



WEALTH ACCUMULATION AND RETIREMENT INCOME THROUGH SIP-SWP: AN EMPIRICAL STUDY IN EQUITY AND DEBT

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Abstract:

This paper assesses the usefulness of an integrated Systematic Investment Plan-Systematic Withdrawal Plan (SIP-SWP) as a model of long-term wealth development and long-term retirement wealth generation in both equity and debt mutual funds. The study is founded on primary survey data and the secondary historical data on NAV data from 2010–2025. Return performance, withdrawal sustainability and investor behaviour were measured using statistical tests that included CAGR, standard deviation, t-test, chi-square test and Monte Carlo simulation. The results indicate that equity funds perform better in promoting accumulation of wealth because of their greater return potential whereas debt funds would be more stable during the withdrawal period. There was a strong correlation between the expectations of returns and fund preference which shows that the view of investors affects the asset allocation decisions. The analysis endorses the idea of balanced equity–debt allocation and the orderly SIP-to-SWP transition plan to enhance the sustainability of retirement corpus. The proposed model is an AI- assisted and zero-brokerage retirement tool that helps plan asset allocation and inflation-adjusted retirement income.

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Introduction:

There are many people who are interested in building personal wealth through long-term investments. So they are protecting their financial stability after their retirement. Financial planning has become a necessity. Retirement planning in India is more of the responsibility of the inhabitants and this is as a result of high inflation rate, the rising life expectancy and the inadequacy of guaranteed pension income. The investment anchored in a mutual fund have increasingly become important due to their flexibility, transparency as well as the ability to perform in the long run. There are various strategies that retail investors use extensively which contain -Systematic investment plan (SIP) and systematic withdrawal plan (SWP) and others. An SIP is the type of investment process in which the investors deposit a defined amount of funds to a mutual-fund program periodically, usually monthly. This process allows investors to take advantage of compounding, and seek to utilize market swings over the years, as well as implant discipline in saving. SWP provides investor a right to withdraw whatever the investments they have done on regular basis and it allow the continuous flow of income so it is very helpful during the retirement. Debt and equity funds are the major types of mutual-fund schemes. The bulk investment in corporate equities by the equity funds is with an aim of generating capital appreciation in the long term. There is generally a greater growth potential with such funds but with a high-risk factor. Debt

limited empirical studies that characteristically measure the use of SIPs and SWPs in the debt and equity funds, which determine the strength of a corpus created by the SIP against periodic withdrawals like the SWP. The current research uses historical data on mutual funds using both debt and equity schemes to test SIP and SWP strategy on an empirical basis. The study aims at determining the effects of systematic investment plans (SIPs) on accumulation of wealth and the effectiveness of systematic withdrawal plans (SWPs) under an assortment of circumstances through investigating the increase of resources to investment and sustainability of withdrawals, such that these phenomena can be quantified with reference to retirement wealth. The results aim to provide the investors and financial planners with practical information that they can use to develop sound, holistic retirement plans.

Statement of Problem:

The research was geographically constrained, and it could not encompass the whole of the Mumbai area, which could compromise the general representation of the behaviour of the investors. The survey has the restriction of not having all possible profession in the sample because it except participants of certain professional backgrounds. Most of the respondents happened to be students and this may be biased and not a true representation of investment patterns of employees who are working or retired. The data collection process was also practically challenged and the entire process was time consuming and drawn out. Because of these, the study results cannot be the best indicators of the wider population of investors in equity and debt mutual funds

Significance of study:

1. It include both SIP and SWP in one system. It Integrates wealth accumulation through SIP with the retirement income generation through SWP into a single lifecycle investment model.
2. Adheres to lifetime investment strategy. Logically describes how the earning phase to the retirement phase goes.
3. Helps to make more successful asset allocation decisions. Helps determine the right equity- debt ratio at the accumulation of wealth and retirement phases.

Limitations of Study:

- 1) Restricted Investing Instruments. Only equity and debt mutual funds are taken into consideration in the research.
- 2) The model assumes no interruption in SIP and SWP ,though investor may stop due to emergencies or biases.
- 3) Inflation and tax changes may affect results, reducing purchasing power and net retirement income.

Objective of the Study:

- To examine how equity and debt returns (in percentage) affects the SIP or investment strategies of Investors.
- To Compare the return rates of SWP in equity and debt fund at the time of retirement and wealth accumulation.
- To examine whether investor goes equity fund or debt fund or for both.

Review of literature:

The expanding doubts on the financial security in retirement have heightened the need to combine SIP as well as SWP with a lifecycle investment strategy instead of viewing them as two independent investment strategies. The equity to debt ratio is crucial towards the accumulation of long-term value, as well as the preservation of retirement being constant.

Nagajyothi (2018) The evaluation of the systematic investment plan (SIP) was conducted in the context of the performance of the equity mutual funds and revealed the periodic investing to promote the disciplined savings behaviour and allow rupee-cost averaging. The study found that the SIPs are especially suitable to the incremental wealth accumulation of persons earning incomes and making moderate and frequent contributions.

Cumming and Zhang (2019) have carried out an in-depth analysis of the mechanism of systematic withdrawals and found that the systematic withdrawals do have a substantial impact on the life cycle and risk to the portfolio. They have performed empirical evidence to prove their hypothesis that system withdrawal plan is an effective retirement income plan but is adjusted in line with expectations of the returns as well as anticipated life span of the investor.

Tian and Zhu (2020) studied the phenomenon of the retirement portfolio and discovered that investors tend to invest in risky assets during the initial stage of the process of creating a corpus necessary but tend to exchange risky assets with less risky assets during the wealth accumulation stage. It is a life cycle phenomenon that brings out the fact that it is the interdependence, rather than the independence of the wealth accumulation and retirement income decisions in this life cycle behaviour.

Gajera et al. (2020) made a comparative study between systematic investment plans (SIP) and lump-sum investment finding that SIP helps to reduce markets-timing risk by averaging and giving more steady long-term returns. In turn, the analysis confirms the usefulness of SIP as a powerful tool in the development of corpora of retirement.

Sharma (2021) has conducted a comparative study of equity and debt mutual funds and has found that equity funds have higher returns but with higher volatility and debt funds provided the process of streaming income, which is predictable and stable. The paper also highlighted the role of asset allocation in mediating the conversion of accumulation of wealth to retirement sustainability.

Jain (2022) assessed the types of equity funds and found that long-term investment in equities is better in accumulating wealth to investors who can accept a higher risk level and thus support the strategic importance of equities in the accumulation stage.

Dash and Samikannu (2023) in their empirical study of the determinants of the performance of mutual funds also proved that the equity-returns can be affected by sectoral allocation, but debt- returns by the bond structure. They found that equity-debt ratio cleanses the correlation between risk and yield results.

Amlani, Raval, and Vidani (2024) compared investor behaviour with systematic withdrawal plans (SWP), and found that younger and older investors use systematic investment plans (SIP) and systematic withdrawal plans (SWP), respectively, as a wealth accumulation investment and a retirement source tool, respectively, and, as a

result, present the effect of the investment lifecycle on investor behavioural patterns.

Porselvi and Meenakshi (2025) have singled out SIP and SWP as complementary approaches in which SIP is used to accumulate money in retirement corpus and SWP uses accumulated wealth to turn it into a regular flow of income.

Vennila et al. (2026) further indicated that equity investment and the stabilization of incomes by debt investment are beneficial as a growth and income stabilizing tool respectively, and as such, balanced allocation is crucial to the planning of a sustainable retirement.

On the whole, it can be stated that according to the literature, SIP helps with accumulating wealth and SWP with retirement income, whereas the growth and stability depend on equity and debt allocation. The majority of studies however, look at the individual parts, but not as an individual lifecycle financial approach. Hence, a gap in the built in research exists to indicate how wealth accumulation in SIPs turns to retirement income in SWP at varied equity-debt mandates. The current study will be based on this gap.

Research Methodology:

Data Base: The research has primary and Secondary data basis. Primary data were taken using a structured questionnaire. The secondary data were provided by historical NAV reports on various equity and debt mutual funds (2010-2025) of interest, market index (NIFTY 50) data, inflation (CPI) data, financial websites and research articles and official portals of various mutual funds.

Nature of Study: The current research is analytical and is empirical by nature. It captures the performance of SIP in accumulating wealth, and SWP on the income of retirement, and the performance of the systems with the influence of the return rates, the market vagaries, inflation and investor preference within the integrated SIP-SWP setup.

Sampling Design: In this research research, the A convenience sampling technique was adopted to collect the responses amongst the sampled retail investors. The mutual funds schemes to be analysed included two schemes Equity and Debt.

Statistical Tools: Percentage Analysis, CAGR (Compound Annual Growth Rate), Standard Deviation (Volatility Measurement), Chi-Square Test, Monte Carlo Simulation, Likert Scale (5 point scale)

Data Analysis and Interpretation:

Hypothesis Testing:

T-Test

T-Test: Two-Sample Assuming Unequal Variances		
	Variable 1	Variable 2
Mean	3.285714286	2.461538462
Variance	1.571428571	1.602564103
Observations	7	13
Hypothesized Mean Difference	0	
df	13	
t Stat	1.397582926	
P(T<=t) one-tail	0.092816536	
t Critical one-tail	1.770933396	
P(T<=t) two-tail	0.185633071	
t Critical two-tail	2.160368656	

1. T-Test (Withdrawal Behaviour: Male vs Female)

H_0 : There is no significant difference in withdrawal behaviour between male and female investors.

H_1 : There is a significant difference in withdrawal behaviour between male and female investors.

The independent sample t-test (unequal variance) showed:

- t-statistic = 1.39
- p-value (two-tailed) = 0.185
- Significance level (α) = 0.05

Since p-value (0.185) > 0.05, the null hypothesis (H_0) is accepted.

Interpretation:

There is no statistically significant difference in withdrawal behaviour between male and female investors.

Chi-square Test:

Return Category	Equity	Non-Equity	Total	8.869565	3.130435	
Positive	11	1	12	8.130435	2.869565	P-value = 0.042844
Not Positive	6	5	11			
Total	17	6	23			

Chi-Square Test: Return Expectation and Fund Preference

H_0 : There is no significant association between return expectation and fund preference. H_1 : There is a significant association between return expectation and fund preference.

The Chi-square test was conducted to examine the relationship between investors' return expectations (Positive / Not Positive) and their fund preference (Equity / Non-Equity).

The calculated p-value is **0.0428**, which is less than the significance level of 0.05.

As the calculated p-value is below the 0.05 significance threshold, the null hypothesis (H_0) is rejected.

Interpretation: The results indicate that there is a statistically significant association between return expectation and fund preference.

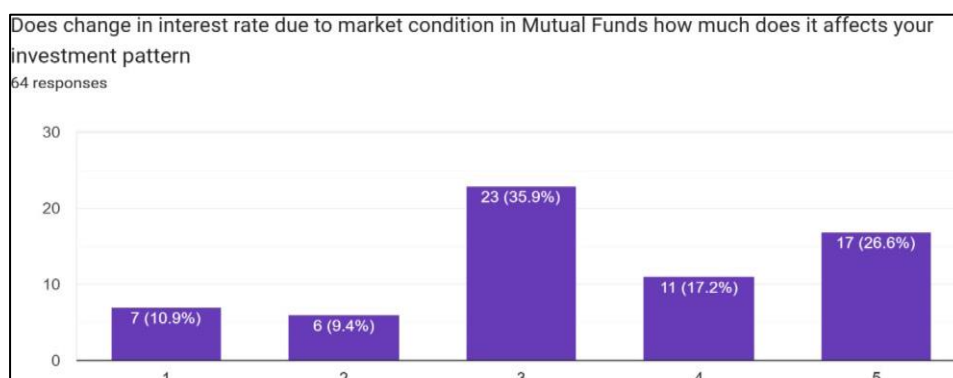
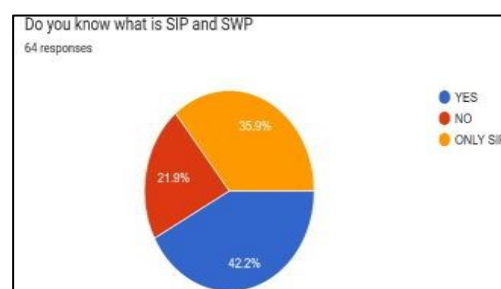
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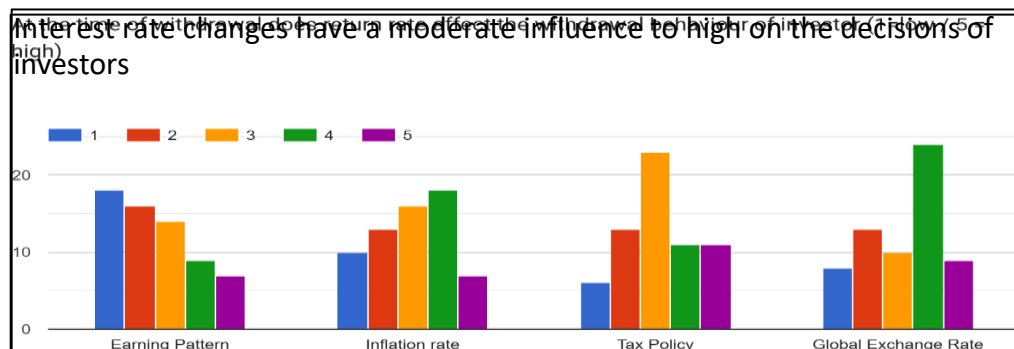
- A majority of investors with **positive return expectations (11 out of 12)** preferred equity funds.
- Investors with **lower or non-positive return expectations** showed comparatively higher preference for non-equity options.

This suggests that investors who expect higher returns are more likely to choose equity funds, while those with lower return expectations tend to prefer safer investment options.

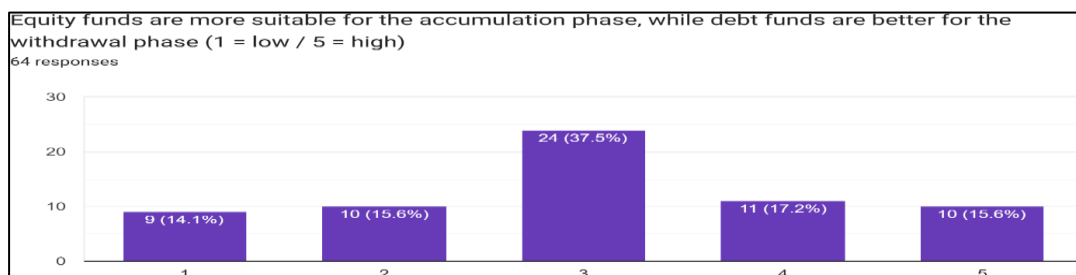
Analysis and Interpretation of Data:

Of the number of respondents there were 42.2 per cent of respondents who were aware of both the systematic investment plans (SIP) and systematic withdrawal plans (SWP) and 35.9 percent of respondents who were aware of the systematic investment plans (SIP). This demonstrates that SIP is better known than SWP. Investors appear to be not very aware of structured withdrawals planning. The results imply that there is need to improve the financial literacy about retirement income strategies involving SWP.





The reactions of tax policy were mixed, most of them rated 3. Generally, the economic factors have a moderate influence on the decision of investors.



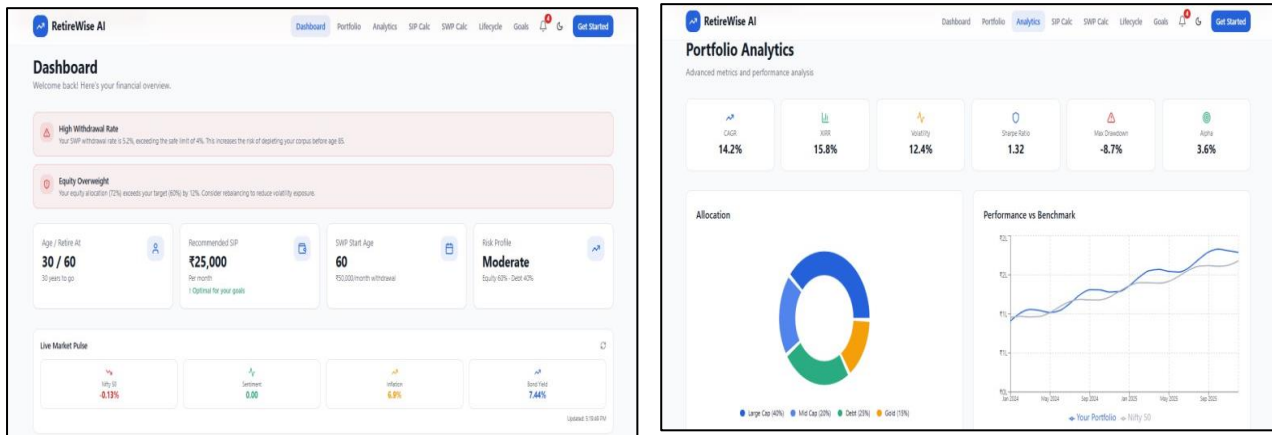
Out of 64 respondents, most showed moderate support for using equity for accumulation and debt for withdrawals under the life cycle investment approach

Conclusion:

The current paper determines that SIP-SWP model is effective in long term wealth building and providing a sustainable retirement income. Equity funds show significant growth of corpus due to high returns; on the other hand, debt funds bring stability and easy income allocation. An equal proportion between the equity and debt also increases sustainability in retirement. Also, the results indicate that inflation and market volatility have a strong effect on the sustainability of withdrawals thus showing the importance of having inflation adjusted planning. The processes of a systematic shift to SIP, simulating the mechanism of lump sum withdrawals are poorer in comparison to systematic transition to SWP. Further on, artificial-intelligence-guided allocation and the use of low-cost platforms can further improve performance, as there is an increased demand among investors to adopt automated and systematic retirement-plan withdrawal techniques due to the use of artificial-intelligence.

Software and its results:

A hybrid AI-driven retirement planning platform was developed based on the study's findings. It integrates SIP and SWP within a lifecycle model, using AI to allocate assets between equity and debt according to risk profile, market conditions, and expected returns. The platform includes inflation-adjusted projections, Monte Carlo simulations for corpus sustainability, and automatic SIP-to-SWP conversion at maturity. It also offers options for lump-sum or structured withdrawals, operates on a zero-brokerage model to reduce costs, and integrates real-time market analytics and alerts to support informed investment decisions.



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