REPUBLIC OF TURKEY
YILDIZ TECHNICAL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
MASTER'S PROGRAMME IN ECONOMICS

MASTER'S THESIS

EUROZONE INFLATION: WHY THINGS GOT WORSE AGAIN?

ALPEREN AKGÜL
22729002

THESIS SUPERVISOR
ASSOC. PROF.
TOLGA AKSOY

2023

REPUBLIC OF TURKEY
YILDIZ TECHNICAL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF ECONOMICS
MASTER’S PROGRAMME IN ECONOMICS

MASTER'S THESIS

EUROZONE INFLATION: WHY THINGS GOT WORSE AGAIN?

ALPEREN AKGÜL
22729002
ORCID NO: 0000-0002-0433-9015

THESIS SUPERVISOR
ASSOC. PROF.
TOLGA AKSOY

JULY, 2023

Alperen AKGÜL tarafından hazırlanan “Eurozone Inflation: Why Things Got Worse Again?” başlıklı çalışma, **07/07/2023** tarihinde yapılan savunma sınavı sonucunda oybirliği ile başarılı bulunmuş ve jürimiz tarafından İktisat Ana Bilim Dalı İngilizce İktisat Programında **YÜKSEK LİSANS** tezi olarak kabul edilmiştir.

Danışman	**İmza**
Doç. Dr. Tolga AKSOY	………………………

Jüri Üyeleri	**İmza**
Dr. Öğr. Üyesi, Hasan Ağan Karaduman	………………………
Doç. Dr., Sinem Sefil Tansever	………………………

ÖZET

EURO BÖLGESİ ENFLASYONU: İŞLER NEDEN TEKRAR KÖTÜLEŞTİ?

Küreselleşme, sanayi devrimi ile hızlanmış ve teknoloji devrimi ile bir sonraki aşamaya geçmiştir. Artan küreselleşme ülkeleri birbirine daha bağımlı hale getirmiştir. Bu bağımlılık finans sektöründe de yaşanmıştır. Bu bağımlılığın en önemli sonuçlarından biri ekonomik krizlerin kolaylıkla yerel bir krizden küresel bir krize dönüşebilmesidir. Bu tür krizlerin en güncel örnekleri 2008 ekonomik krizi ve COVID-19 krizidir.

2008 mali krizi, Amerika Birleşik Devletleri'nde emlak balonunu körükleyen ucuz kredi ve gevşek borç verme standartları ile başladı. Bu kriz ABD ile birlikte AB'yi de etkiledi. Bu krizin AB'ye yansıması borç krizi şeklinde olmuştur. Avrupa merkez bankasının belirlediği %2'lik enflasyon hedefine ulaşılamadı. Enflasyon Temmuz 2007'de %1,8'den bir yıl sonra Temmuz 2008'de %4,1'e yükseldi. AMB'nin aldığı tedbirlerle enflasyon Temmuz 2008'den sonra düşmeye başladı.

2019 yılının sonunda Çin'de başlayan ve tüm dünyaya yayılan bir salgın vardı. Covid-19 adı verilen bu salgın nedeniyle tüm ülkeler sokağa çıkma yasağına girdi. Karantina nedeniyle birçok sektörün faaliyetleri durma noktasına geldi. Hükümetler vatandaşlarını ekonomik olarak korumak için bedava para verdi. Karşılıksız verilen bu paralar ve Ukrayna ile Rusya arasındaki savaş sonucunda artan enerji fiyatları, avro bölgesinde yeniden enflasyonu yükseltti. 2019'da avro bölgesindeki enflasyon %1,7 idi. 2020'de %0,3'e düştü ama 2021'de enflasyon artmaya başladı. 2021'de enflasyon %2,4 idi. Euro bölgesi tüketici fiyat enflasyonu, 2022 Ekim'de yıllık bazda %10,6'dır. Oran, kaydedilen en yüksek orandı ve AMB'nın %2.0'lik hedefinin oldukça üzerindeydi.

Bu çalışmanın amacı AB'nin 2008 yılında artan enflasyonu düşürmek için neler yaptığını incelemek, Covid-19 pandemisiyle birlikte enflasyondaki artışın nedenlerini bulmak ve geçmiş örneklere bakarak enflasyonu düşürmeye yönelik bir çözüm önerisi sunmaktır.

Anahtar Kelimeler: Euro Bölgesi, Enflasyon, Covid-19, Ekonomik Kriz

ABSTRACT

EUROZONE INFLATION: WHY THINGS GOT WORSE AGAIN?

Globalization has accelerated with the industrial revolution and has moved to its next stage with the technology revolution. Increasing globalization has made countries more dependent on each other. This dependency has also occurred in the financial sector. One of the most important consequences of this dependence is that economic crises can easily turn from a local crisis to a global crisis. The most recent examples of this type of crises are the 2008 economic crisis and the COVID-19 recession.

The 2008 financial crisis started with cheap credit and lax lending standards that fueled a real estate bubble in United States. This crisis affected the EU along with the United States. The reflection of this crisis in the EU was in the form of a debt crisis. The 2% inflation target set by the European central bank could not be achieved. Inflation rose from 1.8% in July 2007 to 4.1% a year later in July 2008. With the measures taken by the ECB, inflation started to decline after July 2008.

At the end of 2019, there was an epidemic that started in China and spread all over the world. Due to this pandemic called Covid-19, all countries entered the lockdown. Due to the lockdown, the activities of many sectors have come to standstill. Governments gave free money to protect their citizens economically. These money, which were given without any repayment, and the increased energy prices because of the war between Ukraine and Russia, increased inflation in the eurozone again. In 2019, inflation in the eurozone was 1.7%. It fell to 0.3% in 2020, but by 2021 inflation started to increase. In 2021, inflation was 2.4%. The Eurozone consumer price inflation is 10.6 percent year-on-year in 2022 October. The rate was the highest on record and well above the ECB's target of 2.0 percent.

The aim of this paper is to examine what the EU did to reduce the increased inflation in 2008, to find the reasons for the increase in inflation with the Covid-19 pandemic, and to propose a solution for reducing inflation by looking at the past examples.

Keywords: Eurozone, Inflation, Covid-19, Economic Crisis

ÖN SÖZ

İlk olarak 4 yılı lisans 2 yılı yüksek lisans olmak üzere toplam üniversite hayatımın 6 yılını kapsayan iktisat eğitimim süresince, tez konusu seçiminde, kaynak araştırmalarında ve tüm hazırlık aşamasında hiçbir desteğini esirgemeyen, zamanını bana ayıran ve her türlü sorunumu sabırsızlıkla dinleyen değerli tez danışmanım, hocam Docent. Dr. Tolga AKSOY'a, teşekkür ederim. Lisans ve Yüksek Lisans eğitimim boyunca ders aldığım, bilgi ve birikimlerini benimle paylaşan tüm hocalarıma, manevi desteklerini hiçbir zaman esirgemeyen arkadaşlarıma, sevgilim Burcu'ya ve canım aileme teşekkürü borç bilirim.

Alperen AKGÜL

Temmuz, 2023; İstanbul

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

%	: Percentage
€	: Euro
$	: Dollar
ARRA	: American Reinvestment and Recovery Act
CPFF	: Commercial Paper Funding Facility
CPI	: Consumer Price Index
EFSM	: European Financial Stability Mechanism
EU	: European Union
FED	: The Federal Reserve
FFR	: Federal Funds Rate
GDP	: Gross Domestic Product
IMF	: International Monetary Fund
LTRO	: Long-Term Refinancing Operations
OMT	: Outright Monetary Transactions
QE	: Quantitative Easing
PEPP	: Pandemic Emergency Purchase Programme
UK	: United Kingdom
U.S.A	: United States of America
U. S.	: United States
TAF	: Term Auction Facility
TLTRO	: Targeted Longer-Term Refinancing Operations
WHO	: World Health Organization

1. INTRODUCTION

Having a strong economy has always been important throughout history. Many politically, socially, and culturally developed societies had a good economic structure at their golden age. Similarly, many countries that have been erased from the page of history have experienced various problems because they are not good shape in terms of economy.

Over the time, with the developing technology, increasing population and globalization, economic structures have started to become more complex. In these complex economic structures, failures occur from time to time and cause crises. With the effect of globalization, the crises were not limited to the country they started but also affected other countries.

Crises can be divided into economic crises and financial crises. Many crises have occurred so far. Some of these crises are referred to as financial crises and others as economic crises. Economic crises and financial crises are often thought to mean the same thing, but economic crises and financial crises are two different types of crises.

In many financial crises from the past to the present, the main factor has been the panic in the banking sector. The mortgage crisis that emerged in the banking sector in the USA in 2007-2008 is an example of a financial crisis.

In addition to Banking Crises, Debt Crises and Currency Crises are also examples of financial crises. Currency crisis is the situation where the reserves of the central bank melt and the currency is forced to devaluate because of speculative attacks in the economies where the fixed exchange rate regime is applied. Generally, currency crises occur in developing countries instead of developed countries. Developing countries are more vulnerable to currency crises because their central banks do not have sufficient foreign exchange reserves.

A debt crisis occurs when a country cannot pay its public or private external debts on time. It is also very difficult for countries in debt crisis to find new loans. The perception of a possible debt crisis in the public sector negatively affects private capital inflows (Delice, 2002).

While bad government policies may have an effect on the formation of economic crises, economic crises can also occur as a result of natural disasters that occur mostly independent of the human factor. The effect of the 17 August 1999 earthquake on the Turkish economy is obvious. The effects of the earthquake that took place in Kahramanmaraş on February 6, 2023 on the Turkish economy are not yet known, but according to the study of economist Mahfi Eğilmez, the direct cost of the earthquakes is 48 billion dollars (Eğilmez, 2023).

One of the most important consequences of crises is increasing inflation. Inflation is a general increase in the prices of goods and services over time. When inflation occurs, the purchasing power of a currency decreases, meaning that the same amount of money can buy fewer goods and services than before.

Inflation can be caused by a variety of factors, including an increase in the demand for goods and services, a decrease in the supply of goods and services, or an increase in the supply of money.

In some cases, inflation can be beneficial, such as when it occurs in a growing economy and reflects increasing consumer demand for goods and services. However, high or persistent inflation can be harmful, as it can reduce the value of people's savings, create uncertainty about future prices, and make it more difficult for businesses to plan for the future.

Central banks often try to manage inflation through monetary policy, such as adjusting interest rates and controlling the money supply, in order to achieve a balance between economic growth and price stability.

Eurozone inflation has been a topic of concern in recent years. As mention before inflation refers to the rate at which the general level of prices for goods and services is rising, and it is typically measured by the Consumer Price Index (CPI). When inflation is too high or too low, it can have negative impacts on the economy and the overall standard of living for individuals.

In the first part of this thesis, how the 2008 crisis emerged and the reasons for the crisis will be discussed. In addition to this, the reflection of the crisis in the euro area, how it affected inflation and the general consequences of the crisis will be mentioned.

In the second part, examinations will be made on how the effects of the 2008 crisis were eliminated and how the inflation decreased again. The actions and effects of the European Central Bank during and after the crisis will be discussed.

In the third chapter of the thesis, The spread of the coronavirus to the world and its effects on the world economy have been mentioned.

In the fourth chapter the problems experienced by the European Union and the euro area, along with the Corona virus pandemic, and the increasing inflation are mentioned. The reasons for the increase in inflation were examined, and a road map was tried to be drawn by looking at the past crises and which ways to reduce the increasing inflation again.

Finally, in the conclusion part, what has been explained throughout the thesis is summarized, and suggestions are made about how the inflation of the euro area, which increased with the pandemic, will come back to the target inflation of the European Central Bank.

2. A CONCEPTUAL FRAMEWORK ON THE 2008 FINANCIAL CRISIS

Crises that occur as a result of unusual movements in a certain service, goods or foreign exchange market are called economic crises (Kibritçioğlu, 2001). On the other hand 2008 crisis mostly known as financial cris. The deterioration in the American housing market, which started to rise since 2000, triggered the 2008 crisis. Some banks went bankrupt with the 2008 crisis. As a result of the crisis, many people lost their jobs. The incomes of many people who see housing as an investment have decreased with the decrease in housing prices (BRICKER et al., 2012).

The crisis was not limited to the United States of America (USA), it spread all over the world. The reflection of the crisis in the European Union was mostly in the form of a debt crisis. The euro area was also adversely affected by the crisis. Inflation exceeded the targets of the European Central Bank.

This section provides an overview of the economic landscape prior to the 2008 crisis and delves into the factors that contributed to its emergence. Furthermore, this section analyzes the impact of the crisis on the European Union and the euro area, as well as explores the broader implications and consequences of the crisis.

2.1. 2008 Financial Crisis: How Did It Start?

The 2008 global financial crisis was, also known as the Great Recession, is the deepest crisis experienced after the 1929 Great Depression. It had its origins in the United States (U.S) but quickly spread to other countries, leading to a global recession that lasted for several years.

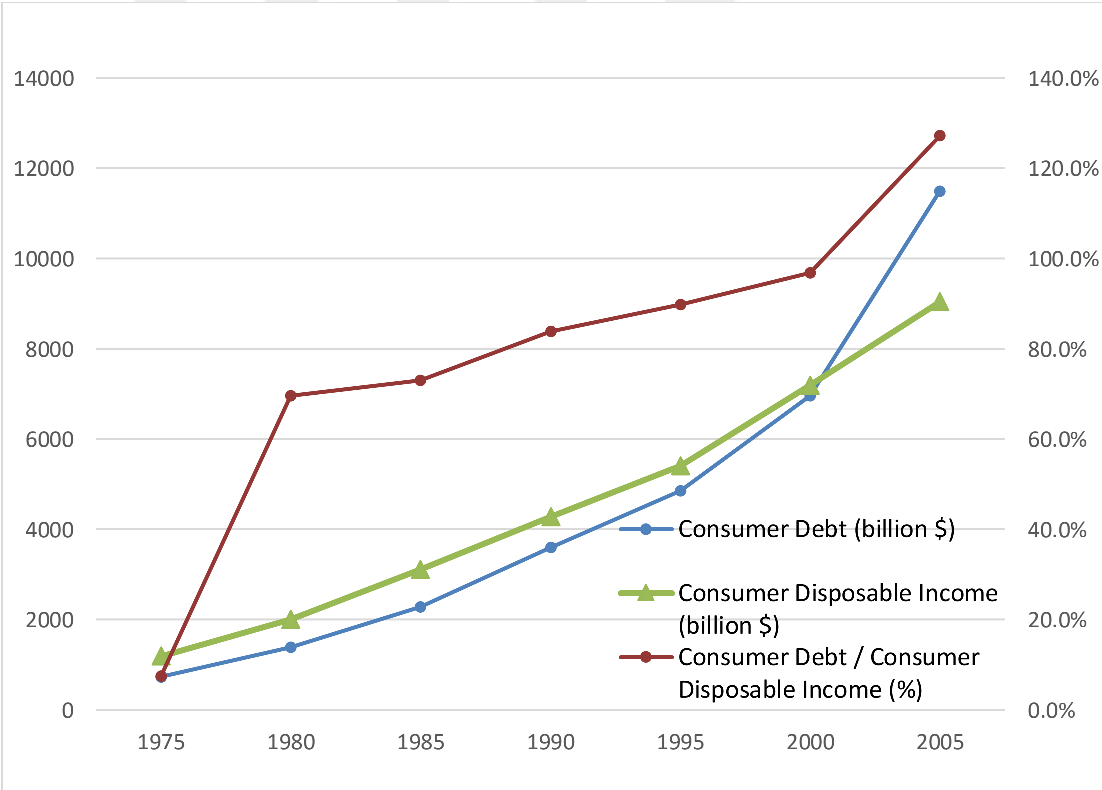
In the early 2000s, the US housing market experienced a boom, fueled by low-interest rates and relaxed lending standards. Banks were giving out mortgages to people who couldn't afford them, and many of these loans were packaged and sold as securities to investors around the world.

With the onset of the decline in the housing market, the second stage started on the road to the crisis. In 2006, the US housing market began to decline, with many subprime borrowers defaulting on their loans. This caused the value of mortgage-backed securities to plummet, leading to losses for banks and investors.

As the housing market downturn continued, the crisis spread to other sectors of the economy. Banks began to suffer significant losses, and interbank lending froze up, leading to a credit crunch that made it difficult for businesses and individuals to access credit.

There was a development that became the symbol of the crisis. In September 2008, Lehman Brothers, one of the largest investment banks in the US, filed for bankruptcy. This triggered a global panic in financial markets, leading to a sharp drop in stock prices and a freeze in credit markets. Governments around the world intervened to prevent a complete collapse of the financial system, with the US government providing bailouts to several large banks.

Figure 1 : Consumer Debt and Consumer Disposable in the USA



Source:(Sarıtaş, 2011)

Figure 1 shows the change in consumer debt and disposable consumer income in the USA over the years. While consumer debt has increased rapidly over the years, the increase in disposable consumer income has not been at the same rate. In 1975, consumer debt was $736 billion, while disposable consumer income was $1,187 billion. Consumer debt accounted for 62% of disposable consumer income. This percentage has increased over time. By 2005, consumer debt had increased to 11,496 billion dollars, while disposable consumer income increased less and reached 9,039 billion dollars. Looking at these figures, the ratio of consumer debt to disposable consumer income, which was 62% in 1975, increased to 127% in 2005. Even this picture alone was an indication that dark clouds were beginning to come in the American economy.

The 2008 global financial crisis was triggered by a combination of factors that built up over several years. These are some of the key contributing factors:

1. **Housing market bubble:** The housing market bubble was created due to a combination of low-interest rates, relaxed lending standards, and a belief that housing prices would continue to rise indefinitely. Banks were giving out mortgages to people who had a poor credit history and didn't have the financial capacity to repay the loans.

2. **Subprime mortgage lending:** Subprime mortgages were given to people who had a low credit score or didn't have sufficient documentation to prove their income. These loans carried a higher interest rate than prime loans, but the borrowers believed that the value of their homes would continue to rise, allowing them to refinance or sell their homes and repay the loans.

3. **Derivatives**: Derivatives are complex financial instruments that allow investors to bet on the value of an underlying asset, such as a mortgage-backed security. Banks and investors had created complex derivatives tied to subprime mortgages, which were sold to investors around the world. When borrowers began to default on their loans, the value of these derivatives plummeted, causing huge losses for banks and investors.

4. **Leverage:** Many banks had borrowed heavily to invest in these derivatives, amplifying their losses when the market turned. Banks used borrowed money, or leverage, to increase their profits. However, this also increased their risk, and when the market turned, banks suffered massive losses that they couldn't cover with their own capital.

5. **Credit crunch:** As banks suffered losses from their investments in subprime mortgages and derivatives, they became reluctant to lend to each other. This

led to a credit crunch that made it difficult for businesses and individuals to access credit, exacerbating the economic downturn.

6. **Global interconnectivity:** The crisis quickly spread to other countries, as banks and investors around the world were exposed to these toxic assets. As the crisis spread, it led to a global recession, with many countries experiencing high levels of unemployment and slow economic growth.

In addition to these, the dotcom crisis and the interest reduction policies followed the crisis are also important on the way to the 2008 crisis. The dotcom crisis, also known as the dotcom bubble or dotcom crash, refers to a period of severe stock market volatility and economic downturn that occurred in the late 1990s and early 2000s. During this time there was a speculative frenzy surrounding internet-based companies, leading to a rapid rise in the value of technology stocks.

Many investors and entrepreneurs thought that the internet would revolutionize business and create vast wealth. As a result, numerous internet startups emerged, often with high values but without solid business plans or profits. The stock prices of these dotcom companies soared to astronomical levels, fueled by investor excitement and the fear of missing out on potential gains.

However, the dotcom bubble eventually burst, leading to a substantial market correction. Many dotcom companies went bankrupt, and stock prices plummed. This crisis had a substantial impact on the broader economy, as it is not affected only technology stocks but also investor confidence and consumer spending.

During this period, Alan Greenspan served as the chairman of the Federal Reserve, the central banking system of the United States. In response to the dotcom crisis and the ensuing economic downturn, Greenspan implemented a series of interest rate cuts.

By reducing interest rates, Greenspan aimed to stimulate economic activity and restore investor confidence. Lower interest rates encourage borrowing and investment by making it cheaper to borrow money. This, in turn, can lead to increased consumer spending, business investment, and economic growth (Langdana, 2009).

The rate cuts by Alan Greenspan and the Federal Reserve were aimed to mitigate the negative effects of the dotcom crisis, but they also contributed to the inflation of another bubble in the housing market in the mid-2000s. This later led to the global financial crisis of 2008.

The dotcom crisis and Alan Greenspan's rate cuts did not directly cause the 2008 financial crisis, but they contributed to the conditions that led to it. Here's how:

- Investor behavior and risk appetite: The dotcom crisis and subsequent rate cuts created an environment where investors became more willing to take on risk. The stock market crash and subsequent rate cuts led to a perception that the Federal Reserve would intervene and provide support whenever there was a financial downturn. This encouraged investors to seek higher returns by taking on increasingly risky investments.
- Loose monetary policy: The rate cuts implemented by Alan Greenspan and the Federal Reserve in response to the dotcom crisis led to a period of loose monetary policy. Lower interest rates made borrowing cheaper, leading to increased lending and credit expansion. This, in turn, fueled a housing boom as more people were able to access mortgages and buy homes.
- Housing market bubble: The loose monetary policy, combined with lax lending standards and financial innovation, led to a housing market bubble. Easy credit and low interest rates encouraged speculative buying in the housing market, driving up prices and creating a false sense of perpetual growth. As the bubble continued to inflate, financial institutions packaged and sold mortgage-backed securities, which were based on these risky mortgages.
- Financial system vulnerabilities: The proliferation of mortgage-backed securities, coupled with complex financial derivatives and inadequate risk management, led to significant vulnerabilities within the financial system. Many financial institutions held these risky assets on their balance sheets or used them as collateral for borrowing. However, when the housing market started to decline and defaults on subprime mortgages increased, these securities quickly lost their value, causing substantial losses for financial institutions.
- Systemic risk and contagion: The interconnectedness of the global financial system meant that the problems in the housing market and the decline in the value of mortgage-backed securities spread throughout the financial system. The losses suffered by financial institutions led to a loss of confidence and a

freeze in credit markets, as banks became reluctant to lend to each other due to uncertainty about the extent of their exposure to these risky assets. This lack of liquidity and trust eventually triggered the 2008 financial crisis.

While the dotcom crisis and Greenspan's rate cuts were not the direct causes of the 2008 financial crisis, they set the stage for the buildup of excessive risk-taking, the housing market bubble, and the vulnerabilities within the financial system that ultimately contributed to the crisis (Chen et al., 2018).

Overall, the dotcom crisis and the rate cuts by Alan Greenspan highlight the challenges of managing speculative bubbles and the complex interplay between monetary policy, financial markets, and the broader economy.

In a nutshell, the 2008 global financial crisis was triggered by a combination of factors, including the housing market bubble, subprime mortgage lending, derivatives, leverage, credit crunch, and global interconnectivity (Bartmann, 2017). The crisis had far-reaching consequences, causing a global recession that lasted for several years and highlighting the need for better regulation of financial markets. Many countries experienced high levels of unemployment and slow economic growth, with some countries, such as Greece, experiencing a debt crisis. The crisis also highlighted the need for better regulation of financial markets and led to the implementation of new regulations such as the Dodd-Frank Act in the US.

Overall, the 2008 global financial crisis was a significant event in economic history, with far-reaching consequences for the global economy and financial system.

2.2. The Impacts of 2008 Financial Crisis

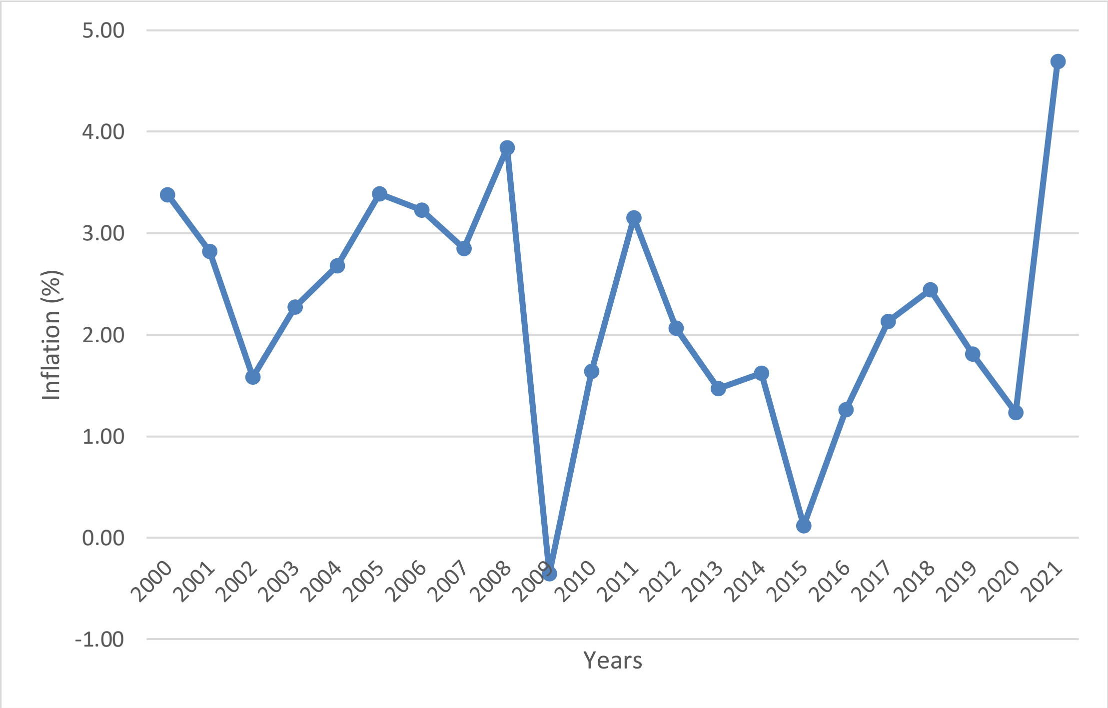
The global financial crisis of 2008 was one of the most significant economic events of the modern era. The crisis had a profound impact on the global economy, causing widespread economic disruption, social unrest, and political upheaval. In this part, we will examine the results of the 2008 economic crisis and its long-term impact on the global economy but for this part we mainly focus US side.

The financial crisis of 2008 was triggered by the collapse of the U.S housing market, which had been fueled by a combination of low interest rates, lax lending standards, and rampant speculation. When housing prices began to decline, many homeowners found themselves underwater, meaning they owed more on their mortgages than their homes were worth. This led to a wave of foreclosures and a sharp decline in the value of mortgage-backed securities, which had been widely held by banks and other financial institutions.

The crisis quickly spread to other sectors of the economy, as banks and other financial institutions began to experience severe liquidity problems. The failure of several major financial institutions, including Lehman Brothers and AIG, exacerbated the crisis, leading to a global credit crunch and a sharp decline in economic activity.

The immediate impact of the crisis was severe. In the U.S, the economy contracted by nearly 5% in 2009, and unemployment soared to over 10%. In late 2008 and early 2009, an average of 750,000 people per month lost their jobs. A total of 8.7 million people lost their jobs during the crisis(Tooze, 2020). Many companies went bankrupt. Millions of people suffered material and/or moral damage due to the impact of the crisis. Some people could not stand this situation and committed suicide. Other countries around the world also experienced significant economic contraction, as trade and investment flows declined sharply.

Figure 2: Inflation Rate in the USA 2000-2021



Source: WB (Worldbank Group, n.d.)

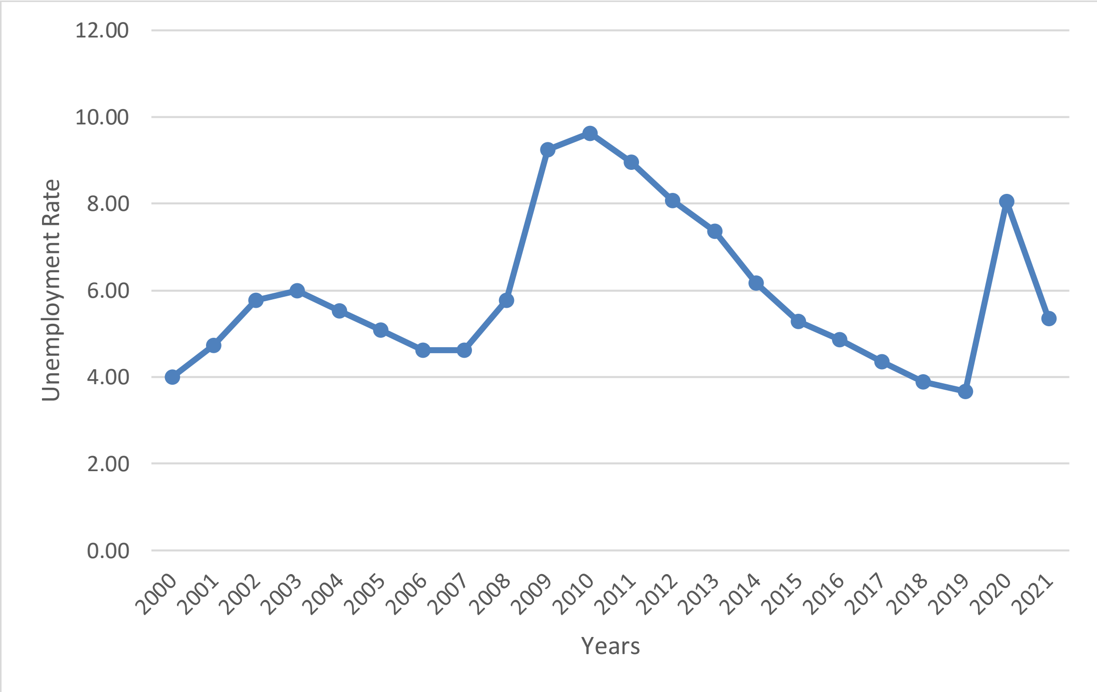
As Figure 2 shows, inflation in the USA before the 2008 crisis was around 3 percent. Inflation reached the level of 3.8 percent with 2008, and then negative inflation was observed with minus 0.4 percent in 2009. After 2009, inflation increased again, but it did not rise to the level of three percent until the pandemic, except for 2011.

Overall, the U.S experienced a period of high inflation followed by a period of low inflation. In the early stages of the crisis, inflation increased because of rising energy and commodity prices, and the Fed's efforts to stimulate the economy through low interest rates and quantitative easing (Lipsky, 2008).

However, as the crisis deepened and the economy slowed down, inflation started to decline. The Federal Reserve responded by implementing a variety of monetary policies to stimulate economic growth and stabilizing prices. These policies included further cuts to interest rates, quantitative easing, and other measures to increase the supply of money in the economy.

Finally, the combination of these policies and the overall weakness in the economy led to a period of low inflation in the U.S following the 2008 crisis.

Figure 3: Unemployment Rate in the USA in 2000-2021



Source: WB (Worldbank Group, n.d.)

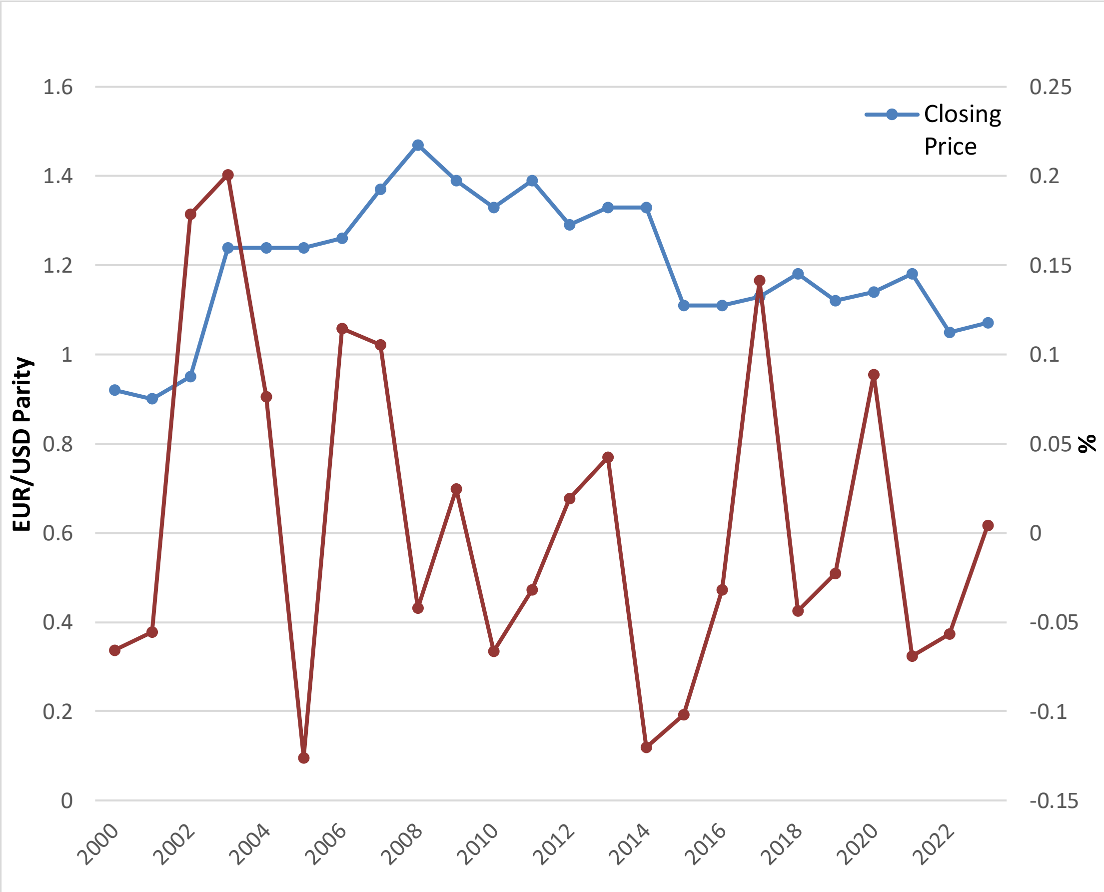
Figure 3 shows the change in unemployment rates in the USA before and after the 2008 crisis. The unemployment rate before the 2008 crisis started to decline in the USA and was 4.6% in 2006 and 2007. As the crisis made itself felt in 2008, unemployment first rose to 5.8%, then increased to 9.3% in 2009 and 9.6% in 2010. It took ten years for unemployment to reach its 2007 level again.

The 2008 financial crisis had a major impact on unemployment rates worldwide. Many countries experienced a sharp increase in unemployment as companies laid off workers and cut back on hiring in response to the economical downturn.

The crisis also had a disproportionate impact on certain demographics, such as young people and those with lower levels of education or skills. These groups often encountered higher unemployment rates and struggled to find work even after the economy began to recover (Bell & Blanchfl, 2011).

Governments around the world implemented various measures to try to mitigate the impact of the crisis on employment, such as stimulus packages, job training programs, and support for small business However, it has taken several years for unemployment rates to return to pre-crisis levels in many countries.

Figure 4: EUR/USD Parity Between 2000-2023



Source: Statista (Statista, n.d.)

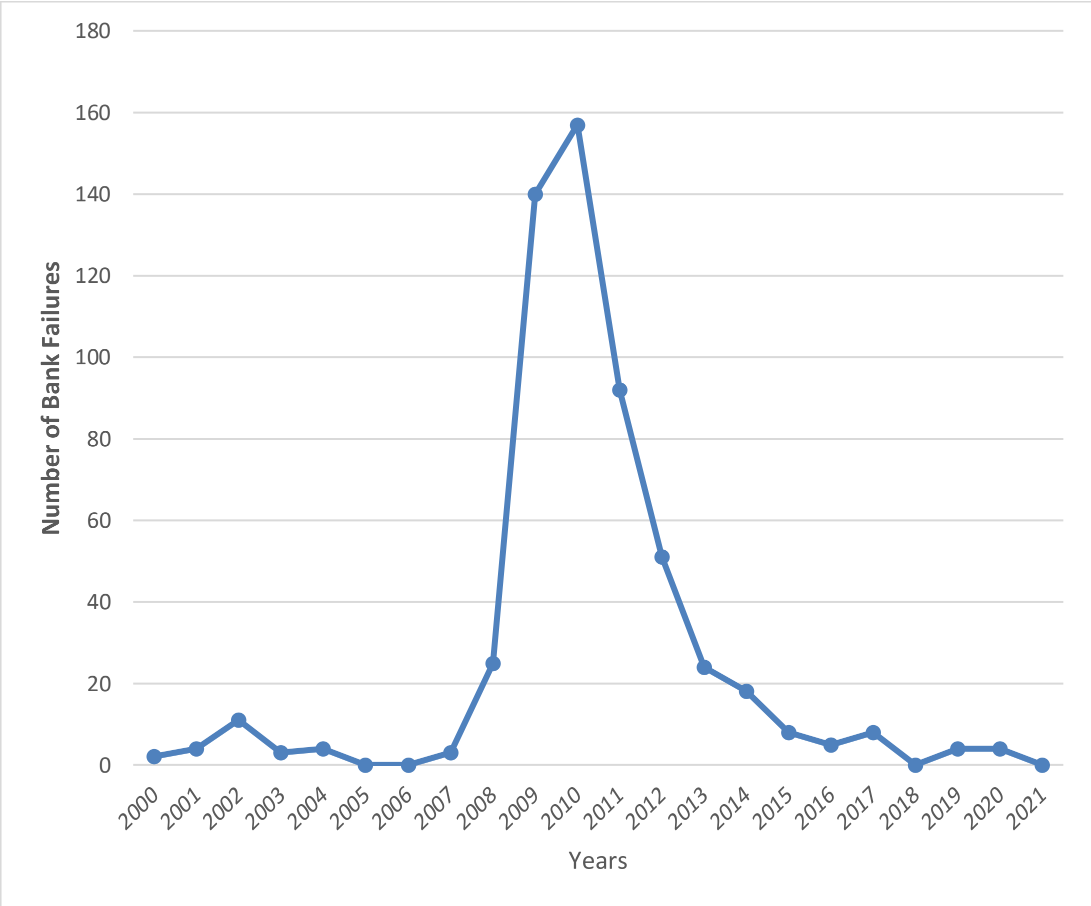
Figure 4 shows the change in euro/dollar parity between 2000-2023. When we look before and after the 2008 crisis, we see that the euro, which gained value against the dollar in 2006 and 2007, depreciated in 2008. There are several main reasons why the dollar appreciated during the 2008 crisis.

First of these reasons **Flight to Safety**, When there is uncertainty in the global financial markets, investors tend to seek safe-haven assets, and the US dollar is considered one of the safest currencies. As a result, investors shifted their investments into US dollar-denominated assets, causing an increase in demand for the US dollar and leading to its appreciation.

Secondly **US Economic Stability**, Although the US was hit hard by the financial crisis, it was seen as more stable compared to other major economies such as Europe and Japan. As a result, investors had more confidence in the US economy, leading to an increase in demand for the US dollar.

Finally **Federal Reserve Policy**, The Federal Reserve took a number of measures during the crisis to stabilize the US financial system, including lowering interest rates and providing liquidity to financial institutions. These measures increased confidence in the US financial system and helped to support the value of the US dollar (Stavrakeva et al., n.d.).

Figure 5: Number of Bank Failures in United States 2000-2021



Source: FDIC (FDIC, 2023)

Figure 5 shows the number of bank failures before and after the 2008 crisis. Before the 2008 economic crisis, no banks failed in 2006, and three banks went bankrupt in 2007. In the four years between 2008 and 2011, a total of 414 banks, including big banks such as Lehman brothers, went bankrupt. This is the clearest example of the impact of the crisis on financial systems. The lack of supervision of the American banking system played a major role in the failure of such a large number of banks.

As a result, the economic crisis had various effects. In response to the crisis, around the world implemented a range of policy measures designed to stabilize the financial system and promote economic recovery. Central banks lowered interests to historic lows, and implemented fiscal stimulus programs designed to boost demand and create jobs.

Over time, these policy measures have helped to stabilize the global economy, and by 2010, many countries had returned to growth. However, the recovery was slow and uneven, with many countries continuing to experience high levels of unemployment and poor economic growth.

The long-term impact of the crisis has been substantial. The crisis exposed weaknesses in the global financial system, leading to a wave of regulatory reforms aiming at strengthening the banking system and preventing future crises. These reforms included higher capital requirements for banks, tightener regulation of financial derivatives, and increased transparency in financial reporting.

The crisis also had a profound effect on public attitudes toward economic policy and globalization. In many countries, the crisis was seen as evidence of the failures of free-market capitalism, and led to a rise in support for populist and nationalist political movements (Fetzer, 2020).

In conclusion, the global financial crisis of 2008 had a profound impact on the global economy, causing diffuse economic disruption, social unrest, and political upheaval. Although all and central banks were able to stabilize the financial system and promote recovery, the long-term impact of the crisis has been significant, leading to a wave of regulatory reforms and changes in public attitudes toward economic policy and globalization.

Overall, the appreciation of the US dollar during the 2008 financial crisis was the result of a combination of factors, including a flight to safety, the relative stability of the US economy, and the actions of the Federal Reserve to support the financial system.

2.3. FED's Response to The Crisis

Before the 2008 crisis, the policy of the FED was to ensure price stability and increase employment. For this purpose, the FED used various monetary policy tools such as open market operations and interest rate adjustments. From the early 1990s to the mid-2000s, there was a stable monetary policy environment. Against the inflation that started to increase in the 2000s, interest rates were increased step by step. Apart from this, the FED worked in coordination with the central banks of other countries.

Currency swap lines were set up. In this way, it was able to control its monetary policy and reserves and move forward in a coordinated manne (Taylor, 2007).

In general, the U.S economy was progressing relatively steadily, thanks to the policies followed by the FED and its interventions in the economy before the crisis. Even though there were concerns such as increasing risks in the housing market and the increase in subprime loans, it was expected that this stable course would continue in general. However, the expected did not happen and the good environment in the housing market suddenly reversed and caused a crisis (Bernanke, 2015).

The 2008 crisis was one of the worst economic crises in world history. As a result of the crisis, many people around the world lost their jobs, companies from various sectors went bankrupt. In order to eliminate the effects of the crisis in the U.S, the American central bank took various actions.

In such crises, the task of the central bank is to make sure that financial institutions have the necessary liquidity to run their day-to-day operations. By the end of May 2008, the Fed had committed nearly two-thirds of its $900 billion balance sheet to these new programs; 150 billion dollar Term Auction Facility, 200 billion dollar to the Term Securities Lending Facility 62 billion dollar to foreign exchange swaps; 29 billion dollar to a loan to support the sale of Bear Stearns and a potentially unlimited amount to the Primary Dealer Credit Facility (Cecchetti, 2009).

One of the Fed's first responses to the crisis was quite traditional. Confessing that they could not understand the magnitude of the crisis at first, Bernanke, the head of the FED, began lowering interest rates from the end of 2007 (Thomas, 2011). During 2008, the Fed reduced its funds by 4% percentage points in total seven times. By the end of 2008, the Fed had dropped the federal funds rate as low as it could go to a range of 0–0.25 percent.

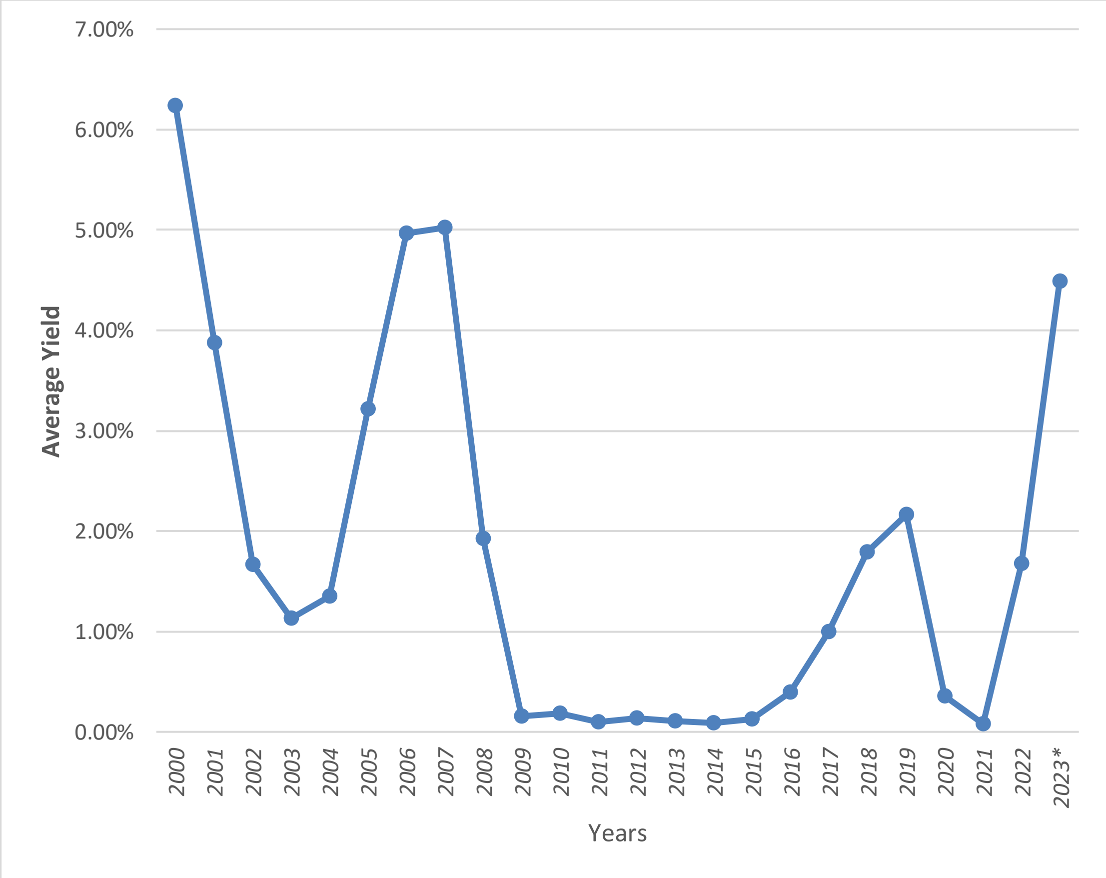
Figure 2.6 shows average federal funds rates from 2000 to 2023.As mentioned before fund rate was 6% on average in 2000, decreased to an average of 1.1% in 2003, then started to increase before the crisis and reached an average level of 5% in 2007. In the following years, the interest rates were lowered by the FED, reaching 0% in 2009 and remained at these levels on average until 2017.

Before the 2008 crisis, the economy of the U.S was not in good shape, mainly due to the economic burden of the Iraq and Afghanistan wars and other reasons. Decreasing tax revenues with the crisis was also increasing the budget deficit. An incentive bill called The American Reinvestment and Recovery Act (ARRA) went into effect in 2009. The scope of this stimulus bill was $797 billion. With the ARRA, the budget deficit continued to increase and reached 10% of the GDP of the U.S (Committee For A Responsible Federal Budget, 2009).

The Fed influences monetary policy through traditional methods by influencing short-term interest rates. The Fed influences a broad array of short-term interest rates, beginning with the federal funds rate (FFR)—the interest rate on reserves traded among banks. The intervention of the FED with traditional methods proceeds as follows; When the economy weakens, the Federal Reserve purchases U.S. Treasury securities, paying for them by crediting the deposit accounts of the dealers' banks with reserves. As banks find themselves with excess reserves, they lend out the funds in the federal funds market, purchase Treasury bills, or expand loans to businesses and households. This stimulates aggregate demand by causing households and firms to increase spending, and boosts business investment spending on plant and equipment as well as construction. The Fed-induced decline in interest rates and increase in the money supply leads to economic activity being stimulated. However, when interest rates came close to zero in the 2008 crisis, the FED had to turn to unconventional methods (Thomas, 2008).

During the 2008 financial crisis, the Federal Reserve used a range of unconventional monetary policy instruments to intervene in the economy and stabilized financial markets. These tools were necessary because the traditional approach of lowering short-term interest rates was inadequate to address the severity of the crisis. Through quantitative easing (QE), the Fed bought large amounts of Treasury bonds and mortgage-backed securities to increase the money supply and lower long-term interest rates. Forward guidance, another unconventional instrument, was used to signal the Fed's future policy intentions and guide market expectations. Operation Twist, which involved selling short-term bonds and using the proceeds to purchase long-term bonds, was implemented to lower long-term interest rates. In addition to these tools, the Fed also established programs such as the Term Auction Facility (TAF), Commercial Paper Funding Facility (CPFF), Money Market Mutual Fund Guarantee Program (MMMF), and currency exchange lines (Kuttner, 2018). These programs provided liquidity to the financial system, prevented runs on money market mutual funds, and ensured that banks and companies had access to financing during the crisis. The Fed's use of unconventional monetary policy instruments played a critical role in stabilizing the economy during the crisis and helped prevent a total collapse of the financial system.

Figure 6: U.S Federal Funds Rate - Historical Annual Yield Data 2000-2023



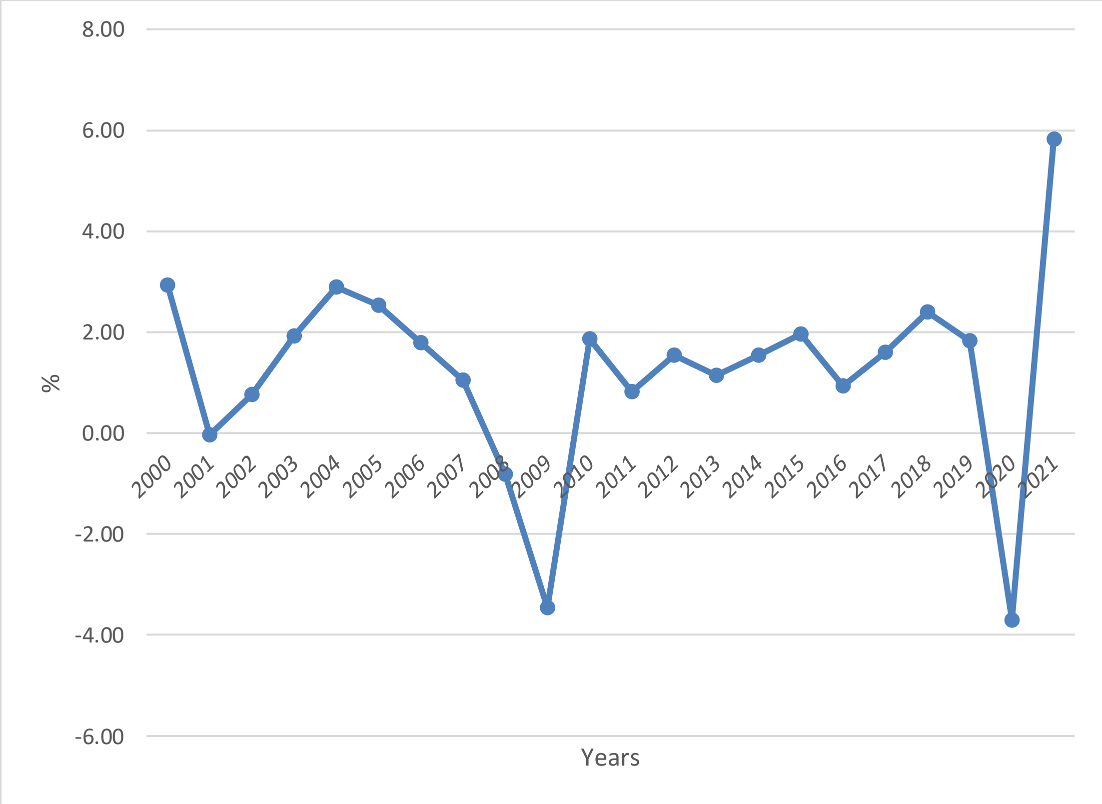
Source: Macrotrends (Macrotrends, n.d.)

Overall, the Fed's response to the 2008 financial crisis was a coordinated effort to provide liquidity and support to the financial system, while also using monetary policy tools to promote economic growth. The Fed's actions were extensively credited with preventing a much deeper and more prolonged economic downturn, and they helped to stabilize the financial system and support economic growth in the years that followed.

In addition to these, the measures taken by the FED against the crisis were not fully accepted by everyone. Some economists criticized the decisions taken by the FED. According to them, these decisions put financial institutions at greater risk and increased income inequality. In addition, the decisions taken by the FED were also questioned morally. It was thought that the bailout of some banks would cause a repeat of their reckless behavior in the future.

Despite these criticisms, most economists agree that the Fed's response to the 2008 financial crisis was largely successful in stabilizing the financial system and preventing a deeper and more prolonged economic downturn. The Fed's actions demonstrated the importance of having a strong and flexible central bank that can respond quickly and decisively to financial crises.

Figure 7: U.S GDP Per Capita Growth 2000-2021 (Annual %)



Source: WB (Worldbank Group, n.d.)

The results of the Fed's policy response were significant. Since mid-2009, the US economy has grown steadily. This growth continued until 2020. The Fed's actions were successful in stabilizing the financial system and preventing widespread collapse of financial institutions. After the end of the crisis, employment increased, new jobs were added to the economy. The FED's lowering of interest rates made borrowing easier and increased spending. This revived the economy.

2.4. ECB's Response to The Crisis

The European Union (EU) is a political and economic union of 27 member states. It was founded on November 1, 1993, through the signing of the Maastricht Treaty, which established the pillars of the EU and laid out the framework for the common currency, the euro.

The Eurozone, also known as the Euro area, is a subset of the EU consisting of 20 of the 27 EU member states that have adopted the euro as their official currency. The Eurozone was established on January 1, 1999, and the euro was introduced as a physical currency on January 1, 2002.

The idea of European integration can be traced back to the aftermath of World War II, when a group of European leaders proposed creating a common market to prevent future wars and promote economic growth. This led to the establishment of the European Coal and Steel Community in 1951, which later evolved into the European Economic Community in 1957.

Over the years, the EU has expanded to include more member states and has taken on new responsibilities, such as the establishment of the European Parliament, the creation of a common foreign and security policy, and the adoption of a single currency in the Eurozone.

The EU has faced several challenges throughout its history, including the global financial crisis of 2008, the refugee crisis, and the ongoing Brexit negotiations, which resulted in the United Kingdom leaving the EU in 2020.

Despite these challenges, the EU remains an important global player in politics and economics, with a population of over 447 million people and a combined GDP of over €14 trillion (European Union, n.d.).

One of the biggest challenges faced by the Eurozone and the European Union was the 2008 economic crisis. The 2008 economic crisis manifested itself in the form of a debt crisis in the European Union. The 2008 global financial crisis had a significant impact on both the Eurozone and the European Union, as they are closely interconnected entities. However, the impact on the Eurozone was generally considered to be more severe than on the EU as a whole. This is because due to its integrated financial system and the specific vulnerabilities of some of its member states. In addition to the other causes of the crisis, it is also believed that using a common currency exacerbates the crisis (Nölke, 2016) .

The Eurozone, which consists of 20 EU member states that have adopted the euro as their common currency, was particularly vulnerable to the crisis due to its integrated financial system and the high level of debt and liabilities in some of its member countries. The crisis led to a sovereign debt crisis in several Eurozone countries, including Greece, Ireland, Portugal, Spain, and Cyprus, which had to seek financial support from the European Union and the International Monetary Fund.

The crisis also exposed institutional weaknesses in the Eurozone, such as the lack of a common fiscal policy, which made it difficult for member states to coordinate their responses to the crisis. The European Central Bank (ECB) played a key role in mitigating the crisis by implementing unconventional monetary policies, such as low-interest rates and quantitative easing, but the recovery was slow and uneven across different countries in the Eurozone.

On the other hand, the impact on the EU as a whole was mitigated by the fact that not all EU member states are part of the Eurozone and thus were not directly affected by the currency crisis. However, the crisis did lead to a general economic downturn across the EU, and some countries outside the Eurozone, such as Hungary and Latvia, also had to seek financial support from the International Monetary Fund.

The 2008 global financial crisis had different effects on each country in the euro area, depending on their economic fundamentals, debt levels and exposure to global financial markets. The countries most affected by the crisis were Greece, Portugal, Ireland and Spain.

Portugal was one of the Eurozone countries that were heavily affected by the 2008 global financial crisis. Prior to the crisis, Portugal had a high level of public debt and a large budget deficit, which made it vulnerable to the economic downturn that followed. The crisis had a significant impact on the Portuguese economy, leading to a sharp contraction in GDP, a rise in unemployment, and a decline in private investment. The country's banking sector also faced challenges due to a high level of non-performing loans and exposure to the housing market.

In response to the crisis, the Portuguese government implemented a series of austerity measures, including cuts in public spending, increases in taxes, and labor market reforms. These measures were aimed at reducing the budget deficit and restoring investor confidence in the economy (Lane, 2012).

The austerity measures were controversial, and they led to social unrest and protests in the country. However, they were successful in reducing the budget deficit and stabilizing the economy. Portugal eventually exited its bailout program in 2014 and returned to economic growth in 2015.

Greece has been one of the countries most affected by the crisis, as it has a lot of debt and a relatively weak economy. After the crisis, the Greek economy contracted. Greece needed financial aid packages from the European Union and the IMF to pay off its debts.

In the Irish economy, the crisis came from the real estate sector. The Irish economy was heavily dependent on construction and the real estate industry. To stabilize the economy after the crisis, the government nationalized some banks and implemented austerity policies. As a result of these measures, Ireland recovered, and the economy returned to growth.

In Spain, as in the U.S, there was a real estate bubble and Spain's debt was too high. As a result, Spain was heavily affected by the crisis. As a result of the crisis, unemployment in Spain increased considerably. The government had to implement austerity policies similar to those in other countries.

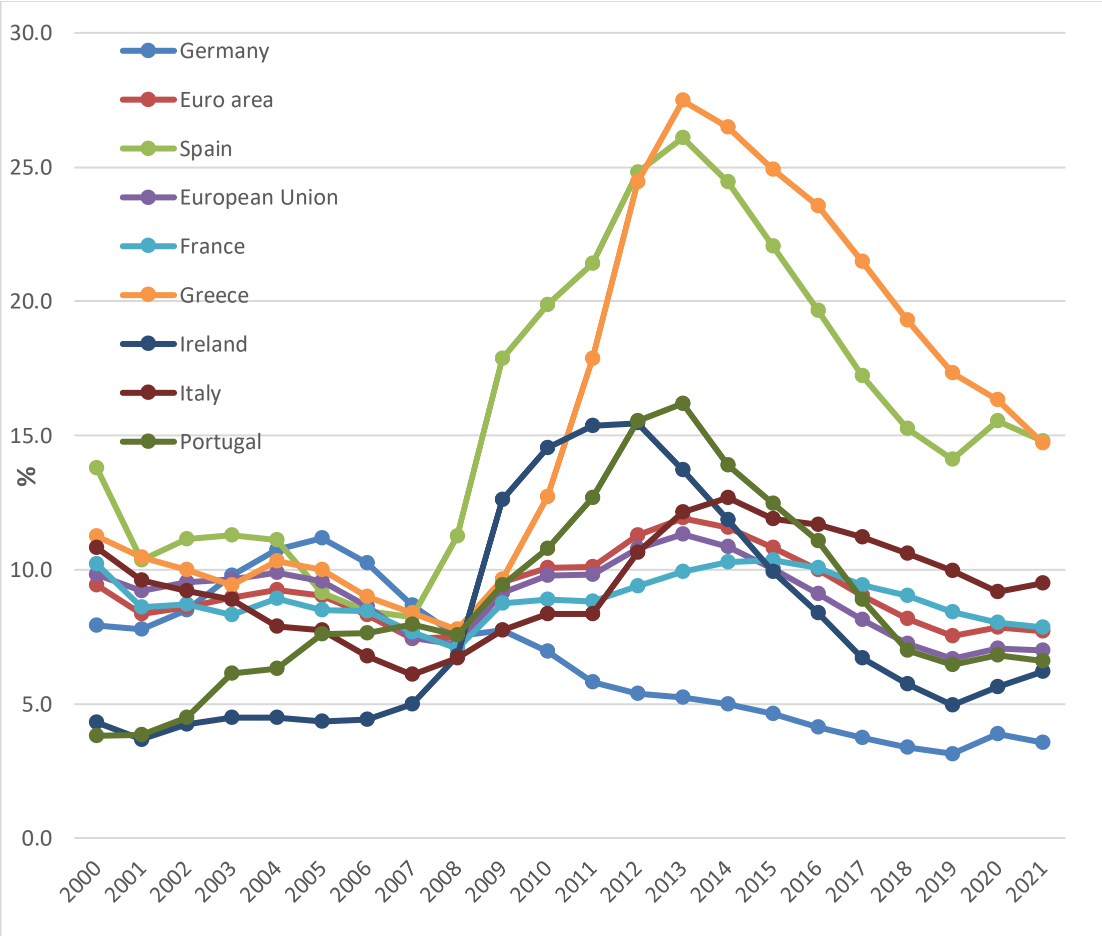
Germany was one of the countries least affected by the crisis. The German economy had strong exports and the debt level was quite low compared to other countries. Despite all this, the German economy shrank after the crisis. It had to provide financial support to other countries in the Eurozone through the European Stability Mechanism.

Figure 8 shows the unemployment rates in the total workforce between 2004-2021 in Greece, Portugal, Spain, Ireland, Germany, the Eurozone and the European Union. Germany was the only country where unemployment decreased in 2009 compared to 2007. Unemployment in Germany, which was 8.7% in 2007, decreased to 7.7% in 2009.

In Spain and Greece, on the other hand, unemployment caused by the crisis is at a frightening level. Unemployment in Greece, which was 8% before the crisis, rose to double digits with the crisis, peaking at 27.5% in 2013. Like Greece, unemployment in Spain, which was 8% in 2007, increased rapidly with the crisis and peaked at 26% in 2016.

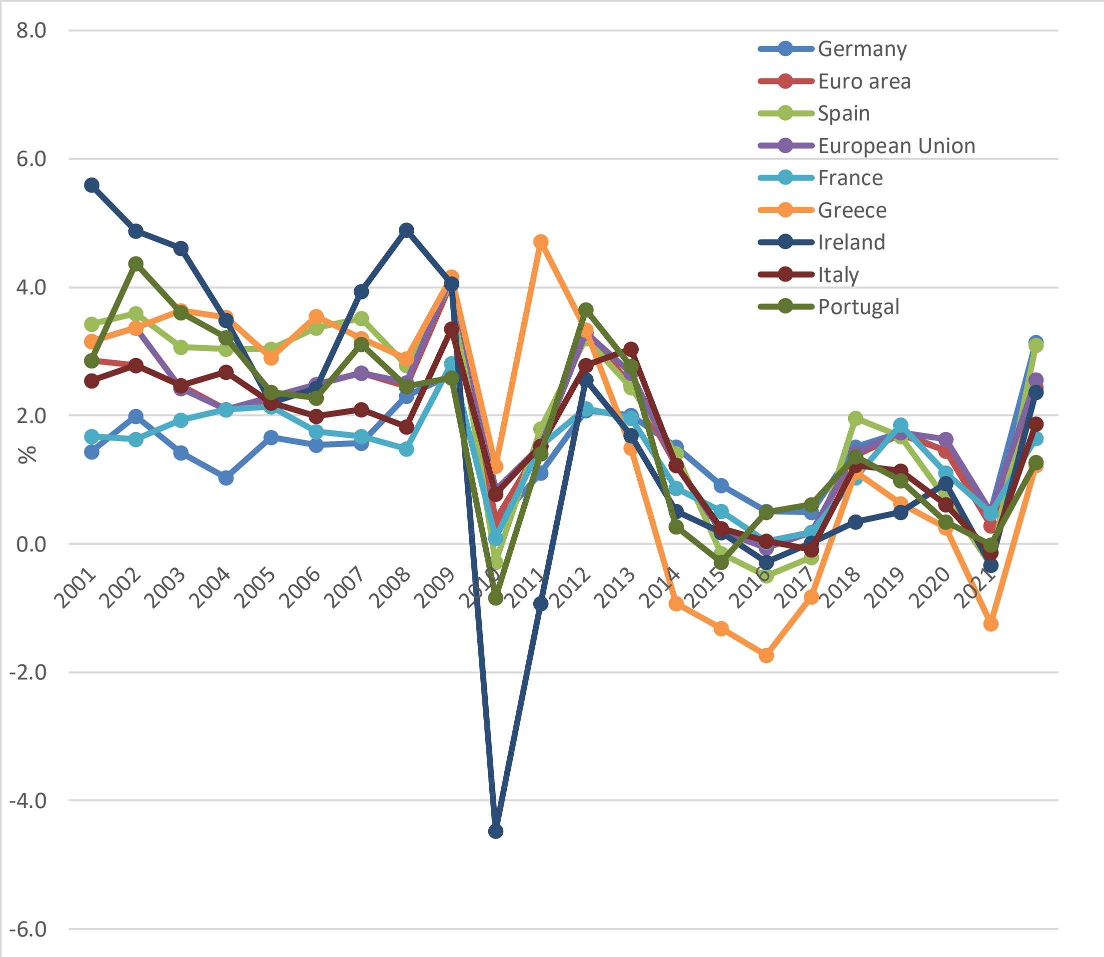
Compared to the European Union and the Eurozone, although they show almost similar performance, the European region with a high unemployment rate before the crisis changed it to the Eurozone after the crisis. In this change, the increasing unemployment rates in Greece and Spain have a greater impact on the euro area than in the European Union.

Figure 8: Unemployment Rate 2000-2021 In Selected Countries and Economies (% of Total Labor Force)



Source: WB (Worldbank Group, n.d.)

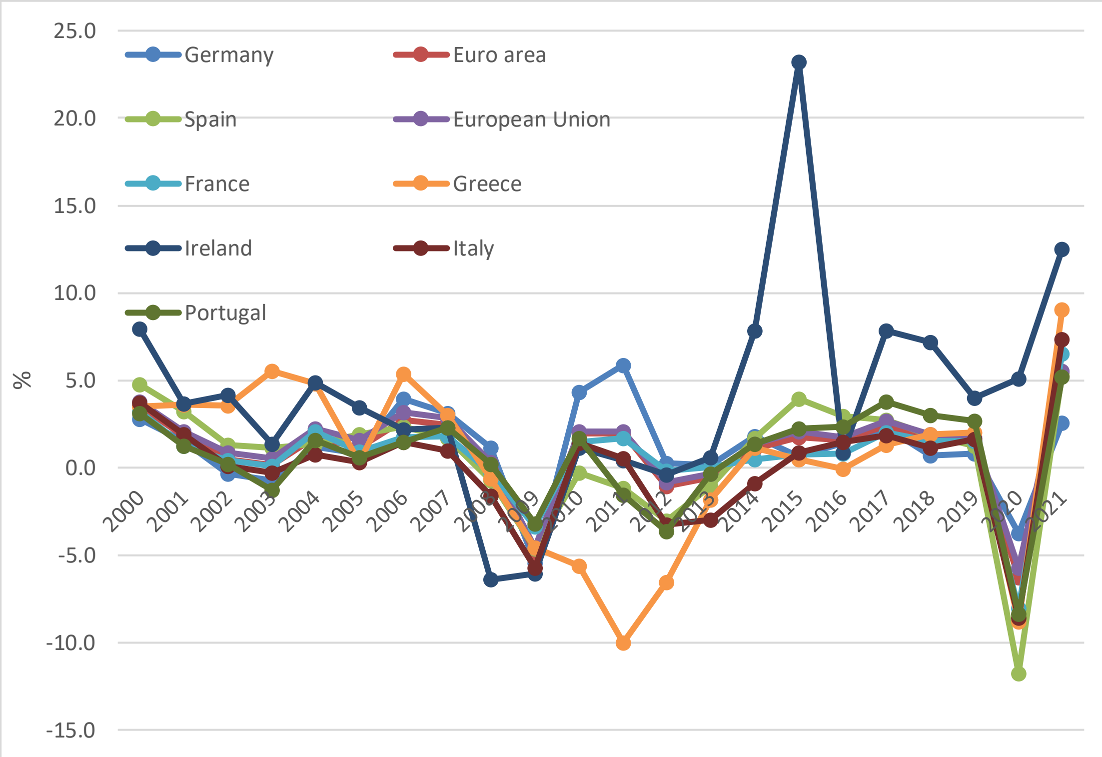
Figure 9: Inflation Rate 2000-2021 In Selected Countries and Economies (Annual %)



Source: WB (Worldbank Group, n.d.)

Figure 9 shows the inflation rates in Greece, Portugal, Spain, Ireland, Germany, the Eurozone and the European Union between 2004-2021. It is noteworthy that Ireland's inflation, which was 4.1% in 2008, is -4.5% in the following year. The most important reason for this is the economy that came to a standstill because of the complete collapse of the real estate market.

Figure 10: GDP Per Capita Growth 2000-2021 In Selected Countries and Economies (Annual %)



Source: WB (Worldbank Group, n.d.)

Figure 10 shows the annual GDP growth between 2004-2021 in Greece, Portugal, Spain, Ireland, Germany, the Eurozone, and the European Union. The shrinking of Greece for six consecutive years since 2008 is one of the most important indicators that it has been heavily affected by the crisis.

On the other hand, Germany's 4.2% growth in 2010, after its economy contracted in 2009, shows that it has a strong economic infrastructure.

In the European Union-Eurozone comparison, although they show similar performances, the GDP of the Eurozone has shrunk more than the European Union.

In response to the crisis, the European Central Bank took a range of traditional and non-traditional measures to address the situation and prevent it from worsening.

The traditional measures taken by the ECB included adjustments to monetary policy, liquidity provision, asset purchases, and international collaboration. The ECB reduced its key interest rates to stimulate borrowing and investment, which would help the economy grow. The central bank also provided emergency funding to banks to maintain confidence in the banking system and prevent a liquidity crisis from turning into a resolution crisis. Additionally, the ECB purchased government and private-sector bonds to inject liquidity into the economy and encourage lending and investments. The ECB also worked closely with other central banks and international organizations such as the International Monetary Fund (IMF) and the European Union to coordinate a global response to the crisis.

In addition to these traditional precautions, the ECB also took a number of non-traditional measures to address the crisis. These measures include Long-Term Refinancing Operations (LTROs), Quantitative Easing, Targeted Longer-Term Refinancing Operations (TLTROs),, and Outright Monetary Transactions (OMT).

Long-Term Refinancing Operations is a monetary policy instrument used by the European Central Bank (ECB) to provide longer-term funding to European banks in order to improve liquidity in the financial system. Through LTROs, banks can loan from the ECB for up to three years at a low interest rate, using eligible assets as collateral.

Quantitative Easing is a monetary policy instrument used by central banks to stimulate the economy by increasing the money supply. In QE, the central bank purchases government bonds or other assets from banks, which in turn increases the amount of money available for borrowing and spending in the economy.

Targeted Longer-Term Refinancing Operations is another tool used by the ECB to encourage loaning to the real economy. Under TLTROs, banks can borrow from the ECB at a very low interest rate for up to four years, with the situation that they use the funds to provide loans to businesses and households (European Central Bank, 2023b) .

Outright Monetary Transactions is a program introduced by the ECB in 2012 to help stabilize the Eurozone by purchasing government bonds of troubled countries such as Greece, Spain, and Italy, to reduce their borrowing costs and alleviate financial stress. OMT is seen as a last-resort measure that is used when other measures have failed to restore market trust in a particular country (Benchimol & Fourçans, 2017) .

The ECB's response to the 2008 financial crisis was mostly successful in preventing the situation from spiraling out of control. By taking a range of traditional and non-traditional measures, the central bank was able to maintain stability in the banking system, increase fluidity in the economy, and stimulate economic growth.

However, there were some reviews of the ECB's response. Some have argued that the central bank did not do enough to support weaker economies in the EU, such as Greece and Portugal, which were hit particularly hard by the crisis. Others argued that the ECB's measures, especially QE, could lead to inflation and distortions in financial markets.

In conclusion, the ECB took a range of traditional and non-traditional measures to address the 2008 financial crisis. These measures were greatly successful in preventing the crisis from worsening and stimulating economic growth. However, there were also criticisms of the ECB's response, highlighting the difficulties and complexities involved in managing a global financial crisis.

Despite the recovery, some of these countries still face challenges such as high public debt, low productivity, and a high level of youth unemployment.

3. THE CORONAVIRUS AND ITS IMPACT ON THE EU ECONOMY

This chapter mainly will focus on the economic impact of the coronavirus pandemic on the European Union and Eurozone.

In this chapter will examine how the pandemic has affected different sectors of the EU economy, including trade, tourism, and manufacturing. It discusses the measures taken by EU governments to support businesses and individuals affected by the pandemic, such as stimulus packages, furlough schemes, and loan guarantees.

The chapter also examines the long-term economic consequences of the pandemic, including changes in consumer behavior, shifts in global supply chains, and the impact on employment and inequality. It also discusses the role of the EU in the global response to the pandemic, including its vaccine distribution efforts and its efforts to promote global economic recovery.

In addition to that this chapter examines the similarities and differences between the 2008 economic crises and Covid-19 economic crises, including the causes, responses, and consequences. It discusses how the two crises have affected different sectors of the Eurozone economy, including employment, trade, and finance.

The chapter also explores the policy responses of Eurozone governments and the European Central Bank to the two crises, including monetary and fiscal measures. It discusses how the lessons learned from the 2008 crisis have informed the policy response to the coronavirus pandemic, and how the two crises have challenged the existing economic models and institutions.

Overall, this chapter will aim to provide an overview of the economic impact of the coronavirus pandemic on the EU, highlighting both the challenges and opportunities presented by this unprecedented crisis and the chapter will aim to provide an in-depth analysis of the similarities and differences between the coronavirus crisis and the 2008 economic crisis in the Eurozone, highlighting the lessons learned and the challenges ahead for the Eurozone economy.

3.1. The Emergence and Spread of The Coronavirus

In December 2019, a new virus emerged in Wuhan, China, causing an epidemic of pneumonia. The virus was later identified as a member of the virus family and was named SARS-CoV-2, which causes COVID-19. The disease quickly spreads across China and then to other countries, eventually becoming a global epidemic.

The coronavirus is highly contagious and primarily spreads through respiratory droplets when an infected person coughs or sneezes (Gordan, 2020) . This makes it easy for the virus to spread rapidly in populated areas, such as public transportation, workplaces, and social gatherings. The virus can also be spreading by touching surfaces contaminated with the virus and then touching one's face.

COVID-19 has a wide range of symptoms, from mild to severe, and can even be asymptomatic. Common symptoms include fever, cough, and shortness of breath, but it can also cause body aches, fatigue, and loss of taste or smell. While most people who contract the virus will recover, it can be deadly, especially for those with underlying health conditions and older adults (Huang et al., 2020) .

The pandemic has had significant social and economic impacts, caused widespread unemployment and leading to significant changes in daily life for many people. Governments around the world have implemented measures to slow the spread of the virus, including lockdowns, social distancing, and mask mandates. Vaccines have also been developed and are being administered globally to prevent the spread of the virus.

The highlighted emergence and spread of the coronavirus have the importance of global cooperation in addressing public health crises. The pandemic has exposed weaknesses in healthcare systems and infrastructure, leading to increased investment in research, technology, and public health initiatives. Governments and healthcare organizations are working together to develop strategies for managing the pandemic and preventing future outbreaks.

The development and distribution of vaccines have been a critical aspect of the global response to the coronavirus pandemic. Vaccines have been developed using different technologies, including mRNA, adenoviral vector, and inactivated virus, and have been shown to be effective in preventing COVID-19 and reducing the severity of the disease (Shereen et al., 2020)

Table 1: WHO Coronavirus (COVID-19) Dashboard

WHO Region	Cases	Deaths	Deaths/Cases
Europe	275.110.560	2.212.212	0,80%
Western Pasific	202.153.158	409.585	0,20%
Americas	191.814.966	2.945.817	1,54%
South-East Asia	60.867.951	804.273	1,32%
Eastern Mediterranean	23.324.249	350.417	1,50%
Africa	9.519.504	175.338	1,84%
World	***762.791.152***	***6.897.025***	***0,90%***

Source: WHO (World Health Organization, 2023)

Table 1 shows coronavirus cases and deaths by world health organization region. When we look at the case fatality rate, the lowest rates belong to Europe. This has both the effect of better treatment since the European population is generally more economically developed than other regions, and the fact that the vaccine was first found in this region, Germany.

Vaccine distribution has been a complex process, with many challenges, including vaccine hesitancy, limited vaccine supplies, and unequal distribution of vaccines between countries. However, vaccines have been distributed worldwide, with many countries launching mass vaccination campaigns to protect their populations.

The distribution of vaccines has had a significant impact on the pandemic, reducing the number of cases, hospitalizations, and deaths in many countries. Vaccination has also been shown to reduce the transmission of the virus, helping to slow the spread of the pandemic.

However, there are still challenges in achieving global vaccination coverage, with many low-income countries struggling to access vaccines. The unequal distribution of vaccines has led to concerns about vaccine nationalism and the need for global cooperation in ensuring equal access to vaccines for all populations.

The development and distribution of vaccines have been a critical aspect of the global response to the coronavirus pandemic. While there are still challenges in achieving global vaccination coverage, vaccines have been effective in reducing the spread and impact of the virus, highlighting the importance of investing in research and public health initiatives.

In conclusion, the emergence and spread of the coronavirus have had a significant impact on the world, highlighting the importance of preparedness and collaboration in addressing public health crises. While the pandemic continues to pose challenges, the global response to the virus has demonstrated the resilience and adaptability of individuals and communities worldwide.

3.2. Impact of Coronavirus on World Economies

The coronavirus pandemic has had a significant impact on world economies. After the coronavirus started in China and spread all over the world in a short time, countries had to take various measures. Most countries have implemented quarantine and full shutdown. As a result, cafes, shopping malls, bars etc. in most countries. it is closed. Tourism has stalled for many countries. These measures, which were taken to reduce contact, minimize contamination and protect human health, had negative effects on the economy. The fact that the service sector came to a standstill meant that most people working in this sector lost their income. Here are some of the main ways it affects the global economy:

i. **Reduced economic activity**: The pandemic and the measures taken to contain its spread, such as lockdowns and social distancing, have led to a significant reduction in economic activity. Many businesses have been forced to close, and supply chains have been disrupted, leading to a decrease in production and consumption.

ii. **Job losses:** As a result of the reduced economic activity, many people have lost their jobs. The International Labour Organization estimates that the pandemic has led to the equivalent of 255 million full-time job losses globally in 2020 (International Labour Organisation, 2021).

iii. **Stock market volatility:** The pandemic has also led to significant volatility in global stock markets. The uncertainty caused by the pandemic has led to large fluctuations in stock prices, with many investors uncertain about the future prospects of companies.

Government response: Governments around the world have implemented various measures to support their economies during the pandemic. These have included stimulus packages, tax breaks, and financial assistance for businesses and individuals (World Bank Group, 2023).

Increase in government debt: The measures taken by governments to support their economies have led to a significant increase in government debt. This could have long-term implications for the financial stability of many countries (International Monetary Fund, n.d.).

Changes in consumer behavior: The pandemic has also led to changes in consumer behavior, with many people switching to online shopping and other digital services. This has had a significant impact on the retail and hospitality sectors, with many businesses struggling to adapt to the new reality.

Industry-specific impacts: The pandemic has had a disproportionate impact on certain industries, including travel, tourism, hospitality, and entertainment. These industries have experienced a significant decline in demand as a result of the pandemic-related restrictions and safety concerns (European Union, 2020) .

Changes in trade patterns: The pandemic has also disrupted global trade patterns, with many countries implementing restrictions on the movement of goods and services. This has led to supply chain disruptions and reduced global trade volumes (Barlow et al., 2021).

Increased government intervention: In response to the economic impact of the pandemic, governments around the world have increased their intervention in the economy. This has included direct support for businesses, increased regulation, and greater government involvement in sectors such as healthcare (OECD, 2021).

Unequal impact: The impact of the pandemic on world economies has not been evenly distributed. Low- and middle-income countries have been particularly hard hit, with limited resources to implement effective public health measures and support their economies.

Innovation and adaptation: Despite the challenges posed by the pandemic, it has also spurred innovation and adaptation in many sectors. Businesses and individuals have had to find new ways of operating, and many have successfully pivoted to new business models.

Long-term implications: It is still too early to fully understand the long-term implications of the pandemic on world economies. However, it is likely that the pandemic will have a lasting impact on the way we work, consume, and interact with each other, and will shape the direction of economic policy for years to come.

Overall, the coronavirus pandemic has had a significant and wide-ranging impact on world economies. The full extent of the damage caused by the pandemic may not be known for some time, but it will have lasting effects on the global economy.

4. COVID-19 AND EUROZONE INFLATION

In this chapter, the effects of the Covid-19 pandemic on the eurozone and the inflation it created will be discussed. In addition, in the last part, the 2008 crisis and the covid-19 economic crisis will be compared, and their similarities and differences will be mentioned.

4.1. The Impact of Covid-19 On the Eurozone

One of the most important macroeconomic indicators that deteriorated in the economy with the Covid-19 Pandemic was inflation. Inflation is an important economic indicator that measures the rate at which prices of goods and services increase over time. Inflation is an important factor for central banks, as it affects monetary policy decisions and the overall health of the economy. In this section, the inflation history of the Eurozone will be discussed. The eurozone is a monetary union of 20 European Union member states that have adopted the euro as their currency.

The introduction of the euro in 1999 marked a significant milestone in the history of the European Union. The euro was introduced as a common currency for the member states of the European Union, with the goal of creating a more integrated and stable economic environment. Inflation was one of the key concerns for policymakers during the introduction of the euro, as it could affect the credibility and stability of the new currency.

In the first few years after the introduction of the euro, inflation was relatively low, hovering around 2% per year. This was seen as a positive sign for the eurozone, as it indicated a stable economic environment for businesses and consumers.

In 2002, eurozone inflation briefly spiked above 3%, but then fell back to around 2% in the following years. The 2002 spike was mainly due to a combination of factors, including rising oil prices, higher food costs, and the introduction of the euro itself (Caramazza et al., 2004).

In 2008, as mentioned in the previous sections, inflation spiked again due to rising oil and commodity prices, reaching almost 4%. However, the global financial crisis hit soon after, causing a sharp drop in demand and inflation. Inflation fell to around 0.5%, its lowest level since the euro was introduced (Mishkin, 2018).

In the following years, inflation remained low, with some periods of deflation in 2014-2016. This was mainly due to weak economic growth and low demand, as the eurozone struggled to recover from the financial crisis (European Central Bank, 2023a).

Between 2017-2018, inflation began to pick up again, reaching 2% in 2018. This was seen as a positive sign for the eurozone, as it indicated a strengthening economy and higher demand for goods and services.

Inflation remained stable at around 1.2-1.3% in 2019. This was seen as a positive sign for the eurozone, as it indicated a continued strengthening economy and higher demand for goods and services.

For inflation in eurozone after 2020 should be focuses on analyzing the influence of two major external shocks, namely the Covid-19 pandemic and the Russia-Ukraine war, on global inflation. During pandemics, inflation can be driven by both upward and downward forces. Supply-side inflation occurs due to disruptions in supply chains, while deflationary pressures arise from heightened idiosyncratic risk. The implementation of redistribution policies can mitigate these effects, but there is a risk of prolonged inflationary consequences. Moreover, the Covid-19 pandemic has led to increased uncertainty regarding inflation and distorted inflation measurements. The official consumer price index has underestimated actual inflation due to the underrepresentation of rising food prices and the overrepresentation of declining transport prices.

The Russia-Ukraine war has also had a significant impact on global prices, although quantifying this impact poses challenges. In the eurozone, food inflation has been driven by global energy and food commodity prices, and the war has further exacerbated this inflationary trend by impeding the import of these commodities. Additionally, the trade restrictions resulting from the war can have enduring effects on pricescapo (Maria Caporale et al., 2022).

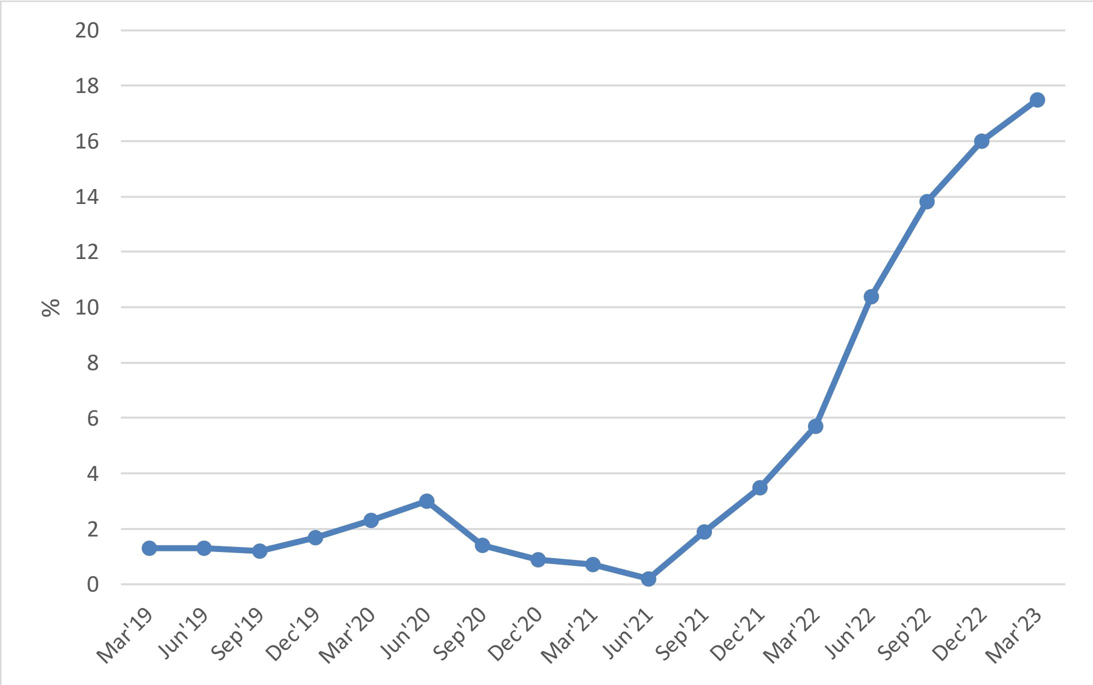
The COVID-19 pandemic has had a significant impact on the eurozone economy and inflation. The pandemic caused a sharp drop in demand and inflation in 2020, and inflation fell to 0.3% in August 2020. This was mainly due to the economic shutdowns and reduced consumer spending caused by the pandemic.

In 2021, inflation has been picking up again, driven by rising energy and commodity prices, as well as supply chain disruptions caused by the pandemic. In March 2021, inflation reached 1.3%. This has caused concern among some economists and policymakers, as higher inflation could lead to higher interest rates and slower economic growth (Eurostat, 2023) .

During the pandemic, inflation expectations in the European region have been consistently 2% higher than the central bank's goal. This may lead to higher inflation in the future. If the government does not effectively address inflation, individuals could grow negative about the future, leading to increased expectations of inflation.

Due to conflicting government objectives, the present circumstances pose challenges. Numerous European governments prioritize resolving the energy scarcity as a more urgent matter. Therefore, this may perpetuate pessimism among the public due to escalating inflation, resulting in higher inflation expectations that are less firmly established in the future. However, it is worth noting that inflation expectations often rely on surveys, which can be prone to inaccuracies, thus making it challenging to reach definitive conclusions (Yu, 2023).

Figure 11: Food Inflation in Eurozone 2019-2023



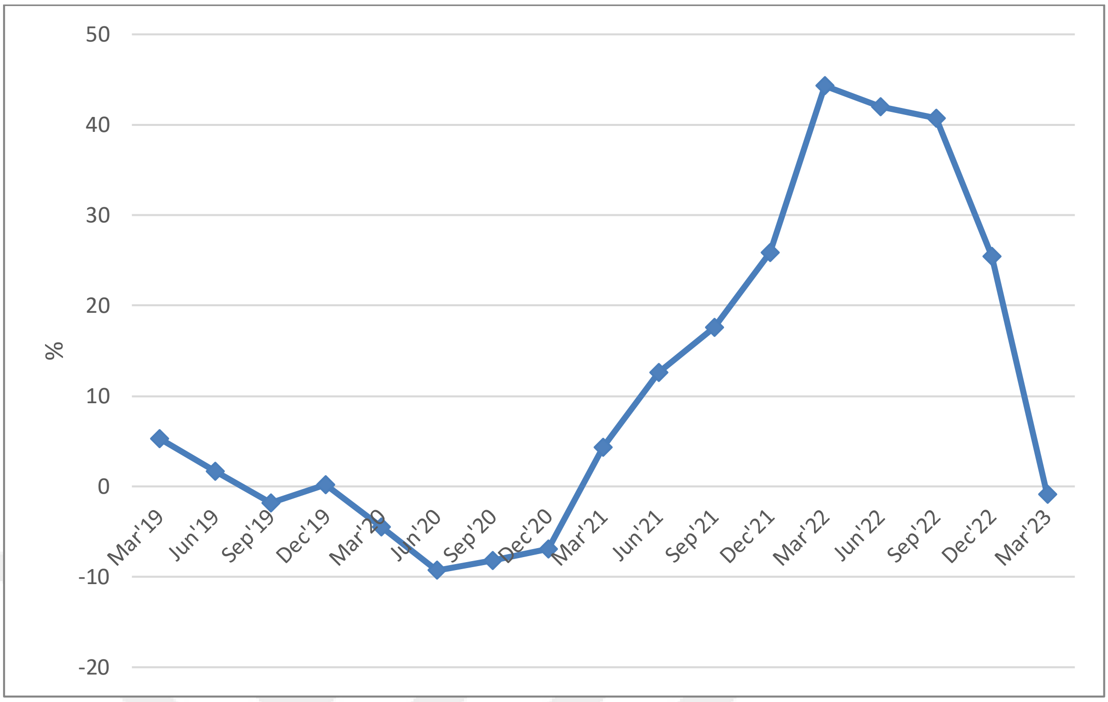
Source: Trading Economics (Trading Economics, 2023b)

As you can see in the Figure, the increase in food prices increased slightly at the beginning of the pandemic, but started to rise after June 2021 and increased gradually in the first months of 2022 with the invasion of Ukraine by Russia.

As of the 2nd quarter of 2023, the eurozone food inflation is expected to be 11%, and in the long term, it is predicted to decrease to 2% in 2024 and 2025 (Trading Economics, 2023b).

Inflation has been an important economic indicator for the eurozone since the introduction of the euro. Eurozone inflation has been relatively stable since the introduction of the euro, with some periods of volatility caused by external factors such as oil prices and the global financial crisis.

Figure 12: Energy Inflation in Eurozone 2019-2023



Source: Trading Economics (Trading Economics, 2023a)

As shown in Figure 12, energy prices decreased with the onset of the pandemic. The stagnation imposed by the "lockdown" caused the demand for oil, and therefore its price, to fall. Through a domino effect, this also drove down the prices of electric and gas, which are highly correlated with the price of oil.

Starting from the first quarter of 2021, energy prices started to rise rapidly. The reasons for this are the rapid economic recovery after the pandemic, weather conditions, maintenance work and companies' decisions to cut investment. By 2022, this increase in prices continued with the Russia-Ukraine war. Energy Inflation is projected to trend around 3.20 percent in 2024 and 2.00 percent in 2025 (International Energy Agency, n.d.).

As a result, The Covid-19 pandemic has caused profound and unparalleled impacts on vital economic measures like GDP and unemployment. In the absence of intervention from the European Central Bank, European economies would have faced severe collapse based on the trajectory of these indicators. It is important to note that this crisis differs from a typical financial crisis and presents unique challenges, particularly in terms of the role played by Central Banks. To address these challenges, the ECB has implemented various measures, such as the introduction of the Pandemic Emergency Purchase Programme (PEPP), which involves large-scale purchases of debt. While similar tools have been utilized in the past, the scale of the PEPP is truly extraordinary. Central Banks are expected to continue supporting economies until the crisis abates (Goldman & Zhang, 2021).

The Covid-19 pandemic has unleashed unprecedented challenges on European economies, with far-reaching consequences for GDP growth, unemployment rates, and societal well-being. However, these effects have not been evenly distributed, as economically weaker households and firms bear the brunt of the crisis, exacerbating existing social divisions and potentially fueling public resistance. In this article, we delve into the impact of the pandemic, lockdown measures, and economic restrictions on European economies, with a particular focus on the Eurozone. We highlight the alarming economic polarization within the region, shedding light on the challenges faced by Southern Eurozone countries and the implications for their recovery. Additionally, we discuss the underlying factors contributing to this polarization and the importance of coordinated policy interventions to mitigate its effects.

The Covid-19 crisis has acted as a magnifying lens, intensifying economic polarization within the Eurozone. Southern Eurozone countries, including Greece, Italy, Portugal, and Spain, are projected to experience more severe declines in GDP growth and higher unemployment rates compared to their northern counterparts. These countries face the additional challenge of high public debt levels, which will be further strained by increasing fiscal deficits and decreasing government revenues.

Existing institutional arrangements and fiscal constraints pose significant hurdles to a swift recovery for Southern Eurozone countries. Meanwhile, countries with stronger fiscal positions, such as Germany, Austria, and the Netherlands, enjoy more flexibility to support their economies. Disparities in fiscal responses are evident, with Germany implementing higher levels of fiscal spending compared to Southern countries, exacerbating the economic divide.

Southern countries relying on debt-led growth models, accumulating current account deficits, and facing limited competitiveness based on technological capabilities. In contrast, Northern countries, particularly Germany, have capitalized on export-led growth models, leveraging their accumulated technological capabilities.

The divergence in growth models has significant implications for production structures. Northern countries have expanded their advantage in high-tech manufacturing, while Southern countries are constrained to lower-tech and non-tradable activities. Consequently, the international competitiveness of Southern economies has suffered, exacerbating the long-term divergence within the Eurozone.

The macroeconomic impact of the Covid-19 crisis is expected to be asymmetric within the Eurozone due to existing differences in production structures and vulnerabilities of different growth models. While both Northern and Southern Eurozone countries will witness declines in exports, the Southern Eurozone is particularly vulnerable in terms of services, especially in tourism-related sectors. Shifting preferences and travel restrictions have dealt a severe blow to these sectors, potentially accelerating macroeconomic divergence within the region.

Coordinated European policy interventions are crucial to prevent further economic polarization and address the structural challenges faced by Southern Eurozone countries. The European Central Bank has taken measures such as purchasing government bonds through the Pandemic Emergency Purchase Programme to maintain low interest rates and support monetary policy transmission. However, Southern countries cannot rely solely on cheap credit, given their legacy debt and structural polarization issues.

While short-term policy measures, such as temporary suspension of EU fiscal rules and loan assistance packages, provide some relief, addressing deeper problems requires long-term strategic considerations. Reorganizing global value chains and aligning European economies with planetary boundaries in the context of climate change are vital steps toward sustainable recovery. Integrating the Covid-19 response with the European Green Deal holds promise, but increased funding is necessary to achieve substantial progress.

Overall, looking at past pandemics, the trend inflation significantly declines below its initial level for over a decade. The size and impact of the epidemic is changing this period.

The Covid-19 pandemic will be the first in this regard among pandemics. An unprecedented amount of fiscal and monetary measures have been taken to mitigate the effects of the pandemic. Finding and applying the vaccine necessary to end the pandemic also prevented the effects of the Covid-19 pandemic from lasting longer. In the absence of all this, inflation and the general economic framework could have been worse both in the euro area and globally (Bonam & Smădu, 2021).

It is certain that this increase in inflation in the Eurozone will not be permanent even if it lasts for a long time, thanks to the fact that the Covid-19 pandemic has lost its effect and the restrictive measures have been almost completely removed, in addition to the prediction that the Russia-Ukraine war will end at some point.

4.2. Comparison of 2008 Crisis Inflation and Covid-19 Crisis Inflation

As in the 2008 crisis, inflation increased with the Covid-19 pandemic. Although inflation increased both in the euro area and around the world after the 2008 Crisis and the Covid-19 Pandemic, the reasons for the increase in inflation were different.

First, it is necessary to mention the differences and similar points of these two crises. Both the 2008 economic crisis and the Covid-19 economic crisis were significant events that had a profound impact on the global economy. However, there are differences and similarities between the two crises.

The first and most important difference is the reasons for the crises, while the 2008 crisis The 2008 crisis was primarily a financial crisis triggered by the collapse of major banks and the bursting of the housing bubble. It led to a severe recession, with a substantial decline in economic activity and employment. The Covid-19 crisis is a global health crisis that resulted in widespread lockdowns, travel restrictions, and business closures. It caused a sudden and unprecedented economic downturn, affecting multiple sectors simultaneously.

Timing and duration is different for this crisis. The 2008 crisis unfolded over a longer period of time, with the full impact on inflation being realized gradually. On the other hand, the Covid-19 crisis had a more immediate and sudden impact on inflation dynamics, as the global economy experienced a sharp contraction within a short period.

There are also differences in terms of policy response. The policy response to the two crises differed in nature and scope. In response to the 2008 crisis, and central banks implemented a range of policies, including lowering interest rates, injecting liquidity into the financial system, and implementing stimulus measures. In response to the Covid-19 crisis, and central banks implemented similar policies, but on a much scale, such as providing direct cash transfers to individuals and businesses, as well as increasing unemployment benefits and providing loan guarantees.

Another difference is financial system stability. The 2008 financial crisis had a impact on the financial system, with banks and financial institutions facing severe losses and liquidity problems. In contrast, the Covid-19 economic crisis did not have the same impact on the financial system, largely due to the lessons learned from the 2008 crisis and the stronger regulatory framework that was put in place since then.

These two crises have similar points. Both resulted in crises in significant economic impacts, including job losses, business closures, and a decrease in consumer spending. In addition, both crises resulted in significant volatility in the stock market, with sharp declines in stock prices.

There are also similarities in terms of Fiscal and Monetary Policies. In both cases, interest and central banks implemented fiscal and monetary policies to mitigate the economic impact of the crises, including rate cuts, liquidity injection, and stimulus measures (Dafflon & Madiès, 2013).

Considering the long-term expected effects of the crises, similar effects are expected, such as inflation. It is necessary to look at the similarities and differences in terms of inflation after the similarities and differences between the crises. As mentioned before, both the 2008 crisis and the Covid-19 crisis resulted in substantial disruptions to economic activity, leading to changes in the demand and supply of goods and services. During the 2008 crisis, many countries experienced a period of deflation due to a reduction in demand for goods and services. This was caused by a sharp decline in economic activity and a significant rise in unemployment rates. Likewise, the Covid-19 crisis resulted in a decrease in economic activity and caused widespread disruptions to supply chains. This led to a surge in request for certain goods and services, such as medical supplies and food products, resulting in inflationary pressures.

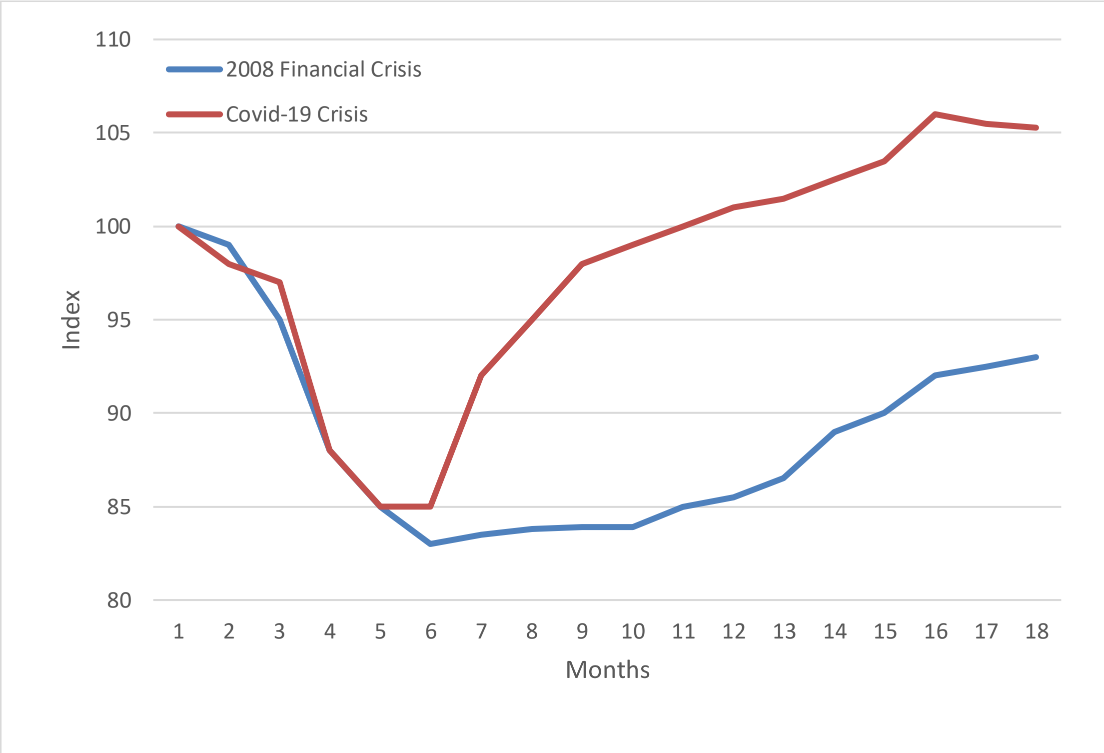
In addition these another similarity is the actions taken by central banks to mitigate the impacts of the crises on inflation. In both cases, central banks reduced interest rates and implemented quantitative easing policies to increased liquidity in the financial system. While these measures helped stabilize the economy, they also had the effect of keeping inflation rates low during the 2008 crisis and increased inflation rates during the Covid-19 crisis.

The primary difference between the inflation impacts of the two crises is the severity and duration of the inflationary period. During the 2008 crisis, the inflationary period was relatively short-lived, with inflation rates remaining low or reducing in many countries. This was because of the deflationary pressures caused by the sharp decline in economic activity, which offset any inflationary pressures resulting from central bank actions (OECD, 2023).

In contrast, the Covid-19 crisis led to a period of inflation in many countries. The outbreak disrupted global supply chains, causing shortages and higher prices for some goods, such as medical supplies, electronics, and food products. Additionally, with many there implementing stimulus packages to support businesses and households during the economic downturn, was a surge in government. This influx of money into the economy led to higher demands for goods and services, and with limited supply, prices rose.

Another factor adding to inflation during the Covid-19 crisis was the increase in money supply resulting from the central bank's actions. As in 2008, central banks have responded to the crisis by lowering interest rates and implementing quantitative easing policies to increase the money supply. However, the scale of the stimulus was much larger during the Covid-19 crisis, with many central banks creating huge amounts of new money to purchase government debt or other financial assets. This increase in the money supply led to higher inflation, as more money chasing the same amount of merchandise and services results in higher prices. When these are considered, the Covid-19 economic crisis may have greater effects than the 2008 economic crisis (Cheema et al., 2022).

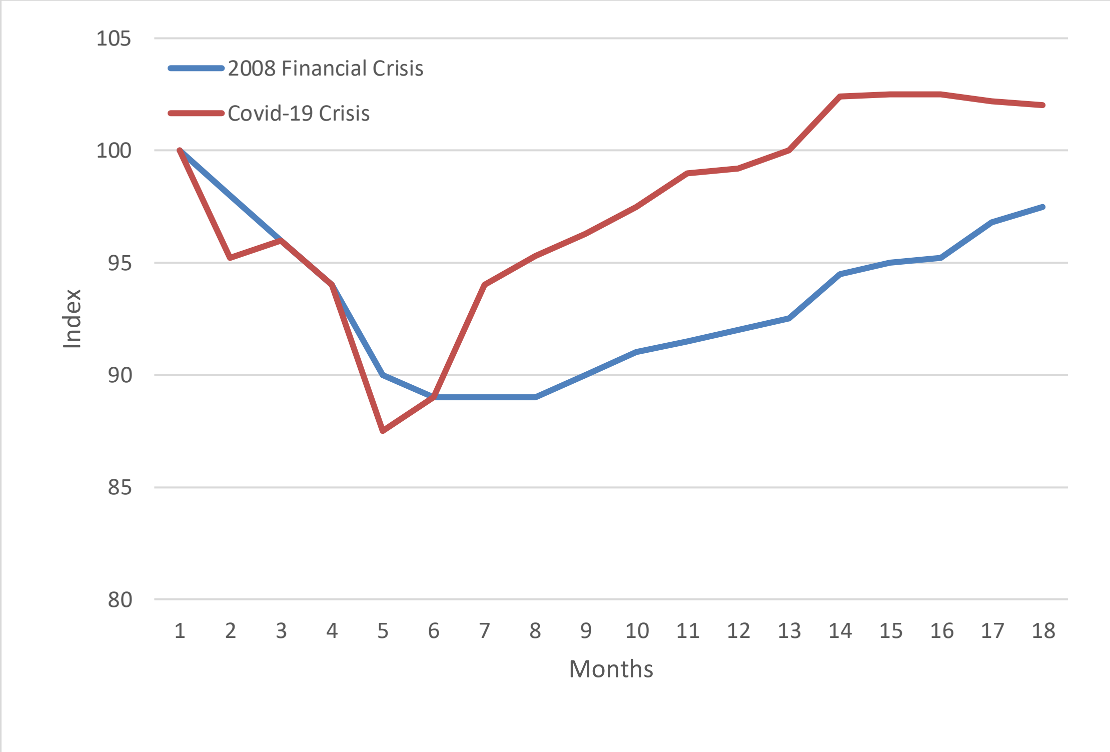
Figure 13: World Trade Comparison: Financial Crisis vs Covid-19 Crisis



Source: IMF(International Monetary Fund, n.d.)

Figure 13 shows the comparison of world trade in the 18 months after the 2008 crisis and the Covid-19 crisis. An example of how the effects of the Covid-19 crisis were overcome more quickly than the 2008 financial crisis can be seen here. While it took less than a year for world trade to recover after the Covid-19 crisis, world trade could not reach its pre-crisis level even after 18 months in the 2008 financial crisis.

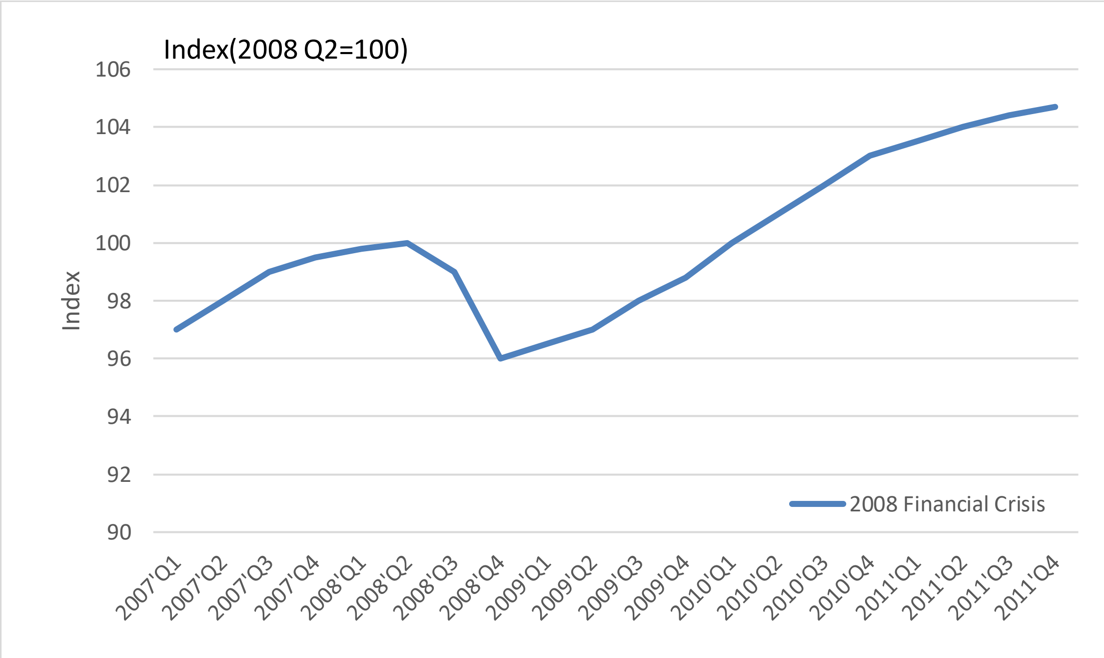
Figure 14: Global Industrial Output Comparison: Financial Crisis vs Covid-19 Crisis



Source: IMF (International Monetary Fund, n.d.)

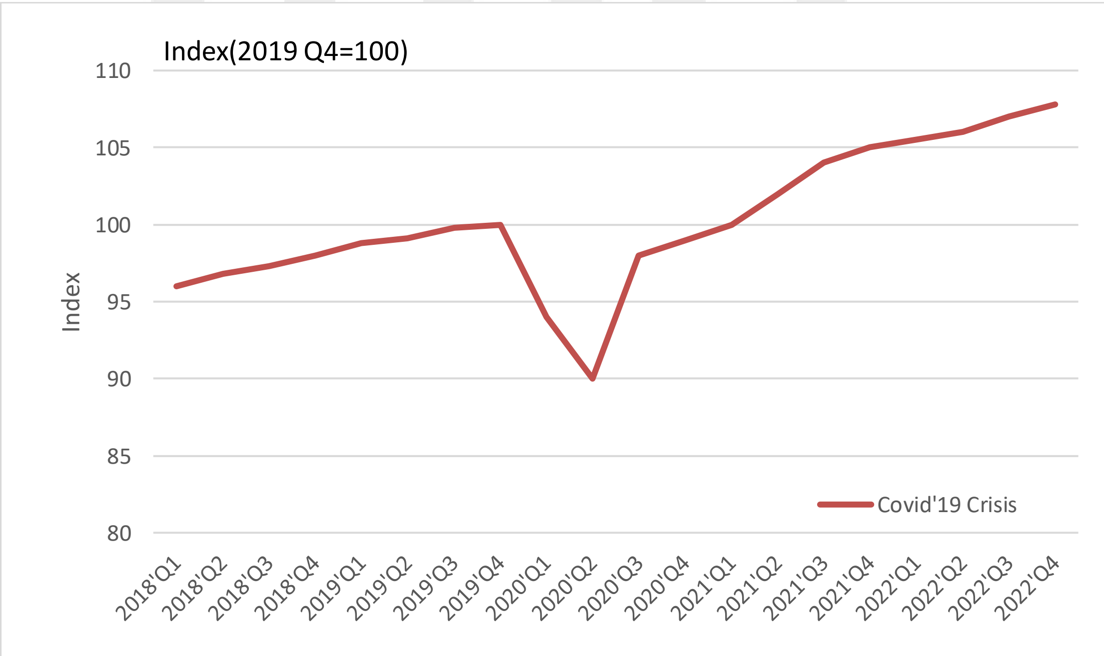
Figure 14 shows the comparison of global industrial output in the 18 months after the 2008 crisis and the Covid-19 crisis. With the Covid-19 crisis, global industrial output reached lower levels compared to the 2008 financial crisis, but quickly recovered and reached its pre-crisis status in approximately 1 year. In the 2008 financial crisis, even 1.5 years after the crisis, global industrial output could not reach its pre-crisis level.

Figure 15: Global GDP: 2008 Financial Crisis



Source: IMF (International Monetary Fund, n.d.)

Figure 16: Global GDP: Covid-19 Crisis

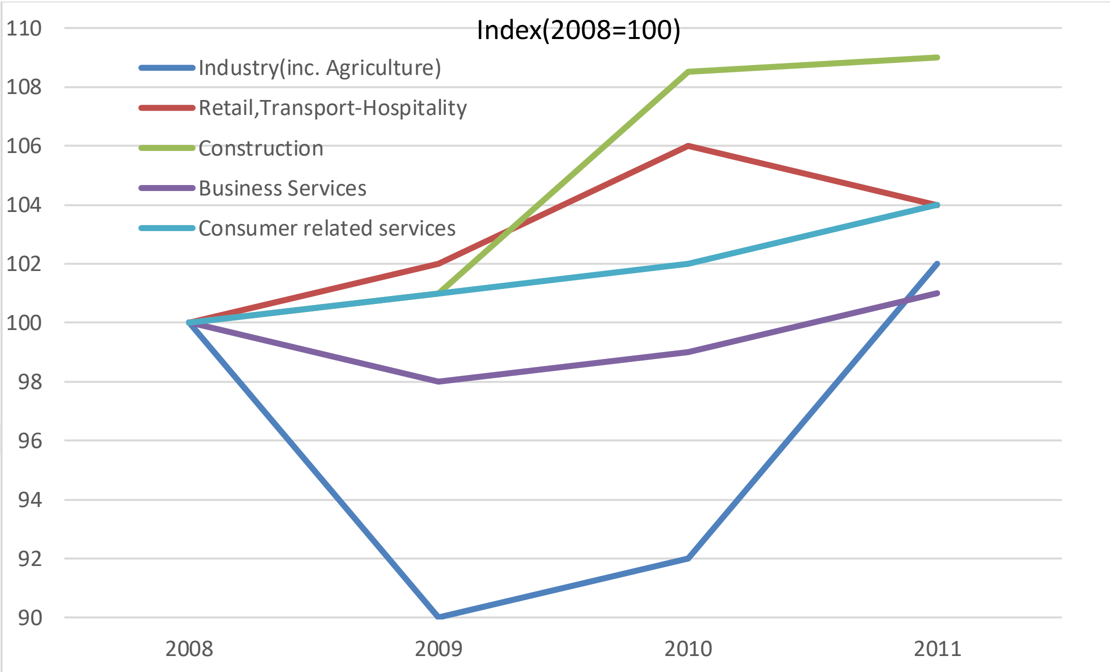


Source: IMF (International Monetary Fund, n.d.)

Figures 15 and 16 show the changes created by the two crises in Global GDP. In the covid-19 crisis, the global gdp experienced a sharper and more sudden decline compared to the 2008 financial crisis. However, the rise of Global GDP to pre-crisis levels was faster than the 2008 financial crisis. In the Covid-19 crisis, while the global

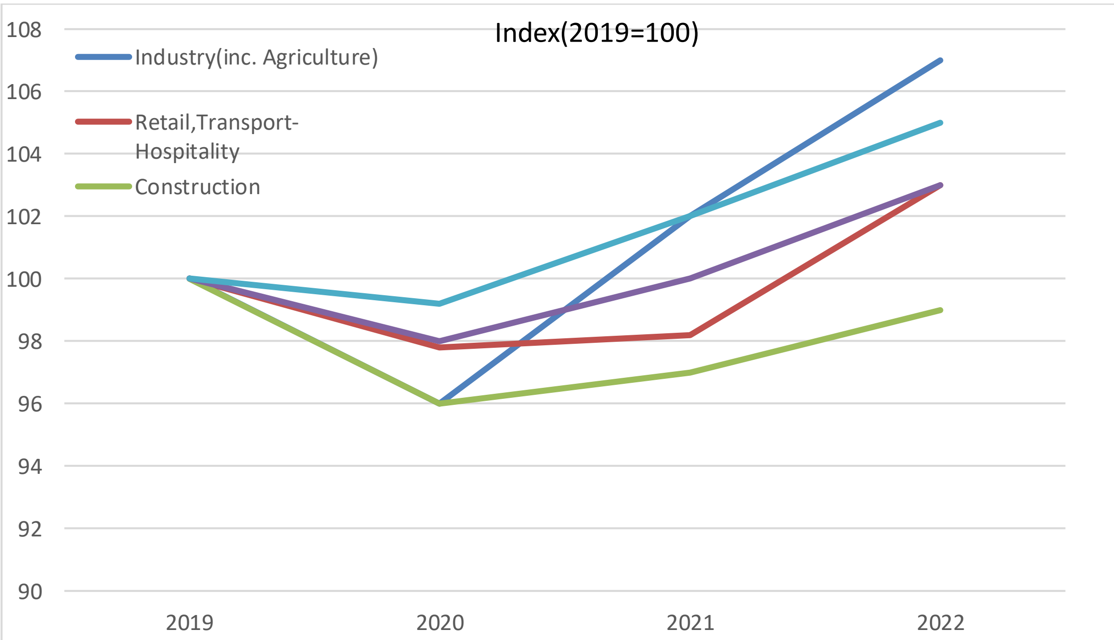
GDP rose to its former levels in about one year, it took approximately 1.5 years for the global GDP to reach its former levels in the 2008 financial crisis.

Figure 17: Sectoral Value Added Over Time: 2008 Financial Crisis



Source: SSEA, KOF (State Secretariat for Economic Affairs, 2023), (KOF Swiss Economic Institute, n.d.-b)

Figure 18: Sectoral Value Added Over Time: Covid-19 Crisis



Source: SSEA, KOF (State Secretariat for Economic Affairs, 2023), (KOF Swiss Economic Institute, n.d.-b)

When Figures 17 and 18 are examined, it will be seen how much the industry, retail, construction, business services and consumer related services sectors were affected by the 2008 financial crisis and the covid-19 crisis. During the financial crisis, the banking and construction industries were the first to be affected globally, leading to a decline in other sectors such as capital goods and consumer durables. However, in the Covid-19 pandemic, the financial and manufacturing sectors were not heavily impacted, but challenges arose due to supply bottlenecks and transportation issues. Sectors like personal services, events, accommodation, catering, and non-food retail suffered greatly during the pandemic, while online retailing and the pharmaceutical industry experienced growth. The industrial decline during the financial crisis was more significant than in the pandemic, and all sectors were initially affected during the COVID-19 crisis, unlike the financial crisis where retail, transport & hospitality, and consumer-related services did not collapse (KOF Swiss Economic Institute, n.d.-a).

Overall, while both the 2008 crisis and the Covid-19 crisis had significant impacts on the global economy and inflation rates, the two crises differed in their inflation outcomes. The 2008 crisis resulted in a period of deflation, while the Covid-19 crisis led to a period of inflation. These differences highlight the unique challenges and complexities that arise during economic crises and demonstrate the need for cautious policy responses to support the economy and manage inflation. The policy responses and long-term inflation outcomes of the Covid-19 crisis are still unfolding and require further analysis as the situation evolves.

5. CONCLUSION

In conclusion, the Eurozone's struggle with inflation has once again intensified, posing significant challenges for its member countries and the European Central Bank. This article has explored the reasons behind the recent worsening of inflation in the Eurozone and has presented potential solutions to address this issue.

To better understand the severity of the current inflationary challenges in the Eurozone, it is essential to consider the relationship between the 2008 economic crisis, the coronavirus pandemic, and Eurozone inflation.

The 2008 economic crisis, which originated in the United States, had profound repercussions globally. Irresponsible lending practices and a housing bubble led to a collapse of the subprime mortgage market, triggering a domino effect that affected financial institutions and credit markets. This crisis exposed vulnerabilities in the global financial system and highlighted the interconnectedness of economies around the world. Governments and central banks, including the U.S. Federal Reserve and the European Central Bank, responded with unprecedented measures to stabilize the financial system and revive economic growth.

The FED's response to the 2008 crisis included implementing extraordinary measures such as cutting interest rates to near zero, initiating quantitative easing programs, and providing liquidity support to financial institutions. These measures aimed to bolster lending, restore stability, and revive economic activity. Similarly, the ECB implemented monetary easing measures, including interest rate cuts, long-term refinancing operations, and asset purchase programs, to combat the negative effects of the crisis. However, the ECB faced additional challenges due to the diverse nature of the Eurozone economies and the absence of a unified fiscal response.

The emergence and spread of the coronavirus in recent years have further complicated the economic landscape. The pandemic has had a profound impact on the EU economy and the world at large. Governments implemented strict containment measures, leading to disruptions in production, supply chains, and reduced consumer demand.

This has resulted in a global recession and a decline in economic activity. The Eurozone, like other regions, experienced significant contractions in output, rising unemployment, and decreased consumer spending.

The impact of the COVID-19 pandemic on Eurozone inflation cannot be overlooked. The pandemic has disrupted global supply chains, leading to shortages of critical inputs and increased prices for goods and services. Governments and central banks responded with substantial fiscal stimulus measures, such as increased government spending and income support programs, and monetary easing policies, including low interest rates, liquidity injections, and asset purchase programs. These measures were crucial in preventing a deeper economic downturn and supporting businesses and households. However, they have also contributed to inflationary pressures, as the influx of money into the economy and supply chain disruptions drove up prices.

When comparing the inflationary consequences of the 2008 economic crisis and the COVID-19 crisis, it is important to note the differences in their origins and the measures taken in response. While the 2008 crisis was primarily driven by financial sector vulnerabilities and had a significant impact on the banking and housing sectors, the COVID-19 crisis resulted from a global health emergency and affected a broader range of industries. The responses to these crises by central banks and governments have also differed in their approach and magnitude. The COVID-19 crisis prompted unprecedented fiscal and monetary interventions on a global scale, reflecting the extraordinary nature of the situation.

Addressing Eurozone inflation requires a multifaceted approach that acknowledges the interconnectedness of these events. Resolving supply chain disruptions is crucial to ensure a steady flow of goods and services and to mitigate upward pressures on prices. This involves strengthening domestic and international supply chains, diversifying sources of critical inputs, and enhancing coordination among countries to address bottlenecks and vulnerabilities.

Recalibrating monetary policy is also essential to address inflationary pressures. Central banks, including the ECB, need to carefully assess the effectiveness and potential risks associated with their unconventional measures.

REFERENCES

Barlow, P., Ci Van Schalkwyk, M., Mckee, M., Labonté, R., & Stuckler, D. (2021). COVID-19 and the collapse of global trade: building an effective public health response. In *Viewpoint Lancet Planet Health*. www.thelancet.com/planetary-health

Bartmann, R. (2017). *Causes and effects of 2008 financial crisis*.

Bell, D. N. F., & Blanchfl, D. G. (2011). *Young People and the Great Recession*.

Benchimol, J., & Fourçans, A. (2017). MONEY and MONETARY POLICY in the EUROZONE: AN EMPIRICAL ANALYSIS during CRISES. *Macroeconomic Dynamics*, *21*(3), 677–707. https://doi.org/10.1017/S1365100515000644

Bernanke, B. S. (2015). *The Courage to Act: A Memoir of a Crisis and Its Aftermath*. W. W. Norton & Company.

Bonam, D., & Smădu, A. (2021). The long-run effects of pandemics on inflation: Will this time be different? *Economics Letters*, *208*. https://doi.org/10.1016/j.econlet.2021.110065

BRICKER, J., BUCKS, B., KENNICKELL, A., MACH, T., & MOORE, K. (2012). The Financial Crisis from the Family's Perspective: Evidence from the 2007-2009 SCF Panel *. *Journal of Consumer Affairs*, *46*(3), 537–555. https://doi.org/10.1111/j.1745-6606.2012.01243.x

Caramazza, F., Ricci, L., & Salgado, R. (2004). International financial contagion in currency crises. *Journal of International Money and Finance*, *23*(1), 51–70. https://doi.org/10.1016/j.jimonfin.2003.10.001

Cecchetti, S. G. (2009). Crisis and responses: The Federal reserve in the early stages of the financial crisis. In *Journal of Economic Perspectives* (Vol. 23, Issue 1, pp. 51–75). American Economic Association. https://doi.org/10.1257/jep.23.1.51

Cheema, M. A., Faff, R., & Szulczyk, K. R. (2022). The 2008 global financial crisis and COVID-19 pandemic: How safe are the safe haven assets? *International Review of Financial Analysis*, *83*. https://doi.org/10.1016/j.irfa.2022.102316

Chen, H.-C., Chou, R. K., & Lu, C.-L. (2018). Saving for a rainy day: Evidence from the 2000 dot-com crash and the 2008 credit crisis. *Journal of Corporate Finance*, *48*, 680–699. https://doi.org/10.1016/j.jcorpfin.2017.12.025

Committee For A Responsible Federal Budget. (2009). *Analysis of The American Recovery and Reinvestment Act*. https://www.pewtrusts.org/-/media/legacy/uploadedfiles/wwwpewtrustsorg/reports/fiscal_and_budget_policy/analysis20of20the20american20recovery20and20reinvestment20actpdf.pdf

Dafflon, B., & Madiès, T. (Eds.). (2013). *The Political Economy of Decentralization in Sub-Saharan Africa*.

Delice, G. (2002). *FİNANSAL KRİZLER: TEORİK VE TARİHSEL BİR PERSPEKTİF*.

Eğilmez, M. (2023, February 23). *Depremlerin Ekonomiye Etkisi*. https://www.mahfiegilmez.com/2023/02/depremlerin-ekonomiye-etkisi.html

European Central Bank. (2023a). *ECB/Eurosystem policy and exchange rates*. https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_area_statistics/html/index.en.html#monetary

European Central Bank. (2023b). *Targeted longer-term refinancing operations (TLTROs)*. https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html

European Union. (n.d.). *Facts and figures on the European Union economy*. Retrieved June 6, 2023, from https://european-union.europa.eu/principles-countries-history/key-facts-and-figures/economy_en

European Union. (2020). *The Impact of COVID-19 on the Economy: the Need for a Coordinated Policy Response*. https://www.ecb.europa.eu/pub/economic-bulletin/focus/2020/html/ecb.ebbox202002_01~c6350b4720.en.html

Eurostat. (2023). *Inflation in the euro area*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Inflation_in_the_euro_area

FDIC. (2023, March 1). *Failed Bank List*. https://www.fdic.gov/resources/resolutions/bank-failures/failed-bank-list/

Fetzer, T. (2020). Nationalism and Economy. *Nationalities Papers*, *48*(6), 963–973. https://doi.org/10.1017/nps.2019.123

Goldman, S., & Zhang, S. (2021). Monetary policy within a covid-19 environment: The role of central banks and the main challenges for the euro-zone1. *Economic Alternatives*, *2021*(2), 197–212. https://doi.org/10.37075/EA.2021.2.02

Gordan, A. (2020, March 26). *12 Commonly Asked Questions About Coronavirus*. https://www.healthworkscollective.com/12-commonly-asked-questions-about-coronavirus/amp/

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., Cheng, Z., Yu, T., Xia, J., Wei, Y., Wu, W., Xie, X., Yin, W., Li, H., Liu, M., … Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, *395*(10223), 497–506. https://doi.org/10.1016/S0140-6736(20)30183-5

International Energy Agency. (n.d.). *Global Energy Crisis*. Retrieved June 6, 2023, from https://www.iea.org/topics/global-energy-crisis

International Labour Organisation. (2021). *ILO Monitor: COVID-19 and the world of work. Seventh edition Updated estimates and analysis*. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_767028.pdf

International Monetary Fund. (n.d.). *IMF Data*. Retrieved April 2, 2023, from https://www.imf.org/en/Data

Kibritçioğlu, A. (2001). Türkiye'de Ekonomik Krizler ve Hükümetler, 1969-2001. *Yeni Türkiye Dergisi.*

KOF Swiss Economic Institute. (n.d.-a). *Comparing the coronavirus crisis and the financial crisis: eight differences and similarities*. Retrieved June 3, 2023, from https://kof.ethz.ch/en/news-and-events/kof-bulletin/kof-bulletin/2021/10/Comparing-the-coronavirus-crisis-and-the-financial-crisis-eight-differences-and-similarities.html

KOF Swiss Economic Institute. (n.d.-b). *KOF Working Papers*. Retrieved June 10, 2023, from https://kof.ethz.ch/en/publications/kof-working-papers.html

Lane, P. R. (2012). The European sovereign debt crisis. *Journal of Economic Perspectives*, *26*(3), 49–68. https://doi.org/10.1257/jep.26.3.49

Langdana, F. (2009). *Federal Reserve Policy from the Dot-Com Bubble to the Subprime Mess: A Story of Two ups and Two downs*.

Lipsky, J. (2008). *Commodity Prices and Global Inflation, Remarks by John Lipsky, First Deputy Managing Director, International Monetary Fund*. International Monetary Fund. https://www.imf.org/en/News/Articles/2015/09/28/04/53/sp050808

Macrotrends. (n.d.). *Federal Funds Rate*. Macrotrends. Retrieved March 22, 2023, from https://www.macrotrends.net/2015/fed-funds-rate-historical-chart

Maria Caporale, G., Infante, J., Gil-Alana, L. A., & Ayestaran, R. (2022). *Inflation Persistence in Europe: The Effects of the Covid-19 Pandemic and of the Russia-Ukraine War*. www.RePEc.org

Mishkin, F. (2018). *Financial Markets and Institutions* (7th ed.). Pearson.

Nölke, A. (2016). Economic causes of the Eurozone crisis: the analytical contribution of Comparative Capitalism. *Socio-Economic Review*, *14*(1), 141–161. https://doi.org/10.1093/ser/mwv031

OECD. (2021). *COVID-19: Protecting people and societies*. OECD. https://doi.org/10.1787/9870c393-en

OECD. (2023). *OECD Economic Outlook*. OECD. https://www.oecd-ilibrary.org/economics/oecd-economic-outlook_16097408

Sarıtaş, S. (2011). *Kriz Teorileri Doğrultusunda 2008 Krizinin Değerlendirilmesi* . Istanbul Üniversitesi .

Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Emergence, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, *24*, 91–98. https://doi.org/10.1016/j.jare.2020.03.005

State Secretariat for Economic Affairs. (2023). State Secretariat for Economic Affairs. https://www.seco.admin.ch/seco/en/home.html

Statista. (n.d.). *Euro (EUR) to U.S. dollar (USD) exchange rate from Jan 1999 - Jun 07, 2023*. Retrieved March 15, 2023, from https://www.statista.com/statistics/412794/euro-to-u-s-dollar-annual-average-exchange-rate/

Stavrakeva, V., Tang, J., Farhi, E., Giannone, D., Gopinath, G., Morris, S., Ozdagli, A., Pesenti, P., Reis, R., Rey, H., Rogoff, K., Swanson, E., & Weber, M. (n.d.). *The Dollar During the Global Recession: US Monetary Policy and the Exorbitant Duty*. http://www.bostonfed.org/economic/wp/index.htm.

Taylor, J. B. (2007). *HOUSING AND MONETARY POLICY*. http://www.nber.org/papers/w13682

Thomas, L. B. (2008). *Unconventional Monetary Policy Initiatives: 2008–2013.*

Thomas, L. B. (2011). The Financial Crisis and Federal Reserve Policy. In *The Federal Reserve's Response to the Great Crisis: 2007–2009* (pp. 169–170).

Tooze, A. (2020, March 18). *Is the Coronavirus Crash Worse Than the 2008 Financial Crisis?* https://foreignpolicy.com/2020/03/18/coronavirus-economic-crash-2008-financial-crisis-worse/

Trading Economics. (2023a). *Euro Area Energy Inflation*. https://tradingeconomics.com/euro-area/energy-inflation#:~:text=Energy%20Inflation%20in%20Euro%20area,for%20Euro%20Area%20Energy%20Inflation.

Trading Economics. (2023b). *Euro Area Food Inflation*. Trading Economics. https://tradingeconomics.com/euro-area/food-inflation

World Bank Group. (2023). *Global Economic Prospects*.

World Health Organization. (2023). *WHO Coronavirus (COVID-19) Dashboard*. https://covid19.who.int/

Worldbank Group. (n.d.). *Worldbank Data*. Retrieved March 3, 2023, from https://data.worldbank.org/

Yu, C. (2023). The Change in Inflation Expectation During and Post the Pandemic in European Region. *Highlights in Business, Economics and Management*, *11*, 236–240. https://doi.org/10.54097/hbem.v11i.8104

APPENDICES

Appx. 1.

European Union Countries	Eurozone Countries
Austria	Austria
Belgium	Belgium
Croatia	Croatia
Cyprus	Cyprus
Estonia	Estonia
Finland	Finland
France	France
Germany	Germany
Greece	Greece
Ireland	Ireland
Italy	Italy
Latvia	Latvia
Lithuania	Lithuania
Luxembourg	Luxembourg
Malta	Malta
Netherlands	Netherlands
Portugal	Portugal
Slovakia	Slovakia
Slovenia	Slovenia
Spain	Spain
Bulgaria	
Czech Republic	
Denmark	
Hungary	
Poland	
Romania	
Sweden	