Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

Investigating the Impact of COVID-19 on the Performance of Indian Mutual Fund Schemes: An Investors Perspective

. **Mr. Gaurav Ajmera**
Management Trainee – Credit Bandhan Bank, Jaipur
Email Id-81294gaurav@gmail.com
Dr. Babita Jha
Assistant Professor – Finance Jaipuria Institute of Management, Jaipur
babita.jha@jaipuria.ac.in
Dr Sudhi Sharma
Assistant Professor- Finance Apeejay School of Management, Dwarka
sudhisharma1983@gmail.com

Abstract:
The outbreak of Coronavirus has battered the Indian economy and IMF has projected that the growth rate of India will contract by 4.5 percent in this fiscal year. The market sentiments over the last few months have gone down. Financial markets are adversely affected by this pandemic and the mutual fund industry is no more exception. The mutual fund industry is facing high volatility due to this turmoil. This paper, therefore, aims to study empirically the impact of COVID -19 on diverse aspects of different schemes of mutual funds. The paper is divided into two parts i.e. the first part has analyzed mutual fund schemes from the perspective of several folios, redemption/repurchase, and cash flows. The second part of the paper empirically drives the impact of COVID-19 on various schemes of mutual funds by applying econometric dummy variable regressions. The study concluded that COVID-19 has largely impacted the large-cap schemes rather than mid and small-cap schemes. Further, funds i.e. DSP Midcap fund, Axis Small-Cap, and Kotak Small-Cap funds had shown the positive impact of the crisis on the Net Asset Values (NAVs) of the funds. Therefore, the investors long in other schemes could take a short position in these schemes to get a considerable hedge against probable losses.

Keywords: COVID-19, Mutual Fund Schemes, Econometric Analysis, Repurchase/Redemption, Net Asset Value (NAV)

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

1. Introduction

The pandemic COVID-19 has severely impacted the Indian economy and it is likely to grow merely at 1.9% in 2020 as predicted by IMF. The economy has been hit hard by the lockdown of the manufacturing units, malls, theatres, and almost a complete shutdown of primarily all the activities for around two months from March 21, 2020, to May 10, 2020. The market sentiment is quite low and this has adversely affected the financial market too. Sharp volatility has been witnessed in the Indian financial markets with the advent of COVID- 19, largely due to the effect of global markets as the domestic market tracks the global indices. The S&P BSE Sensex which was 42273 points on January 20, 2020, settled to 29,916 on March 20, 2020. The Indian stock market has crashed around 30% since February 2020. (Outlook Money, Abhishek Raja Ram, April 21, 2020).

The mutual fund has gained immense reputation and respect from the investors due to the returns reaped by them owing to the expertise and experience of the fund managers. Risk management and reduction have been the major focus of fund managers. In the present times of VUCA (Volatile, Uncertain, Complex, and Ambiguous) scenario, the significance of a mechanism that can mitigate or reduce the risk is most sought. The two risks associated with mutual funds is the systematic and unsystematic risk. The systematic risk is broadly dependent upon macroeconomic factors such as interest rates, currency depreciation, recession, inflation, etc., which can be mitigated partially by sound asset allocation. Unsystematic risk is industry/company-specific which can largely be mitigated through proper diversification. The real testing time for a mutual fund is when the systematic risk increases in the market, as in present times of pandemic, COVID 19. During such times the diligence of the fund managers is seen through the performance of the fund, i.e can it maintain the good performance over the long term and minimize the losses during times of crisis.

2. Review of Literature

Singal and Manraj (2018) in their research revealed that investors' inclinations towards investment in mutual funds depend substantially on the condition of the market. Fundamental factors and the perception of investors play an influential role while making investment decisions. Das (2019) in the research on the appraisal of a mutual fund based on the risk-adjusted performance shown that during the worst condition in the market, equity funds observes high volatility and also gives depressing returns and therefore, debt fund outperforms equity funds. Ramasamy and Pachiyappan (2019) in a study found that the longer the investment period better will be the returns from the mutual funds. The study also found that in the adverse condition in the market, minimum returns are generated in the short horizon in case of adverse conditions.

Mani and Goel (2018) conducted an empirical analysis on the open-ended fund schemes to check the efficiency of mutual funds and their study revealed that very few mutual funds schemes are performing proficiently and mostly equity-linked saving schemes performance is better in comparison to income schemes, growth schemes and balanced schemes. Mazur, Shoshan, and

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

Zagonov (2017) found that retail funds are more inclined towards the past superior performing funds whereas institutional funds strongly penalize the worst performers in the past.
Bose (2012) in a study found that there was an increase at the end of March 2008 in the assets under management by 54.8 but post-financial crisis observed the outflow of funds from equity funds. However, there was an increase in the investments in the debt market. Zafar, Maqbool, and Khalid (2012) in their study recommended that during financial crisis fund managers should evaluate investment strategies related to portfolio diversification and should consider less risky assets for reducing funds volatility. Lohana (2014) in a study concluded that during volatility in the market, equity funds become the riskiest funds, and index funds perform better in comparison to other funds. Then Mozhiand Kumar (2009) in a study revealed that there is a positive relationship between volatility in the stock market and mutual fund flows. Mutual funds are mainly affected by the equity market return.

3. Objectives of the Study

The present study is an attempt to investigate the impact of COVID 19 on the performance of different mutual fund schemes. Keeping this in mind, an attempt is made to study the following objectives:

1. To examine the impact of COVID-19 on the number of folios of different schemes of mutual fund schemes.
2. To analyze the impact of COVID-19 on the repurchase/redemption of different schemes of a mutual fund.
3. To evaluate the impact of COVID-19 on the net cash flows of different schemes of the mutual fund.
4. To analyze the impact of COVID-19 on the NAVs of various schemes.

4. Research Methodology

The study is based on secondary data and is analytical. Data of the last three months (Jan–March 2020) has been collected from the published report of the Association of Mutual Funds Industry (AMFI) to see the impact of Covid -19 on different schemes of mutual funds. The parameters of the study mainly the number of folios, repurchase/redemption, cash flows, and NAVs of various schemes.

5. Analysis and Interpretation

This section has been done into two parts i.e. Impact of COVID-19 on Folios, Repurchase/Redemption & Net cash flows and the second part dealt with the impact of COVID-19 on the NAVs of various schemes. The results have discussed as hereunder:

Section 1: Impact of COVID-19 on the Folios, Repurchase/ Redemption & Net Cash Flows of Various Schemes

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

5.1 Impact of COVID-19 on Number of Folios under Different Schemes

Folio number gives identification to an investor's account and it serves as a gateway to unlocking relevant investor and investment information. Folios specify the investor's understanding of the about market risks associated with different schemes.

Table 1: - Number of Folios under Different Schemes (Jan-March2020)

		Jan	**Feb**	**March**
	Schemes	**No. Of Folios**	**No. Of Folios**	**No. Of Folios**
A	**Open-ended Schemes**			
I	Income/Debt Oriented Schemes	6,788,346	6,188,410	6,135,584
II	Growth/Equity Oriented Schemes	61,298,184	61,983,265	62,692,668
III	Hybrid Schemes	9,531,000	9,544,387	9,572,715
IV	Solution-Oriented Schemes	5,435,598	5,436,449	5,436,840
V	Other Schemes	2,699,892	2,910,703	3,160,311
	Total A-Open ended Schemes	**85,753,020**	**86,063,214**	**86,998,118**
B	**Close Ended Schemes**			
I	Income/Debt Oriented Schemes	1,056,671	1,053,893	1,042,672
II	Growth/Equity Oriented Schemes	1,719,488	1,715,116	1,701,373
	Total B -Close-ended Schemes	**2,776,159**	**2,769,009**	**2,744,045**

Data Source: Association of Mutual Funds of India(Jan-March 2020)

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

Table 1 represents the number of folios under different schemes from the month of Jan-March 2020. The open-ended debt scheme and Close-ended debt scheme witnessed a continuous decline in the given period. The number of folios has increased under Growth/Equity oriented schemes in the open-ended segment because of the projection of the growth in the returns of equity in the future. However, the number of folios in the case of Growth/Equity Oriented schemes under the close-ended segment has decreased because of the COVID-19 Impact. The liquidity crunch forced investors to withdraw money from these funds.

Table 2- Percentage Change in the Number of Folios (Jan–March 2020)

		JAN-FEB	**FEB-MARCH**	**JAN-FEB**	**FEB-MARCH**
	Schemes	**Change in Folio**	**Change in Folio**	**%Change**	**%Change**
A	**Open-Ended Funds**				
I	Income/Debt Oriented Schemes	-599936	-52826	-9.69%	-0.86%
II	Growth/Equity Oriented Schemes	685081	709403	1.11%	1.13%
B	**Closed-Ended Funds**				
I	Income/Debt Oriented Schemes	-2778	-11221	-0.26%	-1.08%
II	Growth/Equity Oriented Schemes	-4372	13743	-0.26%	-0.91%

Data Source: Association of Mutual Funds of India (Jan-March 2020)

Table 2 signifies the percentage decline in the number of folios under open-ended and closed-ended schemes. There was a significant decline of 9.61% in the number of folios between February to March in the debt-oriented schemes of the open-ended funds. Although the open-ended equity scheme saw growth in February and March with 1.11% and 1.13% respectively on a month-on-month basis it was not substantial. The close-ended equity scheme saw a decline at the rate of 0.26% from the month Jan to Feb and 1.08% from the month Feb to March.

The reason for decreasing folios under the debt scheme was due to the rising uncertainty in the debt market that forced the investor to stop investing in the debt funds.

5.2 Impact of COVID-19 on Redemption/Repurchase

Redemption is usually an indicator of future market growth. If more redemption takes place in the market it generally indicates that either market has reached its full valuations or the future growth of the market is uncertain. In India, the Covid epidemic created a health crisis leading to the market crash.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

Table 3- Repurchase/Redemption of Funds from Different Schemes (INR. in Crores)
Data Source: Association of Mutual Funds of India (Jan-March 2020)

Scheme Name	JAN	FEB	March
	Repurchase/ Redemption	Repurchase / Redemption	Repurchase/ Redemption
Open-ended Funds			
Income/Debt Oriented Schemes	1000653	847188	1447707
Growth/Equity Oriented Schemes	14043	13989	18386
Hybrid Scheme	11243	13131	48167
Closed-Ended Funds			
Income/Debt Oriented Schemes	586	332	525
Growth/Equity Oriented Schemes	330	66	238

Table 3 depicts that in February the amount of redemption decreased but in March there was a redemption of funds from all the schemes.

Table 4- Comparative Table of Redemption of Funds (In Percentage)

Scheme Name	JAN-FEB Repurchase/ Redemption	FEB-MARCH Repurchase/ Redemption	JAN-FEB % Change	FEB-MARCH %Change
Open-ended Funds				
Income/Debt Oriented Schemes	-153465	600519	-15.30%	70.90%
Growth/Equity Oriented Schemes	-55	4398	-0.40%	31.40%
Hybrid Schemes	1888	35036	16.80%	266.80%
Closed-Ended Funds				
Income/Debt Oriented Schemes	-254	193	43.30%	58%
Growth/Equity Oriented Schemes	-264	172	-80%	260.60%

Data Source: Association of Mutual Funds of India (Jan-March 2020)

Table 4, shows that investors have not withdrawn their funds till February in almost all the schemes except hybrid schemes. This is because at the beginning of February month Union budget was announced that triggered the stock market. It can be inferred from the data that investors were optimists at that time. But in March data indicates that investors have withdrawn

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

their funds at a very significant rate. Redemption in the case of the hybrid scheme was 267% more in March in comparison to the last month.

5.3 Impact of COVID-19 on Cash Flows

Cash flows in the case of mutual funds represent net inflows and net outflows of funds. When drawings of the fund are more than the purchase of funds then it raises the question on the market performance and ultimately points out the economic condition of the country. In the last quarter of the year 2020, it has been noticed that the majority of the schemes have net outflows rather than inflows representing an unfavorable situation for the market and the economy.

Table 5- Net Inflows /Outflows (INR in Crores)

	Schemes	**Jan**	**Feb**	**March**
		Net Inflow (+ve)/ Outflow (-ve)	**Net Inflow (+ve)/ Outflow (-ve)**	**Net Inflow (+ve)/ Outflow (-ve)**
A	**Open-Ended Funds**			
I	Income/Debt Oriented Schemes	109,306	-27,940	-194,915
II	Growth/Equity Oriented Schemes	7,877	10,796	11,723
III	Hybrid Schemes	1,260	-2,006	-36,460
IV	Solution-Oriented Schemes	117	74	69
V	Other Schemes	2,345	18,449	6,913
	Total A-Open ended Funds	**120,904**	**-627**	**-212,669**
B	**Closed-Ended Funds**			
I	Income/Debt Oriented Schemes	-424	-190	192
II	Growth/Equity Oriented Schemes	-330	-66	-238
	Total B –Closed Ended Funds	**-754**	**-256**	**-46**

Data Source: Association of Mutual Funds of India (Jan-March 2020)

Most of the schemes witnessed net outflows in comparison to net inflows as per data represented in table V. Debt-oriented schemes mainly under the open-ended segment witnessed consistent outflow from February to March. In March, a huge amount was withdrawn by the investors amounting to Rs.194915 crores.

The biggest reason for withdrawing debt funds was the cheaper equity available in the market after deep correction. Therefore, open-ended growth schemes saw Net Inflow in the schemes. The overall picture from January to March points out the fear in the market due to the pandemic Covid-19.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

6. Section 2: Impact of COVID-19 on the NAV's of Large, Mid, and Small Cap Schemes

This section captures the impact of COVID-19 on the various schemes of mutual funds. For this, the study has taken three schemes i.e. large, mid, and small-cap. The top ten funds of these respective schemes have been taken for study. The results of the impact on NAV's of Large cap schemes, Midcap schemes, and Small-cap schemes are encapsulated in Table 6, Table7, and Table 8 respectively. To capture the impact, an econometric model has been applied i.e. Dummy variable regression function. Dummy variable regression function has described as:

The paper also analyses the impact of the outbreak of COVID-19 on seven major currencies. This is evaluated by incorporation of the Dummy Variable in the equation 1,2 and 3 given below.

$$\text{Ln}(NAV\_LCS_{t)} = \alpha_0 + \alpha_2 D_t + U_t \quad (1)$$

$$\text{Ln}(NAV\_MCS_{t)} = \alpha_0 + \alpha_2 D_t + U_t \quad (2)$$

$$\text{Ln}(NAV\_SCS_{t)} = \alpha_0 + \alpha_2 D_t + U_t \quad (3)$$

Where,

Ln= Loglinear

NAV= Net Asset Value

LCS= Large Cap Schemes

MCS= Mid Cap Schemes

SCS= Small Cap Schemes

Dt= Dummy variable at time t; D=0, before the outbreak of pandemic and D=1, after the outbreak of pandemic.

α_0 = intercept or constant; α_2 = coefficient of respective schemes and Ut= stochastic term or error term

t = time

The impact of COVID-19 on Large cap schemes has been summarized in Table 6, Out of 10, 9 schemes of the large-cap schemes fit the regression model well as the F-value >F-sig. The scheme i.e. Axis Bluechip Fund is not showing the model fit. The R square value varies from 0.047 to 0705. As expected all of the schemes are showing a negative impact with the outbreak of COVID-19. In the large-cap schemes, 80% of the schemes are showing significant negative impact (t value> 1.96) of COVID-19, whereas the rest 20% are also showing negative impact but not significant at the 0.05 significance level. Henceforth, it could be fairly concluded that there is an overall negative impact on the large-cap schemes. The inferences provide relevant insight to the investor's long-term investors.

The impact of a pandemic on Medium-term schemes has been captured in Table 7. Out of 10, 3 schemes are showing the model is unfit where 7 are showing that the model fits the data well as f-value >f sig. R square ranges from 0.0512 to 0508, which means the explanatory power of the model varies from 5% to 51%. The overall impact of the pandemic is negative were two schemes i.e. Franklin India Prima and HDFC Mid-Cap Opportunities have shown significant negative impact as the t value >1.96 i.e. -2.506 and -2.331 respectively. One of the schemes i.e. L&T Midcap is significant at a 0.10 significance level. The scheme i.e. DSP Midcap Fund is showing

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

positive impact although the impact is not significant neither at the 0.05 or 0.10 significance level. Here we can infer that the overall impact of the COVID-19 outbreak is negative but a significant negative impact on Midcap schemes. However, the impact is relatively lesser than the negative impact of large-cap schemes.

Lastly, the impact of the outbreak of COVID-19 has been encapsulated in Table 8. The results of the dummy variables regression fit in eight out of ten schemes as the f value> f significance. Schemes i.e. Kotak Small-Cap and Sundaram Small Cap have shown the model is not fit on their NAVs. Thus, these two schemes have shown no significant impact. The r square value ranges from 0.0548 to 0.7310, which means the explanatory power varies from 5.48% to 73%. As far as the direction of impact is concerned, 80% of the schemes have shown the negative impact of the pandemic. However, four schemes have shown a statistically significant impact of the crisis on the NAVs of the funds as the t-value>1.96, varying from -2.012 to -4.545. The Axis small-cap and Kotak small-cap are having a positive but statistically insignificant positive impact. But these funds could be used by the investors as a hedge against the negative impact of the pandemic crisis. Thus, it could be fairly concluded that the overall impact of the COVID-19 outbreak is negative but it varies from funds to funds. However, the negative impact is lesser than the large-cap schemes.

The overall inferences in the comparative framework can be concluded and provide an interesting insight to investors. The large-cap funds are more volatile than the small and mid-cap scheme's funds. Mid-cap schemes funds NAVs are more stable compared to others. Few funds mid-cap and small-cap funds are identified as a hedge against the negative impact of the crisis i.e. DSP Mid-cap fund, Axis small-cap, and Kotak small-cap funds. These funds had shown a positive impact of the crisis on the NAVs of the funds. Therefore, the investors long in other schemes could take a short position in these schemes to get a considerable hedge against probable losses.

Table 6- Results of Dummy Variable Regression (Large Cap)

S.no.	***Scheme Name***	***R square***	***A***	***β1***	***t1***	***F Value***	***F sig***
1	Aditya Birla Sun Life Frontline Equity	0.640	221.830	-24.603	-3.535***	12.499	0.002
2	Axis Bluechip Fund	0.047	29.181	-0.201	-0.198	0.039	0.846
3	BNP Paribas Large Cap Fund	0.186	89.460	-2.477	-0.804	0.647	0.432
4	Edelweiss Large Cap Fund	0.472	35.435	-2.623	-2.269***	5.146	0.036
5	ICICI Prudential Bluechip Fund	0.593	41.903	-4.051	-3.122***	9.744	0.006
6	Invesco India Largecap Fund	0.461	28.293	-1.898	-	4.870	0.041

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

					2.207***		
7	Mirae Asset Large Cap Fund	0.543	50.708	-4.612	-2.743***	7.522	0.013
8	Nippon India Large Cap Fund	0.705	34.254	-5.346	-4.220***	17.806	0.001
9	SBI Bluechip	0.534	39.079	-3.592	-2.679***	7.179	0.015
10	UTI Mastershare	0.480	121.038	-8.449	-2.323***	5.397	0.032

Table7- Results of Dummy Variable Regression (Mid Cap)

Scheme Name	R square	A	β1	t1	F Value	F sig
BNP Paribas Midcap	0.1206	31.0522	-0.5327	-0.5156	0.2659	0.6124
DSP Midcap Fund	0.0549	53.2907	0.4099	0.2333	0.0544	0.8181
Edelweiss Mid Cap Fund	0.2600	25.7724	-1.0484	-1.1423	1.3049	0.2683
Franklin India Prima	0.5087	932.9512	-84.2258	-2.5066***	6.2831	0.0220
HDFC Mid-Cap Opportunities	0.4815	52.7232	-4.5187	-2.3311***	5.4340	0.0316
Invesco India Mid Cap	0.0512	47.4415	-0.3315	-0.2175	0.0473	0.8303
Kotak Emerging Equity Fund	0.1736	37.6727	-1.1313	-0.7479	0.5593	0.4642
L&T Midcap	0.4087	129.4046	-8.5060	-1.8998**	3.6093	0.0736
Tata Midcap Growth	0.1852	134.7778	-3.8450	-0.7994	0.6391	0.4345
UTI Mid Cap	0.3071	97.1426	-4.4388	-1.3690	1.8742	0.1878

Table 8- Results of Dummy Variable Regression (Small Cap)

Scheme Name	R square	α	β1	t1	F Value	F sig
Aditya Birla Sun Life Small Cap Fund	0.6975	32.4447	-6.3738	-4.1300***	17.0567	0.0006
Axis Small Cap	0.1791	28.3877	1.0466	0.7723	0.5964	0.4500
DSP Small Cap Fund	0.3946	52.5865	-3.8715	-1.8222	3.3204	0.0851
Franklin India Smaller Companies	0.6766	51.1737	-8.8326	-3.8980***	15.1945	0.0011
HDFC Small Cap Fund	0.7310	41.0787	-8.0858	-4.5453***	20.6600	0.0003

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

ICICI Prudential Smallcap Fund	0.3370	24.2192	-1.8635	-1.5187	2.3065	0.1462
Kotak Small Cap Fund	0.0458	64.4515	1.3384	0.1945	0.0378	0.8480
Nippon India Small Cap	0.2622	37.2571	-2.6287	-1.1527	1.3286	0.2641
SBI Small Cap Fund	0.0548	49.6835	-0.4843	-0.2329	0.0542	0.8185
Sundaram Small Cap Fund	0.4285	75.8524	-8.9061	-2.0123***	4.0493	0.0594

7. Conclusion

The findings of the study reveal that Covid-19 has adversely affected most of the schemes of the mutual funds. The major impact of Covid-19 can be seen in the debt-oriented schemes and schemes under closed-ended funds. The number of folios has decreased and redemption/repurchase has increased in the case of debt-oriented schemes because of the apprehension of the fall of returns in the future debt market. The number of withdrawals has increased in the case of closed-ended funds and hybrid funds because of the Coronavirus pandemic. In the case of equity/growth funds, redemption/repurchase is less and its cash flows are also positive because investors are optimistic about the equity market performance in the future. However, investors are suggested not to panic as long as their NAV has not gone down drastically. Thus, the study further analyzed the impact on the NAVs of various types of schemes i.e. large-cap, mid-cap, and small-cap funds. The major impact of the outbreak of the pandemic has been captured in the performances of large-cap schemes. The overall inferences in the comparative framework can be concluded and provide an interesting insight to investors. The large-cap funds are more volatile than the small and mid-cap scheme's funds. Mid-cap schemes funds NAV's are more stable compared to others. Few funds mid-cap and small-cap funds are identified as a hedge against the negative impact of the crisis i.e. DSP Mid-cap fund, Axis small-cap, and Kotak small-cap funds. These funds had shown a positive impact of the crisis on the NAVs of the funds. Therefore, the investors long in other schemes could take a short position in these schemes to get a considerable hedge against probable losses.

References

1. Singal, S.V.,& Manrai, R. (2018).Factors Affecting Investment in Mutual Funds.Journal of General Management Research, 5(2), 96–107.
2. Das, A. (2019). Towards Risk-Adjusted Performance Appraisal of Indian Mutual Funds.Journal of Mechanics of Continua and Mathematical Sciences, 14(1), 110-131.
3. Zafar, S.M.T., M. Adeel, &Khalid, S.M. (2012).An Empirical Study on Indian Mutual Funds and their Performance Evaluation prior to Recession. Uttaranchal Business Review, 2(1), 19-41.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.220

4. Ramasamy, R.,&Pachiyappan, S. (2019). Holding period for positive return from Indian mutual funds. Investment Management and Financial Innovations,16 (1), 346-364.
5. Lohana, S.R. (2014). Impact of Stock volatility on Mutual Fund Investment: An Empirical Analysis.International Journal of Scientific & Engineering Research,5(5), 1-11.
6. Bose, S. (2016). Some Aspects of Indian Mutual Funds' Performance during the Recent Financial Crisis. ICRA Bulletin, Money and Finance, 75-112.
7. Goel, M. & Mani, M. (2018). Efficiency Measurement of Open-Ended Mutual Fund Schemes with respect to Indian Mutual Fund Industry.International Journal of Financial Services Management, 9(2),140-167.
8. Mazur, M., Salganik-Shoshan, G., &Zagonov, M. 2017. Comparing performance sensitivity of retail and institutional mutual funds' investment flows. Finance Research Letters, 22.
9. Thenmozhi, M. and Kumar M. (2009). Dynamic interaction among mutual fund flows, stock market return and volatility. NSE Working Papers, 50, 1-30.