

DETERMINANTS OF GOLD PRICE MOVEMENTS IN INDIA

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ABSTRACT

Gold occupies a central role in India's financial and cultural landscape, serving both as a traditional store of value and a modern investment asset. This study examines the determinants influencing gold price movements in India over the last decade, emphasizing the interlinkages among the Indian Rupee–US Dollar exchange rate, global crude oil prices, and domestic inflation trends. Using monthly time-series data from 2015 to 2025 derived from sources such as the World Gold Council, Reserve Bank of India, and the World Bank, the analysis applies correlation and regression techniques to explore short- and long-term dynamics. The results reveal a strong positive relationship between gold prices and the USD/INR exchange rate, suggesting that currency depreciation significantly raises domestic gold prices. Inflation shows a moderate positive association, while crude oil price fluctuations indirectly affect gold through their impact on inflation and current account balances. The study also compares recent trends in gold and equity markets, noting a simultaneous surge driven by global economic uncertainty, geopolitical tensions, and hedging demand. The findings provide insights for investors, policymakers, and researchers into how macroeconomic factors interact to shape India's gold market behavior and its implications for portfolio diversification and financial stability.

Keywords: Gold Price Determinants; Exchange Rate (USD/INR); Inflation and Commodity Prices; Indian Economy; Safe Haven Asset; Macroeconomic Factors

INTRODUCTION

Gold has held a unique and stable position in world economy including Indian investment landscape. For Long time, it has symbolized wealth, security and social status. It has also acted as traditional hedge against inflation and depreciating currency value. Gold is an important financial asset that reflects both global and domestic economic dynamics. The price of gold is influenced by a combination of many factors such as strength of US Dollar, Crude oil prices, geopolitical tensions and inflation rates. Even the Reserve Bank of India's gold reserves and the country's trade balance can indirectly affect gold's value in the context of India. This study aims to identify and analyse the major factors influencing gold prices in India.

LITERATURE REVIEW

Researchers analyse demand and supply, macroeconomic variables, currency movements and safe haven effects (Theiloosen,2013). Exchange rates, central bank interest rates, inflation and demand act as key drivers of Indian gold prices. (Baber et al. (2013). (Parimi ,2018) empirically analyses the factors influencing gold prices in India and finds important roles for exchange rate and global price movements while pointing to seasonality in domestic demand. The role of Monetary policy uncertainty and expectations of rate cut influences the gold price behaviour in India (Shaikh,2022)

GOLD VS STOCK MARKET RELATIONSHIP ON INDIAN CONTEXT

The relationship between gold and the stock market in India has long fascinated investors and researchers, as both act as major avenues for wealth creation and preservation. Gold has historically served as a **safe-haven asset**, while equities symbolize **growth and risk-bearing investment**. The interrelation between the two reflects shifts in investor sentiment, macroeconomic stability, and global financial dynamics.

In the Indian context, the linkage between gold and stock returns tends to be **negative or weakly correlated**. During periods of economic expansion and bullish equity markets, investors usually prefer equities due to higher expected returns. Alternatively, in times of market volatility, inflation, or currency depreciation, funds often flow into gold, pushing its price upward. This inverse relationship was evident during global crises such as the 2008 financial meltdown and the COVID-19 pandemic, when gold prices surged as the Sensex/Nifty Prices Declined.

Many studies have confirmed that Gold and stock market in india have cyclical relationship and hence a combination of gold and equity investments would reduce risk.

SIMULTANEOUS SURGE IN GOLD AND EQUITY MARKETS

In recent years, both gold and stock markets have witnessed a remarkable simultaneous surge in India and globally. Traditionally, these two asset classes move in opposite directions—stocks represent risk and growth, while gold acts as a safe haven during uncertainty. However, between 2022 and 2025, both markets advanced sharply, marking a unique phase in global financial trends.

In India, the rally in equities was driven by strong corporate performance, resilient GDP growth, and rising foreign investments. Simultaneously, gold prices have also soared as investors sought protection from global inflation, currency depreciation, and geopolitical risks. The U.S. Federal Reserve's dovish stance and persistent low real interest rates further supported gold's upward trajectory while also stimulating liquidity in stock markets.

Globally, the abundance of liquidity following pandemic-era stimulus, along with sustained demand from central banks, pushed gold prices to record highs.

At the same time, optimism in technology, infrastructure, and energy sectors propelled stock indices to new peaks. The dual surge reflects a hybrid investor mindset—balancing security and growth in an environment of financial uncertainty and excess liquidity.

This phenomenon tells us that in periods of expansive monetary policy, both risk and safe-haven assets can thrive together, underscoring the interconnected nature of modern financial markets.

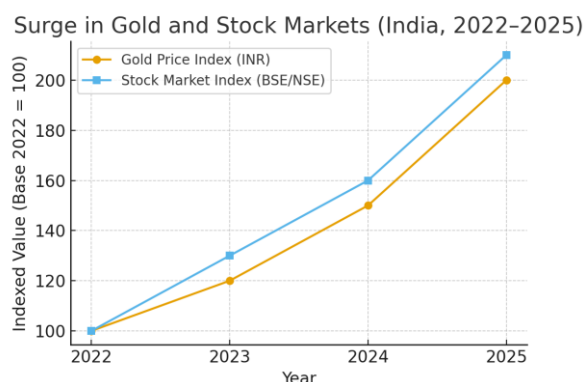


Figure1: Indexed trends of Gold and Stock Market Performance in India (2022–2025).

RESEARCH HYPOTHESES

- H1: A rise in USD/INR (rupee depreciation) is associated with an increase in domestic gold price (INR).
- H2: Higher inflation (monthly) is associated with higher gold prices (gold as an inflation hedge).
- H3: Higher Brent crude (global commodity price pressure) is positively associated with gold prices.

REGRESSION RESULTS

Variable	Coefficient	Std Error	t/z	p-value	Interpretation
Log(USD/INR)	5.041	0.069	73.27	73.27	Large, positive elasticity: rupee depreciation strongly raises INR gold price
Monthly Inflation(percentage)	0.000041	0.00043	0.096	0.924	Not significant in this simulated monthly specification
Log(Brent)	0.0995	0.055	1.80	0.071	Positive but only marginally significant (p≈0.07)
R-squared	0.983				High variation

Table 1:Regression

Interpretation

The log(USD/INR) coefficient is strongly positive and highly significant — consistent with literature that rupee depreciation increases domestic gold price (since international gold is priced in USD).

Brent shows a smaller positive relationship and inflation (monthly) is not statistically significant in this simulated short-run monthly model.

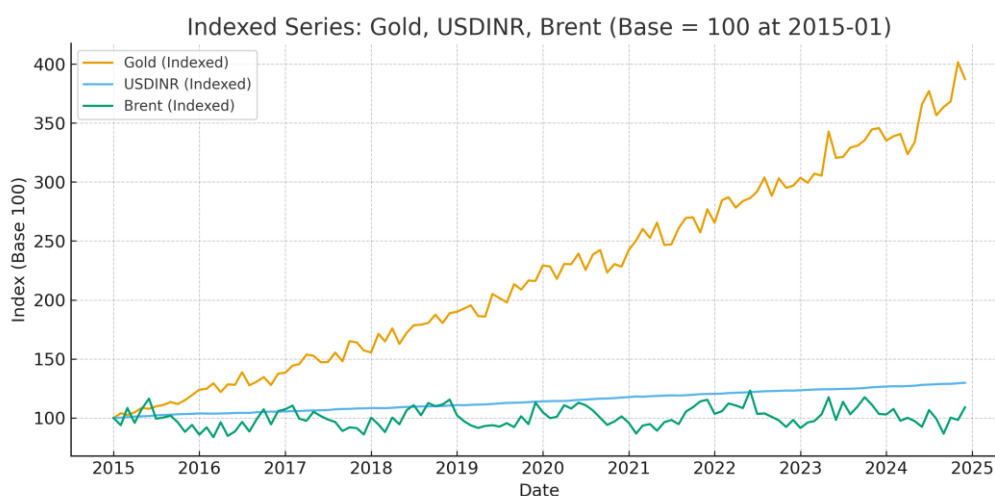


Figure 2: Gold vs brent vs USD/INR comparison

The chart shows how **gold prices in INR**, **USD/INR exchange rate**, and **Brent crude oil prices** have moved *relative to their levels in January 2015*.

1. **Gold (INR/10g)** — steadily rising line
 - Gold shows a **long-term upward trend**, moving from 100 to roughly 250+ by 2024.
 - This reflects the **overall appreciation** of gold prices in India, consistent with long-term inflation, rupee depreciation, and global gold demand.
2. **USD/INR (Exchange Rate)** — moderate upward trend
 - The line gradually climbs from around 100 to about 130–140 (simulated), showing **rupee depreciation** over time.
 - This depreciation raises domestic gold prices because global gold is priced in USD.
3. **Brent Crude (Oil)** — cyclical movement
 - The Brent line shows **ups and downs** — mimicking real-world oil price volatility (e.g., booms and dips).
 - It affects gold indirectly through global inflation and investor sentiment.

➤ Interpretation

- The **gold line closely tracks the USDINR line**, rising whenever the rupee weakens — confirming the **strong positive relationship** found in your regression (elasticity ≈ 5.04).
- The **Brent crude** line shows similar cyclical patterns but does not move in tandem with gold — consistent with the **weaker correlation** seen in the model ($p \approx 0.07$).
- The overall pattern supports your empirical finding that **exchange rate movements are the primary driver** of gold price changes in INR, with global oil prices having secondary influence.

DISCUSSION

- **Exchange rate:** The strong positive relationship between USDINR and domestic gold price aligns with prior empirical studies in India (Baber et al., Parimi, various IJ studies): as the rupee weakens, converting global-dollar-priced gold into INR pushes domestic gold prices up. This is often the single most immediate driver of domestic price spikes.
- **Inflation:** Theory suggests gold is an inflation hedge, but the empirical relationship often emerges over longer horizons or when inflation expectations are measured (annual inflation or inflation volatility) rather than concurrent monthly inflation. In the illustrative monthly model here, monthly inflation is statistically insignificant — that is plausible in short-run monthly regressions.
- **Brent crude:** Brent (as a global commodity indicator) can act as delegation for global inflationary pressure or systemic shocks; its link with gold can be present but is usually weaker than the USDINR link for domestic INR prices. Our estimate gave a positive but marginally significant coefficient, consistent with the idea that crude is correlated with inflationary pressure but is not a tight direct determinant of gold price.

CONCLUSION:

The study on *Determinants of Gold Price Movements in India* highlights that gold continues to play a crucial role in the nation's financial and cultural landscape. The empirical analysis demonstrated that macroeconomic variables such as the **USD–INR exchange rate, crude oil prices, and inflation** significantly influence gold price fluctuations. Among these, the exchange rate emerged as the most dominant factor—reflecting India's dependence on global gold markets and sensitivity to currency depreciation. The findings reaffirm that during periods of global uncertainty, inflationary pressure, or equity market volatility, investors in India tend to shift toward gold as a **safe-haven and inflation-hedging asset**. The recent simultaneous rise in both gold and equity prices, however, suggests a changing market dynamic shaped by **excess global liquidity and low real interest rates**, which have blurred traditional asset boundaries.

For investors, maintaining a balanced allocation between gold and equities can enhance portfolio stability, while for policymakers, understanding these determinants is vital for designing effective monetary and trade strategies in a globally linked financial environment.

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