

Qonlab Simulation Results

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1. results/combined/aligned_breaks_20260213_013233.tex

Complete Structural Break Forecasting Results

Method	RMSE	MAE	Bias	Variance	Successes	Failures	Break Type	Innovation
SARIMA Global	2.0476	1.6263	0.2020	4.1516	300	0	Single	Gaussian
GARCH	2.0535	1.6338	0.2024	4.1759	300	0	Single	Gaussian
SARIMA Rolling	2.0678	1.6504	0.1789	4.2439	300	0	Single	Gaussian
SARIMA Avg-Window	2.0678	1.6504	0.1789	4.2439	300	0	Single	Gaussian
SARIMA Global	2.2351	1.5565	0.1890	4.9598	300	0	Single	Student-t(df=5)
GARCH	2.2438	1.5575	0.1922	4.9975	300	0	Single	Student-t(df=5)
SARIMA Rolling	2.2703	1.6086	0.1681	5.1258	300	0	Single	Student-t(df=5)
SARIMA Avg-Window	2.2703	1.6086	0.1681	5.1258	300	0	Single	Student-t(df=5)
GARCH	2.0311	1.3335	0.2884	4.0421	300	0	Single	Student-t(df=3)
SARIMA Global	2.0378	1.3493	0.2924	4.0670	300	0	Single	Student-t(df=3)
SARIMA Rolling	2.0948	1.4147	0.2680	4.3164	300	0	Single	Student-t(df=3)
SARIMA Avg-Window	2.0948	1.4147	0.2680	4.3164	300	0	Single	Student-t(df=3)
MS AR(1)	1.6031	1.2303	-0.1114	2.5575	300	0	Recurring (p=0.95)	N
SARIMA Global	1.6202	1.2502	-0.0986	2.6152	300	0	Recurring (p=0.95)	N
SARIMA Rolling	1.6405	1.2669	-0.0934	2.6826	300	0	Recurring (p=0.95)	N
SARIMA Avg-Window	1.6405	1.2669	-0.0934	2.6826	300	0	Recurring (p=0.95)	N

2. results/combined/aligned_breaks_20260213_015343.tex

Complete Structural Break Forecasting Results

Method	RMSE	MAE	Bias	Variance	Successes	Failures	Break Type	Innovation N	Fails	Persistence
SARIMA Global	2.0476	1.6263	0.2020	4.1516	300.0000	0.0000	Single	Gaussian	NaN	NaN
GARCH	2.0535	1.6338	0.2024	4.1759	300.0000	0.0000	Single	Gaussian	NaN	NaN
SARIMA Rolling	2.0678	1.6504	0.1789	4.2439	300.0000	0.0000	Single	Gaussian	NaN	NaN
SARIMA Average Window	2.0678	1.6504	0.1789	4.2439	300.0000	0.0000	Single	Gaussian	NaN	NaN
SARIMA Global	2.2851	1.5565	0.1890	4.9598	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
GARCH	2.2438	1.5575	0.1922	4.9975	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
SARIMA Rolling	2.2703	1.6086	0.1681	5.1258	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
SARIMA Average Window	2.2703	1.6086	0.1681	5.1258	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
GARCH	2.0311	1.3335	0.2884	4.0421	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
SARIMA Global	2.2878	1.3493	0.2924	4.0670	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
SARIMA Rolling	2.2948	1.4147	0.2680	4.3164	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
SARIMA Average Window	2.2948	1.4147	0.2680	4.3164	300.0000	0.0000	Single	Student-t(45)	NaN	NaN
MS AR(1)	1.6031	1.2303	-0.1114	2.5575	300.0000	0.0000	Recurring (p=1)	NaN	NaN	NaN
SARIMA Global	1.2202	1.2502	-0.0986	2.6152	300.0000	0.0000	Recurring (p=1)	NaN	NaN	NaN
SARIMA Rolling	1.1605	1.2669	-0.0934	2.6826	300.0000	0.0000	Recurring (p=1)	NaN	NaN	NaN
SARIMA Average Window	1.1605	1.2669	-0.0934	2.6826	300.0000	0.0000	Recurring (p=1)	NaN	NaN	NaN
SARIMA + Break Dummy (p=1, k=1)	1.2270	0.9162	0.1522	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
Simple Exp. Smoothing (SES)	1.2572	0.9293	0.0017	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
SARIMA Global	1.2766	1.0190	0.4633	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
SARIMA Rolling	1.2686	1.0291	0.2303	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
SARIMA + Break Dummy (p=1, k=2)	1.2416	0.8461	0.2153	NaN	NaN	NaN	NaN	Student-t(35)	300.0000	0.0000
Simple Exp. Smoothing (SES)	1.2259	0.9254	0.1228	NaN	NaN	NaN	NaN	Student-t(35)	300.0000	0.0000
SARIMA Rolling	1.2322	0.9301	0.2966	NaN	NaN	NaN	NaN	Student-t(35)	300.0000	0.0000
SARIMA Global	1.2585	0.9570	0.5498	NaN	NaN	NaN	NaN	Student-t(35)	300.0000	0.0000
SARIMA + Break Dummy (p=1, k=3)	1.2537	0.8651	0.1660	NaN	NaN	NaN	NaN	Student-t(33)	300.0000	0.0000
SARIMA Rolling	1.2678	1.0010	0.2374	NaN	NaN	NaN	NaN	Student-t(33)	300.0000	0.0000
Simple Exp. Smoothing (SES)	1.2918	0.9292	-0.0177	NaN	NaN	NaN	NaN	Student-t(33)	300.0000	0.0000
SARIMA Global	1.3133	1.0214	0.4816	NaN	NaN	NaN	NaN	Student-t(33)	300.0000	0.0000
MS AR(1)	1.1071	0.9036	0.0165	1.2255	300.0000	0.0000	Recurring (p=1)	NaN	NaN	NaN
ARIMA Global	1.1253	0.9019	0.1931	1.2290	300.0000	0.0000	Recurring (p=1)	NaN	NaN	NaN
MS AR	1.0735	0.8456	0.0353	1.1512	NaN	NaN	NaN	Gaussian	NaN	NaN
Rolling SARIMA	1.0950	0.8651	0.0433	1.1971	NaN	NaN	NaN	Gaussian	NaN	NaN
Global SARIMA	1.0702	0.9297	0.0288	1.3685	NaN	NaN	NaN	Gaussian	NaN	NaN
MS AR	0.9653	0.7309	0.0408	0.9302	NaN	NaN	NaN	Student-t(45)	NaN	NaN
Rolling SARIMA	0.9781	0.7510	0.0143	0.9565	NaN	NaN	NaN	Student-t(45)	NaN	NaN
Global SARIMA	1.0476	0.8032	0.0124	1.0973	NaN	NaN	NaN	Student-t(45)	NaN	NaN
Rolling SARIMA	0.9406	0.6792	0.0212	0.8287	NaN	NaN	NaN	Student-t(45)	NaN	NaN

Method	RMSE	MAE	Bias	Variance	Successes	Failures	Break Type	Innovation N	Fails	Persistence
MS AR	1.0502	0.7118	-0.0138	1.1027	NaN	NaN	NaN	Student-t(df=4)	NaN	NaN
Global SARIMAX	1.0931	0.7951	0.0526	1.1921	NaN	NaN	NaN	Student-t(df=4)	NaN	NaN
MS AR	1.1426	0.8922	0.0253	1.3049	NaN	NaN	NaN	NaN	NaN	0.9000
Global SARIMAX	1.1695	0.9117	0.0041	1.3676	NaN	NaN	NaN	NaN	NaN	0.9000
Rolling SARIMAX	1.1875	0.9257	0.0059	1.4100	NaN	NaN	NaN	NaN	NaN	0.9000
MS AR	1.0778	0.8570	0.0408	1.1600	NaN	NaN	NaN	NaN	NaN	0.9500
Rolling SARIMAX	1.1215	0.8990	-0.0027	1.2578	NaN	NaN	NaN	NaN	NaN	0.9500
Global SARIMAX	1.1238	0.8952	-0.0114	1.2627	NaN	NaN	NaN	NaN	NaN	0.9500
MS AR	1.0318	0.8043	-0.0102	1.0645	NaN	NaN	NaN	NaN	NaN	0.9900
Rolling SARIMAX	1.0668	0.8408	-0.0122	1.1380	NaN	NaN	NaN	NaN	NaN	0.9900
Global SARIMAX	1.0974	0.8515	-0.0582	1.2009	NaN	NaN	NaN	NaN	NaN	0.9900

3. results/combined/aligned_breaks_20260213_021737.tex

Complete Structural Break Forecasting Results

Method	RMSE	MAE	Bias	Variance	Successes	Failures	Break Type	Innovation N	Fails	Persistence
SARIMA Global	2.0476	1.6263	0.2020	4.1516	300.0000	0.0000	Single	Gaussian	NaN	NaN
GARCH	2.0535	1.6338	0.2024	4.1759	300.0000	0.0000	Single	Gaussian	NaN	NaN
SARIMA Rolling	2.0678	1.6504	0.1789	4.2439	300.0000	0.0000	Single	Gaussian	NaN	NaN
SARIMA Average Window	2.0678	1.6504	0.1789	4.2439	300.0000	0.0000	Single	Gaussian	NaN	NaN
SARIMA Global	2.2851	1.5565	0.1890	4.9598	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
GARCH	2.2438	1.5575	0.1922	4.9975	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
SARIMA Rolling	2.2703	1.6086	0.1681	5.1258	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
SARIMA Average Window	2.2703	1.6086	0.1681	5.1258	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
GARCH	2.0311	1.3335	0.2884	4.0421	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
SARIMA Global	2.2878	1.3493	0.2924	4.0670	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
SARIMA Rolling	2.2948	1.4147	0.2680	4.3164	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
SARIMA Average Window	2.2948	1.4147	0.2680	4.3164	300.0000	0.0000	Single	Student-t(df=45)	NaN	NaN
MS AR(1)	1.6031	1.2303	-0.1114	2.5575	300.0000	0.0000	Recurring (p=10)	NaN	NaN	NaN
SARIMA Global	1.2202	1.2502	-0.0986	2.6152	300.0000	0.0000	Recurring (p=10)	NaN	NaN	NaN
SARIMA Rolling	1.1605	1.2669	-0.0934	2.6826	300.0000	0.0000	Recurring (p=10)	NaN	NaN	NaN
SARIMA Average Window	1.1605	1.2669	-0.0934	2.6826	300.0000	0.0000	Recurring (p=10)	NaN	NaN	NaN
SARIMA + Break Dummy (p=10, Scale T0)	1.2270	0.9162	0.1522	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
Simple Exp. Smoothing (SES)	1.2572	0.9293	0.0017	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
SARIMA Global	1.2766	1.0190	0.4633	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
SARIMA Rolling	1.1286	1.0291	0.2303	NaN	NaN	NaN	NaN	Gaussian	300.0000	0.0000
SARIMA + Break Dummy (p=10, Scale T0)	1.2860	0.9096	0.1119	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
SARIMA Rolling	1.1039	1.0055	0.2142	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
Simple Exp. Smoothing (SES)	1.3450	0.9325	-0.0090	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
SARIMA Global	1.2554	1.0294	0.4408	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
SARIMA + Break Dummy (p=10, Scale T0)	1.2820	0.7766	0.0805	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
Simple Exp. Smoothing (SES)	1.3509	0.9151	-0.0135	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
SARIMA Global	1.2726	0.9878	0.4177	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
SARIMA Rolling	1.1049	0.9544	0.1789	NaN	NaN	NaN	NaN	Student-t(df=30)	300.0000	0.0000
MS AR(1)	1.1071	0.9036	0.0165	1.2255	300.0000	0.0000	Recurring (p=10)	NaN	NaN	NaN
ARIMA Global	1.1253	0.9019	0.1931	1.2290	300.0000	0.0000	Recurring (p=10)	NaN	NaN	NaN
MS AR	1.0735	0.8456	0.0353	1.1512	NaN	NaN	NaN	Gaussian	NaN	NaN
Rolling SARIMA	1.0950	0.8651	0.0433	1.1971	NaN	NaN	NaN	Gaussian	NaN	NaN
Global SARIMA	1.0702	0.9297	0.0288	1.3685	NaN	NaN	NaN	Gaussian	NaN	NaN
MS AR	0.9653	0.7309	0.0408	0.9302	NaN	NaN	NaN	Student-t(df=45)	NaN	NaN
Rolling SARIMA	0.9781	0.7510	0.0143	0.9565	NaN	NaN	NaN	Student-t(df=45)	NaN	NaN
Global SARIMA	1.0476	0.8032	0.0124	1.0973	NaN	NaN	NaN	Student-t(df=45)	NaN	NaN
Rolling SARIMA	0.9406	0.6792	0.0212	0.8287	NaN	NaN	NaN	Student-t(df=45)	NaN	NaN

Method	RMSE	MAE	Bias	Variance	Successes	Failures	Break Type	Innovation N	Fails	Persistence
MS AR	1.0502	0.7118	-0.0138	1.1027	NaN	NaN	NaN	Student-t(df=4)	NaN	NaN
Global SARIMAX	1.0931	0.7951	0.0526	1.1921	NaN	NaN	NaN	Student-t(df=4)	NaN	NaN
MS AR	1.1426	0.8922	0.0253	1.3049	NaN	NaN	NaN	NaN	NaN	0.9000
Global SARIMAX	1.1695	0.9117	0.0041	1.3676	NaN	NaN	NaN	NaN	NaN	0.9000
Rolling SARIMAX	1.1875	0.9257	0.0059	1.4100	NaN	NaN	NaN	NaN	NaN	0.9000
MS AR	1.0778	0.8570	0.0408	1.1600	NaN	NaN	NaN	NaN	NaN	0.9500
Rolling SARIMAX	1.1215	0.8990	-0.0027	1.2578	NaN	NaN	NaN	NaN	NaN	0.9500
Global SARIMAX	1.1238	0.8952	-0.0114	1.2627	NaN	NaN	NaN	NaN	NaN	0.9500
MS AR	1.0318	0.8043	-0.0102	1.0645	NaN	NaN	NaN	NaN	NaN	0.9900
Rolling SARIMAX	1.0668	0.8408	-0.0122	1.1380	NaN	NaN	NaN	NaN	NaN	0.9900
Global SARIMAX	1.0974	0.8515	-0.0582	1.2009	NaN	NaN	NaN	NaN	NaN	0.9900

4. results/tex/mean_recurring_20260213_012109_MarkovSwitching.tex

Mean Recurring Results - MarkovSwitching

Method	RMSE	MAE	Bias	Variance	Successes
MS AR(1)	1.1071	0.9036	0.0165	1.2255	300
ARIMA Global	1.1253	0.9019	0.1931	1.2290	300

5. results/tex/mean_recurring_20260213_015628_MarkovSwitching.tex

Mean Recurring Results - MarkovSwitching

Method	RMSE	MAE	Bias	Variance	Successes
MS AR(1)	1.1071	0.9036	0.0165	1.2255	300
ARIMA Global	1.1253	0.9019	0.1931	1.2290	300

6. results/tex/mean_single_20260213_011953_Gaussian.tex

Mean Single Results - Gaussian

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.1276	0.9194	0.1522
Simple Exp. Smoothing (SES)	1.2572	1.0213	0.0017
SARIMA Global	1.2766	1.0190	0.4633
SARIMA Rolling	1.2886	1.0291	0.2303

7. results/tex/mean_single_20260213_011953_Student-tdf3.tex

Mean Single Results - Student-tdf3

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.1537	0.8650	0.1660
SARIMA Rolling	1.2878	1.0010	0.2374
Simple Exp. Smoothing (SES)	1.2918	1.0042	-0.0177
SARIMA Global	1.3133	1.0214	0.4816

8. results/tex/mean_single_20260213_011953_Student-tdf5.tex

Mean Single Results - Student-tdf5

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.1196	0.8401	0.2153
Simple Exp. Smoothing (SES)	1.2259	0.9454	0.1228
SARIMA Rolling	1.2322	0.9301	0.2966
SARIMA Global	1.2585	0.9570	0.5498

9. results/tex/mean_single_20260213_013233_Gaussian.tex

Mean Single Results - Gaussian

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.1276	0.9194	0.1522
Simple Exp. Smoothing (SES)	1.2572	1.0213	0.0017
SARIMA Global	1.2766	1.0190	0.4633
SARIMA Rolling	1.2886	1.0291	0.2303

10. results/tex/mean_single_20260213_013233_Student-tdf3.tex

Mean Single Results - Student-tdf3

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.2033	0.8671	0.1275
Simple Exp. Smoothing (SES)	1.2944	0.9644	-0.0107
SARIMA Rolling	1.3027	0.9245	0.2095
SARIMA Global	1.3140	0.9735	0.4617

11. results/tex/mean_single_20260213_013233_Student-tdf5.tex

Mean Single Results - Student-tdf5

Method	RMSE	MAE	Bias
Simple Exp. Smoothing (SES)	1.1396	0.8966	0.1019
SARIMA + Break Dummy (oracle Tb)	1.1571	0.8859	0.2157
SARIMA Rolling	1.2232	0.9654	0.3053
SARIMA Global	1.2914	1.0177	0.5385

12. results/tex/mean_single_20260213_015518_Gaussian.tex

Mean Single Results - Gaussian

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.1276	0.9194	0.1522
Simple Exp. Smoothing (SES)	1.2572	1.0213	0.0017
SARIMA Global	1.2766	1.0190	0.4633
SARIMA Rolling	1.2886	1.0291	0.2303

13. results/tex/mean_single_20260213_015518_Student-tdf3.tex

Mean Single Results - Student-tdf3

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.2826	0.8766	0.0805
Simple Exp. Smoothing (SES)	1.3539	0.9471	-0.0135
SARIMA Global	1.3726	0.9878	0.4177
SARIMA Rolling	1.3749	0.9544	0.1789

14. results/tex/mean_single_20260213_015518_Student-tdf5.tex

Mean Single Results - Student-tdf5

Method	RMSE	MAE	Bias
SARIMA + Break Dummy (oracle Tb)	1.1866	0.9096	0.1119
SARIMA Rolling	1.3339	1.0055	0.2142
Simple Exp. Smoothing (SES)	1.3456	1.0325	-0.0090
SARIMA Global	1.3554	1.0294	0.4408

15. results/tex/parameter_recurring_20260213_015343_p09.tex

Parameter Recurring Results - p09

Method	RMSE	MAE	Bias	Variance
MS AR	1.1426	0.8922	0.0253	1.3049
Global SARIMA	1.1695	0.9117	0.0041	1.3676
Rolling SARIMA	1.1875	0.9257	0.0059	1.4100

16. results/tex/parameter_recurring_20260213_015343_p095.tex

Parameter Recurring Results - p095

Method	RMSE	MAE	Bias	Variance
MS AR	1.0778	0.8570	0.0408	1.1600
Rolling SARIMA	1.1215	0.8990	-0.0027	1.2578
Global SARIMA	1.1238	0.8952	-0.0114	1.2627

17. results/tex/parameter_recurring_20260213_015343_p099.tex

Parameter Recurring Results - p099

Method	RMSE	MAE	Bias	Variance
MS AR	1.0318	0.8043	-0.0102	1.0645
Rolling SARIMA	1.0668	0.8408	-0.0122	1.1380
Global SARIMA	1.0974	0.8515	-0.0582	1.2009

18. results/tex/parameter_recurring_20260213_021737_p09.tex

Parameter Recurring Results - p09

Method	RMSE	MAE	Bias	Variance
MS AR	1.1426	0.8922	0.0253	1.3049
Global SARIMA	1.1695	0.9117	0.0041	1.3676
Rolling SARIMA	1.1875	0.9257	0.0059	1.4100

19. results/tex/parameter_recurring_20260213_021737_p095.tex

Parameter Recurring Results - p095

Method	RMSE	MAE	Bias	Variance
MS AR	1.0778	0.8570	0.0408	1.1600
Rolling SARIMA	1.1215	0.8990	-0.0027	1.2578
Global SARIMA	1.1238	0.8952	-0.0114	1.2627

20. results/tex/parameter_recurring_20260213_021737_p099.tex

Parameter Recurring Results - p099

Method	RMSE	MAE	Bias	Variance
MS AR	1.0318	0.8043	-0.0102	1.0645
Rolling SARIMA	1.0668	0.8408	-0.0122	1.1380
Global SARIMA	1.0974	0.8515	-0.0582	1.2009

21. results/tex/parameter_single_20260213_013937_Gaussian.tex

Parameter Single Results - Gaussian

Method	RMSE	MAE	Bias	Variance
MS AR	1.0735	0.8456	0.0353	1.1512
Rolling SARIMA	1.0950	0.8651	0.0433	1.1971
Global SARIMA	1.1702	0.9297	0.0288	1.3685

22. results/tex/parameter_single_20260213_013937_Student-tdf3.tex

Parameter Single Results - Student-tdf3

Method	RMSE	MAE	Bias	Variance
Rolling SARIMA	0.9106	0.6792	0.0212	0.8287
MS AR	1.0502	0.7118	-0.0138	1.1027
Global SARIMA	1.0931	0.7951	0.0526	1.1921

23. results/tex/parameter_single_20260213_013937_Student-tdf5.tex

Parameter Single Results - Student-tdf5

Method	RMSE	MAE	Bias	Variance
MS AR	0.9653	0.7309	0.0408	0.9302
Rolling SARIMA	0.9781	0.7510	0.0143	0.9565
Global SARIMA	1.0476	0.8032	0.0124	1.0973

24. results/tex/parameter_single_20260213_020532_Gaussian.tex

Parameter Single Results - Gaussian

Method	RMSE	MAE	Bias	Variance
MS AR	1.0735	0.8456	0.0353	1.1512
Rolling SARIMA	1.0950	0.8651	0.0433	1.1971
Global SARIMA	1.1702	0.9297	0.0288	1.3685

25. results/tex/parameter_single_20260213_020532_Student-tdf3.tex

Parameter Single Results - Student-tdf3

Method	RMSE	MAE	Bias	Variance
Rolling SARIMA	0.9106	0.6792	0.0212	0.8287
MS AR	1.0502	0.7118	-0.0138	1.1027
Global SARIMA	1.0931	0.7951	0.0526	1.1921

26. results/tex/parameter_single_20260213_020532_Student-tdf5.tex

Parameter Single Results - Student-tdf5

Method	RMSE	MAE	Bias	Variance
MS AR	0.9653	0.7309	0.0408	0.9302
Rolling SARIMA	0.9781	0.7510	0.0143	0.9565
Global SARIMA	1.0476	0.8032	0.0124	1.0973

27. results/tex/variance_recurring_20260213_010013_MarkovSwitching.tex

Variance Recurring Results - MarkovSwitching

Method	RMSE	MAE	Bias	Variance	Successes
MS AR(1)	1.6031	1.2303	-0.1114	2.5575	300
SARIMA Global	1.6202	1.2502	-0.0986	2.6152	300
SARIMA Rolling	1.6405	1.2669	-0.0934	2.6826	300
SARIMA Avg-Window	1.6405	1.2669	-0.0934	2.6826	300

28. results/tex/variance_recurring_20260213_010858_MarkovSwitching.tex

Variance Recurring Results - MarkovSwitching

Method	RMSE	MAE	Bias	Variance	Successes
MS AR(1)	1.6031	1.2303	-0.1114	2.5575	300
SARIMA Global	1.6202	1.2502	-0.0986	2.6152	300
SARIMA Rolling	1.6405	1.2669	-0.0934	2.6826	300
SARIMA Avg-Window	1.6405	1.2669	-0.0934	2.6826	300

29. results/tex/variance_recurring_20260213_013328_MarkovSwitching.tex

Variance Recurring Results - MarkovSwitching

Method	RMSE	MAE	Bias	Variance	Successes
MS AR(1)	1.6031	1.2303	-0.1114	2.5575	300
SARIMA Global	1.6202	1.2502	-0.0986	2.6152	300
SARIMA Rolling	1.6405	1.2669	-0.0934	2.6826	300
SARIMA Avg-Window	1.6405	1.2669	-0.0934	2.6826	300

30. results/tex/variance_single_20260213_010617_Gaussian.tex

Variance Single Results - Gaussian

Method	RMSE	MAE	Bias	Variance	Successes
SARIMA Global	2.0476	1.6263	0.2020	4.1516	300
GARCH	2.0535	1.6338	0.2024	4.1759	300
SARIMA Rolling	2.0678	1.6504	0.1789	4.2439	300
SARIMA Avg-Window	2.0678	1.6504	0.1789	4.2439	300

31. results/tex/variance_single_20260213_010617_Student-tdf3.tex

Variance Single Results - Student-tdf3

Method	RMSE	MAE	Bias	Variance	Successes
GARCH	2.0311	1.3335	0.2884	4.0421	300
SARIMA Global	2.0378	1.3493	0.2924	4.0670	300
SARIMA Rolling	2.0948	1.4147	0.2680	4.3164	300
SARIMA Avg-Window	2.0948	1.4147	0.2680	4.3164	300

32. results/tex/variance_single_20260213_010617_Student-tdf5.tex

Variance Single Results - Student-tdf5

Method	RMSE	MAE	Bias	Variance	Successes
SARIMA Global	2.2351	1.5565	0.1890	4.9598	300
GARCH	2.2438	1.5575	0.1922	4.9975	300
SARIMA Rolling	2.2703	1.6086	0.1681	5.1258	300
SARIMA Avg-Window	2.2703	1.6086	0.1681	5.1258	300

33. results/tex/variance_single_20260213_012945_Gaussian.tex

Variance Single Results - Gaussian

Method	RMSE	MAE	Bias	Variance	Successes
SARIMA Global	2.0476	1.6263	0.2020	4.1516	300
GARCH	2.0535	1.6338	0.2024	4.1759	300
SARIMA Rolling	2.0678	1.6504	0.1789	4.2439	300
SARIMA Avg-Window	2.0678	1.6504	0.1789	4.2439	300

34. results/tex/variance_single_20260213_012945_Student-tdf3.tex

Variance Single Results - Student-tdf3

Method	RMSE	MAE	Bias	Variance	Successes
GARCH	2.0311	1.3335	0.2884	4.0421	300
SARIMA Global	2.0378	1.3493	0.2924	4.0670	300
SARIMA Rolling	2.0948	1.4147	0.2680	4.3164	300
SARIMA Avg-Window	2.0948	1.4147	0.2680	4.3164	300

35. results/tex/variance_single_20260213_012945_Student-tdf5.tex

Variance Single Results - Student-tdf5

Method	RMSE	MAE	Bias	Variance	Successes
SARIMA Global	2.2351	1.5565	0.1890	4.9598	300
GARCH	2.2438	1.5575	0.1922	4.9975	300
SARIMA Rolling	2.2703	1.6086	0.1681	5.1258	300
SARIMA Avg-Window	2.2703	1.6086	0.1681	5.1258	300