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# Quantitative Easing Impact on the Global Economy

DOI: 10.15611/2023.36.9.01

JEL Classification: E58, F01

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**Quote as:** Małecki, J. (2023). Quantitative Easing Impact on the Global Economy. In A. Kuźmińska-Haberla, S. Bobowski (Eds.), *Ekonomia i międzynarodowe stosunki gospodarcze* (pp. 9-23). Wrocław University of Economic and Business.

**Abstract:** The article represents an attempt to evaluate the role of Quantitative Easing (QE) in the economy. The analysis of past events involving monetary policy serves as the basis for forming an opinion on the broader impact of QE on the economic and financial system. The substantive content, particularly the beginning, aims to provide an understanding of the monetary system and the fundamental actions undertaken by the central banks. The research component delves into the global financial crisis of 2007-2008 and the period of the coronavirus pandemic. Description of the decisions in monetary policy, which took place over more than a 15-year period, thoroughly covers the actions of three central banks: the Bank of Japan, the US Federal Reserve, and the European Central Bank. Statistical data, researcher opinions, academic papers, and press content are gathered to showcase implementation of specific intervention measures, what tendencies were observable and how they impacted the economy.

**Keywords:** quantitative easing, monetary policy, central banks, financial markets, crisis

## 1. Introduction

The research problem addressed in the following text focuses on modern monetary policy, specifically examining one of its instruments, which is Quantitative Easing (QE). The overall aim of the article is to evaluate the effectiveness of QE based on its past implementation. Throughout the paper, various periods of economic turbulence during which quantitative easing interventions were used are presented, primarily the 21<sup>st</sup> century Global Financial Crisis and the COVID-19 pandemic period. The responses of prominent central banks, including the Bank of Japan, the European Central Bank, and the United States Federal Reserve, are discussed chronologically, with a focus on the QE interventions introduced and implemented.

The research methodology involves the analysis of scientific and press articles, legal acts, statistical databases, and reports from both public institutions and private enterprises. Care has been taken to include the viewpoints of both sceptics and proponents of QE in order to present an objective assessment of this policy. By employing the principle of contrast, the advantages and disadvantages of QE are highlighted. It should be noted that while the analysis of literature forms the central part, other research methods, such as legal expertise and statistical studies, have also been indirectly employed.

## 2. Quantitative Easing Definition and Model Usage

Central banks all across the world have used unorthodox monetary policy tools to stabilize economies and promote growth in the wake of the most recent financial crisis and COVID-19 pandemic period. Quantitative easing has attracted a lot of attention and scrutiny as a strategy which was used extensively and played a crucial role during crisis interventions. In contrast to conventional monetary policy methods, quantitative easing entails the growth of a central bank's balance sheet by significant asset purchases, primarily of government bonds. Despite the fact that quantitative easing has been successful in reducing the negative consequences of financial crises, academics and policymakers continue to disagree about the QE's possible long-term effects on economic stability. This article seeks to offer a thorough examination of quantitative easing with a focus on how it affects the economy and how it could be used when counteracting sudden economic shocks. The paper aims to clarify the difficulties underlying quantitative easing and the wide-ranging effects it may have on the economic environment by examining the scholarly literature.

Quantitative easing is a type of unconventional monetary policy employed by central banks to expand the money supply and stimulate the economy. It entails the central bank purchasing government bonds as well as possibly other assets such as corporate bonds, mortgage-backed securities, asset-backed securities, commercial paper, ETFs or government-backed securities from commercial banks or other financial institutions in order to increase the economy's monetary resources (Joyce et al., 2012, pp. 274, 275). Central banks most often acquire a substantial volume of such assets to reduce long-term interest rates, increase lending and borrowing, encourage investment, and, eventually resulting from elements previously stated, foster economic growth (Bondarenko, 2022).

QE was first utilized in Japan in the early 2000s, and it gained popularity during the 2008-2009 global financial crisis (Matousek et al., 2019, pp. 2, 3). Since then, central banks in numerous nations have undertaken QE programs, including the United States, the United Kingdom, the Eurozone, and Japan. These schemes have included large-scale purchases to infuse money into the economy and stimulate economic activity. Lowering long-term interest rates is one of the primary processes

along with which QE is aimed to impact the economy. When the central bank purchases government bonds, it reduces the market supply of these assets causing their price to rise while decreasing their yield. As a result, other economic interest rates, such as those on mortgages and corporate bonds, decline. This makes borrowing money cheaper for businesses and households, potentially increasing investment, and consumption spending (Joyce et al., 2012, pp. 274, 275).

### **2.1. Model Usage of Quantitative Easing**

To sum up, the principle of quantitative easing functioning is to make massive asset acquisitions. The straightforward act of purchasing assets on the free market has the following positive effects on the economy:

- Central bank purchases assets as it can “print” money by adding bank reserves to its balance sheet, a process known as money creation. With quantitative easing, the central bank buys long-term Treasuries from big financial institutions on the open market (primary dealers).
- The economy receives fresh funding. Financial institutions now have extra money in their accounts as an outcome of these transactions, which they might keep, lend to people or businesses, or use to purchase other assets (European Parliament, 2020).
- The financial system becomes more liquid. Money is injected into the economy in an effort to avoid financial system issues like a credit crunch, which arise when loan options are reduced or borrowing requirements quickly rise. This guarantees that the financial markets run normally, and stability can be prolonged. Purchases being substantial enough, paired with a clear narrative of central bank’s involvement into the program causes market conditions to be perceived more positively by investors (Kapoor and Peia, 2020, pp. 2, 3).
- Interest rates continue to decrease. Bond prices rise due to the Central Bank’s increased demand, while yields decrease as a result of the massive purchases of Treasury bonds and other fixed income assets (bondholders earn less). Because borrowing money is less expensive when interest rates are low, more people and businesses are able to take loans to sustain or expand their economic existence, leading to the growth of the economy.
- Allocations of an investor’s assets fluctuate. Investors are more willing to invest in higher-returning securities and stocks – given the current lower returns on fixed – income securities. As a result, quantitative easing may result in greater gains for the stock market as a whole (Cruise, 2012).
- The economy is becoming more confident. Central bank ultimately reassures markets and the larger economy through QE. The likelihood that companies and individuals may borrow money, make stock market investments, hire more people, and spend more money is increasing, and with that, market sentiment is more positive.

## 2.2. The Drawbacks of QE

The use of QE has significant drawbacks, and not everyone in the economy will benefit equally from its effects. The following are some of the main risks.

### a. QE May Lead to Inflation

The possibility of inflation is the main threat posed by quantitative easing as the amount of currency being “newly put” into the monetary system heavily impacts its circulation. As a result of increased demand from consumers and businesses for the same number of resources the potential for price instability increases significantly. A decline in the purchasing power of money is highly probable. As there is more money in the non-changed system, the amount of goods cannot follow how immediate increase in money supply. Because of that the main complaint against QE is that it might result in extreme inflation (The Economist, 2021).

QE potential success revolves around causing economic acceleration by introducing liquidity extension programs. If such acceleration does not occur and the expanded money supply is not matched by an increase in economic activity it leads to inflation. Then, the elevated inflation can lead to reduced household purchasing power, resulting in a downward spiral of rising prices and diminishing real earnings (Blundell-Wignall, 2006, pp. 3, 4).

### b. QE Might Lead to Asset Bubbles

Some detractors contest the usefulness of QE, particularly in terms of boosting the economy and its uneven effects on various groups of people. Whether there is a crisis or not, quantitative easing may encourage the stock market to soar, and stock ownership is mostly focused among those that are already wealthy (Bondarenko, 2022).

The two main criticisms are that it might not function in the wanted way and that it is difficult to demonstrate above all doubt that it does step by step impact the economy the way it is designed to. Michael Winter, CEO of Leatherback Asset Management, observed that quantitative easing has been “very effective” in stabilizing and ultimately raising asset prices in both the fixed income and equities markets. When the market quickly recovers, as it did during the 2020 bear market the issue is when someone declares that artificial stabilisation should stop (Jackson and Curry, 2023).

This type of central bank’s approach, along with the decrease of interest rate stimulates speculative behaviour in the stock market that might result in bubbles. The euphoria can compound itself as long as the monetary governance sticks to its “money-printing” course. When market participants believe central banks have their back, there is less concern, which negatively impacts their decision-making.

**c. QE May Result in Income Inequality and Cause Uneven Distributional Effects**

One of the crucial risks from a social perspective is that QE may worsen income inequality due to its effects on both financial and real assets, such as real estate. As asset values increase, it helps those who do well. The central bank's limits are highlighted by the possibility of wealth inequality. The central bank employs banks as intermediaries to issue loans because it lacks the capacity to do so effectively when lending directly to customers. It is extremely difficult for the central bank to target the people and companies who are most negatively impacted by an economic disturbance and often the biggest entities benefit the most (Gnewuch, 2022, p. 15).

**d. Currency Depreciation**

When a country employs QE, the value of its currency may depreciate. This may result in lower export prices and higher import prices, which may benefit exporters but harm importers and consumers (Gnewuch, 2022, p. 19).

**e. Moral Hazard**

QE can cause moral hazard by promoting excessive risk-taking by financial institutions which may feel empowered to take on greater risk in the case of a crisis (Kurtzman et al., 2018, p. 22).

**f. Ineffectiveness**

QE may not be as effective as traditional monetary policy measures such as interest rate decreases in boosting economic development. This could lead to central banks depending more heavily on QE, perhaps amplifying its negative impacts (Fabo et al., 2021, p. 18).

**3. Bank of Japan and Onset of Quantitative Easing**

Japan is considered by many to be financial training ground for other monetary policymakers in the world. Over the past two decades the Bank of Japan, facing its own unique set of economic challenges, has worked hard to earn that status by introducing unconventional solutions (Choi and Lee, 2019). These include primarily the quantitative easing policy introduced in 2001. From March 2001 to March 2006, during the first unorthodox policy period, several measures were implemented, including the zero-interest rate policy (ZIRP), quantitative easing as well as announcements regarding the length of the policy, and credit-easing policy.

The Ministry of Finance (MOF) undertook a huge intervention policy which between the springs of 2003 and 2004 totalled around 35 trillion yen, with an implicit target rate of between 110 and 120 yen to the dollar. The goal for bank reserves was increased at the same time by 15 trillion. This could mean that the Ministry of Finance effectively executed a 15 trillion yen unsterilized intervention

strategy under the zero-interest rate regime (Kitamura and Ito, 2010). The decreasing trend in the value of the yen during the period of quantitative easing appeared to be supported by the intervention policy and monetary policy easing.

In terms of QE, bank reserves grew from 5 trillion yen to 32-35 trillion yen, with 18 trillion yen worth of government bonds purchased and the maturity of the bonds possessed changing over the time of the program. According to Shiratsuka (2010, p. 16), the idea of the BOJ bond regulation was aimed to prevent the easy monetization of budget deficits. Because the BOJ recognized that currency issue on the liability side is typically supported by long-term assets on the asset side, the unconventional policy measure was carried out in a conventional manner with meticulous care not to get involved with too much long-term debt assets.

The Ministry of Finance did not reimburse the BOJ for the cost of buying long-term bonds and other risky assets, a practice that contrasts sharply with latter TARP introduced in the US. This indicated that the BOJ was more cautious than other central banks about the effects of long-term government bond purchases. The entire assets of the BOJ surged by almost 42 trillion yen, and the asset to nominal GDP ratio jumped from 20% in 2001 to 30% in 2006 (Weisenthal, 2011). However, it should be recalled that the BOJ balance sheet had already begun to increase prior to the implementation of QE – since mid-1997, when the Asian Currency Crisis caused a monumental shock to the local financial system (Ashworth, 2020).

As part of the quantitative easing framework, a commitment was made about the policy's longevity. In October 2003, it was determined that the policy would be maintained until the core consumer price index displayed a stable rate of positive change and this decision established clear and precise parameters for exiting QE.

Additionally, the yen carry trade continued the negative trend throughout 2006 and 2007. Due to their superior position over Japanese banks on the global financial market, foreign banks were able to borrow yen-denominated funds at negative interest rates on the short-term money market. Foreign banks borrowed yen at commoditized low interest rates due to the BOJ's ongoing zero interest rate policy, engaging in carry trades through interoffice accounts. As stated by Hattori and Shin, this aided in financing the overall growth of hedge funds' and financial intermediaries' balance sheets in financial hubs (Hattori and Shin, 2009, pp. 56, 387).

#### **4. Genesis of 2007-2008 Financial Crisis and Fed and ECB's Response**

The financial crisis of 2008 was considered by many as the worst economic catastrophe since the Great Depression of 1929 (O'Brien, 2018). It happened in spite of the Federal Reserve's and the Treasury Department's late efforts, causing the Great Recession which saw a greater decline in house prices than during the period of Great Depression and spilled over economically to other continents becoming a worldwide phenomenon. The fact that the fourth biggest United States'

investment bank went bankrupt and unemployment in the USA was still above 9% two years after the recession ended are good indications of how severe the financial crisis was (FRED, 2023).

#### **4.1. Crisis's Root Causes**

Surprisingly, house prices started to decline in 2006 (U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2007, p. 3, 4, 15). Realtors first cheered because they believed the hot real estate market would eventually cool off to a more manageable level. They failed to consider a few vital facts, such as the massive amounts of mortgage loans accepted despite poor credit and underestimated the usage and size of financial leverage on securitized financial products. Many subprime mortgages were widely available to people with poor credit, often covered 100% or more of the home's value and involved in financial products likely to exhibit minimal risk. These mortgage contracts also included incredibly intricate payoff plans, often misunderstood by debtors, and depended heavily on future loan refinancing since creditors were convinced that real estate prices would rise.

The decrease in the general level of prices was a shock for many, worsening the already suboptimal position of many credit recipients. Some blamed the Community Reinvestment Act, which forced banks to fund subprime projects, and other financial markets liberalization acts such as the 1999 Gramm-Leach-Bliley Act. Its partial amendment of Glass-Steagall largely eliminated the distinction between investment banks and depository institutions in the United States expanding the depository banks' speculative activities (Bhutta and Ringo, 2015).

The financial system was deregulated to such an extent that it was difficult for supervisory bodies to control it. Lack of oversight, intervention, and guidance of public administration bodies over the financial institutions is also considered crucial in terms of the creation of the mortgage bubble. With acts permitting banks to invest in derivatives relating to housing and complex financial products being so profitable, combination of banks' greed and flawed surveillance led to global crisis. Banks were permitted to invest in derivatives using deposits under the previously mentioned Gramm-Leach-Bliley Act (Gramm-Leach-Bliley Act, 1999, pp. 47, 48). To safeguard their clients, they pledged to only invest in low-risk securities (Yeager, 2007). Banks broke this pledge as they pursued the lucrative derivatives market relied heavily on toxic subprime mortgages.

When banks realized they would have to bear the losses in 2007, they panicked and stopped lending to one another. Because they did not want other banks to provide them with worthless mortgages as security, interbank borrowing costs increased. Through the Term Auction Facility, the Federal Reserve started injecting liquidity into the banking sector, but it was not enough (Brunnermeier, 2009, pp. 87, 88). Ultimately, banks' deeds and the decline in real estate prices caused a snowball

effect of illiquidity which later led to domino-effect bankruptcies. The crisis was caused by strongly interconnection of the financial entities and their deep involvement in the housing derivatives.

#### **4.2 QE1, QE2, QE3**

The Federal Reserve launched several novel policy instruments during the 2008 financial crisis that had never been employed before. The primary catalyst for its action was the destabilization of credit markets following the decline of the subprime mortgage market, which started in August 2007. By December 2008, however, a second factor had entered the picture: the interest rate had, in fact, fallen to its zero lower bound, which meant that, despite the severity of the recession, there was no longer any room for the traditional course of action of lowering the rates. The new unconventional measures gave the Federal Reserve the one and only opportunity to stimulate the economy, in addition to controlling expectations about the funds rate's future trajectory.

Large-scale asset purchases (LSAPs) have been the most noticeable of the new policy measures because of their enormous influence on the size of the Federal Reserve's balance sheet. The Federal Reserve started what is now known as QE1 shortly after the collapse of the shadow banking system, that came as a result of the failure of Lehman Brothers in September 2008. Progressive purchases of a range of high-grade securities most notably included agency mortgage-backed securities (AMBS), agency debt, as well as long-term government bonds (Davidson, 2008) and were aimed to foster liquidity and confidence in the markets.

The Federal Reserve announced plans to buy \$100 billion in debt from GSEs and \$500 billion in debt on November 25, 2008, and then communicated fresh purchases of MBS for \$750 billion, \$100 billion in GSE debt, and \$300 billion in long-term Treasury securities on March 18, 2009. Growth of the Fed's holdings of MBS starting in November 2008 and long-term Treasury securities starting in March 2009 was tremendous as the size of the U.S. monetary base was almost doubled as a result of these acquisitions (Fawley and Neely, 2013, p. 60).

The Federal Reserve declared a second round of asset purchases (QE2) in October 2010. This round was narrower in scope than QE1 and was limited to long-term government bonds. Mid-August 2010 saw the initial announcement of QE2 which ran from November 2010 until June 2011 (Di Maggio et al., 2016, p. 10). It ran for an overall duration of 7 months (Federal Reserve Bank of New York, n.d.). The Fed declared that by March 2011, it would have purchased \$600 billion worth of Treasury bills, bonds, and notes. The Fed's portfolio of securities increased as a result, going from slightly over \$2 trillion in November 2010 to over \$2.6 trillion in June 2011 (Board of Governors of the Federal Reserve System, n.d.)

The Federal Reserve formally started on September 14, 2012. Its implementation was a calculated move meant to impact economic development and counteract



deflationary tendencies. The Federal Reserve's buying of long-term Treasury securities and mortgage-backed securities (MBS) served as the core of QE3's operational strategy, injecting liquidity into the financial system. QE3 had quantitatively significant consequences. By the time QE3 ended in October 2014, the Federal Reserve had acquired assets totalling over \$1.6 trillion through monthly purchases of \$40 billion in MBS and \$45 billion in long-term Treasury securities.

### **4.3. Targeted Longer-term Refinancing Operations (TLTROs)**

An intriguing example is the ECB's choice to launch the Securities Market program in May 2010 as administrations in the Eurozone's borders faced rising borrowing costs. The Maastricht Treaty's clauses, which expressly exclude the monetization of public debt, were cited by the proposal's opponents as crucial barriers against certain economic hazards. They also raised concerns that government bond purchases might lessen the need for immediate budgetary adjustments and the pressing urges of tackling underlying economic issues.

Before that, the ECB provided its first LTRO with a 6-month period in March 2008, where 177 banks placed bids. The ECB launched 12-month LTRO in June 2009, and it was concluded with over 1,100 bidders, showing a substantial increase in demand (González-Páramo, 2009). Its first 3-year tenure LTRO in December 2011 with 1% interest rate utilized the portfolios of the banks as collateral for the first time (Hartmann and Smets, 2018, pp. 50, 86). The ECB conducted LTRO2 and made low-interest loans totalling 529.5 billion euros available to 800 banks in the eurozone (European Central Bank, 2012, p. 37).

### **4.4. Lessons Learned from Global Financial Crisis**

There is abundant evidence that the QE helped to ease monetary policy conditions during the 2008 financial crisis period. The majority of research suggests that forward guidance and quantitative easing had a large overall impact on long-term government bond yields as those have decreased as a result of negative interest rates. Less is known about how unconventional monetary policy influenced inflation and output. The influence on macro variables may only be observed over longer lags and is therefore complicated by potential concurrent shocks, whereas the impacts on financial variables can be evaluated using complex indicators and traced more precisely. The above-mentioned strategies were implemented during the times of severe systemic, social, and economic distress which also had specific characteristics and made the examples presented unique. Despite the outlook that could be considered positive there was also a set of unknowns which, considering the volume of used monetary tools, could pose severe problems in the future.

There are two main issues that may arise with quantitative easing. The first one is the cause of rogue inflation and its potential detrimental effects on financial stability. If anything, the stimulative impacts of unconventional monetary policy on

asset prices and improvement in asset quality appear to have benefited banks. There were concerns that these institutions would take on excessive risk due to their “yield seeking” strategy if interest rates remained low for an extended period of time, but this does not seem to have happened in the time frame described. It is possible that worries about central bank independence were even more important. Political scrutiny has intensified as a result of central banks’ engagement during the crisis. This occurred in part as a result of the development of central bank balance sheets, which raised the risk of capital losses and possibly had a large budgetary impact. Furthermore, it is frequently believed that unconventional monetary policy has greater distributional consequences than conventional interest rate policy due to its impact on asset values and bank balance sheets. Finally, because this kind of unorthodox monetary policy is new and little understood, it may potentially attract more political attention. Question could be asked whether governments should still be able to change the objectives and tools of central banks as our knowledge of monetary policies and financial conditions advances.

Future unconventional monetary policy actions should be kept in the toolbox because they can offer vital relief when facing the zero lower limit of interest rate. However, unconventional monetary policy is not a cure-all, though, it has its limitations, even in the case of long maturities and volumes which seem monumental to the public eye. Designing policy measures that can support unorthodox monetary policies, such as fiscal stimulus, is therefore essential, but often overlooked as it requires tremendous political responsibility. The relation between the central bank’s purchase of securities and the success of quantitative easing is the first issue, as well as closer inspection of what could be considered as a perfect QE triumph. The second concern is whether acquisitions by central banks should be restricted to particular asset classes and what the dangers of extending those restrictions may be.

## **5. Central Banks Responses to Pandemic and Threats Related to Recent QE**

After the 2008 financial crisis turmoil it took a long time for the economy to return to its previous levels. The recovery took different paths for the regions described, but eventually the macroeconomic marks returned to the levels observed previously and some other indicators like the price of stock indices started to grow, reaching new heights. Before the pandemic, the stock market performed exceptionally well. Indices like Dow Jones or S&P 500 had hit historic highs, while others like Nikkei 225 or FTSE 100 were equalling or getting close to them (Google Finance, 2023). Thoughts of overvalued assets and impending market corrections occurred, but the situation’s outlook was relatively positive.

It is important to point out that all the countries mentioned before faced their own set of challenges and problems but in comparison to the 2008 financial crisis

those were merely minor obstacles. Trade and manufacturing activity have been declining, especially in nations that were strongly dependent on international supply networks as international trade flows had been impacted by trade disputes and the reemergence of protectionist policies. Supposed division between political power and monetary policy governance has been questioned. The Great Recession redefined this assumption and with that a potentially dangerous exception occurred. A potential scenario in which modern monetary policy, especially quantitative easing, can counteract public sector supervision mishaps by providing substantial amounts of liquidity to the markets. Even though political scene can be divided into sides which are more or less open to the idea of intervention in economy, financial crisis of 2008 was an event substantial enough to induce solidarity within the political scene and allow quick reaction to the occurrences observed.

### **5.1. Economic Situation Proceeding Covid-19 and the Pandemic Outbreak**

As the first half of the second decade of the 21st century got off to an unsteady start, the second one could be considered relatively peaceful with a general production increase. Prior to the year 2020, there had been a slowdown in said growth, but the general outlook remained positive (Gopinath, 2019). Global commerce and investment have declined as a result of geopolitical unrest and trade conflicts between major economies like the United States and China.

That reality of comparable order eventually was once again crashed, this time by the global issue which was even less predictable than the 2008 mortgage bubble implosion. The first half of 2020 saw a highly unique, debatably unprecedented before pandemic of highly contagious virus. Despite the fact that Nassim Talib disregarded COVID-19 global pandemic as an event which could be classified under the term of a Black Swan some of the features of this event are consistent with its characteristics (Avishai, 2020; Drake, 2021).

Even though pandemics have occurred in the past, the one observed at the beginning of the third decade of the 21<sup>st</sup> century had monumental impact on a deeply globalized economy. Dynamic streams of products and services were abruptly halted by national lockdowns uncoordinated on a wider scale. Probably never before could it have been observed how fragile international cooperation was.

In the situation of sudden danger countries turned themselves into lonely isles of temporal laws and regulations to fight off negative impact that virus had on societal health. Many nations imposed tight lockdown measures, which involved closing down companies and limiting movement, to stop the virus's spread. As a result, economic activity in many industries, including manufacturing, retail, hospitality, and transportation, abruptly stopped. Because of this, many companies were compelled to close permanently, which resulted in large job losses and decreased consumer spending. Global supply chains were disrupted by the epidemic as quarantine measures had to be implemented. Due to the shortages of necessary

products and components, firms had to delay production and incur higher costs. Automotive and electronic industries, which rely largely on international commerce, were hit particularly hard. Those two events led to job losses and rising unemployment. Businesses that encountered financial difficulties were forced to reduce staff or close, which increased unemployment rates. Consumer purchasing and overall economic growth were negatively influenced by the financial problems and struggles that many people and households faced in order to meet their fundamental needs. Global trade and international relations were also heavily impacted. Due to export limitations and domestic needs taking precedence, the pandemic impacted international relations and global trade. Supply chain disruptions and falling demand have further impacted international trade, which resulted in a reduction in cross-border trade. The epidemic also strained relations internationally, leading to travel prohibitions and trade disputes over the availability of vaccines and medical supplies.

## 5.2. Global Financial Crisis and COVID-19 QE

The main difference between QE used after the 2008 financial crisis and after the COVID-19 pandemic outbreak was the fact that central banks were reacting in the anticipation of potential future turmoil, not those that had already occurred. Of course, it is beyond argument that the economy was threatened by a sudden standstill, without a time horizon for ending the lockdowns, the situation was difficult, but in hindsight it was not as dramatic as in 2008. Markets were comparably liquid and the threat of institutions going bankrupt because of possession of highly toxic assets was non-existent. Another characteristic feature of the pandemic reality was the simultaneous shocks on the supply and demand sides. As a result, budgetary responses to alleviate the immediate consequences of shocks were critical (Dăianu et al., 2022, p. 6).

When comparing both applications of unconventional monetary policy it is also important to ascertain the importance of co-existing determinants. The 2008 financial crisis was a highly specific event with its own set of characteristics which impacted many outcomes, and yet other unrelated conditions might have influenced the macroeconomic indicators making the assessment of QE efficiency solely based on large-scale statistical data incredibly difficult, if not impossible. Thus, the analysis should be conducted with rigor and concentration on said interconnectivity. Data relating to Coronavirus pandemic is even more entangled by important geopolitical events as on 24<sup>th</sup> of February 2022 Russian Federation invaded Ukraine. This act of aggression, evident violation of international standards and breach of peace along with sole brutality of war send shockwaves across Europe. With costs of energy rapidly raising (as Russia was the biggest energy resource supplier) it caused its own set of effects and it is impossible to distinguish what impact the war had on the observable situation between February of 2022 and May of 2023 and what part of it was an effect of QE policies introduced since 2020.

## 6. Conclusions

The presentation of the mentioned strategies allows a reader to evaluate in detail described interventions and analyze whether the cases presented were successful and effective. By considering a long-time intersection that includes both the 2008 financial crisis and the more recent COVID-19 pandemic, the study provides a contrasting perspective and a broad view over QE usage. This allows for a closer examination of the clear tendencies in monetary policy worldwide and the observed differences over time. It is important to note that while some results are well known and have been studied, the more recent set of circumstances reflects how the strategies have changed over time. It is natural that events from a more distant past may be viewed differently over time, and the same applies to recent events, whose initial significance may quickly fade. The article emphasizes that monetary policy studies should not be standardized solely by simple statistical measures of economic indicators but should also take into account historical perspective and social context.

Despite the amount of research carried out, it could be difficult to conclusively prove the potential effectiveness of quantitative easing in general. The global financial crisis as well as COVID-19 period presented such specific circumstances that considering it a golden formula or conclusive evidence that QE works would be misleading. However, it is worth noting that QE improved the contemporary situation with limited downside risks, and policymakers had successes in their attempts to impact economic reality during the Global Finance Crisis. When it comes to the pandemic period such a conclusion is not as obvious, but it became abundantly clear how powerful this type of intervention might be. Not only because of its effectiveness and success, but also because of the lack of similarly effective intervention methods, it seems likely that quantitative easing will remain. The focus of the researchers in such scenario should not only be on establishing what have been the recent strategies results but also, with the highest regard to objectiveness and fairness, what could be the potential improvements and solutions whose implementation would help to realize QE strategies.

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## Wpływ luzowania ilościowego na globalną gospodarkę

**Streszczenie:** artykuł stanowi swoistą próbę oceny roli luzowania ilościowego (QE) w gospodarce. Analiza wydarzeń z przeszłości związanych z polityką pieniężną jest podstawą do sformułowania opinii na temat szerszego wpływu QE na system gospodarczo-finansowy. Treść merytoryczna, zwłaszcza wstępna, ma na celu przybliżenie zrozumienia systemu monetarnego i fundamentalnych działań banków centralnych. Komponent badawczy zagłębia się w światowy kryzys finansowy końca pierwszej dekady XXI w. oraz w okres pandemii koronawirusa. Te historyczne wydarzenia wpłynęły na decyzje w polityce pieniężnej, której analiza obejmuje działania trzech banków centralnych: Banku Centralnego Japonii, Rezerwy Federalnej USA i Europejskiego Banku Centralnego. Gromadzone są dane statystyczne, opinie badaczy, artykuły naukowe i treści prasowe w celu oceny wdrażania konkretnych działań interwencyjnych i ich wpływu na gospodarkę.

**Słowa kluczowe:** luzowanie ilościowe, polityka pieniężna, banki centralne, rynki finansowe, kryzys