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A Study on the Relationship between Gold Prices and Stock Market Returns in India

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ABSTRACT: The present study examines the relationship between gold prices and stock market returns in India using monthly secondary data compiled from the Reserve Bank of India Handbook of Statistics on Indian Economy 2024-25. The study covers the period from January 2023 to June 2025 and includes 30 monthly observations in level form and 29 monthly observations in return form. Gold is represented by the monthly average Mumbai gold price series, while the stock market is represented by the monthly average NSE Nifty 50 index. Monthly percentage returns were calculated from the official data, and the analysis was carried out using descriptive statistics, Pearson correlation, and simple linear regression. The evidence shows that both gold prices and stock market levels increased over the selected period in broad trend terms. Gold rose from Rs. 56,246.33 in January 2023 to Rs. 97,175.81 in June 2025, while the Nifty increased from 17,968.75 to 25,003.40. However, the month-to-month relationship between returns remained weak. The correlation between monthly gold returns and monthly Nifty returns was -0.1155 , and the regression R-squared was 0.0133 , indicating that gold returns explained only a very small part of variation in monthly stock market returns. The findings suggest that although both assets appreciated over the broader period, monthly return linkage was limited. The study therefore concludes that gold may be useful primarily as a diversification-oriented asset rather than as a direct monthly predictor of stock market performance in India.

KEYWORDS: gold prices; stock market returns; India; Nifty 50; diversification; secondary data

I. INTRODUCTION AND REVIEW OF LITERATURE

1.1 Introduction

Gold has always occupied a special place in the Indian economy. Indian households treat gold not only as jewellery but also as a store of value, a reserve asset, a savings instrument, and a symbol of security. At the same time, the Indian stock market has become an important avenue for wealth creation, long-term investment, and participation in the growth of the economy. Because both gold and equities attract household savings, the relationship between the two is important for investors, financial planners, and researchers.

In ordinary market conditions, stock market returns are generally influenced by growth prospects, earnings expectations, inflation, interest rates, policy conditions, and investor sentiment. Gold prices, by contrast, are often linked with inflation concerns, uncertainty, currency movement, and demand for safe assets. Because of this difference in economic role, many investors believe that gold and stocks move in opposite directions. Yet this belief is not always supported by actual data. In some periods, both assets rise together, while in other periods they move differently.

The Indian context makes the issue especially meaningful. Gold has both cultural and financial significance, and its role in household decision-making remains strong across social groups. At the same time, equity participation in India has deepened due to mutual funds, SIPs, demat accounts, digital trading platforms, and increasing awareness of long-term wealth creation. Investors therefore frequently compare gold with equities as alternative uses of savings. This makes the study of their relationship important not only academically, but also from the perspective of portfolio choice and household finance.

The 2023 to 2025 period offers a particularly useful context for study. It reflects the post-pandemic recovery environment, inflationary concerns, global monetary tightening, geopolitical uncertainty, and continued retail participation in financial markets. These conditions create a fresh setting in which both gold and equities may respond



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to a mix of domestic and international factors. In such a period, recent evidence is more useful than relying only on older assumptions.

Another reason for choosing this topic is its practical value. A clear understanding of the gold-stock relationship can help explain whether gold behaves as a hedge, a diversifier, or simply as another appreciating asset over time. It can also help separate broad trend movement from actual month-to-month investment behaviour. This distinction is important because investors may observe both gold and equities rising over a long period and wrongly conclude that they share a strong short-run return relationship.

1.2 Statement of the Research Problem

Investors in India often divide their savings between gold and stock market instruments. Gold is generally viewed as a safer and more stable asset, while stocks are expected to offer higher long-term returns. However, many investors remain uncertain about how the two assets actually behave relative to each other. Some assume that gold rises when stock markets weaken. Others believe that both can rise together because both respond to inflation, liquidity, and broad macroeconomic conditions. This difference in belief creates a practical and academic problem.

The major research problem is the absence of a clear and consistent understanding of the relationship between gold prices and stock market returns in India. Earlier studies provide mixed findings. Some report causality, some report long-run association, and some show that short-run return linkage is weak. Such variation creates confusion for readers and makes it difficult to draw one simple conclusion for investors.

The problem becomes more relevant because investment decisions are often shaped by popular belief rather than by verified evidence. If investors assume that gold always offsets stock market risk, they may design portfolios on an incorrect basis. On the other hand, if they ignore gold entirely, they may overlook its possible diversification benefit. A study based on recent Indian data is therefore useful for clarifying how the relationship actually behaves in practice.

The research problem is also methodological. Some studies focus on prices, some on returns, some on volatility, and others on crisis periods alone. This means that a positive relationship in price levels may exist at the same time as a weak relationship in monthly returns. Unless the distinction is clearly explained, the interpretation can become misleading. The present study addresses this problem by examining both broad movement in levels and relationship in monthly returns.

1.3 Review of Literature

Mishra, Das, and Mishra (2010) studied the relationship between gold price volatility and stock market returns in India. Using time-series techniques, they reported a two-way causal relationship during their sample period. Their work is important because it shows that Indian evidence can vary with the period chosen and the method applied.

Tripathy and Tripathy (2016) examined the dynamic relationship between gold prices and stock market prices in India through monthly data. Their results suggested that the short-run relationship was weak, although a long-run association could still be observed. This distinction between long-run movement and short-run linkage is highly relevant to the present study.

Jain and Biswal (2016) analysed gold, oil, exchange rate, and stock market movement in India. Their results showed that the gold-stock relationship can be influenced by wider macro-financial conditions and should not be treated in isolation. Bouri, Jain, Biswal, and Roubaud (2017) similarly found long-run integration and nonlinear causality involving gold, oil, and the Indian stock market, especially when uncertainty is considered.

Bhuyan and Dash (2018) focused directly on gold price movements and stock market returns in India. Their findings indicated long-run equilibrium between the variables but weak short-run causality. This is particularly relevant because it supports the possibility that broad co-movement and short-run return behaviour can tell different stories.

Manuj (2021) examined whether gold can act as a hedge against stock price risk in Indian and US markets. The findings suggested that gold did not consistently perform as a reliable long-term hedge for Indian stock investors during the selected period. Sarker (2024), using recent Indian evidence, also pointed toward a weak short-run relationship along with more visible broad movement linkage.



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International literature provides a similar conclusion. Baur and Lucey (2010) distinguished between gold as a hedge and gold as a safe haven, showing that gold can behave differently during normal and stressed conditions. Baur and McDermott (2010) showed that gold's safe-haven role is not equally strong across all countries. Reboredo (2013) further demonstrated that the role of gold depends on context and is not always stable or linear.

Taken together, the literature suggests three broad points. First, the gold-stock relationship is conditional rather than fixed. Second, the result differs depending on whether the researcher studies prices, returns, or volatility. Third, India-specific evidence remains necessary because local market structure and investor behaviour influence the interpretation.

1.4 Identification of Research Gaps

The literature review reveals several gaps. First, many studies use older datasets and therefore do not fully represent the recent post-pandemic Indian market environment. Since inflation pressures, global uncertainty, and retail financial participation have changed significantly after 2020, recent evidence is important.

Second, many studies rely on advanced econometric methods that may provide depth but are often difficult to interpret for non-specialist readers. There is still value in a transparent study using official data and straightforward statistical tools, especially when the objective is to produce clear and defensible evidence.

Third, level movement and return movement are frequently mixed together in discussion. This can lead to misleading conclusions because two assets may rise over a broad period without showing a strong month-to-month return relationship. The present study addresses this gap by examining both perspectives separately.

Finally, there is a practical gap in recent student-friendly research material that uses official Indian secondary data and explains the findings in accessible language. This study attempts to fill that gap by combining recent RBI data with a simple but meaningful analytical design.

1.5 Theoretical Underpinnings

The study is guided by portfolio diversification theory, safe-haven theory, and investment substitution logic. Portfolio diversification theory suggests that investors can reduce total risk by holding assets that do not move closely together. If gold and stock returns show low or negative correlation, gold may improve portfolio stability.

Safe-haven theory suggests that investors shift funds toward assets that preserve value during uncertain or stressed conditions. Gold is often viewed as such an asset because it is tangible, globally recognised, and less dependent on company-level earnings. However, this theory does not imply that gold will always move opposite to equities in every period.

Investment substitution logic explains that investors move funds between gold and equities depending on their expectations about inflation, uncertainty, risk, and growth. This means the relationship between the two assets may vary with market phases. Together, these theoretical perspectives justify an empirical test of the actual relationship rather than a reliance on fixed market beliefs.

II. RESEARCH METHODOLOGY

2.1 Scope of the Study

The present study is limited to India and examines the relationship between gold prices and stock market returns. Gold is represented by the monthly average Mumbai gold price series published by the Reserve Bank of India, while the stock market is represented by the monthly average NSE Nifty 50 index. The study period extends from January 2023 to June 2025.

The scope of the study is analytical and quantitative in nature. It is restricted to monthly observations and does not examine daily or intraday movements. The study also focuses only on domestic market indicators rather than international gold prices or multi-country stock indices. This narrow scope helps maintain clarity and keeps the research aligned with the central objective.



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At the same time, the chosen period is practically meaningful because it captures post-pandemic recovery, inflation pressure, policy adjustment, and continued retail participation in markets. Therefore, although the scope is narrow, the study remains relevant for recent Indian financial conditions.

2.2 Research Objectives

1. To study the movement of gold prices and stock market values in India during the selected period.
2. To measure the monthly returns of gold and the Nifty 50 index.
3. To examine whether a significant relationship exists between gold returns and stock market returns in India.
4. To understand whether gold can be treated as a useful diversification asset for Indian investors.

These objectives are arranged in a logical sequence. The first examines broad movement in levels, the second converts the series into return form, the third tests the relationship statistically, and the fourth interprets the findings from an investment perspective.

2.3 Framing of Research Hypotheses

H₀: There is no significant relationship between monthly gold returns and monthly stock market returns in India.

H₁: There is a significant relationship between monthly gold returns and monthly stock market returns in India.

The null hypothesis is appropriate because the study does not begin by assuming that gold and stock returns must move together. Instead, it tests whether the observed relationship in the selected sample is large enough to matter statistically and practically.

2.4 Research Design

The study follows a quantitative and analytical research design based entirely on secondary data. Secondary data is the most suitable method for this topic because the variables under study are actual market outcomes rather than investor opinions. A primary survey could reveal beliefs about gold and stocks, but it could not directly answer how the prices themselves behaved.

Monthly average data is used because it reduces day-to-day noise while preserving enough variation for analysis. The study first examines the movement of the two series in level form and then converts them into monthly percentage returns. Descriptive statistics are used to understand central tendency and volatility. Pearson correlation is used to examine the direction and strength of relationship between monthly gold returns and monthly Nifty returns. A simple regression model is then used to test whether gold returns explain variation in stock market returns.

The design is non-experimental because the researcher does not control or manipulate any variable. It is also explanatory because it attempts to explain whether one market variable is related to another. The design remains simple, transparent, and reproducible, which strengthens the credibility of the study.

2.5 Methods for Data Collection and Variables of the Study

The study uses only secondary data. Gold price data and Nifty 50 data were collected from the *Reserve Bank of India Handbook of Statistics on Indian Economy 2024-25*. The data were compiled month by month into a spreadsheet and then converted into return form using the standard percentage change formula.

The selected period provides 30 monthly observations in levels and 29 monthly observations in returns. Monthly gold return is treated as the independent variable, while monthly stock market return is treated as the dependent variable. Gold price level and Nifty level are also retained as supportive variables for broad trend interpretation.

The use of RBI data improves consistency and reliability because it avoids differences that may arise from unofficial data vendors or platform-specific adjustments.



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Table.1. Variables of the Study

Type of variable	Variable name	Measurement
Independent variable	Gold return	Monthly percentage change in RBI Mumbai gold price
Dependent variable	Stock market return	Monthly percentage change in Nifty 50 monthly average
Supportive trend variable	Gold price level	Monthly average gold price in rupees
Supportive trend variable	Nifty level	Monthly average Nifty 50 index level

III. DATA ANALYSIS AND INTERPRETATION

3.1 Techniques for Data Analysis

The study uses four main techniques: monthly percentage return calculation, descriptive statistics, Pearson correlation, and simple linear regression. Monthly return calculation is necessary because gold prices and Nifty values are measured in different units and cannot be directly compared in raw form. Converting both series into returns makes them comparable in percentage terms.

Descriptive statistics are used to summarise average behaviour and volatility. Correlation is then used to examine whether the two return series move in the same direction, opposite directions, or largely without a clear pattern. Regression is used as a basic explanatory technique to test whether changes in gold return are associated with changes in monthly stock market return.

3.2 Hypothesis Testing and Methods

The null hypothesis states that there is no significant relationship between monthly gold returns and monthly stock market returns in India. Correlation is used first to check the direction and degree of association. Regression is then used to see whether gold return explains any meaningful variation in monthly Nifty return.

The practical reading of the test is simple: if the correlation is weak and the regression explains very little variation, the null hypothesis is retained. The regression model can be expressed as:

$$\text{Nifty Return}_t = \alpha + \beta (\text{Gold Return}_t) + \epsilon_t$$

3.3 Data Analysis and Interpretation

At the annual average level, gold rose from Rs. 59,027.02 in 2023 to Rs. 70,725.56 in 2024 and then to Rs. 89,303.57 in 2025 H1. The Nifty average also rose from 18,894.61 in 2023 to 23,468.34 in 2024 and remained high at 23,748.40 in 2025 H1. This indicates broad upward movement in both series, though their rates of change were not identical.

Table.3. Annual Average Movement in Gold Prices and Nifty

Year	Gold avg price (Rs.)	Nifty avg index	Gold growth %	Nifty growth %
2023	59027.02	18894.61	-	-
2024	70725.56	23468.34	19.82	24.21
2025 H1	89303.57	23748.40	26.27	1.19



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The year-wise average monthly return comparison reveals that both assets recorded gains across the sample period, but the leadership changed. In 2023 the Nifty showed stronger average monthly return, while in 2024 and especially in 2025 H1 gold strengthened more sharply.

Table.4. Year-wise Comparative Movement Summary

Year	Average return (%)	gold (%)	Average Nifty return (%)	Reading
2023	0.9320		1.5441	Both assets showed average monthly gains
2024	1.7580		1.1598	Both assets showed average monthly gains
2025	4.1627		0.5638	Both assets showed average monthly gains

Descriptive statistics provide a clearer view of average return and volatility. Gold recorded an average monthly return of 1.9422 percent compared with 1.1823 percent for the Nifty. Gold also showed slightly higher volatility than the Nifty during the sample.

Table.5. Descriptive Statistics of Monthly Returns

Statistic	Gold returns	Nifty returns
Number of observations	29	29
Average monthly return (%)	1.9422	1.1823
Standard deviation	2.8885	2.7700
Minimum monthly return (%)	-2.5195	-3.5682
Maximum monthly return (%)	9.3885	7.9943

The return statistics suggest that gold delivered stronger average gains during the chosen period, especially because of the surge observed from late 2024 into 2025. At the same time, slightly higher volatility indicates that stronger gains were accompanied by somewhat sharper monthly changes.

The main empirical finding emerges from the correlation and regression results. The correlation between monthly gold returns and monthly Nifty returns is -0.1155, which is weak and slightly negative. The regression slope is -0.1107 and the R-squared is only 0.0133. This means that gold returns explain only a very small part of monthly stock return variation.

Table.6. Regression Summary

Measure	Value
Correlation between monthly gold returns and monthly Nifty returns	-0.1155
Correlation between price levels	0.7855
Regression intercept	1.3973
Regression slope on gold returns	-0.1107
R-squared	0.0133

An important distinction appears here. At the level of price levels, the correlation is 0.7855, which is positive and fairly strong. This tells us that both series moved upward over the broader sample. However, once the analysis shifts to monthly returns, the relationship becomes weak. Therefore, long-run trend similarity and short-run return linkage should not be treated as the same thing.



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The directional movement summary further supports this conclusion. Out of 29 monthly return observations, both assets increased in 13 months and both declined in only 2 months. In the remaining 14 months, the assets moved in opposite directions. This shows that the relationship was mixed rather than mechanically opposite or consistently similar.

Table.7. Directional Movement Summary

Movement pattern	Months	Share of return observations
Both gold and Nifty increased	13	44.83%
Both gold and Nifty declined	2	6.90%
Gold increased while Nifty declined	7	24.14%
Gold declined while Nifty increased	7	24.14%

Taken together, the analysis suggests that both assets appreciated during the study period, but their month-to-month return relationship remained weak. An investor may correctly observe that both gold and equities performed well over the broader period, yet that does not mean that monthly changes in one series can explain monthly changes in the other.

IV. FINDINGS AND RECOMMENDATIONS

4.1 Research Outcome and Findings

The most important finding of the study is that both gold prices and stock market values increased over the selected period in broad trend terms, but their monthly returns did not exhibit a meaningful linear relationship. The return correlation was weak and slightly negative, while the regression model had almost no explanatory power.

Another important finding is that broad trend movement and return movement are not the same thing. The positive correlation in price levels may create the impression of a close relationship, but the return analysis shows that monthly co-movement remained limited. This is a significant interpretive lesson because it helps avoid misleading conclusions based on trending data.

The study also finds that gold's role appears more consistent with diversification than with direct prediction. Gold did not reliably indicate what the Nifty would do in the same month, but its weak linkage with stock returns suggests that it may still support portfolio balance.

4.2 Theoretical Implication

The findings support portfolio diversification theory because low return correlation suggests that gold and equities do not strongly move together in the selected sample. This means that holding both assets may help reduce concentration in a portfolio.

The study offers only limited support to safe-haven theory. It does not isolate crisis months or extreme market stress separately, so it cannot claim that gold consistently serves as a safe haven in every adverse period. Instead, it shows that under recent normal-period conditions, monthly return linkage remains weak.

The findings therefore support a conditional understanding of the gold-stock relationship. Gold may play different roles depending on the time horizon, market regime, and analytical measure being used.

4.3 Managerial Implication

For investors and financial planners, the main implication is that gold may be useful as a diversification-oriented asset, but it should not be treated as a monthly forecasting tool for stock market returns. Portfolio advice should therefore distinguish between long-run diversification value and short-run predictive power.



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For investment education, the study provides a practical lesson in evidence-based interpretation. It shows why investors should move beyond popular assumptions and rely on actual market data before making claims about hedging, safety, or return prediction.

For financial advisors, the results suggest that gold can be included as part of a balanced allocation strategy, but not with the assumption that it will always rise when equities fall. Such an assumption is too simple for actual market behaviour.

4.4 Limitations of the Study

The study has several limitations. It is restricted to one stock market index and one domestic gold price series. It uses only monthly data and a relatively short recent time period. It also relies on simple statistical tools rather than advanced techniques such as cointegration, causality testing, or GARCH modelling.

In addition, the study does not include macroeconomic control variables such as exchange rate, inflation, crude oil prices, or interest rates. These factors may influence both gold prices and stock market returns and could affect the relationship between them.

Despite these limitations, the study remains useful because it provides clear and recent India-specific evidence with transparent methods.

4.5 Conclusion

The study concludes that the relationship between gold prices and stock market returns in India was weak in monthly return terms during January 2023 to June 2025. Both assets moved upward over the broader period, but their month-to-month return behaviour remained largely independent.

This means that gold should not be interpreted as a strong monthly driver of stock market returns in the selected sample. However, the weak linkage also suggests that gold may still be useful as a diversification-oriented asset within an Indian portfolio. The most balanced reading is that gold and equities may share a favourable broad environment while still behaving differently in the short run.

4.6 Scope for Future Research

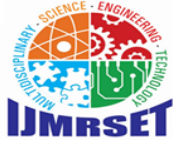
Future research can extend the time period and include additional stock indices such as Sensex or sectoral indices. It can also examine daily or weekly data in order to capture more short-term market behaviour.

Further research may include macroeconomic variables such as exchange rate, inflation, oil prices, and interest rates to provide deeper explanation. More advanced methods such as cointegration, causality tests, GARCH models, or event-study approaches may also be used to examine whether the relationship becomes stronger during stressed periods.

Another useful extension would be to compare different forms of gold exposure such as physical gold, gold ETFs, and sovereign gold bonds. This would be valuable because Indian investors do not participate in gold investment through only one channel.

REFERENCES

1. Baur, D. G., & Lucey, B. M. (2010). Is gold a hedge or a safe haven? An analysis of stocks, bonds and gold. *The Financial Review*, 45(2), 217-229.
2. Baur, D. G., & McDermott, T. K. (2010). Is gold a safe haven? International evidence. *Journal of Banking & Finance*, 34(8), 1886-1898.
3. Mishra, P. K., Das, J. R., & Mishra, S. K. (2010). Gold price volatility and stock market returns in India. *American Journal of Scientific Research*, 9, 47-55.
4. Reboredo, J. C. (2013). Is gold a safe haven or a hedge for the US dollar? Implications for risk management. *Journal of Banking & Finance*, 37(8), 2665-2676.
5. Jain, A., & Biswal, P. C. (2016). Dynamic linkages among oil price, gold price, exchange rate, and stock market in India. *Resources Policy*, 49, 179-185.



International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

6. Tripathy, N., & Tripathy, A. (2016). A study on dynamic relationship between gold price and stock market price in India. *European Journal of Economics, Finance and Administrative Sciences*, 88, 23-35.
7. Bouri, E., Jain, A., Biswal, P. C., & Roubaud, D. (2017). Cointegration and nonlinear causality amongst gold, oil, and the Indian stock market: Evidence from implied volatility indices. *Resources Policy*, 52, 201-206.
8. Bhuyan, A. K., & Dash, A. K. (2018). A dynamic causality analysis between gold price movements and stock market returns: Evidence from India. *Journal of Management Research and Analysis*, 5(2), 117-124.
9. Manuj, K. M. (2021). Is gold a hedge against stock price risk in U.S. or Indian markets? *Risks*, 9(10), 174.
10. Sarker, T. (2024). A study on Indian gold price and stock market volatility. *International Research Journal on Advanced Engineering and Management*, 2(7), 2328-2340.



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