Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Master's Thesis

Euro Currency

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DIPLOMA THESIS ASSIGNMENT

Kristian Karamavrov

World Economy

Thesis title

Euro Currency

Objectives of thesis

The aim of this work is to justify the need for the development of the euro currency.
- define the concept of the euro currency, as well as the main functions performed by them;
- to review the main factors affecting changes in the euro exchange rate;
- to evaluate the main problems in the modern international currency market;
- to evaluate euro transactions in the international foreign exchange market;
- make a forecast for the dynamics of the euro exchange rate into the future.

Methodology

During the performance of this work, the following methods and techniques will be used:

- economic-statistical;

- dynamic;

- system and comparative analysis;

- graphic tools.

To make a forecast, will be used the method of trend analysis.

The proposed extent of the thesis

60 – 80 pages

Keywords

European Central Bank, Euro, Exchange Rate, Currency, Eurozone.

Recommended information sources

David Marsh. The Euro: The Battle for the New Global Currency – August 23, 2011, ISBN-13: 978-0300127312
David Marsh. The Euro: The Politics of the New Global Currency – May 5, 2009, ISBN-13: 978-0300127300
Dirk Meyer. European Union and Monetary Union in Permanent Crisis II: Scenarios for the future of the euro – September 1, 2022, ISBN-13: 978-3658386450
Joseph E. Stiglitz. The Euro: How a Common Currency Threatens the Future of Europe – November 28, 2017, ISBN-10: 0393354105
Markus K. Brunnermeier. The Euro and the Battle of Ideas – September 13, 2016, ISBN-13: 978-0691172927
Martin Sandbu. Europe's Orphan: The Future of the Euro and the Politics of Debt – March 14, 2017, ISBN-10: 069116830X
Matthias Matthijs, Mark Blyth. The Future of the Euro – April 2, 2015, ISBN-13: 978-0190233235
Paul-Jacques Lehmann. The Future of the Euro Currency – March 1, 2019, ISBN-13: 978-1786303134
Roderick Macdonald. Eurocritical: A Crisis of the Euro Currency -February 19, 2018, ISBN-13: 978-1137346278
Thomas Mayer. Europe's Unfinished Currency: The Political Economics of the Euro – October 1, 2012, ISBN-13: 978-0857285485

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Declaration

I certify that my independent research and inquiry served as the foundation for the research provided in this thesis. The reference section includes a list of all sources that have been properly acknowledged and cited throughout this thesis. Any information, facts, or statements gleaned from outside sources have been accurately referenced and cited by accepted academic norms.

In Prague on 13 March

Gratitude

I would like to thank **Ing. Tomáš Maier, Ph.D.** for the expert supervision of my thesis, the time spent, valuable advice, and the human approach during consultations on the content of this thesis. I can confidently recommend the professor to other students. I would also like to thank my family, friends, and colleagues who have supported me throughout my journey.

Euro Currency

Abstract

This study explores the significance of the euro as a global reserve currency and its role in expanding international trade and capital flows. The aim is to evaluate the theoretical foundations of the euro, analyze current trends, and forecast exchange rate changes. The thesis comprises an introduction, three main chapters, a conclusion, and a list of references. The object of research is the euro currency and world currencies, focusing on their current trends. The purpose is to evaluate the theoretical basis of the euro, assess its current state, and forecast exchange rate fluctuations. The introduction establishes topic relevance, outlines the thesis goal, defines the research object and subject, and sets objectives. The first chapter examines the euro's essence, formation stages, factors, and risks. The second chapter assesses transactions with euro and world currencies, and their impact on the monetary system. The third chapter addresses modern forecasting methods, regulatory challenges, euro development issues, and offers a currency dynamics forecast. The conclusion summarizes the main study findings.

Keywords: European Central Band ank, euro, exchange rate, growth dynamics forecast, factors affecting the growth.

Měna Euro

Abstrakt

Tato studie zkoumá význam eura jako světové rezervní měny a jeho roli v rozšiřujícím se mezinárodním obchodu a kapitálových tocích. Cílem je zhodnotit teoretické základy eura, analyzovat současné trendy a předpovědět změny směnných kurzů. Práce se skládá z úvodu, tří hlavních kapitol, závěru a seznamu literatury. Předmětem výzkumu je měna euro a světové měny se zaměřením na jejich současné trendy. Cílem je zhodnotit teoretický základ eura, posoudit jeho současný stav a předpovědět změny směnných kurzů. V úvodu je stanovena relevance tématu, nastíněn cíl práce, vymezen objekt a předmět výzkumu a stanoveny cíle. První kapitola zkoumá podstatu eura, fáze jeho vzniku, faktory a rizika. Druhá kapitola hodnotí transakce s eurem a světovými měnami a jejich dopad na měnový systém. Třetí kapitola se zabývá moderními metodami prognózování, regulačními problémy, otázkami vývoje eura a nabízí prognózu dynamiky měny. Závěr shrnuje hlavní závěry studie.

Klíčová slova: Evropská centrální banka, euro, směnný kurz, prognóza dynamiky růstu, faktory ovlivňující růst.

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Introduction

In the global economy, currencies play an indispensable and pivotal role in ensuring stability, liquidity, and the development of both national and global financial systems. Currencies serve not only to facilitate the exchange of goods and services but also act as a financial barometer, reflecting an economy's health, inflation levels, the soundness of financial institutions, and even political stability.

One of the currencies that have gained special significance and captivated the attention of the global economic community is the euro. Introduced relatively recently in 1999, this young world reserve currency has emerged as a remarkable and distinctive phenomenon in the annals of global monetary and economic history.

The euro not only symbolizes integration and the creation of a unified economic space within Europe but also wields considerable influence over financial markets and trade relations on a global scale. It serves as a bridge between national currencies, providing stability during financial turbulence.

Exploring the role and dynamics of the euro is not only of academic interest but also holds practical significance in an era of global shifts and economic dynamism. This study delves into the historical and contemporary facets of the euro, its impact on financial stability and development, and the challenges and prospects that lie ahead for this youthful global currency.

In the aftermath of the global financial-economic crisis of 2008-2010, active debates have resumed about the future of the US dollar and, consequently, the international monetary order. The debate about the dollar's status as a key international currency is not new. It dates back to the 1960s, when the sustainability of the Bretton Woods system began to be questioned and has arisen almost every time the dollar has lost significant value, and since, unlike in the past, it has potential alternatives, notably the euro and perhaps the Chinese yuan in the longer term.

Will the dollar this time have the status of a key currency, or will a new international monetary order emerge in which the euro currency will dominate? To answer these important questions, we need a firm grasp of the determinants of a currency's international status and what the international use of the currency entails for the issuing country.

This thesis is a systematic and comprehensive review of the literature on international currencies, covering both economic and political studies and with a particular focus on the following issues: the concept of the euro currency, the benefits and costs of euro currency issuance, the determinants of the euro currency, the status of the euro currency, and prospects for the current euro-centric international monetary order. Assessing competing prospects for the future of the international monetary system, this paper envisions the emergence of an uneven multiple

international monetary systems in which the euro and the yuan play the role of regional currencies in Europe and Asia, respectively, limiting the dollar's influence in these regions. Still, the dollar retains its status as the primary international currency at the global level.

This perspective of the future international monetary order could change if important new determinants of international currency status are discovered leading to events different from my prediction (though of course, it is also possible that they could reinforce it). This study is not to present an infallible forecast for the future, but rather to provide a useful framework to help develop a better analytical framework for studying international currencies and the euro currency. In this regard, specific political-economic factors, including domestic and systemic factors, are considered important issues for further study of international currencies. These include domestic players, preferences for currency internationalization, financial liberalization, the role of the state, and international political power.

The relevance of the study is determined by the growing role of the reserve currencies in the world economy due to the expansion of international trade and international capital flows over the past decades. Studying the role of the euro currency in the world economy will allow us to understand better the direction of development of the world monetary system and provide recommendations for its more balanced organization.

Objectives

Define the Concept of the Euro Currency and its Main Functions:

Introduction to the Euro: Provide a comprehensive definition of the euro currency, highlighting its origins, establishment, and the countries that use it. Discuss the historical background that led to the introduction of the euro, including the Economic and Monetary Union (EMU) and the Maastricht Treaty. Explore the key features of the euro, such as its physical representation, denominations, and the role of the European Central Bank (ECB) in its issuance.

Review Main Factors Affecting Changes in the Euro Exchange Rate:

Explore the impact of interest rates set by the ECB on the euro exchange rate, considering how rate changes influence the currency's attractiveness to investors. Discuss how economic indicators, such as GDP growth, inflation rates, and employment figures, can affect the perception of the euro's strength or weakness. Examine the role of political stability in the Eurozone and its impact on the euro exchange rate, considering how political events can influence investor confidence. Analyze how broader global economic conditions, including trade dynamics and geopolitical events, can contribute to fluctuations in the euro exchange rate.

Evaluate the Main Problems in the Modern International Currency Market:

Discuss the challenges associated with exchange rate volatility in the international currency market and its implications for businesses and investors. Explore how speculative activities and shifts in market sentiment can lead to short-term fluctuations in currency values. Analyze the concept of currency wars and their potential impact on the stability of the international currency market. Discuss issues related to policy divergence among major central banks and how it can contribute to market uncertainties.

Evaluate Euro Transactions in the International Foreign Exchange Market:

Examine the significance of the euro in international trade transactions, considering its role as one of the world's major reserve currencies. Discuss instances where the euro may act as a safe-haven currency during periods of global economic uncertainty or financial turmoil. Explore how the euro is traded in the international foreign exchange market, including the major currency pairs involving the euro.

Make a Forecast for the Dynamics of the Euro Exchange Rate in 2024:

Consider the expected economic conditions in the Eurozone and globally in 2024, including GDP growth, inflation projections, and employment trends. Analyze the anticipated direction of ECB interest rates and how potential changes may impact the euro exchange rate. Take into account geopolitical developments that could influence the euro, such as trade relations, political stability, and international conflicts. Consider broader global macroeconomic trends and their potential impact on the euro exchange rate.

Methodology

Economic-Statistical Method:

The economic-statistical method involves gathering relevant data from various sources, including economic indicators, financial reports, and statistical databases. Quantitative data, such as GDP growth, inflation rates, trade balances, and employment figures, were collected and analyzed to provide a quantitative understanding of economic trends.

Dynamic Method:

The dynamic method involves examining changes in variables over time. Time-series analysis was employed to study the historical evolution of economic indicators, exchange rates, and other relevant factors affecting the euro. Dynamic analysis helps identify trends, patterns, and cycles in economic and financial data, providing insights into the dynamics of the Eurozone economy and the foreign exchange market.

System and Comparative Analysis:

The system analysis approach involves examining the Eurozone's economic system as a whole. Comparative analysis was used to contrast the performance of the Eurozone with other regions or currencies. System and comparative analysis helped identify relationships and interdependencies between different economic variables, policy measures, and external factors affecting the euro.

Graphic Tools:

Graphic tools, such as charts, graphs, and diagrams, were utilized to represent complex economic and financial data visually. This enhances the clarity of information presentation and facilitates a better understanding of trends. Line charts and trend graphs were used to visually highlight trends, patterns, and significant turning points in the data, aiding in interpreting historical and forecasted information.

For Forecasting:

To make the most accurate and plausible forecast, trend and fundamental analyses were used. The trend analysis method involves examining historical data to identify consistent patterns or trends. Past trends in economic indicators and exchange rates were analyzed to identify potential future patterns. The method of trend analysis was employed to make forecasts for the dynamics of the euro exchange rate in 2024. This involves extrapolating historical trends to project potential future movements. In trend analysis, I used such methods as the determination of long-term trends by applying a trend function where I plotted long-term trendlines on the price chart and identified key support and resistance levels. I used a Japanese Candlestick Pattern. Each green rectangle indicates a growth in the price (bullish sentiment) and each red rectangle indicates a decrease in the price (bearish sentiment). On the graph, there are depicted 2 support and 2 resistance lines. Using the graphical method, I demonstrated the projected price movement by constructing two triangles that cross all support and resistance lines. This method allows us to see further price movement and make a forecast at the point of intersection of the lines. Then I calculated a Technical Indicator Simple Moving Average (SMA) using formula (1.5) SMA= $\frac{A1+A2+\ldots+An}{n}$

SMA = Simple Moving Average

A_n = a price of a currency at period n

n = the number of total periods

SMA (50) = $\frac{53.9841}{50} \approx 1.0796$

SMA (200) =$\frac{220.5603}{200} \approx 1.1028$

to analyze the price action and generate trading signals. I used longer-term moving averages 50-day and 200-day to identify the overall trend direction. The chart pattern method (Falling Wedge Pattern) was used, where I identified a pattern on the chart that indicates the future movement of the exchange rate. Another method that was used is a Fundamental Analysis (not only in the third chapters but also in the first and second chapters), where key macroeconomic indicators were analyzed, such as inflation and unemployment rate, the impact of the Federal Reserve, ECB meetings and interest rate changes, economic data releases, central bank policies, and geopolitical events were considered.

Formulas:

(1.1)[1] $CAGR = \frac{(final\ value)^{\frac{1}{number\ of\ years}}}{(initial\ value)} - 1$

CAGR = Compound Annual Growth Rate

[1] CFI Team. (2024). CAGR [online]. [cit. 15-03-2024] Retrieved from: https://corporatefinanceinstitute.com/resources/valuation/what-is-cagr

(1.2)[2] $USDX = 50{,}14348112 * USDEUR^{0{,}576} * USDJPY^{0{,}136} * USDGBP^{0{,}119} * USDCAD^{0{,}091} * USDSEK^{0{,}042} * USDCHF^{0{,}036}$

USDX = Dollar Index

EUR = Euro

JPY = Japanese Yen

GBP = British Pound

CAD = Canadian Dollar

SEK = Swedish Krona

CHF = Swiss Frank

(1.3) $REER = CER^N * CER^N * CER^N * 100$

REER = Real Effective Exchange Rate

CER = Country Exchange Rate

(1.4) $M = V - V_{10}$

M = Momentum Line

V = Latest price

V_{10} = Closing price 10 days ago

(1.5) SMA= $\frac{A1+A2+\ldots+An}{n}$

SMA = Simple Moving Average

A_n = a price of a currency at period n

n = the number of total periods

(1.6) $A = \frac{1}{n}\sum_{i=1}^{n} a_i$

A = Arithmetic Mean

n = Number of Values

a_i = Dataset Values

(1.7) $C = \frac{X_2 - X_1}{X_1}$

C = Relative Change

x_1 = Initial Value

x_2 = Final Value

[2] Tradingpedia. (2024). United States Dollar Index [online]. [cit. 15-03-2024] Retrieved from: https://www.tradingpedia.com/day-trading-academy/us-dollar-index

1. The Theoretical Basis of The Euro.

1.1 Stages of World Currencies Formation, Their Characteristics.

Since the mid-nineteenth century, the International Monetary System has gone through four phases: the gold standard, which prevailed until the outbreak of World War I; the interwar period; the Bretton Woods system after World War II, which ended in 1973; and the current dollar system, which began in 1976 with the advent of the universal floating exchange rate.[3]

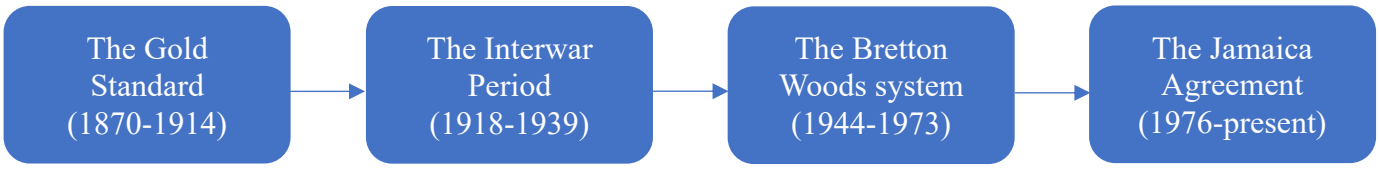

Table 1 – The Evolution of the International Monetary System.

Source: Created by Author.[4]

The Gold Standard (1870-1914) originated in 1821 when the United Kingdom officially adopted gold as the basis for its currency. Later in the century, other countries in Europe, but also Japan and the United States, adopted the gold standard. Gold, because of its beauty, its worldwide distribution, the facility with which it could be obtained from the streams by crude methods of "panning," and the ease with which it could be "worked," probably had a wider use as a medium of exchange in very ancient times, and among primitive peoples in modern times, than any other metal. [5] Given the superiority of the United Kingdom in world trade and finance, London was the center of the MBS built on the gold standard. Under the Paris system, the main task of the central bank was to maintain an official parity between its currency and gold. Maintaining a fixed price for gold by all participants in the system, in turn, ensured fixed exchange rates between their currencies. They were maintaining gold convertibility at official parity and required sufficient gold reserves. External balancing thus consisted not of achieving a current account target, but rather of keeping the balance of payments (BoP) in equilibrium - or at least limiting sharp fluctuations in the balance of payments - to avoid large movements in gold reserves. The Paris system was in many ways a product of the nineteenth-century economic order.

The Interwar Period (1918-1939). Governments largely freed themselves from the constraints of the gold standard during World War I to print the money needed to finance the war effort. As a

[3] World scientific. (2015). Part One: Evolution of the International Monetary System [online]. [cit. 15-03-2024] Retrieved from: https://www.worldscientific.com/doi/abs/10.1142/9789814699051_others01
[4] ScienceDirect. (2014). Gold standard [online]. [cit. 15-03-2024] Retrieved from: https://www.sciencedirect.com/topics/economics-econometrics-and-finance/gold-standard
[5] Dr. Edwin Walter Kemmerer. (2018). Gold and the Gold Standard: The Story of Gold Money, Past, Present and Future. Retrieved from: [book] [cit. 19-11-2023]

result, the money supply and price level were much higher in 1918 than at the beginning of the war.[6] The U.S. returned to gold in 1919, but other countries, including Britain, continued to allow their currencies to fluctuate freely for several years after the war. After 1925, when Britain returned to the gold standard, pegging the pound sterling to gold at its prewar parity, the MBS became a gold exchange standard, a variant of the prewar system. The new fixed exchange rate system added to gold a new category of international reserves, currencies backed entirely by gold, mainly sterling and the dollar, in hopes of avoiding the gold shortage problem that at times plagued the gold standard. The gold standard was an attempt to restore the useful properties of the classical gold standard in terms of external goals, while also striving to achieve internal goals that became much more prominent in the new socio-political environment that prevailed after the First World—war in many countries. However, the system suffered from several flaws that eventually led to its decline. The main flaws were the failure of cooperation among the major countries (coordination mechanisms were either non-existent or highly dysfunctional), and the unwillingness of countries with a large balance of payments surpluses to follow the "rules of the game" that this deflationary pressure was consequently exerted on the rest of the world. During the 1930s, those with internationalist views within the U.S. Treasury and State Department were committed to addressing a substantial cause-and-effect dynamic. Their goal, articulated by Treasury's Harry Dexter White, was to forge a transformative approach, a "New Deal for a new world."[7]

The Bretton Woods system (1944-1973) was created to avoid the shortcomings of the classical gold standard and the interwar period and to promote full employment and price stability by allowing countries to achieve external balance without trade restrictions. The Bretton Woods Conference is justly famous for creating the foundations for the postwar international financial system.[8] The system agreed at the Bretton Woods Conference in July 1944 was a gold exchange standard, but with the dollar as the main reserve currency, a mechanism for coordinating international macroeconomic policy, and with the International Monetary Fund (IMF). The value of the dollar was pegged to gold at $35 per ounce of gold, and all other currencies maintained fixed exchange rates against the dollar. Fixed exchange rates were considered necessary to achieve both monetary discipline and external equilibrium, as under the gold standard, but also to avoid competitive devaluation and protectionism, as in the 1930s. The Bretton Woods system collapsed, in 1971, when the US broke the link between the dollar and gold. After two turbulent years in the foreign exchange markets, marked by exchange rate realignment and speculation, the fixed

[6] GRIPS. (2023). History of International Monetary Systems [online]. [cit. 15-03-2024] Retrieved from: https://www.grips.ac.jp/teacher/oono/hp/lecture_F/lec01.htm
[7] Benn Steil. (2013). The Battle of Bretton Woods: John Maynard Keynes, Harry Dexter White, and the Making of a New World Order. Retrieved from: [book] [cit. 20-11-2023]
[8] Eric Helleiner. (2014). Forgotten Foundations of Bretton Woods: International Development and the Making of the Postwar Order. Retrieved from: [book] [cit. 20-11-2023]

exchange rates of the dollar, the yen, and the currencies of most European and other industrialized countries were replaced by floating rates. In the absence of a corrective mechanism, the breakdown of the Bretton Woods international monetary system was an unavoidable outcome.[9]

The Jamaica Agreement (1976 - present). «It's our currency but it's your problem». —U.S. Treasury Secretary John Connally. The period up to the late 1990s is considered here exclusively. For a while, the floating exchange rate system introduced in the mid-1970s seemed well suited to achieving policymakers' objectives of full employment, stable prices, and a sustainable current account position. The assertion was that under floating exchange rates, the external account balance would adeptly realign to mirror shifts in a nation's underlying economic circumstances.[10] Major problems first arose in the early 1980s, when monetary policy pursued by Federal Reserve Chairman Volcker led to a sharp appreciation of the dollar against the Japanese yen and the German mark, accompanied by a severe recession and large current account deficits for the U.S. economy.[11] This led to the signing of the Plaza Accord in September 1985 by the then G5 countries (France, Japan, the UK, the US, and West Germany). The G5 agreed to devalue the US dollar against the Japanese yen and the German mark by intervening in the foreign exchange markets. The devaluation of the US dollar led to the Louvre Agreement in February 1987, when the G6 (Canada, France, Japan, the UK, the US, and West Germany) agreed to stabilize international currency markets and stop the rise of the yen and the Plaza Accord mark. Although the Plaza and Louvre Accords are generally credited with (temporarily) ending the volatility and misalignment of the US dollar, the period between the two agreements is often viewed not only in Japan but also in China as the beginning of the Japan Accords. During this period, the yen rose sharply against the dollar, causing a recession and bringing down inflation in Japan. Japan responded by expanding fiscal and monetary policies. These policies completely reversed the economic situation but contributed to the creation of an asset price bubble in the late 1980s with a sharp rise in the prices of stocks, real estate, and other assets.

1.2 History and Essence of the Euro Currency.

The idea of creating a borderless Europe, while preserving the cultural independence of the individual countries or regions, is centuries old.[12] Therefore, the Economic and Monetary Union

[9] Barry Eichengreen. (2019). Globalizing Capital: A History of the International Monetary System - Third Edition. Retrieved from: [book] [cit. 20-11-2023]
[10] Eric Helleiner. (2015). States and the Reemergence of Global Finance: From Bretton Woods to the 1990s. Retrieved from: [book] [cit. 20-11-2023]
[11] IMF. (2010). Agreement on Exchange Rates: Rambouillet and Jamaica. Retrieved from: [book] [cit. 20-11-2023] https://www.elibrary.imf.org/downloadpdf/book/9781451931068/ch037.xml
[12] Michael Heine & Hansjorg Herr. (2020). The European Central Bank. Retrieved from: [book] [cit. 21-11-2023]

and the euro are a major success. For its member countries, EMU has anchored macroeconomic stability, and increased cross-border trade, financial integration, and investment. For the EU as a whole, the euro is a keystone of further economic integration and a potent symbol of our growing political unity. For the world, the euro is a major new pillar in the international monetary system and a pole of stability for the global economy.

Towards the conclusion of World War II, forward-thinking French statesmen, including figures like Jean Monnet and Robert Marjolin, foresaw the necessity of integrating a defeated Germany into a European framework to prevent a recurrence of the post-World War I scenario. Back then, under Prime Minister Georges Clemenceau's leadership, France had insisted on a peace treaty that not only aimed to keep Germany in a weakened state but also hindered its economic recovery for an extended period. The prevailing mindset, rooted in nineteenth-century perspectives, led the victorious European powers to anticipate that Germany would not only finance its reconstruction but also shoulder the war debt and contribute to the economic recovery of nations affected by the 1914–18 devastation. The Inter-Allied Reparations Commission initially set reparations at 269 billion German gold marks or 64 billion US gold standard dollars in 1921 (equivalent to USD 785 billion in 2011 prices). However, it soon became evident that this demand was impractical. Amid Germany's payment difficulties, the reparations were reduced to 226 billion gold marks in the Dawes Plan of 1924. Subsequently, due to Germany's default, they were further reduced to 112 billion gold marks under the Young Plan of 1929. The latter envisioned payments spread over 59 years, with the final installment due in 1988.[13] The stringent conditions imposed by the Treaty of Versailles fueled deep-seated resentment in Germany, contributing to German revanchism and eventually the rise of Nazi Germany. When Hitler assumed power in 1933 and terminated all war reparations, Germany had paid only 20 billion gold marks.[14] At that time, few recognized the perils associated with the severe treatment of Germany. One of them was John Maynard Keynes, who in June 1919 resigned from the British Treasury in protest over the size of the reparations. In his famous treatise ‘The Economic Consequences of the Peace’ published in the same year, he wrote:

“Europe, if she is to survive her troubles, will need so much kindness from America, that she must herself practice it. It is useless for the Allies, hot from stripping Germany and one another, to turn for help to the United States to put the States of Europe, including Germany, on to their feet again.”[15]

[13] Thomas Mayer. (2012). Europe’s Unfinished Currency: The Political Economics of the Euro. Retrieved from: [book] [cit. 20-11-2023]
[14] Britannica. (2023). Reparations [online]. [cit. 15-03-2024] Retrieved from: https://www.britannica.com/topic/reparations
[15] John Maynard Keynes. (1919). The Economic Consequences of the Peace. Retrieved from: [book] [cit. 22-11-2023]

Mindful of the developments in the 1920s and 30s, Robert Marjolin, an economic adviser to the exiled de Gaulle government and later head of the Organisation for European Economic Co-operation (the predecessor of the Organisation for Economic Co-operation and Development) and a commissioner of the European Economic Community (EEC), in a memorandum to Jean Monnet in 1944 argued for the construction of a unified Europe. In his memoirs, he recalls: 'A grandiose conception, I wrote, complicated to implement, but representing the only hope of salvation for our western civilization in Europe. The first stage would be to form a federation comprising Britain, France, Benelux, and Germany.'He quotes from his 1944 paper:

"In the economic sphere, the unification of Europe would be marked by a progressive dismantlement of all barriers to the free circulation of goods, persons, and capital, by a rational division of labor among the different regions, by a progressive equalization of living standards across the continent (though it will never be possible to achieve complete equalization…) The European economy as a whole would receive a compelling impetus from the unification of the European market."[16]

Under the leadership of their French colleagues, politicians on the Continent set the stage for the creation of the ECSC, where industries important for the conduct of war were brought under a European umbrella. However European integration was not supposed to end there. Ever-closer economic integration was seen to drive forward political integration. Already in 1950, German Chancellor Adenauer in an interview with International News Service proposed a political union between Germany and France:

"A union between France and Germany would give new life and new impetus to a very sick Europe. It would be of great influence both psychologically and materially and would unleash forces that surely would rescue Europe. I believe this is the only way to achieve the unification of Europe."

The pursuit of the political union involved tangible advancements at the economic level, evolving through the establishment of the EEC, the formation of the European Union, and the creation of the Single European Market. Proponents of integration, particularly those ardently advocating for it, envisioned the progression as a 'chain reaction.' Walter Hallstein, a key collaborator of Adenauer and the President of the EEC Commission from 1958 to 1967, asserted that the 'inner logic of integration' would naturally lead from the ECSC to the customs union, a shared agricultural and commercial policy, and eventually culminate in political union—envisioning the formation of the United States of Europe. However, the concept of a European

[16] Thomas Mayer. (2012). Europe's Unfinished Currency: The Political Economics of the Euro. Retrieved from: [book] [cit. 25-11-2023]

federation was met with controversy. Opposing the federalist model embraced in Germany and smaller European states was the idea of Europe as a union of sovereign nation-states.[17] This view was most strongly held in France. As Marjolin put it:

"Between maintenance of national sovereignties in toto and the dismantlement of the latter, there is a middle way. For me, this middle way represented the reality, the hypothetical extremes – full maintenance of sovereignties or their dismantlement – being mental constructs. The middle way was a treaty whereby the signatory states would pledge themselves to one another indefinitely and undertake to carry out certain acts by specified dates, such as the progressive abolition of customs duties and import quotas, the gradual destruction of movements of labor and capital, the organization of agricultural markets, and so on. After a transition period, which might vary according to the circumstances, the result would be a Europe which, if perhaps not wholly unified economically, would nevertheless present a degree of unity unachieved hitherto." [18]

The euro was founded on three interrelated principles:

1. Uniting Europe economically and politically.
2. Increasing economic growth due to tighter integration.
3. Peace due to economic prosperity and political integration.[19]

Despite this, however, the euro currency is facing challenges. Given Europe's tumultuous and bloody history during the first half of the 20th century, these interrelated goals were seen as vital by the founders of the eurozone. They had hoped that a united Europe would be more influential and powerful on the world stage, but, in reality, the EU only has a true influence on a limited number of issues where there is a broad consensus among member states. Economic integration can be achieved without a common currency. The United States and Canada, for example, have had a free trade deal since 1988 and have very codependent economies. Although the euro was a noble goal, an integrated economic system without agreement on how the economy should be managed is unsustainable. Economic integration that outpaces political integration is a major problem, and while the eurozone is economically integrated, it is quite divided politically. Moreover, the euro has created a "democratic deficit" in which democratically elected governments such as Greece have been forced to accept policies they oppose. Their economy and membership in the eurozone are held hostage by the powerful European Central Bank, which is not democratically elected and is heavily influenced by powerful countries like Germany.

[17] Andreas Staab. (2013). The European Union Explained: Institutions, Actors, Global Impact. Retrieved from: [book] [cit. 26-11-2023]
[18] Thomas Mayer. (2012). Europe's Unfinished Currency: The Political Economics of the Euro. Retrieved from: [book] [cit. 26-11-2023]
[19] Joseph E. Stiglitz. (2017). The Euro: How a Common Currency Threatens the Future of Europe. Retrieved from: [book] [cit. 26-11-2023]

The eurozone has performed poorly during the post-financial crisis period. Germany, held up by some as a model of European growth, has only grown by 6.8 percent since 2007, an extremely low growth rate by historical standards. Other countries, such as Spain, Italy, and Portugal, have seen GDP fall by levels that rival or exceed the contractions they experienced during the Great Depression. Countries like Germany have blamed these problems on corruption, profligate spending, inefficient labor markets, and the like. Yet it was the euro's lack of flexibility that made it impossible for countries to adapt to changing economic circumstances and has therefore caused much of the eurozone's financial pain.[20]

It should be noted that much was expected from the appearance of the Euro in the world monetary system.

With the introduction of the euro as the common currency in 1999, the EMU member states took a major step towards integration whose economic and political significance could only be underestimated. From an economic point of view, a domestic currency is an essential component of a nation-state, whether that is politically desired or not.[21]

Upon its inception in 1999, optimistic forecasts abounded for the euro. Similar to contemporary dollar skeptics, advocates for the euro were prevalent. Robert Mundell, for instance, expressed unwavering confidence that the euro "will challenge the status of the dollar and alter the power configuration of the system." Likewise, European economists Daniel Gros and Niels Thygesen foresaw the emergence of a second global currency due to the Economic and Monetary Union (EMU).[22] Despite some reservations, the prevailing sentiment was clear: the U.S. dollar would encounter a formidable competitor. Jacques Delors, former head of the European Commission, famously remarked that "the little euro will become big." The primary questions at the time were not whether the euro would rival the dollar but rather to what extent and how soon. Forecasts like Fred Bergsten's predicted that the euro would achieve "full parity" with the dollar within five to ten years, echoing the sentiments of economists such as George Alogoskoufis and Richard Portes. Some, like Menzie Chinn and Jeffrey Frankel, even ventured to put a precise date on their prediction, suggesting the euro could surpass the greenback by 2015. Polls conducted in late 2008, just before the euro's tenth anniversary, indicated that a majority of Europeans anticipated their currency surpassing the dollar within five years. A future of shared currency leadership or even global dominance for the euro appeared imminent and promising on the horizon.

[20] Joseph E. Stiglitz. (2017). The Euro: How a Common Currency Threatens the Future of Europe. Retrieved from: [book] [cit. 27-11-2023]
[21] Michael Heine & Hansjorg Herr. (2020). The European Central Bank. Retrieved from: [book] [cit. 27-11-2023]
[22] Benjamin J. Cohen. Currency Power. (2015). Understanding Monetary Rivalry. Retrieved from: [book] [cit. 28-11-2023]

The optimism surrounding the Euro was not unfounded, supported by its strong credentials and perceived future stability, especially in the context of the Economic and Monetary Union's promising outlook. However, the global economic crisis in 2008, coinciding with the Euro's first decade, disrupted this optimism. Sovereign debt challenges in the Eurozone periphery led to a significant loss of confidence. The initially promising outlook turned out to be somewhat illusory. Despite an initial surge, the internationalization of the Euro encountered limitations. By the mid-2000s, cross-border use plateaued and has, in recent times, even experienced a slight decline. Additionally, it is widely acknowledged that, while the U.S. dollar circulates globally, the Euro remains largely restricted to economies with close geographical or institutional ties to the European Union.[23]

The vision of a unified currency and market has been a long-standing aspiration in Europe, spanning across generations. A decade ago, when the euro was introduced, few could have anticipated the direction it has taken today. The majority of European populations initially embraced the euro as a significant chance for integration, facilitating the flow of goods and people, and fostering economic and social progress. Essentially, it was seen as an opportunity for prosperity that needed to be embraced without delay.[24]

Regrettably, we must acknowledge that reality has not unfolded as initially envisioned. While the euro has yielded certain benefits, it has significantly shifted the equilibrium of European economies, giving rise to a genuine systemic crisis. From the onset of the worldwide crisis in 2007, the eurozone has grappled with deflationary challenges across a majority of its member nations. In response to this unanticipated economic landscape, the European Central Bank has had to adjust its approach. Additionally, it is crucial to recognize that Europe confronts challenges extending beyond the economic realm, encompassing areas such as immigration and security. [25]

The unique euro sign (€) came into being after lengthy discussions, public opinion polls, and consideration of numerous graphic proposals from leading designers. According to the European Commission, the symbol is a combination of the Greek letter "epsilon" and the letter E, which stands for Europe. The euro symbol is crossed by two parallel lines, symbolizing the stability and significance of the new single currency. Euro banknotes and coins come in various denominations. The banknotes are issued in denominations of €5, €10, €20, €50, €100, €200, and €500, while coins are issued in denominations of 1, 2, 5, 10, 20, and 50 cents, as well as €1 and €2.[26]

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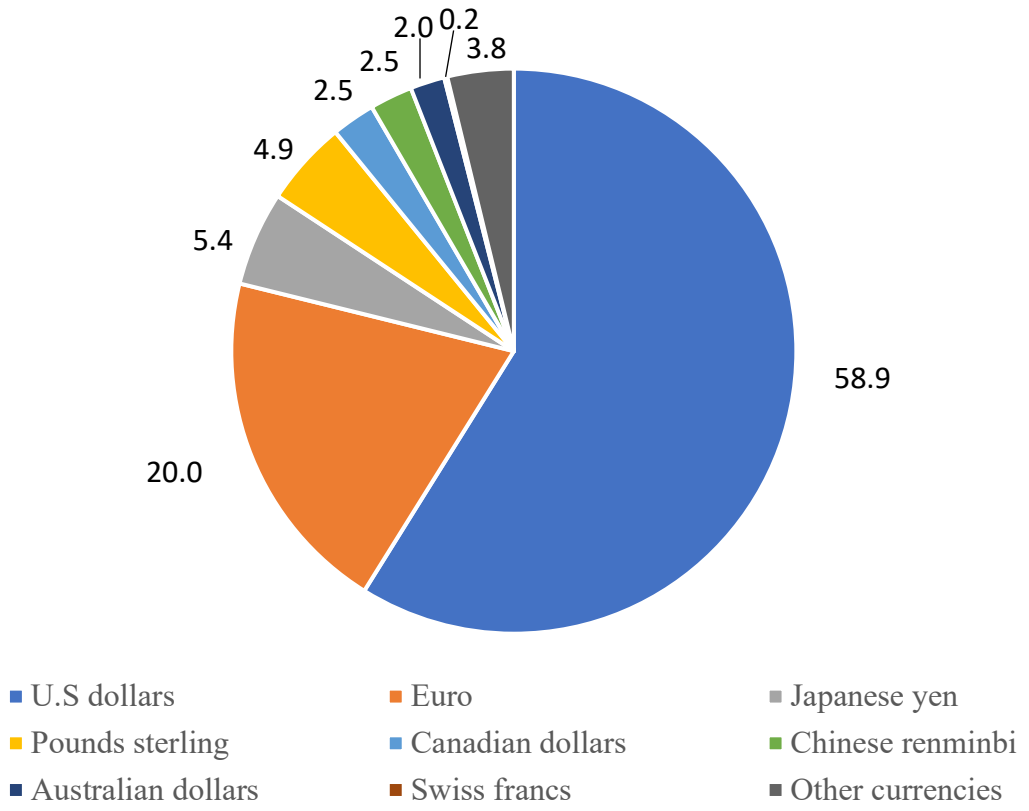
[23] Benjamin J. Cohen. (2015). Currency Power: Understanding Monetary Rivalry. Retrieved from: [book] [cit. 27-11-2023]
[24] Stefano Calicchio. (2021) EURO: What is it and how does it work: Why the euro was created and how it works: a simple approach to Europe's single currency. Retrieved from: [book] [cit. 01-12-2023]
[25] Paul-Jacques Lehmann. (2019). The Future of the Euro Currency. Retrieved from: [book] [cit. 02-12-2023]
[26] ECB. (2023). Banknotes [online]. [cit. 15-01-2024] Retrieved from: https://www.ecb.europa.eu/euro/banknotes/html/index.en.html



Graph 1 – World – Allocated Reserves in % by Currency for 2023Q2[27].

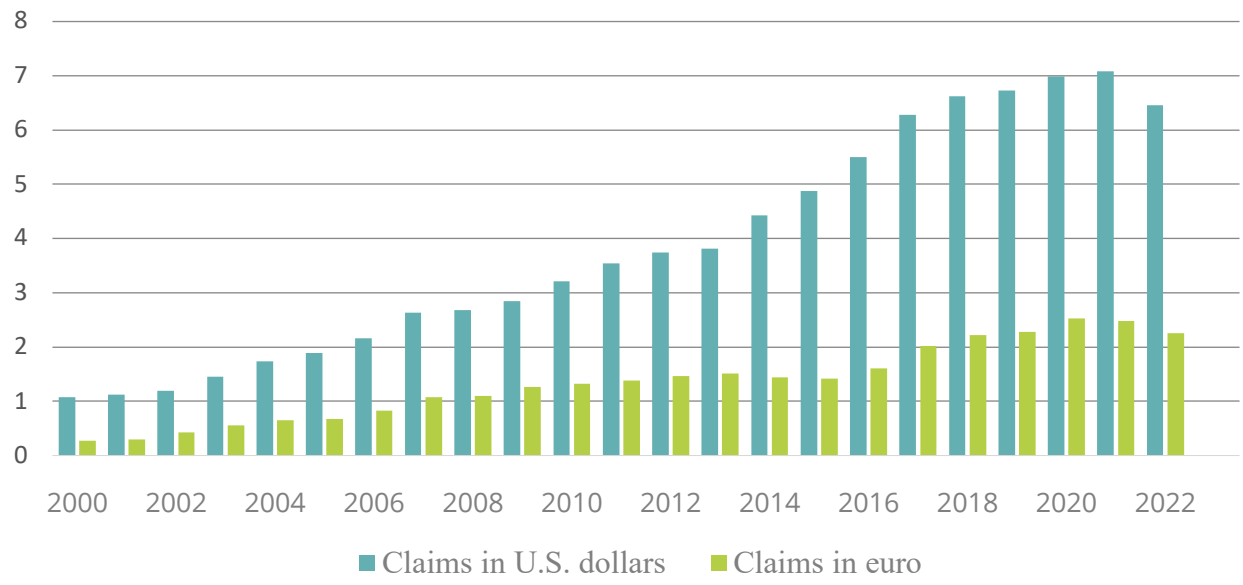
Source: IMF

As we can see in the graph, the euro is the second currency in the world in terms of the number of reserves accumulated in it among all countries in the world. This indicates the reliability of this currency and predictable and stable credit policy. However, the gap between the Euro and the American reserves is staying high. The number of dollar reserves exceeds euro reserves by a factor of 3, indicating that the dollar remains the world's most trusted currency. In third place is the Japanese yen, and in fourth place is the pound sterling. It is noteworthy that the Swiss franc, being one of the world's most trusted currencies and seen as a safe haven during crises, occupies a paltry share of the world's foreign exchange reserves - only about 0.2%. If you look at the statistics, the Japanese Yen has not always been the third currency in terms of reserves. The third place was honored by the British pound, but in the first quarter of 2017, the Japanese yen overtook the pound.[28] This development marked a significant milestone in the international monetary landscape and underscored Japan's economic prowess and the yen's prominence in global finance.Several factors likely contributed to this shift. Japan's robust export-oriented economy, technological innovation, and stable financial markets have long positioned the yen as an attractive currency for international investors. Additionally, geopolitical and economic uncertainties in the

[27] IMF. (2023). World – Allocated Reserves in % by Currency for 2023Q2 [online]. [cit. 12-01-2024] Retrieved from: https://data.imf.org/?sk=e6a5f467-c14b-4aa8-9f6d-5a09ec4e62a4

[28]IMF. (2023). World Currency Composition of Official Foreign Exchange Reserves [online]. [cit. 12-01-2024] Retrieved from: https://data.imf.org/regular.aspx?key=41175

United Kingdom, particularly surrounding Brexit negotiations, may have diminished confidence in the pound sterling as a reserve asset during this period.



Graph 2 – Currency Composition of Official Foreign Exchange Reserves (COFER) in Trillions[29]

Source: IMF

Regarding Graph 2 I can underline that as a percentage, the amount of foreign exchange reserves in euros against the dollar increased between 2000 and 2023. Globally, the amount of reserves in US dollars was $1.07 trillion in 2000. At the same time, the number of reserves in euros was 277.6 billion euros. In percentage terms, this meant 26 percent.

To perform a statistical evaluation of the reserves in dollars and euros from 2000 to 2022, we can calculate various metrics such as the compound annual growth rate (CAGR) and analyze the trends in reserves over the period. Let's start by calculating the CAGR for reserves in dollars and euros separately:

Reserves in Dollars:
Initial value (2000): $1.07 trillion
Final value (2022): $6.46 trillion
Number of years: 2022 - 2000 = 22 years
Using the formula for CAGR:

[29] IMF. (2023). Currency Composition of Official Foreign Exchange Reserves [online]. [cit. 12-01-2024] Retrieved from: https://data.imf.org/?sk=e6a5f467-c14b-4aa8-9f6d-5a09ec4e62a4

$$CAGR = \frac{(final\ value)^{\frac{1}{number\ of\ years}}}{(initial\ value)} - 1 \quad (1.1)$$

$$CAGR_{USD} = \frac{(6.46)^{\frac{1}{22}}}{(1.07)} - 1$$

$$CAGR_{USD} \approx 0.0687$$

Reserves in Euros:

Initial value (2000): $0.27 trillion

Final value (2022): $2.25 trillion

Number of years: 2022 - 2000 = 22 years

Using the formula for CAGR:

$$CAGR_{EUR} = \frac{(2.25)^{\frac{1}{22}}}{(0.27)} - 1$$

$$CAGR_{EUR} \approx 0.0832$$

So, let's evaluate received data from the equations. The conclusion is reserves in euros have been growing at a faster rate compared to reserves in dollars over the period because the compound annual growth rate (CAGR) for reserves in euros (0.0832) is higher than the CAGR for reserves in dollars (0.0687).

The term "reserve currencies" refers to the national currencies of certain countries that have been officially granted this status. Central banks of other countries use them to create, accumulate, and store foreign exchange reserves.[30]

Any national currency cannot receive the status of reserve currency. As a rule, this requires that:

- the economy of the country was stable and demonstrated efficiency;
- the balance of payments was formed with a minimum deficit, or at least effective measures were taken to cover it;
- there were minimum currency and trade restrictions.[31]

That is, only countries with the most developed economies have a chance to become reserve currency issuers.

[30] Science Direct. (2023). Reserve Currency [online]. [cit. 15-01-2024] Retrieved from: https://www.sciencedirect.com/topics/economics-econometrics-and-finance/reserve-currency

[31] Barry Eichengreen, Camille Macaire, Arnaud Mehl, Eric Monnet and Alain Naef. (2022) Is Capital Account Convertibility Required for the Renminbi to Acquire Reserve Currency Status? [online]. [cit. 15-01-2024] Retrieved from: https://www.banque-france.fr/system/files/2023-03/wp892.pdf

The euro entered the global financial market in 1999, and on January 1, 2002, new banknotes and coins were put into circulation. The Euro replaced the previous currency unit (ECU), which was used in the European monetary system from 1979 to 1998. In 2019, the single European currency celebrated its 20th anniversary. The EUR is currently the official currency of 20 eurozone countries - Cyprus, Croatia, Finland, France, Germany, Austria, Belgium, Spain, Ireland, Greece, Italy, Latvia, Lithuania, Estonia, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Finland. Croatia officially switched to the euro on January 1, 2023.

1.3 The Difference in the Currency Approach of the US and Europe.

To better understand the essence of the Euro currency, let's pay attention to the difference in the functioning of the Euro and the Dollar. There are American and European approaches.

The American approach arrived at experimentally over many decades, combines three critical features:

(1) transfers between the federal government and the fifty states;

(2) limitations on the deficits of individual states;

(3) an absence of federal bailouts for states in difficulty.[32]

Collectively, these three characteristics function to mitigate potential strains arising from payment imbalances within the Union. They resemble the essential legs of a stool, each indispensable for maintaining stability. While the risk of a crisis is not entirely eradicated, as evident in California's near bankruptcy in the early 2000s, the likelihood of a systemic crisis within the US monetary union is notably diminished compared to what it might be in a more diverse collection of units. The system incorporates automatic stabilizers that alleviate tensions during crises. Deficit states automatically receive increased transfers from the center, including unemployment benefits, welfare assistance, and similar expenditures, while making reduced tax payments to Washington.

Essentially, the funds originate from surplus states, heightening their net transfers to the center. Research indicates that federal fiscal stabilizers work to counterbalance asymmetric shocks in the United States by varying percentages, ranging from 10 to 40 percent. Examining the third element of the American approach, which refrains from federal bailouts for financially distressed states, and contrasting it with the first element—transfers between the federal government and the fifty states—reveals an automated money transfer process that significantly minimizes the likelihood of some states facing economic hardships. This characteristic is a distinctive aspect of the

[32] Cohen, Benjamin J (2015) Why can't Europe save itself? A note on a structural failure [online]. [cit. 15-01-2024] Retrieved from: https://escholarship.org/content/qt0n54h8rx/qt0n54h8rx.pdf?t=qdv1pa

American approach that contributes to the widespread use of the dollar in global trade and its extensive presence in the world's financial reserves.

In comparison, the European approach employs a three-legged stool where the US transfer union effectively manages imbalances among states. While the system is not flawless and states occasionally encounter difficulties, the absence of a single state in the Union declaring bankruptcy since the Great Depression underscores the reasonable effectiveness of the automatic transfer mechanism. The process eliminates overt controversy as transfers occur more or less seamlessly. Effectively the process is depoliticized, barely noticed, and rarely questioned. Compare that with the recent turmoil in EMU members like Greece or Cyprus, both of which defaulted on parts of their debt. In their cases, political conflict could not be avoided either domestically or in relations with creditors.[33]

Only two aspects of the plan (2 legs of the stool) were ever put into action — a no-bailout rule and restrictions on budget deficits — and neither has proven to be especially effective. The third aspect, involving automatic fiscal transfers, has never been seriously considered. During the planning stages of the Economic and Monetary Union (EMU), it was evident that member governments were adamant about retaining control over fiscal policy. However, there was also an acknowledgment that some form of discipline would be necessary to curb the risk of excessive borrowing, as emphasized in the Delors report. Consequently, two carefully designed safeguards were incorporated into the Maastricht Treaty, signed in 1992 and enacted in 1993. One provision explicitly prohibited state bailouts, while the other, known as the excessive deficit procedure (EDP), established limits on allowable deficits and debt. The prohibition on bailouts was clearly articulated. In the treaty's words (Article 104b), "The Community should not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of any Member State."[34] But the force of the ban was vitiated by a giant loophole spelled out elsewhere in the treaty (Article 103a), which allows that "Where a Member State is in difficulties or is seriously threatened with severe difficulties … the Council may … grant, under certain conditions, Community financial assistance to the Member State concerned."[35] Effectively, the prohibition only holds until it faces a real-world challenge, at which point it may be preempted. In essence, it has become more of a symbolic statement and has not deterred the interventions in several governments since the Economic and

[33] Benjamin J. Cohen. (2015). Currency Power: Understanding Monetary Rivalry. Retrieved from: [book] [cit. 01-12-2023]
[34] EUR-Lex. (2024). Treaty establishing the European Community (Amsterdam consolidated version) [online]. [cit. 15-01-2024] Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A11997E103
[35] Willem Buiter, Giancarlo Corsetti, Nouriel Roubini, Rafael Repullo and Jeffrey Frankel. (1993). Excessive Deficits: Sense and Nonsense in the Treaty of Maastricht [online]. [cit. 20-01-2024] Retrieved from: https://www.jstor.org/stable/1344568

Monetary Union's (EMU) challenges emerged in 2010. This includes countries like Portugal, Ireland, Greece, and Spain, humorously referred to as the PIGS, and more recently, Cyprus. Italy is occasionally grouped in this context as well, leading to the term PIIGS instead of PIGS, although Italy has not formally received a bailout.

Similarly, the detailed specifications of the excessive deficit procedure (EDP) were outlined in the treaty (Article 104c) along with an accompanying protocol. The criteria included that budget deficits should not exceed 3 percent of the gross domestic product, and government debt should not surpass 60 percent of GDP. Penalties, including "fines of an appropriate size," were mentioned as possible consequences for violating these limits. The Stability and Growth Pact (SGP), established in 1997, provided additional clarity on the surveillance of individual government performance (the "preventive arm") and the imposition of sanctions (the "dissuasive arm"). However, the actual impact of these safeguards fell short of expectations.

In practice, both the EDP and SGP lacked significant enforcement power. A notable test occurred in the early 2000s when Germany and France, EMU's two largest members, exceeded the 3 percent deficit limit. Enforcing penalties on these major players proved unfeasible. Instead, in 2005, they successfully advocated for a rule reform, allowing them to receive waivers for their violations and establishing a precedent for others. While this did not invalidate the arrangement, empirical evidence suggests that, especially in its early years, the SGP had some disciplining effect, particularly on smaller EMU members. Nevertheless, it is noteworthy that, to date, no government has faced formal penalties for breaching specified budget or debt limits. In practice, the SGP did not impede the development of a significant credit boom.[36]

As a result, these crucial differences in approaches don't let us suppose that if the United States can have a single currency, so can Europe. As a matter of fact, Europe is much more diverse than the US in terms of culture, languages, and legal regulations, making the US model unapplicable to Europe. So that would be a big delusion to think that Europe and the US have a similar currency's way, having the same leverage over exchange rates. It's important to notice that the Dollar currency is way older than its competitor the Euro. The dollar was founded in 1792[37], 232 years ago while the Euro is a newborn currency, established in 1999[38], 25 years ago. In my opinion, the age of the currency is an advantage, because, over time, there are established approaches to currency management, leverage tested by time and financial crises. The American currency has

[36] Benjamin J. Cohen. (2015). Currency Power: Understanding Monetary Rivalry. Retrieved from: [book] [cit. 21-01-2024]
[37] CFI Team. (2024). United States Dollar (USD) [online]. [cit. 20-01-2024] Retrieved from: https://corporatefinanceinstitute.com/resources/foreign-exchange/united-states-dollar-usd.
[38] An Official website of the European Union (2024) History abd Purpose of the Euro [online]. [cit. 20-01-2024] Retrieved from: https://european-union.europa.eu/institutions-law-budget/euro/history-and-purpose

survived more than ten economic crises since the days of its existence and, as practice shows, the American economy is now more resistant to crises than the European.

The GDP indicator is one of the most important indicators in assessing the productivity of the economy of individual countries since GDP is the value of all goods and services produced exclusively for consumption. The gross product indicator reflects the "value" of the economy, and when compared over different periods, the nature of its dynamics. If GDP grows, then everything is fine, and if it falls, then a crisis is expected or has already occurred in the country. Since 1991, GDP has been the main indicator in macroeconomic research at the UN. It is calculated in any currency, but as a basis for international ratings, GDP is calculated in the US dollar. The indicator is usually calculated for one year, but it can be calculated for any period. I took the period since 2000 to present a general picture of how the GDP of the USA and the European Union developed. To evaluate data from Graph 3 we can use formula (1.1)

$$CAGR_{USA} = \frac{(25.44)^{\frac{1}{23}}}{(10.25)} - 1$$

$$CAGR_{USA} \approx 0.0368 \text{ or } 3{,}68\%$$

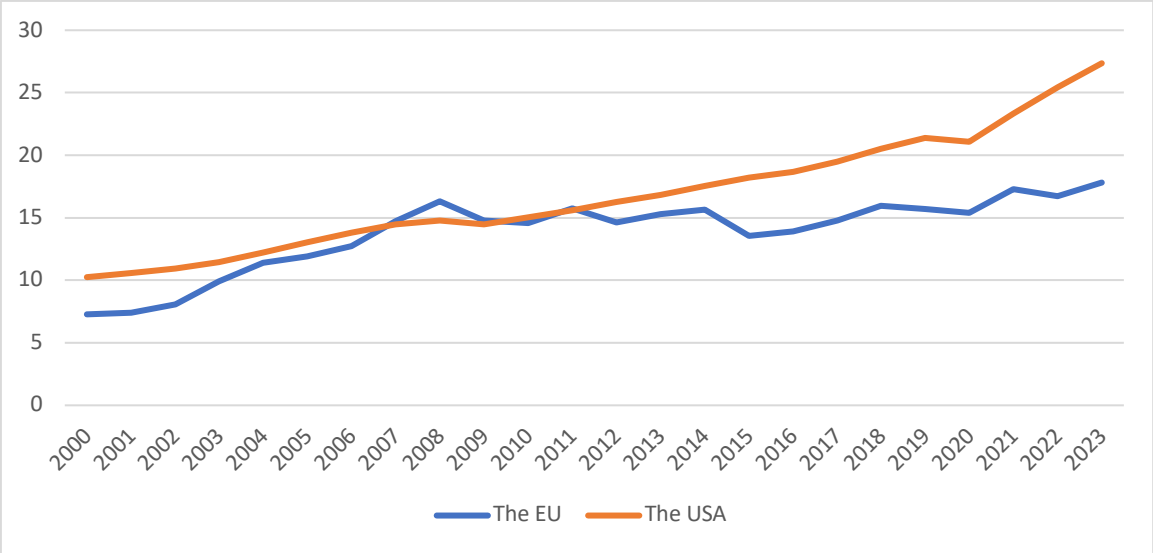
$$CAGR_{EU} = \frac{(16.75)^{\frac{1}{23}}}{(7.28)} - 1$$

$$CAGR_{EU} \approx 0.0455 \text{ or } 4.55\%$$

$CAGR_{EU} > CAGR_{USA}$ => GDP of the EU was growing faster than the USA's

According to the data on Graph 3, I can emphasize that at the beginning of 2000's, the European economy had more rapid growth than the American one, for instance, the growth of the European economy from 2000 – 2008 amounted to 123.9 %, while the American Economy grew up only on 44%. However, after the global financial crisis of 2008, the European economy had more obvious economic fluctuations, than the American economy. Thus, from 2008 to 2023 European GDP barely grew, according to received data, the growth amounted to only 9,2%, from 16,3 $ trillion to 17,8 $ trillion. Meanwhile, American GDP growth looks more inspiring, the value of 2008 of 14,77 $ trillion has grown to 27,36 $ trillion, which in percentages is 85%. In summary, while the European economy exhibited faster growth than the American economy in the early 2000s, the aftermath of the 2008 global financial crisis saw the emergence of differential growth trajectories. The European economy faced more pronounced economic fluctuations, while the American economy demonstrated more robust growth, underscoring the importance of effective economic policies and structural reforms in shaping long-term economic outcomes. Overall, the contrasting economic performances of Europe and the United States underscore the importance of

effective economic policies and structural reforms in fostering long-term growth, resilience, and prosperity.



Graph 3 – The US and the EU GDP 2010 – 2023 in $trillions

Source: data.worldbank.org[39]

In my opinion, one of the biggest obstacles to European economic growth is fiscal policy remaining national. There are a few reasons:

Limited Fiscal Integration: While there is a shared currency, fiscal policies, including taxation and government spending, are still determined at the national level. This lack of fiscal integration can pose challenges during economic downturns, as countries have limited tools to address economic challenges independently.

No Common Debt Issuance: Unlike a fully integrated fiscal union, the Eurozone does not have a mechanism for common debt issuance. Each member country issues its sovereign debt, leading to disparities in interest rates and borrowing costs among member states.

Divergent Economic Conditions: Member countries can experience different economic conditions and face various challenges. During a crisis, the inability to implement coordinated fiscal policies across the Eurozone may exacerbate economic divergences.

Limited Flexibility for Currency Adjustment: With a common currency, member countries cannot use exchange rate adjustments to regain competitiveness. This emphasizes internal adjustments, such as changes in wages and productivity, which can be more challenging and time-consuming.

[39] The World Bank. (2023). GDP (current US$) - European Union and the US [online]. [cit. 25-01-2024] Retrieved from: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2022&locations=EU&start=2010

Dependency on National Institutions: The effectiveness of economic policies is contingent on the strength and flexibility of national institutions. Countries with less robust institutions may find it more challenging to navigate economic shocks effectively.

Political Challenges: Coordinating fiscal policies among diverse member states with different economic philosophies and priorities can be politically challenging. National governments may be hesitant to cede control over their fiscal policies.

While the euro has facilitated economic integration and stability to some extent, the lack of full fiscal integration can limit the Eurozone's ability to respond uniformly and swiftly to economic shocks affecting individual member countries. This dynamic has been a topic of ongoing discussion and debate within the Eurozone.

Another obstacle to European economic growth is limited trade with Russia. Since Russia was in 5th place in European trade among other countries[40], European and Russian economies are more interconnected than the American and Russian, making the ban on trade more harmful. Russia used to sell to Europe raw materials such as oil, gas, and other mineral resources making good impetus for local manufacturers and businesses. Moreover, if we consider imports to the EU, from the extra-EU countries, Russia was in third place in 2021.[41]

To prove my statement, let's come back to Graph 3, where we can see fluctuations in the European GDP in the year 2014 when there were implemented first sanctions against Russia. Thus, from 2014 to 2015 the European GDP shrank by 13,4%, meanwhile, the American Economy didn't even react to it – the growth amounted to 3,7%. Ultimately, the covid did not have much of an impact on GDP in either the US or Europe, the drop in GDP was minimal – 1,49 in the USA and -1,97 in the EU. However, the events of 2022 in Ukraine made the European economy shrink again. Between 2021 and 2022, GDP declined by 3,29%, while the American economy continued its growth. After this research, we can conclude that the European economy is more vulnerable to any shocks, such as economic crisis, pandemic, or geopolitical problems, while its competitor the USA is not.

1.4 The Main Factors Affecting Changes in the Euro Exchange Rate.

International currency exchange rates display how much one currency unit can be exchanged for another currency. Currency exchange rates can be floating, in which case they change continually based on many factors, or they can be pegged (or fixed) to another currency, in which case they still float, but they move in tandem with the currency to which they are pegged. [42]

[40] Destatis. (2024). Top Trading Partners of the EU [online]. [cit. 25-01-2024] Retrieved from: https://www.destatis.de/Europa/EN/Topic/Foreign-trade/_node.html
[41] Statista. (2021). Annual share of EU goods imports from non-EU countries by trade partner from 2002 to 2021 [online]. [cit. 25-01-2024] Retrieved from: https://www.statista.com/statistics/1364662/international-trade-eu/
[42] Investopedia. (2023). 6 Factors That Influence Exchange Rates [online]. [cit. 29-01-2024] Retrieved from:

Understanding the relative worth of a domestic currency concerning various foreign currencies is essential for investors to assess assets priced in foreign denominations. For instance, being aware of the exchange rate between the U.S. dollar and the euro is crucial for U.S. investors when making decisions about European investments. A diminishing U.S. dollar can enhance the value of foreign investments, while an appreciating U.S. dollar may negatively impact the value of those investments. In general, the correlation between the domestic currency and commodity prices in primary domestic industries tends to strengthen as a country relies more on these industries. To understand the mechanics of changes in the euro exchange rate against other currencies, let's look at the main factors.

Floating Exchange Rates

Floating exchange rates are established by the interplay of market forces involving supply and demand. The relative balance between the demand for a currency and its supply dictates the currency's value of another currency.[43]

For instance, when there is a surge in the European demand for U.S. dollars, the dynamics of supply and demand come into play, resulting in an appreciation of the U.S. dollar's value compared to the euro.

Various geopolitical and economic factors influence the exchange rates between two countries. Some of the most common factors encompass alterations in interest rates, unemployment figures, inflation reports, data on gross domestic product, manufacturing statistics, and fluctuations in the prices of commodities.

Fixed Exchange Rates

A fixed or pegged exchange rate is established by the government through its central bank. This rate is set about another prominent world currency, such as the U.S. dollar, euro, or yen. To maintain the stability of this exchange rate, the government engages in buying and selling its currency against the currency to which it is pegged.[44]

Short-term fluctuations in a floating exchange rate currency are driven by factors like speculation, rumors, unforeseen events, and everyday shifts in the supply and demand for the currency. If there is an excess of supply over demand, the currency's value will decrease, and if demand surpasses supply, the currency's value will increase. In extreme short-term fluctuations, central banks might intervene, even in a floating exchange rate system. As a result, while most

https://www.investopedia.com/trading/factors-influence-exchange-rates/

[43] Czech National Bank. (2024). What is the difference between a fixed and a floating exchange rate? [online]. [cit. 29-01-2024] Retrieved from: https://www.cnb.cz/en/faq/What-is-the-difference-between-a-fixed-and-a-floating-exchange-rate

[44] J. Orlin Grabbe. (2022). Foreign Exchange Markets [online]. [cit. 29-01-2024] Retrieved from: https://www.bauer.uh.edu/rsusmel/7386/ln1.htm

major global currencies are classified as floating, central banks and governments may step in when a nation's currency appreciates or depreciates significantly.

A currency that is excessively strong or weak could have adverse effects on a nation's economy, impacting trade and the ability to manage debts. In response, the government or central bank may implement measures to adjust their currency's value to a more desirable level.[45]

Macroeconomic Influences

Various macroeconomic factors also impact exchange rates. The "Law of One Price" establishes that in a global landscape of international trade, the price of a product in one country should be equivalent to the price of the same product in another. This concept is known as purchasing power parity (PPP).[46]

When prices deviate from this principle, it leads to adjustments in interest rates within a country or changes in exchange rates between currencies. Nonetheless, real-world scenarios often do not perfectly align with economic theories, and due to various mitigating elements, the Law of One Price is frequently not upheld in practice. Nevertheless, both interest rates and relative prices play a significant role in shaping exchange rates.

Another macroeconomic consideration is the presence of geopolitical risks and the stability of a country's government. When a country's government lacks stability, its currency is more likely to depreciate compared to the currencies of more developed and politically stable nations.

Forex and Commodities

In general, the extent of a country's reliance on a particular domestic industry significantly impacts the correlation between its national currency and the prices of commodities associated with that industry.

There is no one-size-fits-all rule for determining which commodities will be correlated with a specific currency and the strength of that correlation. However, certain currencies provide notable examples of the relationships between commodities and foreign exchange rates.

Take, for instance, the Canadian dollar, which exhibits a positive correlation with the price of oil. Consequently, when the price of oil rises, the Canadian dollar tends to appreciate against other major currencies. This is because Canada is a net exporter of oil. When oil prices are high, Canada experiences increased earnings from its oil exports, boosting the Canadian dollar in the foreign exchange market.

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[45] Thomas Cook. (2024). Know About the Factors Affecting Foreign Exchange Rates [online]. [cit. 29-01-2024] Retrieved from: https://www.thomascook.in/blog/know-about-the-factors-affecting-foreign-exchange-rates.

[46] Alasdair Crookes, Anthony Zhang, Khaldia Al Kasm and Paul Stoddart. (2022). Exchange Rates and Trade [online]. [cit. 30-01-2024] Retrieved from: https://assets.publishing.service.gov.uk/media/6310829fe90e072940dfca1b/exchange-rates-and-trade.pdf

Another illustrative case is the Australian dollar, which demonstrates a positive correlation with gold. As one of the world's leading gold producers,[47] Australia's currency tends to move in tandem with fluctuations in the price of gold bullion. Hence, when gold prices experience significant increases, the Australian dollar is also expected to appreciate against other major currencies.

As we can see, there are several important factors influencing the exchange rate of currencies and the euro in particular. However, currencies are subject to sudden changes amid geopolitics, wars, pandemics, and global crises. One of the biggest shocks to the euro currency was the global financial crisis of 2008.

Graph 4 – EUR/USD exchange rate from 2000 till 2024.[48]

Source: tradingeconomics.com

According to the chart, at the beginning of 2008, the euro-to-dollar exchange rate was about $1.45 to 1 euro. The highest historical value of the euro against the U.S. dollar was reached on July 27, 2008, when the euro exchange rate exceeded $1.60. This peak occurred in the context of global economic development and financial events at that time. However, the global financial crisis was already on the doorstep. As the financial situation deteriorated and the crisis spread in 2008-2009, investors began to look for risk-free assets, including the US dollar. This led to the strengthening of the dollar and the fall of the euro. At some points during this period, the

[47] CEIC. (2023). Australia Gold Production [online]. [cit. 30-01-2024] Retrieved from: https://www.ceicdata.com/en/indicator/australia/gold-production

[48] Trading Economics. (2024). Euro US Dollar Exchange Rate - EUR/USD [online]. [cit. 01-02-2024] Retrieved from: https://tradingeconomics.com/euro-area/currency

euro/dollar exchange rate fell from around $1.25 to €1. To mitigate the effects of the crisis, central banks implemented various measures including interest rate cuts and quantitative easing programs. This helped to restore confidence in the markets and the euro began to strengthen gradually. However, the euro never reached the former $1.60 mark again.

The European debt crisis, which took place from 2009 until the end of 2010, significantly affected the euro-dollar exchange rate. Several countries within the eurozone, including Greece, Portugal, Ireland, Spain, and Cyprus, found themselves unable to meet their obligations for repaying or refinancing their national government debt or to provide financial support to heavily indebted banks that were under their national regulatory oversight. They required external assistance from sources such as other eurozone nations, the European Central Bank (ECB), or the International Monetary Fund (IMF) to address these challenges.

Economic Events

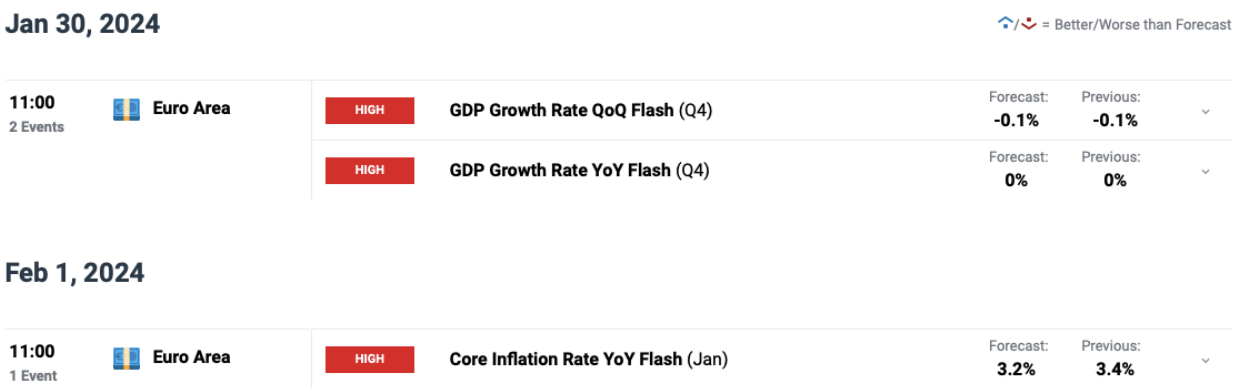
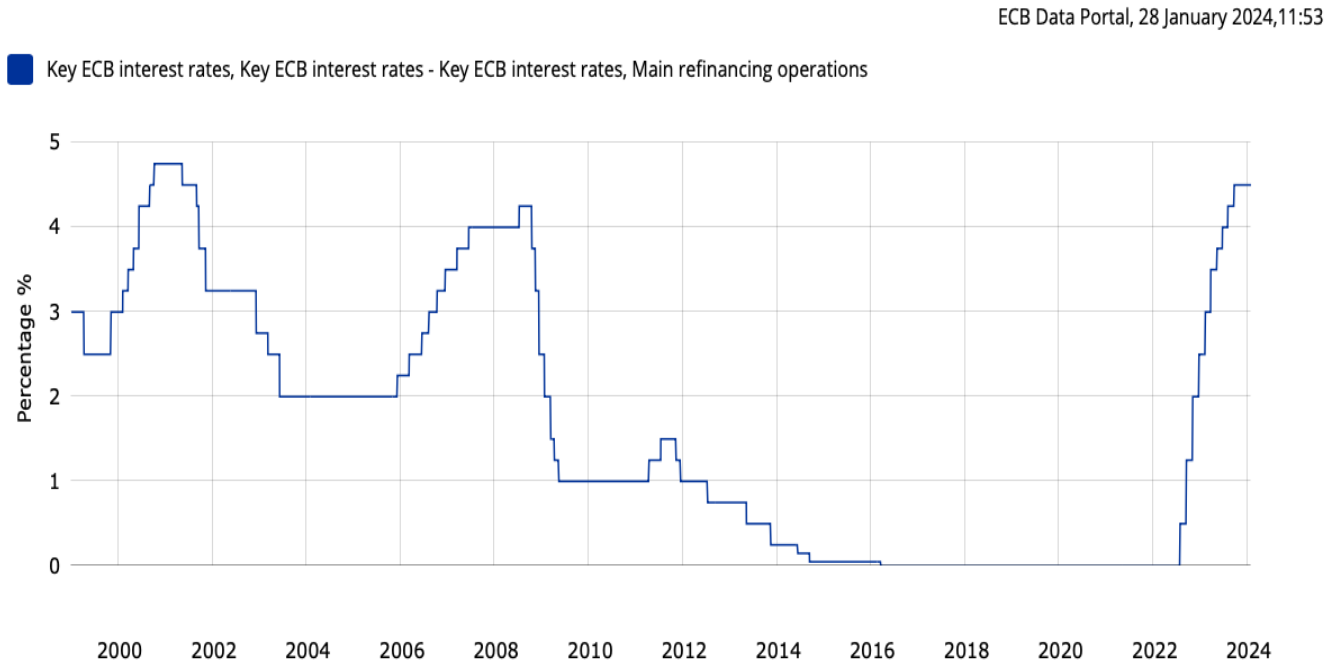


Image 1 – Economic Calendar With the Near Events Affecting the Euro Currency.
Source: www.dailyfx.com

Some particular events may change the EUR/USD currency rate, most of them are referring to announcements of GDP Growth Rate, Core Inflation Rate, Unemployment Rate, etc. If the released inflation data falls below both the forecasted value and the public's expectations, indicating weaker-than-expected price pressures in the Eurozone, it tends to exert downward pressure on the Euro. Investors may interpret lower inflation as a sign of economic weakness, prompting them to sell Euros in favor of more attractive assets denominated in other currencies like the US Dollar. This increased selling pressure leads to a depreciation of the Euro against the Dollar, causing the EUR/USD exchange rate to fall. Conversely, if the released inflation data exceeds both the forecasted value and the public's expectations, indicating stronger-than-anticipated price pressures in the Eurozone, it tends to bolster confidence in the Euro. Investors perceive higher inflation as a sign of robust economic activity and potential future interest rate

hikes by the European Central Bank (ECB) to curb inflationary pressures. As a result, investors may flock to the Euro, leading to increased demand and appreciation of the currency against the US Dollar. Consequently, the EUR/USD exchange rate strengthens.

ECB Interest Rate



Graph 5 – ECB Interest Rate 2000 – 2024.

Source: data.ecb.europa.eu

The European Central Bank (ECB) interest rate is a key factor influencing the value of the euro currency. The ECB, as the central bank for the Eurozone, sets and adjusts the interest rates to achieve its primary objectives of price stability and economic growth. Here's how the ECB interest rate affects the euro:

When the ECB adjusts its benchmark interest rates, it affects the interest rate differentials between the euro and other currencies, particularly the U.S. dollar. Higher interest rates in the Eurozone relative to other major economies make euro-denominated assets more attractive to investors, leading to an increased demand for the euro.

The ECB adjusts interest rates to maintain price stability, with an inflation target close to but below 2%.[49] Changes in interest rates signal the central bank's stance on controlling inflation. A higher interest rate may indicate a hawkish stance aimed at curbing inflation, which can positively impact the euro. If we take a look at Graph 5, we can see how an interest rate depends

[49] ECB. (2021). Five things you need to know about the ECB [online]. [cit. 01-02-2024] Retrieved from: https://www.ecb.europa.eu/ecb/educational/explainers/tell-me-more/html/five_things.en.html

on the economic situation in the EU and the World. Nevertheless, the ECB's actions are not always timely. Thus, when the consequences of the covid were already in full force on the European economy, the ECB decided to raise the interest rate only by the end of July 2022 by 0.5%, then gradually increase and by the end of 2022 the interest rate had already reached 2.5%. The interest rate increase continued further and currently stands at 4.5%.

2. Current Trends in the Development of the Euro Currency.

2.1 International Currency Market at the Present Stage.

For the first time since February 2013, the euro has surpassed the dollar and moved into first place in terms of share in global payments, according to SWIFT data. In October 2020, 37.8% of remittances serviced by this system were in Euro currency. The next time the euro overtook the dollar was already at the end of May 2021, then the number of remittances in euro currency was 39%, while the dollar accounted for 38.3%.

However, between May 2021 and the end of July 2023, the euro's share of global payments decreased by 37.4%, i.e., from 39% to 24.4%, while the dollar's share of global payments increased by 21.4%, from 38.3% to 46.5%, respectively.

Graph 8 shows that greenback-related trades rose to a record 46,5% in July, compared with slightly more than one-third a decade ago. The dollar was the top currency measured by transaction count, followed by the euro, pound, yen, and yuan.

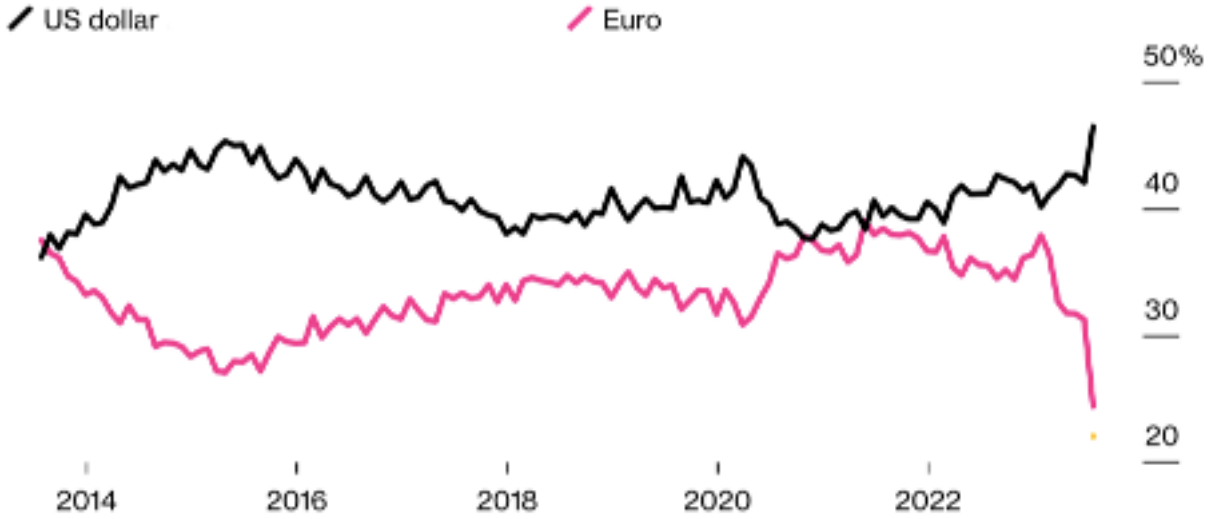
Large global banks use Swift, or the Society for Worldwide Interbank Financial Telecommunication, to communicate with each other and facilitate interbank currency deals. The information Swift tabulates — like some 200 million FX trade confirmations annually, for example — has offered a window into global flows since the consortium began compiling it in 2010. The latest figures reflect a technical upgrade based on changes this year to how trades are reported.[50]

The dollar's increasing tally of Swift transactions has largely come at the expense of the euro, which peaked at a 46% share in 2012. In July 2023, the European common currency's share of trades was its lowest on record, at slightly less than a quarter.

Swift's data also reveals the increasing frequency of yuan-related transactions as the Chinese currency gradually becomes more embedded in global foreign exchange flows. In July, for just the

[50] Carter Johnson and Alexandre Tanzi. (2023). Dollar Usage in Global Payments in July Rises to Record, Swift Says [online]. [cit. 01-02-2024] Retrieved from: https://www.bloomberg.com/news/articles/2023-08-24/dollar-usage-in-global-payments-in-july-rises-to-record-swift-says

second time on record, more than 3% of instructions sent via Swift involved the yuan, while in 2010, that figure was roughly 0.03%.



Graph 6 – Euro and Dollar Share of Global Payments.

Source: SWIFT

Nevertheless, international foreign exchange reserves in euros and dollars are rising. The world's largest active holder of foreign exchange reserves is China, a country that holds more than $3.46 trillion of its assets in foreign currencies. Japan and Switzerland were the only other countries with over a trillion U.S. dollars in reserves in early 2022, with a total of 1.4 trillion U.S. dollars and nearly one trillion U.S. dollars respectively. [51] One of the reasons for this is that it makes it easier to conduct international trade, as most trade is conducted in US dollars. The dominance of the US dollar in international trade facilitates seamless transactions across borders due to its widespread acceptance and stability. Businesses prefer to conduct transactions in US dollars because it simplifies pricing, invoicing, and settlement processes. Additionally, using a single currency like the US dollar reduces currency conversion costs and eliminates exchange rate risk for parties involved in trade. Many commodities, such as oil and gold, are priced and traded in US dollars, further solidifying its role as the primary currency for international trade.

The growth rate of dollar reserves from 3Q 2022 to 3Q 2023 was 1.08%. The growth rate of euro reserves from Q3 2022 to Q3 2023 amounted to 3.06%. Importantly, the dollar outpaced the euro in growth from Q4 2022 to Q1 2023, with dollar reserves rising 2.6% over this period, while euro reserves fell 2.96%.

[51] Raynor de Best. (2024). Monthly forex reserves in 84 countries and territories worldwide 2023 [online]. [cit. 03-02-2024] Retrieved from: https://www.statista.com/statistics/247231/currency-reserves-of-selected-countries.

	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023
Total Foreign Exchange Reserves	11,535.29	11,917.81	12,029.03	12,063.17	11,901.53
Allocated Reserves	10,693.55	11,040.01	11,151.51	11,176.12	10,981.26
Claims in U.S. dollars	6,426.89	6,460.21	6,630.89	6,641.89	6,497.94
Claims in euro	2,086.40	2,252.06	2,186.33	2,207.25	2,150.47
Claims in Chinese renminbi	281.12	287.81	287.12	272.99	260.12
Claims in Japanese yen	560.11	608.17	605.02	597.15	598.73
Claims in pounds sterling	489.95	543.11	532.60	533.64	530.36
Claims in Australian dollars	204.78	217.08	221.62	219.70	222.35
Claims in Canadian dollars	260.92	262.62	270.60	278.51	274.36
Claims in Swiss francs	24.78	25.31	28.26	21.26	20.30
Claims in other currencies	358.59	383.64	389.07	403.72	426.63
Unallocated Reserves	841.74	877.79	877.53	887.06	920.27

Table 2 – World Official Foreign Reserves by Currency (US Dollars, Billions).
Source: SWIFT

Another indicator of currency is the stock market. In Europe, the analog of the S&P 500, an index of the 500 largest stocks on the American market, is the Euro Stoxx 50 index. Euro Stoxx 50 includes shares of the 50 largest companies on the European market. This index is designed to reflect the overall dynamics of the Eurozone and serves as an important indicator for evaluating the performance of the European equity market. The success of companies included in the Euro Stoxx 50 can reflect the overall economic situation in the Eurozone. Positive financial results of companies can strengthen confidence in the Eurozone, which in turn can support the Euro currency. Also, the success of companies in the Euro Stoxx 50 may attract investment due to rising share prices and dividends. This can lead to increased demand for the Euro as investors buy Euros to invest in shares of European companies.

The EURO STOXX 50 was introduced on 26 February 1998. The EURO STOXX 50 Index represents some of the largest companies in the Eurozone in terms of free-float market capitalization. The index captures about 60% of the free-float market capitalization of the EURO STOXX Total Market Index, which in turn covers about 95% of the free-float market capitalization of the represented countries. The EURO STOXX 50 is one of the most liquid indices for the Eurozone.[52] Liquidity refers to the ease with which assets can be bought or sold in the market without significantly impacting their price. Due to its composition of highly traded and widely recognized blue-chip companies, the EURO STOXX 50 enjoys robust liquidity, making it an attractive investment option for institutional and retail investors alike. In summary, the EURO

[52] Bloomberg. (2024). EURO STOXX 50 Price EUR [online]. [cit. 03-02-2024] Retrieved from: https://www.bloomberg.com/quote/SX5E:IND

STOXX 50 Index stands as a premier barometer of the Eurozone equity market, offering investors a comprehensive snapshot of the region's economic performance and serving as a valuable tool for portfolio diversification and benchmarking purposes.

Graph 7 – Euro Stoxx 50 (STOXX50E) Index in EUR.

Source: google.com/finance

According to Graph 7, the European blue-chip index has only recently caught up with the highest values since the end of 2007. Thus, at the end of 2007, the maximum values of the index were about 4500 euros, then we see the largest collapse of the index as a result of the global financial crisis of 2008, the fall reached about 55% from 4500 to 2000 euros respectively. This is followed by a slow gradual recovery and only after 16 years, at the end of 2023, the index reached pre-crisis values. However, it's still far from the historical highest values of the 2000 year, when the price reached 5450 euros. But then there was a massive stock market crash, that is called the dot-com bubble. The dot-com bubble burst refers to the sharp decline in the stock prices of many internet-based companies in the early 2000s, following a period of intense speculation and rapid growth in the technology sector. The bubble was characterized by inflated stock valuations for numerous companies, even those with little or no earnings, based on the expectation of substantial future profits. When reality failed to meet these inflated expectations, the bubble burst, leading to significant market corrections and financial losses. As a result, from March 2000, until March 2003 the Index price fell by 62%. While the aftermath of the crash was painful for many, it paved the

way for a more mature and resilient tech industry that would eventually give rise to some of the most successful companies of the modern era.

Graph 8 – S&P 500 Index.

Source: google.com/finance

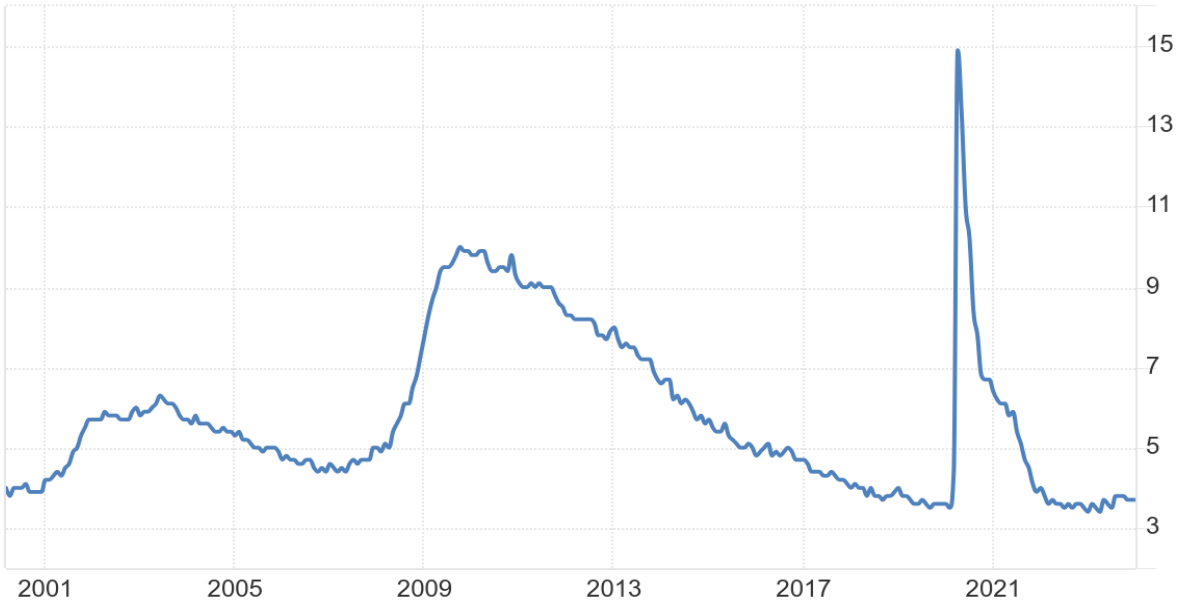
Meanwhile, today, February 3, 2024, the U.S. S&P 500 index hit a record high after the jobs report. A momentous week boosted investor sentiment. Friday's highlight was the jobs report, which blew past Wall Street expectations as the economy added 353,000 jobs in January. The unemployment rate was unchanged at 3.7%. [53]

The U.S. index was also hit hard by the dot-com bubble, falling about 43 percent. However, a few years later, by September 2007, the index reached the same values as before the dot-com bubble. This shows the confidence of investors in U.S. stocks. The global financial crisis hit the U.S. index even harder. In the end, by March 2009, the index reached its lowest value in 2000 - $683. Thus, the drop amounted to 56%. Based on the graph analysis, we can conclude that after the lowest value of 2009 to date, the index has risen by 659%.

As we have seen from the rise in the S&P 500 index in Graph 11, one of the most important factors affecting the economy and exchange rates is the unemployment rate, which has now reached pre-COVID values. In many countries of the world, particularly in the USA, COVID forced to reduction in the number of employees, which led to an increase in the unemployment

[53] Brett LoGiurato and Hamza Shaban. (2024). Stock market today: S&P 500 hits record high after jobs report, tech earnings thrill investors [online]. [cit. 05-02-2024] Retrieved from: https://finance.yahoo.com/news/stock-market-today-sp-500-hits-record-high-after-jobs-report-tech-earnings-thrill-investors-143400775.html

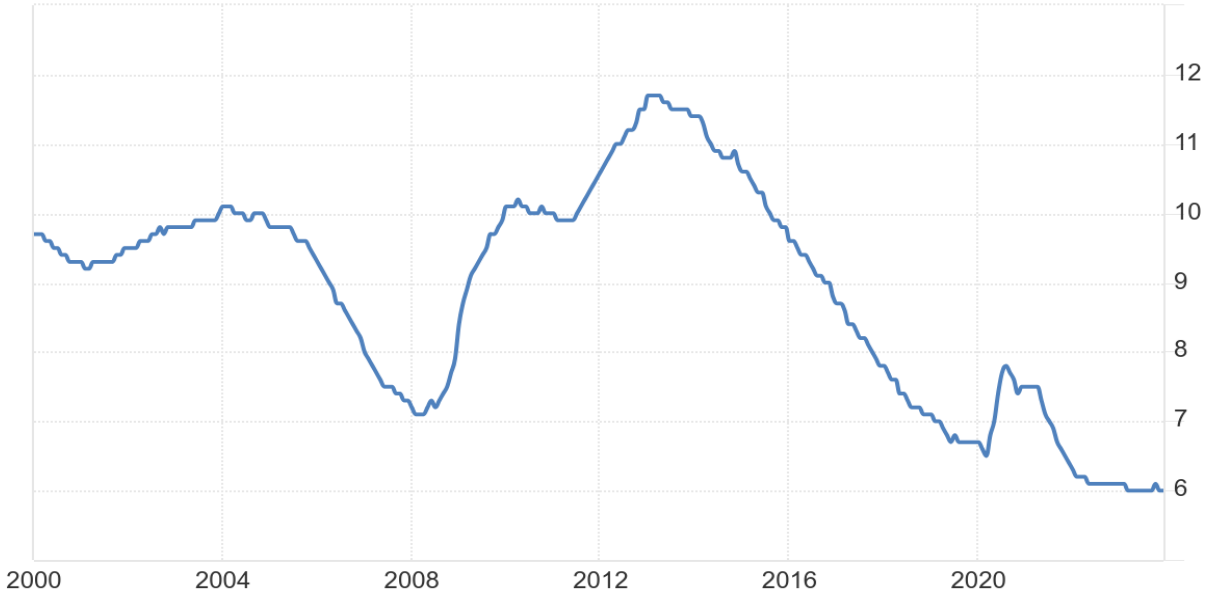
rate. Thus, in May 2020, the unemployment rate in the U.S. amounted to 14.7%, which is an absolute record in the 21st century for this country.



Graph 9 – Unemployment Rate in the USA in %.

Source: tradingeconomics.com

The US unemployment rate in January 2024 was 3.7%, unchanged from the previous month and slightly below the market consensus forecast of 3.8%. From this we can conclude that the US economy is in a better position than the public sees it, exceeding the consensus forecast, thus encouraging investors to put more money into the economy and strengthen it.



Graph 10 – Unemployment Rate in the EU in %.

Source: tradingeconomics.com

Europe has seen a steady decline in the unemployment rate. As of February 1, 2024, the unemployment index was 6.4%, which was in line with the forecast. The European Union has recently achieved a record low unemployment rate in the history of the Union. The labor market is currently robust, showcasing a healthy employment situation with a significant number of people gainfully employed. Projections indicate that the unemployment rate in the European Union is anticipated to maintain a relatively steady level at 6.0% throughout the year 2024. The labor market dynamics in the EU have been significantly influenced by the influx of refugees from Ukraine. Approximately 288,000 of these refugees were unemployed in December, a decrease from August's high of 324,000. The refugee situation has put additional strain on the EU's efforts to rejuvenate its labor market post-pandemic. [54] Traditionally, the leader in unemployment (from the end) is Spain at 11.7%, followed by Greece at 9.2%. In third place, the least expected country was developed Sweden, which scored 8%. However, if we consider the underlying reasons, such as the huge number of migrants from the Middle East and North Africa who live on unemployment benefits and have no plans to work, everything becomes very clear. The lowest unemployment rate is in Malta with 2.4%. It can be explained by the high-paced GDP growth – it's 3.79% as of 2023. While in the EU it amounted to only 0.71%. [55]

The Euro Index (EXY) shows the strength of the Euro against other major currencies. It is one of the most widely used currency indices that helps determine the health of the European currency. The ups and downs of the EXY can often be linked to policy decisions by the European Central Bank. The Euro Currency Index was launched in 2004 and the base is 100 points commencing on January, 4th 1971.[56] As the Euro currency was launched in 1999 before that year the Euro Currency Index is calculated based on the Deutsche Mark. The Euro Currency Index is an index that reflects the exchange rate of 4 currencies against the Euro, such as the US Dollar, British Pound Sterling, Japanese Yen and Swiss Franc. An interesting feature of this index is that unlike the dollar index where currencies are weighted differently, with the euro being the "heaviest" currency in the index and the Swiss franc being the "lightest", in the euro index all currencies are weighted equally. The suggestion that the dollar index provides a more accurate reflection of the health of the currency is a common assumption, but it's essential to delve deeper

[54] BNN Correspondents. (2024). EU Sees Lowest Unemployment Rate in Over a Decade Amid Economic Challenges [online]. [cit. 05-02-2024] Retrieved from: https://bnnbreaking.com/world/ukraine/eu-sees-lowest-unemployment-rate-in-over-a-decade-amid-economic-challenges/

[55] Aaron O'Neill. (2023). Gross domestic product (GDP) growth in EU and Euro area 2028 [online]. [cit. 05-02-2024] Retrieved from: https://www.statista.com/statistics/267898/gross-domestic-product-gdp-growth-in-eu-and-euro-area/

[56] Trading View. (2024). Euro Currency Index [online]. [cit. 06-02-2024] Retrieved from: https://www.tradingview.com/symbols/TVC-EXY/

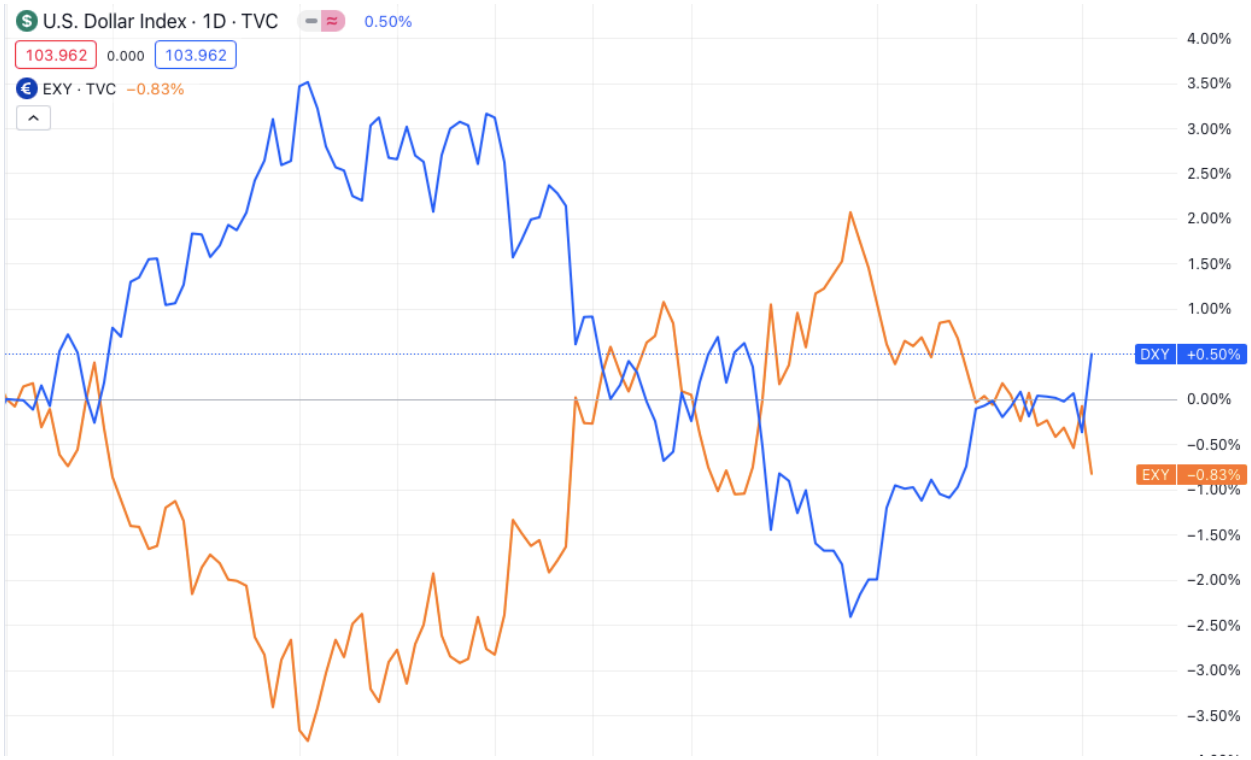
into the factors that influence currency strength and consider the limitations of relying solely on a single index for assessment.

Currency	Code	Weight
US Dollar	USD	25%
British Pound Sterling	GBP	25%
Japanese Yen	JPY	25%
Swiss Franc	CHF	25%
Total		100%

Table 3 – Structure of the EXY Index.

Source: tradingview.com

In addition, the euro index usually moves inversely to the U.S. dollar index DXY as shown in Graph 11. This means that when the euro strengthens against a basket of currencies, it tends to weaken against the U.S. dollar, and vice versa.



Graph 11 – EXY and DXY Indices in 2004 – 2024.

Source: tradingview.com

The USD Index (DXY) is an index showing the ratio of the US dollar to a basket of six other major currencies: Euro, Yen, Pound Sterling, Canadian Dollar, Swedish Krona, and Swiss Franc. The index is calculated as the geometric weighted average of the dollar's exchange rates against these currencies, with a correction factor, using the formula:

$$USDX = 50{,}14348112 * USDEUR^{0{,}576} * USDJPY^{0{,}136} * USDGBP^{0{,}119} * USDCAD^{0{,}091} * USDSEK^{0{,}042} * USDCHF^{0{,}036} \quad (1.2)$$[57]

It is a weighted geometric mean of the dollar's value relative to the following select currencies:

- Euro (EUR), 57.6% weight
- Japanese yen (JPY), 13.6% weight
- Pound sterling (GBP), 11.9% weight
- Canadian dollar (CAD), 9.1% weight
- Swedish krona (SEK), 4.2% weight
- Swiss franc (CHF), 3.6% weight

The nominal effective exchange rate (NEER) is the unadjusted weighted average rate at which the currency of one country is exchanged for a basket of several foreign currencies. The nominal exchange rate is the amount of a nation's currency needed to buy a foreign currency.

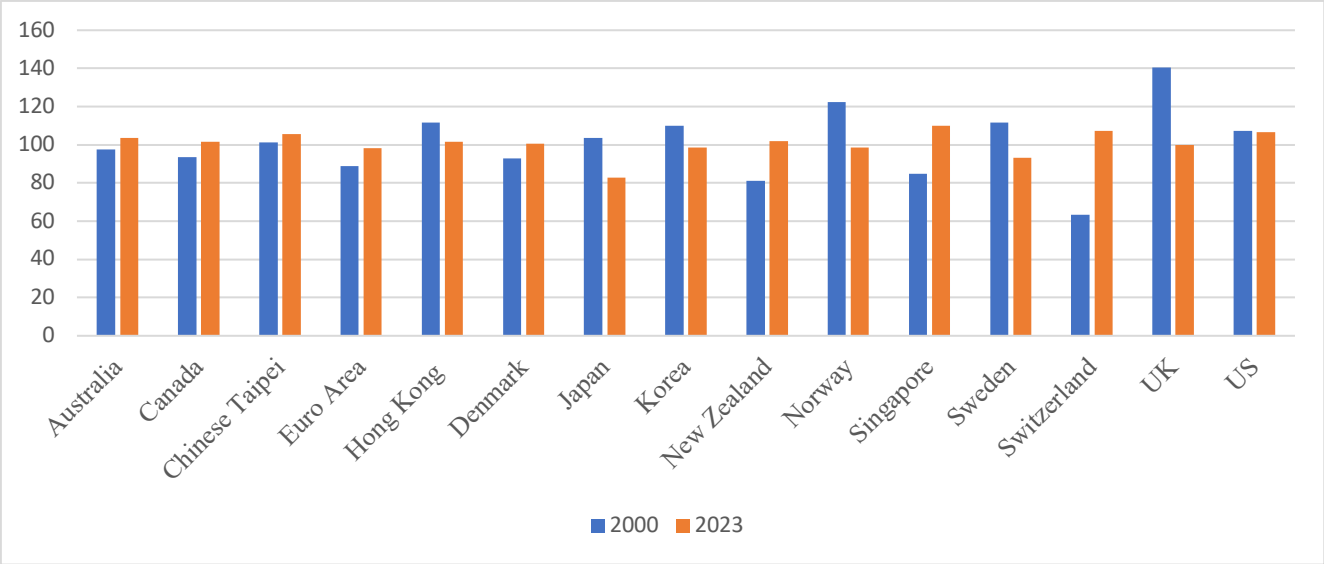
Each NEER compares one individual currency to a basket of foreign currencies. This basket is selected based on the country's most important trading partners as well as other major currencies. The world's major currencies are the U.S. dollar, the Euro, the British pound sterling, the Japanese yen, the Australian dollar, the Swiss franc, and the Canadian dollar.

Data from the Bank for International Settlements (BIS) were used for the estimation.

I've picked a Nominal effective exchange rate narrow (27 economies), excluding countries of the EU that use Euro currency like Germany, France, and so on because they have similar values to the Euro Area. As a result, we have 14 countries and the Euro Area. Having analyzed the NEER indicator we can conclude that the highest NEER ratio (more than 100) is possessed by such countries as Australia, Canada, Chinese Taipei, Hong Kong, Denmark, New Zealand, Singapore, Switzerland, the UK, and the USA. This suggests that the currency of these countries is worth more than the imported currency. Countries with lower NEER ratios (less than 100) such as countries of the Euro Area, Japan, Korea, Norway, and Sweden have a lower value of their domestic currency than their imported currency. Governments and central banks of countries with lower NEER ratios may adopt various policy measures to manage currency fluctuations.

[57] Kimberly Amadeo. (2022). U.S. Dollar Index: What It Is and Its Recent History [online]. [cit. 07-02-2024] Retrieved from: https://www.thebalancemoney.com/u-s-dollar-index-historical-data-3306249

Understanding these dynamics is essential for policymakers and market participants to navigate the complexities of global currency markets and manage economic risks effectively.



Graph 12 – Nominal effective exchange rates (NEER).

Source: stats.bis.org

Moreover, I can emphasize that some countries made a big way through 23 years and increased their NEER. For instance, Switzerland in 2000 had 63,3 and in 2023 it amounted to 107,3, making its growth as big as 69% and turning this country into the second highest NEER holder after Singapore which had 110,1 in 2023. On the other hand, the UK lost its NEER by more than 28,5 % - from 140,5 in 2000 to 100 in 2023. In the Euro Area, there is small growth from 88,8 in 2000 to 98,4 in 2023.

REER is the real effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs. An increase in REER implies that exports become more expensive and imports become cheaper; therefore, an increase indicates a loss in trade competitiveness. [58] Investors and businesses use REER as part of their analysis when making decisions related to international investments, currency hedging, and market entry strategies. Understanding a country's REER helps assess the attractiveness of investing in that country's assets and the potential risks associated with currency fluctuations. Overall, REER serves as a comprehensive indicator reflecting a country's external competitiveness, trade dynamics and macroeconomic stability, making it a critical tool for policymakers, businesses and investors alike.

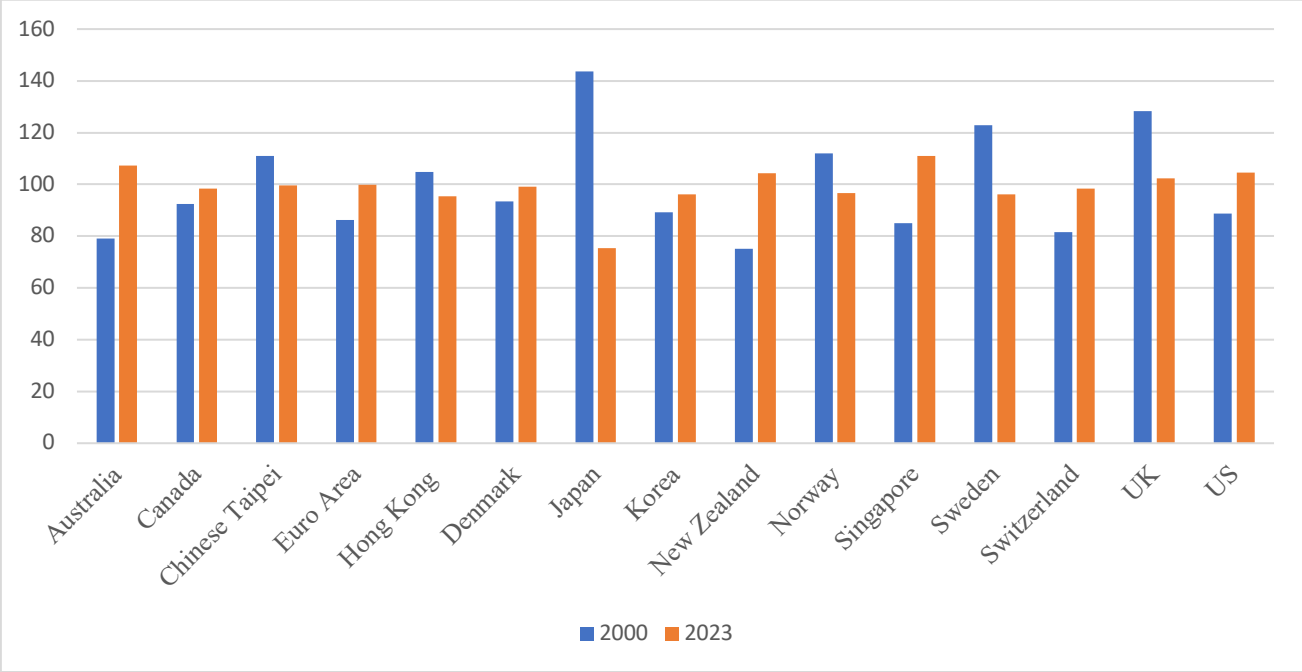
[58] IMF. (2024). What is real effective exchange rate (REER)? [online]. [cit. 08-02-2024] Retrieved from: https://datahelp.imf.org/knowledgebase/articles/537472-what-is-real-effective-exchange-rate-reer.

The Formula for REER is:

$REER = CER^N * CER^N * CER^N * 100$ (1.3)[59]

Where:

CER = Country Exchange Rate



Graph 13 – Real effective exchange rates (REER).

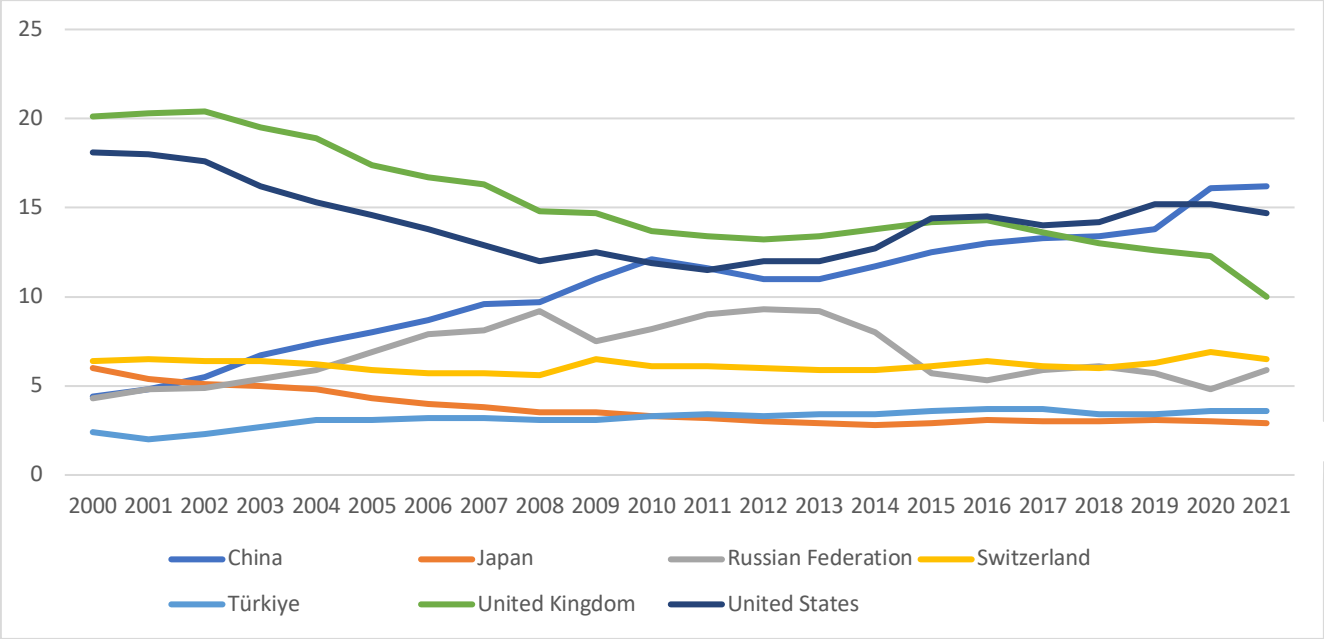
Source: stats.bis.org

Here I've also picked the narrow index 27 economies, excluding countries of the EU that use Euro currency like Germany, France, and so on because they have similar values to the Euro Area. The countries with the highest REER coefficient (over 100) are Australia, New Zealand, Singapore, the UK, and the USA. I can underline that it's less than for NEER, where there are 10 countries with a coefficient over 100. Countries with the largest trade relationships tend to have the largest weights in this comparative index, while countries with small trade relationships will have smaller weights in the basket of currencies. This suggests that the value of these countries' currencies is greater relative to the average group of major currencies. As I mentioned before, a rise in the index means a loss of competitiveness. The Euro Area's REER has increased by 16%, and the USA's by 18%. At the same time, Japan did a good job, having dropped its REER by 48%.

Now let's look at the EU's trading partners. The advantage of the EU is that it is located in a very favorable geographical location, has access to 4 seas and 2 oceans, is in close proximity to

[59] Adam Hayes. (2021). What Is the Real Effective Exchange Rate (REER) and Its Equation? [online]. [cit. 10-02-2024] Retrieved from: https://www.investopedia.com/terms/r/reer.asp

Asia, Africa and is closer to the United States than, for example, China. Of course, all these advantages are applied in trade and the European ports of Rotterdam and Antwerp are the largest in the world, overtaking[60] US ports in terms of volume in tons.



Graph 14 – Trading Partners of the EU from 2000 to 2021 in %.

Source: destatis.de

Analyzing Graph 14, we can conclude that the UK was the EU's largest trading partner at the beginning of the 21st century. As of 2000, the UK accounted for 20.1%. However, already in 2015, the US surpassed the UK, taking 14.4% of total trade with the EU, while the UK had 14.2%. In 2018, China overtook the UK as well, taking 13.4%, while the UK 13%. This trend suggests a shift in trade priorities, bringing countries such as China into the lead. The UK left the EU single market and customs union at the end of 2020. Since then, UK trade with the EU has been governed by the Trade and Co-operation Agreement. While this allows tariff-free trade in goods between the UK and EU, trade barriers are higher than before.

The US-China trade war began in July 2018 under the administration of then-US president Donald Trump, eventually leading to tariffs on about US$550 billion worth of Chinese goods and US$185 billion worth of US goods.[61] Eventually, it affected the trade between the EU and China as China sought alternative markets to offset the impact of reduced exports to the US. According

[60] World Shipping Council. (2024). The Top 50 Container Ports [online]. [cit. 11-02-2024] Retrieved from: https://www.worldshipping.org/top-50-ports

[61] Andrew Mullen. (2022). US-China trade war: timeline of key dates and events since July 2018 [online]. [cit. 11-02-2024] Retrieved from: https://www.scmp.com/economy/global-economy/article/3177652/us-china-trade-war-timeline-key-dates-and-events-july-2018

to the collected data, I can underline, that since the beginning of the trade wars between the US and China, the trade volume between the EU and China has increased up to 16,2%, that is, by 17%.

2.2 Analysis of Euro Currency Transactions in the International Foreign Exchange Market.

As I mentioned in the first chapter, the euro is one of the world's major reserve currencies, alongside the US dollar. Central banks and international organizations hold significant reserves in euros. The demand for euros in reserve holdings can be influenced by factors such as economic stability, interest rates, and geopolitical events. At the same time, the Euro-Dollar exchange rate (EUR/USD) is one of the most widely traded currency pairs in the foreign exchange (forex) market. This currency pair reflects the two largest economic blocs in the world: the Eurozone and the United States. As such, it often exhibits high liquidity and is actively traded 24 hours a day during the forex trading week.

I want to consider one of the most useful (in my opinion) indicators – Bollinger Bands. First of all, let’s figure out what it is.

The idea behind Bollinger Bands is to combine a trend indicator, a volatility indicator, and an oscillator. Bands indicate on the chart the direction and range of price fluctuations, taking into account the trend and volatility characteristic of the current market phase. Graphically, the indicator consists of three lines: a moving average in the middle, characterizing the main direction of movement, and two lines, limiting the price chart from both sides and characterizing its volatility.

If we take a look at the graph 15 more closely, we notice that there is a descending trend. One key aspect of Bollinger Bands is their ability to identify potential overbought or oversold conditions in the market. When prices consistently touch or exceed the upper band, it may signal that the market is overbought, suggesting a potential reversal or correction in prices. Conversely, when prices consistently touch or fall below the lower band, it may indicate oversold conditions and a possible upward price reversal. As far as I tested this index, this indicator gives us a clear understanding of future movements. The adaptive nature of Bollinger Bands is another notable feature. The width of the bands automatically adjusts based on prevailing market conditions, such as changes in volatility levels. For example, during periods of heightened volatility, such as news releases or geopolitical events, the bands widen to accommodate larger price movements. Conversely, during periods of relative stability, the bands contract, reflecting reduced volatility and narrower price ranges. By incorporating trend, volatility, and momentum analysis into a single

visual tool, Bollinger Bands offer a comprehensive framework for assessing market dynamics and anticipating future price movements.

Graph 15 – EUR/USD with Bollinger Bands.

Source: finance.yahoo.com

Other important indicators are the 10-day momentum line and SMA. By analyzing received results from these indicators we can figure out the current mood in the forex, how people are seeing the Euro currency, and whether they believe in this growth or they don't.

1. 10 – day momentum line = $M = V - V_{10}$ (1.4)[62]

M= 1.0795 – 1.0875 = - 0.0080

The value I obtained indicates that it's crossing below the zero line and this range indicates a spread of 80 pips. In other words, it's a small bearish trend.

2. Simple Moving Average (SMA)

SMA= $\frac{A1+A2+\ldots+An}{n}$ (1.5)[63]

Where:

A_n = a price of a currency at period n

n = the number of total periods

[62] Somer G. Anderson. (2024). Momentum Indicates Stock Price Strength [online]. [cit. 15-02-2024] Retrieved from: https://www.investopedia.com/articles/technical/081501.asp

[63] Charles Potters. (2023). Simple Moving Average (SMA): What It Is and the Formula Strength [online]. [cit. 15-02-2024] Retrieved from: https://www.investopedia.com/terms/s/sma.asp

Let's take a period of 100 days.

$$\text{SMA} = \frac{A1+A2+\ldots+An}{n}$$

$$\text{SMA} = \frac{10.7936}{10} \approx 1.0793$$

As for 14.02.24 13:50, the current price of EUR/USD is 1.0703 => it's below the 100-day SMA, which might suggest a bearish sentiment.

According to Murphy (1999), the trading strategy can be based on one moving average

- When the close price crosses above the MA = BUY
- When the close price crosses below the MA = SELL

Another element of the technical analysis is patterns. They provide traders with visual representations of historical price movements, helping them identify potential future market directions.

Graph 16 – EUR/USD with Flag Continuation Pattern.

Source: metatrader5.com

In Graph 16 we can see a pattern which is called "flag continuation". The rectangle develops from two trendlines which form the support and resistance until the price breaks out. As a result, the price grew up.

In conclusion, technical analysis plays a crucial role in a forex market, allowing us to understand better the future movements of a currency pair. Nevertheless, it's necessary to take into

account also a fundamental analysis which we were talking about in previous chapters, and risk management techniques to make well-informed decisions in the forex market.

The US Dollar is not the only currency which the Euro traded with, there are some other currencies like GBP, CHF, and JPY.

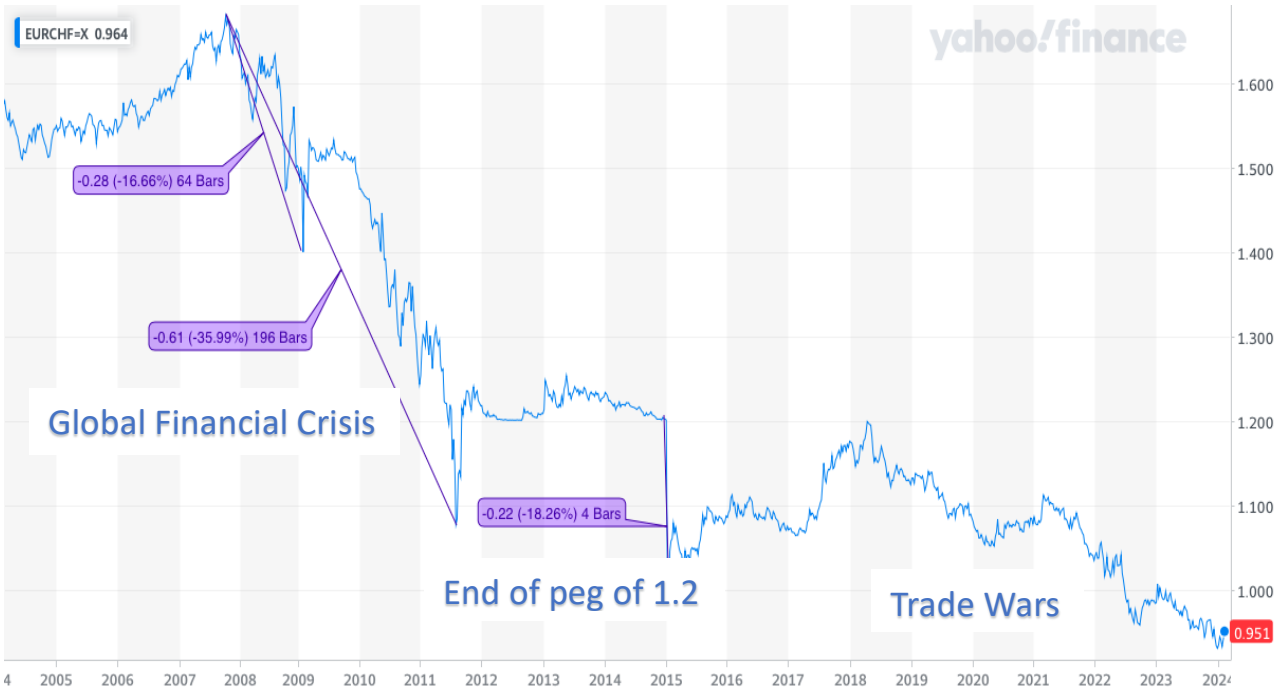
The GBP/EUR currency pair is a crucial financial instrument that reflects the dynamic relationship between the British Pound and the Euro. Notably, this pair has undergone substantial volatility, particularly after the 2007–2008 financial crisis, since the UK decided to exit the European Union on June 23, 2016. The uncertainties surrounding Brexit have significantly influenced the GBP/EUR exchange rate. Furthermore, the currency pair exhibited noteworthy movements in 2020 as the COVID-19 pandemic severely impacted national economies in both the UK and Europe. Affectionately nicknamed 'chunnel,' the GBP/EUR pair symbolizes the vital connection between Britain and Europe, reminiscent of the Channel Tunnel.

Graph 17 – GPB/EUR

Source: finance.yahoo.com

Regarding the analysis from Graph 17, the biggest price change was because of the Financial Crisis of 2007-2008, the fall reached 31.44%, touching the lowest value ever. The financial crisis triggered a "risk-off" sentiment in the markets. Investors were averse to taking risks, leading to a sell-off in riskier assets such as equities and higher-yielding currencies. The British Pound and the Euro, being perceived as more risk-sensitive currencies, faced selling pressure as investors sought safety in the CHF and USD. These are so-called safe-heaven

currencies. The second most significant collapse was because of Brexit, which amounted to 21,74%. Traders and investors closely monitored news, rumors, and sentiment surrounding Brexit. Speculation on the outcome of negotiations and the potential economic consequences led to short-term fluctuations in the GBP/EUR exchange rate as market participants adjusted their positions based on evolving expectations. Finally, COVID-19 made a 7.7% fall. It's important to underline, that the period of COVID-19 coincided with Brexit, so these 2 events were combined against the currency rate. As a matter of fact, GPB returned to pre-Brexit values relatively fast, as for the beginning of 2022 it reached the value of 1.2, as before Brexit and Covid. Currently, the UK interest rate is 5.25% and the EU interest rate is 4.5% and this can be one of the factors why the pound-to-euro exchange rate has been climbing upwards, but only slightly. For example, a year ago the rate was 1.12, now, as of 17 February it is 1.16



Graph 18 – EUR/CHF

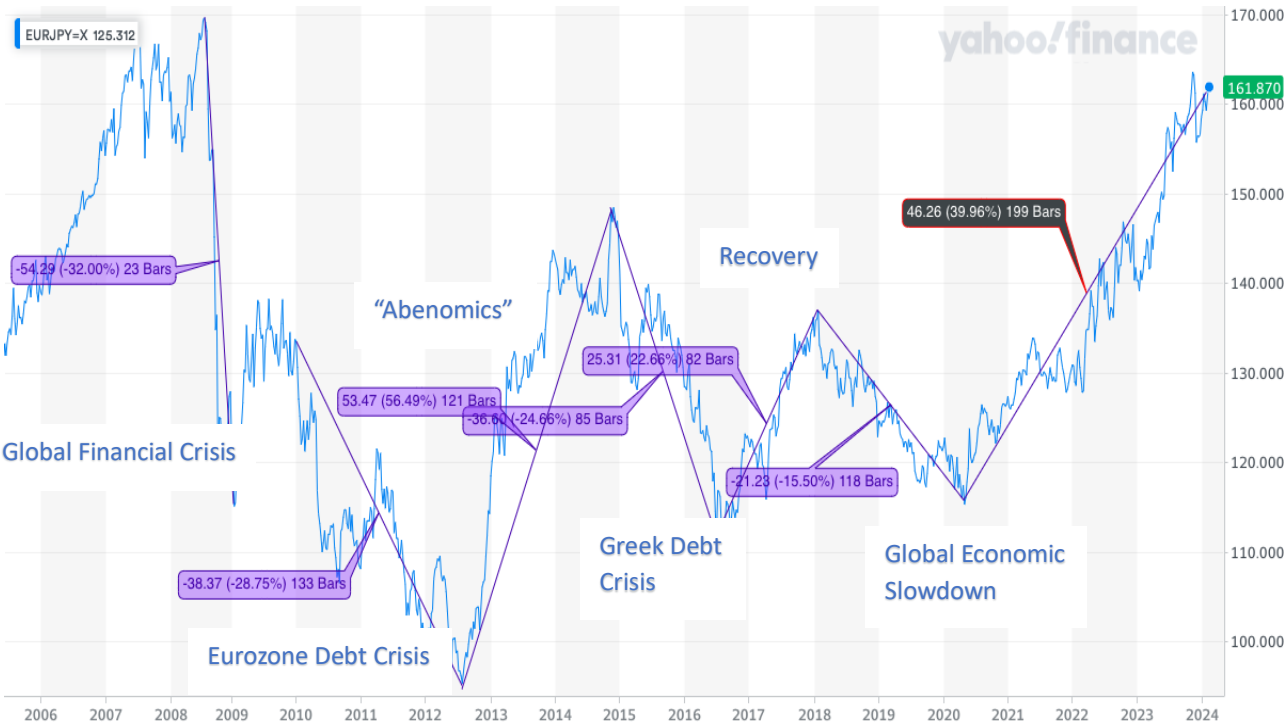
Source: finance.yahoo.com

Starting from October 2007, the Euro faced a declining trend against the Swiss Franc, largely influenced by the unfolding crisis within the Eurozone. The crisis prompted investors to divest from the Euro and turn to the Swiss Franc as a safe-haven currency. As a result of this increased demand for the Swiss Franc, its value surged and continued to strengthen over the subsequent four years relative to the Euro. This situation presented challenges for Swiss exports, which constitute a substantial portion, approximately 70%, of the country's GDP. Given that the

Eurozone serves as the primary destination for Swiss exports, the appreciating Swiss Franc made Swiss products more expensive for European consumers.

Observing the challenges posed by the appreciating Swiss Franc against the Euro, the Swiss National Bank took decisive action by implementing a fixed exchange rate of 1.20 francs per euro. This currency peg was introduced in July 2011, and its impact is evident when examining the chart of EUR/CHF. Almost instantly, the prior price fluctuations vanished, and the currency pair began trading consistently near the established level of 1.20.

However, since 2015, we have seen a sudden fall. What was it? On January 15, 2015, the Swiss National Bank announced the end of the EUR/CHF peg. I believe a lot of traders remember that day. Overnight, the rate dropped almost 20 percent – from 1.2 to 1.02. This marked the beginning of an upward trend, a development unseen since 2007, as the freely traded Swiss Franc propelled the EUR/CHF into an ascending trajectory. Nevertheless, this positive momentum was short-lived. Upon reaching the historical level of 1.20, the situation again became Euro-bad. The potential for further depreciation of the Swiss Franc against the Euro was possibly hindered by the initiation of Trump's trade war against China. Investors, seeking a safe-haven currency amid the uncertainties caused by the trade tensions, once again turned to the Swiss Franc, impacting the EUR/CHF exchange rate. The latest events show that the Swiss Franc is still considered a semi-heaven currency.



Graph 19 – EUR/JPY

Source: finance.yahoo.com

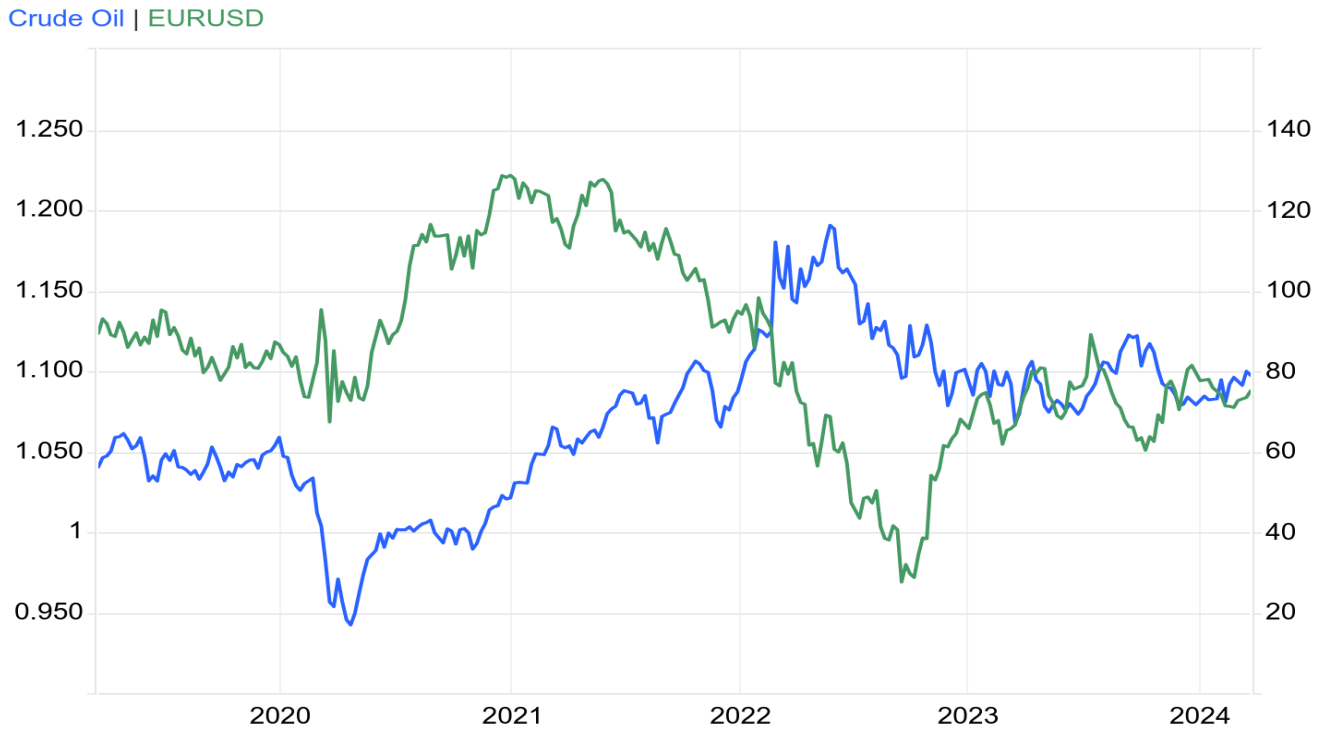
The dynamics of the EUR/JPY (Euro/Japanese Yen) during the Global Financial Crisis (GFC) were characterized by significant volatility and shifts in market sentiment. During the crisis, central banks around the world, including the European Central Bank (ECB) and the Bank of Japan (BoJ), implemented monetary policy measures to address economic challenges. The divergent paths of these policies, coupled with interest rate differentials, influenced the attractiveness of the Euro and the Yen. In times of crisis, the Yen's low interest rates became less of a concern compared to its safe-haven appeal. As a result, the EUR/JPY rate decreased from 169.5 in 2008 to 115 in 2009 losing 32% of its value. The European Debt Crisis, which unfolded primarily from 2010 to 2012, began with worries about the high levels of sovereign debt in certain Eurozone countries, particularly Greece, Portugal, Ireland, Spain, and Italy (let's remember the PIGS abbreviation). Investors became increasingly concerned about the ability of these countries to service their debt, leading to a loss of confidence in the Euro. Loss of currency pair value amounted to 28,7%. In 2012, Shinzo Abe became the Prime Minister of Japan, introducing a set of economic policies known as "Abenomics." These policies aimed to stimulate economic growth, combat deflation, and weaken the Japanese Yen to boost exports. The Bank of Japan (BoJ) implemented aggressive monetary easing measures, including large-scale asset purchases and a commitment to achieving a 2% inflation target. The consequences of this policy can be seen in the graph, the Euro has become stronger towards the JPY at 56,5%. The decline of the EUR/JPY exchange rate from 2014 to 2016 was a result of a combination of factors, including divergent monetary policies, economic challenges in the Eurozone, including the Greek Debt crisis, and global economic uncertainties such as sanctions against Russia. From 2016 to 2018 there has been a gradual increase in the Euro against the Yen, due to factors such as the Eurozone's economic recovery, divergence in monetary policies, political stability, global economic conditions, reduced safe-haven demand for the Yen, positive trade relations, and carry trade dynamics. The growth amounted to 22.6%. In 2018 and 2019, the global economy experienced a slowdown, partly attributed to trade tensions between major economies, such as the United States and China. The uncertainty surrounding global trade hurt export-oriented economies, including the Eurozone and Japan, leading to reduced economic growth expectations. At the same time, there were concerns about the impact of Brexit, and the COVID-19 pandemic in 2020 exacerbated global economic uncertainties. So we can see a fall of 15.5%

Now it is worth understanding why the Euro has been steadily strengthening against the Yen for almost 4 years and how long it can last. From a fundamental point of view, the exchange rate growth is due to the difference in the policies of the ECB and the Bank of Japan. As of 17 February 2024, the current interest rate of the ECB is 4.5%. Meanwhile, the current interest rate of BOJ is -

0.1. The difference is significant. Japan's central bank is expected to exit its negative interest rate regime this spring according to a former Bank of Japan board member.[64]

2.3 Assessing the Influence of Certain Factors on Euro Currency.

Since 2022 the EUR/USD exchange rate has decreased by 5.3% from 1.13 to 1.07. Historically, the EUR/USD exchange rate has a negative correlation with a crude oil price since the European economy is one of the biggest crude oil importers. Thus, when the crude oil price increases, the European currency depreciates, because when the U.S. dollar exhibits strength, a lower quantity of U.S. dollars is required to purchase a barrel of oil. In contrast, when the U.S. dollar is weak, oil costs are elevated when denominated in dollars. However, it is worth noting that there is not always a correlation between the euro-dollar exchange rate and the price of oil. Currency and commodity markets can also be affected by various factors such as economic data, geopolitical events, changes in interest rates, and others. Therefore, it's better to keep an eye on several factors at the same time to better understand the market dynamics. Let's take a look at Graph 26.



Graph 20 – Crude Oil and EUR/USD 2019-2024.

Source: tradingeconomics.com

[64] Clement Tan. (2024). Japan slipped into a technical recession. The Bank of Japan has to juggle supporting the yen and fragile growth [online]. [cit. 16-02-2024] Retrieved from: https://www.cnbc.com/2024/02/16/boj-juggles-yen-weakness-and-fragile-growth-after-gdp-surprise.html#

I took the last 5 years for analysis on purpose in order to show a brighter correlation, while in the 25-year graph, it would be barely seen. According to the received data, I can underline that indeed, in the last 5 years there has been a correlation – when the crude oil price appreciated, the EUR/USD depreciated, as the European economy is very dependent on crude oil import.

Crude oil exhibits a strong correlation with numerous currency pairs for three primary reasons. Initially, as the contract is denominated in U.S. dollars, alterations in oil prices promptly influence the respective currency crosses. Additionally, heightened reliance on crude oil exports makes the national economy susceptible to fluctuations in energy markets, impacting it positively or negatively. Lastly, a decrease in crude oil prices not only triggers a favorable decline in industrial commodity prices but also heightens the risk of global deflation. This, in turn, compels currency pairs to reevaluate their relationships.

Country	Last	Previous	Reference	Unit
United States	8133	8133	Dec/23	Tonnes
Germany	3353	3353	Dec/23	Tonnes
Italy	2452	2452	Dec/23	Tonnes
France	2437	2437	Dec/23	Tonnes
Russia	2333	2333	Dec/23	Tonnes
China	2235	2192	Dec/23	Tonnes
Switzerland	1040	1040	Dec/23	Tonnes
Japan	846	846	Dec/23	Tonnes
India	804	801	Dec/23	Tonnes
Netherlands	612	612	Dec/23	Tonnes
Turkey	540	479	Dec/23	Tonnes
Euro Area	507	507	Dec/23	Tonnes

Table 4 – Gold reserves by country.

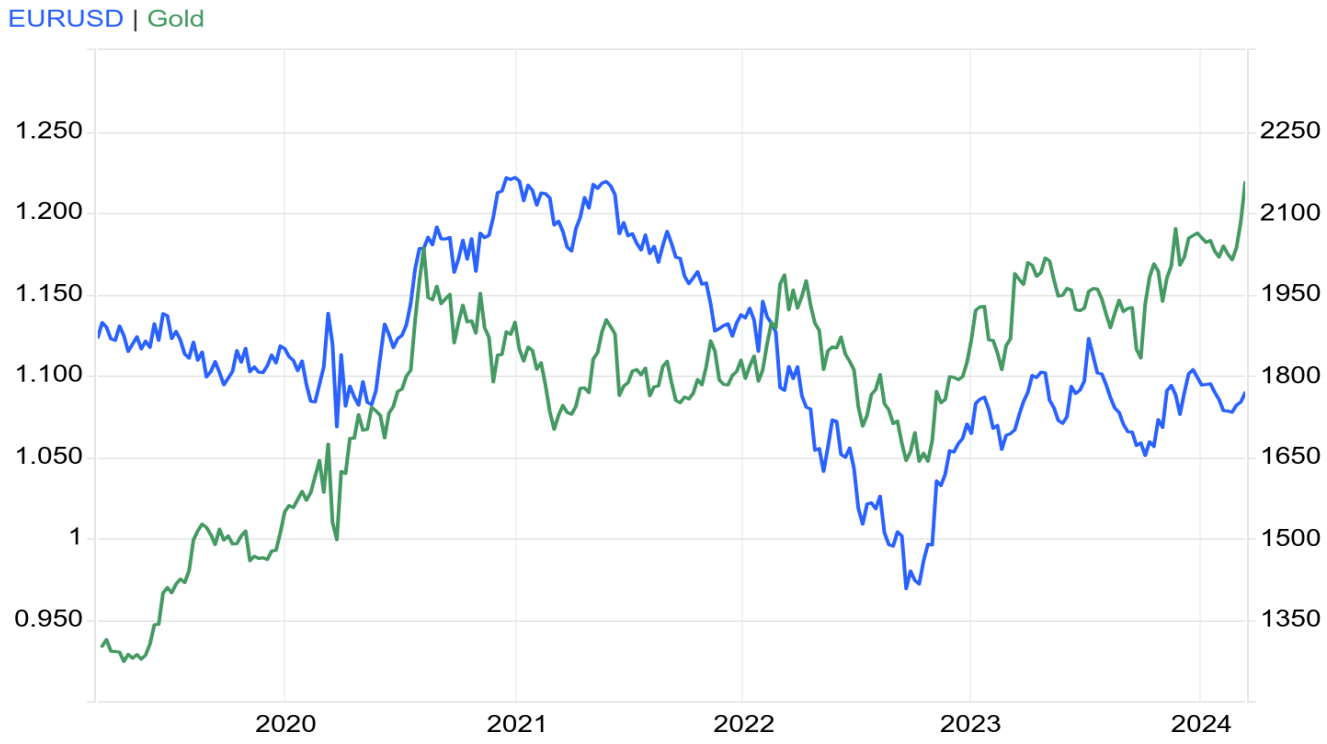
Source: tradingeconomics.com

As for the end of 2023, the biggest holder of the gold reserves is the USA – 8133 tonnes. Why is it important to have large gold reserves? Historically, some currencies were directly tied to gold through the gold standard. Even though this is no longer the case for major currencies, the idea of gold as a store of value persists. Countries with large gold reserves may be seen as having a more solid backing for their currency, influencing exchange rates. Moreover, governments will buy large amounts of gold when inflation starts to rise to counteract this. Regarding the European

countries, Germany, Italy, and France have more gold reserves than the USA, amounting to 8242 tonnes. Additionally, the Euro Area has reserves amounting to 507 tonnes.

Gold is often considered a safe-haven asset, sought by investors during times of economic uncertainty or market volatility. Similarly, the U.S. dollar, especially USD pairs like EUR/USD, tends to attract safe-haven flows. In times of crisis, gold and the U.S. dollar may strengthen, creating a positive correlation.

While gold and the U.S. dollar can both act as safe-haven assets, they often have an inverse relationship. Gold prices may rise when the U.S. dollar weakens, and vice versa. This inverse correlation is based on the idea that gold is priced in U.S. dollars, and a weaker dollar makes gold more attractive to international buyers.



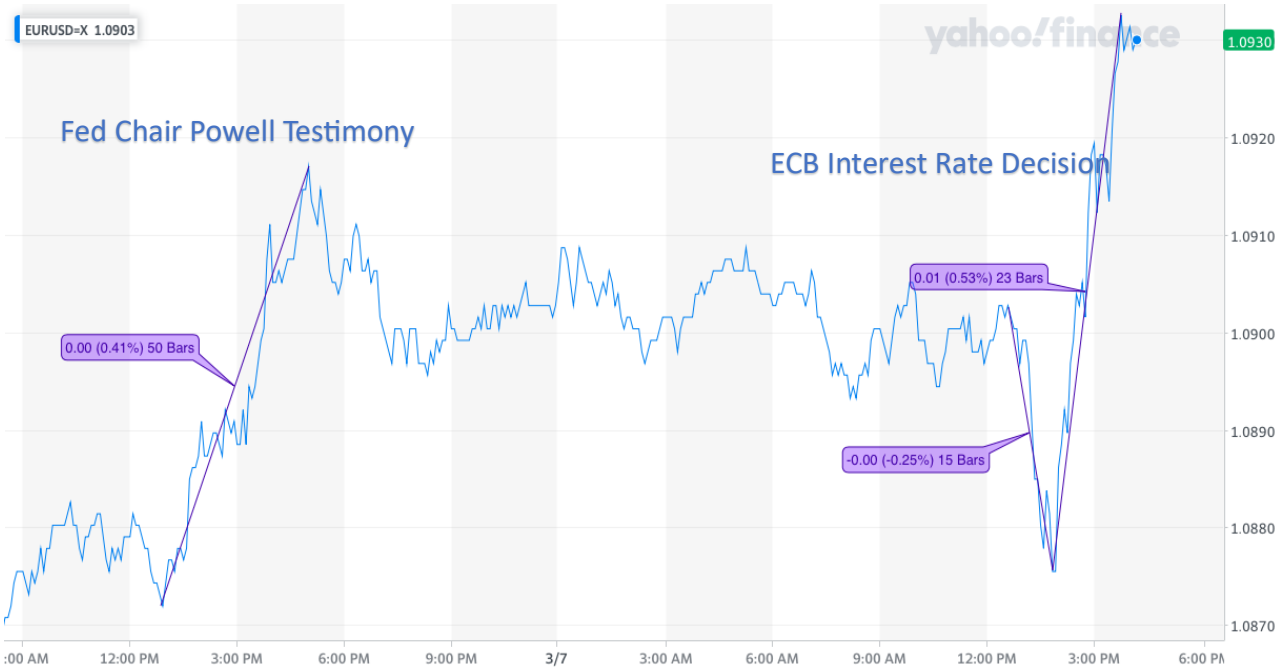
Graph 21 – Gold and EUR/USD 2019-2024.

Source: tradingeconomics.com

The acquired data from Graph 21 shows us that indeed there is some correlation between gold and EUR/USD. The chosen period is a period of the world's instability, and it can be seen by the growing price of gold. The biggest driver of the gold price over the past year has been the market's anticipation of when the Fed will start lowering borrowing costs. Swaps markets show a

65% chance of a cut in June, compared with 58% at the end of February.[65] As of March 7th, 2024, gold is at an all-time high, reaching 2156 USD/t.oz. After the recent Fed meeting which took place on March 6th, the EUR/USD climbed beyond the 1.09 level when Chair Jerome Powell underscored to U.S. lawmakers that the next adjustment in interest rates would likely be a decrease, albeit without a sense of urgency to implement it. The weaker dollar could also push investors to buy gold as this commodity is trading in dollars.

As I mentioned in the 1.4 chapter, some economic events can influence the EUR/USD—especially announcements of a decreasing or increasing interest rate from the ECB or Fed. On March 6, there was a Federal Reserve meeting where they announced that they would be lowering the interest rate. Immediately afterward, the euro exchange rate against the dollar rose significantly. A day later, on March 7, the ECB announced that it would keep the interest rate unchanged, for the fourth consecutive meeting, saying inflation is expected to reach its 2% target in 2025.



Graph 22 – EUR/USD and Decisions of FED and ECB.

Source: finance.yahoo.com

Graph 22 clearly shows how much economic events affect the Euro exchange rate. After the Fed chair Powell's Testimony, the Euro appreciated for the Dollar by 0,41%. A day later, there was an ECB Interest Rate Decision where they kept an interest rate of 4.5%, the Euro depreciated

[65] Jack Ryan, Yvonne Yue Li, and Eddie Spence. (2024). Gold Just Notched Another Record: Here's What to Watch Next [online]. [cit. 18-02-2024] Retrieved from: https://www.bloomberg.com/news/articles/2024-03-06/five-charts-to-watch-after-gold-s-jump-to-an-all-time-high?embedded-checkout=true

for a short period, however, a few minutes later traders bought back the Euro and it reached its highest value since January 2024. Another impetus for the Euro's growth was an unsatisfactory report of the US trade balance, which was forecasted to reach $-63.5B, however, the actual number was $-67.4B.[66] Among other events are employment reports, inflation data, trade balances, and political events. Traders and investors closely monitor these economic events and indicators to make informed decisions about the EUR/USD.

3. Current Aspects of Euro Currency Forecasting and Regulation.

3.1 Problems of Euro and World Currencies Development at the Present Stage.

The most effective way to track the Euro's performance is through the Euro Currency Index, also known as EXY. This indicates how the Euro is performing against a backdrop of currencies such as the Dollar, British pound, Japanese yen, and Swiss franc.

Graph 23 – Index EXY 08.03.23 – 08.03.24

Source: tradingview.com

Over the past 12 months, EXY has been up 3.8%, indicating that the Euro is gradually recovering from a significant weakening in 2021-2022 when the index fell by -20.48%. To have a brighter

[66] Daily FX. (2024). Economic Calendar [online]. [cit. 25-02-2024] Retrieved from: https://www.dailyfx.com/economic-calendar#today

idea of what was going on with the EXY index and what it came through, let's take a look at graph 24 of the EXY index for 2021-2022 years when there were economic hardships such as energetic crisis, supply chain disruption, and fluctuations on forex caused primarily by the Russian war in Ukraine. Over the past year, the economic situation across the Eurozone has improved, as evidenced by the latest reports on annual inflation, which fell from 9.2% to 2.9 in the Eurozone and from 10.4 to 3.4 in the EU, respectively, between December 2022 and December 2023. [67]

Graph 24 – Index EXY 2021-2022.

Source: tradingview.com

2022 has been labeled by analysts as a challenging period, characterized as "the worst year in the euro's history."[68] Nonetheless, the significance of the euro has been diminishing over the past two decades. Its portion of global official foreign exchange reserves dropped to 20.6% by the end of 2021, a decline from approximately 25% in 2003. All this has forced the ECB to raise its key rate by the end of 2022 to 2.5 percent, which had long been at 0 percent since 2016, when in the meantime the Fed's policy has proved more flexible.

In my opinion, the main driver of currency exchange rates in 2024, in particular the Euro, will be the elections of heads of state that will take place in many countries around the world,

[67] Eurostat. (2024). Euro indicators [online]. [cit. 27-02-2024] Retrieved from: https://ec.europa.eu/eurostat/documents/2995521/18343103/2-17012024-AP-EN.pdf.
[68] Piero Cingari. (2022). Could the euro collapse? [online]. [cit. 29-02-2024] Retrieved from: https://www.reuters.com/plus/could-the-euro-collapse

including the US, and also geopolitical conflicts, which are taking place not only in Ukraine but also in Gaza. Since relatively recently, a new challenge to the global economy has emerged - the Houthi attack on merchant ships in the Red Sea, which disrupts supply chains, forcing transportation companies to find workarounds and making logistics more expensive. The US dollar as a reserve currency acts as an insurance policy for the financial world in difficult times. However, recent U.S. labor market reports for February helped the dollar fall to its lowest level since January 15. The number of new jobs in February totaled 275k, which was markedly above the consensus forecast of 200k, but at the same time, the figures for the previous two months were revised to 167k lower on a combined basis. In addition, the unemployment rate rose to a two-year high of 3.9%, exceeding the forecast of 3.7%.[69]

Graph 25 – Index DXY with 5 Min Intervals After the Labor Market Report.

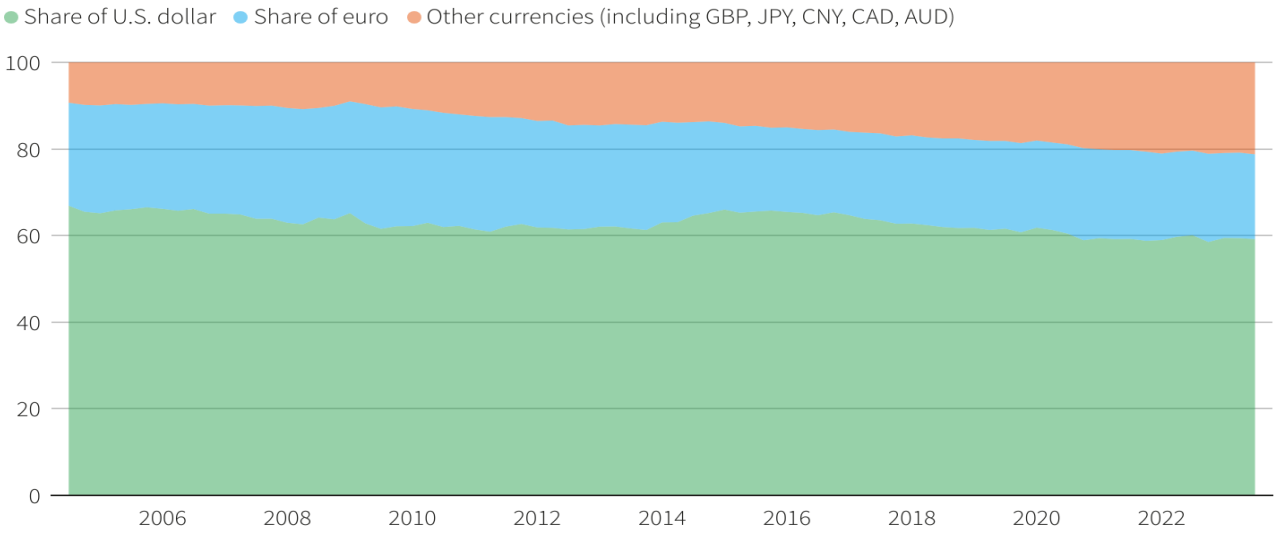
Source: tradingview.com

We can see the reaction to the U.S. labor market statistics for February. The derivatives market is now fully pricing in a 0.25% cut in the federal funds rate at the Fed's June meeting and expects a 1.00% cut from current levels by the end of the year. It is also believed that due to the abnormal growth of bitcoin, the Fed will not be in a hurry to lower interest rates. JPMorgan

[69] Reuters. (2024). Feb US payrolls show labor market healthy but not overly tight [online]. [cit. 09-03-2024] Retrieved from: https://www.reuters.com/markets/us/view-feb-us-payrolls-show-labor-market-healthy-not-overly-tight-2024-03-08/

strategist Marko Kolanovic recently noted that Bitcoin's rise above $60,000 combined with record highs in the stock market is a sign of overheating and a bubble in the risk asset segment.[70] Ultimately, this could force the Fed to hold off on its planned interest rate cuts so as not to increase bullish momentum and provoke inflation risks.

Data from the International Monetary Fund (IMF) indicates a decline in the dollar's share of total foreign exchange reserves to 59% in 2023, down from approximately 72% in 2000. Meanwhile, the yuan's share has experienced a gradual increase. While the euro has been adversely affected by an energy shock and the conflict in Europe, discussions surrounding the United States' competition with China and the repercussions of Russia's actions in Ukraine have spurred conversations about diversifying away from the dollar. In response to Russia's war in Ukraine, the freezing of approximately $300 billion in Russian assets by the United States, Europe, and others has prompted analysts in China to explore strategies to mitigate potential challenges in accessing dollars. The de-dollarization trend could potentially benefit various currencies, including the euro.



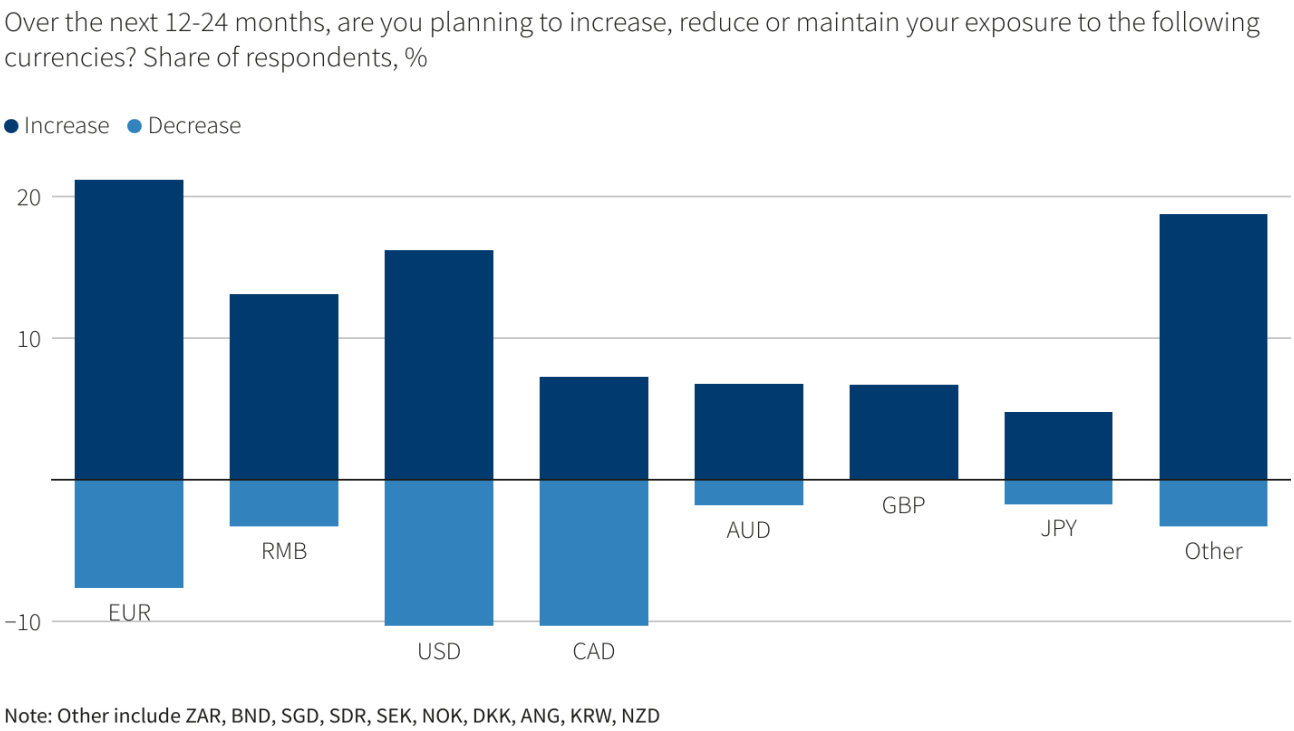
Graph 26 – World Currency Composition of Official Foreign Exchange Reserves. Source: IMF and Reuters calculations[71]

In the same period, the euro's portion has remained relatively stable at approximately 20%, while the allocations of other currencies, such as the Japanese Yen, British Pound, Australian Dollar, Canadian Dollar, and Chinese Renminbi, collectively rose to 20%. Needless to say, the Dollar is still dominant, and the Euro and other currencies will not take its crown overnight,

[70] Matthew Fox. (2024). Bitcoin's record-breaking run could postpone Fed rate cuts, JPMorgan says [online]. [cit. 09-03-2024] Retrieved from: https://www.businessinsider.com/bitcoin-price-record-impact-interest-rate-cuts-federal-reserve-outlook-2024-3

[71] Dhara Ranasinghe and Alun John. (2024). Euro is back on the scene for global central banks [online]. [cit. 09-03-2024] Retrieved from: https://www.reuters.com/markets/currencies/euro-is-back-scene-global-central-banks-2024-03-06/

nevertheless there is a tendency for its nudging down. Nevertheless, a more optimistic perspective on the euro reflects significant transformations underway. Initially, the European Central Bank's departure from negative interest rates in 2022 led to an increase in yields for euro area government bonds, ending almost a decade of rates below 0%. These yields are expected to stay elevated, even in anticipation of upcoming rate cuts.



Graph 27 – Survey among central banks with their intentions towards major reserve currencies.

Source: OMFIF.org[72]

Previously impacted by crises and deflation, the euro is now gaining favor among central bank reserve managers due to a resurgence in positive rates and geopolitical challenges that question the dominance of the U.S. dollar. According to the recently released 2023 report from the London-based OMFIF think-tank, approximately 20% of the 75 surveyed central banks anticipate an increase in their euro holdings over the next two years. While 7% expressed intentions to reduce their euro holdings, the net demand for the euro surpassed that for any other currency during the period. As we can see, there are positive changes towards the euro, this currency is starting to be considered by global banks more and more often.

[72] OMFIF. (2023). Survey among central banks with their intentions towards major reserve currencies [online]. [cit. 14-03-2024] Retrieved from: https://www.omfif.org/gpi2023/

3.2 Forecast of Euro Currency Dynamics Based on Fundamental and Trend Analysis.

Speaking about any forecasts, it is worth noting that the world economy is currently going through a very turbulent period. Exchange rates can be influenced not only by generally accepted fundamental factors such as inflation, unemployment, and interest rates but also by geopolitical challenges that have been going on for several years now, starting with Covid in 2020 and continuing with military conflicts, which violate already established rules and patterns of global trade. The term "globalization" is replaced by the term "slowbalization"[73]. Another question is how quickly we can adapt to the rapidly changing conditions that geopolitics dictates to us and what is the margin of safety of the global economy, including the world's main reserve currencies like the dollar and the euro.

There is some concern that the huge spending by the US government to stimulate the economy, adding to the existing debt, combined with the country's inability to control both domestic border problems, political crisis, and external geopolitical problems could lead to a crisis of confidence in the US dollar. However, previous predictions of a fall in the dollar, including after the 2008 financial crisis, have not come true. This demonstrates both the dollar's advantages as a leading reserve currency and the lack of credible alternatives. The dollar's superiority in trade and finance makes it the most attractive currency for countries and therefore difficult to replace. Moreover, the most common alternative, the euro, has its problems.

The euro is the second most popular reserve currency, accounting for approximately 20 percent of global foreign exchange reserves. The European Union rivals the United States in economic size, exports more, and boasts a strong central bank and sound financial markets - factors that make its currency a viable competitor to the dollar. However, the lack of a common treasury and a single European bond market limits its attractiveness as a reserve currency.

In 2024, the European Union commemorates the 25th anniversary of its unified currency. The euro, introduced on January 1, 1999, initially served as a 'virtual' currency, primarily utilized for accounting functions and electronic transactions. The euro continues to enjoy widespread approval, with the most recent Eurobarometer survey in October 2023 revealing that 79% of respondents believe that the euro is generally beneficial for the European Union and 69% considered the euro good for their own country. It is worth noting that the procedure for joining the eurozone is quite lengthy; many important criteria must be observed, such as price stability,

[73] Shekhar Aiyar, Anna Ilyina. (2023). Charting Globalization's Turn to Slowbalization After Global Financial Crisis [online]. [cit. 16-03-2024] Retrieved from: https://www.imf.org/en/Blogs/Articles/2023/02/08/charting-globalizations-turn-to-slowbalization-after-global-financial-crisis

sound and sustainable public finances, exchange-rate stability, and long-term interest rate. The last country to join the eurozone was Croatia on January 1, 2023, and before that, Lithuania in 2015. This suggests that the accession procedure is difficult and some countries, like the Czech Republic, do not want to join the eurozone of their own accord. Moreover, the last survey of Eurobarometer[74] shows that only 60% of non-eurozone member states' citizens would support joining the euro which suggests that far not everyone is eager to join the eurozone.

As for the forecast of Euro dynamics, besides geopolitics, fundamental factors such as the ECB interest rate and inflation and others will influence here. On March 7th, the European Central Bank (ECB) revised its annual inflation projection and confirmed the widely anticipated decision to maintain interest rates. ECB President Christine Lagarde hinted at a convergence between market expectations for a rate cut in June and the outlook of policymakers. In the updated staff projections, the forecast for inflation in 2024 was adjusted to an average of 2.3%, down from the previous estimate of 2.7%. Looking forward, staff anticipates inflation reaching the ECB's 2% target in 2025 and moderating further to 1.9% in 2026. Additionally, the economic growth forecast for 2024 was revised to 0.6% from the initial 0.8%, reflecting the Eurozone's recovery from its current period of stagnation. Projections indicate a Gross Domestic Product (GDP) expansion of 1.5% in 2025 and 1.6% in 2026, slightly weaker than the December outlook. Recent weeks have witnessed a shift in market expectations towards a rate cut in June. As of now, the European Central Bank's (ECB) key rate stands at 4%, a notable increase from -0.5% in June 2022, marked by a series of 10 consecutive hikes. In addition, Lagarde emphasized on March 7th that the ECB would not necessarily wait for headline inflation to reach its 2% target before making a decision. Eurozone inflation moderated to 2.6% in February, down from 2.8% in January. However, the core inflation figure, which excludes energy, food, alcohol, and tobacco, remained more resilient at 3.1%.

It is crucial to bear in mind that making long-term predictions, whether for the EURUSD or any other major currency pairs, is highly unreliable. Numerous factors can influence currency pair rates, and staying informed about global developments is essential for formulating realistic and dependable forecasts. However, I'm here to make forecasts. In my opinion, during 2024 year Euro will appreciate, because the economy of the EU is gradually recovering after the continuous crisis, as we can see from the previous reports about shrinking inflation, which one year ago was more than 15% and the current annual inflation is 2.6%. Making forecasts for 3 months, till June, The most likely decision by the Federal Reserve at the March 19-20 meeting will be to keep the

[74] Eurobarometer. (2022). Introduction of the euro in the Member States that have not yet adopted the common currency [online]. [cit. 16-03-2024] Retrieved from: https://europa.eu/eurobarometer/surveys/detail/2662

key rate on hold as they want to bring inflation down some more, which is 3.1% and it's slightly higher than in the EU.

On the other hand, the euro exchange rate could be heavily influenced this year by the possible re-election of Donald Trump to the US presidency. I estimate that the euro will fall against the dollar by about 5 percent if Trump wins the election in 2024. Why exactly 5 percent? I'm basing this on the fact that 8 years ago when Trump won the election, the dollar rose by that exact value. Most analysts, including myself, agree that Trump's election victory will put pressure on the EU economy, as Trump is known for his protectionist approach to solving problems in the economy, and given his statements that the US will not defend those NATO countries that do not pay and will even encourage an aggressor to attack them. In the EU, Trump is perceived as a negative outcome and EU politicians are already thinking about further action plans in trade, defense, and economic spheres. However, in order to understand what are the prospects for the rise and fall of the euro against the dollar, let's do a little technical analysis, where we can identify resistance and support lines.

Graph 28 – EUR/USD Dynamic with Support and Resistance Lines.

Source: finance.yahoo.com

After carefully conducting both fundamental (was carried out in the 1-2 chapters where was evaluated the GDP growth, unemployment rate, monetary policies, and in the third chapter where were evaluated the inflation rate and geopolitical events) and trend analysis I can make a forecast of the EUR/USD for 2024. In Graph 28 we can see a dynamic of EUR/USD with a

Japanese Candlestick Pattern (red and green rectangles). Each green rectangle indicates a growth in the price (bullish sentiment) and each red rectangle indicates a decrease in the price (bearish sentiment). On the graph, there are depicted 2 support and 2 resistance lines. Using the graphical method, I demonstrated the projected price movement by constructing two triangles that cross all support and resistance lines. This method allows us to see further price movement and make a forecast at the point of intersection of the lines. The currency pair bounced off the 1.0630 support line in the fourth quarter of 2023. Provided that there is bullish sentiment in the market, which is quite realistic and is considered the most likely outcome of events, the currency pair may reach the resistance, which is at 1.1150. After conducting a fundamental analysis and evaluating the main macroeconomic indicators such as inflation, unemployment rate, and decisions of the ECB and Fed, I can underline that this positive outcome for reaching the first resistance line of 1.1150 is yet to come. If this level is overcome, the road to the next level of 1.1285 opens up, which is the ceiling, the peak of 2023. Then we may also see the price at around 1.1500.

Another method that I'd like to use is the Simple Moving Average – to identify the overall trend position. I'll use a period of 200 and 50 days. If the 50-day Simple Moving Average (SMA 50) is less than the 200-day Simple Moving Average (SMA 200), it is commonly interpreted as a bearish signal known as a "death cross." However, it is also important to compare the last price at which the currency pair closed with SMA 50 and SMA 200Now let's calculate SMA (50) and SMA (200).

I'll use a formula (1.5)

SMA= $\frac{A1+A2+\ldots+An}{n}$

SMA = Simple Moving Average

A_n = a price of a currency at period n

n = the number of total periods

SMA(50) = $\frac{53.9841}{50} \approx 1.0796$

SMA(200) = $\frac{220.5603}{200} \approx 1.1028$

As for 21.03.2024, the open rate of EUR/USD was 1.0925, which is significantly more than SMA(50) and slightly less than SMA(200), which could be interpreted as a rising bullish sentiment – appreciation of Euro. Based on the interpretation above, the situation suggests a rising bullish sentiment, particularly in the short to medium term. This sentiment is supported by the fact that the current exchange rate is above the SMA(50), indicating recent strength, and is approaching the SMA(200), which could potentially act as a resistance level.

Graph 29 – EUR/USD Dynamic with a Falling Wedge Pattern.

Source: metatrader5.com

Another method of trend analysis that I would like to consider when forecasting is patterns. I have already built a pattern in the second chapter (Graph 16) in retrospect, and we made sure it worked. Graph 29 shows us a typical bullish pattern, in most cases after the Falling Wedge begins a bullish sentiment or growth.

It is important to realize that currency forecasting involves a lot of analysis, methods, and factors that should be considered together and complement each other. No formula will predict the rate movement with 100% certainty. However, I have tried to use all the most commonly used methods and techniques that are used by professional traders around the world to give a clear and concise picture of how the Euro/Dollar currency pair may develop in 2024. Therefore, after conducting both fundamental and trend analysis, **my forecast is lying near 1.12**, I believe that by the end of 2024, EUR/USD will touch this level, and there is currently a favorable environment for the strengthening of the euro.

Now let's take a look at what other analysts are thinking about the future price of EUR/USD. I analyzed forecasts from 5 different banks including CIBC - Canadian Imperial Bank of Commerce, HSBC - The Hongkong and Shanghai Banking Corporation, ANZ - Australia and New Zealand Banking Group, Goldman Sachs and Danske Bank. By considering forecasts from multiple banks, traders and investors can gain a comprehensive understanding of the factors driving the future price movements of the EUR/USD currency pair. These insights can inform trading strategies, risk management decisions, and investment allocations in currency markets.

	2Q24	3Q24	4Q24
CIBC	1.14	1.15	1.15
HSBC	1.04	1.02	1.02
ANZ	1.10	1.13	1.15
Goldman Sachs	1.08	1.10	1.12
Danske Bank	1.10	1.07	1.05

Table 5 – EUR/USD Forecast for 2024 by different banks.

Source: apexcurrency.co.uk[75][76]

Let's compare my result of the forecast and the results of 5 banks from Table 5. As we can see, the range of values is from 1.02 to 1.15. The forecasts are diverse. The first bank CIBC - Canadian Imperial Bank of Commerce. Total assets – 691.32 US$B, 49 world's largest bank as for 2023.[77] According to their forecasts, it expects the dollar to depreciate throughout 2024 gradually. This is one of the most positive forecasts for the Euro from the banks – 1.15 by the end of 2024. This is slightly higher than my forecast, on 3 cents or 2,68%. The reason why CIBC believes in the depreciation of the dollar is: "Beyond March, we have the USD profile trending lower as the economic outlook outside of North America improves. Additionally, longer-term valuations still look very unfavorable for the USD."[78]

The next bank HSBC - The Hongkong and Shanghai Banking Corporation. Total assets – 2,864.59 US$B, 8 world's largest bank as for 2023. This bank has a way more pessimistic forecast. They believe that by the end of 2024, the EUR/USD will reach 1.02. This forecast is based on the expectation that the Federal Reserve and other central banks might not be able to implement monetary policy easing measures to the extent that markets are anticipating. Frankly, that's a brave forecast, because it means that the EUR/USD rate will lose almost all the progress that it reached during almost 2 years since it fell until parity in July 2022. The difference between the forecast of HSBC and mine is 10 cents or 9,8%.

The third bank is ANZ - Australia and New Zealand Banking Group. Total assets – 669.66 US$B, 54 world's largest bank as for 2023. It foresees a decline in the Dollar and retains a bearish outlook for the USD, attributing it to diminishing fiscal assistance in the US and the repercussions

[75] APEX Currency. (2024). USD 2024 Forecasts [online]. [cit. 20-03-2024] Retrieved from: https://www.apexcurrency.co.uk/post/usd-2024-forecasts

[76] CIBC Capital Markets. (2023). Forecast Update Table [online]. [cit. 20-03-2024] Retrieved from: https://economics.cibccm.com/cds?id=c3bc3599-c315-4573-a952-4b3611022c54&flag=E

[77] S&P Global. (2023). The world's 100 largest banks, 2023 [online]. [cit. 28-03-2024] Retrieved from: https://www.spglobal.com/marketintelligence/en/news-insights/research/the-world-s-100-largest-banks-2023

[78] FXStreet Insights Team. (2024). Some room for a stronger USD through the end of March – CIBC [online]. [cit. 20-03-2024] Retrieved from: https://www.fxstreet.com/news/some-room-for-a-stronger-usd-through-the-end-of-march-cibc-202403071517

of interest rate hikes, which are expected to affect US growth. The forecast is quite similar to the one from CIBC, the only difference is that ANZ believes the Euro will grow more gradually – from 1.10 in 2Q24 to 1.13 in 3Q24 and to 1.15 in 4Q24. This forecast is higher than mine is on 3 cents or 2,68%. At the same time, it's higher than the most pessimistic forecast from HSBC of 13 cents or 12,75%.

The fourth bank is an American bank, Goldman Sachs. Total assets – 1,441.80 US$B, 26 world's largest bank as for 2023. According to Goldman Sachs forecast, U.S. Treasury yields fell, accompanied by a weakening of the Dollar, consistent with the widely held anticipation of a gradual decline in value throughout 2024. The bank has the same expected rate of EUR/USD by the end of 2024 as mine – 1.12. It's lower by 3 cents or 2,68% than the most optimistic forecast from CIBC and ANZ and higher by 10 cents or 9,8% than the most pessimistic forecast from HSBC.

The last bank is Danske Bank. Total assets – 540.66 US$B, 64 world's largest bank as for 2023. Its forecast is more positive than the one from HSBC but less positive than the rest of the banks and less positive than mine. Unlike HSBC's forecast, the Danske Bank projects a gradual depreciation of the euro throughout 2024. Danske Bank expects the Euro-Dollar to see decreased levels over a 6–12-month period, considering factors like relative terms of trade, real rates (growth prospects), and relative unit labor costs. In my opinion, the least plausible forecast belongs to the HSBC bank because it's out of the common consensus and the arithmetic mean of all forecasts including mine.

As for my recommendations, as I mentioned above in Chapter 3, 2024 can be unpredictable due to geopolitical events that can affect the exchange rate. I expect that the most volatile period may be May-June when Fed meetings are scheduled where interest rates may be lowered. I also expect increased volatility at the end of the year, when the US elections will be held, the result of which may significantly strengthen the dollar (possible victory of Trump). Therefore, I would not advise investing the entire amount in one asset but rather diversify your portfolio. You need to know how to apply risk management in investing and especially in trading. Application of fundamental and trend analysis will help to find the right position to enter the market. I would also recommend using the indicators I described in chapters 2-3, such as the SMA and the Bollinger Bands. In conclusion, you should also keep an eye on forex news (Image 1) to be prepared for increased volatility in the forex market. If we calculate the arithmetic mean of 5 bank forecasts plus mine, we get:

$$A = \frac{1}{n} \sum_{i=1}^{n} a_i \quad (1.6)$$

A = arithmetic mean

n = number of values

a_i = dataset values

$$A = \frac{1{,}02 + 1{,}05 + 1{,}12 + 1{,}12 + 1{,}15 + 1{,}15}{6} \approx 1{,}10$$

Thus, we see that the arithmetic mean of all forecasts is approximately 1.10. I can say that this is a consensus forecast for EUR/USD.

Percent difference between my forecast and the arithmetic mean is:

$$C = \frac{X_2 - X_1}{X_1} \times 100 \quad (1.7)$$

C = relative change

x_1 = initial value

x_2 = final value

$$C = \frac{1.12 - 1.10}{1.10} \times 100 = 1{,}65\%$$

Therefore, the difference between my forecast and the consensus forecast is 1.65%, which is quite insignificant.

Conclusion

The Eurozone economy has indeed undergone a significant journey since the turbulence it faced in 2021. The rapid depreciation of the Euro during that period was a cause for concern, reflecting various global economic uncertainties and internal challenges within the Eurozone. However, as we've witnessed, the currency has exhibited resilience and is now poised for a gradual recovery. One of the factors contributing to the strengthening of the Euro is the improved economic outlook within the Eurozone itself. Economic indicators suggest that the region is on a path of steady growth, supported by factors such as increased consumer spending, robust exports, and a revival in investment activities. This resurgence in economic activity has instilled confidence among investors, leading to a positive sentiment towards the Euro. Furthermore, the ECB has played a pivotal role in stabilizing the currency and supporting economic recovery. While there may be debates about the timing of certain monetary policy decisions, such as interest rate adjustments, the ECB's proactive measures have largely been effective in mitigating downside risks and fostering an environment conducive to growth. Looking ahead, the outlook for the Euro largely depends on various factors, both domestic and international. As mentioned, geopolitical stability will be crucial in determining the trajectory of the currency. Any unforeseen upheavals or geopolitical tensions could introduce volatility and uncertainty, potentially impacting the Euro's performance in the foreign exchange market. As I mentioned in Chapter 3, we may see the Euro/Dollar pair at 1.12-1.15 by the end of the year. The prospect of the Euro becoming the world's

main reserve currency is not on the agenda yet, the dollar is still the world's main reserve currency today, holding 60% of the world's reserves, while the Euro holds the second place with 20% of reserves. Based on my analysis, I can conclude that although the dollar has weakened slightly - as evidenced by the 20-year percentage decline in global reserves and current issues such as poor job market reports and the likely continuation of interest rates, the dollar is still the world's leading currency and although the euro is the world's second-largest currency in terms of reserves and is seen by some banks as the favorite, the narrowing gap between the use of the euro and the dollar shortly is not expected by any economist, including me. Especially, as we discussed at the beginning of Chapter 2, international swift payments in euros and dollars have acquired a huge gap not in favor of the euro. In conclusion, while the Euro has made significant strides in its recovery journey, there are both opportunities and challenges on the horizon. I don't believe that the Euro can become a safe-haven currency one day due to so many external and internal challenges, including the diversity of the Eurozone, lack of political unity, debt and fiscal challenges.

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Appendix

Appendix 1 - EUR/USD Dynamic with Support and Resistance Lines.

Appendix 2 - EUR/USD Dynamic with a Falling Wedge Pattern.

	2Q24	3Q24	4Q24
CIBC	1.14	1.15	1.15
HSBC	1.04	1.02	1.02
ANZ	1.10	1.13	1.15
Goldman Sachs	1.08	1.10	1.12
Danske Bank	1.10	1.07	1.05

Appendix 3 – EUR/USD Forecast for 2024 by different banks.