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Original Article

Does Value Averaging Score Over Rupee Cost Averaging?

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Abstract

Systematic Investment Plan (SIP) has gained immense popularity in India since the last decade. The main reasons behind this popularity have been debarring the commitment of chunk investment and implementation of the auto timing mechanism through Rupee Cost Averaging (RCA). Rupee Cost Averaging yields the benefit by altering the number of units acquired by an investor. The periodical investment amount remains the same. A modified concept of Rupee Cost Averaging is Value Averaging (VA) that shows how periodical investments can be altered to gain more benefits from market fluctuations. The present paper vividly depicts how Value Averaging (VA) plays a dominant role over Rupee Cost Averaging (RCA) as regards Return on Investment (ROI) derived by the investors.

Keywords: *Net Asset Value; Rupee Cost Averaging; Value Averaging; Systematic Investment Plan; Asset Allocation*

Introduction

"I wish if I could time the market" often we have heard investors saying this while meeting them as a tiny professional in the stint of a financial advisor. The moot point of timing the market is known to us and that is buying low and selling high. But the task of timing the market is almost next to impossible even for the best of stock market experts. The reason behind this is that at times the fluctuations in the market price of shares do not abide by the fundamentals even in the medium term. Therefore investors who rely upon the systematic and regular investing habits for a considerably long time, are left with no options but to opt for Systematic Investment Plans (SIPs). But have we ever thought of why SIPs have become the most sought after and lucrative mode of investments into mutual funds and the stock market? Perhaps no. It is the Rupee Cost Averaging technique that enables us to time the market in a sense. In Systematic Investment Plan (hereafter SIP) an investor commits a fixed sum at specific intervals (monthly mode is most popular) and thereby getting a lesser number of units when the stock market is on the upper side and more units when the market is low. As regards SIP, upon commencement an investor is required to set the number of years for which he is going to acquire the particular SIP. So in a sense, he is averaging out and spreading the entire cost of that SIP throughout the tenure of the plan. It is important to note that there is no rigidity and stipulation as regards maintaining the SIP throughout the tenure. Nowadays people in India are leaning towards SIP rather than lump sum investment. The amount of investment made during the intervals remains fixed in the case of Rupee Cost Averaging (henceforth RCA). On the other hand, if an investor fixes his end corpus as the target portfolio and divides it so that it can be obtained by passing through a value path during the monthly or quarterly interval. Value Averaging (VA) is a modified version of RCA and magnifies the auto time mechanism. It can be said that Value Averaging (henceforth VA) is a portfolio rebalancing technique that keeps the targeted portfolio value intact. To elucidate this point we can cite one example that depicts the difference between RCA and VA. Let's assume that an investor commits himself for a monthly SIP of Rs.1000 for four months with NAV of RS.10, Rs.20, Rs.15, and Rs.25 corresponding to month 1, 2, 3 and 4. The number of units the investor will get 100, 50, 66.67, and 40 respectively for four months. This is an example of RCA as we can see that when the NAV is on the higher side (market high) the investor is acquiring lesser units and getting more units when the market and also NAV is low. There is an automatic timing mechanism under place as we get to see the average acquisition cost per unit is less than the average price per unit. Average acquisition cost per unit = $\sum$Investment / $\sum$Units = 4000 / 256.67 = Rs. 15.58. Whereas average price per unit = $\sum$NAV / n (n = number of months) = 70 / 4 = Rs. 17.5.

VA keeps targeted monthly or quarterly portfolio value intact by altering the investment amount. VA magnifies the effects of the auto time mechanism obtained by RCA and reaps more benefits for the investors. Again an example will clarify the points. In the above example if the investors set the target corpus of Rs. 4000 at the end of the fourth month and creates a portfolio value path by spreading the value equally, then he shall have to abide by the VA. At the end of the first month, the investors will get 100 units at a NAV of Rs. 10 per unit and a portfolio value of Rs. 1000. At the end of the second month, before the scheduled investment the portfolio value will be 2000 (100 units× NAV Rs. 20 P.U). If the investor abides by VA, he has to make zero investment to keep the target portfolio path intact.

Review of Literature:

Despite being the advocate of the concept of mutual funds, there is a paucity of researches carried on in the field of Systematic Investment and the mechanism Rupee Cost Averaging. However, researches are being carried on now to examine the impact of Rupee Cost Averaging (RCA) and Value Averaging (VA) on investors' benefits.

Bharma (2007) did an intensive study about the consumers' perceptions and myths associated with the Systematic Investment Plan. Roy & Ghosh (2011) found that how Systematic Investment Plan gained momentum and an increased percentage of income for the investors. Singhal & Goel (2011) tried to evaluate whether a lumpsum investment or Systematic investment plan would fetch higher returns. Batra & Batra (2012) compared the Systematic Investment Plan (SIP) performance with lumpsum investments. Soni & Khan (2012) made a comparative study of the Systematic Investment Plan against other available investment avenues.

Banerjee (2013) showed the impact of Rupee Cost Averaging as an automatic timing mechanism through a Systematic Investment Plan in lowering the average purchase cost of mutual funds units. Reddy & Sreenivasulu (2015) observed the effectiveness of the Systematic Investment Plan as an option for investing in mutual funds. Prasad & Sharma (2015) tried to identify the investors' behavior towards the Systematic Investment Plan in the Bhilai region. Despite having an added advantage over RCA, VA requires a hands-on approach with ready cash needs (Scripbox, 2019). Uddin (2016) made an effort to find out the motivating factors to invest in a Systematic Investment Plan that has emerged as an alternative investment plan. Telukunta (2017) identified the best performing mutual fund schemes for the Systematic Investment Plan.

Research Method:

Selection of Scheme: To serve the purpose of the study Axis Small Cap Fund-Regular Plan-Growth Option, which falls under the small-cap category has been selected. Axis Small Cap Fund is Ranked 1 fund as per CRISIL Mutual

Fund Ranking (CMFR) as on 31.03.2020. It is noteworthy to mention that CMFR is based on global best practices.

Scope of Study: The present study is entirely based on secondary data and no primary research has been carried on. The period of the study is twelve months, starting from 31st January 2019 to 31st December 2019.

Tools Used: To compare two auto timing mechanism RCA and VA, metric such as Average Unit Cost, Average Unit Price, Portfolio Gain/Loss, Extended Internal Rate of Return (XIRR) have been used. XIRR is a metric used to find out the internal rate of return of recurring cash flows. Since a Systematic Investment Plan (SIP) necessitates recurring periodical investments, XIRR is used to measure its return.

Rupee Cost Averaging (RCA) Vs. Value Averaging (VA) : As discussed earlier that the VA magnifies the auto timing mechanism and reaps more benefits for the investors. We shall test the argument with a live example by choosing a running mutual fund scheme in India and check whether the argument holds. To serve the purpose Axis Small Cap Fund is chosen. It is also assumed that a monthly SIP of Rs. 1000 is selected by the investor for a period of one year. The target corpus of Rs. 12000 has been set at the end of the SIP period of 12 months, with a monthly portfolio value path of Rs.1000. Monthly SIP date 25th every month, ending on 25.12.2019.

Results & Discussion:

Comparison of Investments Between RCA and VA (Table 1) depicts that irrespective of the movements in NAV (up or down), the monthly investment made in the case of RCA remains unaltered i.e. Rs. 1000. Whereas with the up or down movement in NAV, the VA monthly investments vary. As regards RCA, we can see that the investor is acquiring more units when NAV is on the lower sides and getting fewer units when NAV is high. This is how the auto timing mechanism works through RCA under a fixed SIP plan. VA magnifies the effects of the auto timing mechanism by altering the investment amount.

Table 1: Comparison of Investments Between RCA and VA

Period (End of Month)	NAV (Rs.)	RCA Invest Ments (Rs.)	Units Purchased	Total Units	Value Path	Portfolio Value at End of Month	VA Investments (Rs.) Deficiet/ Surplus	Units Purchased	Total Units
25.01.2019	26.14	1000	38.25554705	38.255547	1000	1000	1000	38.255547	38.255547
25.02.2019	25.99	1000	38.47633705	76.73188405	2000	994.2616665	1005.738333	38.69712711	76.95267411
25.03.2019	27.19	1000	36.77822729	113.5101113	3000	2092.343209	907.6567911	33.38200776	110.3346819
25.04.2019	27.77	1000	36.01008282	149.5201942	4000	3063.994115	936.0058845	33.70564942	144.0403313
27.05.2019	28.72	1000	34.8189415	184.3391357	5000	4136.838315	863.1616853	30.05437623	174.0947075
25.06.2019	28.86	1000	34.65003465	218.9891703	6000	5024.373259	975.6267409	33.80550038	207.9002079
25.07.2019	28.06	1000	35.63791875	254.6270891	7000	5833.679834	1166.320166	41.56522332	249.4654312
26.08.2019	28.49	1000	35.1000351	289.7271242	8000	7107.270135	892.7298646	31.33484958	280.8002808
25.09.2019	30.52	1000	32.76539974	322.4925239	9000	8570.02457	429.97543	14.08831684	294.8885976
25.10.2019	31.19	1000	32.06155819	354.5540821	10000	9197.57536	802.4246396	25.72698428	320.6155819
25.11.2019	31.41	1000	31.83699459	386.3910767	11000	10070.53543	929.464572	29.59135855	350.2069405
26.12.2019	31.84	1000	31.40703518	417.7981119	12000	11150.58898	849.4110156	26.67748165	376.8844221

Source:https://www.advisorkhoj.com/mutual-funds-research/historical-NAV/Axis-Small-Cap-Fund-Regular-Plan-Growth

Table 2 : Comparison of Purchase Cost & Portfolio Gain

Details	RCA	VA	Average Unit Cost
Average Unit Purchase Cost	28.72200711	28.54592679	28.84833333
Total Cost (Investment)	12000	10758.51512	
Units Purchased	417.7981	376.8844221	
Portfolio Value	13302.69188	12000	
Portfolio Gain/ (Loss)	1302.691882	1241.484877	

Source: Author's Compilation

Table 2 shows that under a fixed monthly SIP plan RCA keeps the average unit purchase cost lower than average unit cost (Rs. 28.72200711 < Rs. 28.84833333). The average unit purchase cost is arrived at dividing total investment by total units acquired. Average unit cost is computed by applying simple arithmetic average, I.e. adding the respective NAV and then dividing it by the number of months. It is also observed that the average unit purchase cost under VA is lower than the average unit purchase cost under RCA (Rs.28.54592679 < 28.72200711).

Table 3: Comparison of Return on Investment

XIRR (%)		
Date(Months)	**RCA**	**VA**
25-01-2019	-1000	-1000
25-02-2019	-1000	-1005.73833
25-03-2019	-1000	-907.656791
25-04-2019	-1000	-936.005885
27-05-2019	-1000	-863.161685
25-06-2019	-1000	-975.626741
25-07-2019	-1000	-1166.32017
26-08-2019	-1000	-892.729865
25-09-2019	-1000	-429.97543
25-10-2019	-1000	-802.42464
25-11-2019	-1000	-929.464572
26-11-2019	-1000	-849.41116
26-12-2019	13302.6915	12000
	24%	**25%**

Source: Author's Compilation

Compounded Annual Growth Rate (CAGR) is a standardized measure to gauge the performance of mutual fund schemes. But this metric can be applied when there are a lumpsum investment and a portfolio value at the end of the period. Since investment in SIP is made periodically (here is monthly), it is not commensurate with the process of SIP to apply CAGR. Extended Internal Rate of Return (XIRR), which is a variant of Internal Rate of Return (IRR) used in MS-Excl, is used to measure and compare the ROI between RCA and VA.

Table 3 depicts that due to the magnifying effect the XIRR yielded through VA is higher than the XIRR earned through RCA (25% > 24%).

Findings:

From Table 1 it can be observed that as the NAV on 25.02.2019 has decreased to Rs.25.99 from Rs.26.14 on 25.01.2019 the units acquired under RCA have increased to 38.47633705 on 25.02.2019 from 38.25554705 on 25.01.2019. The magnitude of this auto timing mechanism increases under VA as it is shown that on 25.02.2019 when NAV is down by Rs.0.15 the number of units under VA is more by 0.2207. Under VA alteration of periodical investments are triggered to take advantage of favorable market conditions. This results in a magnifying effect on the auto timing mechanism. As there is a fixed commitment of funds under RCA, taking greater advantages of a favorable situation is not possible. This logic holds when there is an upward movement in NAV and it is shown vividly in Table 1. The auto timing effect results in lower per-unit cost under RCA than a lower per-unit price. Again due to the boosting effect of VA the per-unit cost under VA is lower than the per-unit cost under RCA. This also results in increased XIRR under VA despite having a lower end portfolio value than RCA.

Conclusion:

It is understood from the study that if applied aptly VA enables an investor to yield more benefit than RCA. The portfolio Rebalancing technique along with VA can be applied to arrive at the various mode of Systematic Transfer Plan (STP). In a Systematic Transfer, Plan money is transferred between two categories (Equity & Debt) of schemes of the same Asset Management Company (AMC). Currently, there are three kinds of STP available in India. Fixed STP, Flexible STP, and Capital STP. Both way transfer of funds is not allowed in either of the modes. There lies a further scope of the study to innovate the newer mode of STP applying the concept of VA and the Portfolio Rebalancing technique. However, from an investor's point of view, VA requires the commitment of additional funds whenever the stock market and NAV are on the lower side. So there is a need for provision for favorable contingencies.

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Conflicts of Interest:

The authors declare that the research review was conducted in the absence of any commercial or economic associations that could be construed as a potential conflict of interest.

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