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Impact of Covid-19 Pandemic on Financial Investments in India.

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Abstract

The purpose of this research is to examine the Impact of COVID-19 on financial investment in India. There are many investments in India and are well patronized by the investors due to the safety and good returns. For this research work, 12 investments were considered and they are listed among the top investments in India. The questionnaire was administered through a Google monkey survey to 100 investors randomly to avoid bias, and 80 were duly completed and returns. Paired sample T test was applied for comparison between rating of investment in India before COVID-19 outbreak and during COVID-19 era by the investors which reveal that there is a significant different between them. The correlation coefficient which is 0.783 indicate a strong positive correlation between the investment before and during COVID-19 outbreak. Besides, the fitted regression model is statistically significant and it indicate that the model is a good fit for the data and can be used for future prediction of financial investment during coronavirus pandemic. Meanwhile, outlier diagnosis was performed using Box-plot and it shows that there is no significant outliers and the test of normality was also conducted using Shapiro-Wilk and Kolmogorov-Smirnov shows that the data are normally distributed which indicate that the underlying assumptions for the choice of the model are satisfy and this implies that the results are valid, robust and reliable. Charts were also plotted for visual impression. The results suggest that the Impact of COVID-19 pandemic on the top investment only has a mild impact and not severe as an appropriate measure were taken that makes the investment survive this period.

Keywords: Investment, COVID-19, Paired-T test, Correlation analysis, Regression model, Box-plot, Normality test.

1. Introduction

An investment is something that receives income or appreciates in value. Appreciation is the trend that occurs as time passes, and an asset appreciates. The primary goal of an individual when purchasing a good is to sell it to generate income. This work focusses on Impact of covid-19 pandemic on financial investments in India.

Investments enable an investor to increase the value of his or her money. Investment can refer to any type of investment income plan. For the purpose of this research 12 investments were considered namely Agriculture land, Bank deposits, capital market, corporate funds, Gold/Silver, life insurance scheme, Livestock, mutual funds, pension funds, post-office scheme, provident funds, and real estate. Purchasing a real estate is viewed as an investment just the same way with other 11 investments.

Any expense that ensures a company makes a profit will be considered an investment. When you are looking to pursue more education, your ultimate goal is to learn and improve at something so that you can eventually earn more.

In order to make money from investments, there is always a certain level of risk involved. Investments are not a sure bet; always subject to volatility. Additionally, you may invest in a company or project that does not meet expectations or one that is not completed. Savings are made in anticipation of future needs, and there is no loss of money. Investment money is used to acquire a potential future gain at the risk of losing some equity.

While most investors want a return with little risk, investors also want to minimize the risk associated with their investments. This is because many investors are in pursuit of investment plans that can make them double their money within a short time period with minimal risk (Goetzman, William N.; Rouwenhorst, K. Geert, 2005).

1.1 Objectives

- To examine the difference between investment rating performance before COVID-19 and during COVID-19.
- To study the relationship between investment rating performance before COVID-19 and during COVID-19.
- To investigate the strength of association between investment rating performance before COVID-19 and during COVID-19.
- To fit a model suitable to predict the performance of investment during the COVID-19 pandemic.
- To make a useful recommendation.

1.2 Research questions

- Is there a significant difference between investment rating performance before COVID-19 and during COVID-19?
- Does investment rating before COVID-19 has Impact on investment rating during COVID-19 pandemic?
- Does the outbreak of COVID-19 have severe or mild Impact on Financial investment in India?

2.0 Overview of the Covid-19 in India

The first patient reported to have contracted coronavirus was reported in Kerala in January 2020. A group of citizens from Wuhan, China, traveled there to assist them. There are suspected cases of the virus in India and more than 2,000 cases are reported (WHO, 2020).

Cases of these diseases have been reported in two hospitals in India. In Bangalore, a Google employee has been tested and found to have COVID-19, and in Delhi, a Google employee has been tested and COVID-19 is positive.

The first confirmed case of a person from Karnataka occurred on March 12. Over the last year, at least 52 people have died. During the 21-day shutdown, the public's attention was focused on the serious epidemic caused by the virus. It would be an understatement to say that the economic cost of the COVID-19 scare was significant for India. A decrease in the number of vehicles used for transport causes companies to scale back their activities.

All businesses, schools, offices, grocery stores and pharmacies have been closed, but hospitals are still open. It is also true to say that the Covid-19 scandal caused a serious economic blow to the Indian industries. Organizational activities have been scaled back in the light of current national policy priorities. After the outbreak of COVID-19, the financial system was affected, but scandals have already damaged the trust of investors and lenders. Today, investor conservatism also undermines the ability of Indian venture-backed companies to grow and compete (World bank, 2021).

The financial system was certainly affected by the outbreak of the COVID-19 pandemic, but previous scandals have already damaged-low confidence on the part of investors and lenders (WHO, 2020). The growing conservatism of the investment market has seriously hindered the growth of more than 50,000 Indian start-ups.

3.0 Methodology

The statistical tools applied for this research are Paired sample T-test, correlation analysis and regression analysis. The paired t test is a measure of comparison between two variables namely investment rating before COVID-19 pandemic (X1) and Investment rating during COVID-19 pandemic (X2) (Goulden, C. H, 2007). The test is suitable because the two variables are continuous (ratio scale) and are related (both talks about investment before and during). The correlation analysis is measure of the strength of association between two variables (investment rating before COVID-19 pandemic (X1) and Investment rating during COVID-19 pandemic (X2).). The correlation coefficient is denoted by R and the value is between 0 and 1. The regression model used for this work is a simple regression because we have only one independent variable (investment rating performance before COVID-19) predicting the dependent variable (investment rating during COVID-19) (Draper, N.R.; Smith, H, 1998). The three analysis are parametric and hence all assumptions suitable for the approach were carried out for the validity and robustness of the analysis result.

4.0 Analysis

The data used for analysis of this research was obtained through Google monkey survey conducted on 80 randomly selected investors. The random approach eliminate bias in the data collection process.

Descriptive Analysis

VARIABLES	Mean	Std Deviation	Std error of mean
Investment before COVID-19	74.03	5.311	0.594
Investment during COVID-19	77.69	6.634	0.742

Demographic variables	**Percentage (100%)**
Gender	
Male	36.3
Female	63.7
Educational level	
Bachelor	55.0
Bridging	7.5
High school	20.0
Master	17.5
Investment Level	
Agriculture Land	7.5
Bank deposits	8.8
Capital markets	8.8
Corporate funds	8.8
Gold/silver	7.5
Life Insurance Scheme	8.8
Livestock	7.5
Mutual Funds	8.8
Pension Funds	8.8
Post office scheme	8.8
Provident funds	8.8
Real estate	7.5

The above descriptive analysis shows that investment during COVID-19 has high variability due to higher standard deviation value of 6.634 than investment before COVID with low standard deviation value of 5.311. More so, investment during COVID-19 is said to be higher than before COVID-19 due to higher mean value of 77.69 and this is because investors now have easy access to online for investment without even visiting the office and hence encourage investor to do more especially in top investment with good returns. Meanwhile, the demographic statistics reveals that male investors

represented 36.3% while female investor represented 63.7%. This implies female invest more during this period than male.

T-Test

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Investment rating before Covid-19 & Investment rating during Covid-19	80	.783	.000

The correlation coefficient, R= 0.783 indicate that there is a strong positive correlation between investment before COVID-19 and investment during COVID-19. P = 0.000<0.01 indicate that there is a statistically significant relationship between investment before COVID-19 and Investment during COVID-19.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Investment rating before Covid-19 - Investment rating during Covid-19	-3.662	4.128	.461	-4.581	-2.744	-7.937	79	.000

The P = 0.000< 0.01 for the Paired samples T test which indicate that there is a statistically significant different between Impact on investments before COVID-19 and during COVID-19 at 1% significant level.

Regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783[a]	.613	.608	4.152

a. Predictors: (Constant), Investment rating before Covid-19
b. Dependent Variable: Investment rating during Covid-19

R-square = 0.613 indicate that 61.3% variability in investment during COVID-19 is attributed to investment before COVID-19. The R-square value indicate that the model is adequate because it is relatively high.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2132.348	1	2132.348	123.675	.000[b]
	Residual	1344.839	78	17.242		
	Total	3477.187	79			

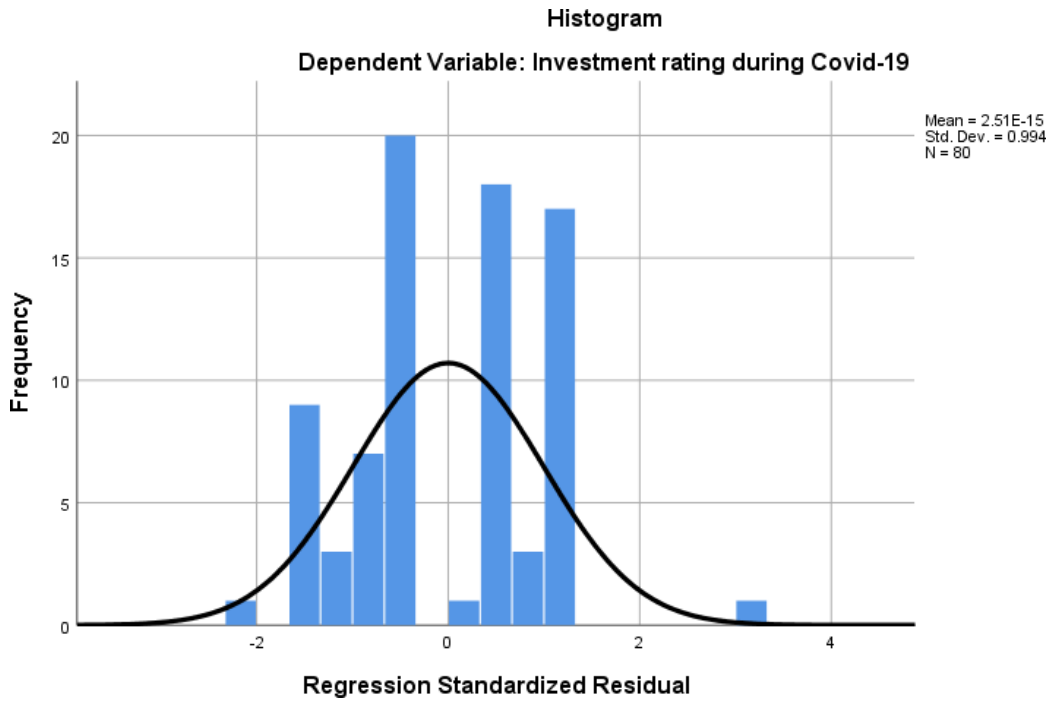
a. Dependent Variable: Investment rating during Covid-19
b. Predictors: (Constant), Investment rating before Covid-19

P = 0.000<0.01 indicate that the regression model is statistically significant at 1% significant level and this tells us that the model is a good fit for the data and very appropriate for future prediction of investment during COVID-19.

Model		Unstandardized Coefficients		Standardized Coefficients			
		B	Std. Error	Beta	t	Sig.	VIF
1	(Constant)	5.268	6.529		.807	.422	
	Investment rating before Covid-19	.978	.088	.783	11.121	.000	1.000

The P = 0.000<0.01 for Investment before COVID-19 which indicate it is statistically significant and it implies it is an important predictor of investment during COVID-19. The VIF = 1 is less than 5 which implies that there is a no multicollinearity problem. The model is expressed as Y = 5.268 + 0.978 X indicate that for one unit increase in investment before covid-19, there will be an increase of 0.978 in investment during covid-19. The intercept = 5.268 is the value of the investment during covid-19 when the investment before covid-19 is zero.

Charts



This is a normality plot of the residual which follows the OLS assumption that the fitted regression model residual should be approximately normally distributed.

Tests of Normality

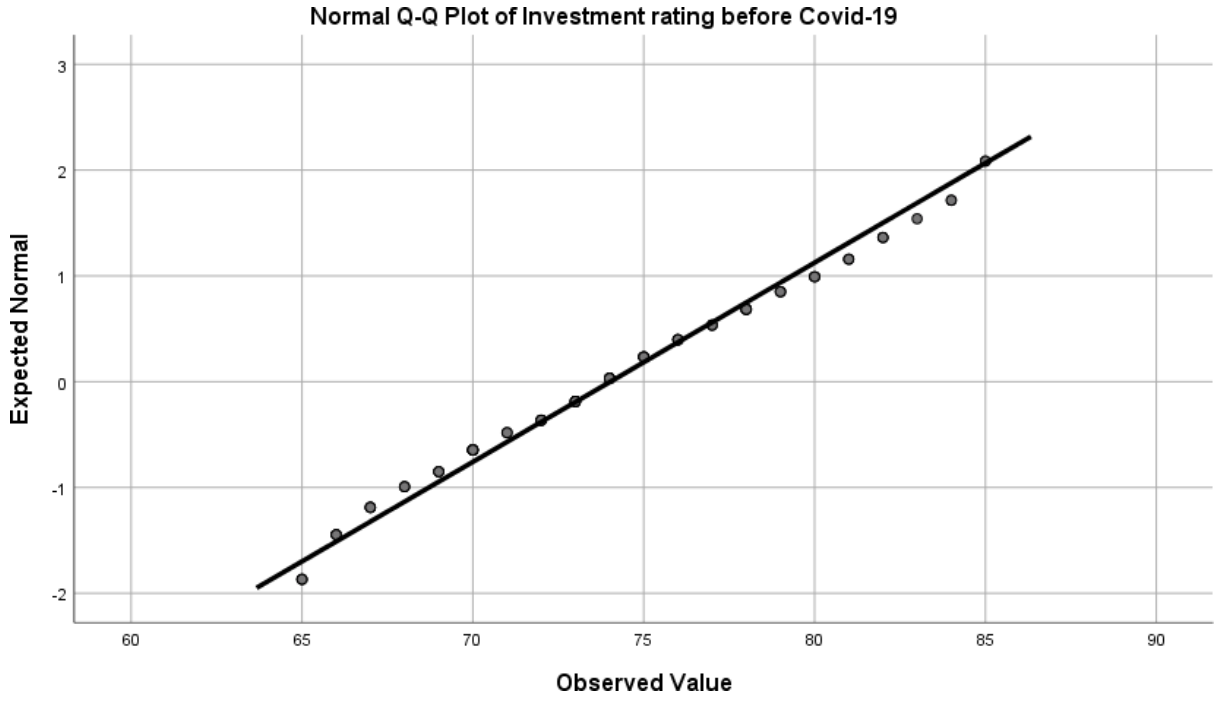
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Investment rating before Covid-19	.076	80	.200*	.974	80	.102

Investment rating during Covid-19	.050	80	.200*	.986	80	.553

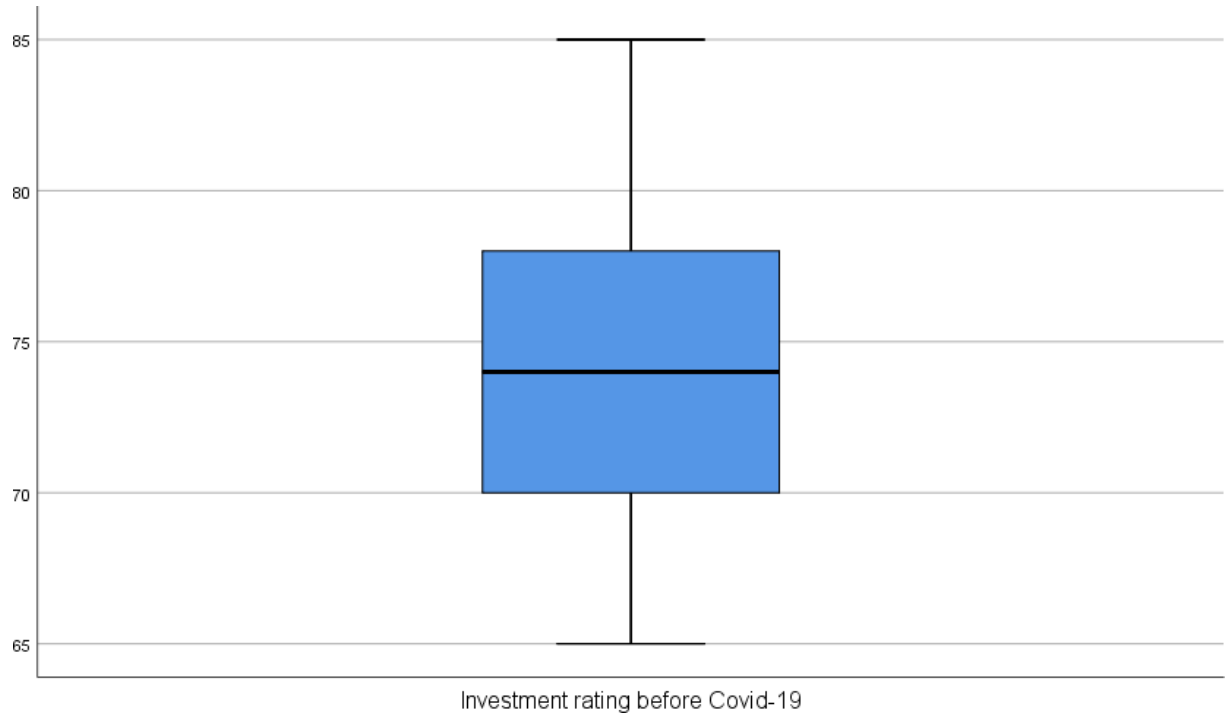
*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

The above shows table for normality test using Kolmogorov-Smirnov and Shapiro-Wilk and we can see that the P>0.05 for both cases and this implies that the two variables are normally distributed and this make the fitted model and the parametric T test very valid, reliable and Robust as it satisfy the normality assumption.

Investment rating before Covid-19

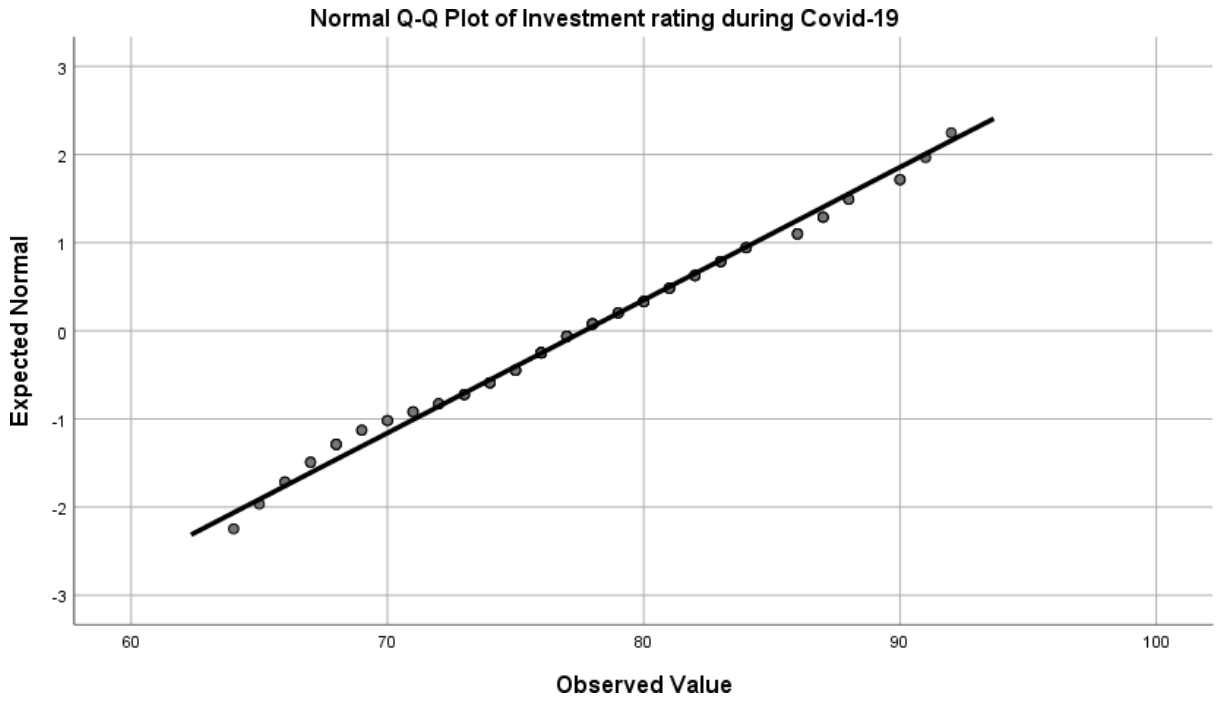


The Q-Q plot also support that the investment before covid-19 is normally distributed.

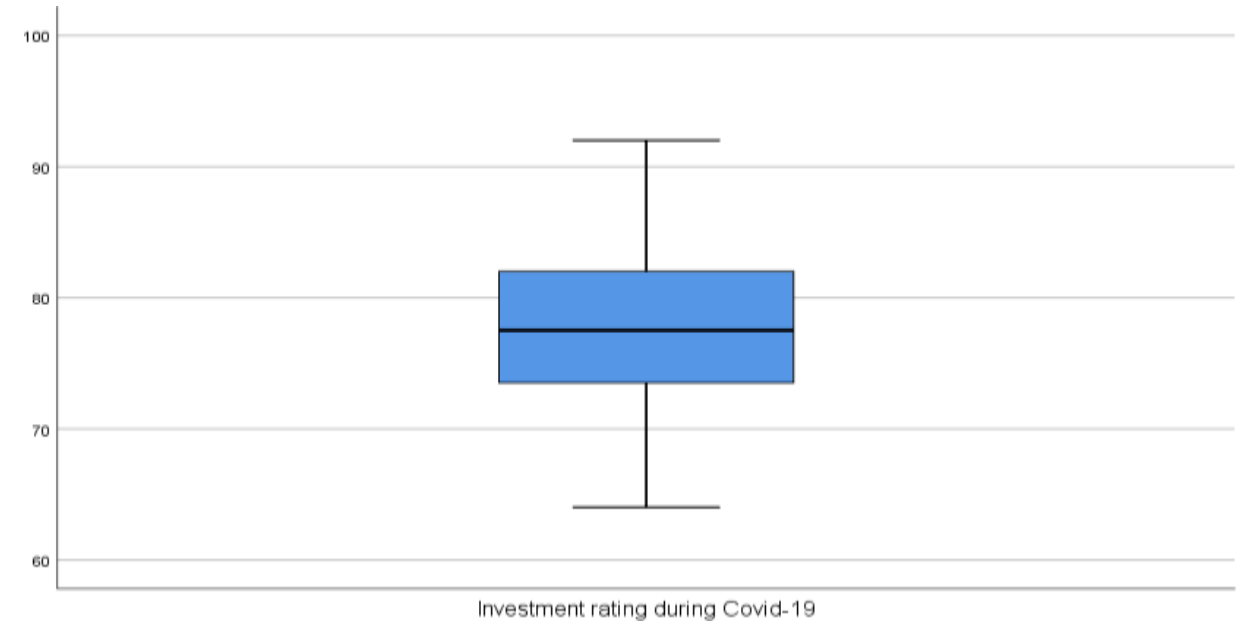


The box plot shows that there is no data point that is outside both the lower and upper whisker for the investment before covid-19 and that implies that there is no presence of outliers in the data and this satisfy the assumptions that there should not be significant outliers.

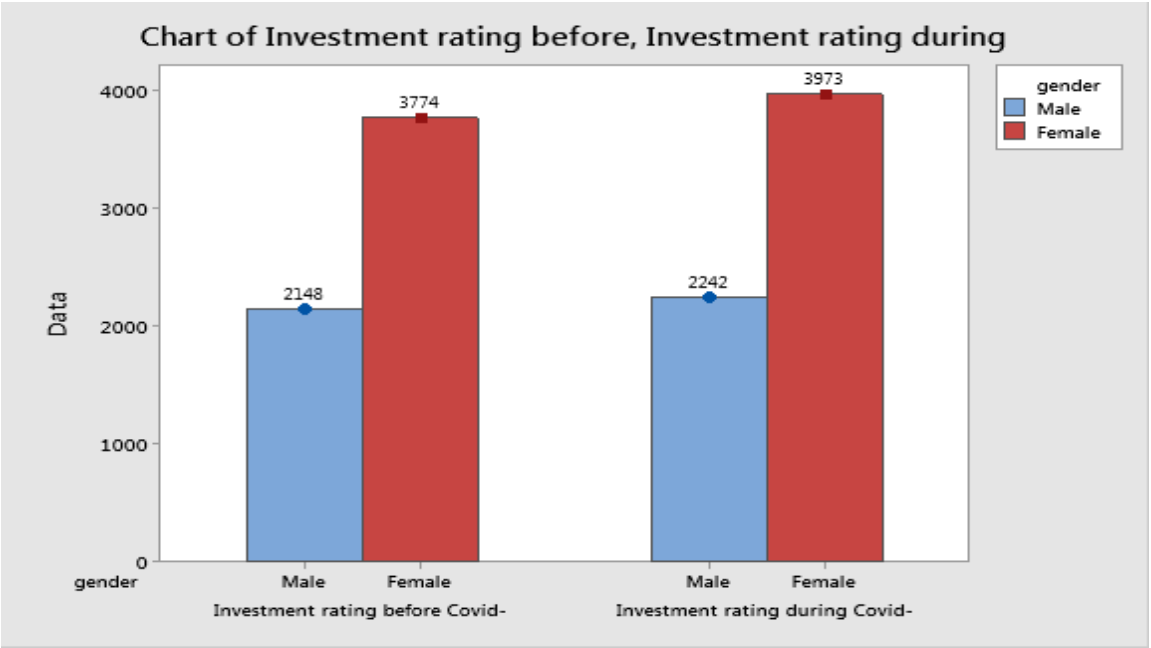
Investment rating during Covid-19



The Q-Q plot also support that the investment during covid-19 is normally distributed.



The box plot shows that there is no data point that is outside both the lower and upper whisker for the investment during covid-19 and that implies that there is no presence of outliers in the data and this satisfy the assumptions that there should not be significant outliers.



The above Chart shows that female investors before and during covid-19 are more than the male investors and this indicate that female participate more in investment for this study as female responded more than male without any case of bias in the data selection.

5.0 Conclusion

This research work focus on Impact of COVID-19 on financial investment in India. The Paired samples test shows that there is significant difference between investment before covid-19 and investment during covid-19. Meanwhile, the overall regression model is statistically significant also indicate that there is a linear relationship between investment before and during covid-19 era. More so, investment during COVID-19 is said to be higher than before COVID-19 due to higher mean value of 77.69 and this is because investors now have easy access to online for investment without even visiting the office and hence encourage investor to do more especially in top investment with good returns. Due to the

global effect of covid-19 pandemic, it is expected that investment rating performance should drop drastically but it only has mild effect as number of investors drop due to low volume of money in circulation but investment returns for top investments is still very attractive. Based on the above, it can be recommended that in order to sustain good investment return and positive investment rating especially during this pandemic, investors should continue to adopt the internet as better alternatives to participate in investment and all investment levels should encourage investors that has no internet idea so as to increase participation and also to sustain investment even during this covid-19 pandemic era.

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APPENDIX

Statistics

		INVESTMENT LEVEL	Investment rating before Covid-19	Investment rating during Covid-19	edu level	gender
N	Valid	80	80	80	80	80
	Missing	0	0	0	0	0
Mean			74.03	77.69		
Std. Error of Mean			.594	.742		
Std. Deviation			5.311	6.634		

Frequency Table

INVESTMENT LEVEL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture Land	6	7.5	7.5	7.5
	BANK DEPOSITS	7	8.8	8.8	16.3
	Capital market	7	8.8	8.8	25.0

	Corporate funds	7	8.8	8.8	33.8
	Gold/Silver	6	7.5	7.5	41.3
	Life Insurance Scheme	7	8.8	8.8	50.0
	Livestock	6	7.5	7.5	57.5
	Mutual funds	7	8.8	8.8	66.3
	Pension funds	7	8.8	8.8	75.0
	Post Office Scheme	7	8.8	8.8	83.8
	Provident Funds	7	8.8	8.8	92.5
	Real estate	6	7.5	7.5	100.0
	Total	80	100.0	100.0	

Education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor	44	55.0	55.0	55.0
	Bridging	6	7.5	7.5	62.5
	High School	16	20.0	20.0	82.5
	Master	14	17.5	17.5	100.0
	Total	80	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	51	63.7	63.7	63.7
	Male	29	36.3	36.3	100.0
	Total	80	100.0	100.0	

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Investment rating before Covid-19	74.03	80	5.311	.594
	Investment rating during Covid-19	77.69	80	6.634	.742