The Modern U.S. Federal Reserve:

To What Extent is Transparency Counterproductive and Politicizing?

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Academic Abstract

This thesis examines the extent to which institutional transparency is counterproductive and potentially politicizing within the U.S. Federal Reserve system. It exemplifies a Venn diagram intersection of political and economic theory – and given the meaningful change in behavior at the Fed – to some extent organizational theory as well. This political economy orientation may be illustrated by providing a historical context – and then addressing the relevant catalysts for change: legislative action, financial crises, and the increase in social media technology. In terms of a "broader view," these changes have occurred against a backdrop of significant changes in the application of Keynesian theories. As a result, this thesis defines modern transparency at the Federal Reserve, including its benefits and potential drawbacks, by connecting the changes in policies and procedures over the last quarter century - and by showing the impact of the evolution of modern New Keynesian interventionist programs within this new environment. The conclusions shown the New Keynesian coincidental contributions to modern interventionalist policies. But the benefits that come from improved transparency have opened the door to unintended consequences – and the main takeaway is the potential for political bias among bankers and the time inconsistencies that come from short-term modifications to otherwise long-term problems. The "secrets of the temple" are no longer secrets…but Greider would agree that the concentration of power and political influence remains the same.

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General Audience Abstract

This thesis explores to what extent is increased transparency counterproductive and potentially politicizing within the U.S. Federal Reserve system. The Fed is primarily responsible for maintaining price stability, facilitating full employment, and maintaining the health of the banking system, placing it both directly and indirectly at the center of power and influence within American politics. FOMC decisions directly affect American citizens. For instance, their interest rate policies influence the cost of a mortgage, a car loan, a student loan, or possibly the value of 401k accounts – and in the 21st century, the average American is more tied to "credit" than ever before. This analysis will consider how this initiative developed, its original intent, its evolution, and why it may result in significant unintended political consequences. The conclusions illustrated that there are benefits that come from improved transparency. However, improved transparency may have opened the door to unintended consequences.

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"If I turn out to be particularly clear, you've probably misunderstood what I've said."
– Alan Greenspan

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Carry on my wayward son, for there'll be peace when you are done.
-Kansas

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I. INTRODUCTION

"Never Explain, Never Apologize" – Bank of England's Motto

Contrary to the subtitle from the Bank of England above, the U.S. Federal Reserve has gradually adopted a policy of broad transparency over the past twenty years. Utilizing multiple communication channels, the "Fed" has in many respects become an open book – a central bank not only embracing full disclosure of both internal metrics and member opinions, but also engaging in a well-constructed public relations campaign. The initiative has generally been well-received by politicians, the financial services industry, and the media; and is certainly consistent with the trends defining the information age and open government. This paper, however, examines the extent to which institutional transparency is counterproductive and potentially politicizing within the U.S. Federal Reserve system. The approach for this study is based in political theory – not economics or credit market finance - and is designed to address the future political implications of such a dramatic reversal in policies and procedures at the world's most powerful financial institution. Several studies in this relatively new area of political economy have looked at whether individual Fed bank presidents exhibit signs of a regional bias in their interest rate preferences (A. Jung & S. Latsos, ECB) or whether background, education, gender, tenure, or career paths influence policy decisions (H. Bennani, et al). Both found evidence that regional bias does exist, and that certain assumptions can be made with respect to a banker's predispositions – resulting in a potential for "suboptimal" monetary policy outcomes.[1] But none have specifically considered the risk inherent with *political* bias among voting members of the

[1] Jung & Latsos, Do Federal Reserve Bank Presidents Have Regional Bias? (2014)

Federal Open Market Committee (FOMC) and the potential policy effects resulting from outside pressure. Testing for an element of political bias in FOMC voting is challenging and may be difficult to observe – even with the bank's high level of transparency. However, a case may be made statistically based on certain trends and market correlations that such opinions among voting members are now more visible and potentially exercisable. There is an important distinction to make with regard to the meaning of transparency. In terms of *public disclosure,* transparency has been a positive development; however, some may interpret it more broadly to include Congressional or outside *oversight*. This would not only strip the central bank of its independence, but also open the door to significant political ramifications.

The idea and motivation for this analysis came from a confluence of events: a study of the New Keynesian school of thought dominating our modern central bank (steering an economy through constant monetary intervention instead of reacting to it), and the very public spotlight now placed on Fed bankers by our current elected officials. Most Americans are not familiar with the status or structure of their country's central bank, much less its dual mandate and the constant impact on their financial lives. "Although, according to Google Trends, their names do not figure among the most searched for on the Internet, members of the Federal Open Market Committee probably have a larger impact on the real life than most stars, real or virtual," writes Hazma Bennani (University of Paris, Nanterre) at the beginning of his research on banker characteristics and predispositions.[2] This research is important because the U.S. Federal Reserve is not simply a minor appendage of the government; it is actually an independent and highly influential centerpiece of the American economy. The Fed is primarily responsible for maintaining price stability, facilitating full employment, and maintaining the health of the

[2] Bennani, Farvaque, & Stanek, p. 6 (2018), https://papers.ssrn.com/abstract=2805882.

banking system, placing it both directly and indirectly at the center of power and influence within American politics. FOMC decisions directly affect American citizens. For instance, their interest rate policies influence the cost of a mortgage, a car loan, a student loan, or possibly the value of 401k accounts – and in the 21st century, the average American is more tied to "credit" than ever before. According to the New York Fed, household debt now stands at $13.86 trillion, $1.2 trillion higher than the previous peak in 2008 and growing at a 2% annualized rate (Fig. 1). We have experienced 20 consecutive quarters of increases.[3]

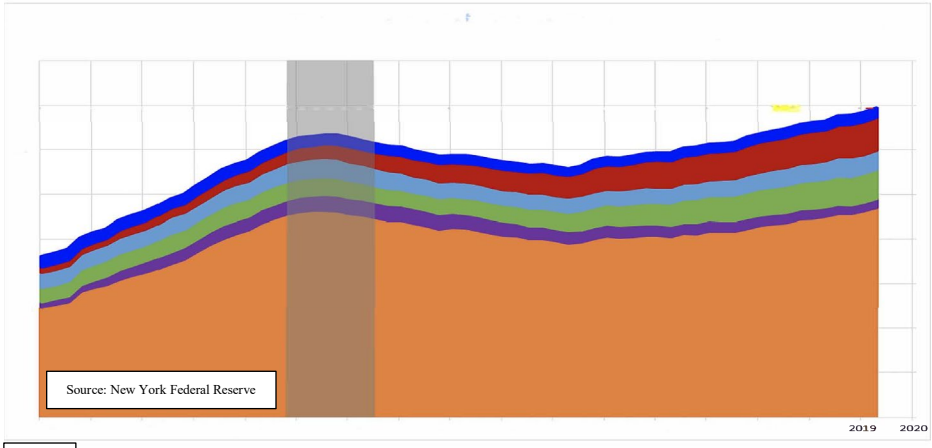


Fig. 1

The Federal Reserve can control short term interest rates (deposit rates) by setting the federal funds rate, manipulate longer-term interest rates through "quantitative easing" and open market operations, and can affect lending and capital formation by setting reserve requirements at banks. As the slightest indication, inference, or opinion from a central banker can move markets – impacting billions of dollars in capital investments and influencing the decisions of corporate executives, consumers, and even foreign governments – there are significant risks to disseminating information without limits, procedures, or filters. With their ability to stimulate an economy through traditional and non-traditional Keynesian monetary measures, the Fed could

[3] D. Short, Advisor Perspectives, Data Derived from: New York Fed, Center of Microeconomic Data

have direct and meaningful impacts on elections – particularly the presidency. To what extent has this effort to embrace transparency put the Fed's independent, unbiased position at risk? Can Federal Reserve Governors, who are appointed by the President and confirmed by the Senate, remain apolitical? Will regional or party biases, much like those exhibited in other areas of government, become more evident? And perhaps most importantly, are Fed members now overly exposed to pressure from elected officials, the media, and the general public? To hold a political preference is normal, but to inject political preferences into monetary policy is different. After decades of operating in self-imposed obscurity, the bank has embraced transparency and the information age and consequently is no longer "shielded from scrutiny," but rather now engages in a *crafted* public relations effort.[4] This analysis will consider how this initiative developed, its original intent, its evolution, and why it may result in significant unintended political consequences. Although most statistical data provided in this analysis covers the last twenty years – the Greenspan, Bernanke, Yellen, and Powell Feds – a full understanding of the transformation in policies requires a brief review of the Volcker Fed, as it was the last representation of the "secret temple" prior to the move toward transparency. As Yale Professor and Nobel Prize winner Robert Shiller points out in his new book Narrative Economics, the study of economics has become myopic and should return to a broader view of the way our world works - economics doesn't sit in a silo but instead is a combination of psychology, anthropology, history and political science.[5] With this perspective in mind, this thesis exemplifies a venn diagram intersection of political and economic theory – and given the meaningful change in behavior at the Fed – to some extent organizational theory as well. As Shiller suggests, this political economy orientation may be illustrated by providing a historical

[4] Greider, Introduction, The Secrets of the Temple: How the Federal Reserve Runs the Country, (1987)
[5] Shiller, Narrative Economics, Introduction (2019)

context – and then addressing the relevant catalysts for change: legislative action, financial crises, and the increase in social media technology. In terms of a "broader view," these changes have occurred against a backdrop of significant changes in the application of Keynesian theories. As a result, this thesis defines modern transparency at the Federal Reserve, including its benefits and potential drawbacks, by connecting the changes in policies and procedures over the last quarter century - and by showing the impact of the evolution of modern New Keynesian interventionist programs within this new environment.

II. METHODOLOGY

"Practical men…are usually the slave of some defunct economist." – John Maynard Keynes

This paper is divided into two distinct sections and has two primary component themes: the evolution of transparency as a standard of policy and practice at the U.S. Federal Reserve; and then the actual open market operations under the new framework of transparency. Although a number of studies have addressed the need for a more open and "public" central bank, and many more have argued the pros and cons of direct Congressional oversight, it does not appear that any have actually tracked the evolution of transparency in terms of the three major convergent factors that helped expedite the formation of disclosure policies at the Fed. Section III (The Evolution of Transparency) is qualitative in nature, and specifically addresses the following contributing elements: Congressional and Fed initiatives, the impact of financial crises, and the significant advancements in information technology – especially communication channels. The qualitative work presented in this section is grounded in the research compiled originally by William Greider, a former editor at the Washington Post. It also draws directly from Federal Reserve records, working papers, Congressional testimony, and many public appearances by Fed officials.

Greider's book, The Secrets of the Temple, exposed the inner workings of the Federal Reserve and how historically it has been more secretive than the CIA. It focused on Chairman Paul Volcker (1979-1987), and how the Fed operated with limited public oversight during his tenure (the "Volcker Model"). From a political theory point of view, Greider's work showed how the monetary power of pure Keynesian "interventionalist" economics was vested in one unelected group of people, or perhaps in just one person – the Chairman. Much of the evolution

of Fed transparency can be attributed to his work, as he was the first to expose the political power attached to the central bank in the post gold-standard era (1971+).

Section IV (Operations Under the New Transparency Framework) is dedicated to understanding how bankers formulate and then communicate interest rate preferences and policy in the age of transparency. In terms of methodology, it is both qualitative and quantitative – and attempts to expand upon the work of Frederic Mishkin, the Alfred Lerner Professor of Banking and Financial Institutions at the Graduate School of Business, at Columbia University. Twenty years after the publication of Secrets of the Temple, Frederic Mishkin responded to the higher level of transparency at the Fed with a reiteration of what Volcker had originally argued: too much disclosure can hinder the execution of the dual mandate. Transparency is not a negative if it makes the Fed's message to the public clearer – however, when taken too far, it can hinder the execution of the bank's mandated purpose.[6] Several of his articles are referenced in this study – *How Big a Problem Is Too Big To Fail, The Fed After Greenspan*, and *Politicians are Threatening the Fed's Independence*. He suggests that inflation "targeting" and the idea of a transparency paradox are two examples of the failures of transparency.[7] "Transparency is a virtue, but like all virtues it can go too far, he writes."[8] Mishkin has drawn a parallel between visibility and political pressure, a notion that we can review statistically.

The core element in this study is the evolution of Keynesian interventionalist theories – as the timing, motivation, and explanation of monetary policy moves are the primary points of contention (remedied through disclosure and/or oversight). There is a distinct difference between

[6] Mishkin, p. 25, Can Central Bank Transparency Go Too Far? https://www.nber.org/papers/w10829.pdf, (2004)
[7] Mishkin, p. 25, Can Central Bank Transparency Go Too Far? https://www.nber.org/papers/w10829.pdf, (2004) (2004)
[8] Mishkin, p. 1, Can Central Bank Transparency Go Too Far? https://www.nber.org/papers/w10829.pdf, (2004) (2004)

providing additional aggregate demand during periods of economic weakness and "steering' an economy with "active" and more frequent changes in interest rates and reserve policies. If the modern Federal Reserve adhered to a more traditional, passive role with regard to monetary policy intervention, then we would likely not be debating the bank's growing political role and its increasing transparency.

In 1936 John Maynard Keynes wrote, "practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slave of some defunct economist."[9] Perceptive as this comment was, Keynes probably had no idea the extent to which his interventionalist theories would be debated and applied over the next eighty years. In a piece published by the Wall Street Journal (*The Great Economics Debate*), Ohio State University Economist Richard Vedder suggests that there has been a divergence in values from the time Keynes was alive. He believes that, "Friedrich Hayek and John Maynard Keynes worked at a time when the study of economics was concerned with society and its values." Today, economics is driven by mathematics and complicated forecasting models. "Economics is a fundamentally quantitative pursuit," he writes.[10] The New Keynesians, Monetarists, Real Business Cycle Theorists, and Supply-Side economists all offer a different interpretation of the practical application of monetary policy. The timing, frequency, and effect of monetary policy can be measured and reported by quantitative means – and in several sections of this paper correlations will be presented between Fed actions and net results in markets, inflation, and GDP. It is also interesting to note that in terms of methodology, Federal Reserve officials may now attempt to influence markets through rhetoric, as they now engage in more public appearances than ever

[9] Romer, p. 69, https://www.aeaweb.org/articles?id=10.1257/aer.103.3.55, (2013)
[10] Vedder, The Great Economics Debate, https://www.wsj.com/articles/the-great-economics-debate-1503354510 (2017)

before. A review of such appearances and corresponding bond market characteristics has been incorporated into this study.

We can effectively measure the roll-out of the transparency effort, as much of the timeline has been tracked by the Philadelphia Fed. This can be overlaid and measured against market changes as well, including dissentions to policy moves from regional Fed Presidents. Political bias underlying policy preferences is more difficult to measure. A half dozen studies have been dedicated to uncovering regional bias in FOMC member voting preferences. It may be argued that it's not much of a leap to translate the data into political bias – as the U.S. becomes more defined politically by region itself. In looking at the Powell Fed and recent voting records, we may be able to draw a parallel statistically. Jung and Latsos of the ECB use the Taylor Rule (a mathematical model tying Fed responses directly to actual inflation changes as opposed to expected changes) as a benchmark against which to measure rate preferences across voting members. Ellen Meade, a Fed economist and Professor at American University, uses the Philips Curve as a benchmark (a model showing an inverse relationship between inflation and unemployment) to measure the same thing. Bennani, Farvaque, and Stanek place emphasis on "hometown," arguing an inherent bias is derived essentially from where one grew up. "The most notable source of heterogeneity mentioned in the literature is the presence of a bias related to the regional origin. This comes from the fact that, as several FOMC members are representatives from different economic regions which may, at each point in time, be located at different positions of the business cycle, their favored policy decision may be influenced by the situation in their home district," they write.[11] The point is that there is no single statistical measurement available to test specifically for political bias in FOMC decisions – even in the age of

[11] Bennani, Farvaque, & Stanek, p. 7, https://papers.ssrn.com/abstract=2805882. (2018)

transparency. But as a matter of methodology, it is possible to combine several measures that may very well *imply* that a degree of bias exists.

III. The Evolution of Transparency

"A mechanism of government, beyond the reach of the popular vote." – William Greider

THE FED'S INCEPTION: The U.S. Federal Reserve was established in 1913 under the Wilson Administration. Its original mandate was to issue currency, help aid in financing the government, and to watch over the other banks. From the time the Fed was created, the United States has faced the Great Depression, two World Wars, and the Cold War. Each of these aspects have affected Fed policy and expanded methods for stabilizing the economy. Arguably the biggest impact came from globalization, which put more of a spotlight on Fed activities. After the Great Depression, "many people blamed the Fed for failing to stem speculative lending that led to the crash, and some also argued that inadequate understanding of monetary economics kept the Fed from pursuing policies that could have lessened the depth of the Depression."[12] In the aftermath of the Great Depression, Congress passed the Banking Act of 1933. The act made amendments that allowed for the Fed to have more influence in the financial system. It "established the Federal Deposit Insurance Corporation (FDIC), placed open market operations under the Fed, and required bank holding companies to be examined by the Fed."[13] This is an early example of legislative action affecting Fed operations. We can also see how the Federal Reserve responded to World War II – "the Federal Reserve supported the war effort in several ways – it helped finance wartime spending, fund our allies, embargo our enemies, stabilize the economy, and plan the return to peacetime activities."[14] The Board of Governors in 1943 stated the Fed was…. "prepared to use its powers to assure at all times an ample supply of funds for financing the war

[12] Federal Reserve Education, https://www.federalreserveeducation.org/about-the-fed/history
[13] Federal Reserve Education, https://www.federalreserveeducation.org/about-the-fed/history
[14] Federal Reserve History, https://www.federalreservehistory.org/essays/feds_role_during_wwii

effort.[15] Defense expenditures and military expenditures increased to $85 billion in 1945, when previously it had been a couple million.[16] Congress amended the Federal Reserve Act during the war that, "enabled the Board to change reserve requirements in banks in New York City and Chicago, known as central reserve cities, without changing the requirements for other banks."[17] This is another example of legislative action affecting and aiding in Fed movements. The Cold War also led to different policy initiatives. During the Cold War the United States was in a "hot war" against another seemily implacable foe – inflation."[18] The Korean War also had an effect on the Federal Reserve. During this time the "Federal Reserve reached an agreement to separate government debt management from monetary policy, laying the foundation for the modern Fed."[19] The Treasury-Fed Accord led to the "development of a strong free market in government securities," – but, most importantly it established "the central bank's independence from fiscal concerns."[20]

The fall of Bretton Woods opened the doors for more Fed influence over monetary policy. The end of the system began when President Nixon "suspended" the dollar's ability to be converted into gold.[21] The new system would allow "the major currencies" to "float against each other."[22] As the world became increasingly inter-connected the Federal Reserve became more open. The Federal Reserve article "Monetary Policy and Globalization," by Chairman Ben

[15] Federal Reserve History, https://www.federalreservehistory.org/essays/feds_role_during_wwii
[16] Federal Reserve History, https://www.federalreservehistory.org/essays/feds_role_during_wwii
[17] Federal Reserve History, https://www.federalreservehistory.org/essays/feds_role_during_wwii
[18] Sniderman, Monetary Policy in the Cold War Era, p. 1, https://www.clevelandfed.org/en/newsroom-and-events/publications/economic-commentary/economic-commentary-archives/1997-economic-commentaries/ec-19970601-monetary-policy-in-the-cold-war-era.aspx
[19] Romero, Treasury-Fed Accord, Federal Reserve History, https://www.federalreservehistory.org/essays/treasury_fed_accord
[20] Romero, Treasury-Fed Accord, Federal Reserve History, https://www.federalreservehistory.org/essays/treasury_fed_accord

[21] The End of the Bretton Woods System, https://www.imf.org/external/about/histend.htm
[22] The End of the Bretton Woods System, https://www.imf.org/external/about/histend.htm

Bernanke looks at how globalization affected monetary policy. Bernanke states – "at the broadest level, globalization influences the conduct of monetary policy through its powerful effects on the economic and financial environment in which monetary policy must operate."[23] He argues that there is a possibility that increased globalization could make navigating monetary policy more difficult. Because increased inter-dependence between countries "requires taking into account a diverse set of global influences, many of which are not yet fully understood."[24] His article though does not touch on the Federal Reserve's plan on how to incorporate increased transparency and globalization. In order to get a fuller picture of this trend towards transparency it is important to look at the influences from the Volcker Fed.

THE VOLCKER FED. Sandra Ghizoni of the Atlanta Federal Reserve writes that the Fed began a transformation in 1971, as then Chairman Arthur Burns argued that the Fed did not have the tools to fight commodities-based inflation and unemployment under the Bretton-Woods gold standard system. On August 15, 1971, she writes, "In effect, the international monetary system turned into a fiat one."[25] In a sense, this was the beginning of the modern Federal Reserve and a victory for the New Keynesians. Since then, new Congressional legislation (the result of forward-thinking Fed officials and politicians), new policies originating from periods of crisis, and modern information technologies have all contributed to a more visible and transparent Fed. Information is now more frequent, more easily accessible, and is provided in less technical language. "Today, the central bank is quite explicit in setting out the objectives of policy and its

[23] Bernanke, Board of Governors of the Federal Reserve, https://www.federalreserve.gov/newsevents/speech/bernanke20070302a.htm
[24] Bernanke, Board of Governors of the Federal Reserve, https://www.federalreserve.gov/newsevents/speech/bernanke20070302a.htm
[25] Ghizoni, Nixon Ends Convertibility of US Dollars to Gold and Announces Wage/Price Controls, https://www.federalreservehistory.org/essays/gold_convertibility_ends. (1971)

views on the outlook for the economy," claims the Philadelphia Fed's website.[26] But much of the acceleration in policies and procedures at the Fed stemmed from the political aftermath of the Volcker era. In fact, the Senate was split during Volcker's re-appointment in 1983 as a result of his extreme interest rate policies and aversion to transparency. In terms of procedure, the President must first appoint a Chairman and Vice-Chairman and then the Senate is required to confirm them. This allows the Chairman to be fully vetted and not chosen based on the opinion of one person. The Senate also must re-evaluate the Chairman every four years to determine if they are fit to keep their position. Governors are also subject to the same process of Senate confirmation. The regional bank Presidents are chosen by the Board of Governors. The Federal Reserve has been able to maintain such great power by not being "legally" connected to the White House – making it its own separate entity.[27] A distinction embraced by Paul Volcker.

Chairman Paul Volcker (1979-1987), who followed Arthur Burns, represents a figurehead who truly embraced the secretive nature of the Federal Reserve, and while most might remember him as the man who, "slayed the inflation dragon," he was also the last Chairman who embraced Federal Reserve discretion and opaqueness.[28] In describing the Volcker Fed, William Greider suggested that the Fed "provided another mechanism of government, beyond the reach of popular vote, one that managed the continuing conflicts of democratic capitalism, the natural tension between those two words, "democracy" and "capitalism."[29] He even goes as far as to argue that Volcker and his board would be "more powerful and more effective than any elective

[26] Federal Reserve Bank of Philadelphia, Timeline to Transparency, https://www.philadelphiafed.org/about-the-fed/transparency

[27] Volcker, p. 35 Volcker, pg. 2, Keeping at it: The quest for sound money and good government, (2018)

[28] Volcker, Inside Flap Volcker, pg. 2, Keeping at it: The quest for sound money and good government, (2018)

[29] Greider, pg. 11, The Secrets of the Temple: How the Federal Reserve Runs the Country, (1987)

government.[30] Greider wrote The Secrets of the Temple in 1987. He had studied journalism and politics at Princeton, and certainty used his position at the Washington Post to help him develop contacts when researching the book. His thesis was straightforward – the Federal Reserve runs the country. The book reads like an expose focused primarily on informing the public to the clandestine inter-workings of the U.S. central bank. Greider's work is important and central to this thesis because it spotlights the political power and control harnessed by the Fed, and also illustrates how deeply private the Fed was prior to the push toward transparency. He emphasizes that the governors are not elected by the people, but rather appointed by the President; and that it is only a matter of time before a sitting President realizes that he or she is not fully in control of the government – the appointed Fed Chairman is. As Ronald Reagan knew in the 1980s and as Donald Trump recognizes today, actions taken by the Fed can affect prospects for Presidential re-election. "The Federal Reserve was legally independent of the White House, but it was not cloistered from political persuasion," Greider argues.[31] In the early 1980s, Fed policies went against the interest of then President Reagan and had potential ramifications for the 1984 Presidential election. The U.S. economy had been suffering years of stagflation, an energy crisis, and a ballooning inflationary bubble. The M-1 money supply was increasing, the dollar was weakening, and in order to curb it, Volcker began to increase interest rates. It was a case of drastic times requiring drastic measures, and explanations to the public were in technical language – rather than making it understandable to the masses. High interest rates slow the economy, slow wage growth, and hit some industries very hard. It would be difficult for an incumbent to be re-elected under these conditions (Fig. 2).[32] Note the cost of a regular 30-year

[30] Greider, p. 46, The Secrets of the Temple: How the Federal Reserve Runs the Country, (1987)
[31] Greider, p. 35, The Secrets of the Temple: How the Federal Reserve Runs the Country, (1987)
[32] FRED, 30 Year Fixed Rate Mortgage Average in the United States

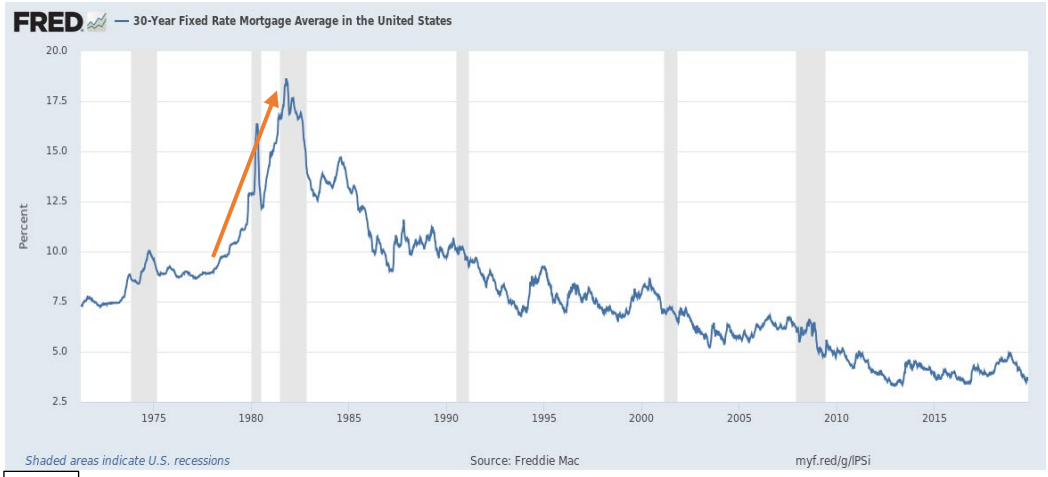


Fig. 2

fixed mortgage over Mr. Volcker's first term, indicated in orange above. He writes about his experiences in his book, Keeping at It: The Quest for Sound Money and Good Government, and recalls a particular meeting with President Reagan at the White House that didn't occur in the Oval Office as usual, but rather in the Presidential Library – presumably for privacy reasons. Reagan felt that Mr. Volcker was hurting his chance for re-election in 1984 and attempted to influence Fed policy. He told the President that his role was to bolster, manage, and recommend policy moves that would help the economy – not to set rates for reelection purposes. It is crucial that the Fed be omitted from "passing or partisan political pressures, he writes."[33] During his tenure he found that everybody had their own ideas for how to create a more accountable Fed, and states that, "ulterior motives underlie seemingly innocuous proposals for change."[34] There have been many different pushes for more accountability within the Federal Reserve – for instance, auditing by the GAO (Government Accountability Office) or appointing a vice chairman for supervision.

[33] Volcker, p. 228, Volcker, pg. 2, Keeping at it: The quest for sound money and good government, (2018)

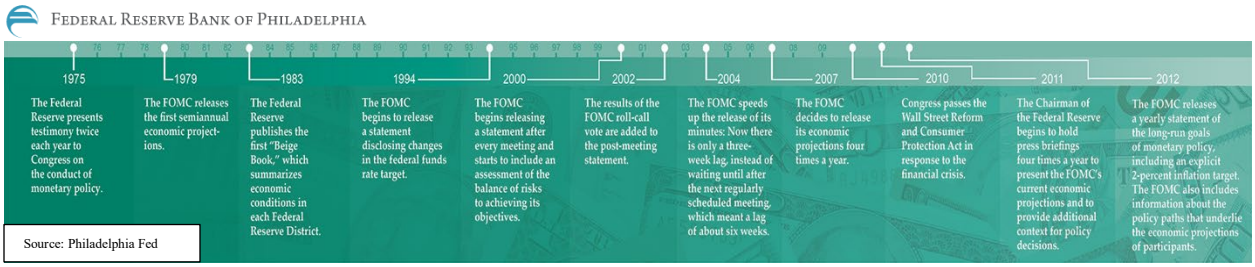
[34] Volcker, p. 229 Volcker, pg. 2, Keeping at it: The quest for sound money and good government, (2018)

While in office, Volcker believed in a secretive and independent Federal Reserve, but he didn't want to, "encourage indiscriminate use of such untraditional authority."[35] While he believes separation is key for the Fed to function, "it is not above accountability."[36] Specifically, he says that the financial/mortgage crisis changed his mind – and understands Congressional moves following the recession. The Bear Stearns rescue, he argues, showed that there wasn't a system in place to handle a meltdown and that the U.S. "needed reforms in the system."[37] He has been working to enhance the Dodd-Frank Act so that the Fed's powers in terms of asset purchases are better defined. His contribution to transparency is probably best reflected in requiring more disclosure of securities held in the banking system in an effort to avoid the extreme losses like 2008 – the so-called "Volcker Rule." He seems to prefer accountability to Congress over transparency to Americans (or the market). However, if the GAO is able to more closely monitor Fed policy moves – bias could be a problem. He argues that the Federal Reserve is susceptible to controversy because they must make restrictive policies. This susceptibility is what leads the Fed to need "protection" against the constantly changing political tide.

CONGRESSIONAL AND FED INITIATIVES. In an effort to show the extent to which the central bank has gone to educate and inform the public regarding its activities and objectives, The Philadelphia Fed has created a "Transparency Timeline" (Fig 3).[38] It traces many of the milestone initiatives, including the public visibility that comes with the publication of meeting

[35] Volcker, p. 208, Keeping at it: The quest for sound money and good government, (2018)
[36] Volcker, p. 235 Volcker, pg. 2, Keeping at it: The quest for sound money and good government, (2018)

[37] Volcker, p. 208 Volcker, pg. 2, Keeping at it: The quest for sound money and good government, (2018)
[38] Transparency Timeline, Federal Reserve Bank of Philadelphia, https://www.philadelphiafed.org/about-the-fed/transparency



Source: Philadelphia Fed

Timeline to Transparency (expanded)

- 1913: Federal Reserve Created
- 1975: Required Testimony to Congress (Humphrey-Hawkins)
- 1983: Published Minutes from FOMC Meetings (Beige Book)
- 1989: CNBC Launched (mainstream media covering Fed)
- 1994: First Time Publishing Their Discount and Funds Rate Targets*
- 2000: Published Statements After FOMC Meetings
- 2002: Reported How Voting Members Voted on Interest Rate Policies
- 2004: Beige Books Became Available Three Weeks After FOMC Meetings
- 2008: Regular Appearances on Television (Including Regional Bank Presidents)
- 2009: First Post-Meeting Press Conference by Chairman
- 2012: More Explicit Language About FOMC Projections in Press Releases
- 2016: Launched Facebook Pages for Central and Regional Banks

*Note: Prior to 1994, financial professionals had to speculate on the Fed's targets based on their open market activities.

Fig. 3

minutes – known as the Beige Book (1983). It took over fifty years for Congress to require the that Federal Reserve Chairmen present their testimonies to Congress twice a year on monetary policy. The Beige Book, which provides current information on the economic conditions of each individual Fed district and the minutes of recent Fed meetings, did not enter circulation until 1983 (an entire 70 years after the Fed's inception). Before a change during Alan Greenspan's second term, Wall Street professionals would estimate the Fed's target for overnight bank lending based on its actions. It wasn't until 1994 that a specific range was explicitly announced after FOMC meetings. In 2000 the Federal Reserve began releasing full statements after their

meetings, which included an "assessment of the balances of risks to achieving its objectives."[39] It was not until 2010 that the Chairman began holding "press briefings four times a year to present the FOMC's current economic projections and to provide additional context for policy decisions."[40] In terms of methods that have led to increased transparency, we can clearly see that Congressional action, in tandem with forward-thinking Fed officials, has undoubtedly been a leading contributor to increased transparency. There have been numerous hearings regarding legislation that would make the Fed required to have increased oversight and disclosure policies. According to a public service piece published by the San Francisco Fed, "What Steps Has the Federal Reserve Taken to Improve Transparency?" - the bank and members of Congress (and their staffs) work together to form a communicative, cohesive unit. It is believed that transparency is vital, "as a responsibility of central bankers, but transparency in policymaking also enhances the effectiveness of monetary policy by aligning public expectations with the goals of the central bank."[41] In 1987 Alan Greenspan said to Congress, "Since I've become a central banker, I've learned to mumble with great incoherence. If I seem unduly clear to you, you must have misunderstood what I said." Fifteen years he had changed his tune, and stated, "Openness is an obligation of a central bank in a free democratic society."[42] Also in terms of new Congressional pressure, an important component today to look at would be the meeting statements and meeting minutes, both of which are legally required to be released to the public. An FOMC meeting statement now becomes public knowledge at "2:15 p.m. Eastern time on the

[39] Philadelphia Branch Transparency Outline, https://www.philadelphiafed.org/about-the-fed/transparency
[40] Philadelphia Branch Transparency Outline
[41] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[42] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)

day of each FOMC meeting."[43] It consists of several major components, the federal funds target, interest rate decisions, the rationale for that decision, risks to monetary policy, and the economy associated with the decision, and how each member voted on the policy decision.[44] There is an emphasis in the report on transparency, as the quantity and quality of information disseminated has evolved over the past few years. The public can see that many changes have occurred in the structure of the Fed itself since 1994. Since then, the Fed has "added description of the state of the economy and the rationale for the policy action," which was combined in the FOMC's communications.[45] In 2000, the Fed added the "balance of risks in the economy," and in 2002 there was the addition of how each board member voted. In 2003, the Fed added "forward-looking guidance on policy."[46] With Federal Reserve governors historically keeping to themselves, these changes are an important step – and are generally the product of political pressure. The FOMC meeting minutes are also important to mention, as they can be used as an indicator coinciding with the FOMC statement. The San Francisco Fed explains that, "the minutes provide greater detail on the Committee's monetary policy decision than does the concise FOMC statement."[47] On December 14, 2004, the Committee decided to alter the publication date of these minutes - instead of coming out six weeks after the meeting, they are now released after three. It only takes a few clicks to access the Federal Open Market Committee website, which then allows the user to easily find FOMC meeting minutes. It even offers direct

[43] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[44] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[45] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[46] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[47] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)

tabs for the reader to access the notes and statements used by the Federal Reserve during the meetings.

There have also been many legislative movements regarding Fed activities that have failed to pass. For instance, the original H.R. 1207/H.R. 24, The Federal Reserve Transparency Act (several versions proposed), would have "eliminated statutory prohibitions on GAO audits of activities related to monetary policy and Fed lending, and required a one-time GAO audit of the Fed within 12 months of enactment that is not subject to remaining statutory restrictions."[48] The 114th Congress discussed whether or not the Fed should have a standard Taylor Rule, which would be a "mathematical policy rule that prescribes a federal funds rate based on inflation and output."[49] The Fed would have had to submit this rule 48 hours after implementing a policy decision or face an immediate GAO audit. The most shocking proposal was whether or not Congress should have a commission headed by House and Senate committees that would be able to offer policy recommendations. That sort of influence over the Fed would call the apolitical status into question. The original Federal Reserve Transparency Act was introduced in 2008 in a response to the financial crisis. Congressman Ron Paul introduced the bill in the House, and Bernie Sanders introduced a similar version in the Senate. The House of Representatives passed the bill three separate times, but it failed to get by the Senate. Its goal was to, "reform the manner in which the Board of Governors of the Federal Reserve System is audited by the Comptroller General of the United States and in the manner in which such audits are reported."[50] On top of that, it would also require that all audits be accessible by Congress. A key issue arises if Congress has oversight over audits, as it could question policy moves. A revised/ combined bill

[48] Congressional Research Services, Marc Labonte, https://fas.org/sgp/crs/misc/R42079.pdf.
[49] Congressional Research Services, Marc Labonte, https://fas.org/sgp/crs/misc/R42079.pdf.
[50] H.R. 1207: Federal Reserve Transparency Act of 2009, https://www.govtrack.us/congress/bills/111/hr1207/text

was ultimately passed on July 6, 2009. The debate surrounding such legislation was simple: there is a need for more oversight of Fed activities, but such oversight may not encroach on the central bank's ability to remain an independent, apolitical entity. Former Fed Chairman Janet Yellen has strong feelings regarding Fed audits, and is known for "opposing Audits of the Fed," because they would "bring short-term political pressures to bear."[51] Federal Reserve General Counsel Scott G. Alvarez agreed with her position and made it clear in a speech before the Committee of Financial Services at U.S. House of Representatives. This speech was given in 2009 in the wake of the financial crisis - and was specifically aimed at derailing the Federal Reserve Transparency Act of 2009. Alvarez acknowledged that the "Federal Reserve is accountable to Congress and the public."[52] The Act would, "inform the Congress and the American people about our actions and accommodate appropriate oversight of those actions."[53] Prior to this bill, the Fed was audited annually by an independent accounting firm that provided the necessary information regarding, "policies, actions, and operations."[54] Alongside the outside audit, the Fed also cooperates with the Government Accountability Office (GAO). Alvarez believed that the Fed was already, "subject to oversight through a variety of mechanisms."[55] He suggested that the Federal Reserve needed to maintain separation and independence from Congress, while being "as transparent as possible about our policies and operations without undermining our ability to effectively fulfill

[51] Fortune, 'Audit the Fed' is about power, not transparency, https://fortune.com/2015/02/24/federal-reserve-janet-yellen-audit/, (2015)
[52] Alvarez, Federal Reserve Transparency, https://www.federalreserve.gov/newsevents/testimony/alvarez20090925a.htm, (2009)
[53] Alvarez, Federal Reserve Transparency, https://www.federalreserve.gov/newsevents/testimony/alvarez20090925a.htm, (2009)
[54] Alvarez, Federal Reserve Transparency, https://www.federalreserve.gov/newsevents/testimony/alvarez20090925a.htm, (2009)
[55] Alvarez, Federal Reserve Transparency, https://www.federalreserve.gov/newsevents/testimony/alvarez20090925a.htm, (2009)

our monetary policy and other responsibilities."[56] For the Fed to be as efficient as possible, it has to be able to function without 24-hour surveillance.

Alongside the statement and meeting minutes, the Fed also has monetary policy reports that must be given to Congress. This document (and the testimony that follows), "lends insight into the monetary policy making process and the possible future path of monetary policy."[57] It incorporates many different areas, such as economic outlook, current economic and financial developments, and monetary policy.[58] This document has also undergone some changes. In the past, the report only focused on core inflation, rather than taking a more comprehensive approach. Now, the Fed reports on inflation from multiple perspectives, which creates more transparency to citizens (given no other entity should have more educated forecasts on expected future prices). In 2005 another shift was made, this time making the forecast illustrate two years in advance on inflation, unemployment, and GDP.[59] Together, all of these have helped provide individuals and businesses with a better understanding of what to expect. Each of these developments are the product of requests by Congressmen and Senators over the course of many semi-annual "Humphrey-Hawkins" testimonies in front of the respective financial services committees on Capitol Hill. Written reports are also mandatory to the House of Financial Services Committee and the Senate Banking and Urban Affairs Committee. Actions taken by policymakers have more forcibly pushed the Fed towards greater visibility.

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[56] Alvarez, Federal Reserve Transparency, https://www.federalreserve.gov/newsevents/testimony/alvarez20090925a.htm, (2009)
[57] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[58] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[59] Dr. Econ, Federal Reserve Bank of San Francisco, https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)

Marc Labonte, a Congressional Research Services macroeconomic policy specialist, published a working paper in 2017: "Federal Reserve: Oversight and Disclosure Issues." Its primary purpose was to address Federal Reserve critics who had been calling for even more oversight and transparency – particularly claiming insufficient changes had been made since the financial crisis (many parts of the Dodd-Frank Act have remained unresolved in committees). Currently, the Fed is required to testify before Congress semi-annually and to disclose a written report. While the Fed is already audited by outside agencies, many individuals call for the audits to be completed by the Government Accountability Office. In the wake of the financial crisis, the Dodd-Frank Act was drafted, which allows the Fed's emergency activities to be audited, alongside Fed governance.[60] It also forced the Federal Reserve to release annual reports and weekly summaries of its balance sheet. The Fed must also shorten the lag time to 2 years for releasing the discount window and open market operation transactions records. Labonte claims that the Federal Reserve has been forthcoming with releasing information to the public.

His research takes a detailed look into all of the proposed legislation that Congress has subsequently attempted to pass. He also looks at the relationship between "oversight" and "disclosure," remarking that they are very different: "Oversight entails independent evaluation of the Fed; disclosure is an issue of what internal information the Fed releases to the public."[61] Government Accountability Office (GAO) audits would add an increased oversight that could entail bias. Janet Yellen once said, that GAO audits, "would politicize monetary policy and bring short-term political pressures into the deliberations of the FOMC by putting into place real-time second guessing policy decisions."[62] We can see clearly how the Federal Reserve has been

[60] Congressional Research Services, Marc Labonte, (2017), https://fas.org/sgp/crs/misc/R42079.pdf.
[61] Congressional Research Services, Marc Labonte, Summary, https://fas.org/sgp/crs/misc/R42079.pdf (2017)
[62] Congressional Research Services, Marc Labonte, Summary, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)

forthright with the information they believe the public should see, but not with information that could question their political independence (or that could greatly affect market movement). Most economists share the belief that "the Fed's independence leads to better policy outcomes," as well as a means to maintain credibility.[63]

FINANCIAL CRISES. To some extent, nothing works better than a crisis to bring about political change. According to former Salomon Brothers CEO John Gutfreund, "it's laissez-faire until you get into deep shit," and following laissez-faire comes a period of internal changes.[64] Since 1980 the Federal Reserve Bank has had to deal with several significant economic emergencies, such as the energy/inflation crisis of the early 1980s, the crash of 1987, the dotcom bust, 9/11, and the financial crisis of 2008. Each required unusual action by the central bank - and drew the attention of both Congress and American citizens. So not all progress toward shaking the invisibility cloak was by choice – as efforts to breakdown secrecy were accelerated by specific events. The biggest impact came from the trio of 21st century crises that were inter-connected: the dotcom bust/recession, the 9/11 terrorist attacks, and the 2008 financial crisis.

Michael Bryan, Senior Economist at the Federal Reserve Bank of Atlanta, relates the Federal Reserve responses to the 21st century crises to central banker studies of past financial emergencies, including the "Great Inflation" - meaning the period before and during the Paul Volcker Fed. The Great Inflation was, "the greatest failure of American macroeconomic policy in the postwar period," he writes.[65] He points out that Fed bankers are often academics who have spent careers studying monetary and fiscal policy responses to major events like the Great Depression and more recently the Volcker Fed – and that perhaps such studies makes them more

[63]Congressional Research Services, Marc Labonte, Summary, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)
[64] Michael Lewis, The Big Short, p. 264 (2010)
[65] Michael Bryan, The Great Inflation, https://www.federalreservehistory.org/essays/great_inflation, 2013

inclined to view modern-day events through an academic or old-school lens. The fall of the Bretton Woods system in 1971 was a major factor in the evolution of Fed capabilities, as it was the first time that the U.S. dollar was completely "unanchored."[66] When Paul Volcker became Chairman, inflation was above 11% and the unemployment rate was hovering around 6%. In the preceding years eight years, the Fed had faced a period of "stagflation," and had failed to implement policies to satisfy either side of its mandate for full employment and stable prices. In October 1979, the FOMC implemented a new policy instrument, targeting the reserve growth instead of the fed funds rate.[67] The combination of high interest rates and slow reserve growth helped diminish inflation rates. This crisis is what led to the understanding of price stability being "essential for good monetary policy."[68] It also set a significant precedent: that a modern central bank, and monetary policy intervention in general, was extraordinarily capable of addressing even the most difficult of financial predicaments. Bankers in recent years who have continued to subscribe to this viewpoint have found that it is not always the case – as monetary policy has substantial limitations.

The stock market crash of 1987 was "the first contemporary global financial crisis."[69] It was a significant event for two reasons: first, it showed how inter-connected global markets had become; and secondly, it marked a time when the Fed became a protector of financial markets. On Black Monday (10-19-87) the Dow Jones Industrial Average sank 22.6 percent. Once the United States market began to fall, it triggered a domino effect, which spread to other countries. For example, New Zealand fell 60 percent – which is a haunting illustration of how our markets

[66] Michael Bryan, The Great Inflation, https://www.federalreservehistory.org/essays/great_inflation, 2013
[67] Michael Bryan, The Great Inflation, https://www.federalreservehistory.org/essays/great_inflation, 2013
[68] Michael Bryan, The Great Inflation, https://www.federalreservehistory.org/essays/great_inflation, 2013
[69] Donald Bernhart and Marshall Eckbald, History of the Federal Reserve, 2013, https://www.federalreservehistory.org/essays/stock_market_crash_of_1987

can impacts on the other side of the world. Fed Chair Alan Greenspan released a statement on October 20th stating, "the Federal Reserve, consistent with its responsibilities as the Nation's central bank, affirmed today its readiness to serve as a source of liquidity to support the economic and financial system."[70] Some individuals believe that the Fed's response to this crisis is what "ushered in a new era of investor confidence in the central bank's ability to calm severe market downturns."[71] Within two trading sessions, the Dow was up 288 points (57%). One potential negative is that if banks know that the Federal Reserve is there to help, it could lead to riskier lending and investing practices – perhaps a precursor to the 2008 mortgage crisis.

Robert Rich, the Chief of Economic Research at the New York Fed, constructed a timeline to help citizens understand the complicated characteristics of the Financial Crisis (2007 – 2009) and the steps taken by the Fed to rescue the economy. The recession began in December 2007 and did not end until June 2009. Mr. Rich reports that gross domestic product (GDP) dropped 4.3 percent over the period and unemployment reached 10%. Both monetary and fiscal policies were implemented to stimulate the economy. The Federal Reserve admits that some of the pathways they took to help stabilize the economy were taken down "nontraditional avenues." [72] The traditional methods used to curb the downfall were their control over interest rates and the Fed funds rate. The Fed dropped interest rates from 5.25% to 0-.25% to help protect from the possibility of deflation and, "provide monetary stimulus through lowering the term structure of interest rates, increasing inflation expectations (or decreasing prospects of deflation), and reducing real interest rates."[73] The non-traditional routes taken involved the implementation of

[70] Donald Bernhart and Marshall Eckbald, History of the Federal Reserve, 2013, https://www.federalreservehistory.org/essays/stock_market_crash_of_1987
[71] Donald Bernhart and Marshall Eckbald, History of the Federal Reserve, 2013, https://www.federalreservehistory.org/essays/stock_market_crash_of_1987
[72] Robert Rich, Federal Reserve History, https://www.federalreservehistory.org/essays/great_recession_of_200709
[73] Robert Rich, Federal Reserve History, https://www.federalreservehistory.org/essays/great_recession_of_200709

quantitative easing (QE), also known as large scale asset purchase (LSAP). Quantitative easing is the process where central banks are able to buy government bonds or other market securities in the open market in an effort to lower longer-term interest rates and up the money supply in circulation. Historically, the Federal Reserve had only been able to control short-term interest rates, the rate level set by the FOMC. But the Fed has deposits from all of the banks in the country, on top of their own personal balance sheet (which contains billions). Chairman Ben Bernanke used the excess reserves to buy T-bonds and mortgage securities in the open market to try and control long-term interest rates. The Fed also acquired Fannie Mae, Freddie Mac, and the Federal Home Loan banks' debt. This was done to help stimulate the economy by putting more money into it. The Federal Reserve's balance sheet expanded 450% from 2008 to 2015 (Fig. 4).[74]

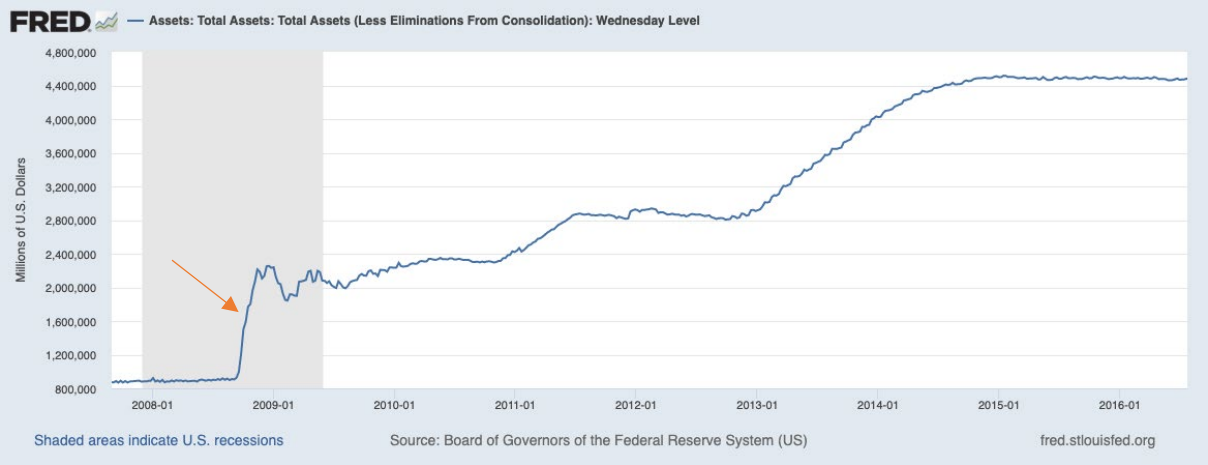

Fig. 4

Quantitative Easing can be understood as a new method for injecting Keynesian monetary stimulus into the economy. By buying securities in the market, it bids the price up, which makes the yield go down. In 2008 this was an unprecedented strategy in the U.S., and it marked the first time that monetary policy was used to directly set long-term interest rates.

[74] FRED, Total Assets: Total Assets (Less Eliminations from Consolidation): Wednesday Level

According to CNBC's Elizabeth Schulze, quantitative easing was seen as a necessity at the Fed because 0% interest rates were not giving the economy the anticipated jolt. She notes that, "GDP growth was contracting at the fastest rate in 50 years, and the economy was losing hundreds of thousands of jobs each month."[75] Chairman Bernanke, "launched" this new program of QE by, "buying trillions of dollars of government bonds and mortgage-backed securities."[76] Within a seven-year period, the Federal Reserve's balance sheet ballooned from $900 billion to $4.5 trillion.[77] The new monetarist policy was a success. Joseph Gagnon, a senior fellow at the Peterson Institute for International Economics, confirms that, "quantitative easing succeeded in lowering long-term interest rates."[78] Schulze also notes that the Fed's low-rate interest rate policy has made it inexpensive for the government to continue to borrow and spend.[79] Will this create a future problem in the U.S., which has already accumulated almost $22 trillion in debt?

Former economist Stephen D. Williamson of the St. Louis Fed has attempted to evaluate the effects of quantitative easing nationally, as well as internationally. In his article Quantitative Easing: How Well Does this Tool Work?, he compares the United States' use of quantitative easing to the Bank of Japan, which was the first high-profile user of a QE program back in

[75] CNBC, The Fed Launched QE Nine Years Ago – These Four Charts Show its Impact, https://www.cnbc.com/2017/11/24/the-fed-launched-qe-nine-years-ago--these-four-charts-show-its-impact.html (2017)
[76] CNBC, The Fed Launched QE Nine Years Age –These Four Charts Show its Impact, https://www.cnbc.com/2017/11/24/the-fed-launched-qe-nine-years-ago--these-four-charts-show-its-impact.html (2017)
[77] CNBC, The Fed Launched QE Nine Years Ago –These Four Charts Show its Impact, https://www.cnbc.com/2017/11/24/the-fed-launched-qe-nine-years-ago--these-four-charts-show-its-impact.html (2017)
[78] CNBC, The Fed Launched QE Nine Years Ago –These Four Charts Show its Impact, https://www.cnbc.com/2017/11/24/the-fed-launched-qe-nine-years-ago--these-four-charts-show-its-impact.html (2017)
[79] CNBC, The Fed Launched QE Nine Years Ago –These Four Charts Show its Impact, https://www.cnbc.com/2017/11/24/the-fed-launched-qe-nine-years-ago--these-four-charts-show-its-impact.html (2017)

2001.[80] Much like what Bernanke faced in the wake of our Financial Crisis, the BOJ had already acknowledged that low interest rates alone were not enough of a Keynesian stimulus to create additional demand. British economic historian and Keynes expert Robert Skidelsky notes that, "the Japanese Ministry of Finance learned that in a massive bear market in both real and financial assets, there is no escape through interest-rate policy."[81] The distinction from the case in the United States was that Japan was not in a crisis, but rather just a long economic slump. Based on its success, Williamson believes that QE will be used again in the future by the Federal Reserve in times of crisis. His analysis shows that it has now been successful in foreign countries as well. Following the financial crisis, "the use of QE became much more widespread, used by central banks in the U.S., the U.K., the euro area, Switzerland and Sweden," for example."[82]

In responding to critics in March of 2009, Alan Greenspan (Chairman from 1987 to 2006), submitted an article to The Wall Street Journal titled: "The Fed Didn't Cause the Housing Bubble." He attempted to justify the bank's actions in the years leading up to the financial crisis. The dotcom crisis/market decline of 2000 and the events of 9-11 had led to a recession, and Mr. Greenspan had responded by lowering interest rates substantially – and keeping them low for a long time. This policy led to mortgage rates declining to levels not seen since the 1950s, and the low rates ultimately created an inflationary bubble in the housing market. He argued that ultimately there were two explanations for the crisis. The first being the, "easy money policies of the Federal Reserve" that "spawned the speculative euphoria."[83] The second was the structure of

[80] Williamson, Quantitative Easing: How Well Does this Tool Work? https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/quantitative-easing-how-well-does-this-tool-work, (2017)
[81] Skidelsky, pg. 66, Keynes: The Return of the Master, (2009)
[82] Williamson, Quantitative Easing: How Well Does this Tool Work? https://www.stlouisfed.org/publications/regional-economist/third-quarter-2017/quantitative-easing-how-well-does-this-tool-work, (2017)
[83] Greenspan, The Fed Didn't Cause the Housing Bubble, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-03-11, (2009)

the mortgage market, from origination to securitization. Greenspan wrote that the imbalance between mortgage rates and monetary policy were not visible until the Fed began to tighten in 2004.[84] He cites Milton Friedman's analysis of the situation for support. Friedman said that, "there is no other period of comparable length in which the Federal Reserve System has performed so well. It is more than a difference of degree; it approaches a difference of kind."[85] While some criticize the Federal Reserve for not taking action sooner, the former Chairman believed that if it had been strictly a monetary policy issue, then the Federal Reserve would have been able to implement quicker actions to resolve the crisis. But instances like these range far beyond internal policy structures and have far broader consequences (just look at foreign nations such as Iceland), making it difficult for the Federal Reserve alone to curb the problem. The result was a deep recession that he called "a global crisis that will unquestionably rank as the most virulent since the 1930s."[86]

According to Ryan Avent at The Economist, the problem began with, the "irresponsible mortgage lending in America."[87] Getting a loan from the bank to buy a house became increasingly easy. While the access was easy, the ability to repay loans became difficult and the underlying collateral was losing value. Loans were given to "subprime" rated individuals – meaning the ability for them to repay their loans was slim (and default was high).[88] These very risky loans were then transferred to Wall Street firms who turned them into presumed low-risk

[84] Greenspan, The Fed Didn't Cause the Housing Bubble, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-03-11, (2009)
[84] Greenspan, The Fed Didn't Cause the Housing Bubble, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-03-11, (2009)
[85] Greenspan, The Fed Didn't Cause the Housing Bubble, Cause the Housing Bubble, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-03-11, (2009)
[86] Greenspan, The Fed Didn't Cause the Housing Bubble, Cause the Housing Bubble, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-03-11, (2009)
[87] Ryan Avent, The Economist, https://www.economist.com/schools-brief/2013/09/07/crash-course, (2013)
[88] Ryan Avent, The Economist, https://www.economist.com/schools-brief/2013/09/07/crash-course, (2013)

securities by bundling them together. The banks figured that the housing market would continue to appreciate, but America then hit a housing slump in 2006. The "safe" securities were worth next to nothing. In 2007, "the ultimate glue of all financial systems" began to "dissolve."[89] Banks started credit-default swaps, where "the seller agrees to compensate the buyer if a third party defaults on a loan."[90] This was intended to spread out the risk and make it less concentrated. However, the opposite occurred, and risk became more concentrated. The collapse of Lehman Brothers created even more market panic. Contrary to Mr. Greenspan's argument, the Economist states that, the Fed "made no attempt to stem the housing bubble."[91] Global crises like these create a valid argument among Fed critics for more transparency to create a sense of security; and to ensure that this won't happen again. The housing bubble did create a climate for congressional action to take place, including the passing of laws allowing for more scrutiny over the Fed to take hold – thus increasing transparency. The Federal Deposit Insurance Corporation (FDIC) "closed those banks that had exceptionally large losses relative to their capital - and sold their deposits to banks that had a secure capital position."[92] By the end of 2009 just under 200 banks failed, and another 250 by 2011. The U.S. government forced the banks to acquire failing banks that way the entire system wouldn't topple due to counter-party risk. The government then took over Fannie Mae and Freddie Mac under "conservatorship."

The financial crisis is important to understand because the events that unfolded helped act as a catalyst that further pushed the Fed to open its doors. Greenspan reaches the conclusion that, "If we are to retain a dynamic world economy capable of producing prosperity and future

[89] Ryan Avent, The Economist, https://www.economist.com/schools-brief/2013/09/07/crash-course, (2013)
[90] Ryan Avent, The Economist, https://www.economist.com/schools-brief/2013/09/07/crash-course, (2013)
[91] Ryan Avent, The Economist, https://www.economist.com/schools-brief/2013/09/07/crash-course, (2013)
[92] Ryan Avent, The Economist, https://www.economist.com/schools-brief/2013/09/07/crash-course, (2013)

sustainable growth" things must change.[93] We must use a "regulatory regime that will ensure responsible risk management."[94] The complicated nature of the crisis speaks volumes in terms of the need for more transparency at the Fed. According to Stanford University researchers, the Financial Crisis Inquiry Commission conducted 19 consecutive days of public hearings in September of 2008 and subsequently interviewed 700 individual bankers, investors, and regulators – including Federal Reserve Governors and Regional Presidents – regarding the causes and responses to the meltdown. "The prime example is the Federal Reserve's pivotal failure to stem the flow of toxic mortgages, which it could have done by setting prudent mortgage-lending standards.[95] The Federal Reserve was the one entity empowered to do so and it did not," the final report concluded.[96]

What followed was the Dodd-Frank Act, and an acceleration of moves by the Fed to be more transparent. Section 13(3) of the Federal Reserve Act allows the Federal Reserve to take emergency action during times of crisis. The Wall Street Reform Act and Consumer Protection Act of 2010 all followed the Dodd-Frank Act, which mandated that the Fed must undergo an audit when 13(3) is enacted. The only catch is the GAO must audit within 12 months of Fed action. The Federal Banking Agency Audit Act of 1978 allowed the GAO to audit aspects of the Fed that are not related to monetary policy. The GAO has been described as the "congressional watchdog" and it is tasked with helping Congress maintain the respectability of the federal government.[97] The GAO has been allowed to audit Fed related cases since 1978. They can be initiated through legislation or by specific members of Congress. Marc Labonte's (CRS) research

[93] Greenspan, The Fed Didn't Cause the Housing Bubble, https://www.wsj.com/articles/SB123672965066989281 (2009)
[94] Greenspan, The Fed Didn't Cause the Housing Bubble, https://www.wsj.com/articles/SB123672965066989281 (2009)
[95] Stanford University, Financial Crisis Inquiry Commission, http://fcic.law.stanford.edu
[96] Stanford University, Financial Crisis Inquiry Commission, http://fcic.law.stanford.edu
[97] Congressional Research Services, Marc Labonte p. 3, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)

argues that the GAO has been conducting audits of the Fed multiple times each year. These audits can include – regulatory duties and individual positions within the payment system. According to the 32 U.S.C. 714(b) this does not include:

> (1) transactions for or with a foreign central bank, government of a foreign country, or nonprivate international financing organization;
>
> (2) deliberations, decisions, or actions on monetary policy matters, including discount window operations, reserves of member banks, securities credit, interest on deposits, and open market operations;
>
> (3) transactions made under the direction of the Federal Open Market Committee; or
>
> (4) a part of a discussion or communication among or between members of the Board and officers and employees of the Federal Reserve System related to clauses (1)-(3) of this subsection.[98]

The Helping Families Save Their Homes Act (P.L. 111-22) and the Dodd Frank Act (P.L. 111-203) each came with their own requirements. The Helping Families Save Their Homes Act allows GAO audits of "any action taken by the Board under Section 13(3) of the Federal Reserve Act."[99] The results must remain confidential, as the GAO is not allowed to release their findings to the public. This has not been enacted since the financial crisis. The Dodd-Frank Act requires the details of "the rationale for assistance; the identity of the recipient; the date, amount, and form of assistance; collateral pledged; the material terms of the assistance; and the expected cost to the taxpayer."[100] Title XI of the Dodd-Frank Act allows the GAO to complete audits on open market operations, discount window lending, and actions taken during emergencies.[101] This is

[98] Congressional Research Services, Marc Labonte, p. 4, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)

[99] Congressional Research Services, Marc Labonte, p. 4, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)
[100] Congressional Research Services, Marc Labonte, p. 5, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)
[101] Congressional Research Services, Marc Labonte, p. 5, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)

the first time in history Congress has had this much power over Federal Reserve actions. Officially this act allows for:

> A) the operational integrity, accounting, financial reporting, and internal controls governing the credit facility or covered transaction;
>
> (B) the effectiveness of the security and collateral policies established for the facility or covered transaction in mitigating risk to the relevant Federal reserve bank and taxpayers;
>
> (C) whether the credit facility or the conduct of a covered transaction inappropriately favors one or more specific participants over other institutions eligible to utilize the facility; and
>
> (D) the policies governing the use, selection, or payment of third-party contractors by or for any credit facility or to conduct any covered transaction. [102]

One major difference between the Federal Reserve and other government extensions is their budget. The Fed does not have "congressional budgetary oversight" – it's a self-financing entity.[103] In short, the Fed is self-sufficient, and historically has not reported how it spends its money. Labonte notes that this has been a point of contention among politicians who advocate for more oversight. But in reality, it is the core component of independence and keeps the bank insulated from political persuasion because their funds do not have to be approved by Congress.

INFORMATION TECHNOLOGY. The rising tide of technology has changed the landscape of the financial system – and it has paved the way for increased transparency across multiple platforms. After an era of opaqueness, the Federal Reserve has embraced transparency and now utilizes new communication channels to help increase its visibility – including various forms of social media to reveal and support its agenda. Through the internet (website and press releases),

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[102] Congressional Research Services, Marc Labonte, p. 5, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)

[103] Congressional Research Services, Marc Labonte, p. 5, https://fas.org/sgp/crs/misc/R42079.pdf. (2017)

Twitter, Facebook, LinkedIn, YouTube, and business cable channels like CNBC, the Fed has shredded its invisibility cloak and become a more present apparatus than ever before. The drive for increased accountability is heavily correlated with the social demands that developed in the new communication age. In this new American culture of accountability – which can be monitored through technology – we may evaluate the rise of transparency on both a macro and micro level. Specifically, how the modern transparent Fed developed as the result of a combination of top-down change (political/bank leaders) and an organic evolution of policy from the field member institutions (social/technological demands), as regional banks responded to their respective communities. Traffic to Fed websites has increased steadily in recent years (Fig. 5).[104]

Website	Monthly Visitors	Time Spent	Pages Viewed	Domestic Visitors (%)
STLFed.org(FRED)	1,200,000.00	5 minutes	4	58%
FederalReserve.org	1,000,000.00	2 minutes	3	65%
NYFed.org	343,000.00	2 minutes	2	61%
SFFed.org	190,000.00	1 minutes	2	57%
ATLFed.org	95,000.00	1 minutes	2	73%

Table 5 Source: similarweb.com

Individual Fed governors now regularly appear on financial news and other media outlets. Policies and opinions are disseminated through public appearances, TV interviews, printed publications, website articles, Facebook posts, and Tweets. Technological advances appear to have served as catalysts in recent years in terms of the Federal Reserve becoming more entrenched in daily life. Without avid Twitter and Facebook users, the Federal Reserve would not be able to reach such a significant number of citizens easily. Without cable channels like Bloomberg, Fox Business and CNBC, Fed officials would have more difficulty reaching audiences and explaining their views on markets and the economy. Twitter provides the perfect

[104] Federal Reserve Internet Traffic, Similarweb.com Analytics

means to disseminate statistical information and policy decisions at precise times. The Fed has its own YouTube channel with almost 35,000 subscribers. Clearly, information technology has taken the Fed, its leadership, and its policies from Wall Street to Main Street. If transparency is not only the motivation to share policies and procedures, but also the efficient means of conveying that information (with needed explanation for the layman), then social media has been an excellent fit for our central bank.

In 2006 the Federal Reserve Bank of San Francisco published an article entitled, "What Steps has the Federal Reserve Taken to Improve Transparency?" The piece outlines the bank's change in public relations attitude, including speeches, FOMC statements and minutes, and the monetary policy report to Congress.[105] At the time, Alan Greenspan was pushing for a change in "attitude," which was an interesting choice of words for a Chairman. This was accomplished in part by having both Fed Presidents and Governors giving regular and reoccurring speeches – many of which were recorded, published, or even broadcasted on business channels. The FOMC meeting statement and subsequent minutes were also important to the increase of transparency. Each statement has four key components: target fed funds rate decision, rationale, risks, and vote. These statements have become more detailed over the years. The Monetary Policy Report to Congress is also important as it contains the "monetary policymaking process and the possible future path of monetary policy."[106] It is also important to look at other less conventional factors that have reached the broader public in terms of clearer communication. For instance, Facebook,

[105] What Steps Has the Federal Reserve Taken to Improve Transparency? https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)
[106] What Steps Has the Federal Reserve Taken to Improve Transparency? https://www.frbsf.org/education/publications/doctor-econ/2006/september/transparency/ (2006)

LinkedIn, and Twitter have been used by Federal Reserve officials and regional banks to help disseminate and spread awareness for what they are doing.

Television media was the first component to shed light on the Fed's activities – and offer explanations on policy actions. The Financial News Network was created on November 30th, 1981 as the first financial and business news television network. It was founded by the Los Angeles news station KWHY-TV, and provided 24-hour news on markets, finance, economics, and late-night business lectures. The wealth management firm Merrill Lynch was FNN's first and largest investor. The company was ultimately bought-out by NBC, which rebranded it as the Consumer News and Business Channel (CNBC). The popular morning business show, Squawk Box, started in 1995. The title originates from a term used in brokerages for a permanent intercom used to communicate stock deals or sale priorities.[107] It is noteworthy because it was an internal precursor to Twitter, and was a means for the network to provide instant Federal Reserve news and information (among other news). The anchors often have former Fed officials on-air to help interpret and explain Fed activities. Throughout the day, different viewers can see different perspectives on the markets, up to date stock information, and important news happening in the financial sector. At present, it is not unusual for a current, sitting FOMC voting member to grant interviews. In terms of social media, this is probably the best form of transparency.

The Federal Reserve also uses a Twitter account as a means of disseminating important information. Its page states, "the official Twitter channel of the Board of Governors of the Federal Reserve System."[108] This Twitter profile was created in 2009, which was seven years before the creation of Facebook accounts by the Fed and its regional banks. The Federal Reserve Twitter account has 545,000 followers, which is substantially more than the Board of Governor's

[107] CNBC: Squawk Box Page, https://www.cnbc.com/squawk-box-us/
[108] Twitter: The Board of Governors of the Federal Reserve, https://twitter.com/federalreserve?lang=en

Facebook "likes" at 24,000. The account appears to be more geared toward economic agendas within the country, and other important news topics. The first page has links that will direct the reader to the current week's speeches, press releases, testimonies, and what the Chairman is doing. It provides a weekly update on assets and liabilities of commercial banks in the United States – as well as the Fed's current balance sheet ($4.1 trillion). The Twitter feed seems more focused on showing its consumers economic related information – while the Facebook page(s) is geared more towards showing the community side of the employees who work at the specific branches. In terms of transparency, bankers, investment managers, investors, politicians, and business leaders around the globe are probably the biggest beneficiaries of this modern Fed media, but it's available to all. Together, both the Twitter account and the Facebook accounts highlight different aspects of the Federal Reserve – the business side and the community (public relations) side. As far as general public relations are concerned, this helps promote transparency through giving citizens a well-rounded version of this esoteric operation. Twitter also offers links to various speeches published by FOMC Presidents/Governors. In many respects, the Fed's approach to consumers is right out of the standard corporate playbook.

According to Business Insider, the creation of the Federal Reserve's Facebook presence in 2016 was, "part of an effort to reach out directly to the general public."[109] Through this action, the interested parties would have access to more up to date information, as well as the ability to "like," "comment," or "post" on the Fed's activities. Creating a presence on Facebook was aimed at, "increasing the accessibility and availability of Federal Reserve news and educational content."[110] This was particularly important in the post-recession time, as citizens grew more

[109] Reuters, Business Insider, https://www.businessinsider.com/r-us-federal-reserve-launches-facebook-page-2016-8, (2016)
[110] Reuters, Business Insider, , https://www.businessinsider.com/r-us-federal-reserve-launches-facebook-page-2016-8, (2016)

aware of the central bank's existence and role in the economy. For users, a quick Facebook search will reveal multiple different Fed accounts. Individual bank branches, such as Richmond, San Francisco, Cleveland, Philadelphia, Atlanta, and Dallas, were all early adopters of the new modes of communication. There are actually pages specifically dedicated to the "Board of Governors of the Federal Reserve System," and also ones dedicated to each of the twelve individual regional banks. One interesting characteristic of the postings by the various regional banks is that they are not geared towards giving citizens information solely on economic issues, but rather information on the branch President, bank staff, and community involvement.

Facebook appears to have the dual job of informing regional citizens on both economic matters and regional/community activities of the branch. The Facebook pages offer posts, videos, photos, and more about what is happening within their immediate communities and in the extended Fed system. The site also "links" the different communication channels citizens can use to reach them – phone numbers, addresses, and an instant chat box. There was no specific data available for the amount of activity across the "chat" system, but the fact that one can establish an instant messaging link with bank representatives is noteworthy. The Facebook pages also offer direct links that will transfer users to a frequently asked questions area or to the specific branch site. These amenities were never offered before.

After examining the twelve Facebooks, it appears that location is a major driver of the information released over this media channel. The Federal Reserve Bank of Richmond seems to have the dynamic approach of "strengthening our economy" through the community.[111] For example, the Richmond Fed has a myriad of postings geared towards helping students make

[111] Facebook: Fed of Richmond, https://www.facebook.com/federalreservebankofrichmond/

post-high school plans, college competitions, volunteer activities, co-worker team building exercises, and community development. It is interesting to see that there are relatively few posts that contain any information regarding the Fed's dual mandate or any part of the larger Fed conglomerate. The entire page is "community driven," with posts mostly dedicated to the city in which it serves. What can be deducted from this approach to social media is that a goal for the regional branches is likeability within the community. Social media accounts like this are increasingly focused on communicating with the public – and in this instance putting a face on a giant government apparatus that by its own nature is difficult to understand.

The Federal Reserve Bank of Minneapolis has a smaller following – with only 1,437 "likes" and 1,602 "followers." Most of their recent posts have been promoting citizen engagement with their booth at the Minnesota State Fair. They do an excellent job of communicating with their region, including creative posts with taglines like, "how would you sit on a throne full of money" to help attract fair-goers. They passed out bags of shredded bills and posted countless pictures of themselves interacting with their community. Much like Richmond, their account is increasingly focused on coming together with the public and less concerned with discussing their dual mandate.

On the larger side, the Federal Reserve Bank of San Francisco seems focused on both community and economic driven purposes. There are 7,895 people who have "liked" the page and 8,398 people who have "followed" it. The most recent posts include remarks from President Daly and Vice Chair Clarida on "Research Perspectives on the Costs & Benefits of a Hot Economy," and "Valuable Insights into Asian Values." While they have a substantial array of economic/financial information, they also showcase their employees. For instance, the site displays "Employee Art," which this past month featured Automation Tech Consultant Sean

Qíu.[112] Another example is the Federal Reserve Bank of Dallas, which, holds a 4.6 out of 5 stars rating and has 1,361 "likes" and 1,511 "followers."[113] Its page highlights Houston's Habitat for Humanity, sustainability initiatives, and their role in giving back to the community. As a public service, the Bank sponsors a speaker series where they bring in interesting guests like Ellen Ochoa, who was a former NASA astronaut and NASA Director. Chairman Jerome Powell visited in November of 2018 to discuss Global Perspectives. Bank President Rob Kaplan recently gave a lecture on the "Neutral Rate of Interest." For those interested, the Bank does provide detailed information regarding the dual mandate and economic news too. As an additional example, the Cleveland Fed uses Facebook to support and advertise its Learning Center and Money Museum. Its posts include youth opportunities, economic careers, and the Cleveland Fed Digest (liked by 2,491 citizens). In terms of transparency, it is important to see the common thread here – the Facebook platform is putting faces and personalities to individuals who historically have been opaque. The marketing strategy appears balanced, as the Board of Governors' site is more technical in nature, and the regional banks are more focused on community outreach. In the case of Facebook, the Fed has used the platform as well as any corporation to connect with citizens - while simultaneously projecting economic forecasts and news onto user's screens.

The Fed is also active on more business-oriented platforms. The Federal Reserve Board and individual banks have their own separate "LinkedIn" accounts. The Federal Reserve Board is located in Washington and has a substantial following. They have over 40,694 connections and 2,242 employees.[114] Similar to Facebook – their LinkedIn account offers different hyperlinks to various websites relevant to the bank's activities, such as the New York Fed branch, the Federal

[112] Facebook: Fed Bank of San Francisco, https://www.facebook.com/SFFedReserve/.
[113] Facebook: Fed Bank Dallas, https://www.facebook.com/FRBDallas/
[114] Federal Reserve Board LinkedIn, https://www.linkedin.com/company/federal-reserve-board/

Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of Currency. Among multiple websites, the Federal Reserve's "FOMC Speak," which publishes Federal Open Market Committee Participants' public engagements, reads much like a list of tour dates for performers. "FOMC Speak" is hosted by the Federal Reserve Bank of St. Louis' database FRED. This website reports all public speaking engagements – whether testimonies, presentations, speeches, audio interviews, statements, remarks, press conferences, or any other form of public engagement. Both Fed officials and individual Fed bank branch governors are included on the list, and data is available back to 2010. The site also offers a database of FOMC policy votes dating back to 1936, including a history of dissents. The FOMC holds "eight regularly scheduled meetings per year. During the meetings the 19 participants share their perspectives on national and international economic conditions; the regional Fed presidents also discuss economic conditions in their local districts."[115] This makes it seem like perhaps the rotation of speeches/public appearances are strategically scheduled such that information in support of policy decisions is disseminated with ample direct explanation and discussion. Chairman Jay Powell says, "In a democratic system, any degree of independence brings with it the obligation to provide appropriate transparency." But in an effort to externalize information by the Fed, we must understand the importance of independence – and the necessity to have a central bank that is outside of mainstream politics. [116] New communication channels have made the implementation of transparency initiatives relatively easy, and have provided the bank with a strong argument that it has sufficiently met its obligations for disclosure. In effect, high tech has helped the Fed retain its operational independence, and also kept the calls for more oversight in

[115] FOMC Speak, https://www.stlouisfed.org/fomcspeak
[116] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html, (2018)

check. However, operating under the new framework of transparency, particularly with the greater public exposure that comes with it, presents new challenges for Federal Reserve officials.

The Federal Reserve's "YouTube" channel is another method of disseminating information and serves as a source of educational clips and archived speeches. There are over 200 videos, including lectures done at various colleges, like Bernanke's "College Lecture Series." The Fed even conducts "College Fed Challenges," where students are selected to make monetary policy recommendations. It has FOMC Press Conferences dating all the way back to 2010. Various topics are covered, such as "lessons from the financial crisis," "banks and lending," and the "balance between saving and spending.

IV. Operations Under the New Transparency Framework

"Thoroughly transparent, thoroughly accountable" – Chairman Ben Bernanke

THE "NEW" KEYNESIANS. A new framework of transparency would not by itself create the potential for counterproductivity or political bias at the U.S. Federal Reserve. However, coincidental to this trend in transparency has been the rise of the New Keynesian school of thought among economists and bankers – and alternative interpretations of interventionalist monetary policy. Up until the 1970s, limited Keynesian monetary policies worked effectively. According to Ohio State's Richard Vedder, the "General Theory" advocates "a planned economy in which the state sets the framework of economic competition and leaves unfettered the market, with all its positive opportunities for private initiative and freedom to carry on with its good work."[117] He suggests that, "later generations, however, saw the growing ineffectiveness of Keynesian remedies."[118] It is possible that globalization played a role, along with a shift in the influence of certain economic sectors. Demand for oil, the Cold War, greater access to credit, and changing demographics all likely altered U.S. economic cycles. The "New Keynesians" – economists who promoted alternative measures of monetary policy and a greater reliance on financial and economic models for direction - embraced a more active role for government across economic cycles. The idealistic notion was that instead of reacting to mitigate the impact of an economic downturn, government and central banks could attempt to avert them entirely – essentially a preventive interventionalist policy. This new branch of Keynesian ideology came about through actions taken by students who completed their studies around the time the Federal

[117] Vedder, The Great Economics Debate, https://www.wsj.com/articles/the-great-economics-debate-1503354510, (2017)
[118] Vedder, The Great Economics Debate, https://www.wsj.com/articles/the-great-economics-debate-1503354510, (2017)

Reserve was maintaining high interest rates (around 1980). An article in Bloomberg written by Carnegie-Mellon and Richmond Fed economist Marvin Goodfriend expresses how this shift took hold. He says that when Volcker embarked on a radical and deliberate disinflation strategy to get price pressures under control in the early 1980s, it validated the power of creative monetary policy and opened the door to new strategies and quantitative metrics. In terms of Keynesian attributes, Goodfriend argues that a debate soon developed at the Fed between New Keynesian viewpoints and those of the offshoot University of Chicago's Real Business Cycle theorists.[119] At the core of the debate was the extent to which a hawkish/restrictive monetary policy would impact pricing, growth, and unemployment –given that the U.S. had just lived through a period of stagflation. It appears Volcker himself incorporated both viewpoints in his monetary policy.

Information technology has changed economic theory in many ways, and as a result has provided bankers with quantitative data to help support policy directives. The New Keynesians have embraced the data. Skidelsky says that the New Keynesians "have a divided life: they accept macroeconomic models in which the assumption of perfect information makes financial markets superfluous, and yet develop micro-economic models which show that markets can fail."[120] He argues that, "by improving on the math and abandoning common sense," the shift from the traditionalists has been pronounced.[121] With the improvements of different mathematical models, one is able to solve certain dilemmas through calculations. As a product of the early 1980s, Goodfriend helped pioneer the forecasting models that were used to try and predict the outcome of raising interest rates to 15%-20% between 1980 and 1981. Statistically, the model incorporated the inverse relationship between unemployment and inflation highlighted

[119] Goodfriend, Bloomberg, pp. 3-9
[120] Skidelsky, p. 44, Keynes: The Return of the Master (2009)
[121] Skidelsky, p. 109, Keynes: The Return of the Master (2009)

in the Philip's Curve. The Volcker team projected that by battling inflation, they could ultimately lower the unemployment rate. Historically, there has been no better example of the use of monetary policy as a price control mechanism than the period from 1980 to 1984. Unemployment has reached 10% of the workforce only twice since 1945. In terms of monetary policy responses, note the decline from 10.8% to 5% in the 1980s subsequent to the Volcker experiment; and then the impact of the Bernanke/Yellen 0% interest rates and QE from 2010 to present. (Fig. 6).[122]

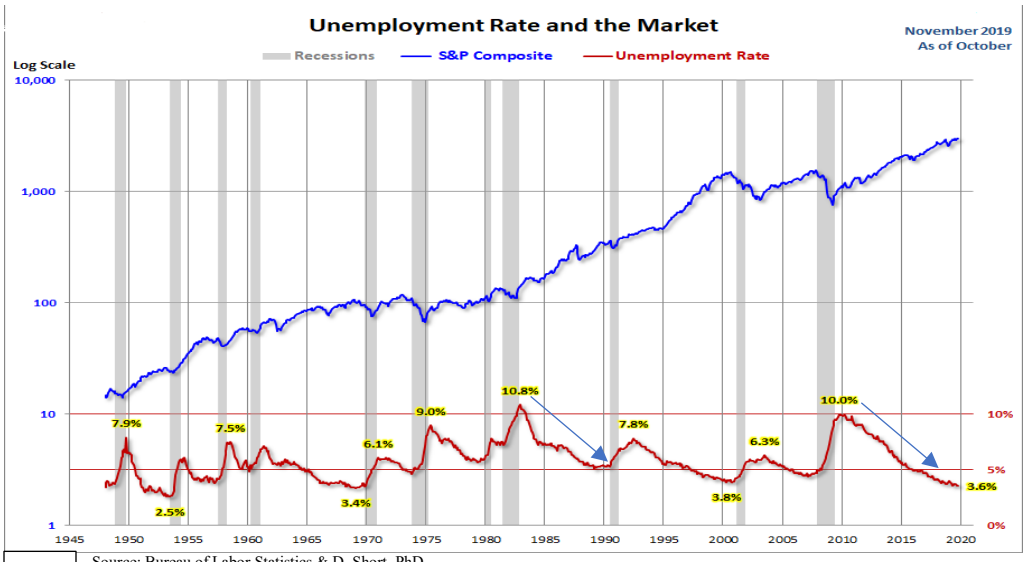


Fig. 6 Source: Bureau of Labor Statistics & D. Short, PhD

As Goodfriend writes, "Far from being the prisoners of abandoned doctrine, they (FOMC) were shrewd and committed." – and essentially developed a new form of macroeconomic modeling encompassing multiple viewpoints. [123] At its core, this exemplifies a classical Keynesian monetary approach to crisis, but with the addition of modern tech modeling tools championed by the New Keynesians.

[122] D. Short Ph.D, Adviser Perspectives, Bureau of Labor Statistics
[123] Skidelsky, p. 109, Keynes Return of the Master, (2009)

Skidelsky argues that today we concentrate more on the supply side than the demand side of the economic equation. Although often characterized as the antithesis of Keynesian theory, supply-side economics is actually another offshoot of Keynesian government intervention policy. First introduced by Economist Arthur Laffer and recognized as the cornerstone of "Reaganomics" in the 1980s, it uses models to show the correlation between tax rates and tax revenue. Laffer argues in his book Trumponomics that, "The benefits of high economic growth far outweigh the cost of short-term deficits." [124] He considers himself a follower of Keynesian ideology, and contends that deficit-spending along with a fiscal policy that includes lower tax rates does not veer too far from a traditionalist - and points to Reagan-era GDP growth to support his ideas. His co-author, Stephen Moore, claimed in the Wall Street Journal recently that Trump's tax cuts have provided a bigger boost to U.S. GDP in just one year than 0% interest rates, quantitative easing, and large deficit spending did over any similar period during the previous eight years. [125] Keynes would likely disagree with this policy given that GDP was consistently positive over the period in question - and the U.S. had an $800 billion budget deficit in 2019. Also, America's debt is now ten times what it was when Reagan left office, so the potential for long-term negative consequences appear to be higher. When President Ronald Reagan and Prime Minister Margaret Thatcher were in office, they forged a path towards more capitalist ideologies. The deficit spending at the time was primarily geared toward the defense industry, which likely provided a significant, multiplier-effect stimulus. The "legacy of unemployment" they inherited from the 1970s was certainly reversed through what could only be

[124] Moore & Laffer, Trumponomics p. 16, (2018)
[125] Moore & Laffer, Trumponomics p. A12, (2018)

termed a successful application of traditional Keynesian government spending.[126] The current round of deficit-financed tax cuts probably won't have the same long-term effect.

The Real Business Cycle Theorists believe that government intervention should only occur in times of true crisis, and not as a traditional Keynesian way of providing demand at the bottom of regular and normal market cycles. Originally formulated at the University of Chicago, this modification of traditionalist concepts still holds that markets and economies exhibit normal ups and downs. Intervention should only take place when there are "shocks" to the system. UC Berkeley Professor of Political Economy David Romer falls into the Real Business Cycle Theorist camp. In his paper, *The Most Dangerous Idea in Federal Reserve History: Monetary Policy Doesn't Matter*, he concludes that, "a belief that monetary policy can achieve something it cannot –such as stable low inflation together with below-normal unemployment –can lead to the pursuit of reckless polices that do considerable damage."[127] In looking at the past forty years, the U.S. economy has experienced three distinct crisis periods: stagflation – low growth and rapidly rising prices (fueled by an energy crisis) in the 1970s, "irrational exuberance," which led to the dot-com bust recession (tech market bubble), and the financial crisis caused by excessive mortgage lending and poor bank capitalization (housing crash). Romer argues that the Fed was responsible, in part, for each of these problems, either by failing to properly diagnose economic excesses soon enough or by applying the wrong stimulus at the wrong time. Ideally, monetary policy would remain neutral over an economic cycle, which means short-term interest rates would stay a fraction above prevailing inflation. Monetary stimulus and Congressional action would be needed in response to these crises under the RBC model, as each would be considered

[126] Skidelsky, pg. 107, Keynes Return of the Master
[127] Romer, p. 60, The Most Dangerous Idea in Federal Reserve History: Monetary Policy Doesn't Matter, *American Economic Association,* https://www.aeaweb.org/articles?id=10.1257/aer.103.3.55
(2013)

a "shock." Romer also writes that a conglomeration of Keynesian ideas has led to "coordination failure."[128] In other words, between the Traditionalists, New Keynesians, RBCs, and Monetarists, too many schools of thought are being applied without a central strategy.

Harvard Economist Gregory Mankiw has written several papers on "New Keynesians" and how modern monetary policy has marked a significant change in the application of traditional theories. In *The Reincarnation of Keynesian Economics,* he provides a framework that compares how Keynesian policies are adopting ideas that were once considered "monetarist," as opposed to traditional government spending models.[129] It would have been impossible for Keynes to envision the power now harnessed by central banks and their ability to influence spending and financial markets in general. Today most economists subscribe to Milton Friedman's viewpoint of the theory of money – that inflation is based off of money in circulation paired with population – as opposed to being driven by full employment, which is what Keynes believed. Mankiw argues that the New Keynesians adopted the "monetarist economics of Milton Friedman," as it offered a faster and more efficient means to influence demand than the cumbersome task of passing legislation.[130] Writing at the height of the Financial Crisis in 2008, he said, "In normal times, the Fed can bolster aggregate demand by reducing interest rates. Lower interest rates encourage households and companies to borrow and spend. They also bolster equity values and, by encouraging international capital to look elsewhere, reduce the value of the dollar in foreign-exchange markets. Spending on consumption, investment and net

[128] Romer, p. 21, The Most Dangerous Idea in Federal Reserve History: Monetary Policy Doesn't Matter. *American Economic Association,* https://www.aeaweb.org/articles?id=10.1257/aer.103.3.55 (2013)
[129] Mankiw, p. 2, The Reincarnation of Keynesian Economics. *National Bureau of Economic Research,* http://www.nber.org/papers/w3885.pdf (1991)
[130] Mankiw, p. 2, The Reincarnation of Keynesian Economics. *National Bureau of Economic Research,* http://www.nber.org/papers/w3885.pdf (1991)

exports all increase."[131] As an economist however, he seems to takes issue with the ability of the central bank alone to address a major crisis, using 2008-2010 data to show how lower interest rates did not provide the same multiplier effect that infrastructure spending might have provided. The timing and degree of government involvement has also been highly debated. He seems to have a classical Keynesian view of the economy, a system "fraught with market failure."[132] But clearly, he questions the ability of central banks to micro-manage an economy based on economic models. Skidelsky states that, the "main source of market failure," is a result of "asymmetric information."[133] The belief that if humans are not rational, then the markets can't be expected to be rational makes sense. As indicated in Figure 7 below, in addition to more frequent adjustments to the federal funds rate, the FOMC has been more active in secondary market operations.[134] The impact on interest rates and the stock market has been significant.

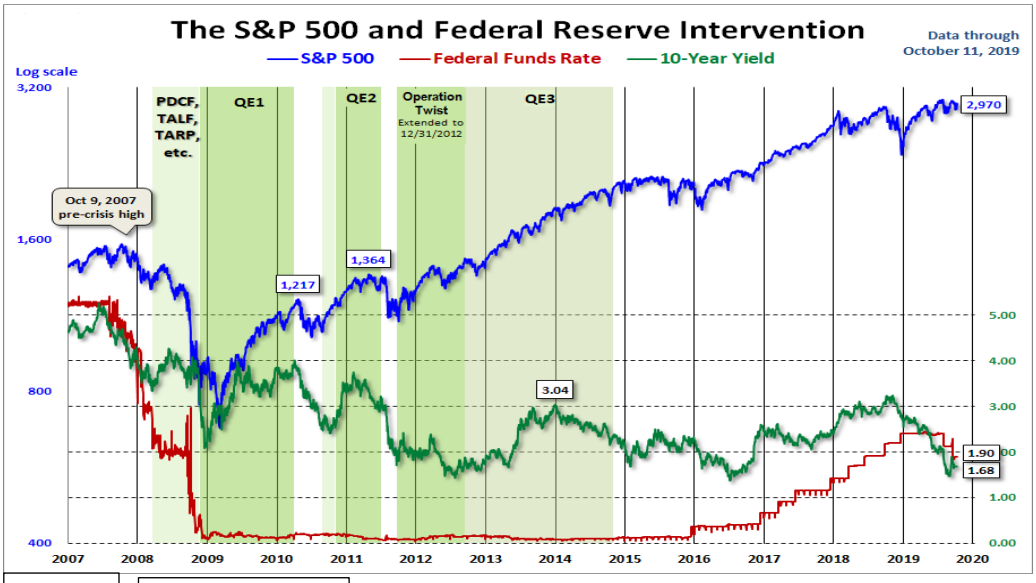


Fig. 7 Source: FRED & D. Short, PhD

[131] Mankiw NYT, p. 1, The Reincarnation of Keynesian Economics. *National Bureau of Economic Research,* http://www.nber.org/papers/w3885.pdf (1991)
[132] Mankiw, p. 9, The Reincarnation of Keynesian Economics. *National Bureau of Economic Research,* http://www.nber.org/papers/w3885.pdf (1991)
[133] Skidelsky, p. 46, Keynes Return of the Master
[134] D. Short Ph.D., Adviser Perspectives, FRED

In terms of transparency, there appears to be a tendency for New Keynesian central bankers to be more active in markets – as they continue to build on the successful precedent set by Paul Volcker. In some respects, the Greenspan, Bernanke, and Yellen Feds exemplify a continuation of experimental monetary policy. With more visibility, comes more scrutiny – and perhaps more expectations for bankers to act. Under such a spotlight, Fed Chairmen/women and voting members of the FOMC may feel added pressure to micro-manage the economy. The wealth effect exhibited in Figure 7, which can at least in part be attributed to central bank policy, is not lost on politicians who in turn may be more inclined to assert influence or oversight on Fed operations. Economists now seem to embrace a continual, managerial role for central bankers – making them *active participants* in global markets. But the 2008 financial crisis certainly shows that even the best monetarist central bankers are not capable of forecasting a giant crisis, even when the evidence in hindsight was there.

In an article for Bloomberg, Matthew Boesler claims that, "*The 80s Are Thriving at Trump's New Keynesian Fed."* He highlights a joint theory created by Marvin Goodfriend, Richard Clarida, and John C. Williams. Clarida is currently the Federal Reserve's Vice Chairman – giving him a voting position. Williams was the former Federal Reserve President in San Francisco, but recently assumed the role of New York Fed President, which gives him a permanent voting position on the FOMC. The article suggests that this new team is following a hybrid approach to monetary policy, based in part on the Fed's new "open and transparent" philosophy. Boesler writes, "if the central bank can convince the public that it will keep rates low and stable, those expectations will be largely self-fulfilling. That in turn will stabilize other important aspects of the economy, such as unemployment."[135] He elaborates that this group of

[135] Bloomberg, The 80s Are Thriving at Trump's New Keynesian Fed, https://www.bloomberg.com/news/features/2018-08-07/the-80s-are-thriving-at-trump-s-new-keynesian-fed, (2018)

individuals see "a role for central bankers to correct failures that occur in the free markets," and believe that "the government can stimulate employment by creating demand for goods and services."[136] The question that remains, he says, is how much stimulus is needed to keep inflation in check and unemployment low – it is always a moving target. The implication is that perhaps some Fed activity might be window-dressing…giving the appearance of taking positive action in response to the higher level of visibility. Despite 0% interest rates and multiple bond-buying initiatives through QE that took the Fed's balance sheet above $4 trillion, the U.S. economy has been stuck at a 2% GDP level for a decade. Fed action did not create the anticipated level of demand.

STATISTICAL TRENDS IN TRANSPARENCY. Public appearances by Federal Reserve officials are a matter of public record, and the history of those speeches, interviews, press conferences, and lectures provides a baseline for one major component of the transparency effort. We can use this baseline to measure trends in appearances and any resulting economic impacts. It is generally accepted that FOMC members and Federal Reserve Governors have the power to move markets. Yet, the linkage between higher levels of transparency and the corresponding movement in markets is a relatively new field of study. Much of the contention in terms of interest rate bias among Fed bankers focuses on regional bank Presidents. The "regional aspect" has been the subject of a number of studies, particularly because it appears the most vulnerable to local interest. But as seen in the following chart, it is also because those Presidents are the ones who appear to be spearheading the effort to engage with the public (Fig. 8).[137] Regional bankers have made 60% more appearances than the Governors and Chairmen

[136] Bloomberg, The 80s Are Thriving at Trump's New Keynesian Fed, https://www.bloomberg.com/news/features/2018-08-07/the-80s-are-thriving-at-trump-s-new-keynesian-fed, (2018)
[137] St. Louis Fed, Cumulative Official Public Appearances 1999-2019

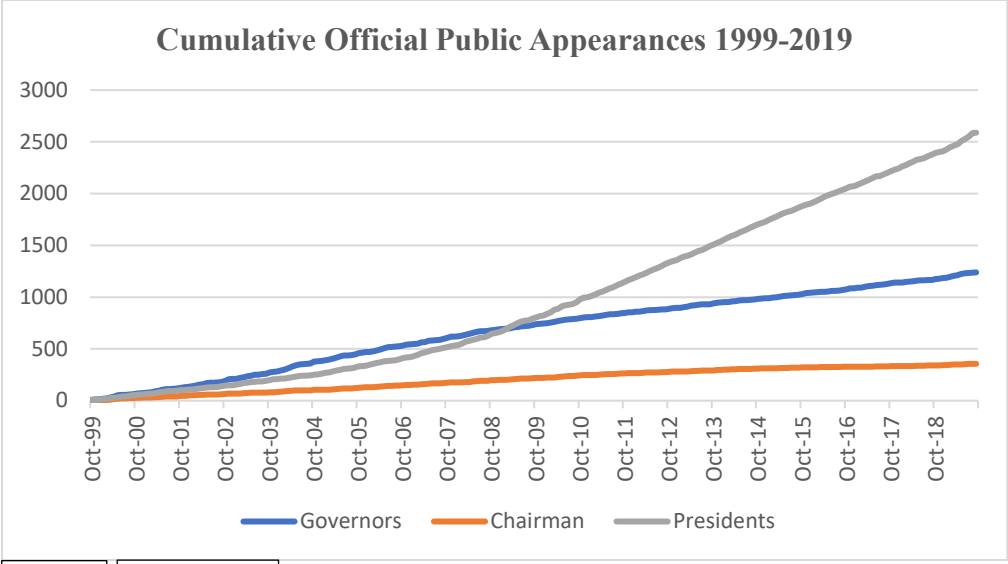


Fig. 8

Source: St. Louis Fed & Individual Fed Banks

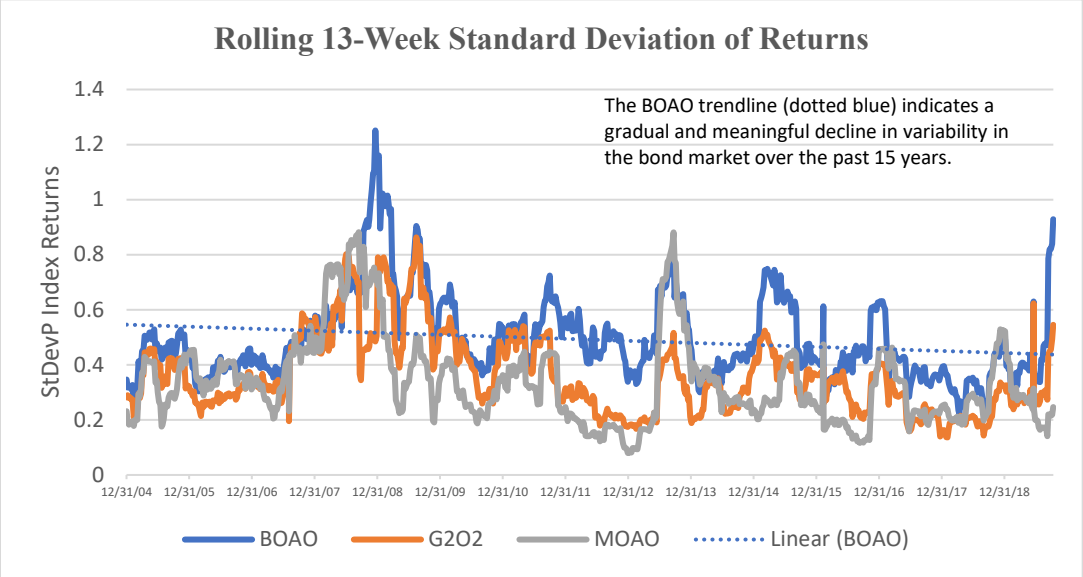
combined over the last twenty years. The trend for both Chairmen and Governors has remained steady, yet the growth since the financial crisis for Branch Presidents has accelerated. This appears to correspond with Website, Facebook, Twitter, and business channel usage as a means to disseminate information. In other words, the regional bankers are doing the heavy lifting for the Fed's public relations effort. They are also the subjects of investigations for bias because they may exhibit the general political characteristics of the regions that they represent. Is there a link between the increase in public appearances and financial markets, specifically the bond market?

Professor and economist Marc Tomljanovich published a paper entitled, "Does Central Bank Transparency Impact Financial Markets: A Cross-Country Econometric Analysis." His goal was to measure how increased transparency affects the markets; and he argues that more active monetary policy paired with more press releases seem to soothe the global financial world. He looked at seven industrialized countries and measured "open disclosure" to find whether or not it

"improved or worsened the predictability of the corresponding national financial markets."[138] Through measuring different maturities of government bonds, he found that the "forecasting error has decreased for interest rates on the respective government bonds across most maturity lengths."[139] This rang true for Australia, Canada, Japan, New Zealand, the United Kingdom, and the United States (every country measured except for Germany). He goes as far as to argue that transparency may be more important than macroeconomic factors. When central banks are open and willing to discuss future projections and trends it removes uncertainty. While it may have "mixed" evidence, he finds that the actual "*release* of information" moves financial markets the most.[140] In my independent, follow-up analysis for this paper using a different dataset, the same characteristics were observed. As noted in Figure 9 below, there has been a gradual and meaningful decline in the variability of prices in the U.S. bond market over the past 15 years – a period of accelerated transparency efforts. The graphic reflects three bond market indices from Bank of America the overall market (B0A0), short-term U.S. Treasuries (G2O2), and the mortgage bond market (M0A0). These are baskets of securities that represent proxies for the market, just like the Dow Jones Industrial Average does for the stock market. Despite the extreme conditions during the financial crisis and a higher level of uncertainty about the economy, volatility in prices has actually declined. Of the three, the decline in variability in the mortgage securities market is the most significant – noteworthy given the amount of debt created over the period and the fact that the financial crisis was actually a "mortgage crisis." As

[138] Tomljanovic, Does Central Bank Transparency Impact Financial Markets: A Cross-Country Econometric Analysis, https://www.jstor.org/journal/souteconj?refreqid=excelsior%3A2c25df2cb9f3655fd05a32d980813f4c, (2007)
[139] Tomljanovic, Does Central Bank Transparency Impact Financial Markets: A Cross-Country Econometric Analysis, https://www.jstor.org/journal/souteconj?refreqid=excelsior%3A2c25df2cb9f3655fd05a32d980813f4c, (2007)
[140] Tomljanovic, Does Central Bank Transparency Impact Financial Markets: A Cross-Country Econometric Analysis, https://www.jstor.org/journal/souteconj?refreqid=excelsior%3A2c25df2cb9f3655fd05a32d980813f4c (2007)

Tomljanovich has suggested, the Fed's communication about its activities is a likely contributor to keeping markets calm. Additionally, it can be argued that the central bank has been more descriptive in terms of its forecasting models which removes some level of uncertainty about their future policy moves and sets expectations more uniformly. For short periods of time, there



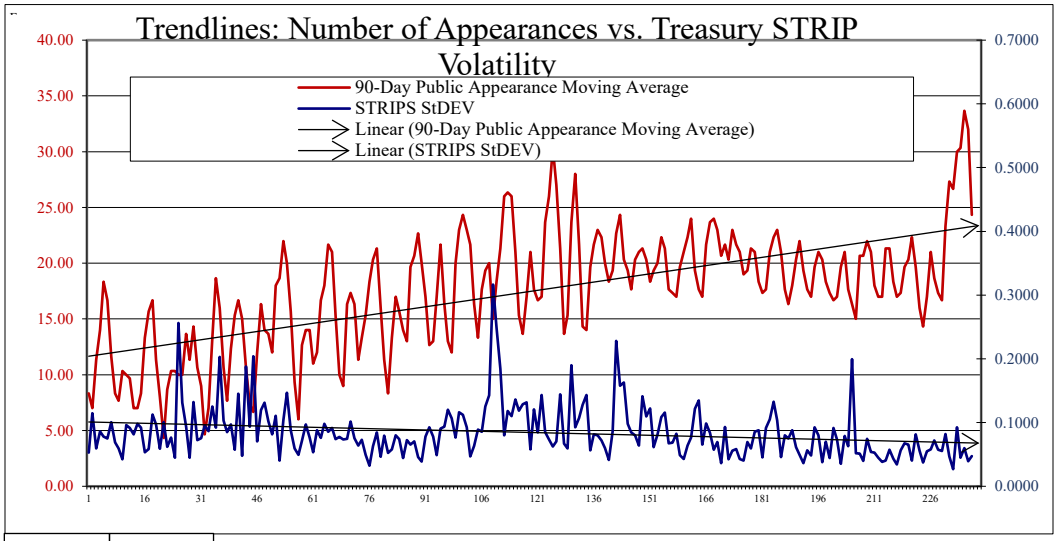
[141]

Fig 9 | Source: Bank of America

appears to be very little correlation between the number of official public appearances by Federal Reserve Governors, Presidents, or the Chairman and the corresponding volatility in short-, intermediate-, or long-term Treasury, corporate, and mortgage securities. When testing over the past 20 years, the correlation coefficients remained consistently below 0.3. However, when looking at long term trendlines, there is a distinct correlation between the increased number of appearances and lower market volatility – just like in Tomljanovich's study. Additionally, note that the observations in the next illustration (Figure 10) show a gradual increase in appearances (red) and a corresponding decrease in risk levels. Using a different approach in the analysis, the second variable represented is the constant maturity 20-year U.S. Treasury Zero Coupon Bond as

[141] Bank of America, Rolling 13-Week Standard Deviation of Returns

provided by the Federal Reserve Bank of St. Louis. It was selected because it shows more sensitivity to interest rate changes and thus should provide a more pronounced response to Fed activities. There are certainly many influences on prices, but the data does suggest that transparency is providing a benefit to the interest rate markets – as long-term trends indicate the more information disseminated by a "transparent Fed," the less volatility observed in bond prices. Given this relationship, we can see the potential for FOMC members to use their higher



[142]

Fig. 10 | Data: FRED & Regional Banks

visibility as a platform from which to inject personal preferences. For instance, much like a conservative block on the Supreme Court may band together to interpret law a certain way; a conservative block of FOMC members could have the potential to move markets or consumer behavior in a certain way as well. Former Fed Governor Fred Mishkin was one of the first insiders to point out this vulnerability.

Frederic S. Mishkin has been a research analyst for the National Bureau of Economic Research and was on the Board of Governors of the Federal Reserve System from September

[142] FRED Data, Trendlines: Number of Appearances vs. Treasury STRIP Volatility

2006 to August 2008. He suggests that there has been a "revolution" in how central banks have shifted their connection with the public.[143] Transparency may have started on a reasonable path, he says, but has become muddled in an attempt to translate complicated policy into layman's terms and the rationale for FOMC actions into simple equations. We can see this through inflation targeting – a concept that "reads" well for the general public, but is virtually impossible to accomplish in practice. Mishkin also highlights Kyland and Prescott's theory of time-inconsistency of optimal policies – suggesting that policies made today to stabilize inflation or unemployment may ultimately lead to rampant inflation and higher unemployment in the future. This theory grew in popularity 25 years ago after the U.S. experienced a commodities-based "great inflation." His point is that too much information, particularly if it proves incorrect over time, can have devastating consequences in financial markets and the economy. This is inherently dangerous because monetary policy has a much longer time horizon than a politicians' election cycle. Mishkin emphasizes that due to re-election prospects, politicians are typically more focused on the short term. It takes a year or more for monetary policy to have a major effect on the economy. If the Federal Reserve were to bend to political pressure and focus on "the current unemployment rate or the latest blip in inflation, both economic activity and inflation are likely to be less stable," he says.[144] On frequent occasions rates may be optimal for the economy but not for the incumbent. Ultimately, the Federal Reserve works best then left to focus on its mandate. Mishkin had suggested a decade ago that he saw a "willingness of

[143] Mishkin, p. 1, Can Central Bank Transparency Go Too Far Can Central Bank Transparency Go Too Far? https://www.nber.org/papers/w10829.pdf, (2004)

[144] Mishkin, Can Central Bank Transparency Go Too Far Can Central Bank Transparency Go Too Far? https://www.nber.org/papers/w10829.pdf, (2004)

American politicians to back off from day-to-day interference in the Federal Reserve's policy-making."[145] But today we see the opposite arising.

One of the most concerning aspects of the Fed's melting independence stems from a very unified front in Washington. Both political parties wouldn't mind seeing an increase of Fed oversight. For example, the Republican party disliked Ben Bernanke's extreme expansionary policies following the recession – they even considered it "treasonous."[146] On the other side, the Democrats have attempted to propose legislation what would "strip the Presidents of the Federal Reserve banks of their FOMC votes and replace with presidential appointees subject to Senate confirmation."[147] The Congressman who had been most vocal was Barney Frank – who happened to dislike the dissenters who voted against stimulating the economy. Operating under the new transparency framework has been a challenge on many fronts. British economist and Financial Time columnist James Mackintosh has an interesting take on the combination of public transparency and econometrics - much in agreement with Mishkin. In his piece, "The Real Problem for Central Bankers is Us," he writes that "economic theory has taken central banks to the upside-down world of negative rates and discussion of dropping money from (figurative) helicopters."[148] Only a fifth of people know that the Fed inflation target is around 2%, which is a problem if one of the methods for targeting inflation is by hypothesizing what people expect inflation to be. Because individuals are less informed than models give them credit for it can negatively impact where interest rates move. This means that a major problem for central banks is us. The author argues that the bank should stop trying to meet the expectations of "ordinary

[145] Mishkin, Can Central Bank Transparency Go Too Far?, https://www.nber.org/papers/w10829.pdf, (2004)
[146] Mishkin, Politicians Are Threatening Fed's Independence, https://www.wsj.com/articles/SB10001424052970204831304576597200646525870, (2011)
[147] Mishkin, Politicians Are Threatening Fed's Independence, https://www.wsj.com/articles/SB10001424052970204831304576597200646525870, (2011)
[148] Mackintosh, The Real Problem for Central Bankers is Us, https://www.wsj.com/articles/the-real-problem-central-bankers-face-the-rest-of-us-11570536214, (2019)

people" and instead work on the financial markets.[149] This is another failure of transparency in that the target recipients of the information disseminated will not understand it – or might interpret it incorrectly. Mishkin perhaps explains it best in terms of a paradox: In a National Bureau of Economic Research piece, "Can Central Bank Transparency Go Too Far?" he argues that the Fed needs a degree of privacy to function, but conversely in order for them to continue to function, Congress and the people want to hold them accountable for being transparent.

FOMC DISSENTION & BIAS. According to data published by the St. Louis Fed, over the past 20 years there have been 83 dissentions at FOMC policy meetings, which means that a voting member disagreed with the action taken by the Chairman in terms of interest rate moves. Of those, 71 or 86% were submitted by Regional Branch Presidents. Given that only five of the twelve voting members at an FOMC meeting are Branch Presidents (and one of the five is always the New York Fed President), the opposition votes are disproportionately coming from the field and not the Governors. It is likely that transparency has played a role in this tendency. For Regional Branch Presidents, their votes are public, the meeting minutes are public, their local outreach on social media is more active, and as illustrated previously, they are more than twice as likely to make public appearances. In Ellen Meade's study, "Dissent and Disagreement on the Fed's FOMC: Understanding Regional Affiliations and Limits to Transparency," she points out that it is the regional representatives who are most likely to voice disagreement with the Chairman during policy meetings as well – even though they ultimately don't officially dissent during the published vote.[150] She says that the Federal Reserve Act stipulates that no two board members can come from the same district, but that this has been "treated somewhat

[149] Mackintosh, The Real Problem for Central Bankers is Us, https://www.wsj.com/articles/the-real-problem-central-bankers-face-the-rest-of-us-11570536214, (2019)
[150] Meade, p. 6, *European Journal of Political Economy* (2006)

flexibly."[151] Her research on the Greenspan Fed found a "significant negative transcript effect," meaning that voting members were more likely to dissent once they knew that their votes would be made public.[152] Much like putting cameras in a courtroom or on the statehouse floor, behaviors are changed when placed in the public eye – it's transparency at work.

Where Meade looked at the effect of increased visibility on FOMC dissentions, a study by Henry Chappell (University of South Carolina) published in the European Journal of Political Economy looked at county-level unemployment data in Federal Reserve Districts to determine whether or not it influenced the Regional Branch Presidents' stand on interest rates – dovish or hawkish. "The analysis confirms that regional conditions affect the policy preferences of Reserve Bank Presidents," he writes.[153] A vote for lower interest rates would be consistent with a locality experiencing higher levels of unemployment. A vote for higher interest rates might be consistent with a region experiencing above average GDP growth and relatively low levels of unemployment. Bennani, Farvaque, and Stanek had a similar conclusion in their paper, "FOMC Members Incentives to Disagree: Regional Motives and Background Influences." However, they took the study one step further, looking at personal characteristics of the FOMC members as well. They submit that statistically, academics tend to be more dovish, non-academics more hawkish, and females more hawkish. In the ECB working paper by Jung and Latsos in 2014, they reference the previous work done on the subject, but argue that there are many variables that are influencing regional bank presidents' decisions and that an algorithm is necessary in a research study like this because it "…provides a structural explanation of individual policy

[151] Meade, p. 3, *European Journal of Political Economy* (2006)
[152] Meade, p. 16, *European Journal of Political Economy* (2006)
[153] Meade, p. 1, *European Journal of Political Economy* (2006)

preferences based on its most important (real-time) determinants."[154] Although they concluded that deviations from the Taylor-Rule projection for interest rate levels based purely on data did constitute an element of regional bias, they could not find an instance where it actually influenced the actual decision of the committee. "Finally, the Fed's example shows that its rotation system, which includes a structural majority for the centre of the FOMC, has effectively limited the regional influence on policy-making while strengthening participation of regional representatives," they write.[155] As a whole, these reports draw a statistical conclusion, but don't necessarily show a political bias.

Returning to the sample of FOMC member dissents over the past twenty years in this study, there is a statistical conclusion to be made. 53 of the 71 dissents were in favor of higher interest rates than recommended by the Chairman (hawkish). 18 were for lower levels of interest rates (dovish). With reference to the chart below showing the summary results of the last four Presidential elections by state, 65% of those dissenters in favor of higher interest rates came from red states and 66% of those favoring lower interest rates came from blue states (note: Cleveland was considered neutral in this analysis). As highlighted by Jung and Latsos, attributing a political

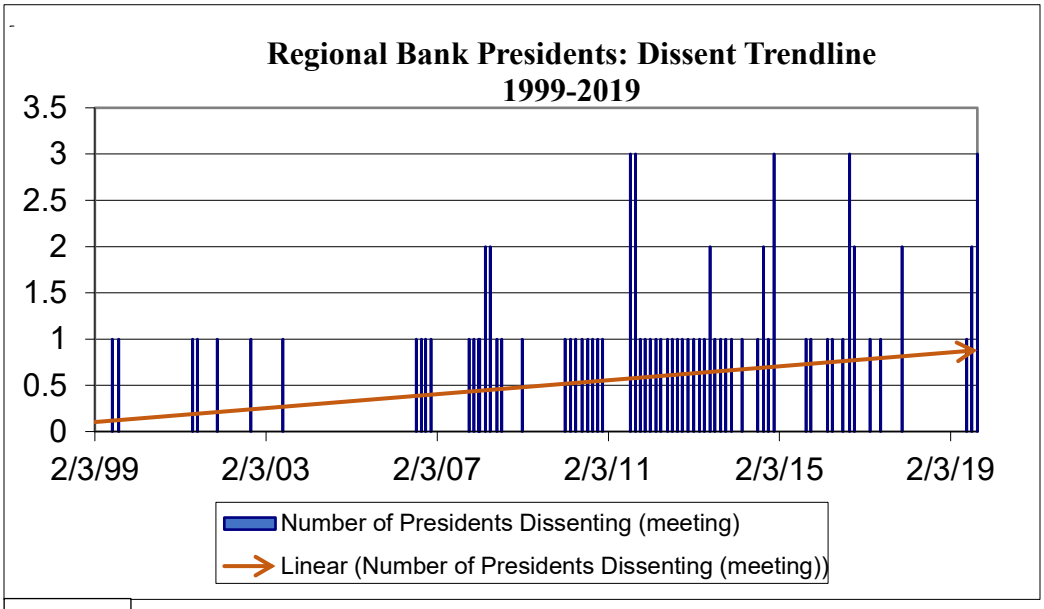
156

Fig. 11

[154] Jung & Latsos, p. 9, European Journal of Economy (2017)
[155] Jung & Latsos, p. 22, European Journal of Economy (2017)
[156] Wikipedia, https://en.wikipedia.org/wiki/Red_states_and_blue_states

bias by mean of statistical analysis is likely not possible. But as a simple observation, there tends to be a relevant rate-preference divide between Branch Presidents from red versus blue states – possibly indicating a reasonable push for policy that would better serve their districts.

In terms of dissentions, we can draw several conclusions: there has been a significant increase in the number of dissents over the last twenty years, most coming from Regional Bank Presidents (Fig. 11). Studies have shown that a regional bias exists in rate preferences, potentially derived from personal characteristics. Roughly two-thirds of the dissents from blue state Presidents appear more dovish, while two-thirds of the dissents from red state Presidents appear more hawkish. Transparency has likely played a role in this development. It is important to note however, that certain Regional Banks are often associated with a particular school of thought in terms of New Keynesian economic theory. For instance, the St. Louis Fed has been considered a champion of the Monetarist Theory. This may account for voting preferences more than a regional or political bias.[157]



[158]

Fig. 12

[157] Meade, p. 10, *European Journal of Political Economy* (2006)
[158] Regional Bank Presidents: Dissent Trendline

THE POWELL FED. The Federal Reserve under Chairman Jerome Powell represents the pinnacle of the transparency initiative at our central bank. He was nominated by President Donald Trump and took office in February 2018. Prior to being appointed, he had been a member of the Board of Governors since 2012. Before that he had a long career in investment banking and private equity. Chairman Powell was an interesting choice because he does not have a degree in either business or economics. He received a bachelor's degree in Political Science and then a law degree from Georgetown. The way Chairman Powell has tackled transparency, market backlash, and an unprecedently public President has been unique. Right before he was appointed, he spoke in Stockholm, Sweden at the Riksbank's 350th anniversary about financial stability and central bank transparency. In the speech, he made it clear that he understands the "declining trust in public institutions in many places around the world."[159] He believes that the response to the global financial crisis is what spurred drastic change in central banking. The "framework" that was created, "includes measures to increase the resiliency of the financial system."[160] Despite his relatively short time in office, he seems to articulate the purpose of transparency better than his predecessors: "Visibility provides an essential basis for accountability and democratic legitimacy by enabling effective legislative oversight and keeping the public informed"[161] His word "legitimacy" is powerful – it gives purpose to why transparency is important. He notes that it allows Fed Governors to better understand "what is expected of them and how best to comply."[162] Powell commented that technology and various forms of communication have shown no signs of slowing down. In the future they will, "affect

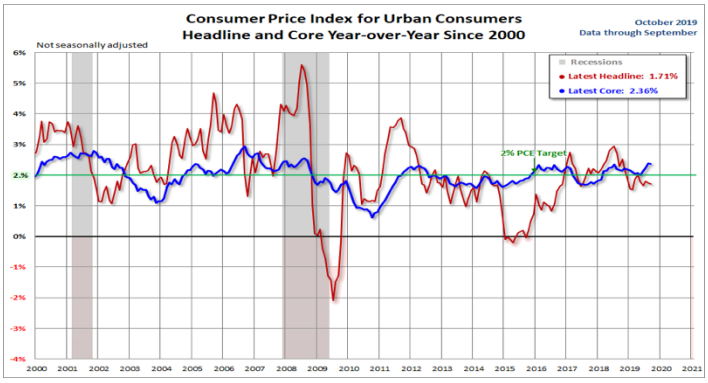
[159] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)
[160] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)
[161] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)
[162] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)

the financial system and financial stability in ways that we cannot fully anticipate."[163] He reiterated this concern during a 60 Minutes interview where he expressed that his main fear is not an inflationary bubble or a banking crisis – it's a cyber-attack on the Fed. In order to prepare for the future in the most productive way possible, Powell pledges to continue to "engage with the public – including consumer groups, academics, and the financial sector," in order to create a fluid transition towards visibility.[164] He made this clear in his first congressional testimony by committing to disclose the details of the financial models the Fed uses to estimate trends in inflation, unemployment, and GDP, contradicting a long-held policy to keep the information internal.[165] Even Janet Yellen, a champion of transparency, had rejected the notion of releasing the Fed's secret models. Bloomberg's Danielle Booth commented that Powell, the first non-economist to hold the Chairmanship in decades, was bringing a new perspective and a "sea of change" into how the Fed would communicate with the public.[166]

According to a Bloomberg analysis, the present-day FOMC consists of four individuals who are categorized as "New Keynesians."[167] These New Keynesians are Jerome Powell (Federal Reserve Chairman), John Williams (New York Fed President), Richard Clairda (Federal Reserve Board Vice Chairman), and Marvin Goodfriend (Federal Reserve Governor). Not surprisingly, these bankers were completing their studies around the time that the Fed was maintaining high interest rates (15% inflation in the early 1980s). The newest perspective today is that these New Keynesians believe that setting inflation targets will help the markets and the

[163] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)
[164] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)
[165] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)
[166] Booth, Fed's Powell Brings Transparency to Congressional Testimony, https://www.bloomberg.com/view/articles/2018-02-27/fed-s-powell-brings-transparency-to-congressional-testimony (2018)
[167] Booth, Fed's Powell Brings Transparency to Congressional Testimony, https://www.bloomberg.com/view/articles/2018-02-27/fed-s-powell-brings-transparency-to-congressional-testimony (2018)

economy. They plan to set policy based on those targets and publish their models in the interests of transparency – even using Facebook and Twitter. 2019 has been a test for this approach because while the Federal Reserve was planning on increasing interest rates to the "neutral" zone or higher, they reversed course and instead interest rates have dropped.[168] As indicated below in



[169]

Fig. 13

figure 12, inflation has not changed much over his tenure as Chairman, yet we have already seen a period of Fed tightening and a period of Fed easing.

For Powell, his dedication to the utmost transparency has posed several problems. Wall Street Journal columnist Greg Ip writes that when Chairman Powell has been too transparent it has turned him into a target – specifically when "markets didn't like the answer, or when events forced him to change course."[170] He is currently having a hard time finding the right amount of "transparency" and "ambiguity" – after "triggering backlash in the markets" due to excessive elaboration on Fed plans in December of 2018.[171] In his piece, "Fed Chairman Jerome Powell

[168] Booth, Fed's Powell Brings Transparency to Congressional Testimony, https://www.bloomberg.com/view/articles/2018-02-27/fed-s-powell-brings-transparency-to-congressional-testimony (2018)
[169] BLS, Consumer Price Index for Urban Consumers Headline and Core year over Year Since, https://www.bls.gov/cpi/ 2009
[170] Wall Street Journal: Fed Chairman Jerome Powell Masters the Art of Saying Nothing, https://www.wsj.com/articles/fed-chairman-jerome-powell-masters-the-art-of-saying-nothing-11568885401 (2019)
[171] Wall Street Journal: Fed Chairman Jerome Powell Masters the Art of Saying Nothing, https://www.wsj.com/articles/fed-chairman-jerome-powell-masters-the-art-of-saying-nothing-11568885401 (2019)

Masters the Art of Saying Nothing," Ip says the Chairman might be pushing down on the transparency brakes, and now taking a more nuanced approach.

Higher visibility has opened up the Chairmanship to much more ridicule. Joseph Carson, the Head of Global Economic Research at AllianceBernstein, submits that transparency can be as harmful as it is helpful, and that by becoming too transparent the Fed has the potential to hurt monetary policy and make it less predictable.[172] President Donald Trump feels that Chairman Powell harmed markets and made him look bad by raising short-term interest rates in 2018. Since then, Trump has created a *virtual* battlefield to tear down Chairman Powell, likely for unveiled personal and professional reasons. Just three years ago while on the campaign trail, Trump called out Chairwoman Yellen saying she "should be ashamed of herself" for keeping rates near 0% for so long.[173] But now facing re-election, he would like less than 0% interest rates and any political boost a stronger economy might give him (not to mention better borrowing costs for real estate developers). Through Twitter he is able to publicly criticize, belittle, and question every move Chairman Powell makes. Twitter has created a platform that lets all 126 million daily twitter users see these attacks.

Former Fed Vice Chairman and current Princeton professor Alan Blinder has been extremely vocal about President Trump's treatment of Powell. He states that this "bashing" of a Fed official is not a new epidemic – but in this situation it is "unusually personal."[174] "Trump is calling Powell names like a child on a playground …. 'a bonehead,' 'a traitor,' I don't think you

[172] Carlson, The Rules of the Game are Changing on the Fed, https://www.bloomberg.com/opinion/articles/2018-02-26/the-rules-of-the-game-are-changing-on-the-fed (2018)
[173] LA Times 9-19-16 Is the fed Politically Biased, https://www.latimes.com/business/la-fi-federal-reserve-election-20160919-snap-story.html
[174] CNBC: 'I Don't Like Trump,' but Presidential Fed Bashing Is Nothing New, https://www.cnbc.com/2019/09/20/alan-blinder-trump-bashing-fed-and-powell-not-new-for-presidents.html. (2019)

can find that in past history."[175] There is a risk that this kind of very public, very transparent commentary could undermine the Fed's credibility and affect financial markets. The Chairman will give 8 televised news conferences a year (not including other speeches, interviews, post meeting press conferences, etc.). Ip believes that he has been more tight-lipped on policy initiatives recently, and has refused to comment on the President's attacks. Powell stated that, 'I have a job to do. The law gives me independence from politics."[176] "In a democratic system, any degree of independence brings with it the obligation to provide appropriate transparency, Powell says."[177] But in an effort to externalize information by the Fed under Powell, markets and politicians have certainly become more volatile. We can see very distinct differences between Paul Volcker's meeting's with President Reagan in the Presidential Library versus Chairman Powell's very public discussions with President Trump. We can also see how differently the Fed was run based on policies. Paul Volcker took a more conservative approach when managing the Federal Reserve and Chairman Powell has been very up front with the people. Both of these methods have created their own set of problems – finding a balance between the two seems necessary. The sheer volume of public engagements has the ability to lead to a coordination failure. If one banker slips up or contradicts another, this could have negative effects and impact the Feds credibility. Powell has been the most transparent Fed Chairman to date, but we have seen the potential for negative results due to his increased transparency.

[175] CNBC: 'I Don't Like Trump,' but Presidential Fed Bashing Is Nothing New, https://www.cnbc.com/2019/09/20/alan-blinder-trump-bashing-fed-and-powell-not-new-for-presidents.html. (2019)
[176] CNBC: 'I Don't Like Trump,' but Presidential Fed Bashing Is Nothing New, https://www.cnbc.com/2019/09/20/alan-blinder-trump-bashing-fed-and-powell-not-new-for-presidents.html. (2019)
[177] Powell, Financial Stability and Central Bank Transparency, https://ideas.repec.org/p/fip/fedgsq/1004.html (2018)

V. Results / Conclusions

"Central banks are never out of bullets" – Christine Lagarde

In summary, the transition from secrecy to transparency at the U.S. Federal Reserve has been the result of multiple factors, each impacted by social and political changes. New policies and procedures in place reflect an institutional commitment to full disclosure. Bank Chairmen now pledge no hidden agendas and an open book in terms of internal econometrics and forecasts. In addition to required reports to Congress, the bank has established multiple communication channels to disseminate information to both Wall Street and the general public regarding open market operations and community education and outreach programs (fully embracing social media). Information is now more frequent, more easily accessible, and is provided in less technical language. The Fed even honors Freedom of Information Act (FOIA) requests now – though they are allowed to decline some applications. Bank leadership now averages over 20 appearances per month, including interviews, speaking engagements, and press conferences. The Chairman conducts 8 formal interviews per year and presides over post-FOMC meeting press conferences to ensure the Fed's actions and rationale are well understood. Fed Chairmen are certainly now more recognizable to the general public as government officials. The benefits of this transparency effort are clearly reflected in the reduced volatility in the bond markets. Commercial banks, borrowers, and business managers may find it easier to make financial decisions with the greater clarity from the Fed. But perhaps the most significant result of the evolution toward greater visibility and accountability is that it has helped solidify the independence of the U.S. central bank. Chairman Bernanke said in 2012 that he wanted "to agree with the basic premise that the Federal Reserve should be thoroughly transparent, thoroughly

accountable."[178] While Bernanke believes in a fully accountable Fed, he does not believe in a Fed too tied to Congress. He states, that it would be a mistake to "create a political influence or a political dampening effect on the Federal Reserve's policy decisions." It would make for a "chilling effect" if GAO audits were allowed to be done based on personal or political views. Janet Yellen agrees, saying an audit provision would, "politicize monetary policy."[179] The transparency initiative has in effect kept Congress at bay, and maintained that crucial balance between accountability and oversight. Some of the "secrets of the temple" must remain private in order for the capital markets to work efficiently.

The Federal Reserve was established to help maintain price stability, facilitate full employment, and provide liquidity among U.S. banking institutions. As the strength of the economy, interest rates, and the employment situation are significant factors impacting Americans across all socio-economic levels, Fed actions have significant political ramifications. The move toward transparency substantially increased Fed visibility, placing both bankers and their policies in the limelight. The extent to which this has been counterproductive and politicizing is a matter of debate, but recent studies have clearly indicated a trend toward more bias in interest rate preferences among members of the FOMC. Economists and researchers have shown both regional and personal-level bias, particularly in Regional Bank Presidents. Mishkin has highlighted the pitfalls of inflation targeting, coordination failure, and time inconsistency in policy decisions – all part of the full-disclosure initiative. Boesler has noted the risks of using rhetoric, including through social media, as a monetary policy tool to affect consumer behavior. We have observed an increase in dissent at FOMC meetings, particularly with Bank Presidents –

[178] Congressional Research Services, Marc Labonte, p. 15, https://fas.org/sgp/crs/misc/R42079.pdf.
[179] Congressional Research Services, Marc Labonte, p. 15, https://fas.org/sgp/crs/misc/R42079.pdf.

and this corresponds with a substantial increase in public appearances for these bankers. We have also noted that over the past 20 years there has been a statistically significant divergence in rate preferences among these same Branch Presidents – those representing blue state being more dovish and those from red states being more hawkish. With the limelight comes more scrutiny. Behavioral Sociologist Erving Goffman at the University of Pennsylvania has studied the effect of public scrutiny on behavior – the notion that decisions and actions are impacted by whether or not others are paying attention (cameras in the courtroom or Senate Chambers, for instance). He believes that "the self" is a "collection of performances that take place in and across specific locations."[180] Transparency can change the behavior of Fed officials – what they say on camera versus behind closed doors may differ. With the Trump Presidency and the Powell Fed, we have witnessed a new dimension to transparency: very public, negative, and politically charged rhetoric. If proposed bankers are seen as partisan tools, then their economic credentials will be less important than their party affiliations. Both of President Trump's initial picks for the Fed in the Summer of 2019, Herman Cain and Stephen Moore, withdrew from consideration for political reasons. Moore had been a "vocal advocate" for Mr. Trump and had even said that the Fed could "endanger" the President's re-election prospects with their current monetary policy.[181] The replacement nominees, Judy Shelton and Christopher Waller, are more traditional choices, but both would bolster the President's low interest rate push. Judy Shelton is a conservative economist who has been known for "praising" President Trump's policies. She believes that interest rates should potentially drop to 0% - and may agree with the ECB's approach to interest rates. The debate will not be about credentials or what a banker can bring to the Fed, but rather

[180] Goffman, p. 50, *The Presentation of Self in Everyday Life*, (1990)
[181] Ip, It's the Senate's Call if the Fed is Politicized (2019), https://www.wsj.com/articles/a-politicized-fed-its-up-to-the-senate-11554901262

what they bring for the President or his/her party. It presents a problem that in the future political appointments could be made based on partisan views rather than what is best for the economy.

Coinciding with this transformation at the central bank has been the evolution of modern monetary theory, as "New" Keynesian schools of thought have come to dominate the boardroom. The offshoots, like the Real Business Cycle Theorists, Monetarists, and Supply-Siders, offer new perspectives on Keynes' ideas – essentially providing government stimulus across economic cycles and not just during downturns. As Mishkin has warned, this can lead to coordination failure – especially given the higher level of transparency. Beginning with Paul Volcker, and continuing with subsequent Chairmen, Wall Street, politicians, and the general public now look to the central bank as a first-responder or savior – not only in times of crisis, but also as a steward of the economic cycle during normal times. New tools such as QE are the product of New Keynesian thinking - tailor-made to respond to public expectations and represent an effort to steer an economy through monetary policy. A Bloomberg article, "Financial Titans Fear Central Bank Powers Near Limit: IMF Update," asks whether or not central banks have used all the tools at their disposal. The authors argue that, "central banks have maneuvered themselves into a difficult corner."[182] But that's not the case according to New ECB President Christine Lagarde. Negative interest rates and Modern Monetary Theory are just two of the latest examples of new thinking. "No, central banks are never out of bullets," she said.[183] As a reminder of what failed monetary policy might mean, John C. Williams of the New York Fed keeps a $100 trillion Zimbabwe note framed on his desk.

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[182] Bloomberg, Financial Titans Fear Central Bank Powers Near Limit: IMF Update (2019), https://www.bloomberg.com/news/articles/2019-10-19/financial-titans-say-uncertainty-is-souring-the-mood-imf-update

[183] CNBC, Interview with Christine Lagarde, (2019), https://www.cnbc.com/video/2019/09/23/lagarde-trade-is-the-biggest-hurdle-for-the-global-economy.html. Ip

Today, many economists question what ideology will come next. Forbes writer John Hartley took a survey of economists before writing his article*, After New Keynesian Economics*, to gauge where economists feel we are heading. John Cochrane (University of Chicago), Simon Wren-Lewis (Oxford), and Brad DeLong (Berkeley), all believe that there is something wrong with the current mix of macroeconomic modelling.[184] Surprisingly, they all came to a similar conclusion, that the simple economic modelling in the 1970s was "better."[185] Nobel prize-winning economics professor Paul Krugman has called for a return to traditional Old Keynesian models."[186] Bank of England Governor Mark Carney has expressed interest in returning to traditional Keynesian monetary policies as well. John Williams says that the financial crisis and the failure of Fed models "left him humbled."[187] With more scrutiny from the executive and legislative branches of government, higher visibility through social media, and a more focused public relations effort, how can the Fed remain an apolitical entity? If current trends continue, the answer is that it probably can't remain apolitical – but it could remain independent. The net result of transparency, combined with continued political pressure, will likely lead to some form of quantitative discipline at the Fed – something like the Taylor Rule. Monetary policy, both in terms of the target Federal Funds Rate and the amount of QE used, would be based on easily definable economic indicators – and not on the more subjective interpretations of central bankers. Perhaps a reversion to a semi-transparent Fed, one in which they keep their mathematical models private and reduce the number of public appearances, would be most

[184] Hartley, After New Keynesian Economics (2014), https://www.forbes.com/sites/jonhartley/2014/08/18/after-new-keynesian-economics/
[185] Hartley, After New Keynesian Economics (2014), https://www.forbes.com/sites/jonhartley/2014/08/18/after-new-keynesian-economics/
[186] Hartley, After New Keynesian Economics (2014), https://www.forbes.com/sites/jonhartley/2014/08/18/after-new-keynesian-economics/

[187] The Wall Street Journal: A Quiet Fed Voice Emerges as Force Inside the Temple, (2012), https://www.wsj.com/articles/SB10001424052970204331304577145650264688084

efficient and present less of a change for bias. This analysis has shown how legislative action, financial crises, and technological advancements in communications have expedited the transition to a transparency at the Fed. It has also shown the New Keynesian coincidental contributions to modern interventionalist policies. But the benefits that come from improved transparency have opened the door to unintended consequences – and the main takeaway is the potential for political bias among bankers and the time inconsistencies that come from short-term modifications to otherwise long-term problems. The "secrets of the temple" are no longer secrets…but Greider would agree that the concentration of power and political influence remains the same. Modern technology, forward-thinking Fed officials (and politicians), new legislation, and new policies originating from periods of crisis have all contributed to a more visible and transparent Fed. But "Mr. Chairman" still retains an extraordinary amount of power.

An excerpt from Paul Volcker's Keeping at It: The Quest for Sound Money and Good Government:

> It's about a lonely old man. His wife had died, his children were gone, and his business was closed. Yearning for company, he decided to buy a parrot. Off to the local pet store he went, pointed a finger at the first parrot he saw, and asked the price. The proprietor said, "He's a fine parrot, and he costs $5,000." "How is that one parrot worth $5,000?" "Well, his native language is English, but he also speaks French, German, Italian, and Spanish – all of the important languages of the European Union." "I'm old, I'm not working anymore, and I don't give a damn about the European Union. Give me that young one over there." "Okay, but he's $10,000." "How can he be $10,000?" What's so special about him?" "He's young but he's learning. He already knows Mandarin, Cantonese, Japanese, and he's working on Korean. He is just the right parrot for the twenty-first century." "Look, I'm not going to live for long in the twenty-first century. How about that old one up in the corner with his feathers falling out and glassy eyes. He's for me. I'll take him." "I understand, but he's $25,000." "How can that grizzly old guy possibly be worth $25,000?" "None of us can figure it out. All we know is that the other parrots call him Mr. Chairman."[188]

[188] Volcker, pg. 2, Keeping at it: The quest for sound money and good government (2018)

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