

Comparison of Quantitative Easing: Analyzing the Paths and Effectiveness in the US and the UK after 2008 Economic Crisis

Yukai Jin^{1,a,*}

¹University of Glasgow, Glasgow, United Kingdom, G128QQ

a. jinyukai0720@gmail.com

**corresponding author*

Abstract: The financial crisis of 2008 precipitated unprecedented challenges for the global economy, necessitating innovative responses from central banks. This study compares the quantitative easing (QE) policies adopted by the Federal Reserve of the United States and the Bank of England in the United Kingdom in response to the 2008 financial crisis. Utilizing a comparative analytical framework, the research delves into the strategies, execution, and economic impacts of these policies. The findings reveal that while both countries aimed to mitigate the crisis's negative effects, their QE implementations differed due to distinct financial market structures and targeted objectives. In the U.S., QE successfully reduced unemployment rates and stabilized the housing market, whereas in the UK, it primarily prevented deflation and had a more modest impact on employment. The study concludes that while QE was instrumental in stabilizing the economies of both countries, it also highlights the complexities and controversies surrounding such policies, including their potential impact on wealth inequality and financial market integrity. This comparative analysis provides valuable insights into the effectiveness and nuances of QE policies in different economic contexts.

Keywords: Quantitative Easing, QE, 2008 Economic Crisis, UK economy, US economy

1. Introduction

The 2008 financial crisis exposed critical vulnerabilities within the economic frameworks of developed nations, prompting central banks to employ unconventional monetary policy instruments. While extensive research has been conducted on the impacts of QE, there is a noticeable gap in comprehensive comparative analyses that dissect the varying degrees of success achieved by different economies, particularly the U.S. Federal Reserve and the Bank of England. For instance, Joyce, Tong, and Woods provide a detailed examination of the UK's QE policy, its design, operation, and impact, offering a foundational understanding of the UK's approach to QE [1]. On the other hand, Krishnamurthy and Vissing-Jorgensen discuss the channels through which QE influences interest rates and policy implications, which can be applied to understand the U.S. context [2]. This paper delves into the differing QE strategies undertaken by these entities, their implementation, and consequent impacts on the national and global economies.

The objective of this research is to address specific inquiries about the relative efficacy of Quantitative Easing (QE) in the United States and the United Kingdom. Furthermore, it aims to explore the transmission mechanisms through which QE influenced economic variables, such as inflation and unemployment, and to assess the broader implications of such policies. Methodologically speaking, this study employs a comparative analysis, leveraging economic data, policy statements, and existing literature to evaluate the outcomes and challenges associated with QE policies. By doing so, it aims to contribute to the academic discourse on monetary policy and its role in economic stabilization.

The significance of this study extends beyond academic boundaries and holds immense practical relevance for informing future monetary policy decisions. Particularly, it sheds light on crisis management, economic stabilization, and growth, areas where Quantitative Easing (QE) has been a pivotal tool. By delving into the nuances of QE's effectiveness, this research contributes to the ongoing academic debate, offering insights that can inform policymakers' decisions. It also identifies potential areas for improvement and examines the implications of QE for anticipating and responding to future economic challenges. Given the uncertain economic landscapes nations currently navigate, understanding the precise impacts of QE is of utmost importance for policymakers, economists, and the global financial community. By providing a comprehensive analysis of QE's impact in the United States and the United Kingdom, this study aims to enhance the knowledge base and facilitate informed decision-making in the realm of monetary policy.

2. Theoretical Basis and Implementation Purpose of Quantitative Easing Policy

2.1. The Role and Mechanisms of Quantitative Easing in Addressing the 2008 Financial Crisis

Quantitative easing (QE) is a monetary policy instrument central banks use to stimulate the economy when traditional monetary policy becomes ineffective. Central banks implement QE by purchasing predetermined amounts of government bonds or other financial assets from the market to increase the money supply, decrease interest rates, and encourage lending and investment. This policy was notably employed in response to the 2008 financial crisis, aiming to provide liquidity and stabilize financial markets [1].

The adoption of QE during the crisis was driven by the ineffectiveness of conventional monetary policies. By purchasing long-term securities, central banks in the United States and the United Kingdom aimed to lower long-term interest rates and stimulate economic activities. While QE succeeded in inflating central bank balance sheets and lowering interest rates, its effectiveness in boosting real economic activity, such as output and inflation, has been a subject of debate [2,3].

2.2. The Different Strategies Adopted by the US and the UK in Asset Purchases

2.2.1. Asset purchase strategy in the United States

The quantitative easing policy implemented by the U.S. Federal Reserve System (Fed) consists mainly of the purchase of the following types of assets [4]:

Treasury securities, also referred to as Treasuries, are the most prevalent type of asset employed by the Federal Reserve (Fed) in its monetary policy. By purchasing Treasuries, the Fed aims to directly influence the long-term interest rates, thereby encouraging investment and consumption. This action effectively lowers borrowing costs for individuals and businesses, stimulating economic activity.

Moreover, Treasury purchases serve to enhance liquidity within the banking system. This increased liquidity not only ensures the smooth functioning of financial markets but also prompts

investors to seek out riskier assets, a phenomenon referred to as the "portfolio balancing effect." This effect is significant as it encourages capital allocation toward more productive sectors of the economy, thereby promoting overall economic growth. In essence, Treasury purchases by the Fed are a strategic tool to promote stability, liquidity, and growth within the financial system.

Mortgage-Backed Securities (MBS):

After the 2008 financial crisis, instability in the housing market was one of the main problems facing the US economy. By purchasing MBS, the Fed aimed to provide market liquidity to support the real estate market and lower interest rates on home mortgages.

MBS purchases not only helped stabilise the real estate market, but also indirectly stimulated consumption and investment in home construction.

These initiatives reflect the Fed's dual objectives: stabilising the financial market and promoting employment by stimulating economic activity.

2.2.2. Asset Purchase Strategy of the United Kingdom

The quantitative easing policy of the Bank of England (Bank of England) is mainly focused on the purchase of government bonds, i.e. Gilts [1]:

Government Bonds (Gilts):

The purchase of Gilts is the centrepiece of the UK's quantitative easing policy. By purchasing these government bonds, the Bank of England aimed to directly influence long-term interest rates, thereby lowering the cost of borrowing for businesses and individuals.

This strategy is thought to directly influence market interest rates and promote economic growth by stimulating investment and consumption.

In contrast to the US, the UK has concentrated more on buying government bonds in its quantitative easing policy and has not extensively covered other types of assets. This reflects the Bank of England's policy focus and consideration of the structure of financial markets.

2.2.3. Contrasting Policy Goals of the US and the UK

In the United States, the primary objective of QE policy was to stabilize and revitalize the financial markets, severely impacted by the mortgage crisis. The Federal Reserve focused on purchasing a substantial amount of mortgage-backed securities (MBS), effectively reducing mortgage spreads during the QE1 and QE3 periods [4]. This approach indicates that the US QE policy was heavily centered on the housing market, aiming to mitigate the crisis's impact on this sector.

Conversely, the UK's QE policy, implemented by the Bank of England, involved large-scale asset purchases. Unlike the US, where the focus was more on the housing market, the UK's approach was more encompassing, aiming to stabilize the financial sector at large. However, research conducted by Professor Chris Martin at the University of Bath and Professor Costas Milas at the University of Liverpool suggests that while there was a limited gain for the financial sector in the UK due to QE, its impact on output, employment, and inflation was not significantly positive [5].

Additionally, the international consequences of the Fed's unconventional measures illustrate a broader impact on global financial conditions, affecting both emerging and advanced economies. This global influence highlights the US's central role in the global financial system and the extensive impacts of its monetary policies [4].

3. The US and the UK, the Path and Impact of Quantitative Easing

3.1. Brief Description of the US Path

The Federal Reserve began its quantitative easing (QE) program in response to the financial crisis of 2008, marking a significant shift in monetary policy aimed at stabilizing and then reviving the U.S. economy. The initial phase, known as QE1, was announced on November 25, 2008. This phase involved the purchase of up to \$100 billion in direct obligations from government-sponsored enterprises (GSEs) like Fannie Mae and Freddie Mac, as well as up to \$500 billion in mortgage-backed securities (MBS). The program expanded in March 2009, ultimately resulting in the Fed purchasing \$1.25 trillion in MBS, \$175 billion in federal agency debt, and \$300 billion in U.S. Treasury securities by the end of the first round of QE in March 2010 [6].

Following the initial phase, the Federal Open Market Committee (FOMC) initiated a second round of quantitative easing (QE2) in November 2010, which involved purchasing an additional \$600 billion in long-term Treasury securities. A third round (QE3) was announced in September 2012, which included monthly purchases of \$40 billion in agency MBS and, starting in January 2013, \$45 billion in U.S. Treasury securities. These actions were unprecedented in scale and scope, aimed at lowering interest rates and increasing liquidity in the financial system to spur economic activity [6].

3.2. Brief Description of the UK Path

In response to the Global Financial Crisis, the Bank of England (BoE) embarked on a Quantitative Easing (QE) program in March 2009. The primary objectives of this monetary policy initiative were to reduce long-term borrowing costs, stimulate spending, and maintain its inflation target of 2%. To achieve these goals, the BoE purchased a total of £895 billion worth of bonds, predominantly UK government bonds amounting to £875 billion, along with a smaller portion of UK corporate bonds totaling £20 billion [7]. This monetary policy tool effectively increased the money supply digitally by utilizing central bank reserves for bond purchases. This action had a significant impact on long-term interest rates, driving them down and stimulating economic activity. Through QE, the BoE aimed to inject liquidity into the financial system, support asset prices, and encourage banks to lend more, ultimately aiming to promote economic recovery and stability.

3.3. Impact of QE on Inflation and Unemployment in the United States

3.3.1. Inflation Rate Impact

Post-QE implementation, the United States observed a moderate increase in inflation rates, aligning with the Federal Reserve's long-term target. Initially, QE was expected to lead to high inflation due to the significant expansion of the monetary base. However, the velocity of money remained low, as banks held onto reserves instead of lending them out aggressively. This phenomenon helped contain inflationary pressures despite the massive liquidity injected into the economy. Over the years following the QE programs, the U.S. inflation rate gradually moved towards the Federal Reserve's target of 2%, indicating that, in the context of a major economic downturn, QE did not trigger runaway inflation as some had feared [8].

3.3.2. Unemployment Rate Impact

The impact of QE on the U.S. unemployment rate was more direct and pronounced. The Federal Reserve's aggressive asset purchase programs aimed to stimulate economic activity by lowering long-term interest rates and encouraging investment and consumption. These measures contributed to a gradual recovery in the labor market. Following the financial crisis, the U.S. unemployment rate

peaked at 10% in October 2009. As the QE programs took effect, fostering economic growth, unemployment began to decline, reaching 4.6% by the end of 2016 [9]. This decline in unemployment was a testament to the effectiveness of QE in stimulating economic recovery and job creation.

3.4. Impact of QE on Inflation and Unemployment in the United Kingdom

3.4.1. Inflation Rate Impact

In the UK, the Bank of England's QE efforts also aimed at preventing deflation and stabilizing inflation around its target of 2%. The UK's inflation rate experienced fluctuations following the implementation of QE, with periods of inflation exceeding the target rate. This was partly due to the transmission mechanisms of QE in the UK, where the increased money supply had a more pronounced effect on prices [10]. Additionally, external factors such as commodity prices and exchange rate movements also influenced inflation rates. Despite these fluctuations, QE helped the UK avoid deflationary spirals and maintain inflation within a manageable range.

3.4.2. Unemployment Rate Impact

The impact of QE on the UK's unemployment rate was similar to that in the U.S., contributing to a gradual reduction in unemployment following the financial crisis. The Bank of England's asset purchases, primarily government bonds, aimed to lower borrowing costs and stimulate economic activity. Although the UK's labor market recovery was initially slower than in the U.S., unemployment rates began to decrease steadily from a peak of 8.5% in 2011 to around 4.8% by the end of 2016 [11]. This decline in unemployment, although influenced by various factors, including fiscal policy measures and structural reforms, was supported by the accommodative monetary conditions created by QE.

4. Divergences in QE Implementation: Causes and Implications

4.1. Market Structure and Crisis Response

The distinct financial market structures and crisis responses between the US and the UK significantly influenced their QE strategies. In the US, the financial market's breadth and diversity allowed for a broader range of asset purchases. This diversity is a reflection of the US's larger economy and its sophisticated financial markets that include a wide variety of asset classes beyond government bonds. The emphasis on purchasing mortgage-backed securities (MBS) was a targeted response to the acute distress in the housing market, which was at the crisis's epicenter. This approach was intended to directly support the housing sector, which had seen a dramatic decline in values and was a significant factor in the financial system's instability.

Conversely, the UK's financial market, while sophisticated, is relatively more concentrated around the government bond market. This centralization made the purchase of government bonds, or Gilts, a more straightforward choice for the Bank of England. The focus on Gilts was aimed at influencing long-term interest rates more directly, thereby affecting borrowing costs across the economy. This strategy reflects the Bank of England's priority to stabilize and stimulate the economy by making borrowing cheaper for businesses and consumers, without the same direct focus on a specific sector like the US's housing market.

4.2. Transmission Mechanisms and Economic Impact

The differences in QE strategies between the US and the UK have implications for their transmission mechanisms and the subsequent impact on their economies:

United States: The Federal Reserve's purchase of a wide array of assets, especially MBS, directly targeted the revitalization of the housing market. By providing liquidity and stabilizing this sector, the Fed aimed to foster a broader economic recovery through the wealth effect and by encouraging spending and investment. The direct intervention in the housing market also helped to restore confidence in financial markets and institutions closely tied to real estate. This multifaceted approach helped lower unemployment rates effectively and contributed to a gradual increase in inflation towards the target rate, albeit with varying success over time.

United Kingdom: The Bank of England's strategy, by concentrating on government bonds, aimed to lower long-term interest rates more uniformly across the economy. This broad-based approach was intended to reduce the cost of borrowing more directly for a wide range of economic actors, from businesses to households, thereby stimulating investment and consumption. While this strategy also contributed to reducing unemployment and managing inflation levels, its effects were mediated through a broader, more diffuse set of economic channels compared to the direct sectoral support seen in the US.

4.3. Economic Conditions, Financial Market Structures, and Policy Objectives

The divergent strategies of the US and the UK in implementing QE reflect their respective economic conditions, financial market structures, and policy objectives. The US's targeted approach to supporting the housing market through MBS purchases addressed the immediate crisis point and leveraged the diverse financial market to stimulate recovery. In contrast, the UK's focus on government bonds aimed to achieve economic stimulation through broader monetary channels, consistent with its more centralized market structure.

These strategic differences underscore the importance of tailoring monetary policy tools like QE to each country's unique economic landscape and policy goals. While both the US and the UK sought to stabilize their economies and promote recovery, their distinct approaches to QE reflect a nuanced understanding of their specific challenges and opportunities.

In conclusion, the comparative analysis of QE's implementation and outcomes in the US and the UK reveals that while both countries achieved some level of success in mitigating the adverse effects of the financial crisis, the paths they took were shaped by their unique financial systems and economic priorities. Understanding these divergences provides valuable insights into the complex dynamics of monetary policy and its implications for financial stability and economic growth.

5. Controversy and Assessment of Quantitative Easing

5.1. Controversy Over the Effects of the Policy

The implementation of QE has been met with significant debate among economists, policymakers, and the public. Critics argue that QE can lead to unintended consequences, such as asset price bubbles, wealth inequality, and distortion of financial markets. They contend that by inflating asset prices, QE disproportionately benefits the wealthy, who are more likely to own stocks and bonds, thereby exacerbating income and wealth disparities. Additionally, there is concern that QE can encourage excessive risk-taking by investors in search of higher yields, potentially sowing the seeds for future financial crises.

Proponents, however, argue that QE was necessary to stabilize the financial system and prevent a deeper economic downturn. They highlight its role in lowering interest rates, supporting asset prices, and ensuring liquidity in financial markets at a critical time. The positive impacts on economic growth, reduction in unemployment, and avoidance of deflation are cited as evidence of its effectiveness.

5.2. Evaluation of Quantitative Easing Policies in Both Countries

In evaluating the QE policies of the US and the UK, it's clear that both countries managed to navigate through the aftermath of the 2008 financial crisis with some degree of success. In the US, QE contributed to the recovery of the housing market and helped lower unemployment rates significantly. In the UK, QE helped stabilize the financial system and supported a gradual economic recovery, though the impact on stimulating broad-based economic growth and reducing unemployment was more gradual.

The effectiveness of QE in both countries was contingent upon the specific economic contexts and the mechanisms through which QE influenced the economy. In the US, the direct targeting of the housing market via MBS purchases had a tangible impact on recovering from the crisis. In contrast, the UK's approach, focused more on government bonds, aimed at a broader stimulus but faced challenges in directly translating increased liquidity into economic growth and employment gains.

6. Conclusion

The key distinctions between the QE policies of the United States and the United Kingdom lie in their strategic focus and implementation mechanisms. The United States targeted both the housing market and broader financial markets, aiming to directly stimulate the real estate sector. In contrast, the UK primarily focused on purchasing government bonds to boost economic activity. These varying approaches reflect the unique economic challenges and objectives of each country, leading to distinct outcomes in terms of inflation, unemployment, and economic recovery.

QE has emerged as a pivotal monetary policy tool in addressing economic crises, demonstrating its adaptability and effectiveness. While the US and UK achieved varying degrees of success with their QE strategies, both countries illustrate the importance of innovative monetary policy in stabilizing financial systems and fostering economic recovery. However, the long-term consequences of QE, including its impact on financial stability and income inequality, remain areas of ongoing debate and research.

Looking ahead, the lessons learned from the QE experiences of the US and UK will inform future monetary policy decisions. Future strategies may involve more targeted interventions that address specific economic challenges while minimizing unintended consequences. Moreover, there is a growing recognition of the need for comprehensive policy approaches that combine monetary, fiscal, and structural measures to promote sustainable economic growth and financial stability. As such, the adaptability and innovation of monetary policy will continue to play a crucial role in responding to economic crises and promoting economic well-being.

References

- [1] Joyce, M., Tong, M., & Woods, R. (2011). *The United Kingdom's quantitative easing policy: design, operation and impact*. Bank of England Quarterly Bulletin, Q3. <https://www.bankofengland.co.uk/quarterly-bulletin/2011/q3/the-uk-quantitative-easing-policy-design-operation-and-impact>
- [2] Krishnamurthy, A., & Vissing-Jorgensen, A. (2011). *The effects of quantitative easing on interest rates: channels and implications for policy*. Brookings Papers on Economic Activity, 2011(2), 215-265. <https://doi.org/10.3386/w17555>
- [3] Michael Joyce, David Miles, Andrew Scott, Dimitri Vayanos, *Quantitative Easing and Unconventional Monetary Policy – an Introduction*, The Economic Journal, Volume 122, Issue 564, November 2012, Pages F271–F288, <https://doi.org/10.1111/j.1468-0297.2012.02551.x>
- [4] Yildirim, Z., Ivrendi, M. *Spillovers of US unconventional monetary policy: quantitative easing, spreads, and international financial markets*. Financ Innov 7, 86 (2021). <https://doi.org/10.1186/s40854-021-00299-1>
- [5] Martin, C. and Milas, C. (no date) Institute for Policy Research. *A very large gamble: evidence on Quantitative Easing in the US and UK*, University of Bath. Available at: <https://www.bath.ac.uk/publications/a-very-large->

gamble-evidence-on-quantitative-easing-in-the-us-and-uk/attachments/ipr-very-large-gamble-evidence-on-quantitative-easing-in-us-and-uk.pdf.

- [6] Luck, S. and Zimmermann, T. (2019) *Ten years later-did QE work?*, Liberty Street Economics. <https://libertystreeteconomics.newyorkfed.org/2019/05/ten-years-laterdid-qe-work/>
- [7] Benford, J. et al. (2009) *Quantitative easing*, Bank of England. <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2009/quantitative-easing.pdf>
- [8] Khemraj, T., Yu, S. *Inflation Dynamics and Quantitative Easing*. *Eastern Econ J* 49, 613–638 (2023). <https://doi.org/10.1057/s41302-023-00257-y>
- [9] United States Department of Labor (2016) *Unemployment rate declines to 4.6 percent in November 2016*, U.S. Bureau of Labor Statistics. <https://www.bls.gov/opub/ted/2016/unemployment-rate-declines-to-4-point-6-percent-in-november-2016.htm>
- [10] Bank of England (2022) *QE at the Bank of England: A perspective on its functioning and effectiveness*, Bank of England. Available at: <https://www.bankofengland.co.uk/quarterly-bulletin/2022/2022-q1/qe-at-the-bank-of-england-a-perspective-on-its-functioning-and-effectiveness> (Accessed: 17 February 2024).
- [11] Clegg, R. (2016) *UK labour market: Dec 2016*, UK labour market - Office for National Statistics. <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/dec2016>