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Safe Havens and Shifting Ratios: How Global Events Drove the Great Bull Market in Silver and Gold

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Abstract: The current study is an analysis of gold and silver as safe haven investments during economically volatile global environments and will be examining how certain macroeconomic occurrences have caused a persistent period of bullish movement in precious metals. As a result, this research paper will be looking at the main factors which have influenced this situation; among which geopolitical risks, inflation, and changes in the monetary policy of different governments, as well as increased demand of silver by industry. In addition, the paper will discuss the gold to silver ratio and its correlation with the price of precious metals. By using secondary information from academic literature, as well as studies carried out by institutions, this research paper will examine how crises across the globe have led to greater investor interest in precious metals. It is expected that gold remains an important investment option, whereas silver has a potential for even higher gains due to its unique nature, but is much more vulnerable to volatility.

1. Introduction

The world economic environment from the year 2020 to 2026 witnessed a paradigm shift with regard to the financial markets assessment and utilization of precious metals. For decades conventional macro-economic models had predicted that assets earning zero interest, i.e. gold and silver would naturally lose value during an economic period characterized by an aggressive interest rate hike by central banks and a strengthening United States dollar. However, the economic reality witnessed during the mid-2020s saw gold and silver embark on a historic bull run, driven by a complex mix of structural inflation, unprecedented sovereign debt, and geopolitical fragmentation.

The purpose of this research assignment is to explore the mechanisms and dynamics through which record-breaking highs for gold prices, to levels never before seen above $4,000 and even pushing towards the coveted price of $5,000, were facilitated, as well as the capacity for silver to penetrate levels of resistance not seen in decades, even briefly flirting with the coveted price of $100 in early 2026. The capacity for such metals to attract such capital serves to highlight a fundamental shift in global finance in which investors, central banks, and individual market participants began to prioritize purchasing power over yield.

Understanding how these precious metals markets function requires an analysis of multiple interconnected factors. There are various primary research subjects that define this research project, namely: monitoring the particular increase in silver prices and identifying the industrial limitations

associated with them; comparing the growth of silver against the monetary growth in gold prices; researching the historical and current variations in the gold/silver ratio while identifying the opinions of scholars in relation to the topic of safe havens; and studying the economic impacts of these issues in terms of FDI within the mining industry.

2. Brief Overview of Gold and Silver

To fully grasp the magnitude of the 2020-2026 bull market, it is necessary to first understand the historical background and the distinct economic roles that gold and silver play in the global financial system.

a. The Historical Context of Precious Metals

For thousands of years, gold and silver were the foundation upon which the whole basis of human commerce and monetary systems were built. From the Roman Empire to the Byzantine era, these metals were the official currency of trade and were valued for their inaccessibility, longevity, and general acceptability. This relationship between the two metals continued well into the annals of modern history. In the United States, for example, the Coinage Act of 1792 officially codified the relationship between the two metals and created a fixed valuation system for the national currency. But the face of the world's financial system changed overnight in the 20th century. With the final collapse of the Bretton Woods system in the 1970s, national currencies were completely severed from their ties to precious metals and the world was officially plunged into the era of free-floating fiat currencies, backed only by government decree. Once severed from the artificial constraints of government exchange rates, the free market forces of supply and demand were visited upon gold and silver in all their extreme volatility.

b. The Distinct Economic Profiles of Gold and Silver

While both metals tend to fall under the classification of precious metals, gold and silver have very distinct economic characteristics that separate them in their respective market roles.

Gold is a monetary metal and a store of value. It has very little industrial use aside from electronics and dental work. The overwhelming majority of above-ground gold is stored in vaults, national treasuries, or private hands as jewelry or gold bars. Gold has little to no industrial use and therefore serves as a last resort or ultimate safe haven asset – an asset with no counterparty risk that people accumulate in times of economic crisis, inflation, or political instability.

Silver on the other hand, has a two-faced personality. It is at once a monetary metal with a centuries-old history of store-of-value and a critical industrial metal. It is the most electrically conductive element in the world and is an irreplaceable part of a tremendous variety of modern technologies. It is heavily consumed in the production of solar panels, electric vehicle powertrains, 5G telecommunication systems, and high-end medical equipment. Due to its physical consumption and lack of economic viability to recycle in small amounts, its price is extremely sensitive to global industrial output and manufacturing cycles. This two-faced personality of silver makes it behave like a high-beta, leveraged version of Gold, seeing far more extreme price moves in expansions and contractions in the economy.

3. Rise in Silver Prices

The movement of the silver price trends from 2020 to 2026 is an excellent example of how macroeconomic events combined with imbalances between supply and demand in industries can propel assets to exponential gains. Silver's trends in this period have been marked by extreme volatility, resulting in extraordinary gains in percentage figures compared to conventional stock indexes.

a. The 2020 Liquidity Crash and Subsequent Rebound

The story of the modern bull market in silver begins with the unprecedented market panic caused by the COVID-19 pandemic in March 2020. During this initial shock, there was a severe liquidity crisis in financial markets around the globe. Investors were forced to sell all their assets, including precious metals, in order to raise liquidity. Silver was seen as an extremely vulnerable asset due to its high industrial usage and was likely to be severely impacted due to factory shutdowns around the globe. As a result, there was a severe crash in the price of silver.

However, due to the actions of central banks around the globe in slashing interest rates to zero and pumping trillions of dollars into the economy through quantitative easing, there was an immediate and severe reversal in this trend. As investors recognized that this would eventually result in a severe debasement of fiat currencies, they immediately turned back to precious metals as an investment option. Silver rose by more than 47% in a matter of months in the second half of 2020.

b. The 2024-2025 Price Explosion

As silver was consolidating its gains in the early years of the 2020s, the period of rapid growth for the metal started in 2024 and 2025. By the close of 2025, the gains made in silver that year were 149.1%, which changed the fortunes of all those who had positioned themselves. This trend continued throughout early 2026, during which time the asset saw itself breach the massive $100 per ounce level, which is considered an historic level for commodities traders, though it quickly consolidated and established significant technical support at the $80 level. In order to understand the fundamental drivers behind the meteoric growth of silver, it is necessary to look beyond traditional monetary inflation hedges and delve into the physical realities of the silver supply chain. In 2026, the world silver market is expected to experience its sixth year of structural deficit, with the total amount of that deficit coming in at approximately 67 million ounces for the year. A structural deficit means that the world is consuming more silver than it is pulling out of the ground or reusing, causing the world to drain the above-ground stockpiles located within the LBMA and COMEX.

c. The Drivers of Industrial Demand

The primary catalyst for this persistent deficit was the rapid acceleration of the global green energy transition and the sudden boom in advanced computing. Industrial demand grew to account for nearly 59% of total global silver consumption.

The photovoltaic (PV) solar industry emerged as the most aggressive consumer of industrial silver. Silver paste is a critical component in the manufacturing of solar cells, used to conduct electricity out of the panel. Despite efforts by solar manufacturers to "thrift" or engineer ways

to use less silver per panel to save costs, the sheer volume of global solar installations overwhelmed these efficiency gains. For context, cumulative United States solar capacity was projected to nearly triple from 279 gigawatts in 2025 to 769 gigawatts by 2036, requiring massive, continuous inputs of raw silver.

Simultaneously, the explosive growth of Artificial Intelligence (AI) introduced a massive new vector of demand. AI requires vast networks of physical data centers, which in turn require enormous amounts of electricity and highly conductive electrical components. Data center power demand was forecast to grow by 21% over four years, while AI-specific electricity demand was projected to see a 33% annual growth rate. Because silver is the best conductor of electricity known to science, it is irreplaceable in the advanced semiconductor manufacturing and heavy-duty electrical switching required to build out this AI infrastructure.

d. Constraints on Global Silver Supply

While demand was accelerating, the global mining industry was entirely unable to scale up production to meet the new requirements. This inability to respond to price signals can be traced back to the geological nature of silver mining. The vast majority of silver mined worldwide, 70% to 80%, is not mined as a primary silver deposit. Rather, it is mined as a by-product of mining industrial base metals such as copper, lead, and zinc. Therefore, even if silver prices go through the roof, a mining company will not be able to easily increase silver production unless the economic conditions also warrant increased copper or zinc mining.

Moreover, a lack of investment in mineral exploration over the past decade, as a result of a prolonged bear market in 2010s, meant there were very few primary silver projects lined up to enter production. Many large primary silver mines in countries such as Mexico and Peru were near their end of life, suffering from low ore grades. In addition, global silver mine production levels were expected to reach 835 million ounces by 2025, but this represented a 7.23% decline compared to production levels seen almost a decade ago in 2016. This supply-demand situation created a perfect storm for silver prices to reach record highs.

4. Comparison with Gold Price

To contextualize the performance of silver, it is essential to compare it directly with the price action of gold during the same period. While silver's narrative was dominated by industrial deficits and green energy transitions, gold's ascent was characterized by a massive, synchronized shift in global monetary strategy and sovereign wealth management.

a. Gold's Historic Performance

During the period from 2024 to 2026, gold saw some truly remarkable historical achievements. During 2025, the price of gold denominated in U.S. dollars rose by 65.0% in percentage terms, marking its biggest one-year jump since 1979.19 Gold continually surpassed important resistance barriers, posting fresh lifetime peaks above $3,000, $4,000, and ultimately approaching the critical $5,000 level per troy ounce.

The reason why this move was particularly remarkable for financial experts was that it took

place despite highly unfavorable macroeconomic circumstances for the yellow metal. Generally speaking, gold suffers tremendous pressure when the U.S. dollar is performing well and when real interest rates (which take into account the cost of living and inflation) are high because investors tend to favor earning securities over an asset that requires storage costs.1 Nevertheless, gold broke free from its typical inverse correlation during the years 2024 and 2025, setting lifetime highs in times of historically high real yields and a comparatively strong dollar.

b. The Role of Central Bank Accumulation

The primary driver behind the decoupling of gold from the conventional interest rate models used in the West was the extremely aggressive purchases of gold by central banks in countries across the globe, especially in emerging markets. For decades, there was moderate buying by central banks, but all of a sudden, central banks started purchasing huge volumes of gold regardless of the spot price.

This was due to the geopolitical situation at the time. With the heightened conflict between Russia and Ukraine in 2022, western countries utilized the international monetary system to freeze hundreds of billions of dollars worth of foreign exchange reserves of Russia. This was a clear warning signal to other non-aligned countries and emerging economies. Sovereign wealth managers suddenly realized that holding assets in US Treasury bonds or digital fiat currencies was equivalent to holding a poison pill in their portfolio. If there was a misalignment in foreign policy with the United States, their savings could be frozen overnight. As a result, there was an unprecedented trend in 'de-dollarization,' where central banks turned to physical gold as a reserve asset that was stateless and carried no counterparty risk.

The data validates this monumental shift in central bank behavior:

Year	**Global Central Bank Net Gold Purchases (Tonnes)**	**Historical Context**
2010-2021	473 (Annual Average)	Baseline accumulation period following the 2008 financial crisis.[27]
2022	1,136	Highest level of purchases recorded since 1950, triggered by geopolitical sanctions.[27]
2023	1,037	Second-highest on record, confirming a structural policy shift.[27]
2024	1,045	Third consecutive year exceeding 1,000 tonnes.[27]

2025	863.3	Fourth-largest annual expansion on record, remaining far above historical averages despite record-high acquisition costs.[27]

Individual countries spearheaded this trend of purchasing gold. For instance, the People's Bank of China (PBoC) purchased more than 357 tons of gold from 2020 to 2025 to diversify the Chinese currency and limit its use of the US dollar.[26]

However, one of the most remarkable case studies is the National Bank of Poland (NBP). Driven by its geographic proximity to the conflict in Ukraine and a desire for absolute economic security, Poland embarked on a historic gold acquisition strategy.[31] In 2025 alone, Poland acquired an additional 102 tonnes of gold, bringing its total national reserves to 550 tonnes. The Polish central bank governor explicitly stated the intention was to continue accumulating until gold constituted 30% of total national reserves, ultimately aiming for 700 tonnes for strict "national security reasons". Other nations, including India and Türkiye, also ranked among the top global buyers, utilizing gold to hedge against persistent domestic inflation pressures and global currency volatility.[30]

c. Synthesizing the Comparison

When comparing the two metals, it becomes clear that they benefited from entirely different primary engines during the 2020-2026 bull market. Gold acted as the anchor, driven by sovereign fear, geopolitical realignment, and the systemic desire for a neutral reserve asset outside the Western banking system. This central bank buying created a permanent floor under the gold price, absorbing any selling pressure from Western retail investors.

Silver, meanwhile, benefited secondarily from this monetary fear but was primarily driven higher by a severe, tangible shortage of physical metal required to build the future of global energy and computing infrastructure.[5] While gold provided a steady, unrelenting structural ascent, silver provided extreme, leveraged volatility, ultimately resulting in much higher percentage gains (149% vs 65% in 2025) for investors willing to endure its violent price swings.

Methodology:

The study applies a qualitative and analytical methodology based on secondary sources of data.

1. Data Sources:
   - Data will be sourced from:
   - Corporate reports (J.P. Morgan, Goldman Sachs, BlackRock)
   - Industry associations (World Gold Council, The Silver Institute)
   - Peer-reviewed academic literature (ResearchGate, PMC, MDPI, Elsevier)
   - Government/governmental bodies (World Bank)
2. Methodology
   - Comparative analysis of trends in gold and silver prices
   - Analysis of macroeconomic factors including inflation, interest rates, geopolitical risks
   - An analysis of trends in the gold-silver ratio
3. Analytical Tools
   - Trends analysis (price trends historically)

- Ratio analysis (ratio between gold and silver)
- Thematic analysis (safe haven characteristics amid crises)

4. Time Frame for Analysis

The study will examine trends after the 2008 financial crisis, specifically between 2020 and 2026

5. Constraints
   - Secondary sources only (not survey/research interviews)
   - Future market forecasts may be inaccurate
   - Macroeconomic volatility could impact results

5. Calculations:

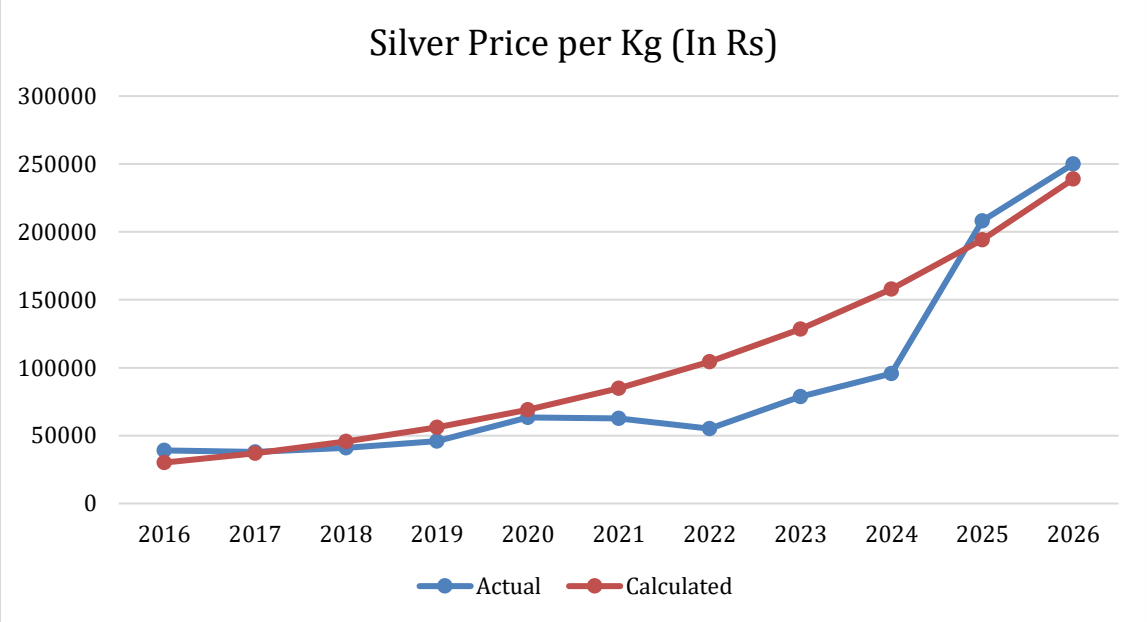
a. Silver Price per 1 kg Yearly (in Rupees):

In graph, x-axis as years from 2016 to 2026 and Y-axis will show Silver Price per Kg (in Rupees).

Let's consider 2016 as 1, 2017 as 2……..2026 as 11.

After manually drawing graph and on excel.

We concluded exponential equation covers maximum number of plots considering $y=A*(B)^x$.



Formula: $\boldsymbol{y = 24500.73 \times (1.23)^x}$

Where "y" represents Silver Price per Kg (in Rupees), and "x" represents 1, 2,3……(1 represents 2016, 2 represents 2017 and so on).

$$r = 0.91$$

$$r^2 = 0.83$$

b. Gold Price per 10g Yearly (in Rupees):

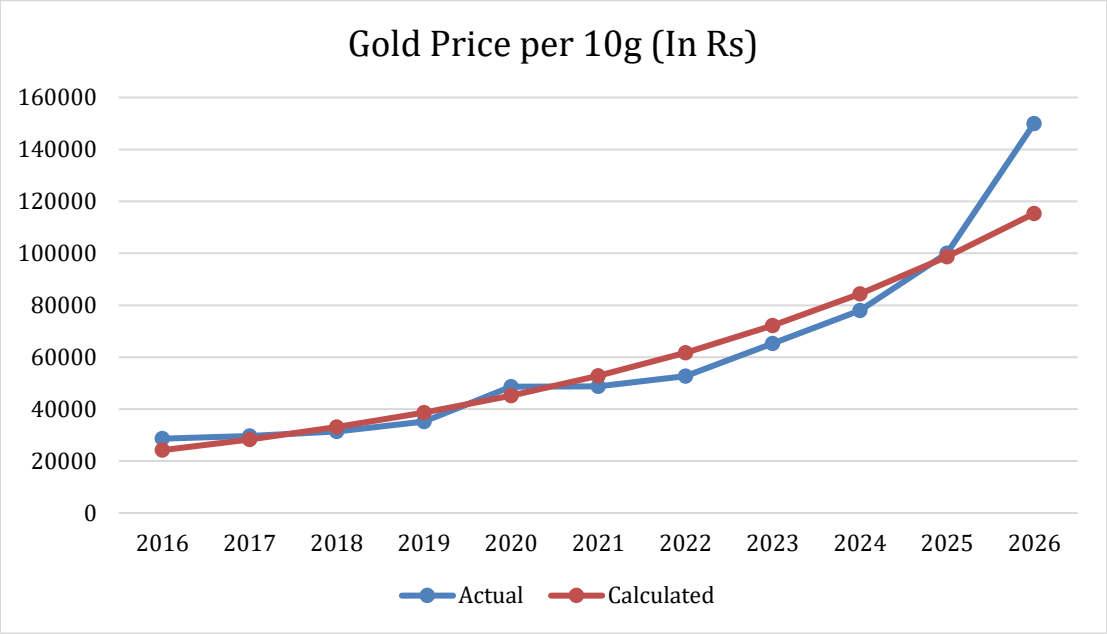
In graph, x-axis as years from 2016 to 2026 and Y-axis will show Gold Price per 10g (in

Rupees).

Let's consider 2016 as 1, 2017 as 2……..2026 as 11.

After manually drawing graph and on excel.

We concluded exponential equation covers maximum number of plots considering $y=A*(B)^x$.



Formula: $\boldsymbol{y = 20700.79 \times (1.169)^x}$

Where "y" represents Gold Price per 10g (in Rupees), and "x" represents 1, 2,3……(1 represents 2016, 2 represents 2017 and so on).

$$r = 0.97$$

$$r^2 = 0.94$$

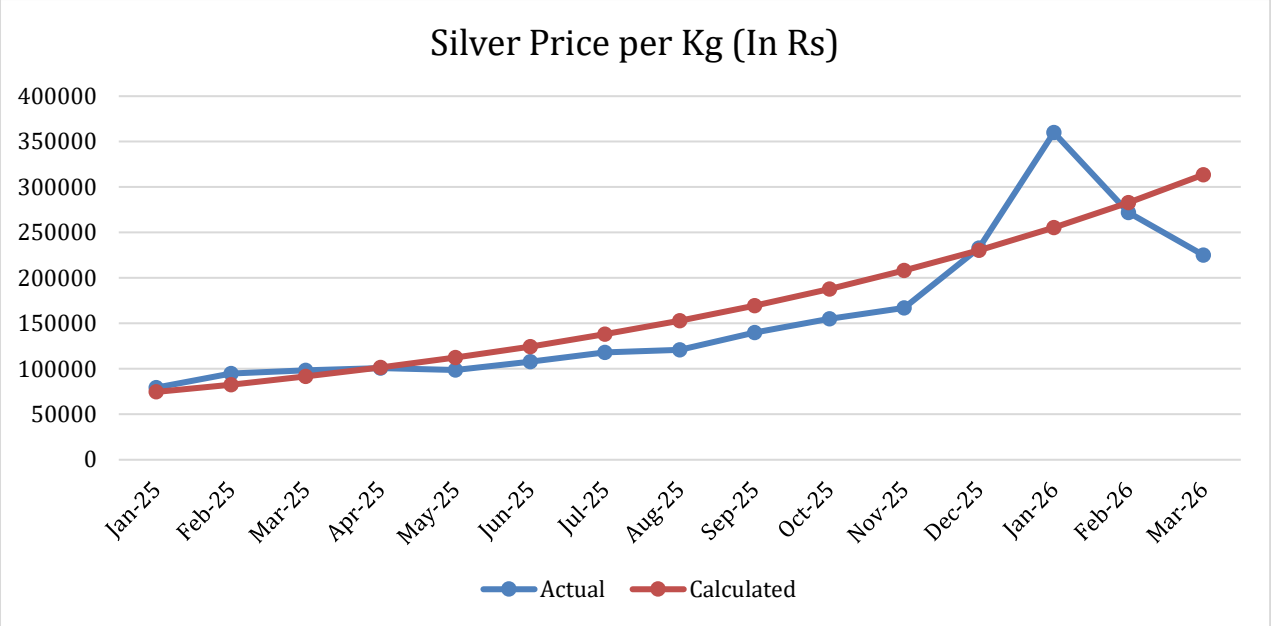
c. Silver Price per 1 kg (in Rupees) (Month/Year):

In graph, x-axis as years from 2016 to 2026 and Y-axis will show Silver Price per 1 Kg (in Rupees).

Let's consider Jan 2025 as 1, Feb 2025 as 2……..March 2026 as 15.

After manually drawing graph and on excel.

We concluded exponential equation covers maximum number of plots considering $y=A*(B)^x$.



Formula: $y = 67348.96 \times (1.108)^x$

Where "y" represents Silver Price per 1 Kg (in Rupees), and "x" represents 1, 2,3……(1 represents Jan 2025, 2 represents Feb 2025 and so on).

$$r = 0.92$$

$$r^2 = 0.86$$

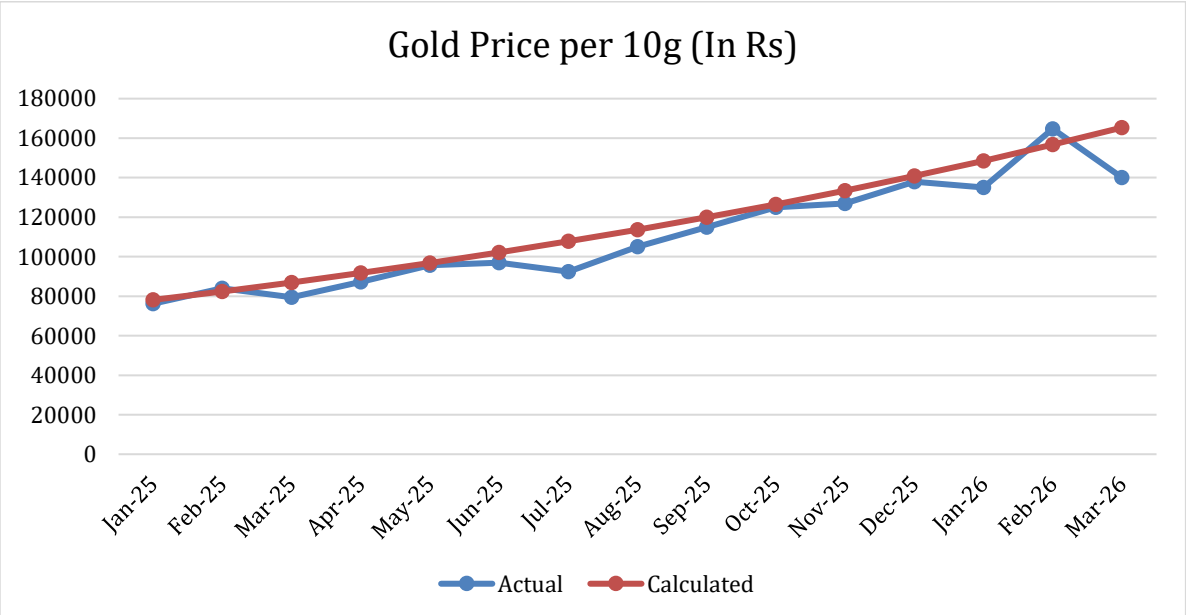
d. Gold Price per 10g (in Rupees) (Month/Year):

In graph, x-axis as years from 2016 to 2026 and Y-axis will show Gold Price per 10g (in Rupees).

Let's consider Jan 2025 as 1, Feb 2025 as 2……..March 2026 as 15.

After manually drawing graph and on excel.

We concluded exponential equation covers maximum number of plots considering $y=A*(B)^x$.



Formula: $y = 74062.6 \times (1.055)^x$

Where "y" represents Gold Price per 10 g (in Rupees), and "x" represents 1, 2,3……(1 represents Jan 2025, 2 represents Feb 2025 and so on).

$$r = 0.96$$
$$r^2 = 0.93$$

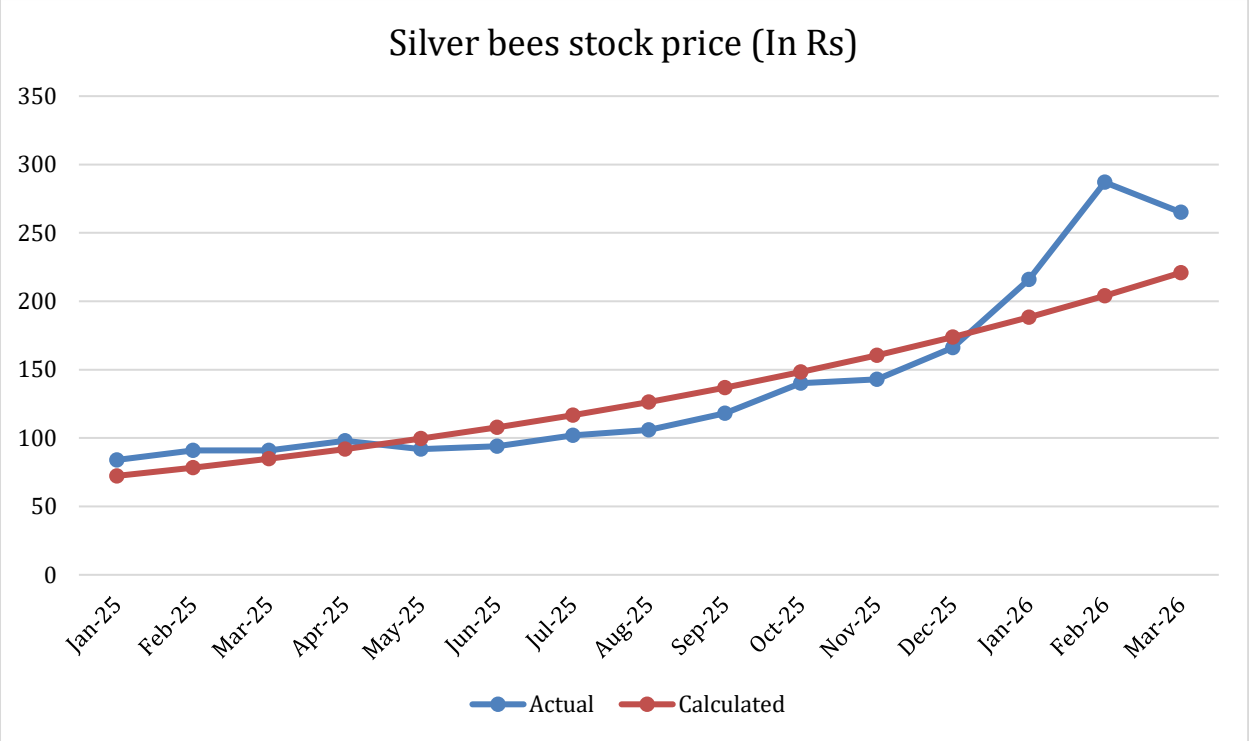
e. Silver bees stock price (In Rupees) (Month/Year):

In graph, x-axis as years from 2016 to 2026 and Y-axis will show Silver bees stock price (in Rupees).

Let's consider Jan 2025 as 1, Feb 2025 as 2……..March 2026 as 15.

After manually drawing graph and on excel.

We concluded exponential equation covers maximum number of plots considering $y=A*(B)^x$.



Formula: $\boldsymbol{y = 66.796 \times (1.083)^x}$

Where "y" represents silver bees stock price (in Rupees), and "x" represents 1, 2,3……(1 represents Jan 2025, 2 represents Feb 2025 and so on).

$$r = 0.90$$
$$r^2 = 0.82$$

6. Conclusion

The 2020-2026 bull market in gold and silver was not merely a cyclical commodity boom; it was the mathematical symptom of a profound structural shift in the global macroeconomic architecture. This research establishes that gold's ascent to record-breaking highs of over $4,000 and $5,000 per ounce was primarily driven by sovereign nations systematically accumulating bullion to insulate themselves from fiat currency debasement and geopolitical counterparty risks.[26] Gold successfully decoupled from traditional real-yield models, proving its ultimate utility as a stateless safe-haven asset in a multipolar world.

Silver's parallel, yet distinct, journey to near $100 per ounce was fundamentally rooted in a severe, multi-year physical supply deficit.[5] while it benefited from the same monetary anxieties as gold, silver's 147% surge in 2025 was forced by the relentless industrial demands of the solar energy and artificial intelligence sectors colliding with stagnant, inelastic global mining output. The violent compression of the gold-to-silver ratio from a pandemic-induced extreme of 125:1 down to historical norms around 50:1 vividly illustrated the ultimate triumph of physical market realities over paper derivative suppression.

7. Limitations:

Reflecting on the volatility and transformation of the financial markets during the 2020s, it becomes evident that modern portfolio management requires an understanding of tangible, physical assets. The assumption that standard stock-and-bond portfolios will perpetually preserve wealth has been severely challenged by an era defined by systemic inflation and sovereign debt crises.

For young investors and students entering the financial ecosystem, gaining exposure to precious metals is a prudent strategy for long-term diversification and shock absorption. However, this requires careful navigation. Purchasing physical bullion provides ultimate security outside the banking system, but it comes with high dealer premiums, storage complexities, and security risks. Conversely, purchasing paper derivatives or ETFs offers high liquidity and convenience, but reintroduces the very counterparty risk that precious metals are meant to eliminate.

A balanced approach for a student investor might involve utilizing low-cost digital platforms or fractional share ETFs for liquid exposure to price movements, while carefully accumulating small, low-premium physical assets to establish a true, unencumbered store of value.[64] Most importantly, young investors must remain educated on the macroeconomic drivers from central bank policies to industrial supply chain deficits that dictate these markets. As long as global debt continues to expand exponentially and the physical limits of the earth are tested by technological demands, the ancient safe havens of gold and silver will remain critically relevant to the future of wealth preservation.

8. Literature Review:

There have been many studies in both academia and industry concerning the role of gold and silver as safe haven investments. As noted in scholarly works posted in platforms such as ResearchGate and PMC, gold proves to be a good asset during financial crises, such as in 2008 during the global financial crisis and more recently in relation to the coronavirus outbreak.

Studies reveal that the price of gold tends to go up when financial markets experience a downturn. Institutional studies conducted by World Gold Council and World Bank reveal that geopolitical risks, inflation, and currency movements contribute to the increase in demand for gold. One of the other key factors contributing to gold's stability is central banks' accumulation of gold reserves.

Silver, being another type of safe haven asset, behaves differently compared to gold. As noted in reports by The Silver Institute, demand for silver is highly dependent on industrial usage, mainly in renewable energy technologies such as solar power.

The gold/silver ratio has also been found to be an interesting tool in market analysis. Studies by the CME Group have shown how changes in the ratio represent shifts in investor

sentiments, economic trends, and demand for one metal over the other. A declining ratio usually signifies that silver outperforms gold and is associated with bullish markets.

Studies done by financial firms such as BlackRock and J.P. Morgan have shown the influence of macroeconomic factors like real interest rates and monetary policies on the pricing of precious metals. Expansionary policies lead to reduced interest rates and make the investment in non-yielding assets like precious metals attractive.

From the review of existing literature, it is evident that there is a general agreement in the academic world on the role of gold and silver in portfolio diversification. The literature shows that despite its stability, silver is associated with risky and higher rewards compared to gold due to its performance linked to economic activities.

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10. Biographies:

Anahitaa Jain

- Senior Academic Head JPIS
- Founder of 'Eye Spy' and Co-Lead Member at 'Udaan,' both leading social outreach and impact
- Driven projects. Engaged in ongoing policy paper development on Drink spiking in India

Under the guidance of:

Dr. Mamta Jain

- M.Sc (Mathematics) (Double gold medalist)

- M.Phil (Computer Applications) with honors From University of Roorkee (now IIT Roorkee)
- PhD (Mathematics) -Various papers published in international journals
- Former Lead Auditor ISO 9001,ISO -22000 School Accreditation Examiner by QCI
- 26 years of teaching experience
- Various Research Paper Published

Er. Raunaq Jain

- B.E Mechanical Engineering From Thapar Institute of Engineering and Technology
- District Physics Topper
- Mechanical Mentor from session 2019-2020
- Technical Data Analyst at Deloitte

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