

Analyzing the Relationship Between the Fed Interest Rates and Foreign Exchange Markets

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Abstract: The research on analyzing the relationship between fed interest rates and foreign exchange markets aims to establish how fed interest rates and foreign exchange rates are related based on capital flow between different countries. The research is to answer the question of how changes in federal interest rates affect capital flow between other countries since it affects the foreign exchange market. The research reviews various scholarly journals as a source of literature on previous studies done within the research area. The methodology to be applied is the empirical research approach. Data is to be collected from verified journals and research papers. Linear regression is the data analysis method for the research, and XSLAT software will be used in data analysis. Independent and dependent variables will be developed based on the research objectives to help the study. Secondary analysis using linear regression has been preferred because of how reliable, time-saving and cost-effective. The expected results from the research show that changes in federal interest rates affect the flow of capital since foreign exchange is implicated. Factors such as currency value and economic level influence federal interest rates and foreign exchange.

Keywords: Federal Interest Rate, Foreign Exchange Capital Flow, Currency Value, Economic fluctuation.

1. Introduction

The global economic system is heavily influenced by interest rates and foreign exchange markets, considering how every country trade and do business transactions which sustains the system. The federal interest rates and foreign exchange markets define most countries' financial or monetary conditions based on how human socioeconomic activities [1]. Various countries can carry out economic activities that impact critical aspects of the foreign exchange and interest rates, considering each country has a different currency with distinctive values. Banks and financial institutions that manage interest rates and foreign exchange try to improve the global economy as dictated by the economic conditions influencing interest rates and foreign exchange [2].

Foreign exchange and interest rates are related, and this is based on how they are connected to currency value. The two aspects influence each other through how economic activities thrive. Foreign exchange and federal reserve interest rates can promote business activities in a country, and this depends on how the interest rates are according to the foreign exchange [3]. As stated by Rebucci et al. In 2022, when the federal reserve increases the interest rates, it makes it uncondusive for foreign investment since the currency value is lowered in the process, significantly impacting the foreign exchange market [4].

Monetary policies significantly affect economic activities, influencing foreign exchange and federal reserve interest rates. Major economic conditions within a country are related to the foreign exchange market or the federal reserve interest rates presenting their importance [1]. Therefore, analyzing the relationship between interest rates and foreign exchange markets in the global economy is worth studying based on how it is essential to show its impact on the economic and financial system.

1.1. Research Problem

The research problem establishes how changes in federal reserve interest rates affect the foreign exchange market by the flow of capital between countries implicated in the process. The research problem helps focus on the global economy from the perspective of how money is invested as dictated by the interest rates and foreign exchange market, which can significantly implicate business development and growth for an investor in a country. The analysis of the problem will then help have a conclusive finding on how federal interest rates and the foreign exchange markets are related depending on the flow of capital.

The significance of the research is to help understand the relationship between interest rates and the foreign exchange market. Findings from the research will provide detailed information on how the flow of capital between countries dramatically depends on the federal interest rates and foreign exchange markets. Insights from the study will help extend research on foreign exchange markets, national interest, and capital flow influence on economic activities between countries or globally. The study is to be resourceful in carrying out in-depth research on how foreign exchange markets in different countries implicate investors in the global economy. The study shows federal interest rates' role in relation to foreign exchange based on capital flowing in other countries.

1.2. Objectives and Research Questions

The main research objectives include the following;

- (1) To find out how changes in federal reserve interest rates affect the flow of capital in different countries due to the effect on the foreign exchange market.
- (2) To establish the factors that influence changes in federal interest rates affecting the flow of capital between different countries concerning foreign exchange markets.
- (3) Assessing the impact of the changes in federal reserve interest rates affecting the flow of capital, which shows the

effect on the foreign exchange market.

The research questions of the research are;

(1) How do the changes in federal interest rates affect the flow of capital between different countries?

(2) What factors influence the changes in federal interest rates affecting the flow of capital between 2 different countries?

(3) What is the impact of the Federal Reserve interest rate changes on the flow of capital between different countries in the foreign exchange market?

2. Literature Review

In 2021, Bianchi and Lorenzoni discussed the prudential use of capital control and foreign currency reserves. The paper outlines how foreign currency reserves control capital flow. The methodology approach used in the paper is an empirical observation, and descriptive statistics are used in presenting the empirical findings [5]. The study's results explained how long terms and short terms affect the flow of capital due to capital controls and foreign currency reserves policies [5]. The paper is relevant in how it helps in explaining how capital flow is influenced by the interest rate, which has been covered as part of the control which affects foreign currency reserves. However, the paper needs to be more consistent in relating how the capital controls implicate federal interest rates since it has established a relationship between capital flow and foreign currency reserves, which is part of what the research aims to address.

In 2022, Gelos et al researched the volatility of capital flow in relation to emerging markets that influence federal reserve interest rates based on the foreign exchange market, aiming to explain policies or frameworks that affect capital flow in the global economy [6]. The research method is quantile regression and descriptive statistics to collect. The results from the research highlight how capital movement between different countries is significantly implicated by global financial conditions, which affects the federal reserve interest rates and the foreign exchange markets [6]. The literature is helpful as evidence of how capital flow between countries is implicated by several factors based on federal reserve interest rates hence portraying the relation to the foreign exchange market. The article is a working paper, but still, it has a gap on how federal interest rate policies or financial conditions impact capital movement to help explain the relation to the foreign exchange markets.

Koepke (2023) researched the factors driving capital flow between different countries' emerging markets. The empirical research focused on explaining how various aspects influenced capital flow, policies addressing it, and its effect on capital flow [7]. The methodology applied in the research paper is an empirical approach [7]. From the data analyzed, the research results outline how interest rates greatly implicate capital flow for investors since it is a pull or a push aspect in the global economy [7]. The foreign exchange market has been covered as part of capital controls, illustrating how the empirical study is essential in establishing a relation between federal interest rates and the foreign exchange market. However, the paper needs to fill in testing the hypothesis on the impact of the drives or factors on capital flows based on the federal interest rates.

In 2022, Miranda-Agrippino and Rey did a prior study on the global financial cycle based on the international capital flows and global factors such as the federal interest reserve by banks such as the U.S. federal reserve and European Central

Bank. The research methodology applied is an empirical study, and the research findings show how the global financial cycle for capital flow is influenced by global variables, including the interest rates and the foreign exchange reserve [8]. The paper is relevant and resourceful since it discusses the relation of capital flow to the interest rates and exchange market, helping to establish the relationship and the factors influencing the changes in the federal reserve, which affect capital flows. The article has inconsistency in showing changes in the interest rates due to the global economy.

3. Research Method

3.1. Methodology

The research process will involve data collection and analysis, and an empirical method will be applied. Data collection will involve secondary analysis. Reliable secondary sources are to be used to answer the research questions based on previous studies and findings collected in relation to the research topic [9]. The sources include reviewed information from financial institutions and peer-reviewed scholarly journals, which directly contribute with evidence on the research topic [9]. This will be useful in explaining how various foreign exchange market support capital flow based on the changes caused by the federal reserve interest rates.

The linear regression econometric technique will be used in analyzing the relationship between interest and foreign exchange rates. Linear regression analysis involves using a dependent variable, continuous and independent variables [10]. The independent variable for the study is the federal reserve interest rates which will focus on the interest rates over time on the capital flow between different countries to ascertain the relationship with the foreign exchange market. Interest rates will show any increase or decrease in relation to the foreign exchange market for capital flow. Conversely, the dependent variable includes the foreign exchange market rates and capital movement between nations. The dependent variables are supposed to help explain the relationship and provide evidence for the research [10].

3.2. Data Analysis

The software to be used in the analysis is XLSTAT which has a higher rating in providing accurate analysis for the linear regression econometric model. The software package is a one-stop package for analytical tasks and can be easily integrated with Excel since it is fully compatible [11]. The software is good at processing descriptive statistics, which is the case in this study. The interpretation of the data is also accurate and helps in critical analysis for better comprehensive results on the research topic. However, the software has shortcomings, such as more flexibility in manipulating statistical functions to get a broad data perspective.

3.3. Methodology Justification

Secondary analysis using linear regression analysis is the preferred methodology based on how a researcher can use prior studies to expound on a research topic; hence reliable, saves time, and is cost-effective. Secondary data analysis relies on relevant primary data from reliable sources [9]. The findings are conveniently sampled based on the main concept being researched and are analyzed to give objective results which address the research questions [9]. However, the

methodology is limited by how it may provide only some of the necessary information, showing consistency for secondary data analysis [12].

4. Conclusion

The research project will tackle the problem of how the federal reserve interest rate influences foreign exchange based on the flow of capital. The study will focus on the changes in federal interest rates, factors influencing the changes and the impact of the changes on the federal reserve interest rate on the foreign exchange market based on capital flow to show the relationship between the two parameters. Empirical methods and linear regression analysis will be used in the methodology and data analysis. The expected findings are to show there exists a relationship between federal reserve interest rates and the foreign exchange market based on how changes in the reserve interest rate implicate the flow of capital.

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