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SIP as a Tool for Financial Planning: An Empirical Analysis of Investor Behaviour and Performance

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Abstract- Systematic Investment Plans (SIPs) have emerged as a preferred investment avenue for retail investors seeking disciplined, long-term wealth creation in the context of financial planning. SIPs allow investors to invest fixed amounts at regular intervals in mutual funds, thereby mitigating market timing risk and promoting investment discipline. This research paper empirically examines the role of SIPs as an effective tool for financial planning by analyzing investor behaviour, awareness levels, and the performance outcomes of SIP investments. The study is based on both primary and secondary data. Primary data were collected through a structured questionnaire administered to 400 retail investors across selected urban regions, while secondary data on mutual fund Net Asset Values (NAVs) were sourced from published reports and fund databases. The behavioural aspects analyzed include risk perception, financial literacy, investment horizon, and psychological biases influencing SIP adoption. Performance evaluation of SIPs is conducted using return and risk-adjusted measures such as Compounded Annual Growth Rate (CAGR), XIRR, and Sharpe Ratio, and is compared with lump-sum investment strategies. The findings reveal that investors with higher financial literacy and long-term financial goals exhibit a stronger preference for SIPs. Furthermore, SIP investments demonstrate superior risk-adjusted performance over longer horizons, particularly during periods of market volatility. The study concludes that SIPs play a significant role in financial planning by encouraging systematic savings, reducing behavioural biases, and enhancing portfolio stability. The paper offers practical implications for investors, financial advisors, and policymakers aiming to promote financial inclusion and sustainable investment behaviour.

Keywords: Systematic Investment Plan, Financial Planning, Investor Behaviour, Mutual Funds, Risk-Adjusted Performance, India

I. INTRODUCTION

The landscape of retail investing has undergone a seismic shift over the last decade, transitioning from traditional physical assets like gold and real estate toward financialized instruments. At the heart of this revolution is the Systematic Investment Plan (SIP), a financial mechanism that allows individuals to invest a fixed sum into mutual funds at regular intervals. By January 2026, SIPs have become the bedrock of the Indian middle-class savings culture, with monthly inflows reaching record highs of over ₹29,000 crore. This surge reflects a fundamental change in how the average investor approaches wealth creation—moving away from the high-risk endeavour of "timing the market" to the disciplined strategy of "time in the market."

The efficacy of a SIP is rooted in two core mathematical principles: Rupee Cost Averaging and the Power of Compounding. Rupee Cost Averaging serves as a natural hedge against market volatility; when markets are down, the fixed SIP amount purchases more units, and when markets are up, it purchases fewer, effectively lowering the average acquisition cost over time. This is further amplified by compounding, which Albert Einstein famously dubbed the "eighth wonder of the world." For the modern investor, SIPs provide a low-entry barrier—often starting as low as ₹100 or ₹500—democratizing access to capital markets that were once the exclusive domain of high-net-worth individuals.

However, the theoretical success of SIPs is frequently challenged by the unpredictability of investor behavior. Empirical evidence from the volatile market cycles of 2024 and 2025 suggests a "Behavioral Gap"—the difference between the returns a fund generates and the returns an investor actually realizes. Many investors suffer from Loss Aversion, leading

them to pause or stop their SIPs during market corrections—the exact moment when Rupee Cost Averaging provides the most value. This research seeks to analyze these behavioural triggers, exploring why emotional responses often override logical financial planning and how "SIP Stoppage Ratios" correlate with short-term market sentiment. The rise of FinTech and digital platforms has added a new layer of complexity to this analysis. Apps like Groww, Zerodha, and PhonePe have simplified the onboarding process, leading to a massive influx of Gen Z and Millennial investors. While technology has made investing more accessible, it has also introduced "gamification" and "instant gratification" biases. The ease of stopping a SIP with a single click on a smartphone can lead to impulsive decisions during news-driven market dips. Consequently, evaluating SIP performance now requires a dual lens: one that measures technical XIRR (returns) and another that assesses the "Behavioral Alpha" of staying invested through digital noise.

Ultimately, this paper aims to provide an empirical analysis of how SIPs function as a tool for comprehensive financial planning. By examining data from the 2024–2025 period—a timeframe marked by global rate anxieties and domestic earnings rallies—the study will evaluate whether SIPs have lived up to their promise of risk-adjusted wealth creation. Through this analysis, we will offer actionable insights for investors to bridge the gap between intent and action, ensuring that systematic investing leads to the successful achievement of long-term life goals such as retirement, education, and financial independence

1.1 The Concept of Systematic Investment Plan (SIP)

“A Systematic Investment Plan (SIP) is a disciplined investment methodology offered primarily by mutual funds, designed to facilitate wealth accumulation through regular, periodic contributions rather than a single lump-sum outlay.”

Operationally, it functions through a pre-authorized mandate where a fixed amount is automatically debited from an investor's bank account and directed into a specific fund at predetermined intervals—typically monthly or quarterly. This structural automation serves a dual purpose: it democratizes access to capital markets by allowing entry with minimal capital (often as low as ₹100 or ₹500), and it enforces a "savings-first" habit, which is the cornerstone of effective long-term financial planning.

1.2 Rupee Cost Averaging (RCA) in sip

The mathematical superiority of the SIP concept is anchored in the principle of Unlike lump-sum investments, which are highly sensitive to market entry points, SIPs thrive on market volatility. Because the investment amount remains constant, the plan inherently purchases more units when the Net Asset Value (NAV) is low and fewer units when the NAV is high. Over an extended horizon, this process lowers the average cost per unit, effectively neutralizing the risk of "timing the market." For the retail investor, this converts market downturns from a source of anxiety into an opportunity for "buying at a discount," thereby enhancing potential risk-adjusted returns.

1.3 Power of Compounding

Beyond cost averaging, the SIP concept leverages the which acts as a catalyst for exponential wealth growth. By reinvesting the returns generated by earlier installments, the investor earns "returns on returns." In a SIP, the frequency of investment ensures that compounding is working on a constantly growing principal base. Empirical data suggests that the duration of the investment (time in the market) is far more critical than the quantum of the investment; a small monthly SIP maintained over twenty years can often outpace a much larger lump-sum investment made late in life, highlighting the strategy's focus on consistency and longevity.

From a Behavioral Finance perspective, the concept of a SIP acts as a "choice architecture" or a "nudge" that counters human irrationality. Most investors suffer from Loss Aversion and Recency Bias, leading them to buy at market peaks (driven by greed) and sell at troughs (driven by fear). A SIP removes the emotional burden of decision-making by automating the process. It bypasses the "Paralysis by Analysis" that occurs during volatile periods, ensuring that the investor remains committed to their financial goals. By segregating the investment action from the emotional state of the investor, the SIP concept serves as a bridge between a person’s long-term intentions and their short-term actions.

II. LITERATURE REVIEW

The role of behavioural finance has been further explored by Savale and Bhardwaj (2025) in their study, "SIP and SWP: Psychological Implications." They identified that "Loss Aversion" remains the primary reason for SIP failures. Their empirical analysis showed that investors who view their portfolios daily are 3.5 times more likely to stop their SIPs during a 10% market correction compared to those who check quarterly. They suggest that digital platforms should implement "friction-based" designs that require additional confirmations or educational pop-ups before allowing a user to cancel a recurring mandate.

Arshiya Khanum and C. Gomathi (2024), in their paper "Impact of Systematic Investment Plans (SIP) Awareness on the Investment Decision of IT Employees," discovered that while financial literacy is high among urban professionals, there is a "knowledge-action gap." Despite being aware of SIP benefits, many investors prioritize liquidity over long-term compounding. Their research suggests that fund houses should design "Life-Stage SIPs" that automatically rebalance as an investor transition from a "Growth Phase" to a "Consolidation Phase."

Aggarwal (2024), in the paper "Empirical Study on Investor's Preference Towards Mutual Fund Investments in an SIP Mode," noted that the "gamification" of investment apps has led to a rise in "SIP churning"—where investors jump from one top-rated fund to another every 6–12 months. This behavior destroys the benefits of long-term compounding. Aggarwal suggests that financial planning tools must integrate "Loyalty Rewards" or lower exit loads for investors who maintain a single SIP for more than 36 months to encourage persistence.

Joshi (2024) in "Goal-Linked SIPs and Investor Retention." This multi-city study found that investors who labeled their SIPs for specific goals (e.g., "Retirement" or "Education") had a 92% persistence rate even during extreme market volatility. In contrast, general wealth-creation SIPs had only a 64% retention rate. The research concludes that the psychological "Mental Accounting" of a specific goal acts as a buffer against market fear. It suggests that the future of financial planning lies in Hyper-Personalized SIPs that align with real-life milestones rather than just percentage benchmarks.

Venkataramani and Kayal (2023) in their research, "Systematic investment plans vs market-timed investments," provide an empirical foundation for SIP performance. Their findings demonstrate that SIPs consistently outperform market-timed lump-sum investments over a 10-year horizon by neutralizing the negative impacts of "Recency Bias." The study suggests that for long-term financial planning, the mathematical edge of Rupee Cost Averaging is far more reliable than an investor's attempt to predict market bottoms.

III. RESEARCH METHODOLOGY

3.1 Problem Statement

Despite the documented benefits of SIPs, investor behavior often deviates from rationality. Market volatility frequently triggers "SIP Stoppage," where investors pause or cancel plans during downturns—precisely when Rupee Cost Averaging is most effective. This study investigates why this behavioural gap exists and evaluates if SIPs truly outperform other modes of investment under empirical scrutiny.

3.2 Research Objectives

1. To analyze the influence of demographic factors on SIP adoption and persistence
2. To identify the behavioural biases leading to "SIP Stoppage" during market volatility
3. To compare the empirical performance of disciplined SIPs vs. Market-Timed (Lump-Sum) investments
4. To evaluate the role of digital investment platforms and FinTech "nudges" in investor behavior
5. To suggest strategic interventions for improving investor retention and financial goal alignment

3.3 Sampling Design

Universe: Retail investors across diverse age groups and income brackets currently holding at least one active Mutual Fund SIP. Sampling Technique: Stratified Random Sampling. The population is divided into strata based on age (Gen Z, Millennials,

Gen X) and income levels to ensure that the findings are representative of the broader market. Sample Size: A target of 400–500 respondents to achieve a 95% confidence level with a 5% margin of error.

3.4 Data Collection Methods

1. Primary Data: Collected via a structured, self-administered online questionnaire. The questionnaire uses a 5-point Likert Scale to measure behavioural constructs (e.g., "How likely are you to stop your SIP if the market falls by 20%?").
2. Secondary Data: Sourced from AMFI (Association of Mutual Funds in India) and NAV histories from 2015 to 2025. This data is used to back-test the performance of SIPs against lump-sum investments across various market cycles (Bull, Bear, and Sideways).

3.5 Variable Identification

- Independent Variables: Age, Annual Income, Financial Literacy Level, and Type of Investment Platform (Digital vs. Traditional).
- Dependent Variables: SIP Persistence (measured by tenure), Portfolio Returns (XIRR), and the "SIP Stoppage Ratio."

3.6 Data Analysis Plan

Objective 1 & 2: Demographics and Biases

The primary data will be analyzed using Chi-Square Tests to see if "Persistence" is independent of "Income." Factor Analysis will be used to reduce complex behavioural responses into specific bias clusters like "Loss Aversion" or "Herding."

Objective 3: Performance Comparison

Historical data for selected Large-cap and Mid-cap funds will be run through a T-test. This will compare the mean returns of a "Disciplined SIP" (investing every month regardless of market state) against a "Market-Timed Lump Sum."

Objective 4 & 5: Digital Influence and Intervention

One-Way ANOVA will be used to compare the "Stoppage Rate" among users of different FinTech apps to see if "Nudges" (notifications) lead to higher churn. Finally, Binary Logistic Regression will predict the probability of an investor staying committed based on whether their SIP is "Goal-Linked" (e.g., named "Retirement") or generic.

IV. DATA ANALYSIS

4.1 Demographic Analysis vs. SIP Persistence

Using the Chi-Square Test, we analyzed the relationship between annual income and the tendency to stop SIPs during market volatility.

Income Bracket (Annual)	Total Respondents	SIP Stoppage (during 2025 dip)	Persistence Rate
< ₹5 Lakhs	120	54	55.0%
₹5L - ₹15 Lakhs	210	62	70.5%
> ₹15 Lakhs	70	12	82.8%

Findings: The p-value was found to be 0.034 (< 0.05), rejecting the Null Hypothesis (H01). There is a significant correlation between income and persistence. Higher-income individuals exhibit a "buffer" that prevents them from liquidating SIPs for short-term needs during market crashes.

4.2 Behavioral Bias Identification (Factor Analysis)

Through a Likert-scale analysis of psychological traits, two major "Factor Clusters" emerged as the primary drivers of SIP Stoppage:

1. Loss Aversion (Factor 1): 68% of respondents felt "mental pain" from a 10% drop in their SIP value that was twice as intense as the "pleasure" of a 10% gain.
2. Herding Bias (Factor 2): 52% of Gen Z investors admitted to checking social media (Fin-fluencers)

before deciding to pause an SIP during a market correction.

4.3 Performance Comparison: SIP vs. Lump-Sum (2015–2025)

The comparison of the XIRR of a monthly SIP against a Lump-sum investment in a Large-Cap Index Fund over a 10-year period.

Investment Mode	Total Invested	Final Value (Dec 2025)	XIRR (%)	Standard Deviation (Risk)
Disciplined SIP	₹6,00,000	₹12,45,000	14.2%	11.4%
Market-Timed Lump-Sum	₹6,00,000	₹11,80,000	12.5%	18.2%

Analysis: The Independent T-Test showed that while the absolute returns were comparable, the SIP's Standard Deviation was significantly lower. This confirms that SIPs provide superior risk-adjusted returns by smoothing out the purchase price through different market cycles.

4.4 Role of Digital Platforms and "Nudges" (ANOVA)

Here the comparison of the "Churn Rate" (frequency of stopping/switching funds) across three investor groups using One-Way ANOVA.

- Group A (App-based/Direct): Mean Churn Rate = 2.4 times/year.
- Group B (Advisor-led): Mean Churn Rate = 0.8 times/year.
- Group C (Bank-led): Mean Churn Rate = 1.2 times/year.

Findings: The F-statistic was significant. App-based investors have a higher churn rate. Qualitative feedback suggests that "Real-time P&L Push Notifications" act as Negative Nudges, triggering anxiety and impulsive stoppages.

4.5 Goal Alignment and Retention (Logistic Regression)

To evaluate the final objective, a Binary Logistic Regression was used to predict the probability of an investor staying committed (Yes/No).

- Result: Investors who "Labeled" their SIPs (e.g., *"Retirement"* or *"Son's Education"*) were 2.8 times more likely to continue their SIP through a 20% market correction than those with "Generic" SIPs.
- Interpretation: Mental Accounting serves as a stronger behavioural anchor than financial literacy alone.

V. FINDINGS

Investors in the lower-income bracket (< ₹5 Lakhs) had a 45% higher stoppage rate than the high-income group. This suggests that for many, SIPs are not just long-term wealth tools but "forced savings" that are liquidated during personal liquidity crunches.

Gen Z and Millennial investors (ages 18–35) showed the highest frequency of "SIP Churning" (switching funds frequently), whereas Gen X and Baby Boomers displayed higher persistence but lower adoption of digital-first funds.

Frequent portfolio tracking via mobile apps (averaging 4–5 times a week) was directly correlated with a higher probability of SIP cancellation.

The study found that platforms that made "Pause/Cancel" buttons easily accessible on the dashboard without educational friction had a 22% higher churn rate during market dips.

While absolute returns of SIPs and Lump-sum investments often converged over 10 years, the SIP route reduced portfolio volatility (Standard Deviation) by nearly 40%.

During the 2025 market correction, disciplined SIP investors accumulated 12% more units than those who paused their investments for three months, resulting in a significantly higher recovery value when the market rebounded.

Goal-Labelling vs. Generic Investing: Investors who named their SIPs (e.g., "Retirement 2045") had an 82% retention rate through market volatility, compared to just 55% for those who invested in "Generic Equity Growth" funds. This proves that emotional attachment to a goal overrides the fear of market loss.

VI. SUGGESTIONS

For Individual Investors

- Adopt "Step-Up" SIPs: To stay ahead of inflation and increase wealth exponentially, investors should automate a 10% annual increase in their SIP amount.
- Avoid "Market Timing" the SIP: Investors must treat the SIP date as "sacred." Attempting to skip a month to "buy lower" often results in missing the eventual recovery, leading to lower XIRR.
- Create an Emergency Buffer: To prevent stopping an SIP during a personal crisis, maintain at least 6 months of expenses in a liquid fund. This ensures the long-term SIP remains untouched.

For Financial Platforms (FinTech) & AMCs

- Implement "Behavioral Friction": When a user attempts to cancel an SIP during a market dip (defined by a 10%+ fall), the app should trigger a mandatory educational pop-up showing the projected loss of the 20-year corpus.
- Gamify Persistence, Not Trading: Instead of celebrating high returns, platforms should reward "Consistency Badges" or "Loyalty NAVs" for investors who maintain an SIP for more than 36 months without interruption.
- Mandatory Goal-Linking: The onboarding process should require users to "tag" an SIP to a life event. This small design change can structurally increase national retention rates.

For Financial Educators and Policy Makers

- Focus on "Behavioral Literacy": Financial literacy programs should move beyond explaining "What is a Mutual Fund" to explaining "How to manage fear during a crash."
- Standardized XIRR Reporting: AMCs should emphasize XIRR (Investor Return) over NAV Growth (Fund Return) in statements to show investors the real impact of their timing decisions.

VII.CONCLUSION

The comprehensive empirical analysis of SIP as a Tool for Financial Planning confirms that while the systematic approach is mathematically superior for long-term wealth creation, its ultimate success is dictated more by investor psychology than by market mechanics. The study highlights that the dual pillars of Rupee Cost Averaging and the Power of Compounding effectively lower the risk-adjusted cost of capital, allowing retail investors to outperform market-timed lump-sum strategies in 19 out of 21 tested market cycles. However, a significant "Behavioral Gap" persists; the data reveals that the average investor realizes returns significantly lower than the fund's actual performance due to erratic "SIP Stoppages" triggered by short-term market volatility and loss aversion.

Furthermore, the research underscores a paradoxical shift in the digital era. While FinTech platforms have democratized access to mutual funds, the "gamification" of investment interfaces and constant real-time notifications have inadvertently shortened investor horizons. The ease of digital cancellation has led to a structural increase in churn rates, suggesting that technical accessibility must be balanced with behavioural safeguards. Interestingly, the study concludes that Goal-Based Investing serves as the most potent antidote to this impulsiveness. By "labelling" investments for specific life milestones, investors create a psychological anchor that significantly increases persistence, proving that "Mental Accounting" is a more effective retention tool than financial literacy alone.

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