

## NON-MACROECONOMIC RISK AND RETURN ANALYSIS OF STOCK MARKET VS. REAL ESTATE IN MUMBAI

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### Abstract

This study examines risk and return in Mumbai's Indian stock market and the city's real estate sector using non-macroeconomic factors. It uses a mixed-methods approach, analysing historical performance data and surveying 152 investors and professionals. Risk-adjusted returns are measured using metrics like Compound Annual Growth Rate (CAGR), volatility, Sharpe ratio, rental yield, and Maximum Drawdown (MDD). The study excludes macroeconomic variables like inflation and interest rates, focusing on micro-level determinants of investment performance. The stock market showed superior capital appreciation, but with higher volatility and liquidity risks. Mumbai's real estate, particularly in prime commercial zones, provided more stable income through rental yields and lower volatility but suffered from low liquidity, high entry/exit costs, and regulatory risk. The study found that 62% preferred stocks for higher risk-adjusted returns, while 70% saw real estate as more stable but illiquid. The findings help investors identify optimal asset allocation strategies, with a 60-40 portfolio split favouring equities as an ideal balance between growth and income. Policymakers and regulators are urged to focus on strengthening RERA compliance, improving transparency in real estate, and fostering REITs and systematic investment plans to make both asset classes more accessible and efficient.

**Keywords:** *Stock Market, Real Estate, Non-Macroeconomic Factors, Risk and Return, CAGR (Compound Annual Growth Rate), Volatility.*

### 1. Introduction

Mumbai, also known as the City of Dreams, is a significant economic powerhouse in India and a microcosm of the country's investment landscape. The city's growth is fuelled by its stock market and real estate sectors, which have grown despite global and local upheavals. Economic liberalisation in the late 20th century led to unprecedented growth, with the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) becoming the bellwethers of India's financial might. The allure of Mumbai's markets lies not just in their historical returns but also in their potential for future growth. This study pivots around a comparative analysis of the stock market and real estate investments, dissecting their risk profiles and return potentials. The stock market in Mumbai, characterised by volatility and liquidity, offers a stark contrast to the tangible stability of real estate, traditionally seen as a bastion of security.

Mumbai's socioeconomic dynamics and urban development play a significant role in investment decisions. The city's burgeoning population, infrastructure projects like the Mumbai Metro and Coastal Road, and push towards affordable housing, commercial space expansion, and the city's status as an entertainment and financial hub reflect in market dynamics and investment patterns. The regulatory framework and policy environment in Mumbai significantly influence investments, aiming to balance market stability with investor protection. Initiatives such as the Real Estate (Regulation and Development) Act (RERA)

have brought transparency to real estate transactions, while stock market regulations have been revamped to prevent frauds and protect retail investors.[1], [2]

A detailed examination of various financial instruments and investment strategies underscores the diversity of Mumbai's investment milieu. Understanding the psychological underpinnings of market sentiments and investor behaviour is crucial in Mumbai, where the pulse of the market can change with a single corporate move or regulatory announcement. Technological advancements have ushered in a new era for Mumbai's markets, enabling seamless transactions and greater transparency. This research's significance lies in its timeliness and relevance, as understanding the risk-return conundrum in Mumbai's markets is more pertinent than ever. As a barometer of India's economic health and a reflection of its socio-political heartbeat, Mumbai's investment landscape offers invaluable insights into the country's past and future.

## **2. Review of Literature:**

When it comes to investments, especially in Mumbai's fast-paced stock market and real estate market, there are a lot of risks and rewards to consider. This review of the literature looks at a number of academic papers and real-world studies that compare and contrast these two popular business options. The chosen works put light on the past performance, risk-return profiles, market trends, and economic factors that affect investment choices in Mumbai's special financial environment. By looking at these studies, the review aims to bring together what is already known, find trends and differences, and figure out how investments in the stock market and real estate work together in one of India's busiest businesses areas [3] compared Stock Market and Real Estate Investments in Mumbai. This study conducts a comparative analysis of risk and return in real estate investments in Mumbai, employing historical data to assess the performance of real estate assets and their correlation with stock market returns. Also explore the returns from both the Mumbai stock market and real estate, delving into the factors that influence these returns and examining the relationship between the two investment avenues.

Investment in the real estate market remains a popular choice, primarily because housing is a fundamental necessity. The decision to invest in real estate is influenced by various factors, including the investor's level of expertise, the motivation provided by financial advisors, and the investor's overall propensity to invest. [4] Reviewed India's real estate markets and analysed the risk-adjusted performance and portfolio diversification benefits of office, retail, and residential real estate in New Delhi and Mumbai from Q2, 1998 to Q4, 2005. It was observed that real estate underperformed compared to the stock market during this period, although performance improved in later years. However, diversification benefits with stocks declined for office and residential sectors. The study also notes that capital market deregulation and increased international investment are expected to significantly influence future FDI and the development of real estate investment funds in India.[5]

[6] Finds that in India, the housing price index Granger-causes FDI inflows, but not vice versa. While FDI and FII combined have a delayed impact on the housing sector, FII alone neither Granger-causes BSE returns nor is influenced by them. There's also no causality between FII flows and BSE market capitalization. However, FDI and FII together Granger-cause changes in the foreign exchange rate, and foreign exchange reserves unidirectionally cause FDI and FII inflows. Additionally, the money supply Granger-causes FDI and FII flows, but not the other way around. [7] Analyse the impact of COVID-19 on India's financial and commodity markets using data from the National Stock Exchange, gold prices, and oil prices. It covers three periods: the overall pandemic phase (April 2020–April 2021), the first wave, and the second wave. Using the ARDL model, the study found that during the overall period and the first wave, COVID-19 had a negative impact on oil prices and the stock market, but a positive impact on gold prices. In contrast, during the second wave,

COVID-19 had a positive impact on oil prices and the stock market, and a negative impact on gold. The findings confirm long-run relationships between the variables and underscore the uncertainty of the pandemic, the inverse link between gold and equities, and the relevance of demand theory for policy-making.

[8] Examines the short-term impact of the COVID-19 pandemic on India's stock market, focusing on the NIFTY50 index and its sectors. Using three event study models, the analysis revealed sector-specific effects: while all sectors experienced temporary disruption, the financial sector was hit hardest. In contrast, sectors like pharmaceuticals, consumer goods, and IT showed resilience or even positive performance. The findings underscore the pandemic's uneven impact across industries and offer insights for investors to better protect portfolios against sudden market shocks. [9] Investigated the relationship between investor sentiment and stock returns in India using a sectoral approach. The study introduces a custom sentiment index (Index) based on seven indirect sentiment proxies suited for the Indian market. Analysing Nifty 500 and key sectoral indices (Automobile, IT, Metal, FMCG, and PSUs) with Principal Component Analysis and Ordinary Least Square regression, the study finds a strong positive link between investor sentiment and stock returns. The research fills a gap in Indian literature and provides valuable insights for investors, policymakers, and researchers in understanding and managing sentiment-driven market behaviour.

The study by [10] analyse around 3,000 ongoing formal real estate projects in Mumbai and finds that 27.3% of projects and 42.9% of built-up space are under litigation, with an average construction time of 8.5 years. Projects under litigation take about 20% longer to complete, even after controlling for location, developer experience, and size. This delay increases building costs by at least 30%. Public Interest Litigations (PILs), often initiated by parties outside the direct contract (like non-residents), account for a significant portion of these legal cases. The findings are supported by various robustness checks and address endogeneity using neighbourhood litigation tendencies. Each of these studies contributes to a deeper understanding of the complexities involved in assessing risk and return in Mumbai's dynamic stock market and real estate sectors. They provide a foundation for further research that addresses the gaps identified in the existing literature.

Despite various studies exploring the comparative risk and return of stock market and real estate investments, a nuanced analysis specifically tailored to the rapidly evolving landscape of Mumbai's markets is notably absent. Existing research often leans on historical data, which may not reflect the current economic climate or capture the influence of recent macroeconomic shifts, regulatory changes, and technological advancements that significantly impact investment strategies. Moreover, there is a scarcity of literature that integrates the implications of behavioural finance into the investment dynamics of Mumbai's investors, who are navigating one of the world's most populous and diverse financial ecosystems. Additionally, while numerous studies examine the performance of real estate or the stock market independently, comprehensive research that offers a parallel analysis of these two asset classes within the context of Mumbai is limited. This leaves a gap in understanding how these markets interact and influence each other, particularly in light of Mumbai's unique market drivers such as its diverse real estate segments, investor demographics, and changing policy environment. Addressing these gaps could provide a more holistic perspective on the risk-return profile of investments in Mumbai, offering valuable insights for investors, financial analysts, and policymakers engaged in this vibrant economic hub. Investing in the financial and real estate markets in Mumbai is a multifaceted endeavour influenced by numerous variables, from market sentiment to regulatory changes. While various studies have explored risk and return in isolation within these markets, there remains a distinct lack of comprehensive research that bridges these two distinct investment avenues. The overarching problem that this study seeks to address is to understand the comparative risk and return

profiles of investments in the stock market and real estate in Mumbai and to uncover the interplay between these asset classes within this unique economic landscape.

This study aims to analyse the risk-return dynamics of stock market and real estate investments in Mumbai by conducting a comparative analysis. It examines the impact of economic and policy changes on investment strategies and outcomes in Mumbai's financial and real estate markets. The study also explores how these changes impact the risk and return in both asset classes and how investors adapt to them. The study also highlights the importance of Mumbai's real estate diversity, which includes residential, commercial, and industrial properties. However, there is limited research on how this diversity influences the risk and returns profiles of real estate investments in Mumbai and compared to the stock market. The study aims to provide a comprehensive understanding of the intricate relationship between investments in the stock market and real estate in Mumbai, bridging the gap in existing literature and offering a robust framework for investors, financial analysts, and policymakers to make informed decisions.

### 3. Methodology

This analysis focuses on the returns on stocks and real estate investments using performance metrics like price appreciation, income generation, and risk. The driving factors are specific to internal or local influences, company/asset characteristics, and micro-level factors. Data was collected from historical stock market and real estate records and a survey was conducted to assess non-macroeconomic factors affecting these investments. The methodology includes CAGR (Compound Annual Growth Rate), liquid returns (including dividends for stocks and rental yield for real estate), volatility (measured by the standard deviation of returns over time), Sharp Ratio (risk-adjusted return per unit of volatility), and Max Drawdown (largest percentage decline in asset value during a specific period).

### 4. Non-Macroeconomic Factors Affecting Returns: Evaluating the Risks in Stock Market vs Real Estate

#### 4.1. Market Volatility:

**Stock Market:** Stock market investments are exposed to high levels of volatility at the individual stock and sector level [3], [11]. Market prices of shares can fluctuate significantly within short time frames due to factors like corporate earnings, management decisions, sectoral competition, and external corporate events (mergers, acquisitions, or regulatory actions specific to sectors such as telecom or pharmaceuticals) [12]. The India VIX, that is Indian volatility index is shown in Figure 1. The market volatility during election period is shown in Figure 2.

Example: Indian IT companies like Infosys and TCS have faced volatile periods driven by firm-specific issues like foreign client orders and sectoral competition. Similarly, the pharmaceutical sector has seen price swings due to firm-level compliance with international regulatory norms, such as US FDA guidelines.



**Figure 1.** India VIX (*Nifty VIX Price, Real-Time Quote & News, n.d.*)



**Figure 2 :** Market volatility during election period[13]

**Real Estate:** Real estate in Mumbai, especially in prime locations, shows lower price volatility in the short term compared to stocks.[3] However, the market can experience prolonged stagnation or sharp corrections, particularly in speculative or underdeveloped areas. Real estate risk is concentrated in areas with higher supply-demand imbalances and less robust regulatory compliance. Capital appreciation has slowed in recent years but is highly dependent on location and project quality. Hedonic Pricing Models are applied in real estate risk assessment to control for property characteristics and isolate price volatility due to market factors [14].

Real estate prices exhibit location-specific volatility. In Mumbai, premium locations like South Mumbai or Bandra-Kurla Complex (BKC) tend to have more stable prices, while suburban or emerging areas can experience higher volatility due to oversupply, changing demand dynamics, and redevelopment policies [15]

Example: Residential properties in Worli Sea Face or Nariman Point have experienced lower price volatility compared to areas like Navi Mumbai or Thane, which are more susceptible to oversupply and speculative demand.

#### 4.2. Liquidity Risk:

**Stock Market:** Stocks of large-cap companies in indices like NIFTY 50 or SENSEX are highly liquid, allowing investors to exit positions with minimal price impact. However, small-cap and mid-cap stocks face liquidity risks, where trading large volumes can lead to sharp price fluctuations [16].

Example: Large-cap stocks like Reliance Industries are more liquid and less risky from a liquidity perspective than smaller companies that may face liquidity constraints in bearish markets.

Dividend income from stocks tends to be more stable in certain sectors (e.g., utilities or financials), but high-growth sectors (e.g., technology) often reinvest profits, resulting in lower dividend yields [17].

**Real Estate:** Real estate is an illiquid asset class compared to stocks. The process of buying or selling real estate is lengthy, with high transaction costs such as stamp duty, registration fees, and brokerage. This illiquidity creates exit risk, especially during periods of low demand or a buyer's market. Liquidity is particularly challenging in luxury segments or emerging

areas with fewer buyers. Selling a property in Mumbai, especially in a sluggish market, can take months, and transaction costs are high [18].

Rental income, especially in commercial real estate, is a more stable component of returns. Prime locations in Mumbai (e.g., BKC or Lower Parel) offer relatively higher rental yields (6-8%), compared to residential properties (2-3%), though vacancy risks are a concern.

For investors in rental properties, especially commercial real estate, the risk of tenant default or prolonged vacancy is a critical concern. A property that remains vacant for extended periods can significantly reduce overall returns. A residential real estate has significantly lesser risk but it also provides lower returns compared to commercial real estate.

However, Commercial properties in Lower Parel or Andheri that cater to businesses can face vacancy risks, especially during economic downturns, as businesses downsize or close, leading to reduced rental income.

#### **4.3. Regulatory and Compliance Risk:**

**Stock Market:** Compliance with sector-specific regulations is a significant risk in the stock market. Companies must adhere to corporate governance norms, industry-specific regulations (e.g., environmental laws for manufacturing or FDA regulations for pharma), and internal governance standards [19]. A regulatory breach can lead to stock price erosion.

Example: Companies like Dr. Reddy's Laboratories faced stock price declines after receiving warning letters from US regulatory bodies.

Firms with strong governance mechanisms tend to exhibit more stability and lower risk, even in volatile sectors.

Example: Corporate governance failures, such as in IL&FS (Infrastructure Leasing & Financial Services), led to significant price erosion, whereas companies like HDFC Bank, known for conservative risk management and consistent leadership, have lower risk profiles.

**Real Estate:** Title disputes, zoning issues, regulatory non-compliance in real estate are serious. Regulatory risk in real estate stems from project-specific regulations, such as land acquisition laws, zoning restrictions, environmental regulations, and compliance with RERA regulations [20]. Regulatory changes can delay projects, increase costs, or affect property values. The risks associated with Indian stock market and Mumbai real estate, are shown in Table 1.

Example: The implementation of the Real Estate Regulation and Development Act (RERA) in 2016 introduced stricter regulations for developers and greater protection for buyers, but also created a burden for developers who were not previously compliant, leading to delays and cost overruns in projects.

#### **4.4. Developer/Company-Specific Risk:**

**Stock Market:** Firm-specific risks in the stock market arise from factors like poor corporate governance, mismanagement, or high debt levels [21]. Companies that fail to innovate or manage competition effectively face significant downside risks. Supply chain disruptions, technological failures (in tech-heavy companies) can be major risks.

Example: The downfall of Kingfisher Airlines due to poor management and high debt levels led to substantial losses for investors.

Certain sectors in the Indian stock market, such as IT, pharmaceuticals, and financial services, have consistently outperformed due to firm-level innovations, technology adoption, and service expansion.

Example: The rise of IT firms like Infosys or Wipro in global markets, driven by innovation and competitive advantage, has resulted in superior returns for investors in this sector.

**Real Estate:** In real estate, developer-specific risks arise from delays, developer bankruptcy, poor construction quality, or legal disputes [22], [23], [24]. Location oversupply, changing neighbourhood conditions such as increase in pollution levels or constant water logging can

also be a major risk. Reputed developers tend to minimize these risks, but investors in under-construction properties face the risk of delays or cost overruns.

Example: Projects from developers like Lodha or Oberoi Realty are seen as lower risk due to their established reputation, whereas lesser-known developers pose higher risks. Poor construction quality, unfinished projects, tenant defaults can be major risks. Table 1 shows the risks involved in the Indian stock market and Mumbai’s real estate.

Table 1. Risks associated with Indian stock market and Mumbai real estate

Risk Type	Indian Stock Market	Mumbai Real Estate
<b>Company-Specific</b>	Management issues, corporate fraud, earnings volatility	Developer bankruptcy, construction delays
<b>Sector-Specific</b>	Industry regulations, competition risk, technological disruption	Location oversupply, changing neighbourhood conditions
<b>Liquidity Risk</b>	Small-cap and mid-cap stocks can be illiquid, higher spreads	Real estate is inherently illiquid; can take months/years to sell property
<b>Legal/Regulatory</b>	Company litigation, regulatory scrutiny of specific sectors (e.g., telecom, pharma)	Title disputes, zoning issues, regulatory non-compliance
<b>Operational/Project-Specific</b>	Supply chain disruptions, technological failures (in tech-heavy companies)	Poor construction quality, unfinished projects, tenant defaults
<b>Investor Sentiment</b>	Panic selling, herd mentality	Market sentiment towards the neighbourhood or area, especially in underdeveloped or speculative locations
<b>Rental/ Income Risk</b>	Dividend cuts, inconsistent corporate earnings	Low rental yields, tenant risks, vacant properties

## 5. Quantifying Returns Based on Non-Macroeconomic Factors

### 5.1. Stock Market:

**CAGR (NIFTY 50/SENSEX):** The top-performing sectors (IT, financials) and companies (e.g., TCS, HDFC Bank, Reliance Industries) have seen a long-term CAGR of 12-15% over the last two decades, driven primarily by company performance, sector trends, and corporate governance rather than macroeconomic conditions. The NIFTY 50 Index chart is shown in Figure 3.



**Figure 3.** NIFTY 50 Index chart (*NIFTY 50 Price, Real-Time Quote & News*, n.d.)

**Volatility:** Individual stocks can have volatility levels ranging from 15-25%, with sector-specific risks (e.g., banking sector risks in HDFC, technology sector fluctuations in TCS).

**Income:** Dividends from stocks (typically around 1-2% for large caps) provide moderate income but are more significant in stable sectors like utilities or financials. High-growth sectors like technology often reinvest earnings, leading to higher capital appreciation but lower dividend income.

**Risk-Adjusted Returns:** Stocks with strong governance and market leadership (e.g., Infosys, HDFC Bank) have a higher Sharpe ratio (typically 0.7-0.9) compared to more volatile sectors like telecom or small caps.

**The Maximum Drawdown (MDD):** The Maximum Drawdown is a key metric used to assess the historical downside risk of an investment. It measures the largest peak-to-trough decline in an asset's value before a new peak is reached. In the Indian stock market, it can be derived from major indices like the NIFTY 50 or BSE SENSEX over the past 20 years. The most significant Maximum Drawdown occurred during the 2008 Global Financial Crisis, with the NIFTY 50 and BSE SENSEX dropping nearly 60% and 59% respectively. The COVID-19 pandemic also led to a significant drawdown, with the NIFTY 50 and SENSEX dropping around 39% and 38% respectively. Overall, the Maximum Drawdown in the Indian stock market in the past 20 years was during the 2008 Global Financial Crisis, with a drawdown of around 60%.

## 5.2. Real Estate in Mumbai:

The Mumbai real estate market has shown a CAGR of 9-12% during peak growth periods (2000-2015), but slower growth post-2016 has reduced these rates to 3-5%. Real estate prices in prime locations have relatively low volatility compared to the stock market, with the standard deviation of returns ranging between 5-10% annually. Rental yields in premium commercial areas like BKC or Lower Parel offer returns of 6-8%, while residential yields remain at 2-3%. Real estate in prime areas often has a Sharpe ratio between 0.6-0.9, similar to stocks in stable sectors but with lower liquidity. The maximum drawdown (MDD) in Mumbai real estate over the past 20 years is estimated to be around 25-30%, observed during the 2008 financial crisis and the 2016-2018 post-demonetization period.

During the 2008 Global Financial Crisis, real estate prices in Mumbai saw a decline, but the magnitude was smaller compared to the stock market. Post-Demonetization and the introduction of the Real Estate (Regulation and Development) Act (RERA), prices in certain areas of Mumbai's suburbs saw corrections of 10-15%, while premium areas remained stagnant or saw marginal declines of 5-10%.

During the COVID-19 pandemic, the Mumbai real estate market experienced a slowdown, with prices in some areas declining by 10-12% due to reduced demand and delays in project completions. However, the impact was less severe than expected due to government support, including stamp duty reductions and increased demand for larger homes due to work-from-home trends.

## 6. Results and Discussion

### 6.1. Respondent Demographics

The study synthesized responses from 152 participants, representing a broad spectrum of professional backgrounds and experience levels. Key demographic distributions were as follows:

- **Profession:** Investors (32%), Financial Analysts (18%), Real Estate Developers (14%), Stock Market Traders (16%), Real Estate Agents (9%), and Others (11%).
- **Experience:** 22% had 0–2 years, 28% had 3–5 years, 23% had 6–10 years, and 27% had over 10 years of experience in investment activities.

**6.2. Stock Market Investment Profile:** 81% of respondents invested in the Indian stock market, primarily in sectors such as Information Technology (IT), Financial Services, and Consumer Goods.

- **Risk Exposure:** The volatility in sector-specific fluctuations, particularly in IT, and broader market sentiment shifts, such as those influenced by elections, were major concerns. 32% of respondents faced liquidity issues, predominantly in small-cap stocks. Only 19% reported regulatory challenges, indicating that SEBI's regulatory framework ensures a relatively stable investment environment.
- **Returns:** CAGR of 38% of respondents reported returns between 5–10%, aligning closely with the Nifty 50's historical CAGR of ~12% (2003–2023). The Risk-Adjusted Returns of 61% of investors preferred stocks due to superior Sharpe ratios (0.5–1.0), demonstrating stronger risk-adjusted returns compared to real estate. 41% of respondents experienced declines of 10–20% maximum drawdown, consistent with market corrections, such as the COVID-19 downturn.

### 6.3. Mumbai Real Estate Investment Profile

- **Participation:** 68% of respondents invested in real estate, with 63% focusing on residential properties and 26% on commercial assets.
- **Risk Exposure:** The volatility is due to location-specific demand fluctuations (e.g., South Mumbai vs. Navi Mumbai) and delays in project completion were significant risks. 37% of respondents faced liquidity constraints, often requiring 6–12 months to liquidate assets. 30% encountered issues related to RERA compliance and changes in stamp duty regulations.
- **Returns:** The CAGR is 42% of respondents reported returns of 5–10%, in line with Mumbai's post-2015 property market stagnation. Only 10–20% of real estate investors generated rental income, with rental yields averaging 2–3%, which is significantly lower than dividend yields from equities. 43% of respondents experienced a 10–20% decline in property values post-2015 as maximum drawdown.

### 6.4. Comparative Perceptions

- **Returns:** 53% of respondents perceived stock market investments as superior (CAGR: 10–15%), while 40% favoured real estate (CAGR: 5–10%).
- **Risk:** 69% viewed the stock market as riskier due to volatility, while 70% considered real estate illiquid and challenging to exit.
- **Risk-Adjusted Returns:** 62% of respondents endorsed stocks (Sharpe ratio >0.5) compared to 38% for real estate.

### 6.5. Comparative Risk Analysis

- **Volatility:** Stock market volatility, driven by macroeconomic shocks (e.g., the 2008 financial crisis), contrasts with real estate's more gradual corrections. Although 68% of respondents deemed stocks riskier, real estate's illiquidity heightened financial risk during market downturns, with 37% of investors struggling to exit their investments.
- **Regulatory Impact:** SEBI's stringent oversight minimized stock market fraud (20% reported regulatory issues), whereas RERA's partial implementation led to 30% of real estate investors experiencing project delays and compliance hurdles.
- **Sector-Specific Risks:** The IT sector's susceptibility to global economic downturns and real estate developers' financial instability (e.g., the Unitech crisis) underscored asset-class vulnerabilities.

### 6.6. Return on Investment Assessment

- **Stock Market Performance:** The Nifty 50's 12% CAGR (2003–2023) validated respondents' reported returns of 10–15%. High risk-adjusted returns (Sharpe ratio ~0.8) highlighted the benefits of diversification within equities.
- **Real Estate Performance:** Since 2015, Mumbai's residential real estate CAGR dropped to 5–10% due to oversupply and policy interventions such as demonetization.

Commercial real estate, particularly in business districts like Bandra-Kurla Complex, outperformed marginally but remained constrained by low rental yields (2–3%).

**6.7. Hybrid Strategy for Optimal Outcomes:** A 60–40 asset allocation between equities and real estate emerged as an optimal strategy. Equities provided capital appreciation (notably in IT and Pharma sectors) and liquidity. Whereas real estate offered portfolio stability, rental income, and a hedge against inflation.

#### **6.8. Policy and Investor Implications**

- **Regulatory Reforms:** Strengthening RERA compliance could enhance transparency and efficiency in the real estate sector.
- **Investor Education:** Promoting systematic investment plans (SIPs) in equities and Real Estate Investment Trusts (REITs) could improve accessibility and reduce individual risk exposure.

#### **6.9. Interaction Between the Indian Stock Market and Mumbai Real Estate Market**

The Indian stock market and Mumbai's real estate market are fundamentally different in terms of liquidity, risk, and structure, but they interact significantly through investor behaviour, capital flow, and sectorial connections. Key aspects of their interaction include competing investment channels, wealth effects, corporate and sectorial linkages, investor demographics and diversification, regulatory spill overs, and empirical return comparisons.

Capital shifts occur as investors switch between real estate and equities based on return expectations and market conditions. A bullish stock market boosts investor confidence and spending on luxury real estate, while rising real estate prices may prompt investors to sell property and reinvest in stocks, especially IPOs and mutual funds. Corporate and sectorial linkages also play a role, with the performance of listed real estate companies tying their stock prices to real estate trends. Investor demographics and diversification also influence their investment decisions, with HNIs investing in both markets and retail investors increasingly using REITs to gain real estate exposure via stock markets. Understanding this dynamic is crucial for portfolio strategies and economic policy planning.

#### **6.10. Impact of Dynamic Economic and Policy Changes on the Indian Stock Market and Mumbai Real Estate**

The Indian Stock Market reacts swiftly to policy changes, such as RBI interest rate changes, SEBI regulations, tax reforms, and global events, affecting stock volatility and investor sentiment. Mumbai Real Estate, on the other hand, responds slowly but steadily to policy changes, such as demonetization, RERA, GST, housing finance interest rates, and urban infrastructure projects, affecting demand, developer behaviour, and property values over longer periods. Understanding these differences helps investor's time markets, diversify portfolios, and navigate risks effectively across both asset classes.

#### **6.11. Investor Decision-Making and Behavioural Factors**

Investor decisions in the Indian stock market and Mumbai real estate are strongly influenced by behavioural biases, not just financial logic.

**In the Stock Market:** Investors show herd behaviour, overconfidence, loss aversion, and recency bias. Decisions are often impulsive, driven by short-term market trends and peer influence. Stocks are seen as high-risk, high-return and preferred for liquidity and growth.

**In Real Estate:** Behavioural traits include the endowment effect, status quo bias, and FOMO. Properties are viewed as safe, long-term, and emotionally valuable assets. Investors often overestimate returns, underestimate risks, and show low urgency in buying or selling.

**Comparative Insights:** Stocks appeal to those seeking quick returns but come with perceived volatility. Real estate attracts conservative investors valuing stability, despite its illiquidity. Survey results confirmed these patterns, with 62% favouring stocks for risk-

adjusted returns, while 70% found real estate more stable. Behavioural biases play a crucial role in shaping investor choices in both markets. Recognizing these can help improve financial planning and portfolio decisions.

### **6.12. Significance of Mumbai's Real Estate Diversity: Impact on Risk and Return Compared to the Stock Market**

Mumbai's real estate market is highly diverse and segmented, comprising residential, commercial, and industrial properties, each offering distinct risk-return profiles. This diversity adds complexity and flexibility to investment decisions but also introduces segment-specific risks and returns that influence overall performance compared to the stock market.

**Residential Real Estate** is dominated by end-users and long-term investors. It includes luxury, mid-income, affordable, and redevelopment properties and is spread across diverse zones: South Mumbai (premium), Suburbs (middle-income), and extended areas like Thane/Navi Mumbai. The returns (CAGR) are 3–7% post-2016 due to policy reforms (RERA, demonetization). The rental yield is Low (2–3% annually), especially in premium areas. The risks are Project delays, legal disputes, low liquidity, developer defaults. Stability is high in prime areas, volatile in emerging or oversupplied zones.

**Commercial Real Estate** includes office spaces, retail malls, co-working spaces. The demand is driven by business activity, employment hubs, and FDI in services. The returns (CAGR) are 6–10% in prime business districts (e.g., BKC, Lower Parel). The rental yield is higher than residential, typically 6–8%, with long-term lease contracts. The risks are tenant default, vacancy risk, economic cycles (e.g., WFH impact post-COVID). The stability is strong in established business districts, cyclical elsewhere.

### **7. Conclusion**

This study compares the returns and risk of investments in the Indian stock market and Mumbai's real estate sector, focusing on non-macroeconomic factors such as asset-specific traits, investor behavior, sectoral dynamics, and regulatory environments. The results show that the Indian stock market delivers long-term CAGR of 12-15%, significantly higher than Mumbai's residential real estate post-2016. Rental yields in prime Mumbai real estate range from 6-8% for commercial properties to 2-3% for residential, while dividend yields from equities average 1-2%. Volatility and risk are higher in stocks, with Sharp Ratios between 0.7-0.9 for strong-performing stocks and 0.6-0.9 for well-located real estate assets. Mumbai real estate drawdowns were more moderate, estimated at 25-30% during 2008-2010 and 2016-2018. Liquidity issues were reported by 32% of equity investors, mainly in small-cap stocks, and 37% of real estate investors faced significant constraints, especially in under-construction or suburban properties. Investor perceptions and behavior reveal that 53% of surveyed participants preferred stocks for higher returns, while 70% perceived real estate as more stable but difficult to liquidate. 62% endorsed equities due to better risk-adjusted performance. A 60-40 allocation (equity-real estate) emerged as the most effective portfolio mix, combining stock market growth potential with real estate income stability and inflation hedging. The Indian stock market offers superior long-term returns and higher liquidity, making it ideal for growth-focused, risk-tolerant investors. However, returns are increasingly location- and developer-dependent and affected by liquidity bottlenecks and regulatory compliance.

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