Impact of Dual Class and single class on the selected top market capitalized companies

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ABSTRACT

Dual class listing of Class A and Class B offers variety of benefits to promoters, founders than general public with Class B shares ,this study has an objective to stationarize and normalize the share prices of selected dual listed companies and to correlate and regress the top market capitalized dual list companies and comparing the Indian DVRs with Foreign DLS. Pearson Correlation, ADF, ARIMA and Averages are applied to achieve the objectives and outcome of the paper indicates that Future DVR, Gujarat DVR, Jain Irrigation, Tata Motors DVR are stationary as per Durban Watson statistics and   there are 24 negatively correlated and 42 positive correlated values where negative correlation is used for construction and forecasting of the top capitalized different class shares.

Introduction
Statement of the problem
The statement includes the study regarding the pricing differentials and voting rights of majorityshareholders in dual listing of stocks in Indian companies and their impact.
Aim of the Study
1) To examine and analysis the normality and stationary test of selected dual listedcompanies
2) To correlate the selected top market capitalized companies.

3) To regress the price of the selected Top Capitalized market.

Formation of Hypothesis

Null Hypothesis (H0): There is no effect of dual class listing share prices on selected topcapitalized companies.

Alternative Hypothesis (H1): There is an effect of dual class listing on the share prices on selected top capitalized companies.

LITERATURE REVIEW

1.   (F. Huang, 2017):   Observed that the study facilitates in understanding the reason why the leading financial centres have different views towards Dual class shares (DCS), by focusing on the company law, voting rights and listing rules with respect to DCS. For the purpose of analysis top five developed markets for trading listed securities are considered. The study reveals that the top 5 global financial centres have changed their rules to allow DCS which becomes challenging to other jurisdictions whether to relax the ban on DCS.

2.   (Zhou, 2017): Observed that the study facilitates in understanding the dual-class firms in terms of the dimensions of determinants, pricing, performance and the level of corporate governance. The study mainly gives us an insight of under-pricing of Chinese dual-class firms that is the firms are 30.42% more under-priced than Chinese single-class firm and also reveals that the insiders of dual-class firms retain control with them and due to inequality of voting rights leads to agency conflicts between shareholders and management.

3.   (McGuire et al., 2014) : In this study the researcher enables in analysing whether the difference between voting rights and cash flow rights   in a dual class firms influences the level of firm' s tax avoidance. For the purpose of the study Heckman (1979) model and OLS regression (Multivariate model) is used. Firms' s profitability from foreign operations, profitability from foreign operations and loss intensity is considered. The study concludes that the difference between the voting rights and cash flow is associated with higher effective tax and cash rates and indicates that managers with excessive control rights engage in significantly less tax avoidance.

4.   (Maury & Pajuste, 2011): Observed that the authors objective of the study is to examine the decision to unify dual- class shares into a single class by considering 382 firms from seven European countries. The methodology used for the study is regression. And to measure consequences of the unification valuation measure industry-adjusted MTB. Various corporate governance variables such as ownership rights, control rights, cross-listing etc. are considered. The study concludes that the firms with a larger need for external capital are more likely to unify their share classes and has revealed that there is no significant difference in the operating performance between DLS and SLS.

5.   (Doidge, 2004) : Observed that the study facilitates in understanding the private benefits of control decrease when non-US firms cross-list their shares in US through depository receipts(ADR). Mainly focuses on the voting premium which is calculated from averaging weekly closing price data. The methodology used for the study is regression, The Breusch – Pagan Lagrange multiplier test which helps in identifying the impact of both country and firm while allowing cross listing. The study concludes that the firm that cross list in the US via Level 2 or 3 ADR program have lower voting premium ($< 43\%$) than firms that did not list in US.

6.   (Amoako-Adu & Smith, 2001): Observed that the author has examined the changes in capitalization an control of dual class firms before and after IPO. The methodology used for the purpose of study is logit regression model to examine the factors to choose between dual and single class equity structure at the time of IPO. The study reveal that the choice of dual class structure at the time of IPO is related to the type of controlling shareholders and also the owners previous use of dual class shares tends to positively affect the probability of adopting dual class capitalization.

Data analysis
Table 1:showing Correlation values of the all the companies

	FUTURE	GUJURAT	JAIN	TATA	HDFC	ITC	RELIANCE	TCS	AMRC	FORD	NACCO
FUTURE	1										
GUJURAT	6.10E-05	1									
JAIN	0.0037	0.0119	1								
TATA	-0.005	0.004	0.259	1							
HDFC	0.0037	0.019	0.1995	0.0149	1						
ITC	-0.0022	-0.0017	0.0769	0.0306	0.052	1					
RELIANCE	-0.0183	-0.0184	0.1209	0.05779	0.06451	0.11311	1				
TCS	0.0054	-0.0435	0.0295	0.0518	0.0702	0.1218	0.1658	1			
AMRC	-0.0584	0.0306	-0.061	-0.0548	0.0149	-0.0328	0.0085	-0.019	1		
FORD	-0.012	0.0259	-0.007	0.0033	0.0161	0.0423	0.0202	0.0042	0.2751	1	
NACCO	- 0.0227	0.03522	-0.009	- 0.0272	- 0.0273	- 0.0072	0.01013	-0.007	0.0209	-0.079	1
SENEA	0.0537	-0.0387	0.0079	0.0253	0.0079	0.0069	-0.0026	-0.015	0.0295	0.0033	

**Table 2 : showing optimal ARIMA model with its lowest Akaike and schwarzvalues.**

Company	Akaike	Schwarz	P,d,q
Future DVR	13903.5	13926.3	0,1,2
Jain DVR	5605.48	5621.5	1,0,0
Gujarat DVR	2240.51	2257.18	0,1,1
Tata Motors DVR	17059.8	17082.5	1,1,1
HDFC	25938.9	25956.3	0,1,1
ITC	15842.8	15860.2	1,1,1

RIL	25303.8	25321.3	0,1,1
TCS	23602.9	23620.3	0,1,1
Seneca Food Mart	4567.33	4590.08	1,1,1
Ameresco	115.642	137.003	2,1,0
Nacco Industry	2500.25	2516.93	0,1,1
Ford Motors	-238.975	-203.992	2,1,2

Interpretation:

The above table shows the information criteria and the selection is based on Akaike information and bayesian information criteria formally known as AIC and BIC and as per this model the least information prices are considered as best and optimum model.

Graph 1: showing prediction of Future DVR for 5 months
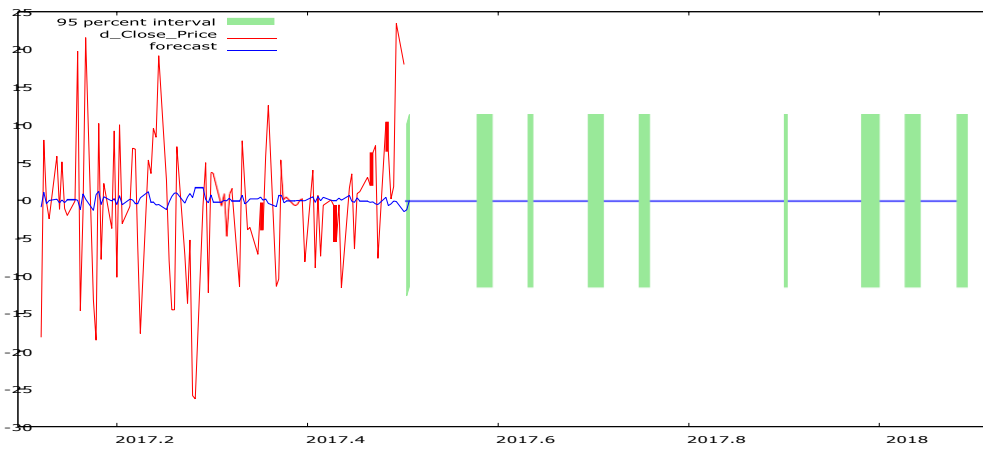
Interpretation:

From the model it is concluded that the best model as per AIC and BIC is at ARIMA (0, 1,2) where the AIC and BIC numbers are minimal compared to other ARIMA (p,d,q) which was tested. The forecast of Future DVR is optimum at the above p,d, q which is more accurate in value and less in volatility.

Graph 2: showing prediction of Jain DVR for 3 months
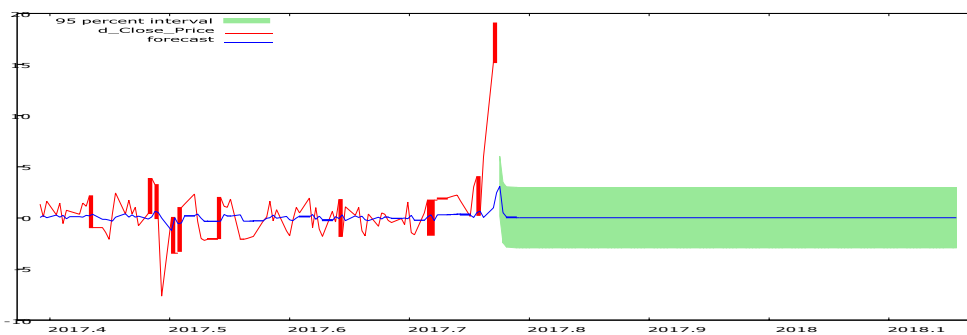
Interpretation:

As per the ARIMA econometric forecasted technique applied for Jain DVR the best model is obtained at AR(1) Interaction(0) and MA(0) where the information criteria is very minimal compared to other p,d,q levels applied which is considered for predictive analysis of Jainirrigation projects.
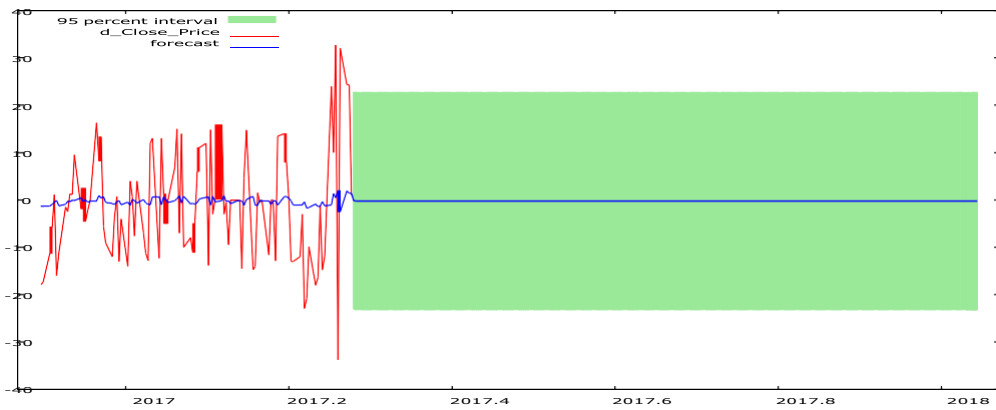
Graph 3: showing prediction of Gujarat DVR for 4 months
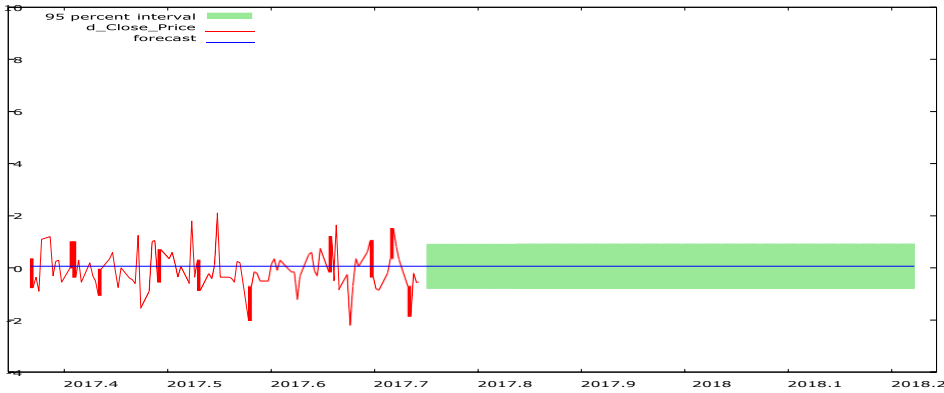
Interpretation:

The model at ARIMA (0,1,1) was considered optimum compared to other models used for testing the prices of Gujarat DVR. The model proved to be successful for prediction at above level based on AIC and BIC least numbers.
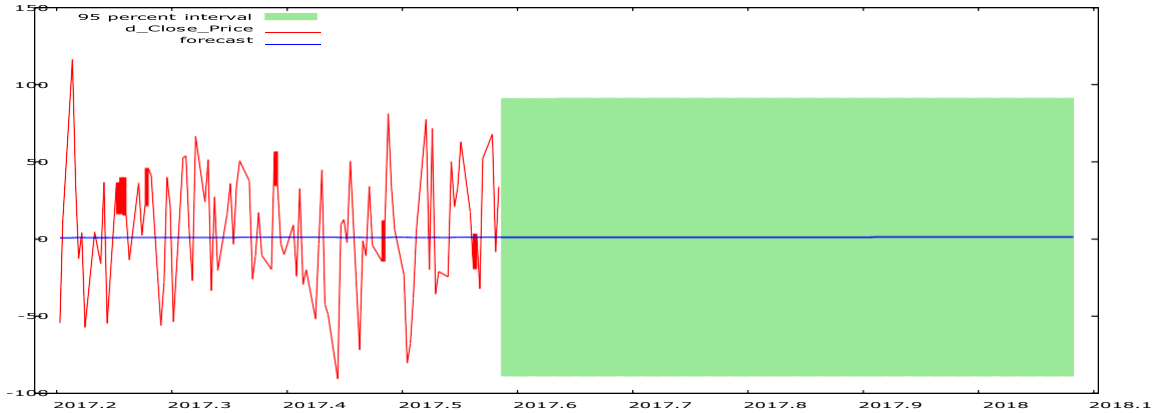
Graph 4: showing prediction of Tata Motors DVR for 4 months

Interpretation:

As per the ARIMA forecasting technique applied it proved effective at ARIMA (1,1,1) where the AIC and BIC are minimal where the volatility will be least compared to other models applied for the study

Graph 5: showing prediction of HDFC for 5 months

Interpretation:

As per the ADF test the ARIMA(0,1,1) proved as best model which is stionarity at the said levels and effective at these levels compared to other p,d,q and it is stationary at first order of difference where the seasonality and irregularities are removed for predictive analysis of HDFC.

Graph 6: showing prediction of TC for 6 months
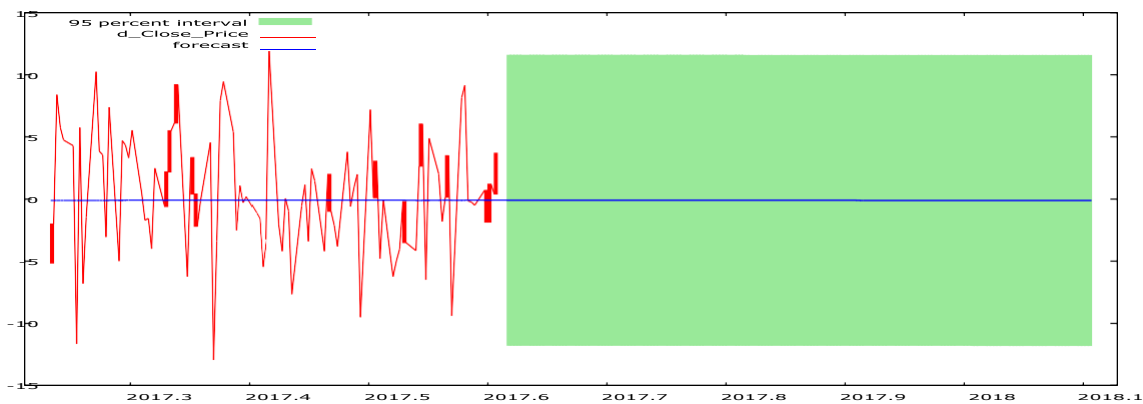
Interpretation:

As per the modern econometric technique to check the stionarity i.e ADF the prices of ITC is stationarized at first order of difference removing the irregularities and making the mean as zero, variance constant and taken out the effect of Auto correlation.

Graph 7: showing prediction of Reliance Industry Ltd. for 6 months
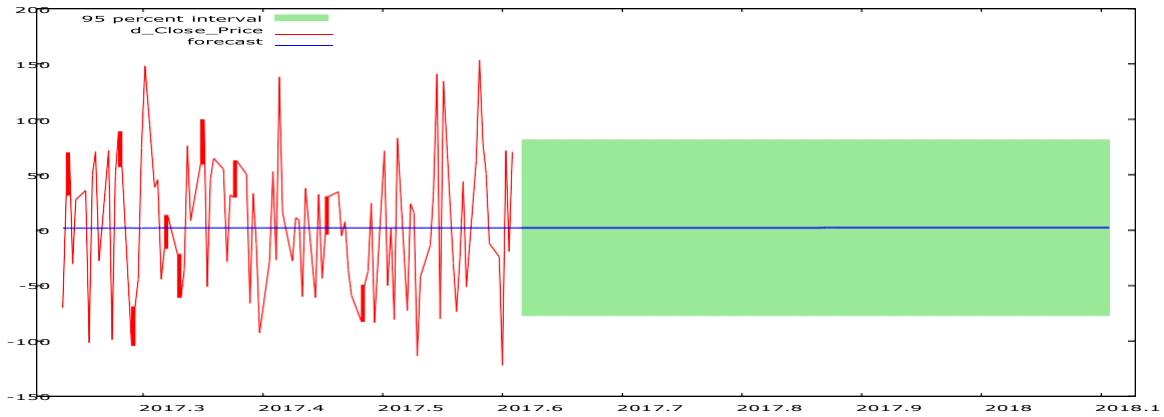
Interpretation:

The ADF test showed the prices of Reliance Ltd is satisfying the conditions of stationarity test at first order of difference and the model showed the efficiency in its prediction at ARIMA (0,1,1) which is considered as best as per information criteria condition.
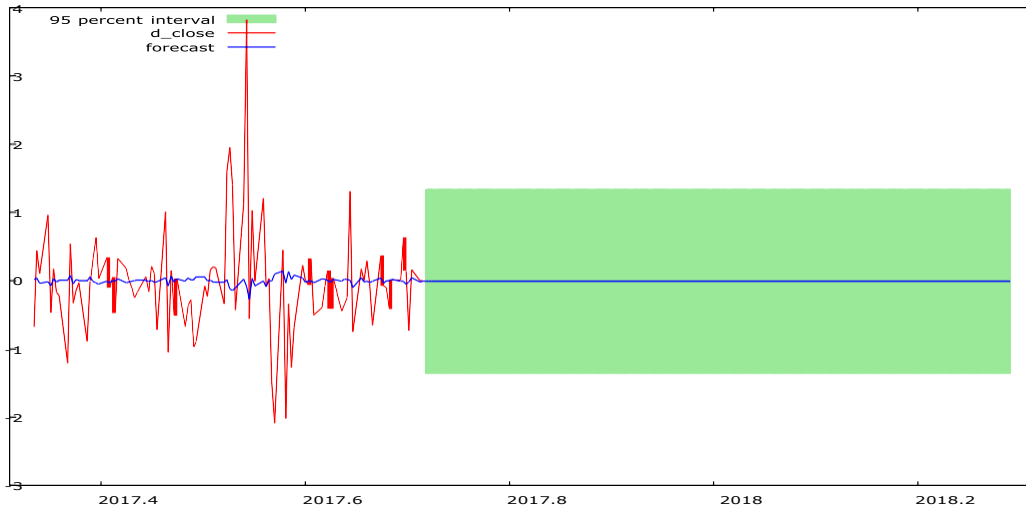
Graph 8: showing prediction of TCS for 5 months
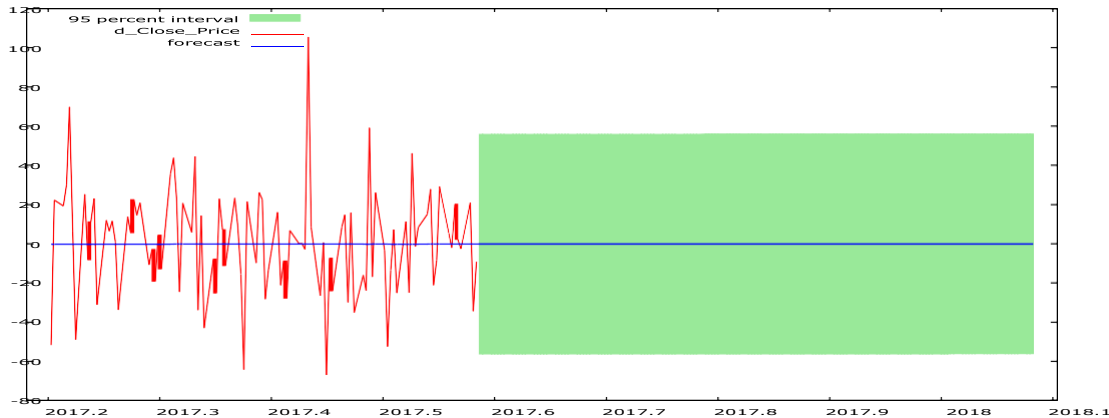
Interpretation:

The ADF test is applied for stationarizing the data by removing the seasonality and trend effect which can be visualized from the above graph and the ARIMA(0,1,1) proved the best model for predicting the future prices of TCS

Graph 9: showing prediction of Senca Food Mart for 5 months

Interpretation:

As per the ADF test applied toc heck its stationarity the prices are stationarized at first differenceand the model is best at ARIMA (1,1,1) compared to other levels .The conditions of Stationarity and Information criteria is satisfied at the above specified levels.

Graph 10: showing prediction of Ameresco for 5 months
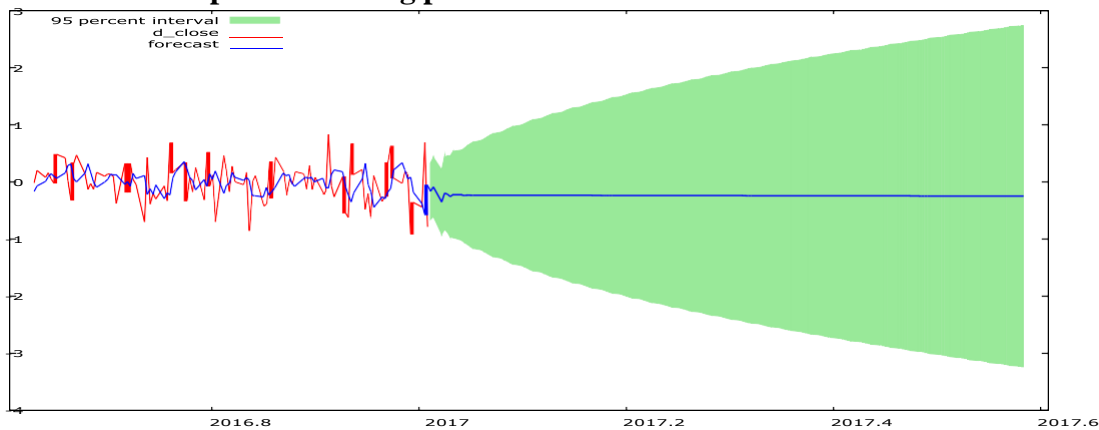
Interpretation:

The company shows the mean reversion, constant variance and no auto correlation at first orderof differencing and as per the ARIMA model the prediction is considered at AR 2 lag and zero MA. The graph shows the effect of mean reversion and predictive prices at the shaded area on the end of the grap

Graph 11: showing prediction of Nacco Industry for 5 months
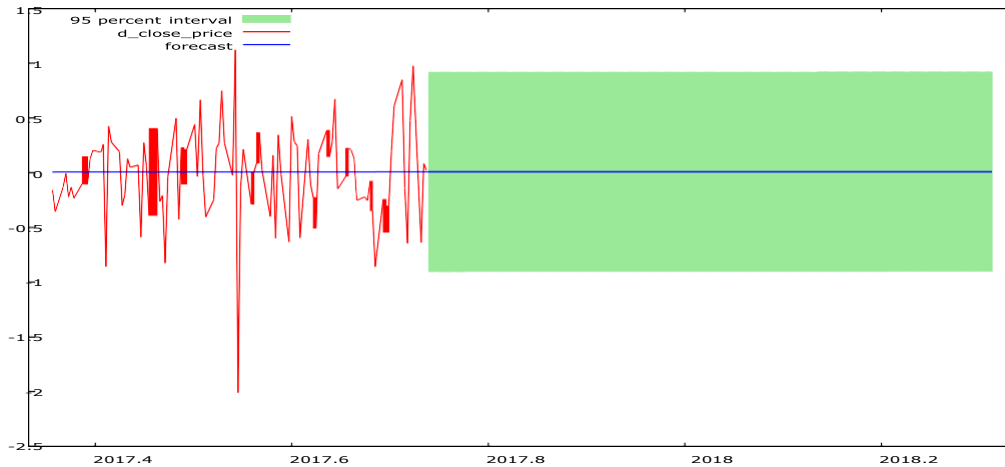
Interpretation:

From the above table of ADF test it is evident that the prices are Stationary at first order of difference at after stationarizing the data the ARIMA model is applied at various levels and the best model is obtained at ARIMA(0,1,1) at which the predicted prices are very close to actuals with a minimal variance.

Graph 12: showing prediction of Ford Motors for 5 months
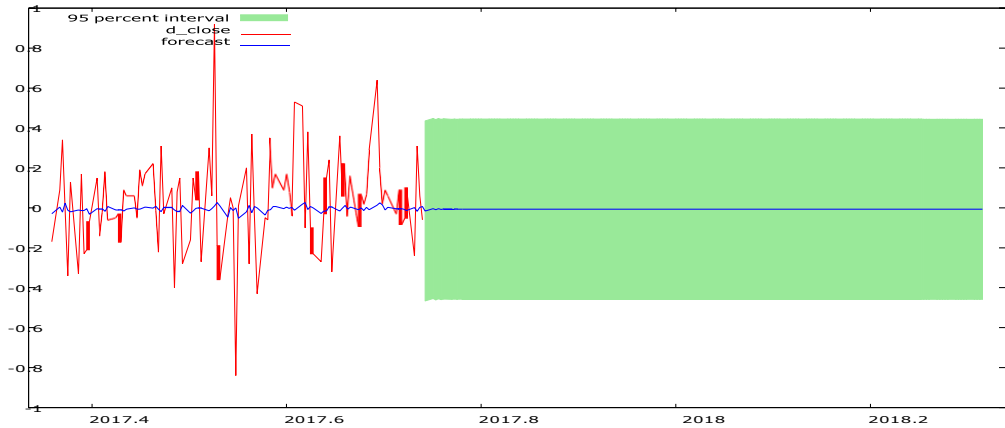
Interpretation:

The modern econometrics ADF test is applied for checking the Stationarity and it is stationary at first order of differencing the data and as per the predictive ARIMA model it proved best at ARIMA (2,1,2) compared to other p,d,q levels.

Findings

1.   Durban Watson stats of Future DVR, Gujarat DVR, Jain Irrigation, Tata Motors DVR is 2.0058,1.9513, 1.6125 and 1.9995 respectively proving the values are stationary.

2.   Foreign DLC like Seneca Food Mart, Ameresco, Nacco Industry and Ford Motors are stationary at level.

3.   It is evident that these Foreign DLC could enjoy the substantial investor interest, partly due to relative paucity of local company resources

4.   It is found there are 24 negative correlated values indicating it is advisable to select all the stocks in the same portfolio.

5.   It is found that there are 42 positive correlated values indicating that it is not advisable to include these highly correlated stocks in the same portfolio.

6.   Gujarat DVR is performance is better than Nacco industry and Tata Motors DVR has better performance than TCS.

Conclusion:

Two classes of single and dual is considered for the study and few companies listed above are picked to check the model accuracy on both dual and single class of shares. Most of the compaies are stationarized at first order of difference and the ARIMA model is applied for predicting the future prices of selcted compnaies.

References

1.   Aganin, A., & Volpin, P. F. (2005). History of Corporate Ownership in Italy. SSRN Electronic Journal, 1(March), 43. https://doi.org/10.2139/ssrn.391180

2.   Amoako-Adu, B., & Smith, B. F. (2001). Dual class firms: Capitalization, ownership structure and recapitalization back into single class. Journal of Banking and Finance, 25(6), 1083–1111. https://doi.org/10.1016/S0378-4266(00)00107-2

3.   Bortolon, P. M., & Câmara Leal, R. P. (2014). Dual-class unifications and corporate governance in Brazil. Emerging Markets Review, 20(1), 89–108. https://doi.org/10.1016/j.ememar.2014.06.003

4.   Chan, R. S. Y., & Ho, J. K. S. (2014). Should Listed Companies Be Allowed to Adopt Dual-Class Share Structure in Hong Kong? Common Law World Review, 43(2), 155–182. https://doi.org/10.1350/clwr.2014.43.2.0270

5.   Chemmanur, T. J., & Jiao, Y. (2012). Dual class IPOs: A theoretical analysis. Journal   of   Banking   and   Finance,   36(1),   305–319. https://doi.org/10.1016/j.jbankfin.2011.07.010

6.   Dimitrov, V., & Jain, P. C. (2006). Recapitalization of one class of common stock into dual-class: Growth and long-run stock returns. Journal of Corporate Finance, 12(2), 342–366. https://doi.org/10.1016/j.jcorpfin.2004.10.002

7.   Doidge, C. (2004). U.S. cross-listings and the private benefits of control: Evidence from dual-class firms. Journal of Financial Economics, 72(3), 519–553. https://doi.org/10.1016/S0304-405X(03)00208-3

8.   Howell, J. W. (2017). The survival of the U.S. dual class share structure. Journal   of   Corporate   Finance,   44(1),   440–450. https://doi.org/10.1016/j.jcorpfin.2014.07.006

9.   Huang, F. (2017). Dual Class Shares around the Top Financial Centres. Journal of Business Law, 2017(2), 137–154.

10. Huang, R. H., Zhang, W., & Lee, K. S. C. (2020). The (re)introduction of dual-class share structures in Hong Kong: a historical and comparative analysis. Journal of   Corporate   Law   Studies,   20(1),   121–155. https://doi.org/10.1080/14735970.2019.1638004

11. King, M. R., & Segal, D. (2009). The long-term effects of cross-listing, investor recognition, and ownership structure on valuation. Review of Financial

Studies, 22(6), 2393–2421. https://doi.org/10.1093/rfs/hhn050

12. Maury, B., & Pajuste, A. (2011). Private Benefits of Control and Dual-Class Share Unifications. Managerial and Decision Economics, 32(6), 355–369. https://doi.org/10.1002/mde.1538

13. McGuire, S. T., Wang, D., & Wilson, R. J. (2014). Dual class ownership and tax avoidance. Accounting Review, 89(4), 1487–1516. https://doi.org/10.2308/accr-50718

14. Zhang, Y., & Zhao, R. (2004). The valuation differential between class A and B shares: Country risk in the Chinese stock market. Journal of International Financial Management and Accounting, 15(1), 44–59. https://doi.org/10.1111/j.1467- 646X.2004.00101.x

15. Zhou, J. (2017). Dual-class firms : a comprehensive literature review. Advances in Economics, Busine