

Seasonal adjustment summary

Pre-processing (RegArima)

Summary

372 observations

Trading days effect (7 variables)

Easter [1] detected

4 detected outliers

Likelihood statistics

Number of effective observations = 359

Number of estimated parameters = 17

Loglikelihood = -799.084, AICc = 1633.964, BICc = 1.855

Standard error of the regression (ML estimate) = 2.218

ARIMA model

Table 1: ARIMA coefficients

	Coefficients	Std. Error	T-stat	$\mathbb{P}(> t)$	
Phi(1)	0.000	0.108	0.003	0.998	
Phi(2)	0.169	0.074	2.278	0.023	*
Theta(1)	-0.549	0.102	-5.396	0.000	***
BTheta(1)	-0.666	0.042	-15.775	0.000	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

ARIMA (2,1,1)(0,1,1)

Regression model

Table 2: Regression coefficientss

	Coefficients	Std. Error	T-stat	$\mathbb{P}(> t)$	
Monday	0.559	0.228	2.453	0.015	*
Tuesday	0.882	0.228	3.864	0.000	***
Wednesday	1.040	0.229	4.535	0.000	***
Thursday	0.049	0.229	0.215	0.830	
Friday	0.911	0.230	3.964	0.000	***
Saturday	-1.578	0.228	-6.927	0.000	***
Leap year	2.154	0.705	3.054	0.002	**
Easter [1]	-2.380	0.454	-5.242	0.000	***
TC (4-2020)	-35.592	2.173	-16.377	0.000	***
AO (3-2020)	-20.890	2.180	-9.582	0.000	***
AO (5-2011)	13.499	1.857	7.269	0.000	***
LS (11-2008)	-12.549	1.636	-7.673	0.000	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Decomposition (X-11)

Mode: additive

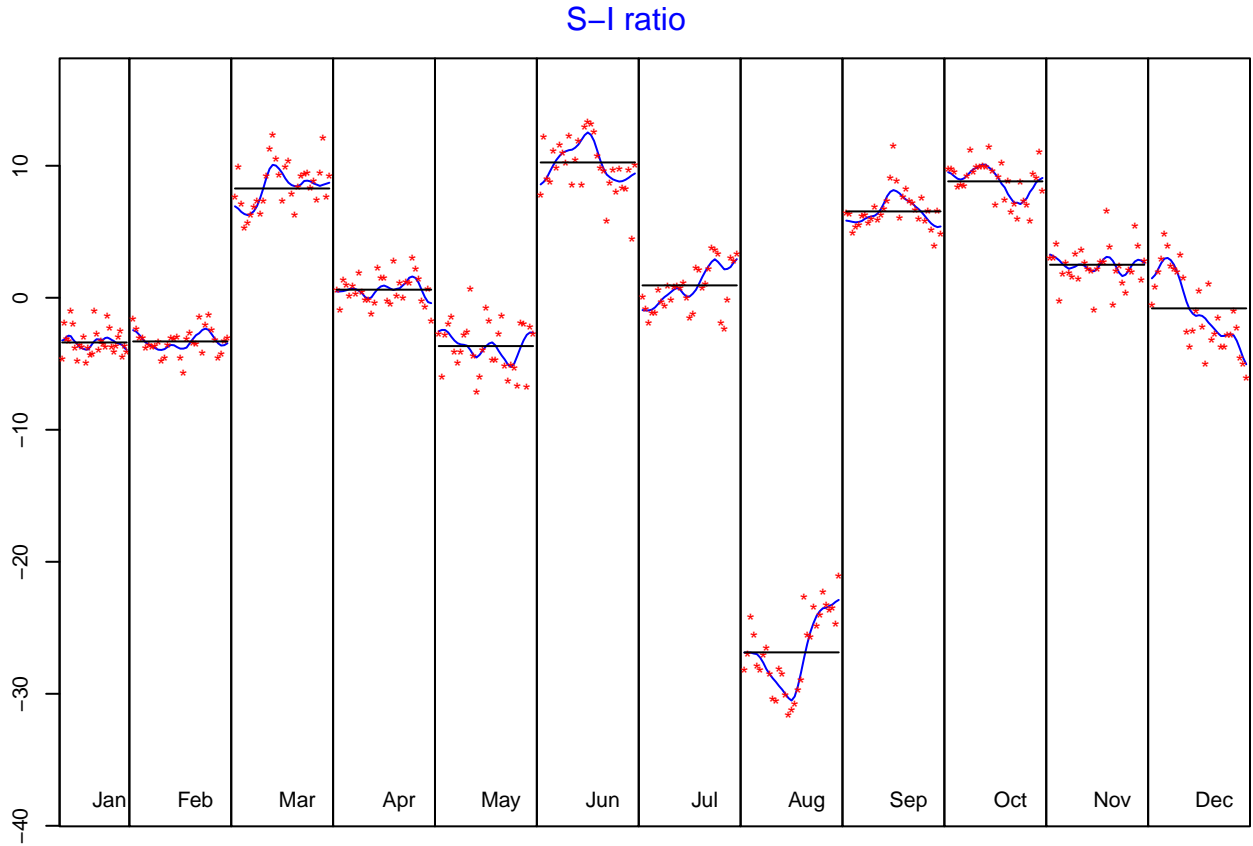


Figure 1: S-I Ratio

Table 3: M-statistics

	Value	Description
M-1	0.163	The relative contribution of the irregular over three months span
M-2	0.089	The relative contribution of the irregular component to the stationary portion of the variance
M-3	1.181	The amount of period to period change in the irregular component as compared to the amount of period to period change in the trend
M-4	0.558	The amount of autocorrelation in the irregular as described by the average duration of run
M-5	1.020	The number of periods it takes the change in the trend to surpass the amount of change in the irregular
M-6	0.090	The amount of year to year change in the irregular as compared to the amount of year to year change in the seasonal
M-7	0.083	The amount of moving seasonality present relative to the amount of stable seasonality
M-8	0.244	The size of the fluctuations in the seasonal component throughout the whole series
M-9	0.062	The average linear movement in the seasonal component throughout the whole series
M-10	0.272	The size of the fluctuations in the seasonal component in the recent years
M-11	0.256	The average linear movement in the seasonal component in the recent years
Q	0.368	
Q-M2	0.402	

Final filters: M3x5, Henderson-13 terms

Table 4: Relative contribution of the components to the stationary portion of the variance in the original series, after the removal of the long term trend

Component	
Cycle	2.251
Seasonal	59.750
Irregular	1.067
TD & Hol.	2.610
Others	33.718
Total	99.395

Table 5: Diagnostics tests

	$\mathbb{P}(> t)$	
mean	0.899	
skewness	0.880	
kurtosis	0.034	*
ljung box	0.000	***
ljung box (residuals at seasonal lags)	0.212	
ljung box (squared residuals)	0.024	*
qs test on sa	0.985	
qs test on i	0.865	
f-test on sa (seasonal dummies)	0.958	
f-test on i (seasonal dummies)	0.893	
Residual seasonality (entire series)	0.876	
Residual seasonality (last 3 years)	0.906	
f-test on sa (td)	0.987	
f-test on i (td)	0.993	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1