

The Impact of Geopolitical Conflict and Fed Rate Hikes on Asset Pricing

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Abstract: In the current context of weak economic recovery, ongoing Russia-Ukraine conflict, and consecutive interest rate hikes by the Federal Reserve, global financial and commodity markets have experienced intensified turbulence. To investigate the impact of the Russia-Ukraine conflict and the Federal Reserve interest rate hikes on asset pricing, this study first analyzed the U.S. stock market, bond market, and commodity market based on data from the CEIC database. From the comprehensive stock and year-on-year data after each round of interest rate hikes, it is evident that both the Russia-Ukraine conflict and the Federal Reserve interest rate hikes have had a significant negative impact on investors' financial assets. Additionally, due to the continuous interest rate hikes by the Federal Reserve, funds from the stock market have gradually shifted to the bond market. Furthermore, after analyzing the impact of the Russia-Ukraine conflict and the Federal Reserve interest rate hikes on the U.S. stock market, bond market, and commodity market, the study further explored the influence of these factors on asset pricing using the discounted cash flow (DCF) valuation model. Finally, the study provided an outlook on future market trends.

Keywords: Asset Pricing, Discounted Cash Flow Valuation, Geopolitical Conflict, Interest Rate Hikes

1. Introduction

The interest rate hike implemented by the Federal Reserve is a strategy used to regulate the economy through changes in interest rates. The Federal Reserve, often referred to as the Fed, serves as the central banking system of the United States. When the Fed raises interest rates, it elevates the level of interest rates, which can have widespread effects on the economy. One of the goals of raising interest rates is to control inflation [1]. By increasing interest rates, the Fed can reduce the money supply, thereby curbing the risk of inflation. This action can make borrowing more expensive, leading to reduced consumption and investment, thereby alleviating pressure on rising prices. Another purpose of raising interest rates is to maintain currency stability [2]. By raising interest rates, the Fed can attract more funds into the United States, supporting the value of the dollar. This helps to maintain stability in the domestic and international foreign exchange markets and uphold the United States as a significant player in the global economy. The decision to raise interest rates by the Fed is made by the Federal Reserve's policy committee based on assessments of economic conditions and inflation expectations [3]. The frequency and magnitude of interest rate hikes may vary depending on changes in economic conditions. Rising interest rates may lead to a decline in the stock market, affect investor

sentiment, and benefit certain industries. Bond prices may decline, bond yields may rise, and demand for safe-haven assets may increase [4]. The impact of Federal Reserve interest rate hikes on specific commodity markets, such as oil and gold, can be complex and can vary depending on various factors, including global economic conditions, supply and demand dynamics, and investor sentiment.

The Russia-Ukraine conflict has had significant political, economic, and humanitarian consequences. For the impact on the US stock market, market sentiment and investor confidence, fluctuations in energy prices, and the outlook for global economic growth. For the impact on the US bond market: increased demand for safe-haven assets, as well as influence on global interest rates. For the impact on the US commodity market: For oil prices, geopolitical risks leading to premiums, and disruption in the global supply chain. For gold prices, demand for safe-haven assets, and impact on the US dollar exchange rate.

In different markets, asset pricing is also influenced by different factors. Following an analysis of the impacts on various markets individually, this article will delve into how these effects influence the Discounted Cash Flow (DCF) model used for asset valuation in different markets. DCF, an absolute valuation method, determines an asset's value by discounting its expected future free cash flows (usually forecasted for 15-30 years) at a suitable discount rate (WACC). If the discounted value exceeds the asset's current price, it is deemed profitable and worth purchasing. Conversely, if the discounted value is below the current price, the asset is considered overvalued, and caution or selling is recommended. The precision of the DCF model is significantly impacted by uncertainties in predicting future cash flows and variations in the discount rate, especially due to events like the Russia-Ukraine conflict and interest rate hikes by the US Federal Reserve.

2. Stock Market

2.1. The Impact of Geopolitical Conflict and Fed Rate Hikes

Rising interest rates can lead to a stock market decline. When the Federal Reserve raises interest rates, borrowing costs increase, which can have a negative impact on corporate profitability. Higher interest rates can increase the financing costs for businesses, thereby reducing their profitability. This may raise concerns among investors and result in a decline in the stock market. Investor sentiment is affected. Interest rate hikes can have an impact on investor sentiment, especially for those who are sensitive to stock market volatility [5]. Interest rate hikes are seen as a signal of tightening monetary policy, which can trigger concerns and uncertainty, causing investors to become more cautious and negatively affecting the stock market.

Although the overall stock market may face pressure, some industries may benefit from interest rate hikes. For example, banks and financial institutions may benefit from rising interest rates as they can lend funds at higher rates and profit from the interest spread. Geopolitical conflicts often trigger fluctuations in market sentiment, especially for investors sensitive to global economic and political stability. Uncertainty and tense situations can lead to investor concerns about risk assets, thereby negatively affecting the stock market.

Ukraine is an important transit country for energy, and Russia is one of the world's largest natural gas exporters. The Russia-Ukraine conflict may result in interruptions or instability in energy supply, thereby impacting the global energy market and the stock prices of energy-related companies. Geopolitical tensions can have an impact on the outlook for global economic growth [6]. If the conflict escalates and leads to regional instability, the global economy may be dragged down, which could have a negative effect on the US stock market.

2.2. The Impact on Asset Pricing

The DCF model determines the present value of future cash flows by applying a discount rate, which signifies the required rate of return or the opportunity cost of investing in a specific stock. When the Federal Reserve raises interest rates, the discount rate in the DCF model can increase. This elevated discount rate reduces the present value of future cash flows, potentially lowering the estimated intrinsic value of the stock.

A crucial element of the discount rate in the DCF model is the cost of capital, which is the return investors demand to compensate for the risk of investing in a particular stock. Higher interest rates can raise the cost of debt, thus increasing a company's overall cost of capital. An elevated cost of capital results in a higher discount rate in the DCF model, which can decrease the stock's estimated intrinsic value.

Interest rate hikes by the Federal Reserve also affect investor sentiment and risk appetite. With higher interest rates, alternative investments like bonds or savings accounts may become more appealing compared to stocks. This shift in investor preferences can influence stock prices and, consequently, the estimated intrinsic value derived from the DCF model.

Geopolitical tensions can raise the risk premium for investments, potentially increasing the discount rate. In the DCF model, changes in the discount rate directly affect the present value of future cash flows, so geopolitical events can impact the intrinsic value of stocks. Geopolitical conflicts often trigger market uncertainty, affecting investor sentiment and risk preferences. Increased caution among investors can lead to stock price fluctuations, impacting the predicted cash flows in the DCF model. Different industries and companies may respond uniquely to geopolitical events [7]. Some industries may heavily rely on the stability of specific regions, while others may be less affected. This variation can influence the predictions of the DCF model.

3. Bond Market

3.1. The Impact of Geopolitical Conflict and Fed Rate Hikes

The global bond market is influenced by the economic performance of various countries and investors' risk preferences. When the global economy is active, international investors tend to invest in high-risk stock markets, which may result in a cooling-off period for the bond market. Conversely, when the global economy is unstable or uncertainty increases, international investors are inclined to redirect their funds to the relatively safe bond market, thereby boosting global bond market activity [8]. It is worth noting that the Federal Reserve's consecutive interest rate hikes have brought new changes to international investors' asset allocation behavior. The Russia-Ukraine conflict and the Federal Reserve's interest rate hikes have sent signals of tightening monetary policy, which may lead to a decrease in global risk appetite.

Geopolitical conflicts often prompt investors to seek safe-haven assets, such as U.S. Treasury bonds. This increased demand can drive up bond prices and lower yields. Moreover, rising interest rates can increase the risk premium of bonds, further boosting the demand for these secure assets. Consequently, during periods of stock market instability, investors may prefer bonds for their safety, positively affecting the bond market.

Geopolitical conflicts can also influence global interest rates. If such conflicts slow down global economic growth, central banks might implement loose monetary policies to stimulate the economy, resulting in lower interest rates [9]. Since bond prices and interest rates are inversely related, a drop in global interest rates can lead to higher bond prices.

On the other hand, interest rate hikes generally cause bond prices to fall. When interest rates rise, newly issued bonds offer higher rates, making existing bonds with lower rates less appealing. This

often leads investors to sell off existing bonds, decreasing their prices. However, bond yields move in the same direction as interest rates. Thus, when interest rates go up, bond yields increase as well, benefiting fixed-income investors who can purchase new bonds with higher yields.

3.2. The Impact on Asset Pricing

An increase in interest rates by the Federal Reserve could lead to an increase in market rates, which may affect the discount rate used in the DCF (Discounted Cash Flow) model. For bonds, changes in the discount rate directly impact their present value. A higher discount rate may result in a decrease in the present value of future cash flows, thereby affecting the valuation of the bond [10].

An interest rate hike by the Federal Reserve can influence market sentiment and investor demand. In the bond market, investors may pay closer attention to changes in market rates, which can affect their demand for and pricing of bonds. The forecasted cash flows in the DCF model may be influenced by this market sentiment and demand.

Different types of bonds may react differently to an interest rate hike by the Federal Reserve. For example, long-term bonds and short-term bonds may be affected to varying degrees. Additionally, high-risk bonds and investment-grade bonds may also exhibit different market performances. These specific impacts can result in variations in bond valuation within the DCF model.

4. Commodity Market

The combined impact of natural disasters, the recurring COVID-19 pandemic, the transition to green energy, and geopolitical conflicts has led to a prolonged and intensified supply shock beyond expectations. The global supply chain has experienced significant bottlenecks due to reduced production capacity and transportation difficulties caused by the pandemic [11]. Furthermore, the prices of global agricultural products have significantly increased due to the impact of extreme weather events and pandemic disruptions. In addition, factors such as economic recovery, ample liquidity, green transition, and geopolitical conflicts have led to a surge in energy prices, with ICE Brent crude and WTI crude oil prices briefly surpassing \$120 per barrel. The pandemic-related drop in production capacity, along with the push for a green transition, has driven up metal prices, particularly for metals like copper. The onset of the Ukraine crisis has further intensified risks in the global energy and agricultural markets, causing a further rise in international commodity prices. According to inflation data from the U.S. Department of Labor, it can be inferred that, firstly, due to the ongoing Ukraine crisis (with both Russia and Ukraine being key global exporters of food and energy), food and energy prices continue to rise steadily. Secondly, inflation dynamics in the U.S. economy are shifting: although commodity prices have declined, they remain relatively high, while prices for goods and services excluding food and energy have shown a noticeable increase.

Geopolitical conflicts often lead to fluctuations in oil prices. Ukraine is an important transit country for energy, and Russia is one of the world's largest natural gas exporters. Therefore, any geopolitical events that affect these regions can potentially impact oil prices. Tensions can cause market concerns about supply disruptions or instability, leading to an increase in oil prices. The Russia-Ukraine conflict may have an impact on the global oil supply chain. If the conflict results in interruptions or instability in energy supply, it can affect the global oil market and subsequently impact US oil prices. Geopolitical tensions can have an impact on the outlook for global economic growth. If the conflict escalates and leads to regional instability, it may weigh on the global economy, which could have a negative effect on oil demand and prices. Interest rate hikes can influence economic growth and, consequently, oil demand. Higher interest rates may lead to reduced borrowing and spending by businesses and consumers, potentially dampening economic activity and oil demand.

Interest rate differentials between countries can affect currency exchange rates. Changes in exchange rates can impact the price of oil, as oil is priced in U.S. dollars. If interest rate hikes strengthen the U.S. dollar, it could potentially make oil more expensive for buyers using other currencies, which may affect demand and prices. Interest rate hikes can influence investor sentiment and risk appetite. Higher interest rates may make other investments, such as bonds or savings accounts, more attractive compared to commodities like oil. This could potentially lead to a shift in investor behavior and impact oil prices.

Geopolitical conflicts usually trigger hedging demand, and investors may seek relatively safe assets, such as gold. Therefore, the price of gold may be affected by geopolitical tensions, leading to an upward trend. Geopolitical events can influence the exchange rate of the US dollar, which usually has an inverse relationship with gold prices. If geopolitical tensions cause the US dollar to depreciate, this could positively affect gold prices. Gold is frequently regarded as a store of value and an inflation hedge. However, when interest rates increase, the opportunity cost of holding gold rises since it does not provide interest or dividends. This could potentially decrease the demand for gold, leading to a decline in its prices.

Interest rate hikes can affect investor sentiment and risk perception. Higher interest rates may make other investments, such as bonds or savings accounts, more attractive compared to gold. This could potentially lead to a shift in investor behavior and impact gold prices. Interest rate hikes by the Federal Reserve are often implemented to control inflation. If interest rate hikes are successful in curbing inflationary pressures, it could potentially reduce the demand for gold as a hedge against inflation, which may impact prices.

5. Conclusion

This study found that the Russia-Ukraine conflict and the ongoing interest rate hikes by the Federal Reserve have significantly negatively impacted global financial and commodity markets. Specifically, in the U.S. market, there has been a noticeable shift of funds from the stock market to the bond market. The uncertainty in predicting future cash flows and changes in discount rates, exacerbated by the Russia-Ukraine conflict and Federal Reserve interest rate hikes, has greatly affected the accuracy of the discounted cash flow (DCF) model. These events have had a substantial impact on the market, creating significant opportunities for investors. Most fund managers and authoritative institutions are more optimistic about the future of the bond market than the stock market. The study did not examine the effects on other asset pricing models and anticipates further research in this area.

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