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A Study on the Short-Term Impact of Inflation Levels and Geopolitical Conflicts on International Spot Gold Prices

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Abstract. In the wake of the COVID-19 pandemic, many countries have implemented accommodative monetary policies, and inflationary pressures have continued to emerge. With the successive outbreaks of the Russia–Ukraine conflict and the Israel–Palestine conflict, demand for safe-haven assets in the investment market has increased, leading to significant fluctuations in gold prices. Although gold serves as both an inflation hedge and a safeguard against geopolitical risks, most existing studies analyse only the impact of inflation or geopolitical tensions on gold prices in isolation, and few examine the distinct short-term impacts arising from their interplay. This paper takes gold as its subject and, by combining relevant literature with price movements during typical events, analyses how inflation and geopolitical conflicts influence gold prices. The findings indicate that inflation provides long-term support for gold prices, with a longer-lasting impact, geopolitical conflicts, by contrast, can only temporarily drive up gold prices, which tend to fall back once market sentiment stabilises. Should inflationary pressures and geopolitical risks occur simultaneously, fluctuations in gold prices are likely to intensify further. London spot gold offers comprehensive trading data, making it suitable for analysing short-term price movements caused by external risks, the findings of this study may provide some guidance for gold investors.

Keywords: London spot gold, inflation, geopolitical conflicts, short-term shocks, price volatility

1. Introduction

Gold possesses three distinct attributes—as a commodity, a financial asset and a currency—and is a commonly used risk-hedging instrument for investors. In the post-pandemic era, the global macroeconomic environment has become increasingly complex, as the aftereffects of the accommodative monetary policies implemented by various countries during the pandemic gradually unfold, leaving many countries facing significant inflationary pressures. At the same time, a succession of geopolitical events—such as the Russia–Ukraine conflict and the Israel–Palestine conflict—has heightened global uncertainty, causing spot gold prices to become volatile. Judging by actual market performance, both rising inflation and geopolitical tensions can drive investment demand for gold. However, existing research indicates that external uncertainties amplify short-term fluctuations in gold prices through investor sentiment, yet rarely distinguishes between the differing

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impacts caused by various sources of risk [1]. Practical observations, however, reveal that while both are external events favourable to gold, the price reactions triggered by changes in inflation and geopolitical conflicts are not entirely consistent. When inflationary pressures and geopolitical risks occur simultaneously, fluctuations in the price of gold become even more complex. This paper takes London spot gold as its subject to examine the short-term shocks to gold prices caused by inflation levels and geopolitical conflicts, and to compare the impact pathways of the two.

2. An introduction to the basics of gold

Gold possesses the triple attributes of a commodity, a financial asset and a currency, making it a unique precious metal. As a commodity, gold is extensively used in jewellery manufacturing and industrial production, at the same time, it offers stable store-of-value properties and has long been regarded by the market as a safe-haven asset. In modern financial markets, international spot gold trading is characterised by large trading volumes, ample liquidity and a continuous, comprehensive historical price record, making it a key instrument for investors worldwide to diversify their portfolios and hedge against market risks. The London spot gold selected for this paper is benchmarked by the London Bullion Market Association (LBMA). This market operates in the over-the-counter (OTC) market, attracting numerous global participants, and trading is almost continuous, external uncertainties can be rapidly transmitted to the market through investor sentiment, amplifying short-term fluctuations in the gold price [2]. Zheng Minggui et al. point out that the price of gold is not determined solely by the supply and demand for physical gold, investment demand and external macroeconomic variables dominate its short-term movements [3] . However, as gold itself does not generate interest income, holding it entails an opportunity cost, which also limits its effectiveness as a store of value and a safe-haven asset to a certain extent. Compared with other investment categories, gold's most prominent advantages lie in its ability to hedge against inflation and serve as a safe haven. When inflation rises, investors often allocate assets to gold to mitigate the erosion of wealth caused by currency depreciation, similarly, when geopolitical conflicts or market turmoil arise, gold becomes a safe-haven asset for capital. However, inflation levels and demand for safe-haven assets cannot entirely determine the direction of gold prices, macroeconomic conditions, gold mining costs and market expectations all influence price movements. Analysing the correlations between these factors and the price of gold therefore has practical reference value.

3. Factors affecting gold prices

3.1. Economic development

Macroeconomic conditions are a key factor in determining the long-term trend of gold prices. Whether the economy is thriving or not alters investment preferences in the market, directly influencing investors' decisions regarding gold holdings [4]. When the economy is steadily improving and market confidence is high, investors are more inclined to invest in higher-yielding assets such as equities, reducing gold's appeal as a safe haven, and gold prices are unlikely to rise significantly. However, should economic growth slow and the outlook become uncertain, investors will fear a decline in the value of their assets and tend to buy gold to preserve their wealth, thereby driving up gold prices.

Economic cycles also cause inflation to fluctuate. During periods of rapid economic expansion, inflationary pressures gradually intensify, as gold is widely recognised as a store of value, demand

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for it as a hedge against currency depreciation increases. When the economy is in a downturn, overall market demand declines, inflationary pressures ease somewhat, and the demand for gold as an inflation hedge also falls. Furthermore, sustained economic growth can raise household incomes and increase consumers' willingness to spend on gold jewellery and physical gold, which in turn expands the market's demand for gold.

3.2. Manufacturing costs

Production costs at gold mines serve as a key reference for the market in assessing the floor of the gold price. Production costs vary significantly amongst different gold mining companies due to differences in mining scale and ore types. Statistical data from 2012 show that the average global cash cost for gold mining was US$673 per ounce, with the marginal cash cost reaching US$1,104 per ounce, the marginal production costs of many mines exceeded US$1,300 per ounce [1]. GFMS has successively defined three accounting standards: cash cost, full cash cost and sustainable full cash cost. The scope of the statistics has been progressively broadened to provide a more comprehensive reflection of the capital requirements for the sustained operation of gold mines. Among these, cash cost accounts only for direct on-site production cash expenditures such as mining and ore processing, and excludes depreciation, head office administration, exploration and environmental remediation costs, full cash costs add equipment depreciation and amortisation, as well as production-related taxes and levies, to cash costs, reflecting the book profit or loss of the mining operations, sustainable full cash costs have the broadest scope, further incorporating head office management costs, capital expenditure to maintain production capacity, exploration expenditure and provisions for environmental remediation upon mine closure, representing the comprehensive cost threshold for the long-term sustainable operation of a mine. In April 2013, international gold prices experienced a sharp plunge, rapidly approaching the production cost thresholds of many gold mines. The market began to worry that persistently low prices would force high-cost mines to shut down, leading to a contraction in gold supply and, consequently, providing support for gold prices. However, production-cost support is not an absolute floor, gold price trends remain subject to other market forces.

3.3. Geopolitics

Geopolitical conflicts can have a significant impact on international gold prices. When geopolitical tensions rise, risk aversion in the market increases, and investors tend to allocate assets to gold to hedge against risk, thereby driving up gold prices. In 2019, events such as the uncertainty surrounding Brexit and tensions between the US and Iran all stimulated demand for safe-haven assets, driving up gold prices. In 2024, the ongoing escalation of conflicts in the Middle East and the prolonged Russia–Ukraine crisis continued to intensify global geopolitical risks, leading to a massive influx of capital into the gold market and supporting a sustained rise in international gold prices.

Faced with geopolitical conflicts and inflationary pressures, central banks worldwide have continued to increase their gold holdings, using gold to hedge against risks and stabilise domestic exchange rates. As the global 'de-dollarisation' process advances, many central banks are optimising the structure of their foreign exchange reserves and increasing the proportion of gold in their reserves, thereby providing further support for rising gold prices. If geopolitical tensions ease and market risk aversion subsides, however, gold prices may also correct temporarily [5].

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4. Economic theory of gold prices

4.1. The theory of gold's safe-haven characteristics

Gold has long been regarded by the market as a classic safe-haven asset, and the safe-haven theory provides a theoretical basis for the influence of geopolitical factors on gold prices. The core logic of this theory lies in the fact that gold does not belong exclusively to any sovereign state, carries no credit default risk, and possesses a high degree of intrinsic value. When external uncertainty rises, investors, concerned that risky assets such as equities and currencies may depreciate significantly, adjust their asset allocation by increasing their holdings of gold to hedge against potential losses, this expansion in demand subsequently drives up the price of gold.

Historical market performance shows that this theory has been borne out on numerous occasions by geopolitical conflicts. During the Brexit negotiations and periods of ongoing tension between the US and Iran, risk aversion in the markets intensified, leading to a surge of capital into the gold market and driving up gold prices. In the international gold market in 2024, as the Russia–Ukraine conflict continued to escalate and tensions in the Middle East spread, the accumulation of global geopolitical risks led to a significant rise in market panic. A large amount of capital was channelled into gold as a safe-haven asset, becoming a key driver behind the sustained rise in gold prices that year.

At the same time, the rise in gold prices driven by safe-haven demand exhibits distinct cyclical characteristics. Once geopolitical tensions ease and market anxiety gradually subsides, short-term speculative safe-haven buying tend to quickly withdraw, leading to a temporary correction in gold prices. In addition to retail investors, against a backdrop of geopolitical turmoil, central banks around the world have continued to increase their holdings of gold with the aim of stabilising their domestic currencies, reducing reliance on the US dollar and optimising the structure of their foreign exchange reserves. This has further expanded demand for gold and continues to provide support for gold prices [5].

4.2. The theory of price determination based on the equilibrium of supply and demand for goods

The theory of supply and demand equilibrium is the fundamental economic theory underpinning the analysis of gold price fluctuations. This theory posits that the equilibrium price of a commodity is determined jointly by market supply and demand, when market demand exceeds supply, there is upward pressure on prices, conversely, in the event of a supply surplus, prices will face downward pressure. Gold is a commodity, and newly mined gold is the main source of market supply. The cost of mining can directly influence the production incentives of gold mining companies, thereby regulating the level of market supply.

Due to differences in operational scale and ore grade, production costs vary markedly among gold mines. Industry statistics for 2012 show that there is a significant gap between the average cash cost and the marginal cost of gold mines globally, with production costs at some high-cost mines exceeding US$1,300 per ounce. Gold prices directly influence mining production decisions: should gold prices continue to fall, steadily approaching the production costs of marginal mines, unprofitable mines will reduce output or even shut down, contracting market supply and slowing the decline in gold prices, when gold prices continue to rise, mining companies have an incentive to extract lower-grade ore, and the supply of gold on the market will gradually increase.

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GFMS has established a multi-tiered system for calculating gold production costs, distinguishing between spot cash costs, full cash costs and sustainable full cash costs, thereby outlining the various expenditure categories a mine must bear to continue operating. Production costs therefore provide dynamic support for gold prices rather than a fixed price floor. In summary, production costs influence the overall supply-and-demand landscape by altering the scale of gold supply, thereby limiting the downward range of gold prices, however, supply-side cost factors alone cannot determine the long-term equilibrium price of gold [6].

5. Conclusion

This paper discusses the factors influencing the price of gold. It begins by introducing the threefold nature of gold—as a commodity, a financial asset and a currency—before analysing the influences on international spot gold prices from three perspectives: economic development, production costs and geopolitics. It also explains the causes of gold price fluctuations by combining the theory of gold's safe-haven status with the theory of commodity pricing based on supply and demand equilibrium. Macroeconomic changes can affect market investment preferences, thereby altering investment and consumer demand for gold, gold mining costs constrain downward price movements, different cost metrics can reflect the pressures faced by mines from the perspectives of short-term cash flow, book profits and losses, and long-term operations, geopolitical conflicts, meanwhile, influence gold prices by fuelling safe-haven sentiment, while central banks' increased gold holdings also provide support for prices. In practice, inflation and geopolitical conflicts are the two primary factors driving gold price volatility in the post-pandemic era. Inflation erodes the purchasing power of currency, thereby increasing demand for gold as a hedge against inflation, geopolitical conflicts introduce uncertainty, triggering risk-aversion sentiment in the market. Both factors influence spot gold prices through different channels. This paper focuses primarily on a review of the literature and event analysis, as no empirical testing was conducted, it is not possible to quantify the specific magnitude and duration of the impact of inflation and geopolitical conflicts on gold prices. Furthermore, the number of references consulted is limited, and the description of geopolitical conflicts remains at the event level without the introduction of quantifiable proxy indicators, consequently, it is difficult to compare the differing impacts of conflicts of varying scales and durations. The analysis also did not fully account for interference from other factors, such as the Federal Reserve's monetary policy and the US Dollar Index, making it challenging to isolate the net effects of inflation and geopolitical conflicts. Future research could collect London spot gold price data covering a longer time period, select appropriate quantitative indicators to represent inflation levels and geopolitical risks, and use empirical models to estimate the magnitude and duration of the shocks caused by these two factors, thereby comparing the differences in their short-term impacts. It could also further explore the interactions between inflation and geopolitical conflicts when they occur simultaneously, analysing the response of gold prices under different conflict intensities and inflation levels.

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