

The Impact of Monetary and Fiscal Policies on Financial Markets: Policy Miscalculations and Financial Market Turmoil

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Abstract: This paper research how macroeconomic policy effects financial markets by case analysis of the Federal Reserve's quantitative easing tightening policy and the United Kingdom government's Mini-budget policy. This presents a qualitative analysis of how specific policies in two cases affect different financial markets. In analyzing the first case, the discussion primarily centered on the adverse effects of a contraction in money supply and rising interest rates on the stock market, bond market, futures market, and credit market. In the second case, policies such as tax reductions and increased issuance of government bonds dampened the development of the foreign exchange market, stock market, and real estate market, while leading to significant volatility in the bond market. This paper shows how theories explain market responses to unexpected policy changes, providing empirical support for the intersection of macroeconomics and financial market theory. The study refers to the policy impacts of non-traditional financial markets, such as the real estate market and the foreign exchange market.

Keywords: Monetary Policy, Fiscal Policy, Financial Market.

1. Introduction

1.1. Research background

Monetary and fiscal policies are the primary instruments employed by central banks and governments to manage economic activity, maintain stability, and address inflation and unemployment [1]. Although their goals are similar, their implementations and contents differ. A country's central bank designs and enforces monetary policies, such as the Federal Reserve or China's central bank. The fundamental tools of monetary policy consist of interest rate modifications, open market operations, reserve requirements, quantitative easing, and forward guidance. Government announces fiscal policies. Its main tools are government spending, tax policies, and debt issuance.

The theoretical basis of macro-economic information release affecting financial markets includes efficient market hypothesis by Eugene F. Fama, arbitrage pricing model by Stephen A. Ross and rational expectations theory [2]. An efficient market is characterized by a large number of rational, profit-driven participants actively competing to forecast future market values of individual securities, where essential information is readily accessible to all participants [3]. The Arbitrage Pricing Theory (APT) is a pricing model based on multiple risk factors. This concept is applicable in explaining the

relationship between asset prices and various economic factors, as it suggests that market prices reflect all available information, including economic indicators, interest rates, and investor expectations. The factor model given by APT can be used as the theoretical basis for the influence of macroeconomic information on the return on assets in the financial market [2]. The rational expectations theory assumes rational people make effective decisions about economic variables using information they already know with the expectations based on economic theory and models, which has close correlation with forward guidance. When macroeconomic information is released with information that was not anticipated, the original expectations of rational people are disrupted. They will adjust their expectations based on the new information. This adjustment process is the direct impact of macroeconomic information release on the financial market [2].

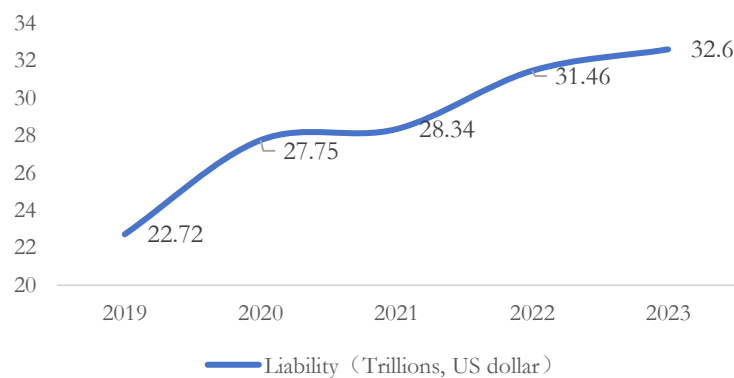


Figure 1: United States government liability (Trillions, dollar)
Data source: China Economic Information Center [4]
Photo credit: Original

Currently, the global economic environment is characterized by uncertainty. Sources of uncertainty can be considered from four parts: geopolitical conflict and great power game, rise of trade protectionism (such as the United States), governments debt crisis (Figure 1) and low growth rate of GDP (Figure 2). Figure 1 shows that the liability of American government was consistently increase from 2019 to 2023. Additionally, the growth rate of GDP in the United States, China and the United Kingdom were slowing down these years according to Figure 2.

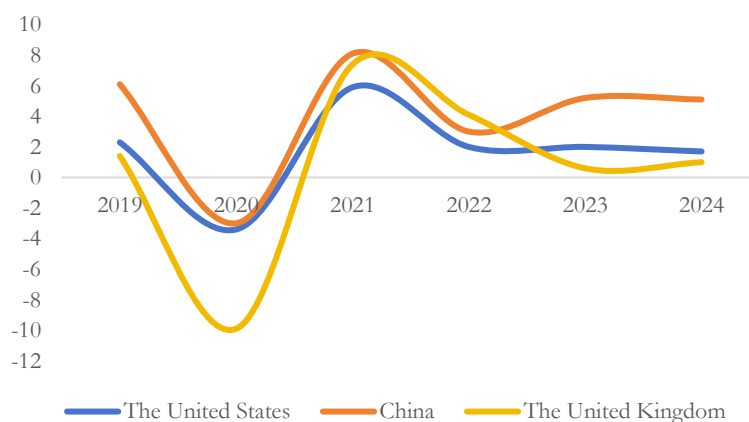


Figure 2: GDP Growth Rate (%)
Source: The world bank open data [5]
Photo credit: Original

1.2. Purpose of this research

This study aims to explore how monetary policy and fiscal policy influence different financial markets, helping to understand the impact mechanisms of various types of policies, especially in uncertain economic environments. In addition, investors and financial institutions often need to adjust their strategies based on changes in these policies. Through case analysis, this paper provides practical insights for understanding the effects of policy changes.

1.3. Paper structure

This paper will explore two case studies to demonstrate how monetary and fiscal policies influence different financial markets. The second section will focus on the Federal Reserve's 2013 tapering of quantitative easing, assessing its impact on financial markets through monetary policy. The third section will examine the UK mini-budget, highlighting the effects of fiscal policy on financial markets.

2. Monetary polices

2.1. Tapering of quantitative easing

The Federal Reserve's 2013 announcement of the "tapering of quantitative easing (QE)" serves as a key case study for analyzing the effects of monetary policy on equity, bond, futures, and credit markets. On May 22, 2013, during a congressional hearing, Federal Reserve Chairman Ben Bernanke first suggested that if economic indicators continued to show improvement, the Fed might begin scaling back its tapering of asset purchases in the next few meetings. This statement diverged from market expectations at that time, which was the Fed would continue to ease policy, and triggered financial market volatility [6]. This marked the first official signal from the Federal Reserve since 2008 indicating a potential shift away from expansionary policies. Following the outbreak of the global financial crisis in 2008, multiple rounds of quantitative easing were implemented [7]. The policy sought to stimulate economic recovery by purchasing long-term Treasury bonds and mortgage-backed securities, thereby lowering long-term interest rates. According to the Figure 3, during the period of quantitative easing, the 10-year Treasury yield experienced a decline from 2009 to 2012, which aligned with the expectation of the policy. Since expectations of a recovery in the US economy and a possible rise in inflation increased between 2012 and 2013, a significantly rose of 10-year Treasury yield could be witnessed. Besides, the research "Monetary Policy at the Zero Lower Bound" indicates that in the period of QE3, the Fed's purchases increased market liquidity and reduced the relative attractiveness of treasuries, thus pushing up the term premium [8].

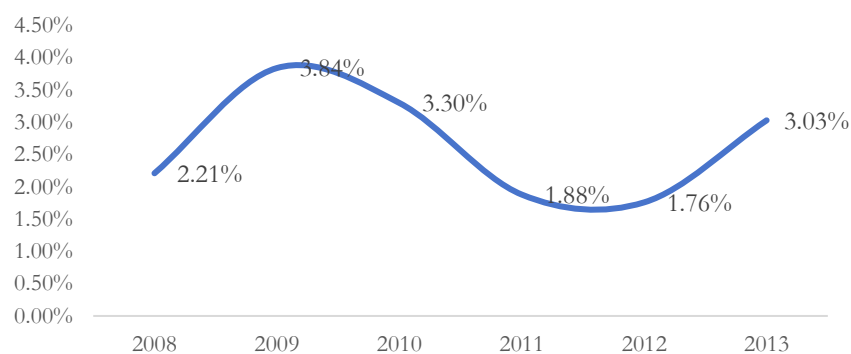


Figure 3: The United States 10-year treasury yield
Data source: Investing.com [9]
Photo credit: Original

2.2. Economic impacts

In this context, monetary policy instruments that worth further discussion are reducing the money supply and increasing interest rates. The Federal Reserve influenced expectations of them by announcing reductions in asset purchases.

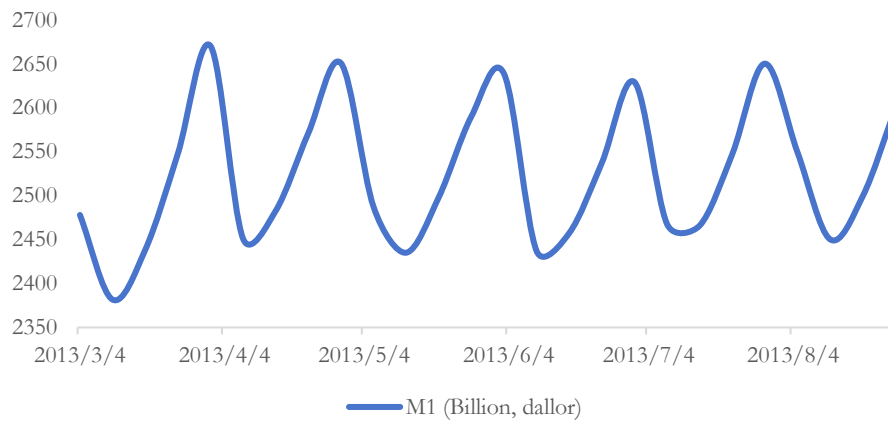


Figure 4: The United States money supply
Data source: Federal Reserve Economic Data [10]
Photo credit: Original

Generally speaking, the tightening of the money supply directly led to a decrease in market liquidity, which might prompt investors to scale back equity investments, particularly in high-valuation growth stocks that rely on ample liquidity support. At the same time, investors became more cautious in their expectations, withdrawing from high-risk assets and shifting toward more conservative investment strategies, like bonds. As the Figure 4 shows, the growth of M1 slowed down, compared with the overall increased historical trend. Market expectations did not directly affect the M2 money supply. However, due to rising interest rate expectations, businesses and individuals might transfer part of their funds from demand deposits (a component of M1) to time deposits (a component of M2), leading to a short-term slowdown or decline in M1 growth.

The impact on the futures market is also relatively direct. A reduction in the money supply may can result in the appreciation of the U.S. dollar, which means commodities priced in dollars, such as gold, oil, and copper, would become more expensive for non-dollar holders, causing a decline in demand and price as well.

Regarding interest rate expectations, the Federal Reserve's announcement of reduction in asset purchases decreased demand for bonds, which led to a decline in bond prices and a rise in yields. A surge of average yield on long-term U.S. Treasury bonds (over a 10 years) can be seen in the Figure 5.

Long-term interest rates, including mortgage rates and corporate bond rates, also rose. This situation would create higher financing costs for businesses and consumers in the credit markets, higher mortgage rates and reduced demand. In general, in the case of the Fed's announcement of the tapering of quantitative easing in 2013, the financial markets were mainly affected by the bond, futures and credit markets.

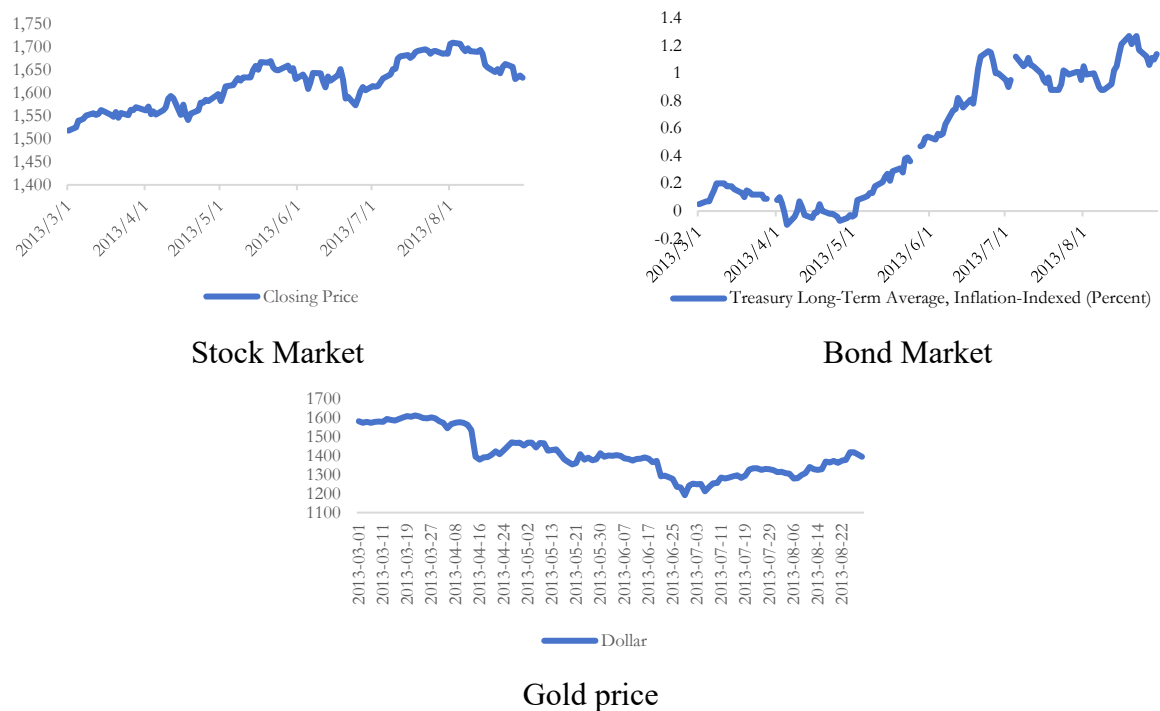


Figure 5: Dynamic changes in stock, money and gold market

Data source: Federal Reserve Economic Data [11], Federal Reserve Bank of St. Louis [12], and London Bullion Market Association [13].

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3. Fiscal policies

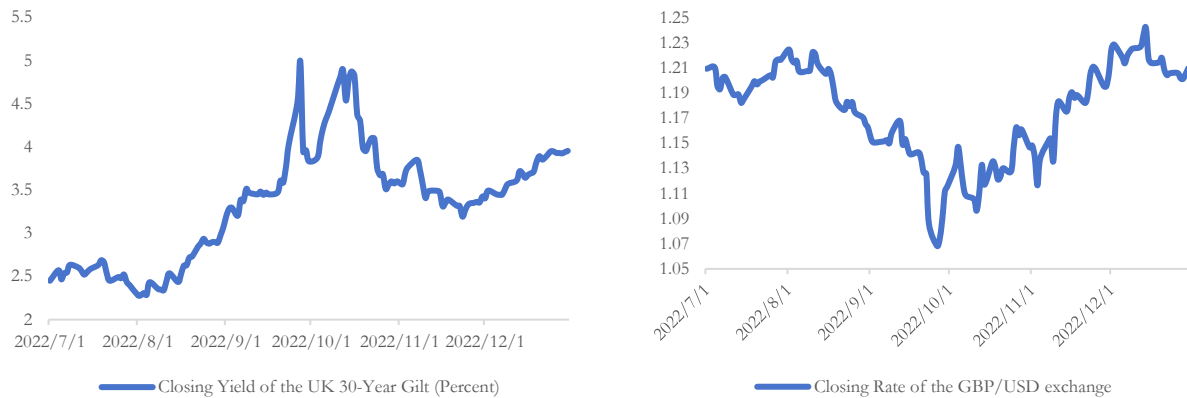
3.1. Policy

The UK mini-budget was selected as the second case study to analyze effects of fiscal policy on financial markets. The UK mini-budget refers to a series of economic policies unveiled by Chancellor of the Exchequer Kwasi Kwarteng on September 23, 2022, on behalf of the Liz Truss administration. Its core contents include large-scale tax cuts and energy subsidies aimed at stimulating economic growth and attracting investment. On the one hand, the policy particularly reduces personal income tax for the wealthy, including the removal of the highest 45% tax rate for top earners and the adjustment of the initial tax rate from 20% to 19%. Given that the UK imposes personal income tax on a progressive scale, £5 billion in personal income tax will be gradually reduced. On the other hand, the UK government plans to spend £100 billion to subsidize people's daily energy consumption in response to the energy crisis triggered by the Russia-Ukraine war [14]. Tax policy and debt issuance are the main instruments of fiscal policy. However, these policies were considered overly aggressive and failed to adequately take into account the economic conditions and debt levels at that time. The mini-budget was not fully overturned until October 25 in that year, when Rishi Sunak took office as the UK Prime Minister and implemented a more conservative fiscal policy.

3.2. Economic impacts

Under the context of reduced government revenue caused by the tax cut plan, the government had to issue more bonds, which further expanding the fiscal deficit. This situation directly influenced the

bond market. The yield on UK government bonds largely increased, especially on the UK 30-Year Gilt, since government needed more debt financing. The Figure 6 highlights violent fluctuations of the UK 30-Year Gilt yield between September 23 and October 25, during which was a surge to 4.987% on September 27.



Bond Market

Foreign Exchange Market

Figure 6: Dynamic changes in bond and foreign exchange market

Data source: Investing.com [15, 16].

Photo credit: Original

Subsequently, the foreign exchange market was also severely affected. After the Mini-budget was announced, investors had lost confidence in the United Kingdom's fiscal sustainability, leading to a sell-off of the British pound. As Figure 6 displays, the GBP to USD exchange rate experienced a dramatic drop after the announcement of mini-budget and reached the bottom at 1.0684% on the trading day after the 23rd.

Turning to the stock market, high-yield bonds became more attractive than stocks, which caused capital to flow into the bond market from stock market. As a result, the UK FTSE 100 Index declined at one point (Figure 7).

For the real estate market, these policies increased consumers' disposable income, leading to higher demand, which should have driven up housing prices. However, in fact, the rise in UK government bond yields pushed up market benchmark interest rates. The growth speed of the Bank of England base rate increased after August 4 in the Figure 7.

This rose the cost of capital for financial institutions, which in turn rose mortgage rates. Housing cost grew, so the liquidity and demand in the real estate market reduced, instead. The above analysis described the impact of the UK Treasury's mini-budget on the bond, foreign exchange, stock, and real estate markets.

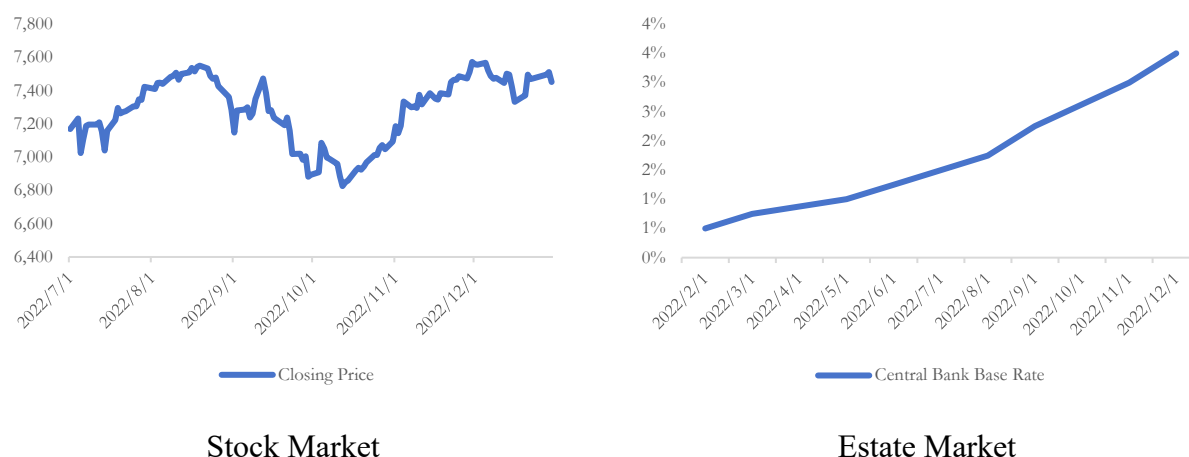


Figure 7: Dynamic changes in stock and estate market
Data source: Investing.com [17, 18]
Photo credit: Original

4. Conclusion

4.1. State the conclusion and summary

In conclusion, when considering monetary policy, a decrease in the money supply and a rise in interest rates typically restrain financial market development but enhance activity in the foreign exchange market. A reduction in the money supply decreases liquidity in the financial market, lowers investor demand for investments, and makes return expectations more cautious, especially in the stock market. However, this will lead to an appreciation of the domestic currency in the foreign exchange market. This will further lead to lower commodity futures prices. Looking back at the quantitative easing period, an expansion in the money supply typically stimulated financial market prosperity. However, excessive supply might lead to financial markets bubbles, which was one of the main reasons the Federal Reserve unexpectedly decided to end quantitative easing earlier than anticipated. Higher interest rates not only directly increased bond yields and lowered bond prices but also raised financing costs in the credit market, suppressing investment and profit growth. When considering fiscal policies, in theory, tax cuts should boost the financial market and promote its development. However, the UK government's act of issuing additional treasury bonds had caused investors to lose confidence. In the situation where bond yields rose, a series of benchmark market interest rates had to be increased. This suppressed the financial market, with the real estate market taking the lead. The loss of confidence in the pound in the foreign exchange market led to capital outflows and domestic inflation.

4.2. Suggestion

Any macroeconomic policy must be taken into account of its impact on the financial markets. It is necessary to guide the expectations of economic entities in advance to avoid causing market fluctuations and a loss of confidence. In the case of the QE policy adjustment in 2013, although the Federal Reserve issued forward guidance indicating that low interest rates would be maintained, this was not believed. The unexpected reduction of quantitative easing increased market volatility, forcing the Federal Reserve to delay its QE tapering plan. Besides, the release of the UK's mini-budget policy further triggered market panic, undermining investor and consumer confidence, and forced the UK government and central bank to undertake emergency interventions.

4.3. Innovation

This study differs from previous literature in several ways. First, the analysis involves non-traditional financial markets. Second, the selected cases align with the current global economic uncertainty, examining how monetary and fiscal policies function under such conditions. Third, this paper focuses on explaining the impact chains and underlying logic.

4.4. Shortcomings and improvements

This study also has several limitations. First, due to space constraints, the number of cases discussed is limited, and the national conditions and policies covered are relatively few. This makes it difficult to generalize the research conclusions to broader contexts. Secondly, this case analysis primarily relies on qualitative descriptions without quantitative calculating analysis. It may affect the study's persuasiveness and reliability. Thirdly, in the analysis of logical chains, there may be subjective assumptions.

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