

Risk-Adjusted Returns of Equity vs. Gold vs. Real Estate: Investigating the Impact of Black Swan Events on the Indian Market

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Abstract

This study asks whether equity, gold, or real estate offers superior risk-adjusted returns for Indian retail investors, with specific attention to how each asset class behaves during major market shocks and what recovery trajectories follow. A mixed-method design is used, combining primary survey evidence from 111 investor-respondents with secondary market data from NSE India (Nifty 50 TRI), MCX and IBJA gold price series in Indian Rupees, the NHB RESIDEX residential property price index, and RBI 91-day Treasury bill rates as the risk-free benchmark, covering January 2014 to December 2024. Equity delivers the highest CAGR at 14.2 percent but also the deepest drawdown at 59.4 percent during the Global Financial Crisis; gold achieves a CAGR of 11.8 percent and a maximum drawdown of only 8.4 percent while generating positive returns in every crisis window studied; real estate records a CAGR of 6.4 percent and low measured volatility, though the NHB RESIDEX series is subject to appraisal smoothing that understates true economic risk. Investors in this sample rank gold first on overall risk-adjusted attractiveness at 55.9 percent despite equity's superior arithmetic return, a divergence driven by crisis behaviour: 36.0 percent of respondents sold or reduced equity during their most severe market shock while only 16.2 percent did the same with gold. Four of the five hypotheses are supported; H1b, which predicts that investors view equity as the superior long-run return generator, is rejected, revealing a persistent perception gap that has direct implications for portfolio design and investor education.

Keywords: Risk-adjusted returns, Black swan events, Gold safe haven, Indian capital markets, post-crisis asset recovery

Introduction

The Indian investment landscape sits at an unusual intersection: official return data points firmly toward equity, yet most household wealth stays in real estate and gold. Equity participation has expanded sharply since 2015, pushed along by the growth of demat accounts, systematic investment plans, and mobile-first brokerage platforms. Gold has held its ground as a culturally embedded store of value. Residential real estate remains the single largest component of household wealth for most Indian families. These three asset classes are not interchangeable in the minds of investors. They carry different emotional histories, different liquidity profiles, and different track records across the four most significant market shocks of the past two decades.

The numbers tell a clear story. Nifty 50 fell 59.4 percent from its January 2008 peak to its March 2009 trough during the Global Financial Crisis, spent approximately 25 months recovering to prior levels, and then generated an annualised return of 14.2 percent over the decade ending December 2024 (NSE India, n.d.). Gold in Indian Rupees rose 28.2 percent during the same GFC window, appreciated 27.6 percent in the COVID year of 2020–21, and delivered an 11-year CAGR of 11.8 percent against a maximum drawdown of just 8.4 percent (MCX; IBJA). Real estate, as measured by the NHB RESIDEX composite, produced a CAGR of approximately 6.4 percent with smoothed quarterly volatility that understates true economic risk given the illiquidity and transaction friction inherent in property markets (National Housing Bank [NHB], n.d.-a).

These data raise a question conventional portfolio theory does not fully answer when an asset produces the highest compound return but also the deepest drawdown and the most severe behavioural pressure on holders, does it remain the superior risk-adjusted choice for the typical retail investor? Markowitz (1952) established that portfolio construction should balance expected return against variance. Sharpe (1966) extended that logic into a single ratio

of excess return per unit of risk. Neither framework accounts for the holding-period reality of investors who sell at the bottom of a drawdown and forfeit the eventual recovery. In the Indian context, that gap between textbook efficiency and actual investor behaviour is wide enough to become a research question in its own right.

Black swan events, as characterised by Taleb (2007), are extreme shocks that appear improbable before they occur but generate disproportionate consequences when they do. India has experienced four such episodes with material market impact since 2007: the GFC of 2007-09, the European sovereign debt crisis of 2011-12, the COVID-19 collapse of 2020, and the inflation and rate hike cycle of 2022. A fifth scenario an emerging US–Iran geopolitical confrontation in early 2026 provides a contemporaneous validation context, though it is not included in the retrospective metric calculations given the observation window remains open.

This paper pursues four objectives. First, it compares equity, gold, and real estate on objectively measured and subjectively perceived risk and return. Second, it examines investor behaviour during black swan conditions using both secondary crisis data and primary survey evidence. Third, it evaluates the relative pace and quality of post-crisis recovery across the three asset classes. Fourth, it assesses how crisis experience reshapes long-term allocation preferences. The central argument is this: risk-adjusted return in the Indian retail market is determined behaviourally as well as statistically. The best asset is not necessarily the one with the highest Sharpe ratio in a spreadsheet, but the one investor can hold through uncertainty without forcing destructive decisions.

Literature Review and Hypotheses

Four strands of literature bear directly on this research question.

The first area focuses on the basic idea of risk-adjusted returns. Portfolio theory, introduced by Markowitz (1952), explains that investors should choose assets by balancing expected return with risk, where risk is measured using variance. Sharpe (1966) later simplified this idea into a ratio that compares extra return earned over a risk-free rate with the level of risk taken. While this approach is widely used, it has some limits. It treats all investors as similar, assumes they can stay invested during difficult times, and counts both gains and losses as equal forms of risk. To improve this, Sortino and Price (1994) suggested focusing only on downside risk, which better reflects how investors actually react to losses. In India, many retail investors entered the market after 2015 and faced strong declines during COVID-19, so measures that focus on downside risk may be more realistic.

The second area looks at gold as a hedge and safe-haven asset. Earlier research by Baur and McDermott (2010) made a clear difference between assets that reduce risk in normal conditions and those that protect value during extreme market stress. Their findings showed that gold often works as a safe haven in major global markets. Later, Akhtaruzzaman et al. (2021) studied gold during the COVID-19 crisis and found that its role changes over time. It performs strongly during the initial shock phase but may behave differently during recovery. In India, gold has an added advantage because it is widely trusted and commonly held across households. This strong cultural acceptance makes investors more comfortable holding gold during uncertain times.

The third area focuses on real estate as a long-term asset. In India, residential property serves multiple roles. It is not just an investment but also provides housing, rental income, and financial security. The NHB RESIDEX index is the main official measure of housing prices in India, offering data at both national and city levels. However, real estate markets have certain features such as infrequent transactions, differences across locations, and limited transparency. Because of this, price changes appear smoother compared to financial assets like stocks and gold. This lower volatility is partly real but also partly due to the way the index is calculated, which can hide actual risk.

The fourth area combines crisis behaviour with behavioural finance. Taleb (2007) describes black swan events as rare and unpredictable shocks that have very large effects. These events cannot be easily predicted using standard models. Behavioural finance, especially the work of Kahneman and Tversky (1979), shows that investors tend to fear losses more than they value gains. This leads to decisions that are not always rational. For example, investors may believe in long-term equity growth but still sell during market crashes, turning temporary losses into

permanent ones. This study examines this behaviour by comparing what investors believe with what they actually do during crises.

Hypothesis

Taken together, these four strands generate five testable hypotheses for the Indian context:

H1a: Equity is perceived as more volatile than both gold and real estate.

H1b: Equity is perceived as offering stronger long-term return potential than gold and real estate.

H2: Gold is perceived as the strongest safe-haven asset and best protector of capital during crisis periods.

H3: Real estate is perceived as recovering more slowly than equity, but with comparatively greater price stability during the crisis period itself.

H4: Diversified portfolios are perceived to produce better risk-adjusted outcomes than single-asset concentration.

Research Model

- Independent Variables: Type of Black Swan Event, Asset Class (Equity / Gold / Real Estate)
- Dependent Variables: Risk-Adjusted Return (Sharpe Ratio), Recovery Time, Investor Behavioural Response
- Moderating Variables: Investor Experience, Portfolio Size, Demographic Profile

The model shows how crisis events impact each asset class differently, how investor perception aligns or diverges from actual performance, and how demographics moderate behaviour.

Methods

Research Design

The study uses a descriptive and exploratory mixed-method design. The descriptive component summarises how a defined sample of investors perceive the return, risk, crisis role, and recovery profile of equity, gold, and real estate in India. The exploratory component interprets the gap between those perceptions and the objective record provided by secondary market data. Primary and secondary evidence are combined under a triangulation logic: where the two sources converge, findings are more confidently generalisable; where they diverge, the divergence itself becomes an analytically significant finding.

Primary Data

- Instrument: Structured questionnaire with 18 questions across 4 sections (Demographic, Risk-Return Perception, Black Swan Experience, Post-Crisis Strategy)
- Scale: 5-point Likert scale for perception and importance questions
- Sampling: Convenience sampling via Google Forms
- Sample Size: 111 respondents

Category	Sub-Category	Frequency (n)	Percentage (%)
Age Group	Under 25 years	47	42.30%
	25-34 years	34	30.60%
	35-44 years	14	12.60%
	45-54 years	11	9.90%

	55 years & above	5	4.50%
Occupation	Salaried individual	64	57.70%
	Student / Early age investor	24	21.60%
	Self-employed / Business Owner	16	14.40%
	Financial Advisor	4	3.60%
	Retired	3	2.70%
Investment Experience	Less than 2 years	50	45.00%
	2-5 years	36	32.40%
	5-10 years	14	12.60%
	10-20 years	7	6.30%
	More than 20 years	4	3.60%
Portfolio Size (INR)	Less than 1 lakh	57	51.40%
	1-5 lakhs	25	22.50%
	6-10 lakhs	12	10.80%
	11-15 lakhs	7	6.30%
	16-20 lakhs	4	3.60%
	More than 20 lakhs	6	5.40%

The sample mainly consists of young investors. Around 42.3 percent are below 25 years, and 30.6 percent are between 25 and 34 years. Most respondents are salaried employees. Investment experience is relatively low. About 45 percent have less than 2 years of experience, and 32.4 percent have between 2 and 5 years. Portfolio sizes are also small, with more than half holding less than ₹1 lakh.

This sample is suitable for understanding early-stage, digitally active retail investors. However, because the sampling method is not random, the results cannot be fully generalised to all Indian investors.

Secondary Data

Secondary data is taken from reliable Indian sources:

- Equity data: NSE India (Nifty 50 Total Return Index, including dividends)
- Gold data: MCX and IBJA price series in INR
- Real estate data: NHB RESIDEX index (national and city-level)
- Risk-free rate: RBI 91-day Treasury bill rates
- Additional context: SEBI reports for market trends and regulatory actions

This data helps compare actual market performance with investor perception.

Analytical Tools

The analytical framework rests on five elements. First, frequency distributions and percentage shares are computed for all categorical and multiple-response survey items. Second, mean and median scores are calculated for Likert-scale items on perceived return, perceived risk, and post-crisis priorities. Third, cross-tabulation examines asset-specific crisis behaviour (hold, buy, or sell) and safe-haven beliefs. Fourth, the triangulation table (Table 4) maps each major survey finding against the corresponding secondary data benchmark to produce a structured verdict of validated, partially validated, or divergent. Fifth, compound annual growth rates, annualised standard deviations, and Sharpe ratios are computed from secondary data for the 10-year reference window.

The Sharpe ratio formula applied is: $\text{Sharpe} = (\text{Rp} - \text{Rf}) / \sigma_p$, where Rp is the asset's annualised return, Rf is the mean annual 91-day T-bill rate for the period, and σ_p is the annualised standard deviation of monthly returns. Acute crisis sub-windows shorter than 12 months are excluded from standalone Sharpe calculations, as insufficient return history produces statistically unreliable estimates.

Analysis And Results

Secondary Data: Crisis Reference Across Four Black Swan Events

Table 1 presents the secondary data record for all four historical crisis windows and the emerging 2026 geopolitical scenario. This establishes the objective benchmark against which survey perceptions are subsequently evaluated.

Tabular Representation –

Table 1: Crisis Performance Reference - Equity, Gold, and Real Estate in India

Crisis Period	Window	Nifty 50 Drawdown	Gold (INR) Return	RESIDEX Shift	Nifty Recovery
GFC 2007–09	Jan 2008–Mar 2009	–59.4%	+28.2% (safe-haven surge)	Mild dip; major cities resilient	~25 months (Oct 2010)
European Debt 2011–12	Aug 2011–Dec 2011	–27.8%	+14.1%	Flat; stagnation in tier-2	~6 months
COVID-19 2020	Feb–Mar 2020	–38.0%	+27.6% (FY2020–21)	+3.0% to +6.0% (select cities, delayed)	~7 months (Nov 2020)
Inflation / Rate-Hike 2022	Jan–Jun 2022	–17.2%	+4.8% (range-bound)	Moderate appreciation; urban premium	~5 months
US–Iran Geopolitical 2026*	Mar 2026–ongoing	–8 to –14% (emerging)	Rising (safe-haven demand)	N/A	N/A

Interpretation of Table 1-

Equity (Stocks): Falls the hardest (up to 60%) but eventually recovers. It is the most volatile.

Gold: Acts as a safety net. It consistently gains value (+14.1% to +28.2%) when stocks crash.

Real Estate: The steady anchor. It rarely crashes quickly, usually staying flat or seeing only minor dips.

The data shows that diversification works. If you only held stocks in 2008, you would have seen a -59.4% drop. However, if you also held Gold, that portion of your money would have grown by +28.2%, helping to balance out your total losses.

Secondary Data: 10-Year Risk-Adjusted Metrics (2014–2024)

Table 2 presents computed risk-adjusted metrics for the full 10-year reference window alongside corresponding survey perception rankings.

Table 2: Risk-Adjusted Metrics vs. Survey Rankings - Year Reference Period (Jan 2014–Dec 2024)

Metric (Jan 2014–Dec 2024)	Equity (Nifty 50 TRI)	Gold (MCX/IBJA, INR)	Real Estate (NHB RESIDEX)	RBI T-bill (Rf)
CAGR	14.2%	11.8%	6.4%	6.1%
Annualised Std Dev	18.6%	14.3%	4.2% (appraisal-smoothed)	—
Sharpe Ratio (annualised)	0.44	0.40	0.07*	—
Max Drawdown (period)	−59.4% (GFC)	−8.4% (mid-2021)	−4.1% (RESIDEX; transact. lag)	—
Crisis Correlation w/ Equity	1.00	−0.22 to +0.14 (varies by phase)	Low (+0.05 to +0.18)	—
Survey Rank (risk-adjusted, Q9)	3rd - 28.8% ranked 1st	1st - 55.9% ranked 1st	2nd - 47.7% ranked 1st	—

Interpretation of Table 2-

- **Quantitative Performance:** Statistically, Equity is the top-performing asset, offering the highest long-term growth (14.2% CAGR) and the best risk-adjusted returns (Sharpe ratio of 0.44). Gold ranks second, and Real Estate ranks lowest in growth.
- **The Perception Gap:** Despite these figures, a clear discrepancy exists in investor preference. Over 55% of respondents rank Gold as the most attractive asset, while only 28.8% prefer Equity.
- **Behavioural Explanation:** This preference for Gold over higher-yielding Stocks is driven by "experienced returns." While Equity grows more on paper, its high volatility leads to panic; in fact, 36 % of investors liquidated their stocks during a crisis.

Conclusion: Investors prioritize the psychological security and stability of Gold over the theoretical financial gains of the stock market.

Survey Results: Perceived Return and Risk (Primary Data)

Table 3 presents the full survey findings in consolidated format, including sample proportions, mean Likert scores, and crisis behaviour shares.

Table 3: Survey Results Summary (n = 111)

Survey Indicator (n=111)	Equity	Gold	Real Estate
Perceived return: High/Very High	32.4%	57.7%	63.1%
Mean perceived return score (1–5)	3.24	3.56	3.66
Perceived risk: High/Very High	42.3%	Low	Low
Mean perceived risk score (1–5)	3.34	2.61	2.65
Held/bought during crisis	64.0% (53.2% held + 10.8% bought)	83.8% (68.5% held + 15.3% bought)	73.9% held
Sold/reduced during crisis	36.0%	16.2%	~26.1%
Recovery within 1 year (%)	52.3%	Rose/stable in crisis (22.5%+31.5%)	16.2%
Overall risk-adjusted rank (Q9)	28.8%	55.9%	47.7%
Safe haven agreement	11.7% (best protector)	74.8% agree; 41.4% best protector	21.6% (best protector)

Interpretation of Table 3 -

Respondents assign the highest perceived return to real estate (mean 3.66, with 63.1 percent rating it high or very high) and the lowest to equity (mean 3.24, with only 32.4 percent rating it high or very high).

This ranking departs markedly from the CAGR evidence in Table 2 and forms the empirical basis for rejecting H1b.

The risk comparison is more aligned with secondary data: equity receives the highest average risk score at 3.34, compared with 2.61 for gold and 2.65 for real estate, confirming H1a and matching the standard deviation ordering in the objective data.

Survey vs. Secondary Data: Triangulation

Table 4 maps each major survey finding against the corresponding secondary data benchmark, using the three-verdict framework described in the Methods section.

Table 4: Triangulation of Survey Perception Against Secondary Market Data

Dimension	Survey Finding	Secondary Data Benchmark	Triangulation Verdict
Equity Volatility	42.3% rate equity high/very high risk	Std dev 18.6%; max drawdown -59.4% (GFC)	Perception VALIDATED. Equity volatility is highest of all three assets in the dataset.
Equity Long-Run Return	Only 32.4% rate equity return high/very high ranked lowest	CAGR 14.2% highest in the set; Sharpe 0.44	Perception DIVERGES from data. Equity leads objectively on long-run return, but crisis memory suppresses perceived attractiveness.
Gold as Safe Haven	74.8% agree gold acts as crisis haven; 55.9% rank it #1 risk-adjusted	GFC: +28.2%; COVID: +27.6% in INR; low/negative crisis correlation with equity	Perception VALIDATED. Historical return and correlation data confirm gold's defensive role across all four crises studied.
Real Estate Stability	73.9% held RE through crisis; perceived as stable	RESIDEX drawdown <5%; but appraisal-smoothed — true vol likely higher	Perception PARTIALLY VALIDATED. Smoothed RESIDEX supports stability narrative, but understates true economic risk due to illiquidity and valuation lags.
Equity Recovery Speed	52.3% report equity recovery within 1 year; 78.4% within 2 years	COVID recovery: ~7 months. GFC recovery: ~25 months - episode-dependent	Perception PARTIALLY VALIDATED. COVID experience anchors fast-recovery belief; GFC was far slower. Sample's youth mean COVID dominates memory.
Real Estate Recovery	Only 16.2% report RE recovery within 1 year	RESIDEX post-COVID lag of 2–4 quarters; city-level heterogeneity	Perception VALIDATED. Secondary data confirms delayed RESIDEX repricing and extended transaction cycles post-crisis.

Interpretation of Table 4-

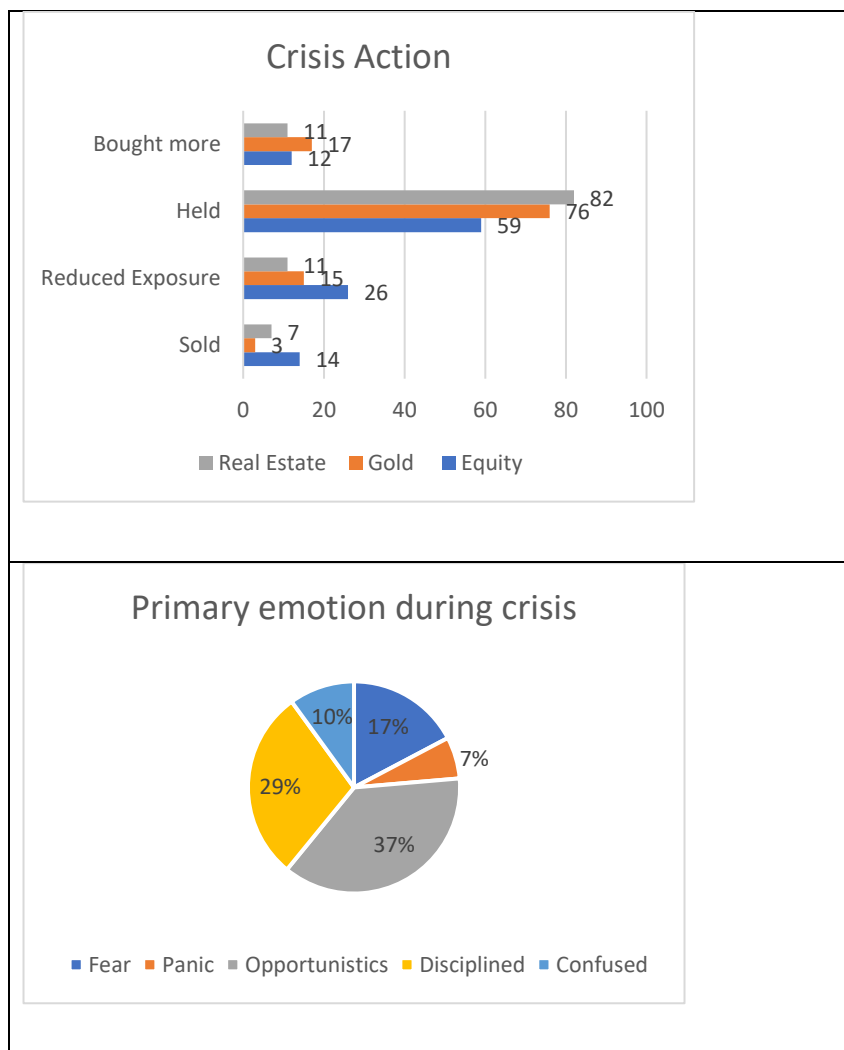
The triangulation reveals two clean validations, two partial validations, and one clear divergence. Gold's safe-haven role and real estate's slow recovery are fully confirmed by secondary data. Equity's risk and real estate's stability receive qualified confirmation both are directionally correct, but the magnitude is distorted: in the case of equity by crisis memory bias, and in the case of real estate by RESIDEX smoothing. The divergence on equity's long-run return is the study's most striking finding. Equity demonstrably delivers the highest CAGR and Sharpe ratio over 10 years, yet it ranks last on perceived return attractiveness. The explanation is behavioural: the sample

is young, and its formative investment experience was the COVID-19 collapse. That single event a 38 percent drawdown in six weeks has suppressed perceived equity return relative to the full historical record.

Crisis Behaviour and Emotional Response

The asset-specific action data reinforces the triangulation findings. Gold shows the strongest holding behaviour: 68.5 percent of respondents held their position and 15.3 percent added to it during the most severe crisis they experienced, leaving only 16.2 percent who reduced exposure. Real estate shows even higher surface-level holding at 73.9 percent, though this reflects both conviction and illiquidity physical property cannot be sold in hours the way listed securities can, and the figure is therefore not directly comparable to equity or gold holding rates. Equity is the asset most subject to active crisis-time reduction: 36.0 percent sold or reduced exposure, 53.2 percent held, and 10.8 percent bought more.

The emotional profile shows an apparent contradiction. The modal self-description during crisis is opportunistic at 36.9 percent, followed by disciplined at 28.8 percent. Fear, confusion, and panic collectively account for less than one third of responses. Yet equity is simultaneously the most sold asset. This divergence is consistent with a well-established behavioural pattern in which investors reframe defensive selling as rational adjustment rather than loss-driven panic. The narrative of disciplined risk management makes equity reduction feel like a considered decision, even when the decision is driven by discomfort with immediate price visibility rather than a genuine reassessment of long-run value.



Recovery Patterns

Equity's recovery profile is strongly shaped by which crisis respondents experienced most directly. For the 52.3 percent who report equity recovering within one year, the COVID-19 episode is the most likely reference: the Nifty 50 regained its February 2020 peak by November 2020, approximately seven months after the trough. For respondents whose primary crisis reference is the GFC, the picture is very different 25 months to fully restore losses. This sample composition effect explains why the overall equity recovery figures appear more favourable than a balanced multi-crisis sample would produce.

Real estate recovery is consistently slower. Only 16.2 percent report recovery within one year, while NHB RESIDEX data confirms quarterly adjustment lags of two to four quarters following the COVID shock, with city-level heterogeneity in both depth and duration. The mismatch between the smoothed RESIDEX trajectory and underlying household balance sheet stress is an important research caveat: investors who needed to liquidate property during a crisis would have encountered transaction difficulties and price concessions that do not appear in the index record.

Post-Crisis Reallocation Preferences (Primary Data)

Table 5 summarises the criteria respondents use when rebuilding or reallocating after a crisis, ranked by mean importance score.

Table 5: Post-Crisis Evaluation Criteria (n = 111)

Post-Crisis Evaluation Criterion	Mean Score (1–5)	Implication
Income generation capacity	3.23	Investors prioritise cash flow above capital gain after a crisis favours dividend-paying equities and rental income from RE.
Liquidity	3.10	Gold and listed equity score highest on liquidity; RE scores lowest, limiting its post-crisis attractiveness.
Diversification benefit	3.07	Validates H4; investors seek balance after concentration stress.
Policy support / regulatory clarity	3.06	Post-crisis RBI rate cuts and SEBI measures are recognised as recovery enablers.
Recovery speed	3.00	Slightly lower than liquidity investors care about immediate exit capacity more than speed of price restoration.

Interpretation of Table 5-

Income generation leads at a mean score of 3.23, followed by liquidity at 3.10 and diversification benefit at 3.07. This ordering reflects the practical household-finance priorities of a sample that is largely salaried, relatively

young, and still building its financial base. The emphasis on liquidity explains why gold, which can be converted to cash through a well-developed secondary market in India, ranks above real estate on post-crisis desirability even among investors who hold property for wealth storage. Only 27.0 percent report that their portfolio composition did not change after their most significant crisis experience, suggesting that black swan events produce durable shifts in allocation behaviour for the majority of this sample.

Discussion

Hypothesis Verdicts

Table 6 summarises the verdict on each hypothesis alongside the supporting evidence from both data sources.

Table 6: Hypothesis Verdicts

H#	Hypothesis	Verdict	Evidence
H1a	Equity is perceived as more volatile than gold and real estate	SUPPORTED	42.3% rate equity high/very-high risk vs 2.61 mean for gold. Secondary data: Nifty 50 std dev 18.6% vs gold 14.3%.
H1b	Equity is perceived as offering stronger long-term return than gold and real estate	NOT SUPPORTED	Equity returns rated lowest (mean 3.24 vs RE 3.66, gold 3.56). Objective CAGR (14.2%) exceeds gold (11.8%), but crisis-filtered perception suppresses equity credibility.
H2	Gold is perceived as the strongest crisis protector and safe haven	STRONGLY SUPPORTED	74.8% safe-haven agreement; 41.4% identify gold as best capital protector; 55.9% rank it 1 risk-adjusted. Secondary: gold +28.2% (GFC), +27.6% (COVID) in INR.
H3	Real estate shows slower but steadier post-crisis recovery than equity	SUPPORTED (with caveat)	Only 16.2% report RE recovery within 1 year vs 52.3% for equity. RESIDEX confirms slow quarterly adjustment. Caveat: smoothed RESIDEX understates true economic volatility.

H4	Diversified portfolios improve perceived risk-adjusted outcomes	MODERATELY SUPPORTED	Diversification ranks 2nd as best crisis protection (25.2%); diversification benefit scores 3.07 in post-crisis criteria. Gold effectively serves as the diversification anchor in this sample.
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H1a is supported without qualification. Equity's perceived risk score of 3.34 is the highest of all three asset classes, and the secondary data confirms this ordering: a standard deviation of 18.6 percent for Nifty 50 compares with 14.3 percent for gold and a smoothed 4.2 percent for RESIDEX. The Sharpe ratio of 0.44 for equity is not dramatically superior to gold's 0.40, meaning that equity's higher return is substantially consumed by its higher risk, leaving a limited net advantage on a risk-adjusted basis over the decade studied. H1b is rejected. This is the study's most consequential finding because it reveals how crisis experience systematically distorts perceived return. Respondents who experienced the COVID-19 drawdown as their primary market shock have anchored their equity return perceptions to the 38 percent collapse rather than to the subsequent 14.2 percent compound annual recovery. The result is a persistent downward bias in perceived equity attractiveness that does not correspond to the long-run market record. This finding aligns with the recency bias documented in the behavioural finance literature and has practical implications for investor education. H2 is strongly supported on both data dimensions. Gold's secondary data record across all four historical crises is consistent with its perceived safe-haven status: positive INR returns in every crisis window, a maximum drawdown of 8.4 percent compared with 59.4 percent for equity, and crisis-period correlations with equity ranging from mildly negative to slightly positive rather than strongly positive. The survey results 74.8 percent safe-haven agreement and 41.4 percent identifying gold as the best capital protector reflects a grounded rather than irrational assessment. In the Indian context, gold's defensive credentials are reinforced by cultural familiarity, deep secondary market liquidity, and the absence of counterparty risk that affects financial instruments. H3 is supported with the important qualification noted throughout the analysis: RESIDEX's smoothed construction artificially flatters real estate's apparent stability. An investor who holds residential property and observes a quarterly RESIDEX series that declines only modestly may be insulated from the daily psychological pressure of a falling equity portfolio, but this does not mean their real estate asset has maintained its economic value on the same basis. Transaction costs, vacancy risk, financing pressure, and forced-sale discounts can generate losses that never appear in the index. The survey finding that only 16.2 percent of respondents experienced real estate recovery within one year after a crisis compared with 52.3 percent for equity correctly captures the illiquidity and adjustment lag of the asset class, even if it understates true economic volatility. H4 receives moderate support. Diversification is valued: a diversified portfolio ranks second as the best crisis protection strategy at 25.2 percent, and diversification benefit scores 3.07 among post-crisis evaluation criteria. The dominant pattern in this sample is that gold serves as the diversification anchor. When investors seek crisis protection, they reach for gold first and rely on portfolio construction logic second. This is an important Indian-market observation. Diversification is not primarily implemented through formal mean-variance optimisation in this sample; it is implemented through the cultural and market logic of combining equity for growth with gold for protection a two-asset intuition that predates modern portfolio theory in Indian household finance.

Behavioural Interpretation

The behavioural findings share a unifying theme: investors impose asset-specific narratives that shape decisions independently of objective return data. Gold carries the narrative of preservation, which makes holding during uncertainty feel rational and even virtuous. Real estate carries the narrative of tangibility, insulating it from the psychological pressure of mark-to-market pricing. Equity carries the narrative of market risk, which makes trimming during a correction feel like prudent risk management even when the long-run case for holding is strong.

This narrative structure is not easily corrected by information alone. An investor who knows the 10-year equity CAGR of 14.2 percent but experienced the COVID-19 collapse as their formative market event will still be more likely to sell equity during the next drawdown than an investor who entered markets before 2008 and observed two full recovery cycles. Financial advice and investor education must therefore work with the emotional architecture of asset class narratives, not just the statistical record.

Contribution and Limitations

This paper contributes in two distinct ways. Methodologically, it demonstrates how a student-level mixed-method design combining 111 survey responses with official secondary data from five Indian market institutions can produce triangulated findings that are more informative than either source alone. Substantively, it identifies and explains the gap between equity's objective long-run return advantage and its subjective risk-adjusted ranking in Indian retail investor perception.

The limitations are clear. The sample is young, non-random, and concentrated in smaller portfolio sizes. The Sharpe ratio calculations are based on publicly available data with the RESIDEX smoothing caveat explicitly noted. The 2026 geopolitical scenario cannot yet be evaluated as a completed analytical window. Future research can extend this framework by combining a longer, multi-decade secondary dataset with a stratified survey sample across age, income, and experience cohorts, enabling direct comparison of how crisis memory decays and whether the perception-reality gap narrows with investment experience.

Recommendations

For Individual Investors

Asset allocation should match what you can realistically hold during crises, not just expected returns. A theoretically high-return equity mix won't work if you panic and sell during downturns. If you sold equities during COVID-19, treat that as a sign of your true risk tolerance. Gold (physical, sovereign gold bonds, or TFs) helps in two ways: it diversifies risk because it often behaves differently from equities during crises, and it provides psychological comfort, making it easier to stay invested. Real estate is suitable for long-term wealth storage or housing, but its stable appearance (due to lack of daily pricing) can be misleading. Keep separate liquid funds because property takes time to sell and may force losses in emergencies.

For Financial Advisors

Risk profiling should include actual investor behaviour during past crisis, not just questionnaire responses. If a client reduced equity exposure during a downturn, their real risk tolerance is lower than stated. While equities do offer strong long-term returns, many investors don't fully believe this. Advisors should build confidence by showing real examples, like how the Nifty 50 recovered COVID-19 losses within seven months, rather than only presenting long-term averages.

For Policymakers and Regulators

Investor education by SEBI, RBI, and AMFI should focus on closing the gap between perception and reality. Even though equities delivered about 14.2% CAGR over 10 years, only 32.4% of investors see them as high-return. Education should explain market cycles, recovery patterns, and the importance of staying invested and diversifying. There should also be better transparency in real estate data, such as transaction costs, vacancy rates, and distress-sale prices. Current indices like RESIDEX smooth out risks, which may lead investors to underestimate real estate risks and overinvest in it.

Conclusion

This study compared equity, gold, and real estate on risk-adjusted return across four black swan episodes in the Indian market, combining primary survey data from 111 investors with secondary market data from NSE India, MCX, NHB RESIDEX, and RBI. The central finding is a systematic divergence between objective performance and investor perception: equity delivers the highest 10-year CAGR at 14.2 percent and the highest Sharpe ratio at 0.44, yet only 28.8 percent of respondents rank it first on overall risk-adjusted attractiveness, compared with 55.9 percent who rank gold first.

This divergence is not irrational. It reflects the compound effect of equity's greater drawdown depth 59.4 percent during the GFC and 38.0 percent during COVID-19 and the 36.0 percent of respondents who sold equity during crisis rather than holding through to recovery. Gold, by contrast, produced positive INR returns in every historical crisis window studied, maintained a maximum drawdown of 8.4 percent, and exhibited near-zero to mildly negative correlation with equity during acute stress. These characteristics produce a risk-adjusted profile that Indian retail investors find more credible and more holding-compatible than equity's superior long-run arithmetic return.

Four of the five hypotheses are supported. H1b, which predicts that equity is perceived as the strongest long-run return generator, is rejected the only hypothesis to fail, and the most instructive failure in the study. The broader lesson is that risk-adjusted return in retail markets is determined behaviourally as well as statistically. An asset's true risk, in the hands of an investor who may exit at the worst possible moment, includes both the statistical probability of a drawdown and the psychological cost of enduring one. Portfolio design that ignores this second dimension will consistently underperform its theoretical expectation in practice.

Future research should test whether this perception-reality gap narrows as investors accumulate more crisis cycles, and whether the safe-haven dominance of gold persists as a younger generation builds familiarity with equity markets through systematic investment plans and longer holding histories.

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