International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 11 Issue: 10 | Oct 2024 www.irjet.net p-ISSN: 2395-0072

"The Gold Investment Dilemma: A Comparative Study of Physical Gold, Gold Bonds, and Gold Shares"

- *Ryna Goyal*

---***---

Abstract: This research paper explores the dynamic changing investment opportunities, gold, gold bonds and gold stocks are emerging as leading options, each with its own perks and risks. The objective of this research paper is to analyze these three forms of investment to determine which one offers the best potential for financial growth and stability. A traditional safe-haven asset, gold has been considered a reliable store of wealth for centuries, acting as a hedge against inflation and economic downturns, making it an attractive option during times of market volatility. However, investing in physical gold comes with considerations such as storage, insurance costs and lack of income generation. In this article we look at the historical performance of gold as an investment and its role in modern portfolios. Gold bonds, particularly Sovereign Gold Bonds (SGBs), are a more modern approach to investing in gold. These bonds not only offer investors a fixed interest rate but also the potential for capital gains linked to the price of gold. Unlike physical gold, gold bonds eliminate storage issues and offer liquidity, but have certain limitations, such as lock-up periods and exposure to market fluctuations. This article evaluates the benefits and challenges of gold bonds and how they compare to traditional investments in physical gold. Gold stocks, or shares of gold mining companies, offer another level of investment opportunity. These stocks can offer higher returns than physical gold due to their operational efficiency and dividend potential. However, they also pose additional risks related to performance and market volatility. This study examines the correlation between gold prices and mining stocks and assesses their viability as an investment option. By conducting a comprehensive analysis of these investment options, the article aims to provide information on their historical performance, risk profiles and potential returns. It will use quantitative data, historical price trends and expert opinions to form a conclusion on which investment option – physical gold, gold bonds or gold stocks – makes the most compelling case for investors seeking safety and growth. The results will be valuable for individual investors and financial advisors, helping them make informed decisions in a complex investment environment. Ultimately, the study aims to clarify the role of gold in investment portfolios and guide investors towards the best strategies to achieve their financial goals.

KEY WORDS: Investment, Gold, Bonds, ETFs

1. Introduction:

Investment refers to the allocation of resources, usually money, in the hope of earning future income or profits. Investors can put their funds into a variety of assets such as stocks, bonds, real estate, and commodities.

The purpose is to develop the amount invested over time by receiving the growth, dividends, or interests provided by these assets.

<u>Main types of investment assets:</u>

1. Stocks: Purchase of a share of ownership in a company, offering high potential returns but also higher risk.
2. Bonds: Loans to a company or government that pay periodic interest and repay the principal at maturity, generally considered safer than stocks.
3. Real Estate: Investments in real estate that can generate rental income or capital gains.
4. Commodities: Physical assets such as gold, oil, or agricultural products that can serve as a hedge against inflation.

Now let us focus on gold as an investment option.

1. <u>Physical Gold:</u>

   Investing in physical money, such as coins, bars, and jewellery, provides specific assets that many people encourage, especially in economic uncertainty.
   It's an easy way to store value, especially during times of inflation and currency weakening. However, physical gold comes with challenges.
   The need for secure storage and insurance adds additional costs, and gold itself doesn't generate income like stocks or bonds.

Its value fluctuates based on market conditions, meaning your income depends on it selling at a higher price. Additionally, liquidity can be an issue if you need quick access to cash, especially if you have large gold reserves.

2. <u>Gold Bonds (Gold Mining Stocks):</u>

   Gold bonds, such as Sovereign Gold Bonds (SGBs), offer an alternative to holding physical gold. These government-backed securities provide exposure to gold prices while paying a fixed interest (typically 2.5% per year). This allows investors to benefit from both rising gold prices and regular income. Since no storage is required, there is no risk of theft or loss. However, gold bonds are less liquid than physical gold or gold ETFs and can be difficult to sell quickly. Nevertheless, they offer tax benefits in some jurisdictions and are a convenient and inexpensive way to invest in gold.

3. <u>Gold ETFs (Exchange-Traded Funds):</u>

   Gold ETFs are a great way to invest in gold without physically holding it. These funds track the price of gold or invest in gold mining companies and trade them on the stock market. ETFs are very liquid and allow investors to buy or sell quickly. Unlike physical gold, there is no need for storage or insurance, and handling costs are minimal. However, ETFs do not provide the security of physical ownership and their returns are subject to fluctuations in the price of gold, which can fluctuate. However, gold ETFs offer an affordable and convenient way to gain exposure to gold as part of a diversified portfolio.

2. Gold Commodity as Investment:

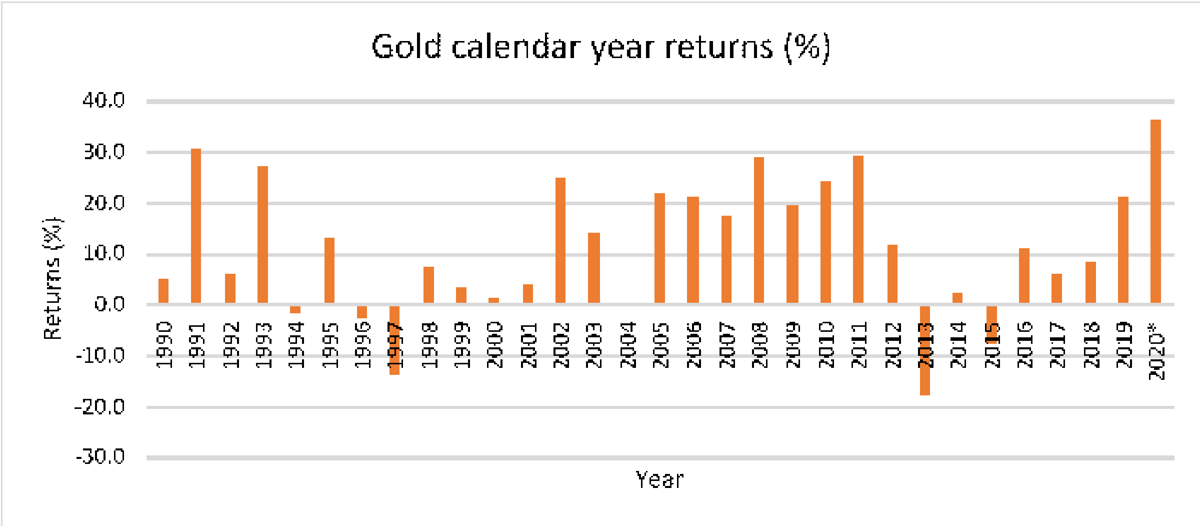
Gold is one of the oldest and most reliable investments and is often considered a safe haven during times of economic uncertainty. Investing in gold as a commodity means buying the metal itself in physical form (coins, bars, etc.) or through financial instruments such as futures, ETFs, or "gold" exchange certificates.

- Benefits:
  - The cost stock: gold has retained its value over the centuries, which makes it reliable against inflation, the devaluation of currencies and geopolitical risks.
  - Diversification: including gold in the portfolio can reduce the overall risk, as it often comes back to stocks and bonds when lowering the market.
  - Liquidity: Physical gold and gold-related financial products are highly liquid and can be quickly sold for cash.
  - Inflation Hedge: Gold has historically maintained its value during periods of high inflation or falling currencies. As fiat currencies lose purchasing power, gold tends to rise.
  - Portfolio Diversification: Gold tends to have low correlation with stocks and bonds and often performs well during market downturns, helping to balance a diversified investment portfolio.
  - Global Demand: Gold has universal demand for cultural, industrial and technological uses, ensuring its long-term value. Its widespread use in the jewellery industry, electronics, and even central bank reserves keeps it in demand in the market.

- Problems:
  - No income: Gold does not pay dividends or interest like stocks and bonds, so investors benefit only from price appreciation.
  - Storage cost: Physical gold maintenance requires safe storage and insurance, and has increased overall investment costs.
  - Price volatility: Gold prices can fluctuate in the short term, affected by market sensations, financial movements, and macro-economic factors.
  - No Passive Income: Without passive income, unlike stocks, real estate, and bonds, gold does not provide dividends, rental income, or interest payments. This means that investors only depend on capital evaluation.
  - Storage and security costs: Owning physical gold requires secure storage (a safe or vault) and insurance, which increases the overall cost of your investment. The risk of theft also adds to your worries.
  - Price volatility: Gold is considered a stable long-term investment, but short-term price fluctuations may occur due to global economic factors, interest rate changes, or geopolitical events.

- Opportunity cost: Even if gold holds its value, its low yields mean it may underperform compared to growth investments, especially during economic expansions, when stocks and real estate may offer higher returns.

Gold is an important part of many investment strategies evaluated for its stability, diversification, and hedging roles in the irregular era. Nevertheless, this should have been balanced to bring asset income due to long -term growth.



Source: World Gold Council

Fig 1: Gold returns over the years
Source: https://www.moneycontrol.com/

3. Gold Bonds as Investment:

Gold bonds are a way to invest in gold without holding the physical metal. Typically issued by governments, such as Sovereign Gold Bonds (SGBs), these financial instruments track the price of gold and offer an additional fixed interest income. Gold bonds are an attractive option for investors who want to combine the benefits of gold with the benefits of bonds.

- Advantages:
  - Interest income: Unlike physical gold, gold bonds offer annual interest (usually around 2.5%) in addition to capital gains from rising gold prices. This is a significant advantage over simply storing gold because it generates a regular income.
  - No storage fees: Because these bonds represent ownership of gold without the need to store physical gold, investors can avoid storage and insurance fees that can be costly when holding large amounts of physical gold.
  - Tax Benefits: In many countries, capital gains from redemption of gold bonds may not be subject to tax. Moreover, interest income can also enjoy tax benefits.
  - Safety: Gold bonds, especially those issued by governments, are considered safe and are guaranteed by the government, providing an extra layer of safety for investors.

- Challenges:
  - Price volatility: Though gold bonds bear interest, their fundamental value still depends on the market price of gold. This means that if the price of gold falls, so will the value of the bonds.
  - Limited liquidity: Gold bonds are not as liquid as physical gold or gold ETFs. They usually have lock-up periods, and although they can be traded on the secondary market, it may not be as easy or quick as selling gold directly.
  - Long-term commitment: Most gold bonds have a maturity period of 5 to 8 years, making them suitable for long-term investors. If you need quick liquidity, they may not be the best option for you.

- Key functions:
  - Denomination: usually denominated gold grams, which makes them affordable for both small and large investors.
  - Sovereign support: bonds issued by governments, such as SGB, ensure the safety of state support, which makes them a lower risk compared to other gold investments.

Gold bonds are a great investment option for those seeking exposure to gold with the added benefit of fixed interest income. They are a safe and cost-effective way of investing in gold compared to physical gold, especially for long-term investors, but they require a long-term commitment and cannot offer instant liquidity.

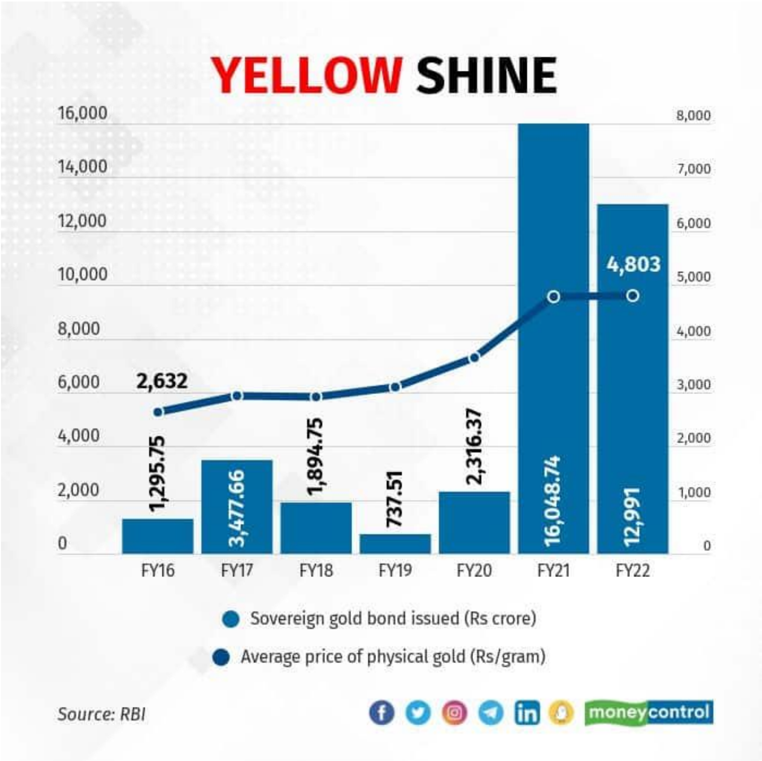


Fig 2: Gold returns over the years
Source: https://www.moneycontrol.com/

4. Gold ETFs (Exchange-Traded Funds):

Gold ETFs are financial instruments that allow investors to gain exposure to the fluctuations in the price of gold without owning the physical metal. These funds hold gold as their underlying asset and their value fluctuates based on the market price of gold. Exchange-traded gold ETFs offer the benefits of liquidity and easy access to gold, making them popular with both retail and institutional investors.

- Advantages:
  - Liquidity and flexibility: Gold ETFs trade on exchanges throughout the day, allowing investors to buy and sell at market prices when the market is open. This makes it much more liquid than physical gold or gold bonds.
  - Low barrier to entry: Investors can purchase fractional amounts of gold through ETFs, making it accessible to those on a budget who want to access gold without having to buy bars or full gold coins.
  - Economy: Gold ETF eliminates a lot of costs related to physical, gold, as it is not necessary to store physical, insurance, or treatment. In addition, transaction costs are generally lower than purchasing physical money from dealers.
  - Diversification: Investors can easily add gold to their portfolio without the hassle of buying and storing physical assets, improving diversification and hedging against market risks or inflation.

- Tracking Efficiency: Gold ETFs are designed to closely follow the spot price of gold, so their performance usually mirrors the price movements of physical gold. This allows you to interact directly with the product.

➢ Problems:
- No physical ownership: Investors benefit from rising prices, but do not own the metal itself. This can be a disadvantage for those looking to safely store tangible gold, especially during a crisis.
- Management fees: Though lower than the cost of physically storing gold, ETFs still charge management fees, which will reduce your returns slightly over time.
- Obesity: Especially in the short term, the price of gold can be unstable. Investors can significantly fluctuate the value of their property, especially during the fast -changing period of uncertainty and market changes.
- Counterparty Risk: Although gold ETFs are backed by physical gold, they are still financial instruments. This creates a certain level of counterparty risk as the ETF provider or custodian is responsible for maintaining the gold reserves.

➢ Types of Gold ETFs:
- Physical Gold ETFs: These ETFs store gold directly in their vaults to back each unit sold, providing accurate tracking of gold prices.
- Gold Mining ETFs: Invest in shares of gold mining companies. These offer exposure to the gold mining industry, but their performance may be more volatile due to company-specific factors and operational risks.

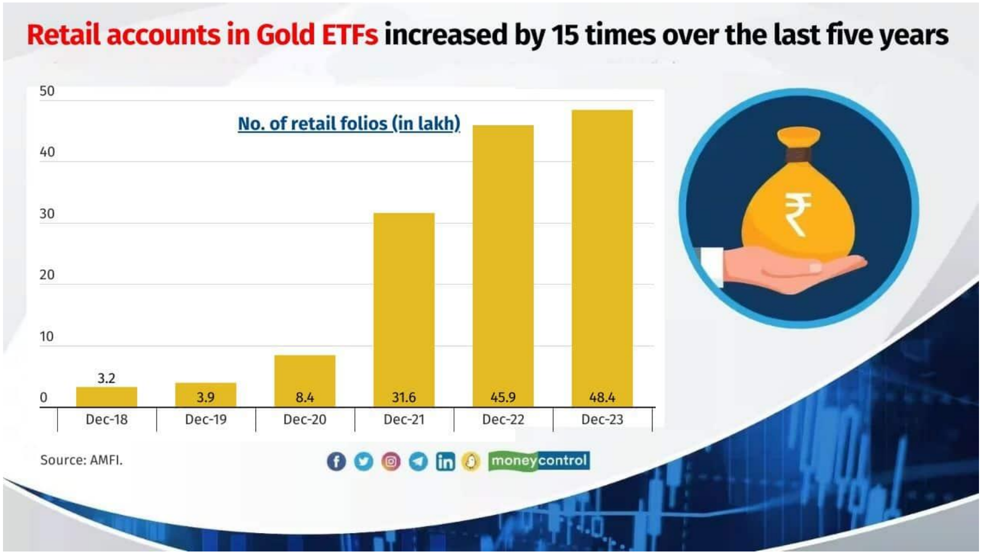


Fig 3: Gold ETFs returns over the years
Source: https://www.moneycontrol.com/

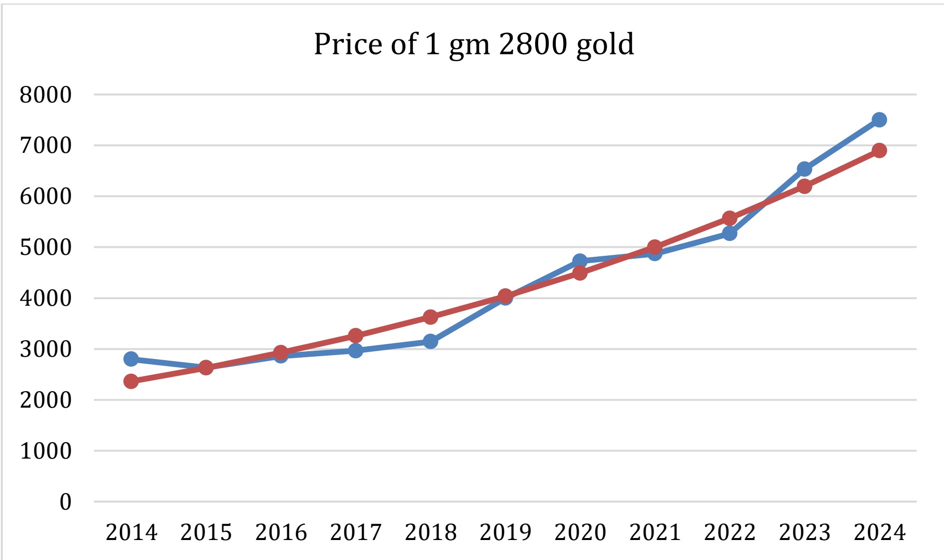
5. Calculations:

❖ Price of 1 gm 2800 gold:

In graph, x-axis shows years from 2014 to 2024 and Y-axis will show price of 1gm 2800 gold for corresponding years (in rupees).
Let's consider 2014 as 1, 2017 as 2……..2024 as 11.
After manually drawing graph and on excel.
We concluded quadratic equation covers maximum number of plots considering $y=a*b^x$

Year	Price of 1 gm 2800 gold
2014	2800
2015	2632
2016	2862
2017	2967
2018	3144
2019	4000
2020	4725
2021	4872
2022	5267
2023	6533
2024	7500

Table 1: Price of 1gm 2800 gold (in rupees)



Graph 1: Price of 1gm 2800 gold (in rupees)

Formula: $y = 2123.69*(1.113)^x$

Where “y” represents price of 1gm 2800 gold for corresponding years and “x” represents 1, 2,3……(1 represents 2014, 2 represents 2013 and so on).

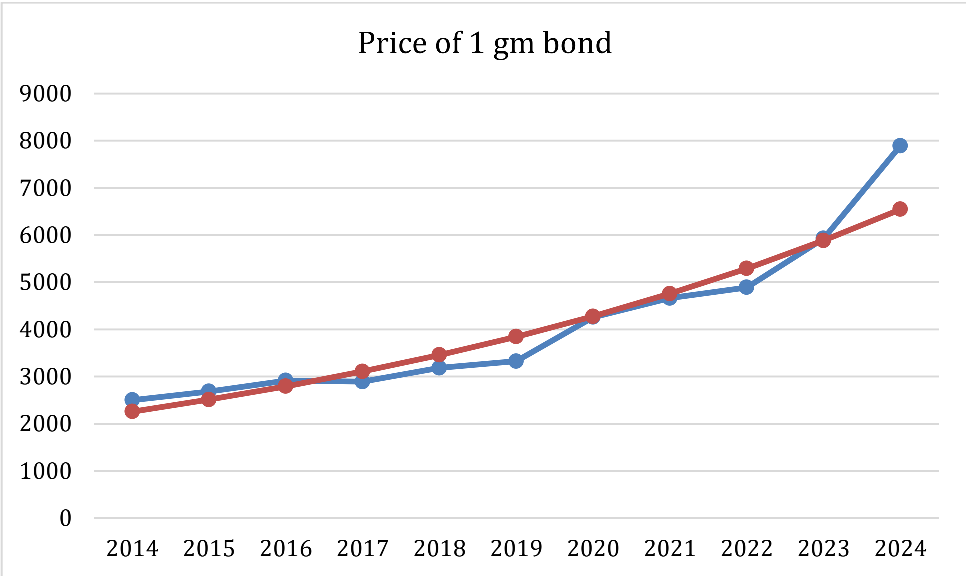
As we can see there is a growth of 11.3% growth.

❖ Price of 1 gm bond:

In graph, x-axis shows years from 2014 to 2024 and Y-axis will show price of 1 gm bond for corresponding years (in rupees).
Let’s consider 2014 as 1, 2017 as 2……..2024 as 11.
After manually drawing graph and on excel.
We concluded quadratic equation covers maximum number of plots considering $y=a*b^x$

Year	Price of 1 gm bond
2014	2500
2015	2684
2016	2916
2017	2893
2018	3183
2019	3326
2020	4260
2021	4662
2022	4889
2023	5926
2024	7890

Table 2: Price of 1gm gold bond (in rupees)



Graph 2: Price of 1gm gold bond (in rupees)

Formula: $y = 2029.995*(1.1123)^x$

Where "y" represents price of price of 1 gm bond for corresponding years and "x" represents 1, 2,3……(1 represents 2014, 2 represents 2013 and so on).

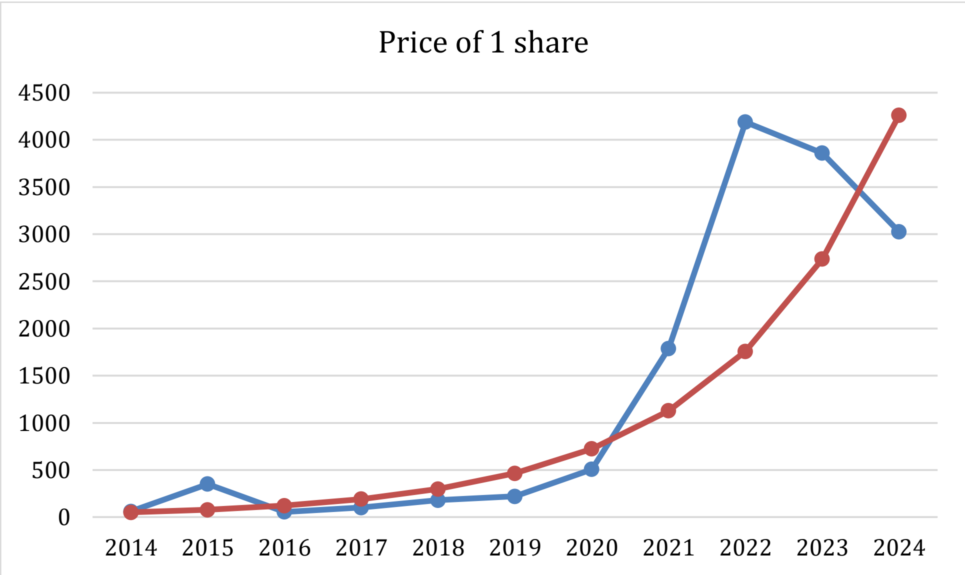
As we can see there is a growth of 11.23% growth.

❖ Price of 1 gold share:

In graph, x-axis shows years from 2014 to 2024 and Y-axis will show Price of 1 gold share for corresponding years (in rupees).
Let's consider 2014 as 1, 2017 as 2……..2024 as 11.
After manually drawing graph and on excel.
We concluded quadratic equation covers maximum number of plots considering $y=a*b^x$

Year	Price of 1 share
2014	61.83
2015	352
2016	56.53
2017	103
2018	180
2019	221
2020	507
2021	1788
2022	4189
2023	3860
2024	3025

Table 3: Price of 1 gold share (in rupees)



Graph 3: Price of 1 gold share (in rupees)

Formula: $y = 32.688*(1.557)^x$

Where "y" represents price of price of Price of 1 gold share for corresponding years and "x" represents 1, 2,3……(1 represents 2014, 2 represents 2013 and so on).

As we can see there is a growth of 55.7% growth.

❖ Profit and Return comparison:

1. Physical gold:

If we invest 1, 00,000 rupees in physical gold.

Price in 2019 is Rs 40,000 per 10gm.

So quantity = 100000/40000

= 25 gms

Price today = 25 * 76000 per 10 gm

= Rs 1,90,000

So, profit = Rs 90,000

Return = 90%

2. Gold Bonds:

Price in 2019 is Rs 3326 per gm.

Quantity = 100000/336 = 30.07 gms

Price today = 30.07 8 7890 per gm = Rs 237222

So, profit = Rs 137222

Return = 137% approx.

3. Gold Share:

Price of 1 share in 2019 = Rs 725.12

Quantity = 100000/725.12 = 137.9 shares

Price today = 137.91 * 4261.51 = Rs 587697.20

Profit = Rs 487697.20

Return = 488%

4. Conclusion:

So, considering the three types of gold investments - physical gold, gold bonds and gold stocks - it becomes clear that each has different advantages and disadvantages in terms of patience, investment and return. Gold mutual funds (such as shares in gold mining companies or ETFs) are the best, most profitable investment because they are closely related to market movements and the performance of the company. However, it is easier and more convenient for investors who can tolerate short-term risk for long-term gains.

Gold bonds strike a balance between yield and safety. They generally have lower costs, better retention of time than physical gold, and are more effective at paying interest. Bonds are safer and more profitable than stocks, and are ideal for investors looking for stable income with less risk. Although considered a safe place to practice climbing, physical gold has few benefits in comparison. It is better for those who are looking for security and real estate, but not a lot of money and appreciation.

So investors are looking for high returns and high risk in gold stocks. Those who value stability but are looking for growth can choose gold bonds, even though physical gold is safe, if the yield is lower for long-term asset protection strategies.

Earlier investors used to quote:

"Invest in gold jewellery, skip the stock market. Now it is truly said Gold bonds –majestic gold for the class and for stock/share – sparkle and shine in stocks.

5. References:

1. Smith, J. P. (2019). *The Performance of Gold as an Investment*. Journal of Financial Markets, 12(3), 102-118.

2. Gupta, R., & Kapoor, V. (2020). Gold Shares vs Gold Bonds: An Analysis of Returns. *Investment Strategies Journal*, 8(2), 45-60.

3. Blackwell, H. D. (2021). Physical Gold vs. Financial Instruments: A Comparative Study. *Journal of Economic Perspectives*, 27(1), 33-47.

4. Thompson, L., & Brown, A. (2018). Understanding the Role of Gold in a Diversified Portfolio. *Global Investment Review*, 15(4), 210-225.

5. Williams, E. M. (2022). Gold Bonds and Their Impact on Investor Returns. *International Journal of Financial Studies*, 9(6), 78-89.

6. Investopedia. (2023). *Has Gold Been a Good Investment Over the Long Term?* Retrieved from https://www.investopedia.com/ask/answers/020915/has-gold-been-good-investment-over-long-term.asp.

7. Groww. (2023). *Sovereign Gold Bonds*. Retrieved from https://groww.in/p/sovereign-gold-bonds.

8. Groww. (2023). *Gold Investment: How to Invest in Gold?*. Retrieved from https://groww.in/p/gold-investment.

9. Investopedia. (2023). *5 Reasons to Own Gold*. Retrieved from https://www.investopedia.com/articles/basics/08/reasons-to-own-gold.asp.

10. Groww. (2023). *Best Gold Stocks in India*. Retrieved from https://groww.in/blog/best-gold-stocks-in-india.

11. Moneycontrol. (2023). *Gold Investment*. Retrieved from https://www.moneycontrol.com/news/tags/gold-investment.html.

12. Moneycontrol. (2023). *MCX Gold Price Futures*. Retrieved from https://www.moneycontrol.com/commodity/mcx-gold-price?type=futures&exp=2024-12-05.

6. Biographies:

Ryna Goyal

- Received a certificate as well as scholarship from ICSE for securing 97% marks in class X boards.
- Appointed as the Finance head in The Satyan Innovation Fest 4.0.
- Volunteered at Ek Vachan Ngo and taught two underprivileged girls Maths and English online, since the past 4 years.
- President of the Business Management club where we conduct several activities and group discussions for the students about their entrepreneurial journeys and how to improve.
- Bagged silver inRegional level swimming competition and further went for nationals .
- Bagged silver in cricket Regional level Cricket competition and further went for nationals in 2023.
- Bagged silver in Regional level Cricket competition in 2024.
- Own a small business on instagram named strokes by mnr where i sell hand painted accessories and clothes.
- Have published a research paper on the topic “An Analysis of Financial Literacy and Decision-Making Among Indian Women Aged 14-46 of Ludhiana City” in 2024
- Have participated in the Wharton Global High investment competition since grade 9.

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