IMPACT OF SUBSCRIPTION AND REDEMPTION OF MUTUAL FUNDS ON EQUITY

Gudipati. Srinivasa Rao,
Research Scholar, Department of Commerce and Management Studies,
Andhra University, Visakhapatnam, Andhra Pradesh.
Prof.A.Narsimha Rao,
Research Supervisor, Department of Commerce and Management Studies,
Andhra University, Visakhapatnam, Andhra Pradesh.
doi: 10.48047/ecb/2023.12.si4.1182

ABSTRACT
This study aimed to investigate the impact of mutual funds on the growth of equity market capital in India. Using data from 2001 to 2022, the study employed a descriptive research approach to examine its objectives. The results indicate a long-term relationship between mutual fund subscription, mutual fund redemption, and Indian equity market capital growth. The study found a positive impact of mutual fund subscription on the growth of Indian equity market capital, suggesting that increased mutual fund investments can push equity market investments higher. Additionally, mutual fund redemption was found to have an impact on Indian equity market capital growth. However, the study noted that despite mutual fund redemption, equity market capital growth remained constant, indicating strong contributions from retailers and institutional investors. The study concluded that mutual fund investments play a significant role in the growth of Indian equity market capital, and both subscription and redemption can impact it in the long run. Overall, this study provides insights into the dynamics of the Indian equity market and its relationship with mutual fund investments.
Keywords: AMC, Equity Markets, Mutual Fund Investments, Redemptions, Stock Market and Subscription

INTRODUCTION

Mutual funds have become a popular investment option in the Indian market. They offer a diverse range of investment options and provide investors with an opportunity to invest in the stock market indirectly. With the growth of the Indian economy and the stock market, mutual fund investments have been growing rapidly in recent years.However, the impact of mutual fund subscription and redemption on equity market capital growth in India has been a topic of debate. Some researchers argue that mutual fund investments can push equity market investments higher, while others suggest that they may not have a significant impact due to the presence of other factors, such as the contributions of retailers and institutional investors.

Mutual funds have gained widespread popularity as a means of investment, particularly in the stock market. They offer a convenient and diversified investment option for both retail and institutional investors. In India, mutual fund investments have been growing rapidly, and they have become an essential part of the country's equity market. However, the impact of mutual fund subscription and redemption on equity market capital growth remains a topic of debate. While some argue that mutual fund investments can push equity market investments higher, others believe that they may not have a significant impact due to the presence of other factors, such as the contributions of retailers and institutional investors.

Therefore, this study aims to investigate the impact of mutual fund subscription and redemption on equity market capital growth in India. Through a descriptive research approach and an analysis of data from 2001 to 2022, this study aims to examine the long-term relationship between mutual fund investments and equity market capital growth. The findings of this study may provide valuable insights into the dynamics of the Indian equity market and its relationship with mutual fund investments, which could benefit investors and policymakers alike.

REVIEW OF LITERATURE

Suresh Kumar, & R. Venkatesh, (2021): This study examines the impact of subscription and redemption of mutual funds on equity in India using monthly data from 2010 to 2019. The results suggest that mutual fund subscription has a positive impact on equity, while mutual fund redemption has a negative impact on equity. The findings of this study provide insights into the dynamics of the Indian equity market and may be useful for investors and policymakers.

Hussain, A. S. Haq, & S. Yousaf, (2020): The purpose of this study is to examine the impact of subscription and redemption of mutual funds on equity market returns in Pakistan. Using monthly data from 2005 to 2015, the study found that mutual fund subscription has a positive impact on equity market returns, while mutual fund redemption has a negative impact. These findings provide insights into the relationship between mutual funds and equity market returns in Pakistan.

Hamid & W. H. Wan Mahmood, (2020): This study investigates the relationship between mutual fund subscription and redemption and equity market volatility in Malaysia. Using daily data from 2010 to 2019, the results suggest that mutual fund subscription has a positive impact on equity market volatility, while mutual fund redemption has a negative impact. The findings of this study provide insights into the role of mutual funds in equity market volatility in Malaysia.

Lu, P (2020): The objective of this study is to investigate the impact of subscription and redemption of mutual funds on equity market performance in the United States. Using quarterly data from 2000 to 2019, the results suggest that mutual fund subscription has a

positive impact on equity market performance, while mutual fund redemption has a negative impact. These findings provide insights into the relationship between mutual funds and equity market performance in the United States.

Zhao & H. Zhang, (2019): This study examines the impact of subscription and redemption of mutual funds on equity market liquidity in China. Using monthly data from 2010 to 2019, the results suggest that mutual fund subscription has a positive impact on equity market liquidity, while mutual fund redemption has a negative impact. The findings of this study provide insights into the role of mutual funds in equity market liquidity in China.

AgarwalA& S. K. Gupta, (2017): The purpose of this study is to investigate the impact of subscription and redemption of mutual funds on equity market returns in India. Using monthly data from 2005 to 2015, the results suggest that mutual fund subscription has a positive impact on equity market returns, while mutual fund redemption has a negative impact. These findings provide insights into the relationship between mutual funds and equity market returns in India.

Jones, C. M., Lipson, M. L., &Wehling, T. O. (2017): The impact of mutual fund redemptions on equity market liquidity: Evidence from US equity mutual funds." This paper investigates whether mutual fund redemptions have a negative impact on equity market liquidity by causing forced selling of assets. The results show that mutual fund redemptions do have a negative impact on equity market liquidity in US equity mutual funds.

OgwucheF. O., (2015): This study examines the impact of subscription and redemption of mutual funds on equity market performance in South Africa. Using monthly data from 2000 to 2010, the results suggest that mutual fund subscription has a positive impact on equity market performance, while mutual fund redemption has a negative impact. The findings of this study provide insights into the relationship between mutual funds and equity market performance in South Africa.

RESEARCH GAP

While mutual funds have become a popular investment option in India, the impact of mutual fund subscription and redemption on equity market capital growth remains a subject of debate. While some researchers argue that mutual fund investments can push equity market investments higher, others suggest that they may not have a significant impact due to the presence of other factors, such as the contributions of retailers and institutional investors.

Although several studies have examined the relationship between mutual fund investments and equity market capital growth, there is still a research gap in the literature regarding the impact of mutual fund subscription and redemption on the Indian equity market. There is a need for further research to provide a better understanding of the dynamics of the Indian equity market and the role of mutual fund investments in it.

Moreover, the existing literature primarily focuses on the short-term impact of mutual fund investments on equity market capital growth. However, it is essential to examine the long-term relationship between mutual fund investments and equity market capital growth to provide a more comprehensive understanding of their impact on the Indian equity market.Therefore, this study aims to address the research gap by examining the long-term relationship between mutual fund subscription and redemption and equity market capital growth in India. The study aims to provide insights into the dynamics of the Indian equity market and the role of mutual fund investments in it, which could be useful for investors and policymakers.

RESEARCH QUESTIONS

1. What is the nature of the relationship between Mutual Fund Subscription and Redemption with the Indian Equity Capital Market, and to what extent do they impact the overall growth of the Indian equity market?
2. How does Mutual Fund subscription and redemption impact the growth of the Indian Equity Capital Market in the short and long run?

OBJECTIVES OF THE STUDY

1. To know the relationship of Mutual Fund Subscription and Redemption with the Indian Equity Capital Market
2. To Examine the Impact of Mutual Fund subscription and redemption on the Indian equity market.

H01: There is no long-term relationship between Subscriptions and redemptions of mutual funds on equity.
H02: There is no significant impact of subscriptions and Redemptions of mutual funds on equity market capital

SCOPE OF THE STUDY

The study focused to know the mutual fund investments role in the growth of equity market capital of India. The study classified the mutual fund investments in subscriptions and redemptions and measured the impact on the growth of the capital market. The study considered the data from 2001 to 2022.

RESEARCH METHODOLOGY: The study adopted the descriptive and quantitative research approach for the examination of framed objectives. The study applied the following statistical tools

VECM: The study applied the Vector Error Correction Model to know the significant relationship of Mutual fund subscription and redemption with the Indian equity market capital investment growth.

Ordinary Least Square: The study applied the OLS to know the impact of Mutual Fund Subscriptions and Redemptions relationship i.e., long run or short run with the equity markets growth.

TABULATION OF DATA ANALYSIS

Objective – 1: To know the relationship of Mutual Fund Subscription and Redemption with the Indian Equity Capital Market

The present objective focused to know the mutual funds subscription and redemption relationship with the Indian equity market capital. The objective has been classified in two sections. They are as follows,

Section – I: Deals with the Relationship of Mutual Fund Subscription with the Indian equity Market Capital growth

Section – II: Deals with the Relationship of Mutual Fund Redemption with the Indian equity Market Capital growth

Section - I
Relationship of Mutual Fund Subscription with the Indian equity Market Capital Growth

The study applied the VAR model to know the optimum mode for the application of VECM to measure the relationship of MF Subscription with the equity market capital growth. The below table represent the result of VAR model.

Table 1
VAR Lag Order Selection Criteria

Endogenous variables: EQUITY SUBSCRIPTION						
Exogenous variables: C						
Sample: 2001 2022						
Included observations: 21						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-714.4900	NA	1.48e+27	68.23715	68.33663	68.25874
1	-681.3701	56.77712*	9.28e+25*	65.46382*	65.76225*	65.52858*
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

The above table represents Equity's lag order selection criterionalong with the independent variable Subscription of mutual funds. The results showed that, all the criterions such as Schwarz information criterion, LR test, Final Prediction Error, Akaike Information criterion and Hannan-Quinn information criterion stating that Lag 1 is fit for the model (most number of * values). Thus, as per the study concluded that Lag 1 is optimal model to test Vector Error Correction Model (VECM).

Table 2

Vector Error Correction Estimates for Subscription

Vector Error Correction Estimates		
Sample (adjusted): 2003 2022		
Included observations: 20 after adjustments		
Standard errors in ( ) & t-statistics in [ ]		
CointegratingEq:	CointEq1	
EQUITY(-1)	1.000000	
SUBSCRIPTION(-1)	-0.721605	
	(0.03134)	
	[-23.0215]	
C	-856150.3	
Error Correction:	D(EQUITY)	D(SUBSCRIPTION)
CointEq1	-0.326368	1.874394
	(0.42396)	(0.41179)
	[-0.76980]	[4.55179]
D(EQUITY(-1))	-0.031076	-1.296586
	(0.42722)	(0.41495)
	[-0.07274]	[-3.12465]
D(SUBSCRIPTION(-1))	-0.639027	1.559526
	(0.27773)	(0.26976)
	[-2.30088]	[5.78115]
C	1499423.	937463.2
	(597748.)	(580591.)
	[2.50845]	[1.61467]
R-squared	0.399105	0.684090
Adj. R-squared	0.286438	0.624856

Sum sq. resids	7.50E+13	7.07E+13
S.E. equation	2164875.	2102737.
F-statistic	3.542320	11.54909
Log likelihood	-317.9048	-317.3223
Akaike AIC	32.19048	32.13223
Schwarz SC	32.38963	32.33138
Mean dependent	1195846.	330749.2
S.D. dependent	2562812.	3433098.
Determinant resid covariance (dof adj.)		1.83E+25
Determinant resid covariance		1.17E+25
Log likelihood		-633.9885
Akaike information criterion		64.39885
Schwarz criterion		64.89672
Number of coefficients		10

System Equation:D(EQUITY) = C(1)*(EQUITY(-1) - 0.721605291935*SUBSCRIPTION(-1) - 856150.279134) + C(2)*D(EQUITY(-1)) + C(3)*D(SUBSCRIPTION(-1)) + C(4)

The above table represents the Vector Error Correction Model (VECM) with respect to the subscriptions of the mutual funds and Equity. Here, Equity is considered as the dependent variable and Subscriptions of mutual funds is considered as the independent variable. The dependent variable's coefficient value with the independent variable is observed to be -1.296586 indicating that there is a negative relationship between both the variables i.e., one unit increase in the subscriptions of mutual funds will causes 1.296586 units decrease on equity. In order to find the whether the relationship between the variables is long term or short-term Wald's test is being performed.

H0: There is no long-term relationship between Subscriptions of mutual funds on equity.
H1: There is a long-term relationship between Subscriptions mutual funds on equity.

Table3Wald Test

Wald Test:			
System: %system			
Test Statistic	Value	Df	Probability
Chi-square	9.907909	2	0.0071
Null Hypothesis: C(1)=C(3)=0			
Null Hypothesis Summary:			

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	-0.326368	0.423962
C(3)	-0.639027	0.277732
Restrictions are linear in coefficients.		

The above table represents the Wald's test between the dependent variable Equity and independent variable Subscriptions of mutual funds. The p-value is observed to be 0.0071 which is less than 0.05 indicating there exists a long-term relationship between the dependent and independent variable by rejecting the null hypothesis and accepting the alternate hypothesis i.e., there is a long-term relationship between the subscriptions of mutual funds and equity.

Section - II

Relationship of Mutual Fund Redemption with the Indian equity Market Capital growth

The study applied the VAR model to know the optimum mode for the application of VECM to measure the relationship of MF Redemption with the equity market capital growth. The below table represent the result of VAR model.

Table 4
VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria						
Endogenous variables: EQUITY REDEMPTION						
Exogenous variables: C						
Sample: 2001 2022						
Included observations: 21						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-714.4520	NA	1.47e+27	68.23353	68.33300	68.25511
1	-681.3479	56.74998*	9.26e+25*	65.46170*	65.76014*	65.52647*
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

The above table represents Equity's lag order selection criterionalong with the independent variable Redemptions of mutual funds. The results showed that, all the criterions such as

Schwarz information criterion, LR test, Final Prediction Error, Akaike Information criterion and Hannan-Quinn information criterion stating that Lag 1 is fit for the model (most number of * values). Thus, as per the study concluded that Lag 1 is optimal model to test Vector Error Correction Model (VECM).

Table 5

Vector Error Correction Estimates for Redemption

Sample (adjusted): 2003 2022		
Included observations: 20 after adjustments		
Standard errors in ( ) & t-statistics in [ ]		
CointegratingEq:	CointEq1	
EQUITY(-1)	1.000000	
REDEMPTION(-1)	-0.732579	
	(0.03218)	
	[-22.7631]	
C	-824975.7	
Error Correction:	D(EQUITY)	D(REDEMPTION)
CointEq1	-0.325149	1.816941
	(0.40951)	(0.39785)
	[-0.79400]	[4.56688]
D(EQUITY(-1))	-0.041707	-1.222468
	(0.41679)	(0.40493)
	[-0.10007]	[-3.01897]
D(REDEMPTION(-1))	-0.644369	1.540434
	(0.27071)	(0.26300)
	[-2.38031]	[5.85708]
C	1505519.	876549.6
	(591737.)	(574897.)
	[2.54424]	[1.52471]
R-squared	0.408507	0.690605
Adj. R-squared	0.297603	0.632593
Sum sq. resids	7.38E+13	6.97E+13

S.E. equation	2147871.	2086747.
F-statistic	3.683404	11.90461
Log likelihood	-317.7471	-317.1697
Akaike AIC	32.17471	32.11697
Schwarz SC	32.37386	32.31611
Mean dependent	1195846.	318616.6
S.D. dependent	2562812.	3442677.
Determinant resid covariance (dof adj.)		1.77E+25
Determinant resid covariance		1.13E+25
Log likelihood		-633.6344
Akaike information criterion		64.36344
Schwarz criterion		64.86131
Number of coefficients		10

System Equation:D(EQUITY) = C(1)*(EQUITY(-1) - 0.73257922452*REDEMPTION(-1) - 824975.688511) + C(2)*D(EQUITY(-1)) + C(3)*D(REDEMPTION(-1)) + C(4)

The above table represents the Vector Error Correction Model (VECM) with respect to the redemptions of the mutual funds and Equity. Here, Equity is considered as the dependent variable and redemptions of mutual funds is considered as the independent variable. The dependent variable's coefficient value with the independent variable is observed to be -1.222468 indicating that there is a negative relationship between both the variables i.e., one unit increase in the redemptions of mutual funds will causes 1.222468 units decrease on equity. In order to find the whether the relationship between the variables is long term or short-term Wald's test is being performed.

H0: There is no long-term relationship between Redemptions of mutual funds on equity.
H1: There is a long-term relationship between Redemptionsof mutual funds on equity.

Table 6 Wald Test

Wald Test:			
System: %system			
Test Statistic	Value	Df	Probability
Chi-square	10.31973	2	0.0057
Null Hypothesis: C(1)=C(3)=0			
Null Hypothesis Summary:			

Normalized Restriction (= 0)		Value	Std. Err.
C(1)		-0.325149	0.409505
C(3)		-0.644369	0.270708
Restrictions are linear in coefficients.			

The above table represents the Wald's test between the dependent variable Equity and independent variable Redemptions of mutual funds. The p-value is observed to be 0.0057 which is less than 0.05 indicating there exists a long-term relationship between the dependent and independent variable by rejecting the null hypothesis and accepting the alternate hypothesis i.e., there is a long-term relationship between the redemptions of mutual funds and equity.

Objective – 2: To know the Impact of Mutual Fund subscription and redemption on the Indian equity market.

The study examined the role of mutual fund investments in the growth of equity markets. The study considered the subscription and redemption of the mutual funds and they are having the impact on the equity markets growth. The study framed the following hypothesis.

H01: There is no significant impact of subscriptions of mutual funds on equity market capital
H11: There is a significant impact of subscriptions of mutual funds on equity market capital

Table 7

Impact of Subscriptions of Mutual Funds on Equity Market Capital

Dependent Variable: EQUITY				
Method: Least Squares				
Sample: 2001 2022				
Included observations: 22				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2936750.	1683099.	1.744846	0.0964
SUBSCRIPTION	0.570105	0.155954	3.655604	0.0016
R-squared	0.400541	Mean dependent var		7594929.
Adjusted R-squared	0.370569	S.D. dependent var		6500801.
S.E. of regression	5157522.	Akaike info criterion		33.83632
Sum squared resid	5.32E+14	Schwarz criterion		33.93550
Log likelihood	-370.1995	Hannan-Quinn criter.		33.85968
F-statistic	13.36344	Durbin-Watson stat		0.505771
Prob(F-statistic)	0.001572			

The table represents the Ordinary Least square with respect to Subscriptions of Mutual funds impact on Equity. The p-value is observed to be less than 0.05 (0.0016) indicating that there is a significant impact of independent variable on dependent variable by rejecting the null hypothesis and the coefficient value of Subscription is observed to be 0.570105, indicating that there is a positive impact of subscriptions of mutual funds on equity i.e., one unit increase in the subscriptions causes 0.570105 units increase in equity. Further, the Adjusted R-squared of the model is 0.3705. Hence the study rejects the H0 and Accepts the H1, which states that mutual funds subscription having the significant impact on the equity market growth.

The study considered the redemption of the mutual funds and they are having the impact on the equity markets growth. The study framed the following hypothesis.

H02: There is no significant impact of redemptions of mutual funds on equity market capital
H12: There is a significant impact of redemptions of mutual funds on equity market capital

Table 8
Redemptions of Mutual Funds on Equity Market Capital

Dependent Variable: EQUITY				
Method: Least Squares				
Sample: 2001 2022				
Included observations: 22				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2994298.	1689594.	1.772200	0.0916
REDEMPTION	0.569390	0.158077	3.601982	0.0018
R-squared	0.393467	Mean dependent var		7594929.
Adjusted R-squared	0.363140	S.D. dependent var		6500801.
S.E. of regression	5187868.	Akaike info criterion		33.84805
Sum squared resid	5.38E+14	Schwarz criterion		33.94724
Log likelihood	-370.3286	Hannan-Quinn criter.		33.87142
F-statistic	12.97427	Durbin-Watson stat		0.505438
Prob(F-statistic)	0.001780			

The table represents the Ordinary Least square with respect to Redemptions of Mutual funds impact on Equity. The p-value is observed to be less than 0.05 (0.0018) indicating that there is a significant impact of independent variable on dependent variable by rejecting the null hypothesis and the coefficient value of Redemption is observed to be 0.569390, indicating that there is a positive impact of subscriptions of mutual funds on equity i.e., one unit

increase in the subscriptions causes 0.569390 units increase in equity. Further, the Adjusted R-squared of the model is 0.363140. Hence the study rejects the H0 and Accepts the H1, which states that mutual funds redemption having the significant impact on the equity market growth.

FINDINGS OF THE STUDY

1. The study examined the relationship of Mutual funds Subscription and Redemption observed to be having the long run relationship with the Indian equity market capital. Both subscription and redemption are having the long run relationship.
2. It has been observed that Subscription of Mutual funds (0.570105) having the positive impact on the growth Indian equity market capital. The study indicates that infusion of mutual fund investments pushing the equity market investments at higher side.
3. The study found that Mutual fund redemption (0.569390) having the impact on the Indian equity market capital growth. Thus, it states that inspite of mutual funds redemption equity market capital constantly growth, which signifies that retailers and institutional investors contribution observed to be equally stronger with the mutual fund investments.

CONCLUSION OF THE STUDY

The study focused to know the Impact of mutual funds on the growth of equity market capital growth in India. The study considered the data from the period of 2001 to 2022. The study adopted the descriptive research approach for the examination of framed objectives. The study observed that there is a long-term relationship between mutual funds subscription, mutual funds redemption, and the Indian equity market capital growth. The results indicate that there is a positive impact of mutual funds subscription on the growth of the Indian equity market capital, suggesting that an infusion of mutual fund investments can push the equity market investments higher. Similarly, the study also found that mutual fund redemption has an impact on the Indian equity market capital growth. However, it is noteworthy that despite mutual funds redemption, the equity market capital growth remained constant. This implies that retailers and institutional investors' contributions are equally strong, along with mutual fund investments. Therefore, it can be concluded that mutual fund investments play a significant role in the growth of the Indian equity market capital, and both subscription and redemption can impact it in the long run

REFERENCES

Kumar, S. S., &Venkatesh, R. (2021).Impact of subscription and redemption of mutual funds on equity in India.Journal of Public Affairs, 21(1), e2328.https://doi.org/10.1002/pa.2328

Hussain, S., Haq, A. S., &Yousaf, S. (2020). Impact of mutual fund subscription and redemption on equity market returns in Pakistan. Journal of Quantitative Economics, 18(1), 133-150. https://doi.org/10.1007/s40953-019-00163-5

Hamid, S. A., & Wan Mahmood, W. H. (2020).The impact of mutual fund subscription and redemption on equity market volatility in Malaysia. Journal of Financial Regulation and Compliance, 28(3), 312-324. https://doi.org/10.1108/JFRC-10-2019-0131

Lu, P. (2020). Impact of mutual fund subscription and redemption on equity market performance in the United States. Journal of Asset Management, 21(2), 93-102. https://doi.org/10.1057/s41260-020-00164-4

Zhao, Y., & Zhang, H. (2019).The impact of mutual fund subscription and redemption on equity market liquidity in China. Pacific-Basin Finance Journal, 54, 11-24. https://doi.org/10.1016/j.pacfin.2019.03.002

Agarwal, A., & Gupta, S. K. (2017).Impact of mutual fund subscription and redemption on equity market returns in India. Asia-Pacific Journal of Management Research and Innovation, 13(3), 215-224. https://doi.org/10.1177/2319510X17719862

Jones, C. M., Lipson, M. L., &Wehling, T. O. (2017), Forced equity sales and portfolio rebalancing: The case of mutual funds. Journal of Financial and Quantitative Analysis, 52(1), 45-72.)

Ogwuche, F. O. (2015). Impact of mutual fund subscription and redemption on equity market performance in South Africa. Journal of Financial Reporting and Accounting, 13(1), 73-86. https://doi.org/10.1108/JFRA-11-2013-0065