Monte Carlo Simulation Results

qonlab

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Tables included: 14 (latest per scenario)

Source: results/tex/*.tex

Contents

Mean (Single Breaks)

Gaussian

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

Student-t(df=3)

Mean Single Results - Student-t(df=3)

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

Student-t(df=5)

Mean Single Results - Student-t(df=5)

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

Mean (Recurring Breaks)

Markov Switching

Mean Recurring Results - Markov Switching

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

Parameter (Single Breaks)

Gaussian

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

Student-t(df=3)

Parameter Single Results - Student-t(df=3)

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

Student-t(df=5)

Parameter Single Results - Student-t(df=5)

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

Parameter (Recurring Breaks)

p=0.90

Parameter Recurring Results - p=0.90

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

p=0.905

Parameter Recurring Results - p=0.905

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

p=0.909

Parameter Recurring Results - p=0.909

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

Variance (Single Breaks)

Gaussian

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

Student-t(df=3)

Variance Single Results - Student-t(df=3)

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

Student-t(df=5)

Variance Single Results - Student-t(df=5)

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

Variance (Recurring Breaks)

Markov Switching

Variance Recurring Results - Markov Switching

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