STRATEGIC FORECAST & PLAN

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Table of Contents

STRATEGIC FORECAST & PLAN – EXECUTIVE SUMMARY

The following plan incorporates the use of a regression analysis testing the x variables "Export: Value Goods" & "Revolving Consumer Credit" & categorical variables: "Recession", "Low Advertisements", and "New Product Sales". The models first test the correlations and general statistics to see how reliable, accurate and reasonable all these variables are. The best forecast analysis is chosen for each x variable to be used in the regression analysis. The forecast is analyzed, and the categorical values are turned on at specific dates relevant to them and the forecast fluctuations to capture as much data as possible. The model is put through several tests to check for heteroscedasticity, serial correlation, seasonality, accuracy, reliability, and visual reasonableness.

After meeting high levels of confidence in these measures the forecast is run using regression analysis with the mentioned x variables & categorical variables. The company revenue forecasted includes a negative categorical value turned on for the last 3 quarters of 2020 (Low Ads) to show negative impact that is expected from the coronavirus pandemic. The forecast produced is included in the pro-forma plan with the new updated numbers of importance such as stock, EPS, etc. Two programs are recommended after the analysis which are the entering of an emerging market with a 15% target and a 5% cut in sales general and administrative expenses. The regression forecast for next 8 quarters without the implementation of the programs results in $ -332.82 million average loss per quarter, $ -67.71 million average loss in income per quarter, and $ -2.14 average loss in stock price per quarter. The regression forecast with implementation of the programs results in $ -43.17 million average loss per quarter, $ -9.36 million average loss in income per quarter, and $ -0.29 loss in stock price per quarter.

Objective & Methodology

Objective is to develop the best two year quarterly forecast for Procter & Gamble revenue and pro-forma plan.

First, the creation of a hypothesis on several macroeconomic variables that are believed to have a logical influence on Procter & Gamble revenue (Y) and will be relevant to its characteristics of trends, cycles and seasonality if applicable. There will be testing of the hypothesis using first a scatter plot using regression to see if there is a significant slope visible between the company revenue and the x variables. The analysis will be followed by a correlation test to confirm there is a high correlation between the (Y) Procter & Gamble revenue and the (X) macroeconomic variables chosen.

After the correlation confirming high Procter & Gamble revenue (Y) to macroeconomic variables (X) there will be a test of the hypothesis with early regression Y=a + B1X1 + B2X2. Then a forecast for each variable will be made using historical data with three approaches (Expo smoothing, decomposition, ARIMA). Then selection of the best forecast of each (X) variable from these methods and revision of the early regression model to best fit the Procter & Gamble revenue and testing of the model. Then the use of the regression forecast with the Procter & Gamble company 10k to create a pro-forma financial strategic plan. Lastly, a comment on the plans financial results and recommendations for Procter & Gamble's performance improvement.

Hypothesis

Procter & Gamble Revenue = f (Export: Value Goods + Revolving Consumer Credit + New Product Sales + Recession + Low Advertisements)

Procter & Gamble sells nondurable consumer goods as their main source of revenue so if revolving consumer credit changes it should be affecting the revenue for Procter & Gamble as the more credit consumers have the more purchases of our higher quality and higher priced products than cheapest brands should happen. Procter & Gamble sells products all over the world so if the Export: Value Goods economic data increases it should have a positive correlation to Procter & Gamble Revenue as it will mean we will also be exporting more of our product. The recession will be significant to make the forecast as well as a low advertisement period and the new product sales period. These categorical variables will be useful for the final regression model and forecast.

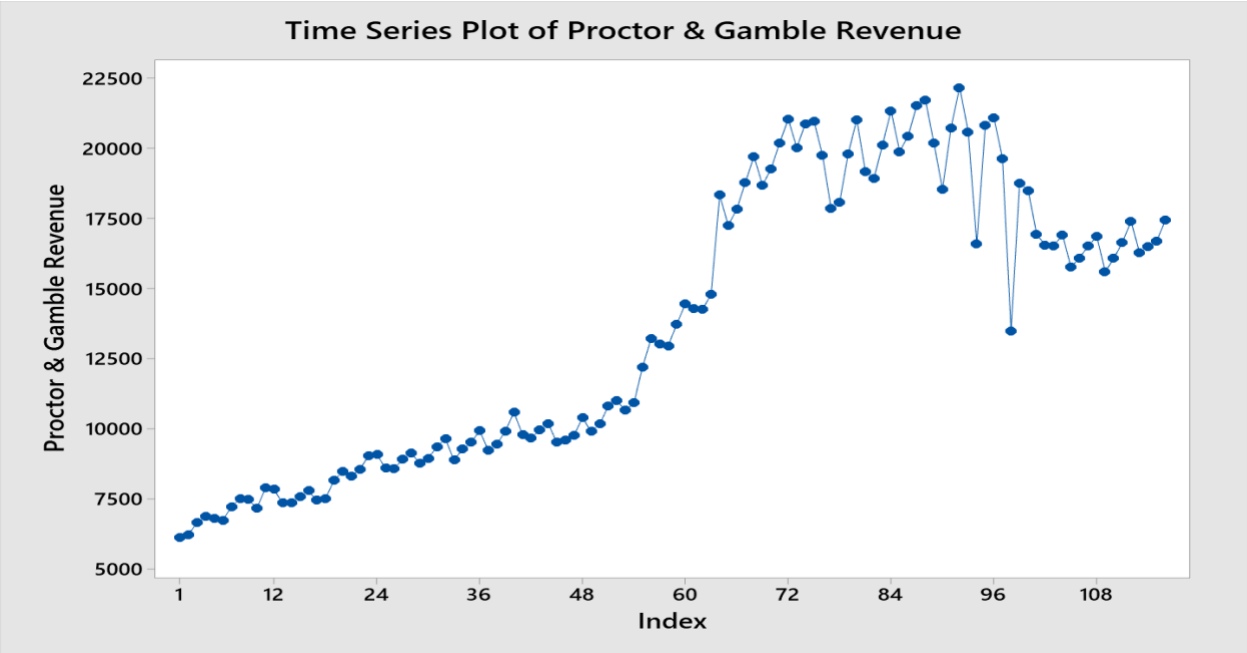
X Variables:

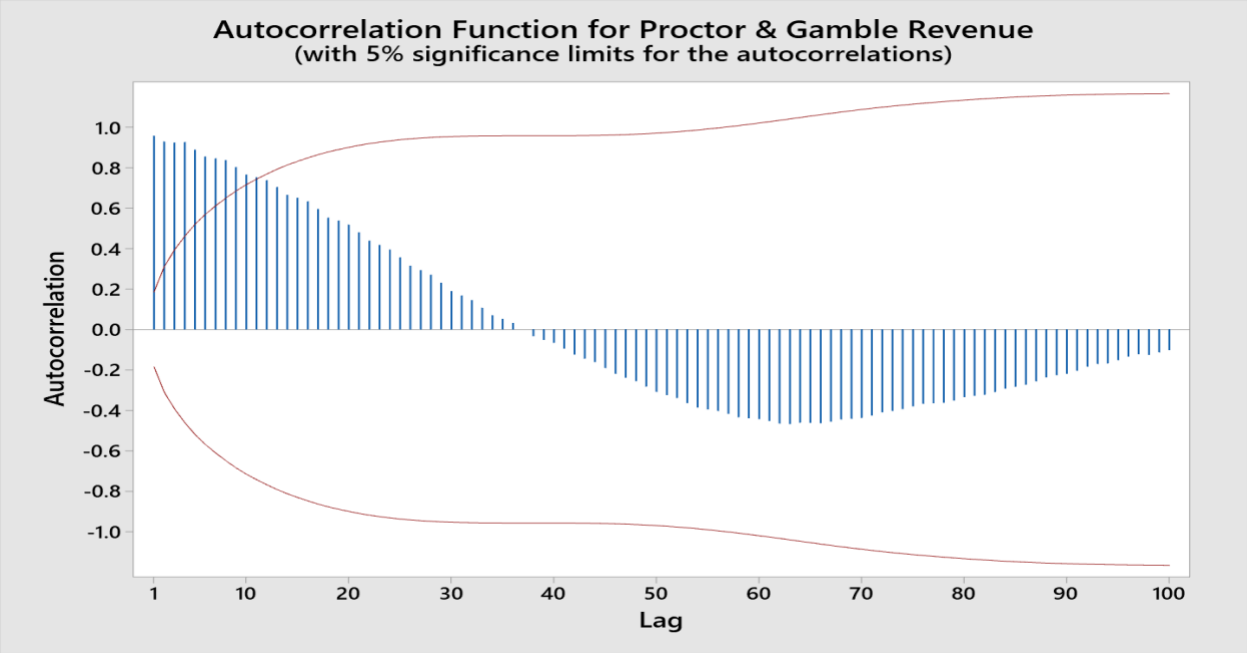
Exports: Value Goods for the United States, National currency, Monthly Level, Quarterly, in Millions $ Not Seasonally Adjusted // Shown as: "Export: Value Goods"

Households and nonprofit organizations; revolving consumer credit; liability, Level, Millions of Dollars, Quarterly, Not Seasonally Adjusted // Shown as: "Revolving Consumer Credit"

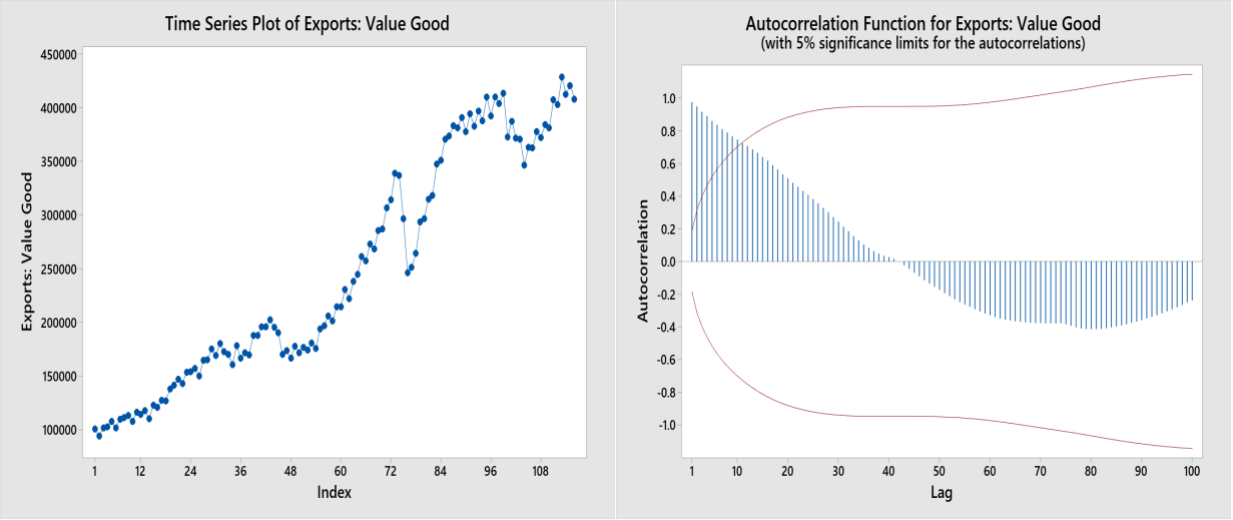
P&G characteristics analysis & hypothesis testing

This is the analysis to see the characteristics of Procter & Gamble Revenue and the testing of the x variables from the hypothesis to ensure that they are true at the 95% confidence level.

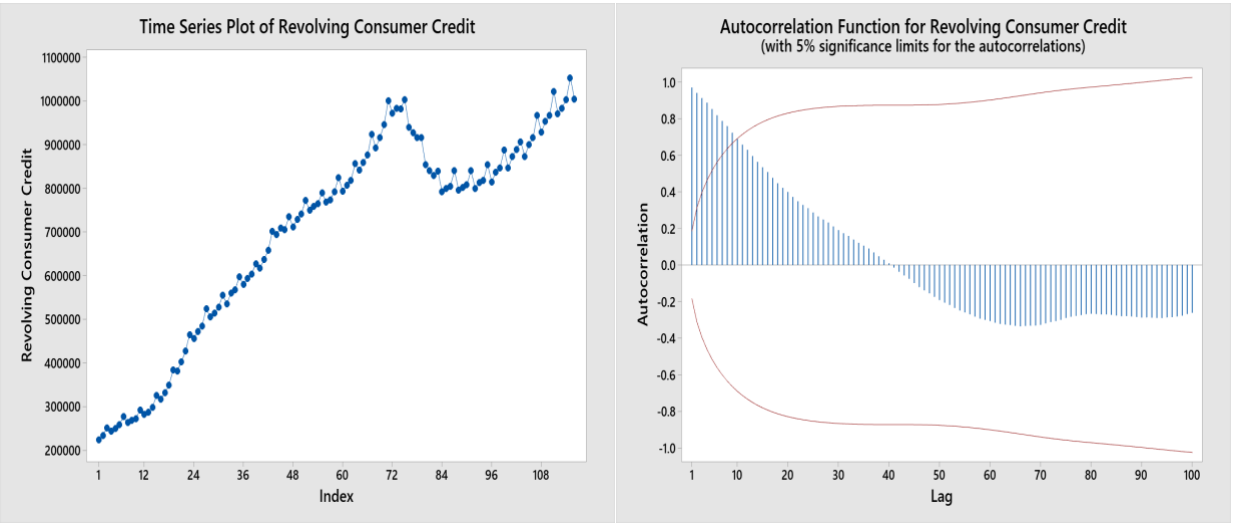




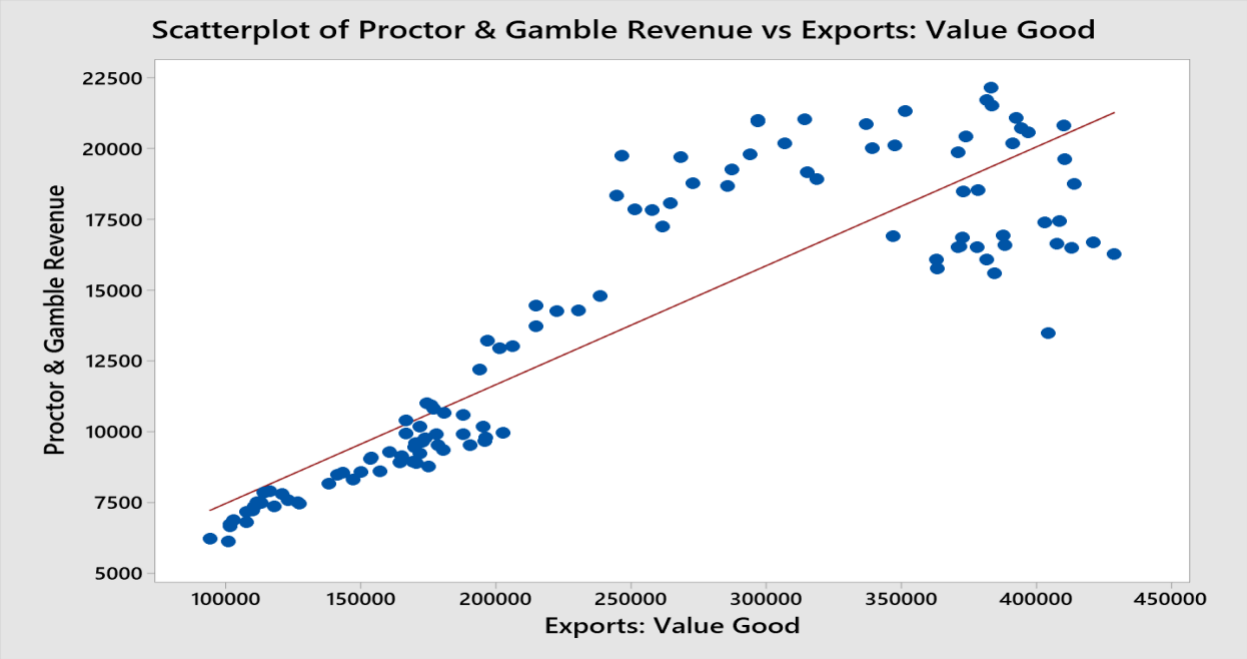
The time series plot for Procter & Gamble revenue shows an upward trend while having the cycle characteristic. Running the autocorrelation on Procter & Gamble gives us the indicator that it is seasonal as the average of the 3rd and 5th lag is 0.905 and the 4th lag is 0.923 showing statistically significant seasonality which will be taken into consideration for the forecast.



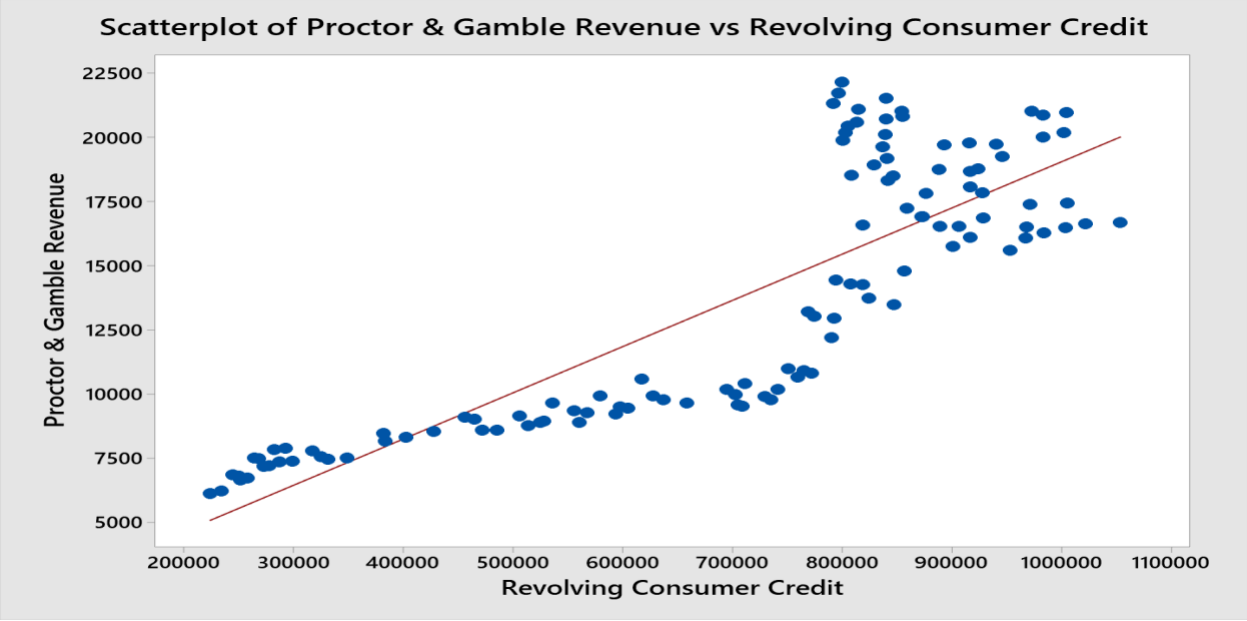
The time series plot of Exports: Value Goods shows significant similarity to the time series plot of Procter & Gamble revenue with a similar upward trend. This X variable shows trend and cycle characteristics and upon running the autocorrelation function to find seasonality the 3rd & 5th lag average is 0.88 compared to the 4th lag which is 0.88 (rounded 2 decimals) showing no seasonality for this x variable.



The time series plot of Revolving Consumer Credit shows significant similarity to the time series plot of Procter and Gamble revenue with a similar upward trend. This X variable shows trend, cycle, and seasonality characteristics as shown in the time series plot and upon running the autocorrelation function to find seasonality the 3rd & 5th lag average is at 0.88 compared to the 4th lag which is at 0.89 (rounded 2 decimals) confirms the seasonality for this x variable.



There is a strong upward slope in the scatterplot between Procter & Gamble revenue and Exports: Value Good which indicates high sensitivity & response to each other. There is some minor heteroscedasticity in this relationship as the scatter tends to widen and depart from regression line at the right side of the plot.



There is a strong upward slope in the scatterplot between Procter & Gamble Revenue and the Revolving Consumer Credit indicating high sensitivity & response to each other. There is minor heteroscedasticity in this relationship as the scatter widens a minor amount and departs from the regression line towards the right of the plot, but it comes back closer again in the end of the regression line.

Correlations

	Proctor & Gamble Revenue	Exports: Value Good
Exports: Value Good	0.880	
Revolving Consumer Credit	0.848	0.834

Running the correlation test for Exports: Value Good & Revolving Consumer Credit there is a highly significant correlation for Exports: Value Good at 0.880 and 0.848 for Revolving Consumer Credit which is higher than the correlation the x variables have to each other passing correlation test requirements.

Pairwise Pearson Correlations

Sample 1	Sample 2	N	Correlation	95% CI for ρ	P-Value
Exports: Value Good	Proctor & Gamble Revenue	116	0.880	(0.831, 0.916)	0.000
Revolving Consumer Credit	Proctor & Gamble Revenue	116	0.848	(0.787, 0.892)	0.000
Revolving Consumer Credit	Exports: Value Good	116	0.834	(0.769, 0.882)	0.000

The pairwise pearson correlations show a P-Value of 0.000 confirming these x variables can be used and that we have higher than 95% confidence level.

Regression Equation

Proctor & Gamble Revenue = 1392 + 0.00793 Revolving Consumer Credit
+ 0.02716 Exports: Value Good

The regression equation shows that for every increase of 1 million US dollars in Revolving Consumer Credit the company revenue increases by $7,930 US dollars and that for every increase of 1 million US dollars in Exports: Value Good the company revenue increases by $27,160 US dollars.

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	1392	633	2.20	0.030	
Revolving Consumer Credit	0.00793	0.00155	5.11	0.000	3.29
Exports: Value Good	0.02716	0.00348	7.79	0.000	3.29

The statistical results of the regression analysis have the coefficient value for both variables staying positive which is consistent with the correlation signs. The T-Value for both X variables is over the 1.96 absolute value threshold showing high statistical of evidence against the null hypothesis. The P-Values are at 0.000 which are lower than the 0.05 showing these X variables have a high confidence level and belong in the forecast. The VIF is below 5 at 3.29 for both X variables to support that we do not have multicollinearity.

Model Summary

S	R-sq	R-sq(adj)	R-sq(pred)
2178.06	81.71%	81.38%	80.70%

In model summary the result for the R-sq (adj) is high at 81.38% showing that the x variables are effective & benefit the model and that the model has good reliability.

Analysis of Variance

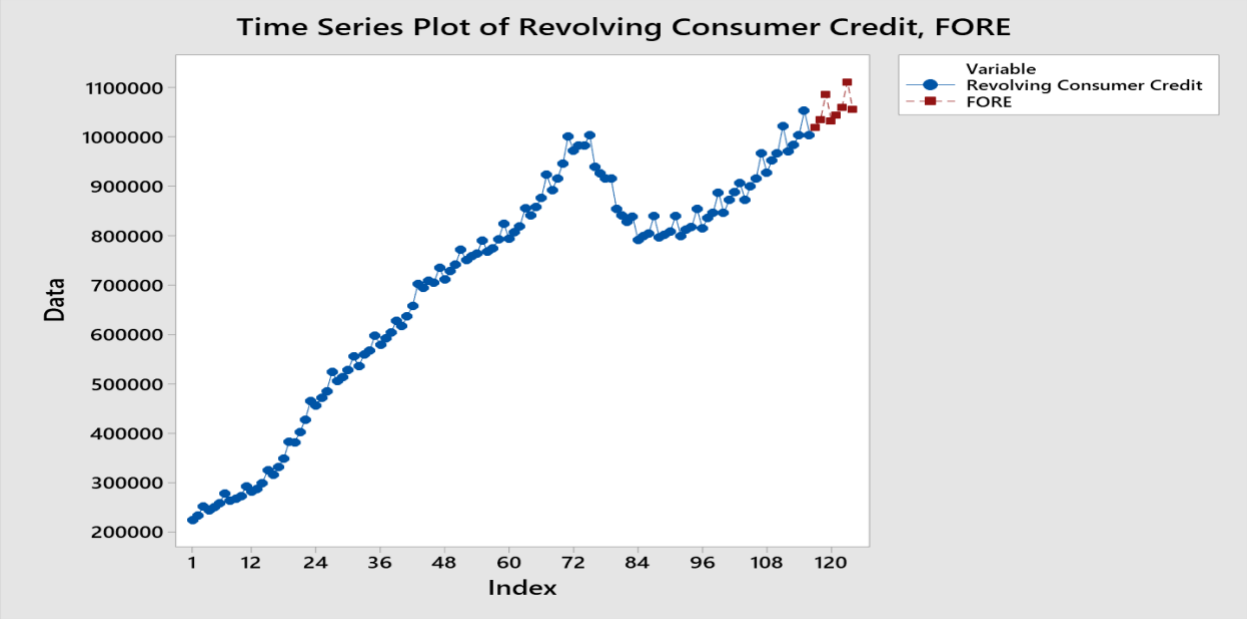
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	2	2394601970	1197300985	252.39	0.000
Revolving Consumer Credit	1	123817310	123817310	26.10	0.000
Exports: Value Good	1	288195936	288195936	60.75	0.000
Error	113	536063887	4743928		
Total	115	2930665857			

On the analysis of variance, the F-value is high at 252.39 for the regression showing that the test is statistically significant with the Exports: Value Good & the Revolving Consumer Credit variables showing the model has reliability.

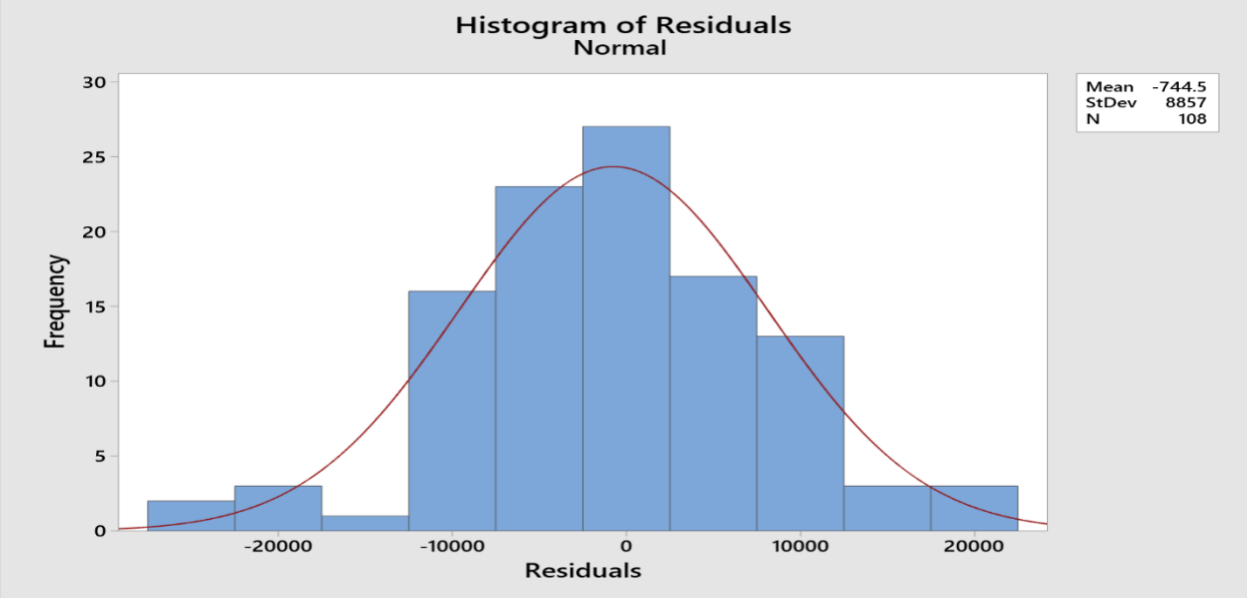
This analysis shows that the hypothesis with these two x variables is true at the 95% confidence level and the statistics show that the model is reliable.

Forecasts for Export: Value Goods & Revolving Consumer Credit

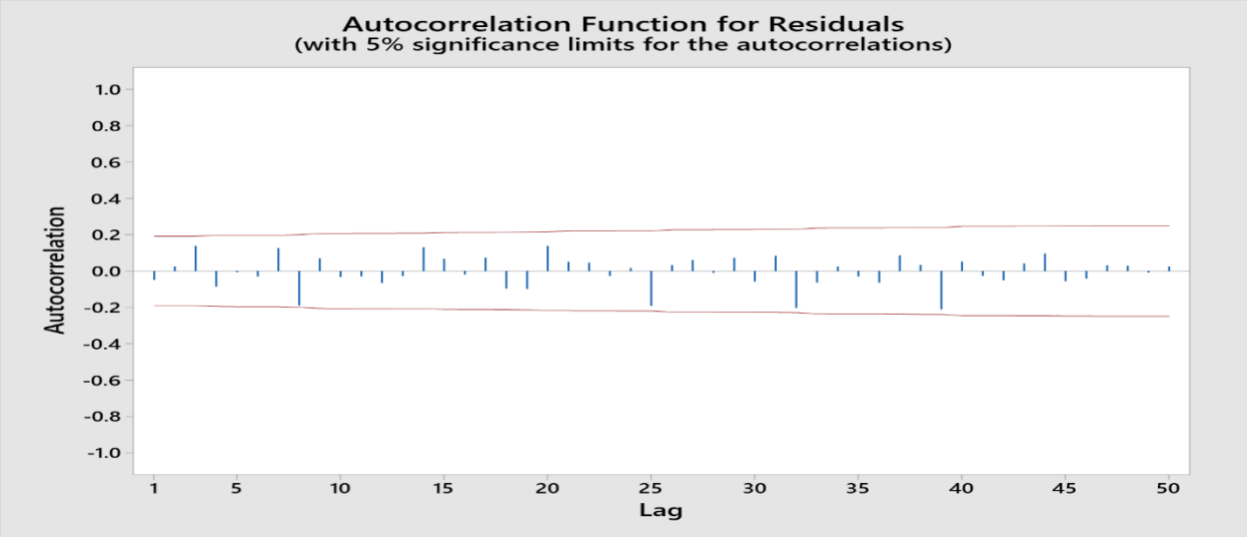
ARIMA Forecasts



The time series plot of X variable Revolving Consumer Credit with the 8-period ARIMA forecast shows significant reasonableness with the historical data as it follows the direction of the trend and continues the spikes of seasonality.



The histogram analysis of the residuals shows a mean that is of reasonable size relative to the data and with it being a negative mean we can know the model will overestimate a small relative amount. The data is near normal distribution to prove some randomness with a minor skew to the right.



The autocorrelation function for the residuals show that the model is picking up the data and the residuals are random. LBQ values at 12th- 10.96 & 24th- 20.42 are significant and are showing the model is reliable.

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
AR	1	1.8305	0.0743	24.64	0.000
AR	2	-0.8684	0.0728	-11.93	0.000
SAR	4	-0.4340	0.0974	-4.46	0.000
MA	1	0.446	0.129	3.45	0.001
SMA	4	0.9508	0.0558	17.03	0.000

The Final Estimates of Parameters show the reliability of the model with significant T-Values for all AR and MA model types being over the 1.96 absolute value. P-values are significant below 0.05 for 95% confidence level.

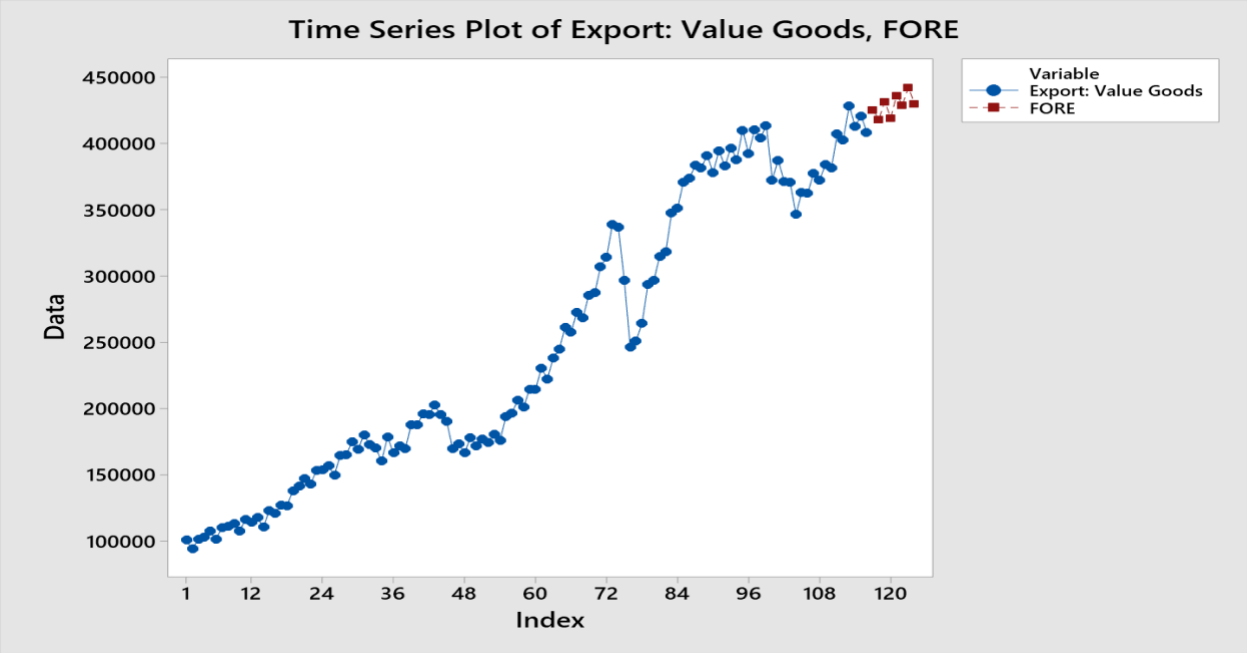
Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	10.96	20.42	36.85	50.38
DF	7	19	31	43
P-Value	0.140	0.370	0.216	0.205

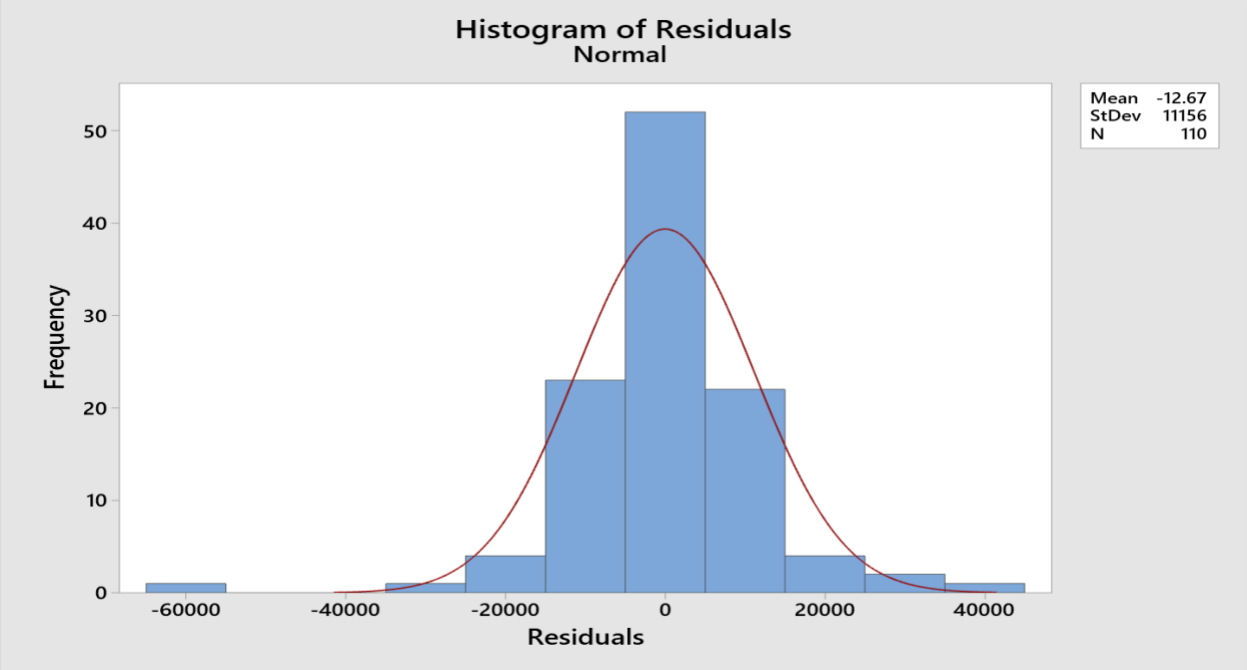
The Chi-Square statistics show the reliability of the model with the 12th lag being under required 21 at 10.96 & the 24th lag being under required 36.4 at 20.42.

Accuracy Details:

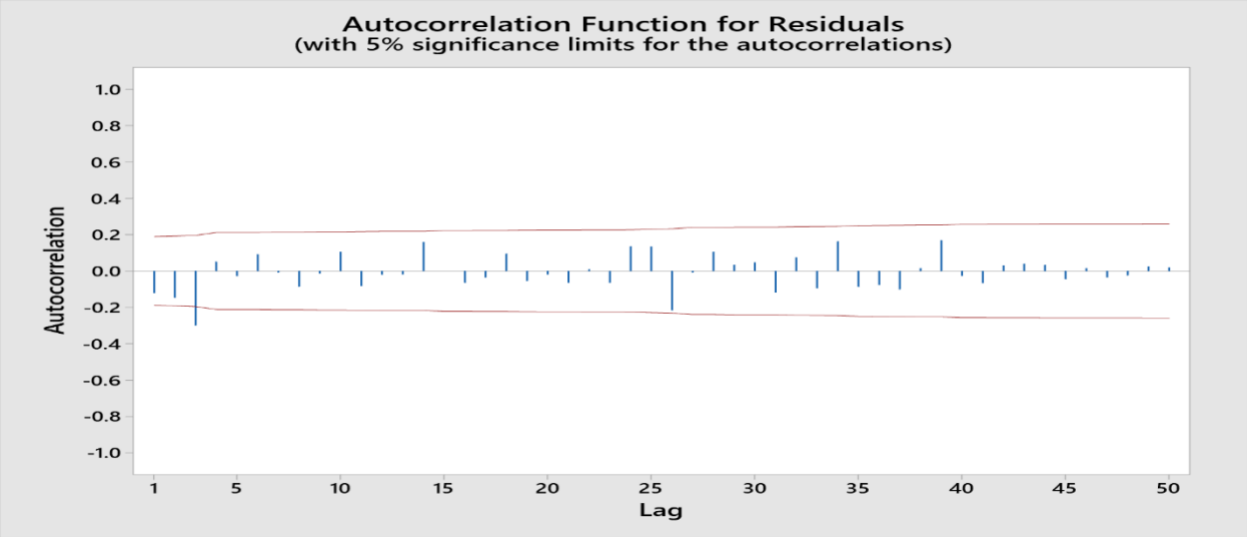
MAPE: 0.0093251 or 0.9% (rounded & turned into percentage)
RMSE: 8847.04
The MAPE is below preferred 5% at 0.9% which shows high accuracy of model statistics. The RMSE shows a reasonable standard deviation of residuals showing confidence in model accuracy.



The time series plot of X variable Export: Value Goods with the 8-period ARIMA forecast shows significant reasonableness with the historical data as it follows the direction of the trend.



The residuals with a mean close to 0 relatively being a very small negative number suggesting little overestimation and a histogram that shows little to no skew to either side reinforces that this is both a random normal distribution.



The autocorrelation function for the residuals show that the model is picking up the data and the residuals are random with only one lag excluded. LBQ values at 12th- 19.10 & 24th- 28.65 are significant and are showing the model is reliable.

Final Estimates of Parameters

Type		Coef	SE Coef	T-Value	P-Value
SMA	4	0.7752	0.0635	12.20	0.000

The Final Estimates of Parameters show the reliability of the model with significant T-Values for the MA model type being over the 1.96 absolute value. P-value is significant at below 0.05 for a 95% confidence level.

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	19.10	28.65	51.40	60.51
DF	11	23	35	47
P-Value	0.059	0.192	0.036	0.089

The Chi-Square statistics show the reliability of the model with the 12th lag being under required 21 at 19.10 & the 24th lag being under required 36.4 at 28.65.

Accuracy Details:

MAPE: 0.0283126 or 2.8% (Rounded & turned into percentage)
RMSE: 11105.3
The MAPE is below preferred 5% at 2.8% which shows high accuracy of model statistics. The RMSE shows a reasonable standard deviation of residuals showing confidence in model accuracy.

Conclusion on forecasts:

The statistics for the ARIMA forecast meet the statistical requirements needed in both accuracy and reliability as shown in accuracy details, chi-square, and field estimates of parameters in both x variables. The time series data with the forecast also meets reasonableness in the visual time series graph showing the 8 forecasted periods. Through all 3 measures of accuracy, reliability, and reasonableness with this data we can see the ARIMA forecast would give us high statistical confidence to use.

Regression Analysis

This is the regression analysis with the reliability, and accuracy statistics & charts to show that there can be confidence in the reasonable company revenue forecast throughout the 8 periods forecasted with this model.

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	-16796	4583	-3.66	0.000	
Export: Value Goods	0.02122	0.00264	8.03	0.000	4.24
Revolving Consumer Credit	0.00568	0.00131	4.34	0.000	3.43
SEAS1	19487	4569	4.27	0.000	1.01
New Products Sales					
1	3609	406	8.89	0.000	1.37
Recession					
1	4915	364	13.49	0.000	1.94
Low Ads					
1	-2919	485	-6.02	0.000	1.38

All variables have significant T-values, P-values, and VIF showing the reliability of the model. Statistics show that there is no multicollinearity and that we can have confidence in the model.

Coefficients show gains in millions of US dollars at a 0.02122 increase in revenue for every increase of Export: Value Goods and 0.00568 increase in revenue for Revolving Consumer Credit increases.

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	-357243	583528	-0.61	0.542	
SQ Fits	0.00757	0.00217	3.49	0.001	1.00

The KB test shows square fits as the continuous predictor to the square residuals that there is heteroscedasticity in the model as the T-value is significant at 3.49 this lowers reliability in the model but there is still high confidence in the model considering all other statistics on reliability.

Model Summary

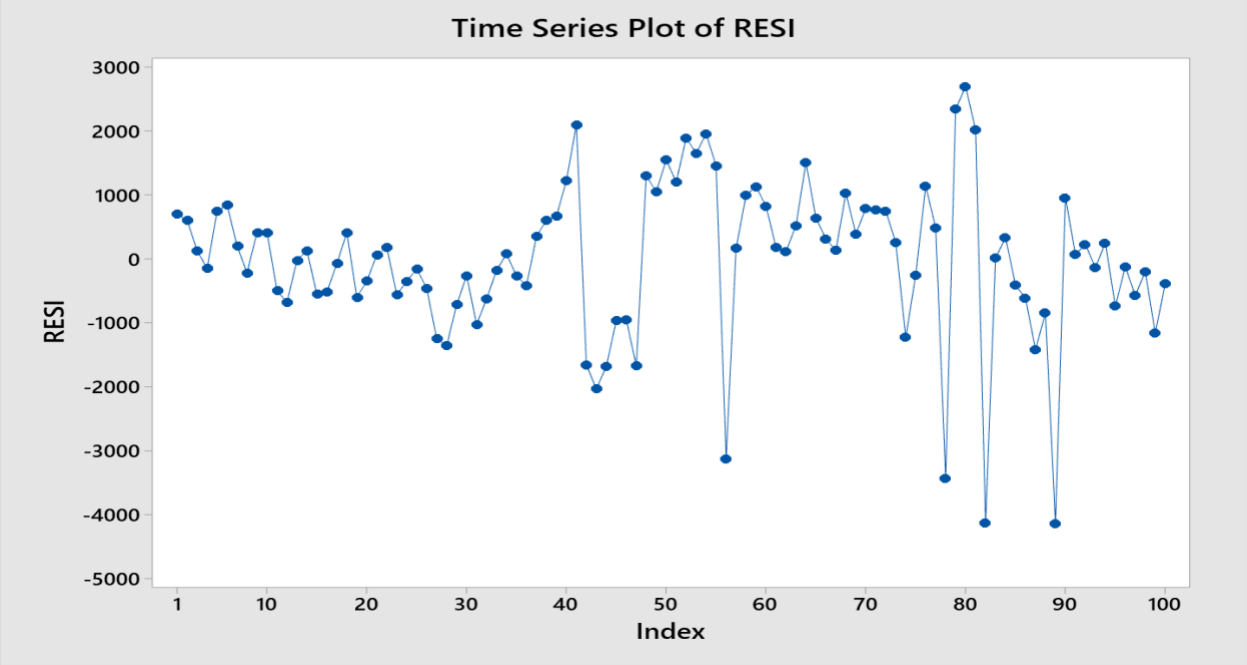
S	R-sq	R-sq(adj)	R-sq(pred)
1239.59	93.33%	92.90%	92.03%

R-sq(adj) shows the analysis model is capturing 92.90% of data necessary showing this model has good reliability.

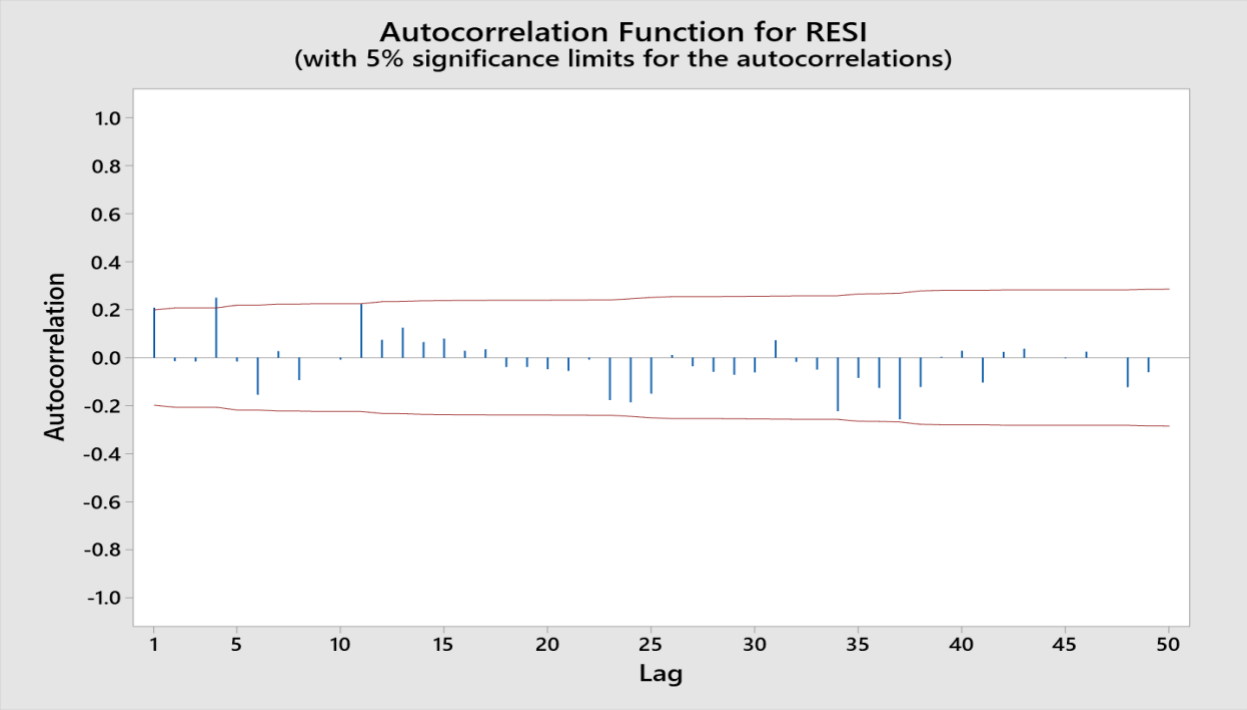
Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Regression	6	2000071653	333345276	216.94	0.000
Export: Value Goods	1	99129384	99129384	64.51	0.000
Revolving Consumer Credit	1	28941594	28941594	18.83	0.000
SEAS1	1	27954273	27954273	18.19	0.000
New Products Sales	1	121485779	121485779	79.06	0.000
Recession	1	279623432	279623432	181.98	0.000
Low Ads	1	55745698	55745698	36.28	0.000
Error	93	142902633	1536587		
Total	99	2142974287			

F-Value for regression is 216.94 showing good reliability and integrity of the regression model.



Time series plot of residuals showing how the model absorbed most of the cycle and seasonality using the regular x variables and the 3 categorical variables (recession, low ads, new product sales). Low ads variable turned on at 9/30/2013-12/31/2015, New product sales variable turned on at 6/30/2004-12/31/2007, and Recession variable turned on at 12/31/2007-3/31/2016.

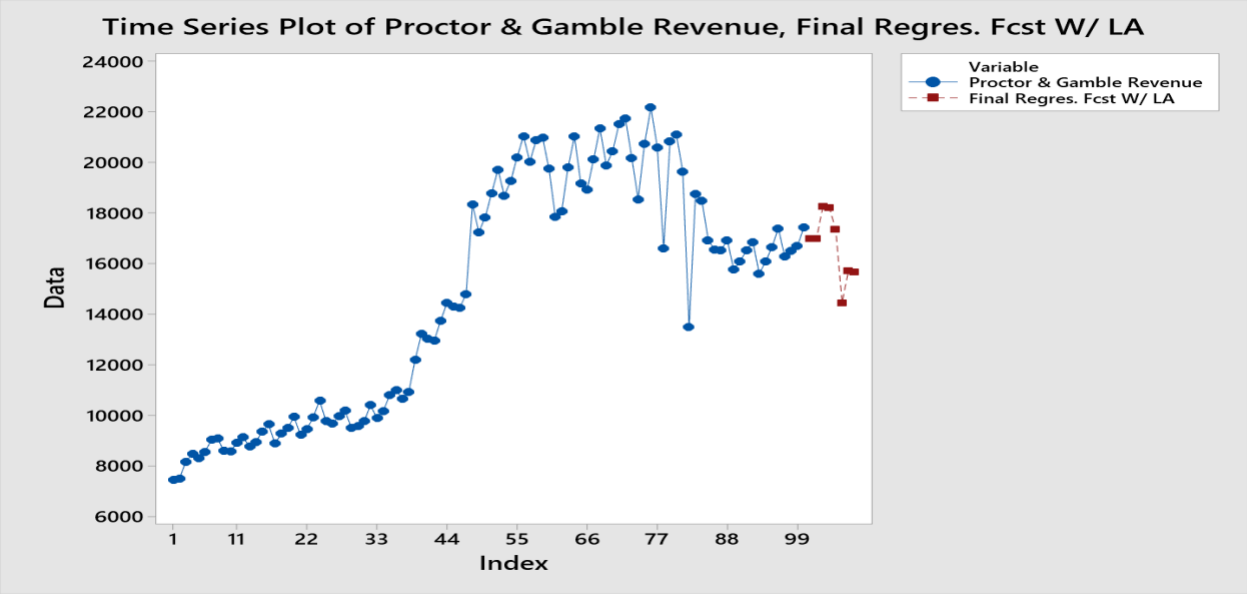


Autocorrelation shows mostly random distribution with almost all lags within the red meaning the model absorbed and was efficient with the data. LBQ values are statistically significant at 24th-34.36 & 12th-21.14 showing the model didn't leave significant information out and has high reliability.

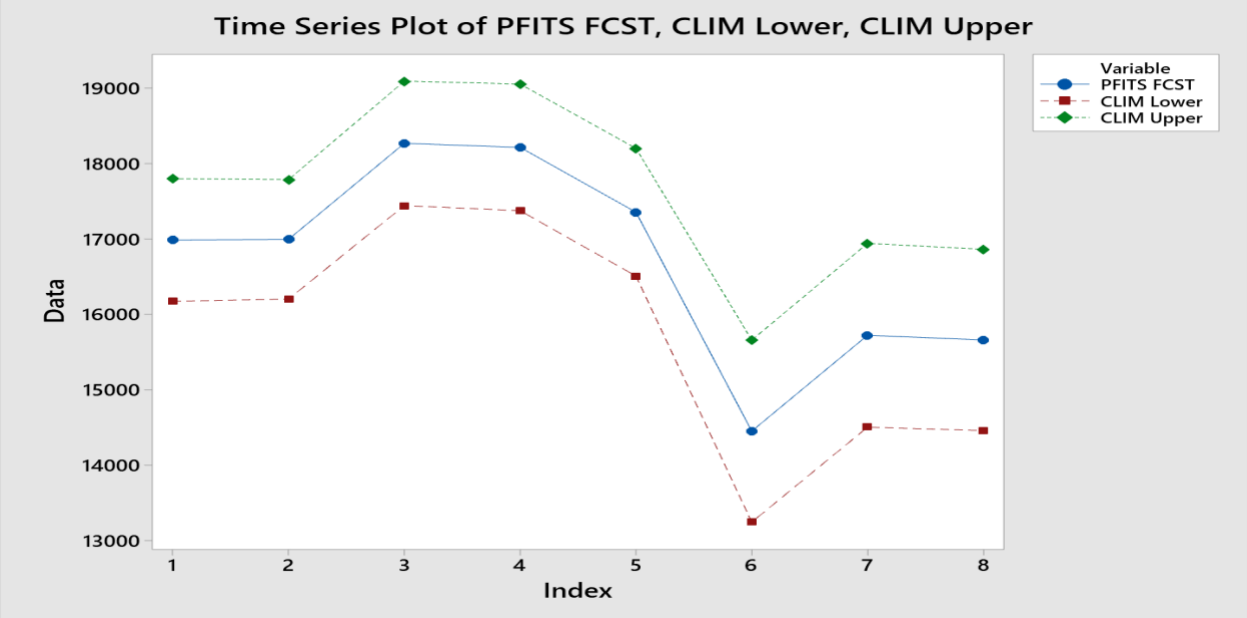
Durbin-Watson Statistic

Durbin-Watson Statistic = 1.57891

The Durbin-Watson statistic is showing that we do not have serial correlation in this model. The model will be estimating both cycle and seasonality appropriately and has high reliability.



Regression analysis forecast considering the current situation with the coronavirus having a negative impact on company revenue throughout the last 3 quarters of 2020 the analysis shows high reasonableness. Low ads categorical variable turned on in Q2, Q3, Q4, of 2020 forecast to help predict the down curve of the coronavirus as it was the strongest negative variable.



The time series plot with the lower and upper confidence levels of the forecast showing constant reasonableness throughout each forecasted period with a slight widening of the confidence interval over the forecast indicating a slight loss in forecast reliability over the plan.

MAPE of model: 0.058 or 5.8% at this error number the model is excellent and has acceptable error deviation from the data showing high model accuracy.

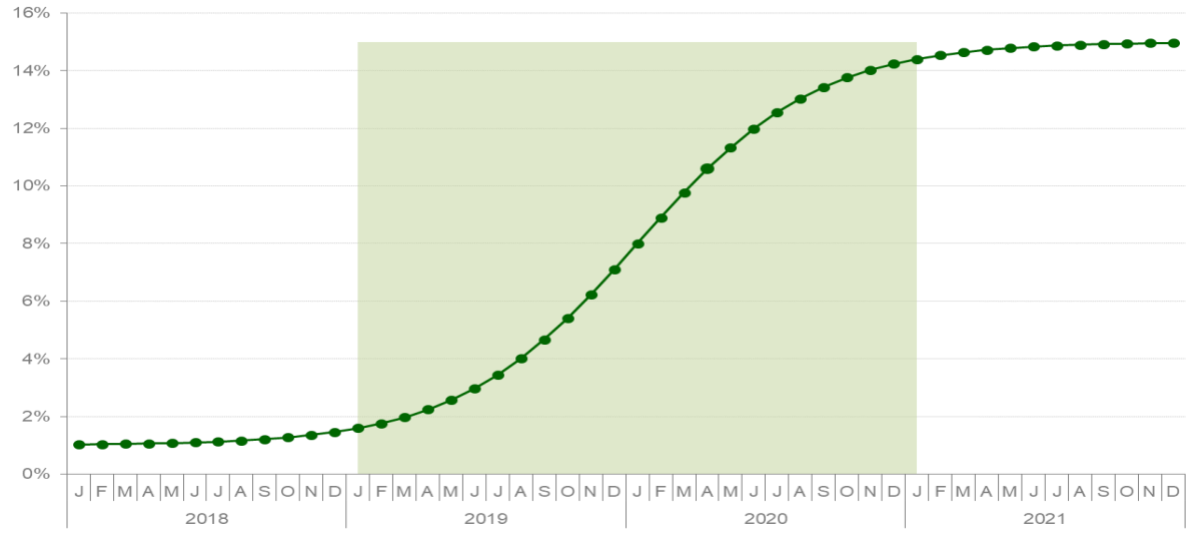
RMSE: 1194.4 is also acceptable as it is reasonable to the data and it shows model accuracy.

Industry	Pro-Forma Planning Template									
	Proctor & Gamble (PG)	Company Revenue Forecast Per Plan Quarter								
	1st									
Quarter Ending:	**9/30/2019**	**Revenue Share**	**3/31/2019**	**6/31/2019**	**9/30/2019**	**12/31/2019**	**3/31/2020**	**6/31/2020**	**9/30/2020**	**12/31/2020**
Total Revenue	$17,798		17323.96	17500.40	19124.08	19510.44	19053.57	16184.97	17835.72	17891.25
Cost of Revenue	$8,671	0.49	8440.05	8526.01	9317.05	9505.28	9282.70	7885.15	8689.38	8716.43
Gross Profit	**$9,127**		8883.91	8974.39	9807.03	10005.16	9770.87	8299.82	9146.34	9174.82
Operating Expenses										
Research and Development	$0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sales, General and Admin.	$4,807.0	0.26	4445.02	4490.29	4906.90	5006.03	4888.81	4152.78	4576.33	4590.58
Non-Recurring Items	$0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Operating Expense & Provisions	$2.0	0.00	1.95	1.97	2.15	2.19	2.14	1.82	2.00	2.01
Other Operating Income	$0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating Income or EBIT	**$4,318.0**		4436.94	4482.13	4897.98	4996.93	4879.92	4145.23	4568.01	4582.23
Non Operating (Income) / expense items	($103.0)	-0.01	-100.26	-101.28	-110.67	-112.91	-110.27	-93.67	-103.22	-103.54
Net Interest Expense	$50.0	0.00	48.67	49.16	53.73	54.81	53.53	45.47	50.11	50.26
Earnings Before Tax / Pre tax Income	**$4,371.0**		4488.53	4534.24	4954.93	5055.03	4936.66	4193.43	4621.12	4635.51
Income Tax (Benefit)/ Expense	$726.0	0.04	706.66	713.86	780.09	795.85	777.22	660.20	727.54	729.80
Equity (Earnings)/Loss Unconsolidated Subsidiary	$0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net/ Income-Cont. Operations	**$3,645.0**		3781.87	3820.38	4174.84	4259.18	4159.44	3533.22	3893.58	3905.71
Discontinued Op	$0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minority Interest	$24.0	0.00	23.36	23.60	25.79	26.31	25.69	21.82	24.05	24.13
Net Income	**$3,621.0**		3758.51	3796.78	4149.05	4232.87	4133.75	3511.40	3869.53	3881.58
Pref Dividend	$65.0	0.00	63.27	63.91	69.84	71.25	69.59	59.11	65.14	65.34
Abnormal Loss (Gain)	($28.0)	0.00	-27.25	-27.53	-30.09	-30.69	-29.98	-25.46	-28.06	-28.15
Net Income Available to Common Shareholders	**$3,528.0**		3667.98	3705.34	4049.12	4130.92	4034.19	3426.83	3776.34	3788.09
Number of Share Outstanding (Common Stock) in Millions	2,494	2493.8	2493.8	2493.8	2493.8	2493.8	2493.8	2493.8	2493.8	2493.8
EPS	$1.41		$1.47	$1.49	$1.62	$1.66	$1.62	$1.37	$1.51	$1.52
Stock Price	**114.66**	**You supply this**	$119.21	$120.42	$131.60	$134.25	$131.11	$111.37	$122.73	$123.11
P/E Ratio	81.05									

Company Revenue Forecast	You supply this
16987.6	
16997.3	
18270.8	
18217.0	
17357.7	
14452.2	
15724.0	
15662.5	

Procter&Gamble

This regression analysis of Procter & Gamble revenue has high reasonableness, high accuracy, and high reliability and is taking in to account the current coronavirus pandemic. The two programs to improve company performance would be to lower expenses in the sales, general and admin area by 5% to increase profits. The second program is to enter an emerging market where there will be a 15% target growth which is a conservative estimate based on our products being nondurable consumer goods. Using an S-function analysis at a 1% start rate, 15% target, and the 13th month considered the fast growth month conservatively.



The pro-forma plan without the recommended programs shows per quarter averages for Revenue being $ -332.82 million. This yields a decrease of $ -67.71 million in Net Income, a decrease of $-0.0265 in EPS per quarter, and a $ -2.14 decrease in stock per quarter.

The pro-forma plan with the recommended programs shows per quarter averages for Revenue being $ -43.17 million. This yields a decrease of $-9.36 million in Net Income, a decrease of $-0.0037 in EPS per quarter, and a $-0.29 decrease in stock per quarter.

Revenue increase after both programs: 2019 Q1- 1.98%, Q2- 2.96%, Q3- 4.67%, Q4- 7.10% & 2020 Q1- 9.77%, Q2- 11.99%, Q3- 13.43%, Q4- 14.23%.

Net Income increase after both programs: 2019 Q1- 8%, Q2- 9%, Q3- 10.8%, Q4- 13.4%

2020 Q1- 16.2%, Q2- 18.6%, Q3- 20.1%, Q4- 21%.

Earnings per share(EPS) increase after both programs: 2019 Q1- 8.8%, Q2- 10.3%, Q3- 11.7%, Q4- 14.4 2020 Q1- 17.3%, Q2- 19.1%, Q3- 20.8%, Q4- 22.5%.

Stock Price: 2019 Q1- 8.9%, Q2- 9.9%, Q3- 11.8%, Q4- 14.3% 2020 Q1- 17.2%, Q2- 19.6%, Q3- 21.1%, Q4- 22%.

Data Appendix

Date	**Export: Value Goods** *XTEXVA01USQ664N*	**Revolving Consumer Credit** *BOGZ1FL153166100Q*	**P&G Revenue**
3/30/1990	100626	223520	6123.0
6/29/1990	93903.4	233653	6216.0
9/28/1990	101466.3	250909	6652.0
12/31/1990	102759.5	243907	6857.0
3/29/1991	107640.4	249675	6795.0
6/28/1991	101467.9	257752	6722.0
9/30/1991	109862.2	277089	7205.0
12/31/1991	111229	263739	7507.0
3/31/1992	112984	267816	7483.0
6/30/1992	107628	272158	7167.0
9/30/1992	116322	292258	7879.0
12/31/1992	114027	281767	7839.0
3/31/1993	117914	286864	7350.0
6/30/1993	110297	298288	7365.0
9/30/1993	122854	325011	7564.0
12/31/1993	120826	316400	7788.0
3/31/1994	127227	331247	7441.0
6/30/1994	126573	348625	7503.0
9/30/1994	138001	383187	8161.0
12/30/1994	141211	381573	8467.0
3/31/1995	147056	401754	8312.0
6/30/1995	143085	427090	8542.0
9/29/1995	153391	464947	9027.0
12/29/1995	153831	456188	9090.0
3/31/1996	157052	471729	8587.0
6/30/1996	149771	484730	8580.0
9/30/1996	164418	524417	8903.0
12/31/1996	164945	505699	9142.0
3/31/1997	174967	513922	8771.0
6/30/1997	169041	527696	8948.0
9/30/1997	180230	555533	9355.0
12/31/1997	172703	535467	9641.0
3/31/1998	170341	559889	8881.0
6/30/1998	160624	567097	9276.0
9/30/1998	178470	597660	9510.0
12/31/1998	166604	579336	9934.0
3/31/1999	171597	593009	9231.0
6/30/1999	169868	604129	9450.0

9/30/1999	187729	627467	9919.0
12/31/1999	187806	616812	10590.0
3/31/2000	195977	636949	9783.0
6/30/2000	195675	657911	9661.0
9/30/2000	202460	702247	9969.0
12/31/2000	195262	694173	10180.0
3/31/2001	190279	709029	9511.0
6/30/2001	169954	705033	9582.0
9/30/2001	173604	735093	9766.0
12/31/2001	166456	711468	10400.0
3/31/2002	177950	729216	9900.0
6/30/2002	171800	741402	10170.0
9/30/2002	176895	772123	10800.0
12/31/2002	174295	750644	11000.0
3/31/2003	180715	759335	10660.0
6/30/2003	175920	764703	10920.0
9/30/2003	193840	790388	12200.0
12/31/2003	196696	768593	13220.0
3/31/2004	206132	774312	13030.0
6/30/2004	201372	792724	12960.0
9/30/2004	214576	824421	13740.0
12/31/2004	214723	793899	14450.0
3/31/2005	230549	807870	14290.0
6/30/2005	222363	818699	14260.0
9/30/2005	238341	856683	14790.0
12/31/2005	244654	841578	18340.0
3/31/2006	261465	859216	17250.0
6/30/2006	257659	876504	17840.0
9/30/2006	272856	923877	18780.0
12/31/2006	268384	892673	19720.0
3/31/2007	285489	916374	18690.0
6/30/2007	287383	946115	19270.0
9/30/2007	306942	1001625	20200.0
12/31/2007	314349	972523	21040.0
3/31/2008	339271	983250	20030.0
6/30/2008	337012	983028	20880.0
9/30/2008	296810	1003997	20980.0
12/31/2008	246348	940323	19760.0
3/31/2009	251303	927383	17860.0
6/30/2009	264408	916473	18080.0
9/30/2009	293984	916077	19810.0
12/31/2009	296966	854314	21030.0
3/31/2010	315122	841087	19180.0

6/30/2010	318547	829016	18930.0
9/30/2010	347630	839103	20120.0
12/31/2010	351449	791850	21350.0
3/31/2011	371160	800257	19890.0
6/30/2011	374010	805280	20450.0
9/30/2011	383672	840353	21530.0
12/31/2011	381714	796525	21740.0
3/31/2012	391225	802591	20190.0
6/30/2012	378239	808263	18540.0
9/30/2012	394525	840364	20740.0
12/31/2012	383127	799694	22180.0
3/31/2013	396931	813014	20600.0
6/30/2013	388229	818261	16600.0
9/30/2013	410154	854664	20830.0
12/31/2013	392428	814911	21100.0
3/31/2014	410506	836740	19640.0
6/30/2014	404323	847389	13490.0
9/30/2014	413913	888018	18770.0
12/31/2014	372781	846527	18500.0
3/31/2015	387620	872913	16930.0
6/30/2015	371776	888888	16550.0
9/30/2015	370925	906744	16530.0
12/31/2015	346814	872776	16920.0
3/31/2016	363387	900647	15760.0
6/30/2016	362882	916757	16100.0
9/30/2016	377939	967961	16520.0
12/31/2016	372605	928477	16860.0
3/31/2017	384452	953270	15600.0
6/30/2017	381666	967493	16080.0
9/30/2017	407749	1022135	16650.0
12/31/2017	403054	971314	17400.0
3/31/2018	428832	984192	16280.0
6/30/2018	413040	1003714	16500.0
9/30/2018	421066	1053479	16690.0
12/31/2018	408509	1004846	17440.0

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Households and nonprofit organizations; revolving consumer credit; liability, Level, Millions of Dollars, Quarterly, Not Seasonally Adjusted
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