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Gold's Effectiveness in Reducing Risk for Asian Stock Investments During the Russia–Ukraine Conflict

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ABSTRACT

This research article examines the effectiveness of gold as a safe-haven asset for Asian stock markets during the Russia–Ukraine conflict over the period from February 2022 to December 2025. This paper looks into the Heightened financial uncertainty evolving around the traditional investment strategies followed by investors due to the geopolitical crisis of the Russia- Ukraine War. This paper focuses on relation of gold as a safe haven with Asian Index like SSE Composite Index (China), Nikkei 225 (Japan), KOSPI (South Korea), Nifty 50 (India), MOEX Russia Index (Russia), and KASE Index (Kazakhstan). The Time-Varying Parameter Vector Autoregressive (TVP-VAR) Approach is applied to analyse the returns from the closing price of the index and gold. The findings reveal that consistently acts as a net receiver of volatility shocks, confirming its role as a financial sink and effective safe-haven assets during periods of heightened geopolitical stress. The results further highlight heterogenous responses across mature and emerging Asia markets, with emerging indices such as KOSPI acting as net sources of volatility. Although gold delivers Lower Average returns compared to equities, investors willingly accept a "premium for safety" in exchange for reduced downside risk. The study provides valuable insights for portfolio diversification, risk management, and policy formulation under prolonged geopolitical instability.

Keywords: Gold, Safe Haven Asset, Asian Stock Markets, TVP-VAR, Geopolitical Risk.

JEL Classification: G11, G15, C32, F51

SDG Alignment: SDG 8, SDG 9, SDG 16.

INTRODUCTION

The global financial landscape has experienced instability many a times. In such times, traditional investment strategies have often faltered because of the surprising events in geopolitics and economics. Gold has proven to be the most reliable choice in times of such instability among all the various options available. The conflict between Russia and Ukraine, which started in 2022 prolonged to a long duration until 2025 and is still going on. Due to this prolonged period, there were significant geopolitical uncertainty, tough international sanctions, and a shift in global order. This study aims to examine how effective gold is as a safe-haven asset for Asian stock markets during this era of warfare.

A basic understanding that gold is a defensive asset comes from the definitions provided by (Baur & Lucey, 2010). They distinguished between a "safe-haven" and a "hedge." A safe-haven asset does not move in the same direction as another asset or portfolio during market uncertainty. In contrast, a hedge is an asset that is mostly uncorrelated or at least negatively correlated with another asset. (Baur & McDermott, 2010) also further clarified these definitions by splitting them as "strong" and "weak". A strong safe-haven has a negative correlation during such turbulent times, while a weak safe-haven is simply remains uncorrelated. In a similar fashion, a strong hedge shows negative correlation on average, while a weak hedge will also remain uncorrelated over a long period of time.

If we look into the history, gold's performance varied during different periods of crises. At time of the 2007 to 2009 financial crisis, few researchers suggested that gold did not act as a safe haven instead they observed a relationship where gold returns influenced the market, however it failed to offer protection. This unlikely event suggested that gold might lose its role as a hedge during the worst crisis moments. However, many recent studies show a positive result, especially when it is compared to newer digital assets like Bitcoin. Researches like such, indicate that gold performs well in bearish markets and provide a significant level of diversification benefits for developed economies.

The most recent situation of geopolitical risks and global health crises have heightened interest in gold. For example, gold remains less influenced by stock markets during when times are peaceful. However, it has significant influence when geopolitical risks increase. This influence that it has makes gold a reliable safe haven during times of conflicts. It was seen that during the COVID-19 pandemic, gold's effectiveness had varied over time. While it did perform well in the early stages its strength started to diminish as the crisis continued. Therefore, in addition to being a safe haven, gold also serves as a key hedge against inflation and changes in exchange rates, especially when in relation to the US dollar.

In Asia, this situation is complicated. This is because various studies have found a lasting link between gold prices and the emerging ASEAN markets which suggest that gold can aid in portfolio diversification. Also, gold has been seen to be a safe investment during downturns in markets like Malaysia, Singapore, and Thailand. However, some researchers also show that it may not prove to be an effective long-term hedge against inflation in developed markets such as Japan.

Even though there has been extensive research on gold's performance during the 2008 crisis and the COVID-19 pandemic, there still exists a lack of clear understanding of specific dynamics and effects of the Russia-Ukraine conflict from 2022 to 2025. This effect is important as this conflict is not just a local war but has acted as a trigger of a series of economic sanctions and de-dollarization trends worldwide. The impact of these changes have altered how Asian markets interact with traditional safe havens.

The various research problems worsen more due to the limitations of current studies as Much of the earlier research relied on fixed models or outdated GARCH frameworks. These methods have shown to not often accurately reflect how the connectedness operates, particularly how the shock in one market impact others during such prolonged geopolitical crises. This shows that there is an urgent need for studies that use more effective frameworks, such as the Time-Varying Parameter Vector Autoregressive (TVP-VAR) approach.

Also, it is noticed that most academic literature treat Asian markets as one group which ignores the differences that exist between mature, globalized indices like the Nikkei 225 (Japan) and SSE Composite (China) and the sensitive and emerging markets such as the KASE (Kazakhstan) and KOSPI (South Korea).

This study aims to address these gaps by providing conflict-specific evidence from various Asian economies. The main objectives are:

i. To examine the relationship between gold prices and major Asian stock indices, including the SSE Composite, Nikkei 225, KOSPI, Nifty 50, MOEX Russia, and KASE Kazakhstan, during the Russia and Ukraine conflict.
ii. To evaluate gold's role as a "financial sink" by testing whether it absorbs volatility that prevents portfolio problems in different Asian markets.
iii. To compare mature global markets with sensitive emerging markets to see if gold's ability to hedge changes based on market maturity. iv. To measure the "premium for safety" by quantifying the returns investors are willing to give up for the stability gold provides during wartime.

This research is important because of its practical and theoretical contributions to international finance. It uses data from February 2022 to December 2025 to offer one of the first detailed looks at gold's performance during a period of significant economic sanctions and a movement away from the dollar. The study goes beyond simple analysis to show how spillovers develop over several years of ongoing conflict. This method gives investors and policymakers a clearer understanding.

For portfolio managers, the study shows that gold acts as a stabilizer for "leptokurtic" distributions. These are markets like the KOSPI, which go through extreme fluctuations more often than a normal distribution would suggest. By demonstrating that gold remains steady when these markets encounter extreme shocks, this research provides a clear guide for safeguarding against high-frequency outliers.

Additionally, the identification of a "premium for safety," the 2.692 difference between the higher returns of the Nikkei 225 and the lower returns of gold, offers a clear measure for professional fund management. This shows that for Asian investors, gold is not just an asset; it is also a strategic tool to handle extreme volatility and lessen maximum drawdowns.

The research paper starts with a review of safe-haven definitions and identifies gaps in the literature. It then analyses gold's performance during the Russia-Ukraine conflict from 2022 to 2025. The methodology section explains how a Time-Varying Parameter Vector Autoregressive (TVP-VAR) framework studies the dynamic connections among different Asian indices. The results section shows that gold acts as a "net receiver" of volatility and highlights the "leptokurtic" nature of emerging markets like the KOSPI. The discussion further connects these results together by examining gold's role as a "financial sink" and calculating the "premium for safety" that investors pay for stability along with the various factors related to them. At last, the paper would conclude by discussing the broader effects of de-dollarization and international sanctions on global portfolio management.

REVIEW OF LITERATURE

Gold as we know has been viewed as a financial tool b due to the definitions provided by (Baur & Lucey, 2010) where they distinguish between a safe-haven asset and a hedge. A safe-haven asset does not correlate with another asset or portfolio during uncertain market periods. In contrast to which, a hedge is an asset that does not correlate or is negatively correlated with another asset. (Baur & McDermott, 2010) refined these definitions by sorting them into strong and weak forms. A strong safe-haven is negatively correlated with another portfolio during uncertain times, while a weak safe-haven remains uncorrelated. Similarly, a strong hedge shows negative correlation on average, whereas a weak hedge is uncorrelated on average.

(Choudhry, Hassan, & Shabi, 2015) argue that gold failed to act as a safe haven during the 2007-09 financial crisis, citing a unidirectional relationship where gold returns influenced market returns, but not vice versa. They further observe nonlinear causality, suggesting that while gold may have functioned as a hedge prior to the crisis, this role did not persist during the actual turmoil. However, other studies provide more optimistic views. (Shahzad, Bouri, & Kristoufek, 2020) demonstrate that gold serves as a safe haven against stock indices in advanced economies and acts as a superior hedge compared to digital assets like Bitcoin. Their research indicates that gold is particularly efficient in bear markets and provides essential diversification benefits.

The role of gold during geopolitical instability and health crises has also been a focal point of recent literature. (Triki & Maatoug, 2021) highlight that while gold is less connected to US stock markets during peaceful times, this relationship strengthens significantly when geopolitical risk is elevated, establishing gold as a potent safe haven during war times. In the context of the COVID-19 pandemic, (Akhtaruzzaman, Boubaker, Lucey, & Sensoy, 2021) find that gold's safe-haven capacity was time-dependent; it functioned effectively during the early phase of the pandemic but lost this capacity as the crisis progressed into its middle phase.

Beyond its safe-haven status, gold is frequently analyzed as an inflation and exchange-rate hedge. (Capie, Mills, & Wood, 2005) find evidence supporting gold’s potential as a hedge against the US dollar. (Beckmann & Czudaj, 2013) utilize a Markov-switching VECM to show that gold can partially hedge future inflation in the long run, with stronger effectiveness in the USA and UK compared to Japan and the Euro Area. (Tully & Lucey, 2007) examine macroeconomic influences using an APGARCH model, finding an insignificant relationship between gold prices and the FTSE index during major market crashes between 1983 and 2003.

Regional studies, particularly in Asia, offer diverse perspectives. (Do, Mcaleer, & Sriboonchitta, 2009) identify a long-run cointegration between international gold prices and emerging ASEAN markets, recommending gold

for portfolio diversification and hedging in Asian equity trading. (Nguyen, Bhatti, Komorníková, & Komorník, Gold price and stock markets nexus under mixed-copulas., 2016) use copula methods to confirm gold as a safehaven asset during market crashes in the UK, US, Malaysia, Singapore, and Thailand. However, some limitations are noted by (Wang & Lee, 2011), who suggest that gold is not an efficient long-run inflation hedge in the USA or Japan and fails as a short-run hedge during low momentum regimes.

While there is a lot of literature that discusses the role of gold during the 2008 financial crisis and the COVID19 pandemic, there is a significant gap observed regarding the Russia-Ukraine conflict from 2022 to 2025. The already existing research such that of (Triki & Maatoug, 2021), states that gold usually tends to perform well during war but there is very little conflict-specific evidence to prove it. Such evidence should focus more on the economic sanctions and de-dollarization trends caused by this modern conflict between Russia and Ukraine. It is also observed that much of the earlier research is dependent on static models or early-generation GARCH models and these may not capture the changing nature of connectedness during a such prolonged geopolitical crisis. Therefore, it is now a requirement that use better frameworks like the Time-Varying Parameter Vector Autoregressive (TVP-VAR) approach. As it will help us understand how spillovers between gold and Asian markets change over several years of the ongoing conflict.

As mentioned earlier, it is observed that the literature often treats Asian markets as a single entity or focuses only on on a few specific countries. This indicates a lack of comparative analysis that separates mature, globalized Asian markets, such as Japan and China, from sensitive, emerging markets, like Kazakhstan and South Korea, within the same geopolitical framework. The unique “financial sink” role of gold, where it absorbs volatility to prevent portfolio contagion, remains under-explored in relation to these diverse Asian indices. This study connects to the foundational theories of (Baur & Lucey, 2010) and (Baur & McDermott, 2010) by empirically testing gold's role as a strong hedge and safe-haven asset. It aligns with the findings of (Triki & Maatoug, 2021) regarding gold’s effectiveness during geopolitical stress but extends this by providing evidence from the 2022–2025 period.

Unlike (Tully & Lucey, 2007), who used APGARCH, or (Nguyen, Bhatti, Komorníková, & Komorník, Gold price and stock markets nexus under mixed-copulas., 2016), who used copula methods, this study employs a TVP-VAR dynamic connectedness approach. This allows for the capture of evolving spillover effects and parameter instability that static models might miss. By examining net total connectedness, the study identifies that gold acts as a net receiver of effects (-0.021), confirming its role as a "financial sink" that absorbs systemic shocks. The research differs from previous work by analyzing a diverse set of Asian indices: SSE Composite (China), Nikkei 225 (Japan), KOSPI (South Korea), Nifty 50 (India), MOEX (Russia), and KASE (Kazakhstan). While earlier studies like (Do, Mcaleer, & Sriboonchitta, 2009) looked at ASEAN markets, this study highlights the unique behavior of leptokurtic distributions in markets like KOSPI (kurtosis of 6.629). It demonstrates that while KOSPI experiences extreme fluctuations, gold remains stable, allowing it to hedge these fluctuations effectively.

This study builds on the foundational safe-haven and hedging framework proposed by (Baur & Lucey, 2010) and (Baur & McDermott, 2010), extending it to a prolonged geopolitical conflict context. Unlike prior studies that focus on short-lived crisis periods, this research examines gold’s dynamic role during an extended phase of warfare accompanied by sanctions and de-dollarization trends. By integrating a time-varying connectedness approach, the study contributes to the literature by demonstrating how gold functions not only as a hedge or safehaven, but also as a financial sink that absorbs systematic volatility across heterogenous Asian Markets. This approach allows for a richer understanding of market interdependence than traditional correlation-based or static volatility models.

The study also presents the idea of gold as a safe haven amid de-dollarization and international sanctions on Russia. It shows that in mature markets like the Nikkei 225 and SSE, which benefit from their deep global ties, gold helps cushion the impact of shocks. This prevents severe losses. In emerging markets like KASE and KOSPI, which tend to create effects, gold's role as a receiver lessens the overall impact of their volatility. Finally, this study measures the "premium for safety" by comparing the average returns of the Nikkei 225 at 10.460 with Gold at 7.768. Although the Nikkei offers higher returns, the 2.692 difference shows the price investors are

willing to pay for gold's ability to reduce extreme volatility and limit losses during times of uncertainty caused by war. This practical implication for professional fund management adds a layer of depth not typically found in the more theoretical literature.

METHODOLOGY

This research article examines the effectiveness of gold as a safe-haven asset for Asian stock markets by using daily closing prices spanning over the Russia-Ukraine Conflict, precisely from 22 February 2022 to 31 December 2025. Here, the Market prices of gold alongside the market values of the SSE Composite Index (China), Nikkei 225 (Japan), KOSPI (South Korea), Nifty 50 (India), MOEX Russia Index (Russia), and KASE Index (Kazakhstan) are adopted as representations of Asian Stock Markets. All the Values are expressed in USD. All the data is downloaded from the Yahoo Finance database are converted into logarithmic returns to mitigate heteroscedasticity and ensure the stationarity of the series by using $\frac{p2-p1}{p1}$.

The tool adopted is a Time-Varying Parameter Vector Autoregressive (TVP-VAR) dynamic connectedness approach is employed based on (Pendaraki & Charda, 2025) in order to examine structural changes and regime shifts induced by prolonged geopolitical instability.

The TVP-VAR model is expressed

$$Y_t = \beta_t Y_{t-1} + \varepsilon_t \qquad \varepsilon_t | F_{t-1} \sim N(0, S_t) \qquad (1)$$

$$\beta_t = \beta_{t-1} + u_t \qquad u_t | F_{t-1} \sim N(0, R_t) \qquad (2)$$

Where Y_t stands for a vector of conditional volatilities with $N \times 1$ Dimensions, Y_{t-1} is a lagged conditional vector with $N_P \times 1$ dimensions, β_t is a time-varying coefficient matrix with $N \times Np$ dimensions, and $\varepsilon_t$is a new disturbance vector with $N \times 1$ dimensions with a time-varying variance-covariance matrix with $N \times N$ dimensions. The parameters β_t rely on their lagged values and on an error matrix with $N \times Np$ dimensions.

This type of connectedness demonstrates how a shock in a specific variable has a spillover effect on other variable(s). In this case that a variable exerts influence on the group of the remaining variables, it is called the total directional connectedness to others and is defined as

$$C_i^{g}{}_{\rightarrow j}(H) = \sum_{j=1, i \neq j}^{k} \tilde{\varphi}_{ji}^{g}(H) \qquad (3)$$

While the reverse impact is the total directional connectedness from others:

$$C_i^{g}{}_{\leftarrow j}(H) = \sum_{j=1, i \neq j}^{k} \tilde{\varphi}_{ji}^{g}(H) \qquad (4)$$

The total net connectedness is estimated by subtracting the above:

$$C_i^{g}(H) = C_i^{g}{}_{\rightarrow j}(H) - C_i^{g}{}_{\leftarrow j}(H) \qquad (5)$$

If the net total connectedness is positive, then this variable is a net source of effects. On the other hand, if the net total connectedness is negative, then the variable is a net receiver of effects. Unlike the fixed parameter VAR models, the TVP-VAR approach accounts for parameter instability and enables the measurement of dynamic spill over effects. Directional connectedness measures indicate how shocks originating in one market transmit to other while net connectedness distinguishes between markets acting as volatility transmitters and those absorbing shocks (Net receivers). A negative net connectedness value implies a stabilizing or shock-absorbing role, consistent with the concept of a financial sink.

RESULTS

Table 1: Descriptive Statistics during Russia-Ukraine War

	Gold	KASE	KOSPI	MOEX	NIKKEI	NIFTY 50	SSE
Mean	7.768	8.389	7.805	7.912	10.460	9.954	8.646
Median	7.677	8.382	7.764	7.928	10.500	9.993	8.619
Maximum	8.423	8.883	8.416	8.161	10.867	10.174	8.930
Minimum	7.392	7.869	7.563	7.558	10.154	9.635	8.328
Std Dev	0.271	0.288	0.157	0.144	0.185	0.153	0.130
Skewness	0.679	- 0.026	1.903	- 0.400	0.094	- 0.226	0.007
Kurtosis	2.299	1.788	6.629	2.196	2.148	1.619	2.327
Jarque-Bera Prob.	91.201 (0.000)	57.382 (0.000)	1079.075 (0.000)	50.197 (0.000)	29.657 (0.000)	82.266 (0.000)	17.630 (0.000)

Source: Authors Calculation based on Secondary Data

From the table 1, it shows that the mean value of returns Nikkei 225 (10.460) is the best performing index followed by Nifty 50 (9.954) however Gold (7.768) remained the least performing. The Standard deviations suggest that most volatile were KASE (0.288) followed by Gold (0.271) while MOEX (0.144) and SSE (0.130) were the least volatile. KOSPI (6.629) at kurtosis indicates a leptokurtic distribution where returns are more concentrated around the mean, however extreme market shocks are much more frequent than normal distribution.

Figure 1: Returns of Asian Stock market Index and Gold

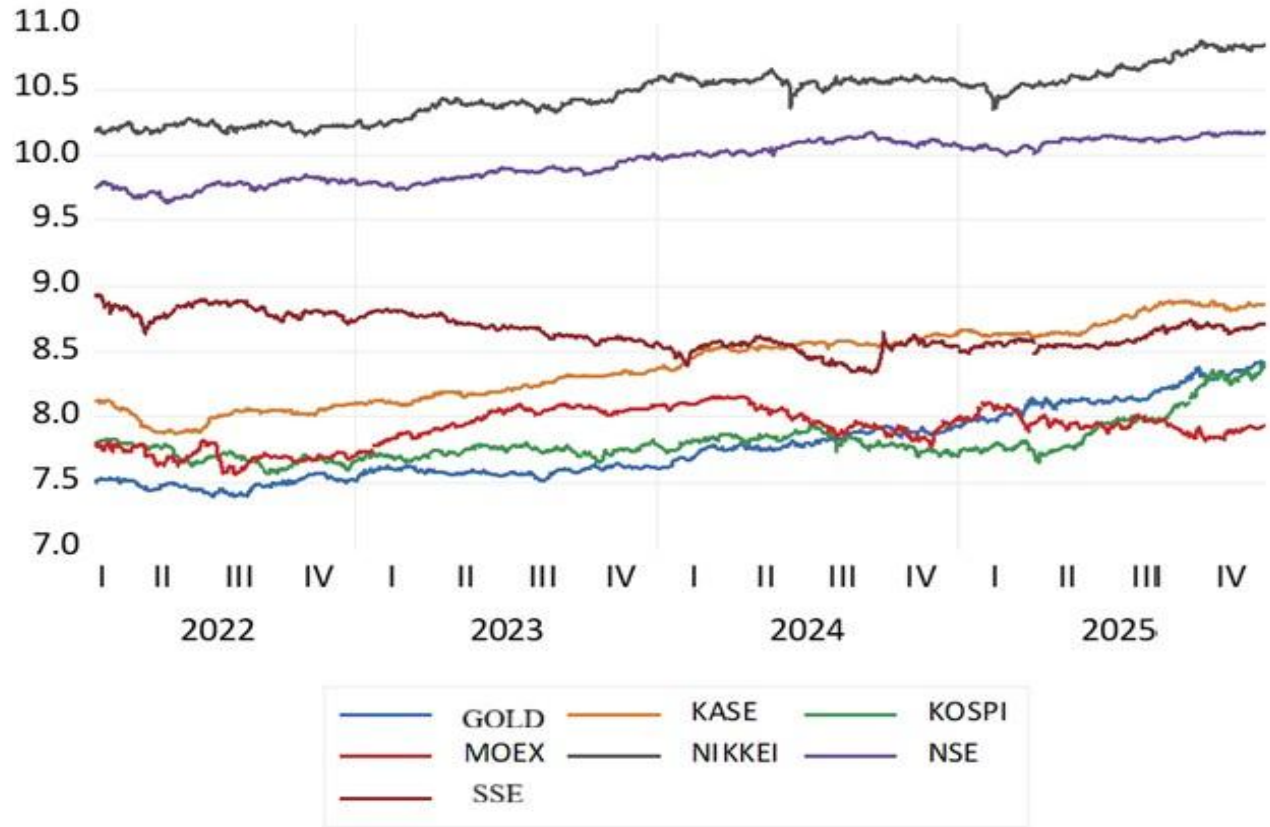

Figure1 shows the comparative graph of the returns of various stock index along with Gold. This graph clear represents that during this period Nikkei 225 had the highest returns followed by Nifty 50 (NSE).

SSE also remained below however, it fluctuated around 2024 but eventually became stable. Gold remained fairly stable during the initial stages and gave lower returns compared to other index but started giving better returns towards the end of this duration

Table 2: Average Dynamic Connectedness during the Russia-Ukraine War by using TVP-VAR Model

	Gold	KASE	KOSPI	MOEX	NIKKEI	NIFTY 50	SSE	FROM
Gold	0.985	0.003	0.011	- 0.003	0.001	0.001	0.012	0.025
KASE	0.022	0.981	- 0.016	0.010	0.010	0.005	- 0.005	0.026
KOSPI	0.001	- 0.008	0.986	- 0.009	0.011	- 0.005	0.002	-0.008
MOEX	-0.007	0.007	0.008	0.985	0.004	- 0.002	- 0.007	0.003
NIKKEI	-0.003	0.008	0.010	0.022	0.970	0.015	0.004	0.056
Nifty 50	-0.008	0.033	0.029	- 0.031	0.00	0.971	- 0.027	-0.004
SSE	-0.001	0.016	0.026	- 0.007	- 0.001	- 0. 007	0.970	0.033
TOTAL	0.004	0.059	0.068	-0.018	0.025	0.014	-0.021	
NET	-0.021	0.033	0.076	-0.021	-0.031	0.018	-0.054	

Source: Authors Calculation based on Secondary Data

From Table 2, that shows the result of TVP -VAR Method we can see that KOSPI (0.076) has emerged as the Strongest Net Source of the effects followed by KASE (0.033) AND NIFTY 50 (0.018). The most significant Net Receiver of effects was SSE (-0.054) followed by NIKKEI (-0.031) and finally Gold (-0.021).

DISCUSSION

In finance, Financial Sink means when the volatility in one area of finance spikes, its energy is absorbed by another. Here, we can say that gold is the net receiver of such impacts and it acts as a financial sink when the stock markets got volatile. The Time-Varying Parameter Vector Autoregressive (TVP-VAR) Model followed in this research article signifies this claim as there is a negative net total connectedness of gold of – 0.021 which confirms gold being a net receiver of effects. This means that for each and every unit of volatility that exists in the system, gold is absorbing a small portion. Although small, such portion of absorption is also playing a significant role as it is preventing a contagion effect across the portfolio.

As observed that when in the Equity market price one stock drops, it often brings the value of others also down and this is known as transmission of volatility. However, in the Gold Market reacts differently where, when equity drops investors buy gold and this inverse relationship soaks up the capital which otherwise would exit market entirely in equity and this soaking up effect on capital is known as absorption of shock. When the Russia Ukraine Conflict started, the sanctions that were imposed on Russia created a sense of uncertainty due to which gold absorbed the capital and this absorption was due to the level of volatility in traditional currencies. There also was a hike in inflation due to rise in interest rates, the impact of which in normal situations on Gold would have been negative, however, during this period it remained a net receiver of effects due to the fear of recession among the investors.

A normal distribution of market follows a bell curve where extreme events are rare mathematically. However, this study revealed that KOSPI which has a high kurtosis value of 6.629, exhibits Leptokurtosis. Leptokurtosis is a probability distribution that is sharper and taller than a normal distribution with “fat” tails, indicating higher likelihood of extreme outliers or large fluctuations. KOSPI with a kurtosis of 6.629 means that South Korean Market experienced extreme events that could be either high number of sell offs or sudden spikes much more frequently than the standard model. On the other end, Gold tends to have a more stable distribution during such periods. Therefore, an investor who has KOSPI in his portfolio can hedge this fluctuation by adding gold to it, thereby making the portfolio more predictable.

We can also infer that gold has a negative relationship with Asian indices during situations of such geopolitical conflicts. This relation is statistically significant and defines a strong hedge. Asian markets tend to have such a relation because they are sensitive to global trade disruptions, US Dollar fluctuations and security concerns. It is due to this sensitivity that when geopolitical conflicts arise, institutional Asian Investors liquidate equities and invest such liquidated money in gold. Therefore, we can say that gold works as a cushion to losses in equity markets. The average mean performance of Nikkei 225 is 10.460, which is the highest, while gold is lower being at 7.768. There is a difference of approximately 2.692 between Nikkei 225 and Gold. While Nikkei 225 promises

better returns during such a period, Gold is preferred by investors due to the safety it provides. This difference of 2.692, the investors would give up when they choose gold over Nikkei 225, can be considered a premium for the safety. In Professional Fund Management, the preference is often given to lower mean returns, which will also provide lower drawdowns. Drawdowns are the maximum amount a portfolio would lose from its peak. Therefore, for Asian investors. Gold is a way to neutralise the extreme volatility of markets like KOSPI and a hedge against geopolitical conflicts.

Asian markets are unique as they contain a mix of both mature and sensitive markets. While Japan and China, which are represented by Nikkei 225 and SSE Composite Index are highly mature and Globalised, Indices like KOSPI and KASE that represent South Korea and Kazakhstan are highly sensitive and volatile as they are still emerging. SSE Composite Index and Nikkei 225 are net receivers of effect due to their negative connectedness at -0.054 and -0.031, respectively. Since these markets are mature and globalised, they have a deep integration into economies like the US and Europe. Therefore, any sudden change or spike in the index of these would impact the SSE Composite Index and Nikkei 225, and due to them being net receivers of effects, they absorb the impact. Since Gold is also a net receiver of effects, instead of adding impact on these indices, Gold shares the impact, thereby preventing extreme impact on the SSE Composite Index and Nikkei 225. On the other hand, Indices like KOSPI and KASE represent a net connectedness of 0.076 and 0.033. This net positive connectedness implies that these are a net source of effects. This is because these countries are exporters, thereby having economic connections with other Asian countries. Any change in these will have an impact on other countries, and since these are emerging markets, they are volatile and less predictable. However, gold being a net receiver of effects reduces the impact these net sources have. It is because gold's value is determined by global demand and supply, and is complemented by an increase in demand during such fluctuations, leading to an increase in its price

The impact of the Russia-Ukraine Conflict could be seen on the gold rates. While at times of peace, gold would trade based on based the US Dollar and Interest rates. At times of such a conflict and prolonged duration, the demand for gold sustained unlike how at times of other crisis the price of gold spikes but also fades away. This is all because investors stopped investing in gold for quick gains but to treat it as a safety anchor against the global financial fluctuation occurring at the time. The reason for such fluctuations were the various sanctions imposed on Russia. Such sanctions triggered the requirement and wave of de-dollarization globally and in Asia. Countries started building their gold reserves and backing their currency on it. This has led to the significant rise in the price of gold and thereby mitigating the risk associated with the fluctuations.

Although the primary focus of this study is on dynamic connectedness during the Russia-Ukraine conflict, the empirical findings remain consistent with earlier crisis-based studies examining gold's role during periods of extreme uncertainty. The stability of gold's negative connectedness over time suggests that its safe-haven properties persist across different phases of the conflict. The observed results are also in line with the existing evidence from geopolitical risk and pandemic related crisis, reinforcing the robustness of gold's shock-absorbing behaviour. While alternative model specifications and sub-sample analyses are beyond the scope of this study, the consistency of the results across diverse Asian markets enhances confidence in the empirical conclusions.

The findings od this study carry important implications for investors, portfolio managers, and policymakers. For investors, the results confirm that gold serves as an effective diversification toll capable of reducing portfolio drawdowns during the prolonged geopolitical crisis. Portfolio managers operating in Asian markets can use gold strategically to hedge extreme volatility, particularly in leptokurtic and emerging markets such as South Korea and Kazakhstan. For policymakers, the evidence supports the growing role of gold in reserve diversification strategies amid de-dollarization and global financial fragmentation. By functioning as a financial stabilizer, gold can help mitigate systematic risk and enhance financial resilience during periods of geopolitical stress.

CONCLUSION

This research focuses on the urgent need to understand financial stability during the Russia–Ukraine conflict (2022–2025). This period is marked by intense geopolitical and financial uncertainty. Traditional investment strategies often struggle during unexpected geopolitical events, making it essential to explore how effective gold is as a defensive asset. The study specifically looks at the relationship between gold prices and major Asian stock

indices, such as the SSE Composite (China), Nikkei 225 (Japan), KOSPI (South Korea), Nifty 50 (India), MOEX Russia Index (Russia), and KASE Index (Kazakhstan). While earlier research has thoroughly investigated the 2008 financial crisis and the COVID-19 pandemic, there is still a significant gap in understanding the market dynamics triggered by modern warfare, economic sanctions, and the increasing trend of de-dollarization. Additionally, this study aims to address the shortcomings of previous research that used static models or outdated GARCH frameworks, which often do not capture how shocks spread during extended crises. By using a TimeVarying Parameter Vector Autoregressive (TVP-VAR) framework, this research seeks to provide specific evidence of gold's role as a "financial sink" and a risk-hedging tool across various Asian economies.

The findings of this study show that gold plays a key role as a financial safe haven in the Asian financial landscape. Using the TVP-VAR model, the research finds a negative net total connectedness for gold at -0.021. This indicates that gold acts as a net receiver of volatility effects. It suggests that gold absorbs systemic shocks, which helps stop the spread of volatility from declining equity markets to a wider investment portfolio. The analysis also reveals a mostly negative and statistically significant relationship between gold and Asian stock indices, especially during times of high geopolitical stress. This inverse relationship allows gold to attract capital that would otherwise exit the market when stocks drop, providing an important cushion against losses. These findings confirm that gold is not just an asset; it is a strategic tool that remains stable when traditional markets experience severe shocks.

A key finding of this research is the identification of "leptokurtic" behavior in sensitive emerging markets, especially the KOSPI index in South Korea. With a high kurtosis value of 6.629, the KOSPI shows a distribution where returns cluster around the mean. However, extreme market shocks occur much more often than a standard normal distribution suggests. The study ranks the KOSPI as the strongest net source of effects at 0.076, followed by the KASE index at 0.033 and Nifty 50 at 0.018. These emerging markets are volatile and highly sensitive to global trade issues and security concerns. As a result, they tend to pass on volatility to other regions. In contrast, gold acts as a net receiver of effects, which helps lessen the impact these net sources have on a portfolio. This allows investors to protect against the frequent outliers and sudden spikes seen in emerging Asian indices. In contrast to these emerging markets, mature and globalized indices like the Nikkei 225 and SSE Composite were net receivers of effects, showing negative connectedness values of -0.031 and -0.054, respectively. These mature markets have strong ties to global economies like the US and Europe, which makes them vulnerable to international shocks. In this context, gold provides important diversification by spreading the impact of global shocks. This helps prevent significant losses in these developed indices. The study also looks at a "premium for safety" by comparing the average returns of the Nikkei 225 (10.460) with gold (7.768). The difference of 2.692 shows the return that investors are willing to give up to ensure the stability gold offers during wartime. This finding is particularly important for professional fund management, where the focus is often on minimizing maximum losses instead of just increasing average returns.

This study contributes to academic research by offering one of the first detailed examinations of gold's performance during a period of intense international sanctions and changing global alliances. It avoids treating Asian markets as a single group and instead highlights the subtle differences between established global indices and vulnerable, emerging markets. Moreover, the research situates gold's value within the broader trend of moving away from the US dollar. As sanctions drove a shift from the dollar, countries began to increase their gold reserves and back their currencies with gold. This resulted in sustained demand, distinct from the shortterm spikes observed during previous crises. By demonstrating that gold serves as a better safe haven when geopolitical risks rise, this study provides valuable insights for investors and policymakers looking to strengthen portfolio resilience.

This study contributes to the financial economics literature by providing conflict-specific evidence on gold's safe-haven role during an extended period of geopolitical instability. By distinguishing between mature and emerging Asian markets and employing a time-varying connectedness framework, the research advances understanding of how systematic risk is transmitted and absorbed across financial markets. Future research may extend this analysed by incorporating alternative safe-haven assets, higher frequency data, or comparative regional studies to further explore the evolving nature of financial resilience in an increasingly fragmented global economy.

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