	**0.700**	0.647	0.686	**0.702**	0.672	**0.703**	0.571	0.505	0.578	**0.593**	0.529	**0.594**
RV_{AC1}	0.615	**0.666**	0.564	0.615	0.634	0.614	0.470	0.455	**0.499**	0.484	0.428	0.485
RV_{TS}	**0.702**	0.650	0.683	**0.700**	0.671	**0.701**	0.565	0.500	0.576	**0.589**	0.525	**0.590**
RV_{TSd}	0.675	**0.685**	0.628	0.677	**0.688**	0.676	0.520	0.478	0.521	**0.541**	0.488	**0.542**
$\overline{RV}$	**0.703**	0.649	0.685	**0.701**	0.671	**0.702**	0.566	0.500	0.578	**0.590**	0.525	**0.591**
						Stock: EK						
RV	**0.565**	0.547	0.553	**0.562**	0.552	**0.563**	**0.506**	0.495	0.444	0.502	0.484	0.502
RV_{AC1}	0.503	**0.544**	0.467	0.503	0.520	0.502	0.371	0.358	0.321	0.359	0.347	0.359
RV_{TS}	**0.542**	0.528	0.528	**0.539**	0.532	**0.540**	**0.494**	0.474	0.433	0.487	0.470	0.487
RV_{TSd}	0.527	**0.545**	0.498	0.526	0.535	0.526	**0.457**	0.441	0.381	0.441	0.430	0.441
$\overline{RV}$	**0.542**	0.527	0.529	**0.539**	0.531	**0.539**	**0.494**	0.474	0.434	0.487	0.470	0.487
						Stock: GE						
RV	0.538	0.463	0.534	**0.550**	0.523	**0.551**	0.422	0.363	0.397	**0.454**	0.439	**0.454**
RV_{AC1}	0.426	0.447	0.385	0.448	**0.480**	0.444	0.312	0.283	0.276	**0.343**	**0.338**	**0.343**
RV_{TS}	0.524	0.456	0.516	**0.537**	0.517	**0.538**	0.406	0.346	0.376	**0.440**	0.427	**0.440**
RV_{TSd}	0.473	0.460	0.427	0.493	**0.521**	0.488	0.386	0.333	0.331	**0.424**	**0.416**	**0.424**
$\overline{RV}$	0.529	0.454	0.526	**0.541**	0.514	**0.542**	0.407	0.346	0.379	**0.441**	0.427	**0.441**
						Stock: GM						
RV	0.660	0.606	0.664	0.657	0.644	0.657	0.504	0.522	0.544	0.512	0.494	0.513
RV_{AC1}	0.560	0.524	0.564	0.560	0.550	0.560	0.443	0.466	0.468	0.454	0.439	0.454
RV_{TS}	0.656	0.602	0.661	0.653	0.641	0.654	0.509	0.530	0.547	0.518	0.500	0.518
RV_{TSd}	0.628	0.578	0.630	0.626	0.616	0.626	0.463	0.489	0.491	0.473	0.461	0.473
$\overline{RV}$	0.657	0.603	0.662	0.655	0.642	0.655	0.509	0.531	0.548	0.518	0.500	0.519

Table continued on next page ...

Full Sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
Stock: HD												
RV	**0.664**	0.618	0.643	**0.655**	0.623	**0.656**	0.588	0.514	0.533	0.578	0.564	0.578
RV_{AC1}	0.587	**0.600**	0.527	0.583	**0.597**	0.580	0.483	0.427	0.428	0.467	0.459	0.467
RV_{TS}	**0.663**	0.622	0.638	**0.654**	0.627	**0.655**	0.578	0.503	0.521	0.570	0.558	0.570
RV_{TSd}	**0.624**	**0.625**	0.562	0.620	**0.634**	0.617	0.548	0.479	0.479	0.542	0.533	0.542
$\overline{RV}$	**0.665**	0.620	0.644	**0.656**	0.625	**0.657**	0.578	0.504	0.523	0.570	0.558	0.570
Stock: HON												
RV	**0.338**	0.311	0.321	0.327	0.321	0.327	0.278	**0.318**	0.224	0.307	0.309	0.307
RV_{AC1}	**0.319**	**0.325**	0.238	0.306	**0.320**	0.305	0.253	**0.287**	0.199	**0.281**	**0.285**	**0.281**
RV_{TS}	**0.348**	0.319	0.329	0.335	0.330	0.336	0.304	**0.344**	0.245	**0.335**	**0.338**	**0.335**
RV_{TSd}	**0.316**	**0.307**	0.285	0.304	**0.310**	0.303	0.290	**0.332**	0.227	0.320	**0.326**	0.320
$\overline{RV}$	**0.349**	0.319	0.331	0.337	0.330	0.337	0.304	**0.344**	0.246	**0.335**	**0.339**	**0.335**
Stock: HPQ												
RV	0.535	0.501	0.561	0.553	0.532	0.555	0.443	0.322	0.476	0.453	0.424	0.453
RV_{AC1}	0.479	0.473	0.484	0.495	0.495	0.496	0.352	0.279	0.371	0.361	0.342	0.361
RV_{TS}	0.538	0.506	0.561	0.554	0.535	0.556	0.455	0.330	0.497	0.466	0.435	0.467
RV_{TSd}	0.500	0.484	0.509	0.516	0.511	0.517	0.422	0.309	0.458	0.435	0.406	0.436
$\overline{RV}$	0.540	0.507	0.565	0.557	0.536	0.559	0.456	0.331	0.499	0.467	0.435	0.468
Stock: IBM												
RV	0.578	0.589	0.572	0.576	0.574	0.576	0.457	0.437	0.471	0.478	0.471	0.478
RV_{AC1}	0.510	**0.536**	0.499	0.505	0.506	0.506	0.388	0.370	0.396	0.403	0.398	0.403
RV_{TS}	0.582	0.594	0.575	0.580	0.580	0.580	0.472	0.454	0.480	0.493	0.487	0.493
RV_{TSd}	0.559	0.576	0.548	0.557	0.559	0.557	0.435	0.420	0.440	0.456	0.451	0.456
$\overline{RV}$	0.584	0.595	0.577	0.582	0.581	0.582	0.472	0.455	0.481	0.494	0.488	0.494
Stock: INTC												
RV	0.605	0.556	0.613	0.585	0.565	0.607	0.544	0.536	0.499	0.543	0.542	0.546
RV_{AC1}	0.474	**0.513**	0.463	0.455	0.453	0.479	0.511	0.511	0.456	0.509	0.509	**0.513**
RV_{TS}	0.579	0.532	0.572	0.574	0.557	0.578	0.536	0.528	0.490	0.535	0.533	0.538
RV_{TSd}	0.547	0.523	0.530	0.545	0.535	0.546	0.531	0.524	0.478	0.529	0.528	0.532
$\overline{RV}$	0.609	0.562	**0.619**	0.587	0.567	0.611	0.542	0.535	0.500	0.540	0.539	0.544

Table continued on next page ...

Full Sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
Stock: IP												
RV	0.686	0.587	**0.698**	**0.691**	0.660	**0.692**	0.609	**0.664**	0.599	0.639	0.643	0.639
RV_{AC1}	0.572	0.568	0.549	0.577	**0.592**	0.576	0.535	**0.588**	0.543	0.547	0.547	0.548
RV_{TS}	0.696	0.597	**0.707**	**0.701**	0.671	**0.702**	0.592	**0.636**	0.583	0.614	0.614	0.615
RV_{TSd}	**0.642**	0.594	0.634	**0.647**	**0.643**	**0.647**	0.547	**0.597**	0.518	0.564	0.570	0.565
$\overline{RV}$	0.698	0.596	**0.710**	**0.703**	0.671	**0.704**	0.593	**0.637**	0.585	0.615	0.614	0.615
Stock: JNJ												
RV	**0.772**	0.730	0.757	0.762	0.748	**0.763**	**0.730**	0.660	0.702	**0.724**	0.692	**0.724**
RV_{AC1}	**0.772**	0.756	0.739	**0.763**	**0.764**	**0.763**	**0.705**	0.650	0.664	**0.698**	0.677	**0.699**
RV_{TS}	**0.780**	0.739	0.764	0.770	0.757	**0.771**	**0.740**	0.661	0.719	**0.736**	0.700	**0.737**
RV_{TSd}	**0.779**	0.757	0.749	**0.771**	**0.771**	**0.771**	**0.723**	0.652	0.680	**0.720**	0.693	**0.720**
$\overline{RV}$	**0.780**	0.737	0.764	0.770	0.756	**0.771**	**0.740**	0.661	0.720	**0.736**	0.700	**0.737**
Stock: JPM												
RV	0.336	0.297	**0.393**	0.367	0.337	0.368	0.189	0.174	**0.349**	0.266	0.236	0.266
RV_{AC1}	0.320	0.298	**0.373**	0.354	0.332	0.355	0.121	0.122	**0.269**	0.192	0.167	0.193
RV_{TS}	0.334	0.296	**0.390**	0.365	0.335	0.366	0.184	0.170	**0.342**	0.260	0.230	0.260
RV_{TSd}	0.329	0.298	**0.382**	0.360	0.334	0.361	0.162	0.155	**0.313**	0.237	0.210	0.237
$\overline{RV}$	0.335	0.297	**0.392**	0.366	0.337	0.368	0.185	0.171	**0.342**	0.260	0.231	0.261
Stock: KO												
RV	**0.739**	0.623	0.727	0.728	0.669	0.731	0.651	0.644	0.597	**0.671**	**0.667**	**0.672**
RV_{AC1}	0.622	**0.649**	0.554	0.619	**0.641**	0.617	0.558	**0.575**	0.553	**0.574**	**0.568**	**0.575**
RV_{TS}	0.740	0.632	0.722	0.729	0.676	0.732	0.647	0.642	0.590	**0.665**	**0.661**	**0.666**
RV_{TSd}	**0.690**	0.678	0.624	**0.686**	**0.695**	0.684	0.605	0.615	0.534	**0.624**	**0.630**	**0.624**
$\overline{RV}$	0.741	0.627	0.727	0.730	0.673	0.733	0.647	0.642	0.592	**0.665**	**0.660**	**0.666**
Stock: MCD												
RV	0.554	0.357	**0.602**	0.584	0.486	0.587	**0.423**	0.213	0.308	0.396	0.369	0.396
RV_{AC1}	0.310	0.396	0.289	0.362	**0.420**	0.359	0.287	0.168	0.198	0.280	0.260	0.280
RV_{TS}	0.548	0.362	**0.590**	0.578	0.488	**0.581**	**0.416**	0.218	0.310	0.393	0.363	0.394
RV_{TSd}	0.431	0.410	0.430	0.478	0.484	0.476	**0.356**	0.192	0.216	0.340	0.325	0.340
$\overline{RV}$	0.552	0.359	**0.596**	0.582	0.487	0.584	**0.417**	0.218	0.314	0.394	0.364	0.395

Table continued on next page ...

Full Sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
Stock: MMM												
RV	**0.585**	0.577	0.571	**0.582**	**0.588**	**0.582**	**0.529**	0.506	0.492	**0.521**	0.515	**0.521**
RV_{AC1}	**0.560**	**0.569**	0.539	0.554	**0.564**	0.554	**0.439**	**0.435**	0.393	0.427	**0.432**	0.427
RV_{TS}	**0.591**	0.583	0.576	**0.588**	**0.594**	**0.587**	**0.531**	0.507	0.497	**0.528**	0.520	**0.528**
RV_{TSd}	**0.584**	**0.580**	0.567	**0.581**	**0.589**	**0.581**	**0.481**	0.467	0.440	**0.475**	**0.471**	**0.475**
$\overline{RV}$	**0.591**	0.583	0.576	**0.588**	**0.594**	**0.588**	**0.531**	0.507	0.497	**0.528**	0.520	**0.528**
Stock: MO												
RV	0.669	0.451	**0.705**	0.667	0.562	0.671	0.379	0.358	**0.447**	0.370	0.340	0.372
RV_{AC1}	0.377	0.277	0.389	0.372	0.317	0.374	0.246	0.224	**0.311**	0.235	0.214	0.237
RV_{TS}	0.662	0.450	**0.697**	0.660	0.558	0.663	0.375	0.347	**0.453**	0.363	0.331	0.365
RV_{TSd}	0.503	0.361	**0.528**	0.500	0.432	0.502	0.293	0.274	**0.352**	0.282	0.262	0.284
$\overline{RV}$	0.668	0.452	**0.703**	0.665	0.561	0.669	0.378	0.350	**0.457**	0.366	0.333	0.368
Stock: MRK												
RV	**0.563**	0.525	0.553	0.555	0.544	0.556	0.468	0.385	**0.509**	0.477	0.450	0.477
RV_{AC1}	**0.569**	0.545	0.544	**0.561**	**0.563**	**0.560**	0.409	0.335	**0.453**	0.414	0.390	0.415
RV_{TS}	**0.561**	0.522	0.550	0.553	0.544	0.554	0.498	0.398	**0.540**	0.505	0.475	0.505
RV_{TSd}	**0.558**	0.535	0.529	**0.550**	**0.555**	**0.549**	0.485	0.387	**0.522**	0.496	0.470	0.496
$\overline{RV}$	**0.561**	0.522	0.552	0.553	0.543	0.554	0.498	0.399	**0.541**	0.505	0.475	0.505
Stock: MSFT												
RV	**0.615**	0.572	**0.622**	0.594	0.574	0.605	**0.530**	0.484	**0.529**	**0.523**	**0.521**	**0.525**
RV_{AC1}	**0.544**	**0.542**	**0.551**	0.517	0.505	0.539	**0.520**	0.496	0.481	0.499	0.499	0.503
RV_{TS}	**0.603**	0.555	**0.598**	0.588	0.571	0.589	**0.557**	0.513	0.547	**0.550**	**0.549**	**0.552**
RV_{TSd}	**0.587**	0.549	0.577	0.574	0.562	0.575	**0.554**	0.511	0.540	**0.547**	**0.546**	**0.549**
$\overline{RV}$	**0.612**	0.576	**0.621**	0.589	0.570	0.604	**0.560**	0.517	0.549	**0.552**	**0.551**	**0.555**
Stock: PG												
RV	0.704	0.614	**0.727**	0.710	0.658	0.712	**0.560**	0.509	**0.557**	0.536	0.507	0.537
RV_{AC1}	0.571	0.562	0.558	**0.581**	**0.575**	**0.581**	**0.490**	0.451	**0.480**	0.461	0.438	0.462
RV_{TS}	0.699	0.611	**0.722**	0.706	0.656	0.708	**0.572**	0.522	**0.567**	0.547	0.517	0.548
RV_{TSd}	0.639	0.599	0.636	**0.649**	0.629	**0.649**	**0.516**	0.466	0.489	0.487	0.460	0.487
$\overline{RV}$	0.702	0.611	**0.725**	0.708	0.656	0.710	**0.573**	0.523	**0.569**	0.548	0.518	0.549

Table continued on next page ...

Full Sample (End)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: SBC						
RV	**0.784**	0.759	0.767	**0.783**	**0.775**	**0.783**	0.655	0.594	0.609	**0.676**	0.660	**0.676**
RV_{AC1}	0.710	**0.743**	0.661	0.708	0.730	0.707	0.602	0.560	0.521	**0.617**	**0.617**	**0.617**
RV_{TS}	**0.784**	0.761	0.765	**0.782**	**0.776**	**0.782**	0.682	0.622	0.629	**0.702**	0.686	**0.702**
RV_{TSd}	0.764	**0.772**	0.724	0.764	**0.778**	0.763	0.625	0.581	0.543	**0.646**	**0.643**	**0.646**
$\overline{RV}$	**0.784**	0.759	0.766	**0.782**	**0.775**	**0.782**	0.682	0.622	0.630	**0.702**	0.686	**0.702**
						Stock: T						
RV	0.640	0.416	**0.669**	0.636	0.470	0.646	**0.445**	0.335	0.398	0.437	0.398	0.438
RV_{AC1}	0.388	0.433	0.318	0.403	**0.455**	0.394	**0.377**	0.322	0.240	**0.379**	**0.372**	**0.378**
RV_{TS}	0.627	0.430	**0.639**	0.625	0.483	**0.632**	**0.439**	0.328	0.373	0.434	0.401	**0.435**
RV_{TSd}	0.449	0.460	0.376	0.464	**0.494**	0.455	**0.396**	0.312	0.290	**0.398**	0.382	**0.398**
$\overline{RV}$	0.634	0.417	**0.657**	0.630	0.471	0.639	**0.441**	0.328	0.382	0.435	0.401	**0.437**
						Stock: UTX						
RV	0.363	0.370	0.357	0.361	0.363	0.361	0.361	0.381	0.322	0.370	0.391	0.370
RV_{AC1}	0.337	0.355	0.326	0.335	0.341	0.335	0.293	0.316	0.250	0.301	0.324	0.301
RV_{TS}	0.359	0.366	0.353	0.357	0.359	0.357	0.353	0.367	0.316	0.361	0.380	0.361
RV_{TSd}	0.350	0.361	0.342	0.348	0.352	0.348	0.326	0.343	0.283	0.332	0.353	0.332
$\overline{RV}$	0.359	0.366	0.353	0.358	0.359	0.357	0.353	0.367	0.316	0.361	0.380	0.361
						Stock: WMT						
RV	**0.648**	0.616	**0.650**	**0.649**	0.606	**0.651**	**0.534**	**0.535**	0.511	**0.536**	**0.535**	**0.537**
RV_{AC1}	0.547	**0.569**	0.520	0.553	0.547	0.551	0.444	**0.467**	0.448	0.440	0.441	0.441
RV_{TS}	**0.646**	0.619	**0.645**	**0.648**	0.610	**0.649**	**0.549**	**0.551**	0.523	**0.552**	**0.551**	**0.553**
RV_{TSd}	0.586	**0.604**	0.544	0.592	**0.597**	0.589	**0.504**	**0.513**	0.471	**0.506**	**0.509**	**0.506**
$\overline{RV}$	**0.650**	0.618	**0.652**	**0.652**	0.609	**0.653**	**0.550**	**0.552**	0.525	**0.553**	**0.551**	**0.553**
						Stock: XOM						
RV	**0.805**	0.751	**0.797**	**0.800**	0.792	**0.800**	0.681	0.630	0.672	**0.713**	0.681	**0.713**
RV_{AC1}	0.727	**0.749**	0.710	0.730	0.737	0.730	0.648	0.635	0.570	**0.673**	0.660	**0.673**
RV_{TS}	**0.809**	0.759	**0.801**	**0.805**	0.798	**0.805**	0.712	0.647	0.692	**0.740**	0.706	**0.740**
RV_{TSd}	**0.787**	0.750	0.772	**0.784**	**0.784**	**0.784**	0.681	0.644	0.626	**0.712**	0.692	**0.712**
$\overline{RV}$	**0.810**	0.759	**0.802**	**0.806**	0.799	**0.806**	0.713	0.647	0.693	**0.740**	0.706	**0.740**

Table B-4: R^2 Comparison of MIDAS Models for the Individual DJIA Stocks, Two-Year Out-of-Sample (2003–2004)

Each entry in the table corresponds to the R^2 for the different models (Section 2) and the different return sampling frequencies. The regressions are run on a weekly (5 days) data sampling scheme. The names of the variables are consistent with the section describing realized volatility estimators. To preserve the table format, RV_{NWAC} is replaced by RV_{NW}. Every column in the panel corresponds to the explanatory power of the different left-hand side variables for the same right-hand side variable. The first panel contains results for the regressions constructed exclusively using one-minutes returns, the second contains results for the five-minutes returns.

	One-minute returns						Five-minute returns					
	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
					Stock: AA							
RV	0.538	0.468	**0.555**	0.521	0.478	0.524	**0.436**	0.299	0.404	0.386	0.376	0.386
RV_{AC1}	**0.448**	0.393	**0.447**	0.430	0.390	0.433	**0.199**	0.151	**0.203**	0.145	0.165	0.146
RV_{TS}	0.552	0.471	**0.569**	0.535	0.488	0.538	**0.414**	0.295	0.396	0.358	0.356	0.358
RV_{TSd}	**0.534**	0.473	**0.538**	0.522	0.487	0.524	**0.321**	0.218	0.280	0.250	0.270	0.251
$\overline{RV}$	0.551	0.470	**0.569**	0.534	0.486	0.536	**0.414**	0.295	0.397	0.358	0.357	0.359
					Stock: AXP							
RV	0.791	0.714	0.774	0.791	**0.795**	0.791	0.675	0.616	**0.747**	0.724	0.665	0.724
RV_{AC1}	0.746	0.720	0.727	0.754	**0.766**	0.753	0.635	0.610	0.685	0.690	0.649	0.690
RV_{TS}	0.790	0.715	0.774	0.792	**0.795**	0.792	0.695	0.634	**0.764**	0.738	0.679	0.739
RV_{TSd}	0.767	0.705	0.747	0.774	**0.784**	0.774	0.682	0.654	0.723	**0.740**	0.697	**0.740**
$\overline{RV}$	0.791	0.715	0.775	0.792	**0.795**	0.792	0.695	0.634	**0.764**	0.738	0.678	0.739
					Stock: BA							
RV	**0.790**	0.674	0.777	**0.788**	0.776	**0.788**	0.644	0.410	**0.688**	0.650	0.502	0.652
RV_{AC1}	0.712	0.711	0.682	0.712	**0.727**	0.712	0.450	0.356	0.354	0.463	0.412	0.464
RV_{TS}	**0.796**	0.686	0.781	**0.795**	0.786	**0.795**	0.650	0.412	0.673	0.656	0.511	0.657
RV_{TSd}	**0.787**	0.708	0.756	**0.786**	**0.794**	**0.785**	0.573	0.418	0.466	0.583	0.504	0.583
$\overline{RV}$	**0.796**	0.685	0.783	**0.795**	0.785	**0.795**	0.650	0.413	0.675	0.656	0.511	0.657
					Stock: C							
RV	0.710	0.658	0.721	0.718	0.710	0.720	0.560	0.493	**0.670**	0.581	0.541	0.581
RV_{AC1}	0.676	0.631	0.681	0.683	0.679	0.684	0.492	0.437	**0.607**	0.515	0.480	0.516
RV_{TS}	0.701	0.650	0.712	0.710	0.703	0.711	0.572	0.503	**0.680**	0.591	0.552	0.592
RV_{TSd}	0.691	0.643	0.696	0.699	0.697	0.700	0.552	0.488	**0.656**	0.571	0.534	0.572
$\overline{RV}$	0.701	0.649	0.712	0.709	0.702	0.711	0.573	0.503	**0.681**	0.591	0.552	0.592
					Stock: CAT							
RV	**0.614**	0.572	**0.624**	**0.622**	0.599	**0.623**	0.452	0.383	0.469	0.456	0.402	0.456
RV_{AC1}	0.542	**0.551**	0.516	**0.549**	**0.555**	**0.549**	0.199	0.091	0.305	0.250	0.191	0.249
RV_{TS}	**0.616**	0.573	**0.625**	**0.625**	0.604	**0.626**	0.447	0.369	**0.482**	0.451	0.393	0.452
RV_{TSd}	0.610	0.590	0.596	**0.620**	**0.621**	**0.620**	0.339	0.129	0.392	0.382	0.350	0.382
$\overline{RV}$	**0.616**	0.572	**0.625**	**0.624**	0.602	**0.625**	0.447	0.369	**0.483**	0.452	0.393	0.452

Two-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
					Stock: DD							
RV	**0.682**	0.616	0.672	**0.683**	**0.679**	**0.683**	0.561	0.475	0.558	0.574	0.509	0.575
RV_{AC1}	0.612	0.600	0.530	0.616	**0.638**	0.614	0.408	0.364	0.395	0.419	0.387	0.419
RV_{TS}	**0.678**	0.610	0.664	**0.678**	**0.674**	**0.678**	0.568	0.461	0.568	0.582	0.509	0.582
RV_{TSd}	0.652	0.608	0.599	**0.669**	**0.666**	**0.667**	0.520	0.444	0.492	0.551	0.485	0.552
$\overline{RV}$	**0.679**	0.610	0.667	**0.679**	**0.674**	**0.679**	0.568	0.462	0.570	0.582	0.509	0.582
					Stock: DIS							
RV	0.732	0.654	**0.753**	**0.746**	0.721	**0.748**	0.583	0.432	**0.653**	0.577	0.476	0.579
RV_{AC1}	0.617	0.653	**0.688**	0.663	0.654	0.667	0.434	0.366	0.438	0.506	0.444	0.508
RV_{TS}	0.717	0.646	**0.741**	**0.734**	0.710	**0.736**	0.601	0.463	**0.667**	0.611	0.508	0.613
RV_{TSd}	0.703	0.659	**0.729**	**0.725**	0.708	**0.727**	0.525	0.429	0.539	**0.565**	0.483	**0.566**
$\overline{RV}$	0.718	0.646	**0.742**	**0.735**	0.710	**0.736**	0.602	0.463	**0.668**	0.612	0.508	0.613
					Stock: EK							
RV	0.286	0.200	0.303	0.277	0.255	0.277	0.138	0.130	**0.212**	0.154	0.127	0.154
RV_{AC1}	0.248	0.183	0.261	0.238	0.217	0.238	−0.047	−0.236	**0.003**	−0.096	−0.114	−0.096
RV_{TS}	0.298	0.210	0.316	0.289	0.266	0.289	0.114	0.103	**0.187**	0.127	0.100	0.128
RV_{TSd}	0.297	0.212	0.311	0.288	0.265	0.288	0.074	−0.239	**0.109**	−0.028	−0.061	−0.027
$\overline{RV}$	0.298	0.210	0.316	0.289	0.266	0.289	0.114	0.103	**0.187**	0.128	0.100	0.128
					Stock: GE							
RV	**0.724**	0.629	**0.728**	**0.726**	0.688	**0.728**	0.584	0.408	**0.633**	0.574	0.522	0.575
RV_{AC1}	**0.662**	0.634	0.618	**0.668**	**0.660**	**0.667**	0.532	0.373	0.553	0.525	0.482	0.526
RV_{TS}	**0.720**	0.631	**0.721**	**0.723**	0.688	**0.724**	0.598	0.423	**0.637**	0.589	0.538	0.591
RV_{TSd}	**0.705**	0.653	0.683	**0.711**	0.698	**0.710**	0.597	0.432	0.610	0.586	0.541	0.587
$\overline{RV}$	**0.722**	0.630	**0.726**	**0.725**	0.687	**0.727**	0.598	0.423	**0.639**	0.589	0.537	0.591
					Stock: GM							
RV	**0.747**	0.678	**0.751**	**0.751**	**0.745**	**0.751**	0.543	0.523	**0.564**	**0.560**	0.510	**0.560**
RV_{AC1}	**0.606**	0.570	0.590	**0.598**	**0.602**	**0.599**	0.420	0.410	**0.457**	0.440	0.395	0.441
RV_{TS}	**0.737**	0.670	**0.740**	**0.741**	**0.735**	**0.741**	0.554	0.540	**0.577**	0.563	0.514	0.564
RV_{TSd}	**0.712**	0.647	**0.711**	**0.714**	**0.711**	**0.715**	0.467	0.466	**0.469**	**0.477**	0.436	**0.478**
$\overline{RV}$	**0.738**	0.671	**0.741**	**0.742**	**0.736**	**0.742**	0.555	0.541	**0.578**	0.564	0.515	0.565

Table continued on next page ...

Two-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: HD						
RV	**0.648**	0.500	**0.646**	0.619	0.580	0.623	0.355	0.178	**0.390**	**0.384**	0.345	**0.385**
RV_{AC1}	**0.463**	0.418	**0.453**	0.414	0.410	0.420	0.191	0.002	0.220	**0.235**	0.208	**0.236**
RV_{TS}	**0.639**	0.492	**0.639**	0.610	0.572	0.614	0.356	0.183	**0.394**	**0.392**	0.352	**0.393**
RV_{TSd}	**0.596**	0.476	**0.593**	0.563	0.537	0.567	0.260	0.100	0.223	**0.308**	0.289	**0.309**
$\overline{RV}$	**0.640**	0.491	**0.641**	0.611	0.572	0.616	0.358	0.185	**0.398**	**0.394**	0.353	**0.395**
						Stock: HON						
RV	0.445	0.380	0.454	0.443	0.421	0.444	0.384	0.355	0.370	0.372	0.356	0.373
RV_{AC1}	0.400	0.391	0.385	0.402	0.406	0.401	0.325	0.301	0.328	0.313	0.296	0.313
RV_{TS}	0.453	0.393	0.460	0.452	0.432	0.453	0.385	0.355	0.377	0.374	0.355	0.374
RV_{TSd}	0.426	0.394	0.419	0.427	0.421	0.426	0.344	0.321	0.328	0.335	0.322	0.335
$\overline{RV}$	0.454	0.392	0.461	0.453	0.432	0.454	0.385	0.355	0.378	0.374	0.355	0.374
						Stock: HPQ						
RV	**0.681**	**0.687**	0.665	**0.685**	**0.688**	**0.684**	**0.596**	0.564	0.549	**0.603**	**0.593**	**0.602**
RV_{AC1}	0.605	**0.639**	0.576	0.616	**0.637**	0.613	0.442	0.427	0.406	0.456	0.450	0.455
RV_{TS}	0.669	**0.682**	0.649	**0.674**	**0.681**	**0.672**	0.608	0.584	0.569	**0.621**	**0.613**	**0.620**
RV_{TSd}	0.632	**0.659**	0.606	0.642	**0.660**	0.639	0.578	0.554	0.535	**0.591**	**0.584**	**0.591**
$\overline{RV}$	0.672	**0.684**	0.654	**0.676**	**0.682**	**0.675**	0.609	0.585	0.571	**0.622**	**0.614**	**0.621**
						Stock: IBM						
RV	**0.706**	0.700	0.699	**0.709**	**0.712**	**0.709**	0.608	0.594	0.619	0.641	0.620	0.642
RV_{AC1}	**0.653**	**0.658**	0.633	**0.654**	**0.662**	**0.654**	0.587	0.597	0.617	0.620	0.597	0.620
RV_{TS}	**0.714**	0.706	0.708	**0.716**	**0.719**	**0.717**	0.644	0.623	0.660	0.674	0.648	0.674
RV_{TSd}	**0.697**	0.692	0.687	**0.698**	**0.703**	**0.698**	0.625	0.610	0.628	0.654	0.631	0.654
$\overline{RV}$	**0.715**	0.706	0.709	**0.717**	**0.720**	**0.717**	0.644	0.624	0.661	0.675	0.649	0.675
						Stock: INTC						
RV	**0.614**	0.577	**0.621**	0.604	0.597	0.611	0.498	0.479	**0.531**	0.501	0.498	0.502
RV_{AC1}	**0.552**	**0.546**	**0.552**	**0.547**	**0.545**	**0.552**	0.415	0.376	**0.448**	0.408	0.405	0.409
RV_{TS}	**0.603**	0.572	**0.605**	**0.595**	0.589	**0.600**	0.519	0.498	**0.547**	0.517	0.514	0.518
RV_{TSd}	**0.573**	0.549	**0.567**	**0.567**	**0.567**	**0.570**	0.509	0.490	**0.534**	0.508	0.506	0.509
$\overline{RV}$	**0.616**	0.582	**0.624**	0.605	0.597	0.612	0.522	0.500	**0.552**	0.519	0.517	0.521

Table continued on next page ...

Two-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
					Stock: IP							
RV	0.712	0.724	0.695	0.723	**0.731**	0.723	0.620	0.540	0.591	0.647	0.611	0.647
RV_{AC1}	0.619	**0.685**	0.577	0.632	0.671	0.631	0.467	0.427	0.422	0.482	0.474	0.482
RV_{TS}	0.715	0.728	0.697	0.726	**0.736**	0.726	0.635	0.551	0.600	0.661	0.623	0.661
RV_{TSd}	0.676	**0.717**	0.643	0.689	**0.716**	0.688	0.587	0.525	0.538	0.610	0.584	0.610
$\overline{RV}$	0.717	0.729	0.699	0.728	**0.737**	0.728	0.636	0.552	0.601	0.662	0.623	0.662
					Stock: JNJ							
RV	0.758	0.646	**0.770**	0.755	0.733	0.757	0.540	0.409	0.598	0.540	0.459	0.541
RV_{AC1}	0.685	0.639	0.671	0.678	0.682	0.678	0.329	0.230	0.326	0.318	0.261	0.318
RV_{TS}	0.762	0.651	0.772	0.759	0.738	0.760	0.552	0.418	0.602	0.548	0.466	0.548
RV_{TSd}	0.763	0.669	0.767	0.759	0.746	0.760	0.460	0.348	0.415	0.454	0.397	0.454
$\overline{RV}$	0.761	0.650	**0.772**	0.758	0.737	0.759	0.552	0.418	0.604	0.548	0.467	0.549
					Stock: JPM							
RV	0.643	0.610	0.650	0.654	0.655	0.654	0.470	0.338	0.546	0.464	0.407	0.464
RV_{AC1}	0.564	0.543	0.568	0.574	0.577	0.574	0.435	0.318	0.479	0.424	0.377	0.424
RV_{TS}	0.636	0.602	0.643	0.647	0.648	0.647	0.477	0.344	0.549	0.471	0.414	0.471
RV_{TSd}	0.603	0.575	0.608	0.613	0.616	0.614	0.440	0.319	0.498	0.434	0.383	0.434
$\overline{RV}$	0.638	0.603	0.645	0.648	0.650	0.649	0.478	0.344	0.551	0.472	0.415	0.472
					Stock: KO							
RV	0.563	**0.604**	0.560	0.558	0.554	0.559	0.356	**0.452**	0.425	0.309	0.245	0.309
RV_{AC1}	0.430	0.419	0.444	0.424	0.411	0.427	0.250	**0.405**	0.335	0.204	0.141	0.205
RV_{TS}	0.565	**0.608**	0.561	0.562	0.559	0.563	0.348	**0.458**	0.410	0.296	0.235	0.297
RV_{TSd}	0.532	**0.597**	0.526	0.534	0.533	0.534	0.226	**0.419**	0.313	0.185	0.128	0.186
$\overline{RV}$	0.566	**0.608**	0.562	0.563	0.560	0.563	0.349	**0.458**	0.411	0.297	0.236	0.298
					Stock: MCD							
RV	0.680	0.490	**0.704**	0.676	0.622	0.678	0.373	0.290	0.360	0.373	0.316	0.374
RV_{AC1}	0.476	0.438	0.437	0.475	0.482	0.474	0.307	0.268	0.231	0.306	0.283	0.306
RV_{TS}	0.683	0.494	**0.703**	0.679	0.627	0.681	0.386	0.302	0.387	0.392	0.332	0.394
RV_{TSd}	0.612	0.501	0.601	0.611	0.588	0.611	0.317	0.264	0.274	0.321	0.289	0.322
$\overline{RV}$	0.687	0.494	**0.708**	0.683	0.629	0.685	0.388	0.303	0.390	0.394	0.333	0.395

Table continued on next page ...

Two-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: MMM						
RV	0.392	0.300	0.406	0.414	0.412	0.414	0.198	0.162	0.217	0.227	0.172	0.227
RV_{AC1}	0.184	**0.243**	0.183	0.217	**0.237**	0.217	0.181	0.166	0.170	0.205	0.171	0.205
RV_{TS}	0.384	0.290	0.398	0.408	0.406	0.407	0.151	0.169	0.214	0.212	0.124	0.212
RV_{TSd}	0.358	0.286	0.364	0.383	0.390	0.383	0.011	0.144	0.122	0.120	0.063	0.120
$\overline{RV}$	0.384	0.290	0.399	0.408	0.406	0.408	0.152	0.170	0.215	0.212	0.124	0.213
						Stock: MO						
RV	0.366	0.328	0.403	0.369	0.328	0.372	0.252	0.277	0.304	0.281	0.270	0.282
RV_{AC1}	0.310	0.302	0.323	0.316	0.302	0.317	0.080	0.115	0.122	0.112	0.114	0.112
RV_{TS}	0.360	0.324	0.398	0.366	0.326	0.368	0.247	0.281	0.320	0.283	0.273	0.284
RV_{TSd}	0.360	0.337	0.390	0.371	0.344	0.372	0.240	0.263	0.295	0.267	0.259	0.268
$\overline{RV}$	0.361	0.324	0.399	0.366	0.326	0.369	0.247	0.281	0.321	0.284	0.274	0.284
						Stock: MRK						
RV	0.498	0.450	0.500	0.504	0.505	0.504	0.338	0.316	0.388	0.354	0.320	0.355
RV_{AC1}	0.414	0.394	0.415	0.418	0.425	0.418	0.323	0.324	0.360	0.341	0.314	0.341
RV_{TS}	0.492	0.442	0.494	0.499	0.500	0.499	0.371	0.355	0.436	0.399	0.360	0.399
RV_{TSd}	0.483	0.435	0.483	0.491	0.495	0.491	0.358	0.358	0.395	0.383	0.353	0.383
$\overline{RV}$	0.492	0.442	0.494	0.499	0.499	0.499	0.371	0.355	0.437	0.399	0.360	0.399
						Stock: MSFT						
RV	0.638	0.629	0.612	0.641	**0.660**	0.639	0.547	0.540	0.545	0.567	0.572	0.566
RV_{AC1}	0.574	0.577	0.550	0.578	**0.601**	0.579	0.509	0.497	0.506	**0.525**	**0.530**	**0.525**
RV_{TS}	0.632	0.623	0.603	0.637	**0.658**	0.633	0.557	0.552	0.557	0.578	0.583	0.578
RV_{TSd}	0.605	0.599	0.571	0.611	**0.637**	0.605	0.550	0.545	0.546	0.570	0.575	0.569
$\overline{RV}$	0.643	0.637	0.618	0.646	**0.666**	0.645	0.559	0.554	0.560	0.581	0.586	0.580
						Stock: PG						
RV	0.577	0.568	0.544	0.575	**0.600**	0.575	0.472	0.386	0.394	**0.508**	0.430	**0.509**
RV_{AC1}	0.494	**0.580**	0.452	0.483	0.513	0.484	0.313	0.307	0.107	**0.369**	0.345	**0.369**
RV_{TS}	0.579	0.567	0.546	0.578	**0.603**	0.578	0.474	0.380	0.385	**0.515**	0.431	**0.515**
RV_{TSd}	0.571	0.573	0.529	0.571	**0.603**	0.570	0.413	0.378	0.237	**0.468**	0.431	**0.468**
$\overline{RV}$	0.579	0.566	0.546	0.578	**0.602**	0.578	0.475	0.380	0.385	**0.515**	0.431	**0.515**

Table continued on next page ...

Two-years out-of-sample (End)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
Stock: SBC												
RV	**0.838**	0.804	**0.833**	**0.838**	**0.833**	**0.838**	0.743	0.697	**0.768**	0.751	0.725	0.752
RV_{AC1}	**0.792**	0.770	0.775	**0.788**	**0.793**	**0.788**	0.611	0.613	**0.629**	0.605	0.587	0.605
RV_{TS}	**0.836**	0.802	**0.828**	**0.835**	**0.830**	**0.835**	0.746	0.703	**0.756**	**0.752**	0.729	**0.753**
RV_{TSd}	**0.824**	0.798	0.798	**0.821**	**0.823**	**0.820**	**0.702**	0.681	**0.703**	**0.703**	0.688	**0.703**
$\overline{RV}$	**0.836**	0.802	**0.829**	**0.836**	**0.830**	**0.835**	0.746	0.703	**0.757**	**0.753**	0.730	**0.753**
Stock: T												
RV	**0.488**	0.464	0.461	**0.485**	**0.487**	**0.485**	0.307	0.287	0.081	0.314	0.299	0.313
RV_{AC1}	0.314	0.364	0.115	0.329	**0.377**	0.311	0.226	0.207	0.084	0.233	0.221	0.233
RV_{TS}	**0.501**	0.475	0.463	**0.499**	**0.499**	**0.498**	0.340	0.319	0.113	0.346	0.329	0.346
RV_{TSd}	0.418	0.445	0.150	0.425	**0.463**	0.417	0.296	0.279	0.115	0.302	0.288	0.302
$\overline{RV}$	**0.500**	0.474	0.469	**0.497**	**0.497**	**0.497**	0.341	0.320	0.111	0.347	0.329	0.347
Stock: UTX												
RV	0.528	0.515	0.508	0.544	**0.563**	0.543	0.422	0.355	0.437	0.446	0.399	0.446
RV_{AC1}	0.481	0.451	0.458	0.490	**0.504**	0.489	0.380	0.293	0.371	0.394	0.367	0.394
RV_{TS}	0.526	0.514	0.507	0.543	**0.562**	0.542	0.418	0.344	0.450	0.436	0.382	0.437
RV_{TSd}	0.514	0.506	0.493	0.531	**0.553**	0.530	0.390	0.311	0.394	0.402	0.361	0.402
$\overline{RV}$	0.526	0.514	0.507	0.543	**0.562**	0.542	0.419	0.344	0.451	0.437	0.382	0.437
Stock: WMT												
RV	**0.654**	0.614	**0.651**	**0.656**	**0.652**	**0.656**	0.513	0.494	**0.580**	0.525	0.475	0.525
RV_{AC1}	**0.622**	0.597	**0.615**	**0.623**	**0.624**	**0.623**	0.418	0.407	**0.457**	0.431	0.389	0.431
RV_{TS}	**0.654**	0.612	**0.650**	**0.657**	**0.652**	**0.656**	0.527	0.506	**0.588**	0.540	0.489	0.540
RV_{TSd}	**0.655**	0.620	0.640	**0.658**	**0.659**	**0.657**	0.472	0.466	**0.515**	0.487	0.448	0.487
$\overline{RV}$	**0.654**	0.612	**0.651**	**0.656**	**0.651**	**0.656**	0.527	0.506	**0.588**	0.540	0.489	0.540
Stock: XOM												
RV	**0.775**	0.711	**0.775**	**0.772**	0.758	**0.772**	0.565	0.464	**0.627**	0.586	0.521	0.587
RV_{AC1}	**0.665**	0.643	0.646	**0.659**	**0.662**	**0.659**	0.428	0.363	0.457	0.457	0.405	0.457
RV_{TS}	**0.778**	0.712	**0.779**	**0.775**	0.761	**0.776**	0.562	0.462	**0.625**	0.583	0.516	0.584
RV_{TSd}	**0.756**	0.709	**0.746**	**0.753**	**0.748**	**0.753**	0.498	0.416	0.525	0.525	0.472	0.526
$\overline{RV}$	**0.779**	0.713	**0.780**	**0.776**	0.762	**0.777**	0.563	0.463	**0.627**	0.584	0.517	0.585

Table B-5: R^2 Comparison of MIDAS Models for the Individual DJIA Stocks, One-Year Out-of-Sample (2002)

Each entry in the table corresponds to the R^2 for the different models (Section 2) and the different return sampling frequencies. The regressions are run on a weekly (5 days) data sampling scheme. The names of the variables are consistent with the section describing realized volatility estimators. To preserve the table format, RV_{NWAC} is replaced by RV_{NW}. Every column in the panel corresponds to the explanatory power of the different left-hand side variables for the same right-hand side variable. The first panel contains results for the regressions constructed exclusively using one-minutes returns, the second contains results for the five-minutes returns.

	One-minute returns						Five-minute returns					
	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
					Stock: AA							
RV	0.692	0.551	0.653	**0.706**	0.642	**0.706**	0.691	0.618	0.537	**0.738**	0.700	**0.738**
RV_{AC1}	0.515	**0.698**	0.411	0.534	0.652	0.528	0.591	0.539	0.476	**0.629**	0.596	**0.630**
RV_{TS}	0.693	0.564	0.650	**0.706**	0.651	**0.706**	0.641	0.563	0.488	**0.694**	0.652	**0.694**
RV_{TSd}	0.611	**0.696**	0.517	0.630	**0.703**	0.625	0.603	0.549	0.442	**0.669**	0.633	**0.669**
$\overline{RV}$	0.694	0.552	0.654	**0.707**	0.643	**0.707**	0.642	0.564	0.491	**0.695**	0.653	**0.695**
					Stock: AXP							
RV	**0.632**	0.587	0.609	**0.626**	**0.625**	**0.626**	0.578	0.529	0.592	**0.610**	0.585	**0.610**
RV_{AC1}	**0.638**	0.629	0.594	0.629	**0.642**	0.628	0.542	0.495	0.554	**0.570**	0.549	**0.571**
RV_{TS}	**0.636**	0.594	0.610	**0.629**	**0.628**	**0.629**	0.587	0.538	0.596	**0.621**	0.596	**0.621**
RV_{TSd}	**0.617**	0.591	0.573	0.610	**0.623**	0.609	0.583	0.543	0.580	**0.617**	0.597	**0.617**
$\overline{RV}$	**0.638**	0.595	0.613	**0.630**	0.583	**0.630**	0.587	0.538	0.596	**0.621**	0.596	**0.621**
					Stock: BA							
RV	0.582	0.528	0.538	0.580	0.595	0.579	**0.591**	0.369	0.561	0.575	0.486	0.575
RV_{AC1}	0.591	0.606	0.527	0.588	**0.625**	0.585	0.409	0.352	0.391	**0.420**	0.378	**0.420**
RV_{TS}	0.576	0.527	0.528	0.575	0.593	0.573	0.567	0.341	0.547	0.565	0.470	0.566
RV_{TSd}	0.544	0.519	0.480	0.542	0.578	0.540	**0.559**	0.401	0.486	**0.558**	0.504	**0.558**
$\overline{RV}$	0.578	0.528	0.531	0.577	0.594	0.575	0.567	0.341	0.548	0.565	0.473	0.566
					Stock: C							
RV	0.274	0.278	0.270	0.278	0.281	0.277	0.242	0.214	0.190	0.228	0.227	0.228
RV_{AC1}	0.234	0.238	0.229	0.235	0.237	0.235	0.236	0.200	0.153	0.213	0.224	0.212
RV_{TS}	0.281	0.282	0.277	0.285	0.288	0.284	0.263	0.230	0.206	0.247	0.246	0.247
RV_{TSd}	0.270	0.269	0.257	0.271	0.277	0.270	0.252	0.219	0.180	0.233	0.240	0.232
$\overline{RV}$	0.282	0.284	0.279	0.286	0.289	0.286	0.263	0.230	0.206	0.247	0.246	0.247
					Stock: CAT							
RV	**0.732**	0.500	0.689	**0.729**	0.665	**0.729**	0.650	0.618	0.475	**0.661**	**0.660**	**0.661**
RV_{AC1}	0.549	**0.672**	0.431	0.546	0.635	0.541	0.577	0.562	0.426	**0.584**	**0.593**	**0.584**
RV_{TS}	**0.739**	0.504	0.697	**0.736**	0.672	**0.736**	**0.644**	0.610	0.475	**0.653**	**0.649**	**0.654**
RV_{TSd}	0.685	0.679	0.581	0.681	**0.722**	0.678	0.605	0.576	0.423	**0.616**	**0.621**	**0.616**
$\overline{RV}$	**0.739**	0.491	0.700	**0.736**	0.666	**0.736**	**0.644**	0.610	0.476	**0.654**	**0.649**	**0.654**

One-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
Stock: DD												
RV	**0.753**	0.678	0.705	**0.753**	0.675	**0.752**	**0.641**	0.456	0.531	**0.633**	0.592	**0.633**
RV_{AC1}	0.553	**0.674**	0.470	0.554	0.613	0.548	**0.680**	0.469	0.562	0.676	0.640	0.677
RV_{TS}	**0.724**	0.660	0.681	**0.725**	0.650	**0.724**	**0.660**	0.468	0.528	**0.669**	0.637	**0.669**
RV_{TSd}	0.639	**0.723**	0.543	0.643	0.681	0.637	0.618	0.414	0.471	**0.647**	0.619	**0.646**
$\overline{RV}$	**0.724**	0.650	0.686	**0.725**	0.642	**0.725**	**0.661**	0.470	0.531	**0.670**	0.637	**0.670**
Stock: DIS												
RV	0.697	0.669	0.670	**0.721**	0.680	**0.722**	0.598	0.494	0.527	**0.671**	0.659	**0.672**
RV_{AC1}	0.434	**0.702**	0.387	0.650	0.688	0.649	0.303	0.508	**0.542**	0.376	0.478	0.376
RV_{TS}	0.699	0.673	0.663	**0.720**	0.680	**0.721**	0.558	0.467	0.523	**0.644**	**0.640**	**0.645**
RV_{TSd}	0.629	0.696	0.527	0.671	**0.725**	0.670	0.453	0.445	0.523	0.548	0.582	0.548
$\overline{RV}$	0.700	0.672	0.665	**0.720**	0.681	**0.721**	0.559	0.467	0.523	**0.645**	**0.641**	**0.646**
Stock: EK												
RV	**0.465**	0.445	**0.472**	0.445	0.408	0.447	0.286	0.329	0.335	0.350	0.292	0.350
RV_{AC1}	0.418	**0.433**	0.401	0.402	0.385	0.402	0.262	0.288	0.299	**0.311**	0.265	**0.312**
RV_{TS}	**0.455**	0.438	**0.458**	0.436	0.402	0.437	0.380	0.391	0.392	**0.421**	0.371	**0.421**
RV_{TSd}	**0.442**	**0.443**	**0.433**	0.424	0.400	0.425	0.369	0.367	0.350	**0.396**	0.358	**0.396**
$\overline{RV}$	**0.454**	0.436	**0.459**	0.435	0.401	0.437	0.380	0.391	0.393	**0.421**	0.372	**0.421**
Stock: GE												
RV	0.554	0.452	0.552	0.583	0.570	0.584	0.441	0.316	0.458	0.494	0.461	0.494
RV_{AC1}	0.498	0.491	0.422	0.524	**0.574**	0.519	0.372	0.271	0.368	0.416	0.389	0.416
RV_{TS}	0.552	0.449	0.539	0.578	0.572	0.578	0.414	0.308	0.417	0.475	0.444	0.475
RV_{TSd}	0.491	0.411	0.412	0.514	**0.553**	0.508	0.422	0.306	0.369	**0.470**	0.444	**0.470**
$\overline{RV}$	0.555	0.451	0.549	**0.582**	0.572	**0.582**	0.415	0.309	0.420	0.476	0.444	0.476
Stock: GM												
RV	0.743	0.646	0.735	0.731	0.721	0.732	0.633	0.670	0.697	0.651	0.617	0.652
RV_{AC1}	**0.715**	0.645	0.705	0.705	0.696	0.705	0.562	0.602	0.631	0.584	0.554	0.584
RV_{TS}	0.748	0.653	0.741	0.737	0.726	0.738	0.624	0.664	0.693	0.642	0.608	0.642
RV_{TSd}	0.726	0.629	0.714	0.714	0.706	0.714	0.602	0.648	0.658	0.623	0.599	0.623
$\overline{RV}$	0.749	0.654	0.742	0.738	0.727	0.739	0.624	0.664	0.694	0.642	0.608	0.642

Table continued on next page ...

One-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
Stock: HD												
RV	**0.791**	0.722	0.752	0.780	0.755	0.780	0.715	0.595	0.691	0.702	0.673	0.702
RV_{AC1}	**0.732**	0.716	0.649	0.724	**0.741**	0.721	0.695	0.609	0.688	0.682	0.659	0.683
RV_{TS}	**0.783**	0.718	0.738	0.773	0.752	0.772	0.698	0.577	0.671	0.690	0.663	0.690
RV_{TSd}	0.729	0.702	0.641	0.722	**0.742**	0.718	0.685	0.571	0.650	0.681	0.657	0.681
$\overline{RV}$	**0.787**	0.718	0.745	0.776	0.751	0.775	0.699	0.577	0.673	0.690	0.664	0.691
Stock: HON												
RV	0.121	0.062	0.054	0.086	0.118	0.087	0.030	**0.229**	−0.051	0.021	0.051	0.021
RV_{AC1}	0.065	0.024	−0.004	0.036	0.085	0.037	0.039	**0.238**	−0.134	−0.004	0.046	−0.005
RV_{TS}	0.133	0.074	0.065	0.100	0.134	0.101	0.042	**0.232**	−0.077	0.035	0.066	0.035
RV_{TSd}	0.132	0.081	0.064	0.100	0.138	0.101	−0.010	**0.207**	−0.176	−0.038	0.004	−0.038
$\overline{RV}$	0.133	0.073	0.065	0.099	0.133	0.100	0.042	**0.232**	−0.076	0.036	0.066	0.036
Stock: HPQ												
RV	0.564	0.511	0.588	0.579	0.553	0.582	0.530	0.354	**0.601**	0.550	0.504	0.551
RV_{AC1}	0.548	0.510	0.554	0.562	0.550	**0.564**	0.509	0.392	**0.557**	0.533	0.498	0.534
RV_{TS}	0.566	0.512	0.591	0.580	0.551	0.583	0.501	0.333	**0.586**	0.521	0.475	0.522
RV_{TSd}	0.545	0.509	0.550	0.559	0.550	0.561	0.498	0.329	**0.579**	0.522	0.474	0.523
$\overline{RV}$	0.567	0.511	0.593	0.581	0.550	0.583	0.501	0.333	**0.587**	0.521	0.475	0.522
Stock: IBM												
RV	0.579	**0.592**	0.581	0.582	0.579	**0.582**	0.500	0.518	0.485	**0.531**	**0.526**	**0.531**
RV_{AC1}	0.502	**0.569**	0.489	0.503	0.513	0.504	0.383	**0.413**	0.339	**0.406**	**0.407**	**0.406**
RV_{TS}	0.584	**0.598**	0.585	0.587	0.585	0.588	0.489	0.511	0.454	**0.524**	**0.524**	**0.524**
RV_{TSd}	0.578	**0.601**	0.575	0.581	0.583	0.582	0.449	**0.480**	0.393	**0.484**	**0.490**	**0.484**
$\overline{RV}$	0.583	**0.598**	0.584	0.587	0.585	0.587	0.490	0.511	0.454	**0.524**	**0.524**	**0.524**
Stock: INTC												
RV	**0.653**	0.626	0.625	0.630	0.632	0.641	0.572	0.574	0.423	0.580	0.582	0.580
RV_{AC1}	0.474	**0.564**	0.429	0.415	0.444	0.472	0.429	**0.521**	0.132	0.429	0.443	0.439
RV_{TS}	0.625	0.562	0.587	**0.631**	0.622	0.609	0.568	0.579	0.413	0.578	0.581	0.578
RV_{TSd}	0.618	0.581	0.571	0.619	0.618	0.604	0.557	**0.576**	0.384	0.567	0.571	0.568
$\overline{RV}$	**0.650**	0.628	0.624	0.619	0.625	0.638	0.568	**0.586**	0.402	0.578	0.582	0.580

Table continued on next page ...

One-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
					Stock: IP							
RV	0.429	−0.074	**0.528**	0.464	0.276	0.469	0.496	0.505	0.526	**0.559**	0.492	**0.561**
RV_{AC1}	0.534	0.497	0.500	0.552	**0.569**	0.550	0.397	0.416	**0.479**	0.435	0.371	0.437
RV_{TS}	0.442	−0.067	**0.532**	0.472	0.287	0.477	0.440	0.460	**0.490**	**0.498**	0.444	**0.499**
RV_{TSd}	0.505	0.308	**0.528**	**0.537**	0.484	**0.538**	0.435	0.463	0.415	**0.490**	0.463	**0.491**
$\overline{RV}$	0.437	−0.089	**0.532**	0.467	0.274	0.472	0.439	0.458	**0.491**	**0.496**	0.441	**0.498**
					Stock: JNJ							
RV	**0.797**	0.740	0.753	**0.790**	0.750	**0.791**	**0.770**	0.673	0.639	**0.766**	0.730	**0.766**
RV_{AC1}	0.707	**0.773**	0.619	0.720	**0.767**	0.717	**0.744**	0.672	0.623	**0.741**	0.725	**0.741**
RV_{TS}	**0.800**	0.753	0.753	**0.796**	0.763	**0.796**	**0.758**	0.651	0.627	**0.757**	0.717	**0.757**
RV_{TSd}	0.743	**0.783**	0.667	0.757	0.772	0.753	**0.723**	0.626	0.565	**0.722**	0.692	**0.722**
$\overline{RV}$	**0.801**	0.749	0.757	**0.796**	0.759	**0.796**	**0.759**	0.652	0.629	**0.757**	0.717	**0.757**
					Stock: JPM							
RV	0.153	0.124	0.186	0.167	0.150	0.169	0.067	−0.015	**0.175**	0.098	0.061	0.098
RV_{AC1}	0.171	0.149	0.203	0.187	0.172	0.189	0.040	−0.012	**0.113**	0.066	0.042	0.067
RV_{TS}	0.153	0.125	0.185	0.166	0.150	0.168	0.073	−0.000	**0.175**	0.105	0.070	0.105
RV_{TSd}	0.157	0.132	0.189	0.171	0.155	0.173	0.067	0.003	**0.155**	0.097	0.068	0.098
$\overline{RV}$	0.153	0.125	0.185	0.166	0.150	0.168	0.073	−0.000	**0.175**	0.105	0.070	0.105
					Stock: KO							
RV	0.697	0.512	0.652	0.681	0.555	0.684	0.675	0.658	0.541	**0.691**	**0.685**	**0.692**
RV_{AC1}	0.608	**0.677**	0.488	0.608	0.666	0.603	0.621	**0.680**	0.579	0.629	0.624	0.631
RV_{TS}	0.705	0.545	0.648	0.689	0.586	0.691	0.679	0.657	0.541	**0.695**	0.685	**0.695**
RV_{TSd}	0.669	0.704	0.545	0.670	**0.717**	0.665	0.658	0.660	0.500	**0.672**	**0.680**	**0.672**
$\overline{RV}$	0.702	0.527	0.651	0.685	0.569	0.687	0.678	0.657	0.542	**0.694**	0.684	**0.695**
					Stock: MCD							
RV	0.477	0.341	0.530	0.531	0.384	0.535	**0.431**	0.208	−0.093	0.406	0.388	0.406
RV_{AC1}	0.259	0.398	−0.091	0.320	**0.430**	0.315	0.405	0.213	−0.068	0.391	0.373	0.391
RV_{TS}	0.471	0.349	0.513	0.523	0.394	0.526	**0.454**	0.225	−0.046	0.431	0.407	0.431
RV_{TSd}	0.381	0.427	0.355	0.441	**0.490**	0.438	**0.372**	0.134	−0.115	0.356	0.343	0.356
$\overline{RV}$	0.471	0.341	0.518	0.523	0.382	0.527	**0.456**	0.226	−0.044	0.433	0.409	0.433

Table continued on next page ...

One-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: MMM						
RV	**0.620**	0.606	**0.622**	**0.625**	**0.625**	**0.625**	**0.484**	0.425	0.412	0.469	0.453	0.469
RV_{AC1}	0.547	**0.589**	0.536	0.548	0.555	0.548	**0.306**	0.258	0.200	0.279	0.276	0.279
RV_{TS}	**0.627**	0.616	**0.628**	**0.632**	**0.632**	**0.632**	**0.496**	0.436	0.446	**0.492**	0.472	**0.492**
RV_{TSd}	**0.630**	0.625	**0.629**	**0.635**	**0.636**	**0.634**	**0.416**	0.361	0.332	0.403	0.390	0.403
$\overline{RV}$	**0.627**	0.616	**0.628**	**0.632**	**0.632**	**0.632**	**0.496**	0.437	0.447	**0.493**	0.473	**0.493**
						Stock: MO						
RV	0.301	−0.101	−0.347	**0.306**	0.064	**0.312**	**0.238**	0.196	−0.037	0.221	0.203	0.223
RV_{AC1}	0.092	0.293	0.114	0.019	0.305	0.036	0.180	0.172	−0.026	0.165	0.157	0.166
RV_{TS}	0.304	−0.108	−0.339	**0.308**	0.062	**0.315**	**0.282**	0.238	0.030	0.266	0.251	0.268
RV_{TSd}	−0.039	0.281	0.025	0.325	0.317	0.324	0.266	0.245	0.046	0.251	0.245	0.252
$\overline{RV}$	0.297	−0.147	−0.376	**0.302**	0.034	**0.309**	**0.281**	0.235	0.026	0.265	0.249	0.267
						Stock: MRK						
RV	0.345	0.378	0.318	0.350	0.347	0.350	0.305	0.355	**0.600**	0.361	0.351	0.361
RV_{AC1}	0.356	0.404	**0.572**	0.375	0.374	0.374	0.280	0.360	0.290	0.313	0.316	0.313
RV_{TS}	0.351	0.384	0.321	0.357	0.355	0.355	0.298	0.347	0.375	0.344	0.335	0.343
RV_{TSd}	0.298	0.358	0.249	0.308	0.342	0.304	0.289	0.378	**0.623**	0.356	0.339	0.356
$\overline{RV}$	0.354	0.386	0.328	0.360	0.355	0.359	0.298	0.348	0.366	0.344	0.336	0.344
						Stock: MSFT						
RV	**0.594**	0.555	0.581	0.576	0.568	0.577	0.488	0.493	0.459	0.523	0.525	0.526
RV_{AC1}	0.511	**0.527**	**0.525**	0.465	0.468	0.510	0.344	**0.487**	0.186	0.369	0.384	0.387
RV_{TS}	**0.580**	0.526	0.559	0.568	0.557	0.557	0.493	0.497	0.468	**0.534**	**0.536**	**0.537**
RV_{TSd}	**0.587**	0.539	0.571	0.570	0.562	0.567	0.486	0.497	0.455	**0.528**	**0.530**	**0.531**
$\overline{RV}$	**0.586**	0.564	**0.581**	0.560	0.558	**0.576**	0.489	0.500	0.457	**0.531**	**0.534**	**0.535**
						Stock: PG						
RV	0.595	0.109	**0.659**	0.601	0.366	0.608	**0.551**	0.470	0.510	0.538	0.459	0.539
RV_{AC1}	0.575	0.596	0.510	0.596	**0.610**	0.594	**0.485**	0.417	0.433	0.471	0.404	0.472
RV_{TS}	0.617	0.170	**0.671**	0.626	0.413	0.632	**0.547**	0.462	0.529	0.533	0.448	0.535
RV_{TSd}	0.653	0.509	0.619	**0.673**	0.622	**0.672**	**0.556**	0.478	0.460	0.533	0.468	0.534
$\overline{RV}$	0.612	0.145	**0.672**	0.620	0.396	0.626	**0.545**	0.459	0.530	0.531	0.446	0.533

Table continued on next page ...

One-years out-of-sample (Cont.)

	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$	RV	RV_{AC1}	RV_{NW}	RV_{TS}	RV_{TSd}	$\overline{RV}$
	One-minute returns						Five-minute returns					
						Stock: SBC						
RV	0.702	0.599	0.591	0.705	**0.720**	0.702	0.554	0.407	0.491	**0.597**	0.525	**0.597**
RV_{AC1}	0.565	0.613	0.329	0.577	**0.668**	0.566	0.544	0.480	0.505	**0.563**	**0.567**	**0.562**
RV_{TS}	0.694	0.588	0.574	0.697	**0.716**	0.694	0.567	0.417	0.474	**0.607**	0.533	**0.607**
RV_{TSd}	0.521	0.512	0.292	0.537	**0.651**	0.526	0.561	0.454	0.456	**0.592**	0.562	**0.592**
$\overline{RV}$	0.699	0.591	0.587	0.702	**0.717**	0.699	0.567	0.418	0.477	**0.607**	0.534	**0.607**
						Stock: T						
RV	0.486	0.290	**0.523**	0.485	0.213	0.502	0.418	0.298	0.282	0.406	0.393	0.406
RV_{AC1}	0.323	0.417	0.216	0.348	**0.436**	0.334	**0.356**	0.295	−0.028	**0.357**	**0.362**	**0.356**
RV_{TS}	0.501	0.362	0.499	**0.507**	0.308	**0.516**	0.405	0.274	0.271	0.397	0.384	0.397
RV_{TSd}	0.361	0.450	0.244	0.389	**0.480**	0.374	**0.362**	0.253	0.205	0.358	0.353	0.358
$\overline{RV}$	0.495	0.318	**0.518**	0.495	0.245	**0.510**	0.406	0.273	0.278	0.397	0.384	0.398
						Stock: UTX						
RV	**0.488**	0.451	**0.481**	**0.484**	**0.483**	**0.484**	**0.442**	0.358	0.385	0.429	0.423	0.429
RV_{AC1}	**0.454**	**0.449**	0.442	**0.451**	**0.456**	**0.451**	**0.327**	0.279	0.221	0.308	**0.325**	0.308
RV_{TS}	**0.493**	0.452	**0.488**	**0.490**	**0.487**	**0.489**	**0.454**	0.369	0.402	0.442	0.433	0.442
RV_{TSd}	**0.489**	0.454	**0.480**	**0.485**	**0.486**	**0.485**	**0.401**	0.331	0.310	0.382	**0.391**	0.382
$\overline{RV}$	**0.494**	0.452	**0.488**	**0.490**	**0.487**	**0.490**	**0.454**	0.369	0.403	0.442	0.433	0.442
						Stock: WMT						
RV	**0.579**	**0.578**	0.548	**0.578**	0.532	**0.578**	0.428	0.407	0.351	0.424	0.421	0.424
RV_{AC1}	0.481	**0.534**	0.408	0.485	0.487	0.480	0.306	**0.337**	0.271	0.288	0.297	0.289
RV_{TS}	**0.582**	**0.585**	0.546	**0.581**	0.543	**0.580**	0.468	0.451	0.390	0.467	0.465	0.467
RV_{TSd}	0.540	0.588	0.451	0.546	0.577	0.540	0.402	0.402	0.325	0.400	0.404	0.400
$\overline{RV}$	**0.583**	**0.581**	0.553	**0.582**	0.536	**0.582**	0.468	0.452	0.392	0.467	0.465	0.467
						Stock: XOM						
RV	**0.781**	0.644	0.768	**0.772**	0.761	**0.771**	0.642	0.563	**0.723**	**0.729**	0.681	**0.730**
RV_{AC1}	0.712	**0.746**	**0.749**	0.718	0.683	0.720	0.655	0.728	0.620	0.787	**0.808**	0.786
RV_{TS}	**0.793**	0.661	0.777	**0.786**	0.778	**0.785**	0.710	0.582	0.747	**0.774**	0.714	**0.774**
RV_{TSd}	**0.764**	0.639	0.735	**0.757**	0.754	**0.755**	0.682	0.650	0.682	**0.780**	0.763	**0.780**
$\overline{RV}$	**0.795**	0.664	0.780	**0.787**	0.779	**0.787**	0.710	0.581	0.747	**0.774**	0.714	**0.774**