



## **Rewriting the Rules of the Federal Reserve for Broad and Stable Growth**

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## EXECUTIVE SUMMARY

The Federal Reserve as we know it today is the product of more than a century of evolving economic theory and political and social compromise. The monetary, regulatory, and supervisory policy choices of the Fed shape macroeconomic and financial conditions in the U.S. and abroad and have long-term impacts on economic inequality. By reforming Federal Reserve governance and policy, we can improve Federal Reserve accountability to the general public. A more accountable Fed with a broader arsenal of policy tools would place more emphasis on full employment, wage growth, financial stability, and fair credit access, promoting stronger and more broadly shared economic growth.

## INTRODUCTION

Rising inequality and stagnating wages represent major impediments to broadly shared prosperity in the American economy. As a recent report by Joseph Stiglitz and the Roosevelt Institute makes clear, inequality is not inevitable.<sup>1</sup> Rather, it is the result of the rules and institutions that make up the economy—rules that originated in political and social decisions, and that merit reconsideration and revision.

This report focuses on the rules for one particularly powerful institution, the Federal Reserve System, and the role it plays as the United States' central bank: conducting monetary policy to maximize employment with stable prices, maintaining financial stability as a financial regulator and lender of last resort, and providing financial services to banks and the government.<sup>2</sup>

Former Federal Reserve Chair Ben Bernanke recently wrote that “[m]ost economists would agree that monetary policy is ‘neutral’ or nearly so in the longer term, meaning that it has limited long-term effects on ‘real’ outcomes like the distribution of income and wealth.”<sup>3</sup> However, the evidence challenges this conventional wisdom. Central bank policy, which includes the monetary, regulatory, and supervisory policy decisions made by the Fed, directly impacts inequality via asymmetric costs and benefits to people at different levels of the income and wealth distribution. That means Fed policy decisions are *not* neutral in the long run, but rather shape macroeconomic and financial conditions in the U.S. and abroad through a number of channels:<sup>1</sup>

- When labor market conditions are weak, lower-income families bear more of the burden of unemployment, and wages at the bottom and middle of the distribution stagnate.<sup>4</sup> These effects are not fully reversed in economic expansions; when the Fed tightens too early, it locks in the economic losses experienced during a recession, ratcheting down wages.
- The effects of inflation are very complex and differ for people with different levels of income and wealth depending on the types of assets they own.<sup>5</sup> Lower-than-expected inflation tends to redistribute wealth from borrowers, who are usually less wealthy, to savers, who tend to be wealthier.
- Policies that affect asset prices change the distribution of wealth and can affect the quality of investment choices. Higher stock prices help the wealthy, while the middle class benefits from higher home prices. Booms and busts in asset prices have wide-reaching ramifications; those with

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<sup>1</sup> For a discussion of some of the channels by which monetary policy can influence inequality, see Coibion, Olivier, Yuriy Gorodnichenko, Lorenz Kueng, and John Silvia. 2012. “Innocent Bystanders? Monetary Policy and Inequality in the U.S.” NBER Working Paper No. 18170.

higher income and wealth have the most opportunity to benefit from the boom and to insulate themselves from costs of the bust.

- Financial stability and inclusion is beneficial for both prosperity and equity. In particular, access to credit on fair terms supports business creation and human capital formation. Financial distress resulting from ineffective regulation has negative spillovers that disproportionately harm lower-income households.

The first section of this report discusses these channels in more detail and explains how current central bank policy overemphasizes ultra-low and stable inflation, sometimes to the neglect of full employment, broad-based real wage growth, financial stability, and fair access to credit. This prioritization contributes to an economy in which most families struggle not to fall further behind in periods of stagnation and recession, while the gains in boom times flow increasingly to the top.

The second section explains that the adverse outcomes of the current monetary policy system were not inevitable or unknowable. Rather, they are the product of a long history of political decisions and compromises that have shifted the balance of power at the Fed as its objectives have evolved. A review of U.S. macroeconomic and monetary history reveals that, because of its effects on the income and wealth distributions, central bank policy is inherently subject to political contention and capture, and therefore deserves regular scrutiny and critical reevaluation. In a democracy, policymakers must be held accountable to the public. The Fed is no exception.

The third section proposes reforms to Fed governance to eliminate conflicts of interest and make the Fed more transparent, accountable, representative, and participatory. Governance reforms, including a reformed selection process for Fed officials, can better align the Fed's objectives with those of society at large, especially concerning full employment, wage growth, and financial stability. Achieving these goals will require the Fed to expand its toolset. In the current framework, the Fed conducts monetary policy using the federal funds rate and faces a short-run tradeoff between inflation and unemployment. This narrow conception of central bank policy is part of the reason why America has experienced more volatile and more unequal economic growth in recent business cycles.

The final section advocates expanding the Fed's toolset to include:

- ***Countercyclical margin and collateral requirements and stronger capital requirements*** to reduce destabilizing swings in asset prices and avoid the deleterious cycle of bubbles and busts.
- ***Stronger regulations on derivatives and attention to shadow banks*** to prevent the negative spillovers of disruptions in the credit system.
- ***International coordination*** to reduce imbalances in the international monetary and financial system and avoid international spillovers of financial instability.
- ***An accessible communication strategy*** that listens and responds to the concerns of different demographic and socioeconomic groups.
- ***Continued and strengthened efforts by Federal Reserve economists to research the effects of a wide variety of economic policies on inequality*** and to promote these findings to academics and policymakers.

## EVALUATING THE STATUS QUO

The Federal Reserve is a powerful institution charged with conducting monetary policy and regulating and supervising parts of the financial sector to ensure orderly functioning of the overall financial system. Congress mandates that the Fed's broad goals are "maximum employment, stable prices, and moderate long-term interest rates," but does not precisely define these goals or how the Fed should go about prioritizing and achieving them.<sup>6</sup> Federal Reserve officials therefore have considerable discretion and independence in their policy choices. The Federal Open Market Committee (FOMC) declares 2 percent annual inflation to be consistent with the price stability goal but does not define a specific target for the maximum employment goal.

In practice, the Fed typically uses its control over a short-term interest rate, the federal funds rate, to pursue its employment and price stability objectives. (See "What is the Taylor Rule?" below.) Raising the federal funds rate tends to reduce both inflation and employment, while lowering it has the opposite effect. This means that the Fed sometimes must make tradeoffs. In the short run, the Fed can choose higher employment at the cost of higher inflation or vice versa. In the long run, the Fed chooses how much to emphasize inflation stability compared to output stability and financial stability.<sup>7</sup>

This section discusses how the Fed's policy choices affect income inequality. Full employment and broad-based wage growth have enormous benefits for broadly shared economic prosperity. Unfortunately, a misplaced emphasis on very low and stable inflation prevents these benefits from being realized, contributing to rising inequality. Inequality is also compounded by financial instability resulting from suboptimal regulation and supervision of the financial sector.

### What Is the Taylor Rule?

John Taylor found that the Fed's behavior from the mid-1980s to 1993 was well-described by a rule of the form:

$$\text{Federal funds rate} = 0.5 * y + 1.5 * \text{inflation} + 1,$$

where  $y$  is the percent deviation of real GDP from a target.<sup>8</sup> The federal funds rate is the rate at which banks lend to and borrow from each other overnight. This type of rule is known as a Taylor rule. This rule means that the Fed raises the federal funds rate, tightening policy, when inflation and output are high and lowers the federal funds rate when inflation and output are low. If output is too low and inflation is too high, or vice versa, the rule guides the Fed in making tradeoffs. This rule implies that the federal funds rate moves more than one-to-one with an increase in inflation. The Taylor rule does not perfectly describe the behavior of the Fed, but it does roughly summarize monetary policymaking under normal circumstances.

Note that if output or inflation is very low, the Taylor rule implies that the federal funds rate should be negative, although this is impossible in practice—a limitation referred to as the zero lower bound.

### *The Need for Full Employment as a Cornerstone of Broad Prosperity*

The economy grows when workers become more productive. But who benefits from this growth? It is not always the workers themselves, as many researchers have observed the widening divergence between labor productivity growth and the wages of the median worker and the average non-supervisory worker beginning in the late 1970s.<sup>9</sup> As Ian Dew-Becker and Robert Gordon note, "The failure of the productivity

growth revival to boost the real incomes and wages of the median family and median worker calls into question the standard economic paradigm that productivity growth translates automatically into rising living standards.”<sup>10</sup>

Whether productivity growth translates into higher living standards for most workers and families depends on the strength of the labor market—the level of unemployment and the pace of net new job creation, both of which affect the relative scarcity of workers that employers seek to hire and retain. Real wage growth for low- and middle-income workers is closely linked to full employment. When the economy is at full employment, there are fewer workers competing for the same number of job openings, which gives workers more power to bargain for higher wages. Workers also show more willingness to quit a job to pursue better opportunities, forcing employers to keep compensation competitive in order to retain workers and the skills they contribute. But when labor markets are slack and unemployment is high, low and middle wages stagnate.<sup>11</sup>

While the unemployment rate is one indicator of the strength of the labor market, it does not fully capture how far the economy is from full employment. The U.S. unemployment rate fell from 10 percent in late 2009 to 5 percent in late 2015, but the number of people employed as a share of the overall population has improved by less than 1 percentage point and remains far below the employment rate prior to the Great Recession and even further below the employment rate during the late 1990s boom.<sup>12</sup> And even though the headline unemployment rate has fallen dramatically, 1.3 million more people are involuntarily employed part-time—because they can’t find permanent full-time work—compared to before the Great Recession.<sup>13</sup> Hence, real wage growth remains anemic even though the unemployment rate has been below 6 percent for the past 15 months.<sup>14</sup>

Since the “natural” rate of unemployment is very difficult to measure accurately and can vary over time with structural changes in the economy, setting an explicit numerical goal for unemployment could do more harm than good. It is best to use a variety of metrics to gauge the employment situation, such as the labor force participation rate, the long-term unemployment rate, the under-employment rate, and unemployment rates among vulnerable demographic groups.

### *Consequences of High Unemployment and Tight Monetary Policy*

Labor earnings at the bottom of the income distribution are more sensitive to business cycle fluctuations than earnings higher in the distribution.<sup>15</sup> Compared to higher-income workers, whose working hours are relatively stable, lower-income workers see larger cuts in hours worked when the unemployment rate is high. Moreover, unemployment rates for low-skilled and minority workers rise most strongly in response to contractionary monetary policy.<sup>16</sup> For every additional percentage point of unemployment, income declines by 2.2 percent for low-income families at the 20th percentile of the income distribution, by 1.4 percent for median-income families, and by just 0.7 percent for families in the 95th percentile, and the ratio of 95th percentile income to 20th percentile income grows by 1.6 percent.<sup>17</sup> Alan Blinder notes that inequality has rarely ever declined when unemployment was above 6 percent.<sup>18</sup>

Extended episodes of below-full employment do damage to productivity and equity that is not fully offset during economic expansions.<sup>19</sup> Workers’ skills may atrophy during long spells of unemployment while opportunities for productivity growth through “learning-by-doing” are lost. Even those who keep their

jobs experience downward pressure on their wages as a weak job market undermines potential outside opportunities that justify demands for wage increases. The three most recent recessions have been followed by jobless recoveries, in which labor markets remain slack even as the economy expands, preventing workers from sharing in the benefits of economic growth. Larry Ball finds evidence of hysteresis in unemployment, meaning that periods of high unemployment caused by low aggregate demand or tight monetary policy actually change the long-run “natural” rate of unemployment.<sup>20</sup>

When wage growth does begin to pick up, the Fed tends to tighten policy immediately. But this may be premature, as new evidence from researchers at the Federal Reserve Board shows that the link between price inflation and wage inflation is tenuous.<sup>21</sup> In addition, economists Christopher Erceg, Dale Henderson, and Andrew Levin find that monetary policy focused only on stabilizing price inflation generates large welfare losses, which can be reduced by adding the stabilization of wage inflation as a distinct monetary policy objective.<sup>22</sup>

Despite the enormous societal benefits of full employment, less than full employment has become the operating norm in the U.S. economy for two main reasons. First, excessive fear of inflation leads monetary policymakers to place more weight on the “stable price” goal to the detriment of the “maximum employment” goal. Second, insufficient financial regulation and supervision has led to financial instability and crises associated with negative externalities in the real economy, including prolonged and deep recessions.

#### *The Fed’s excessive emphasis on ultra-low inflation*

Since the rise of inflation targeting as a dominant monetary policy regime around the world, low and stable inflation has become the primary focus of central banks. Inflation targeting means that, instead of balancing employment and inflation, monetary policymakers pursue a single goal of maintaining low, stable price inflation—announcing and committing to maintain an explicit numerical target for inflation. Even though the Fed has not adopted an explicit goal of inflation targeting—which would require Congress to change the Fed’s legal mandate—in January 2012 the Fed declared that 2 percent inflation is consistent with its price stability objective.<sup>23</sup> Since then, inflation has nearly always been below 2 percent.

How useful is this preoccupation with very low and stable inflation? All else being equal, moderate and stable inflation is a good thing, providing stable economic expectations that facilitate wage-setting, investor and consumer decisions, and monetary transactions. However, all else is not equal.

The Fed could choose to focus less on keeping inflation in such a small range and more on maintaining full employment. There is no evidence that allowing inflation to fluctuate within a moderate range is costly.<sup>ii</sup> For example, Bruno and Easterly find that long-run growth rates only start to fall as inflation rises above 20–25 percent.<sup>24</sup> Furthermore, there is no evidence that higher inflation in the single-digit range harms growth.<sup>25</sup> In fact, somewhat higher inflation can actually help lower-income households, for example by transferring wealth from wealthier creditors to less wealthy debtors.<sup>26</sup> Moreover, Social

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<sup>ii</sup> Barro and Fischer confirm that high inflation is deleterious to growth, but fail to find harmful effects of inflation on growth in lower ranges of inflation. Barro, Robert. 1997. “Determinants of Economic Growth.” Cambridge, MA: MIT Press. Fischer, Stanley. 1993. “The Role of Macroeconomic Factors in Growth,” *Journal of Monetary Economics* 32:485-512.

Security and other benefits are often indexed to inflation, which protects recipients from the loss of purchasing power.<sup>27</sup>

Only extremely high values of inflation are harmful to economic growth and to the wellbeing of the poor, and the U.S. economy is nowhere near that range.<sup>28</sup> In fact, in recent years the bigger risk has been negative inflation, or deflation. Both hyperinflation and deflation are symptomatic of other structural economic problems and clearly ought to be avoided. Negative inflation is particularly concerning at present, with economic growth waning across much of the rest of the world and signs of price deflation already threatening the European Union and Japan.<sup>29</sup>

The Fed does not necessarily need to abandon its 2 percent inflation target, but—recognizing that inflation has fallen persistently below target—it should allow larger fluctuations around that target and clarify that the target is symmetric, not an upper bound. That is, inflation should overshoot the target approximately as frequently as it undershoots the target, in contrast to the current practice of keeping inflation consistently below the target. The Fed should also avoid raising rates preemptively when it fears future inflation.

To summarize, excessive emphasis on low and stable inflation at the expense of a strong labor market is unwarranted. Privileging low inflation over maximum employment means that more people are likely to experience unemployment, underemployment, or stagnant wages.

#### *Financial instability and lack of credit access*

In addition to excessively emphasizing extremely low and stable inflation, Federal Reserve policy has also failed to ensure financial stability and fair access to credit. The 2008 financial crisis challenged the belief that financial stability and macroeconomic policy are separate domains.<sup>30</sup> As a report of the International Monetary Fund summarizes, “The recent crisis showed that price stability does not guarantee macroeconomic stability ... To ensure macroeconomic stability, policy has to include financial stability as an additional objective.”<sup>31</sup>

Broad prosperity requires a well-functioning and stable financial system. Perfectly competitive, highly transparent markets with symmetric information do not require much regulation to function efficiently—but this ideal does not describe actual financial markets, in which market failures abound and regulation and oversight are necessary to prevent a range of socially and economically undesirable outcomes.<sup>32</sup> Financial markets are characterized by large externalities. Individuals do not bear the full downside of risks they take; their losses are shared by the larger economy. These market failures largely arise from asymmetric information, moral hazard, and spillover effects.

Financial crises significantly reduce the potential output of an economy and increase the risk of harmful deflation.<sup>33</sup> And as the 2008 financial crash demonstrates, low- and middle-income households bear a disproportionate burden from these crises.<sup>34</sup> Financial crises can make recessions and job loss more severe and prolonged, keeping the economy below full employment. They also disrupt access to credit, which is essential for human capital formation, creation of small and medium-sized enterprises (SMEs), and poverty reduction.<sup>35</sup>

Without financial stability, it is also much more difficult to conduct effective monetary policy. In a financial crisis, the interest rate channel of monetary policy is weakened.<sup>36</sup> The federal funds rate may hit the zero lower bound, impeding the Fed from using its normal tool.

Even in normal economic conditions, market failures arising from imperfect information imply that private financial systems on their own may not provide adequate credit access to entrepreneurs and SMEs.<sup>37</sup> Imperfect information facilitates predation, discrimination, and conflict of interest. Payday loans, subprime auto loans, and predatory education loans contribute to the impoverishment of many families. High, monopolistic credit and debit card fees enrich the financial system at the expense of the average consumer. Exploitation and usury transfer money from the bottom of the distribution to the top without contributing to sustainable growth. Unequal access to credit and unfair terms of credit contribute to inequality of opportunity. In fact, unequal financial and political access are mutually reinforcing.<sup>38</sup>

Regulation may also promote positive externalities from finance. Financial innovations that expand access to fair loans can open opportunities for education, human capital formation, entrepreneurial opportunity, and job creation. The free market does not always incentivize these innovations because banks do not internalize the social benefits.

Given the enormous social benefits of full employment and financial stability, why are these goals not a higher priority for central bankers? The next section reviews how the history of the Fed has led to a status quo that fails to realize the U.S. economy's potential for broad prosperity.

## **REVIEWING A HISTORY OF CONFLICT AND COMPROMISE**

It is important to realize that the Federal Reserve System in place today is the result of a long history of political conflict, compromise, and institutional evolution. Changes in the Fed reflect lessons from history and the evolution of economic theory. Financial, economic, and political circumstances have shaped the structure and roles of the Fed and the nature of its relationships with Congress and the public. Because the status quo discussed in the previous section was not inevitable, it merits continual reevaluation.

To examine how changes to the rules of central banking could support rebalancing America's financial and monetary system toward stable growth, more productive investments, and a more level economic playing field, this section reviews how the rules of Fed policymaking and governance have evolved over time and how these rules have shaped the trajectory of U.S. economic growth and inequality.

Taking in the broad sweep of the Fed's first century of history reveals a striking pattern: Every stage in the Fed's history begins with the identification of major economic challenges. The design of institutional changes at the Fed to address these challenges involves a distributional conflict. The resolution of this conflict leads to a compromise and the adoption of new rules, which alters economic outcomes in terms of growth, distribution, and stability. Eventually, limitations of the compromise are revealed as a new crisis points to the need for further institutional reform.

The initial creation of the Fed responded to the need for a lender of last resort (LLR) in an economy plagued by financial crises. The decentralized structure of the Federal Reserve System, in which Wall Street firms hold great sway over the New York Fed, resulted from a compromise between populist and



commercial banking interests. However, the decentralized Fed was unable to coordinate its response to financial troubles in the late 1920s and early 1930s, which contributed to the onset and severity of the Great Depression. The Great Depression prompted changes to the Fed, including broader roles and responsibilities in macroeconomic stabilization and financial regulation and supervision. However, weaknesses in the international monetary system and intellectual misunderstanding about the tradeoff between inflation and unemployment sowed the seeds for the stagflation of the 1970s. A new status quo of lower worker bargaining power, reduced financial regulation, and monetary policy focused on price stability followed the Volcker disinflation. In turn, inequality and financial instability grew. The Fed responded strongly to the financial crisis and Great Recession of the late 2000s, particularly given the lack of a stronger fiscal stimulus program as the recession progressed. However, continued wage stagnation, broader measures of elevated unemployment, and widening inequality reveal the need for new institutional reforms to shift the Fed's priorities more into line with those of the public.

### *The 1913 Federal Reserve Act: Compromise for a Lender of Last Resort*

Financial panics and bank runs were prevalent in the late nineteenth century U.S. economy. In 1907, an especially severe financial panic catalyzed fundamental monetary reform. Congress created the National Monetary Commission (NMC) to study plans for the creation of a central bank to serve as a lender of last resort.<sup>39</sup> The LLR idea, as popularized by Walter Bagehot in *Lombard Street*, urges central banks to lend “quickly, freely, and readily,” at a penalty rate of interest, to any bank that can offer good collateral.<sup>40</sup> The idea is to prevent solvent but illiquid banks from failing, thereby allaying the banking panics that can arise in a fractional reserve system and preventing individual institutional failures from cascading across the financial system.<sup>41</sup>

Plans for the central bank were hotly debated in 1912 and 1913. The initial proposal of the NMC, as put forth in Senator Nelson Aldrich's 1912 plan, was endorsed by the American Bankers Association but criticized by Virginia Democratic Congressman Carter Glass as providing “a central bank, for banks, and by banks.” Progressives, led by William Jennings Bryan, argued for a system under public control, as opposed to a system controlled by “big financiers.”<sup>42</sup>

The resulting decentralized structure of the Federal Reserve System reflects a compromise between the interests of diverse regional economic interests and populist sentiment. Twelve cities were selected as sites for regional Reserve Banks and remain the seats of the regional banks today. Then, as now, Wall Street firms held great sway over the New York Fed, the most powerful of the regional banks.<sup>43</sup> The 1913 Federal Reserve Act also established that each Reserve Bank board of directors should have nine members, consisting of three Class A directors to represent banks, three Class B directors elected by member banks to represent the public, and three Class C directors appointed by the Federal Reserve Board to represent the public. The Class B and C directors are supposed to be chosen “with due but not exclusive consideration to the interests of agriculture, commerce, industry, services, labor, and consumers” to “ensure that a diversity of viewpoints and backgrounds is represented on each Reserve Bank board.”<sup>44</sup>

In the newly established Federal Reserve System, each district had a governor who could set policies for that district. The Federal Reserve Board itself, located in Washington, D.C., lacked the authority to coordinate nationwide policies across districts. Sometimes district governors disagreed about the appropriate policies to implement during banking crises. While some governors subscribed to Bagehot's

view that a central bank should serve as LLR, others believed in the real bills doctrine, which held that central banks should supply less funding to commercial banks during economic contractions.<sup>45</sup> Partly due to these intellectual disagreements and the inability to coordinate policy across districts, the Federal Reserve failed to act as LLR during the banking panics at the start of the Great Depression.<sup>46</sup>

### *Depression and War Expand the Fed's Mandates*

As created in 1913, the Fed was underequipped to manage risks to financial and macroeconomic stability and did not react in a decisive and coordinated manner to the series of banking panics that began in the late 1920s. The devastation wrought by the 1929 stock market crash and ensuing Great Depression revealed that it was not enough to have a lender of last resort and led to a belief that the government should take a more active role in preventing financial crises and recessions.

The Banking Act of 1933, also known as the Glass-Steagall Act, increased restrictions on branch banking, put bank holding companies under Fed supervision, and created a system of deposit insurance.<sup>47</sup> A provision called Regulation Q encouraged banks to make productive loans in their local communities by limiting the interest rates they could offer on deposits. Glass-Steagall also separated commercial banking from the securities business in response to lessons learned about the dangers of allowing commercial banks with ordinary deposits to engage in riskier financial activities. The culmination of these measures gave the Fed more regulatory and supervisory authority over banks and expanded its scope of power and responsibility.

A further expansion of the scope of Fed responsibility came with rise of Keynesianism as the dominant school of economic thought and with the passage of the Full Employment Act of 1946, whose congressional sponsors interpreted the global Great Depression as a contributor to the rise of National Socialism and World War II.<sup>48</sup> Policymakers learned that a failure to combat massive unemployment has not only economic but also social and political consequences.<sup>iii</sup> This lesson prompted the introduction of maximum employment as a goal of the Fed. However, the Fed's ability to pursue this goal was limited because the Treasury pressured the Fed to keep interest rates low to help with funding war expenses.

In 1950 and 1951, as the Korean War intensified and inflation rose, the Treasury blocked the FOMC's efforts to raise interest rates, and disputes between the FOMC and President Harry Truman were highly publicized. Recognizing that the Treasury's demands were damaging macroeconomic stability, Federal Reserve Chairman Marriner Eccles declared, "We should tell the Treasury, the President, and the Congress these facts, and do something about it ... We have not only the power but the responsibility ... If Congress does not like what we are doing, then they can change the rules."<sup>49</sup>

Truman lacked the political popularity to prevail over the Fed, so Congress did, indeed, change the rules. The Fed-Treasury Accord of 1951 granted the Fed independence in its pursuit of macroeconomic stability.<sup>50</sup> During the next two decades, under a system characterized by active macroeconomic policy management and a more regulated financial sector, the U.S. economy enjoyed faster, more stable, broadly shared growth. Even given ongoing, deep-rooted structural discrimination in the U.S., wages and incomes grew steadily across income and social groups.<sup>51</sup>

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<sup>iii</sup> In 1933, in the Senate Committee on Banking and Currency hearings investigating the causes of the Depression, head counselor Ferdinand Pecora revealed and publicized the greed, conflict of interest, and lack of transparency in banking that had contributed to the Depression (Crawford 2011).

However, two major weaknesses in the new system would soon be revealed. The first was the constraints of the Bretton Woods system, the global monetary system implemented after World War II. Bretton Woods attempted to maintain fixed parity between foreign currencies and the U.S. dollar, the value of which was pegged to gold at \$35 per ounce. Initially this system functioned similar to a gold standard: In order to maintain the dollar's value, the Fed had to counter gold outflows by raising interest rates. Lyndon Johnson's Great Society programs and Vietnam War spending caused the dollar to become overvalued and led to the suspension of the dollar's convertibility to gold. The Bretton Woods system thus changed from a de facto gold standard to a dollar standard, in which the price levels of other countries had to move with the U.S. price level.<sup>52</sup>

The second major weakness—an intellectual misunderstanding—sowed the seeds for the U.S. price level, and with it prices around the world, to begin rising rapidly. This misunderstanding concerned a statistical relationship between unemployment and inflation, originally documented by A.W. Phillips.<sup>53</sup> Academics and policymakers believed they could exploit a long-run tradeoff between unemployment and inflation, and that permanently lower unemployment was possible at the cost of somewhat higher inflation. Edmund Phelps and Milton Friedman later warned of the flaws in this logic: As households and businesses began to expect higher inflation, the tradeoff between inflation and unemployment would become less favorable.<sup>54</sup>

### *The Great Inflation*

Phelps's and Friedman's warnings came to fruition as the U.S. entered a period of high inflation and high unemployment, known as stagflation, as the result of a combination of policy mistakes and bad luck, including oil price shocks. Consumer price inflation reached 12 percent on an annualized basis by the end of 1974 while the unemployment rate reached 9 percent as the U.S. economy exited recession in May 1975.<sup>55</sup> After a period of deflation following the 1973 OPEC oil price shock, inflation began climbing again in early 1978 and spiked with a second oil price shock in 1979.

Federal Reserve Chairman Arthur Burns still believed that full employment was the top priority of the government and the public, and that fighting inflation with monetary policy would be too costly in terms of employment.<sup>56</sup> Thus, the task of fighting inflation was initially left to the White House, not the Fed. President Nixon's attempts to reduce inflation through wage and price controls, and his "Whip Inflation Now" program, proved ineffective. The Bretton Woods system unraveled, and inflation continued to spiral upward.

Meanwhile, the Federal Reserve Reform Act of 1977 and the Full Employment and Balanced Growth Act of 1978 amended the 1913 Federal Reserve Act to increase congressional oversight of the Fed and make the Fed's mandate more specific: to "maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote the goals of maximum employment, stable prices, and moderate long-term interest rates."<sup>57</sup> Given the ambiguous wording of the legislation, FOMC members decided to implement this new mandate by pursuing price stability as the primary goal; they would support the employment objective indirectly.<sup>58</sup> Robert Lucas and Tom Sargent's highly influential work on rational expectations led to recognition that if aggressive efforts to fight inflation could also reduce expected inflation, the Fed could escape the stagflation trap.<sup>59</sup>

When Paul Volcker took office as Federal Reserve Chairman in 1979 with inflation above 11 percent, he remarked that “we have no choice but to deal with the inflationary situation because over time inflation and the unemployment rate go together. ... Isn’t that the lesson of the 1970s?”<sup>60</sup> To deal with inflation, the Volcker Fed raised the federal funds rate target from around 10 percent to around 20 percent. The spike in interest rates did yield a large decline in inflation, primarily by throwing the U.S. economy into a sudden and steep economic contraction in the first half of 1980, and again from 1981 to 1982.<sup>61</sup> The unemployment rate jumped from 5.7 percent in July 1979 to 10.8 percent by the end of 1982—the highest level on record in the postwar U.S. economy.<sup>62</sup> But as inflation expectations fell, both inflation and unemployment eventually returned to more normal levels.

The success of the Volcker Fed in taming inflation—albeit at the cost of mass unemployment—bolstered the belief that price stability was the rightful goal of monetary policy and that monetary policy should be delegated to inflation-averse technocrats who could credibly fight inflation, free from political pressures to pursue expansionary policy.<sup>63</sup> Some countries, beginning with New Zealand, formalized this belief by adopting inflation targeting. The Fed did not join the list of formal inflation targeters but was greatly influenced by the emphasis on low and stable inflation, and Ben Bernanke, a leading academic advocate of inflation targeting, was named Chairman of the Federal Reserve in 2006.<sup>64</sup> Although the Fed remained bound to the dual mandate by law, the interpretation of the dual mandate evolved to put more of an emphasis on fighting inflation. This was aided by the Depository Institutions Deregulation and Monetary Control Act of 1980, which gave the Fed more control over the money supply by making all depository institutions subject to the Fed’s reserve requirements.<sup>65</sup>

The experience of the Great Inflation and Volcker disinflation also came with major changes in economic theory and policy. Finn Kydland and Edward Prescott’s work on real business cycles, for which they later won a Nobel Prize, inspired a large body of literature that placed a larger emphasis on supply shocks as a source of macroeconomic fluctuations.<sup>66</sup> Supply-side economics, reflected in the policies of President Ronald Reagan, led to an erosion of worker bargaining power and weakening of unions, which in turn led to a shift away from the broadly shared growth that followed World War II. Then-Chairman of the Federal Reserve Alan Greenspan testified before Congress in 1997 that the “extraordinary” performance of the economy that year was attributable to “a heightened sense of job insecurity and, as a consequence, subdued wages”—the so-called “traumatized worker” hypothesis by which Greenspan justified allowing the unemployment rate to fall lower than was previously thought prudent because wage pressures would be held in check.<sup>67</sup>

Supply-side economics affected central bank policy not only by cementing the privileged status of the price stability goal for monetary policy but also by unraveling the regulatory framework built up after the Great Depression.<sup>68</sup> For example, the Financial Services Modernization Act of 1999, also known as the Gramm-Leach-Bliley (GLB) Act, repealed many of the Glass-Steagall restrictions on broad banking.

The new compromise—deregulation of the financial sector, lower worker bargaining power, and a Fed focused on price stability—contributed to rising inequality, as preemptive tightening of monetary policy in recovery phases helped ratchet down wages.<sup>69</sup> The next phase in Federal Reserve history would reveal the extent to which weak financial supervision and regulation contributed to fragilities that would impose severe negative externalities on low- and middle-income households.

### *The Financial Crisis and Great Recession*

The lax financial supervisory environment that developed in the 1980s and '90s allowed fragility to build up in the financial system. The GLB Act opened the door for a series of financial mergers to form megabanks, over which the Fed held supervisory responsibility, as well as a proliferation of new non-bank financial institutions operating in regulatory grey areas, which presented new challenges for the management of systemic stability. These changes in the structure of the U.S. financial system helped fuel an asset bubble in the late 1990s and a real estate and broader credit bubble in the 2000s. The bursting of these bubbles contributed to the recession of 2001 and the Great Recession of the late 2000s.

The Fed attempted to combat the financial crisis of 2007 by cutting the federal funds rate target from 5.25 percent in September 2007 to 2 percent in June 2008 (see Appendix B). In response to intensifying financial panic following the bankruptcy of Lehman Brothers and near-bankruptcy of American International Group, the Fed continued cutting the federal funds rate to zero. The use of a nominal interest rate as the monetary policy instrument caused the Fed to face the limitation of the zero lower bound, an uncommon constraint prior to the crisis.<sup>70</sup>

Unable to cut the policy rate further, the Fed turned to unconventional monetary policy to support still-flagging U.S. economic activity and employment, including forward guidance (communication about the future path of policy), liquidity provision, and credit easing programs. The Fed conducted three large-scale asset purchase (LSAP) programs, referred to as quantitative easing, or QE1, QE2, and QE3, between the start of the financial crisis and October 2014.<sup>71</sup> These programs purchased Treasury bonds, mortgage-backed securities, and assorted other assets in order to put downward pressure on longer-term interest rates, thereby supporting mortgage lending impacted by the crisis and recession and allowing homeowners with positive equity to refinance their homes at more favorable rates.<sup>72</sup>

The overall impact of the LSAP programs on inequality is difficult to evaluate, but there were some clear negative effects. These programs increased the prices of Treasury bonds and mortgage-backed assets, directly benefiting asset holders by increasing their wealth. In addition, the top 10 percent of wealth holders in the U.S. own 89 percent of the value of all publicly traded shares.<sup>73</sup> Declining interest rates made stocks a relatively more attractive investment than bonds, which helped to pump up the general level of stock prices. This benefited existing shareholders—disproportionately concentrated at the top of the distribution—as well as corporate executives whose compensation is increasingly tied to share price performance, while those buying shares to save for retirement found that their incomes could purchase fewer assets.<sup>74</sup>

Households in lower income brackets, lacking substantial assets, benefited only insofar as asset holders increased investment, hiring, and personal consumption through the so-called wealth effect. This presumed link from balance sheets to the real economy, however, is tenuous.<sup>75 76</sup> The largest banks were saved, but hundreds of smaller and regional banks, which were more involved in lending to small and medium businesses, were not. Although banks and other financial institutions had access to ample liquidity from the Fed, this did not translate into an increase in the supply of credit. This is one reason for the slow recovery.<sup>77</sup>

Central banks in other countries also undertook unconventional policies. In the United Kingdom, quantitative easing boosted the value of households' financial wealth held outside pension funds, but the

wealthiest 5 percent of households hold 40 percent of these assets.<sup>78</sup> A decade of unconventional monetary policy appears to have increased inequality in Japan, as well.<sup>79</sup>

On the other hand, the LSAP programs provided macroeconomic stimulus when fiscal policymakers in Congress were unable to muster the political will for a larger stimulus package. To the extent that monetary stimulus brought the economy closer to full employment than it otherwise would have been, the LSAP programs likely reduced the Great Recession's deleterious effects on the income distribution.<sup>80</sup> Of course, it would have been better to prevent the financial crisis and recession in the first place.

Larry Summers and others have warned that low interest rates and stagnant growth may plague industrial economies for years to come. At the IMF Economic Forum in 2013, Summers noted:

*[M]y lesson from this crisis—and my overarching lesson, which I have to say I think the world has under-internalized—is that it is not over until it is over ... and that we may well need, in the years ahead, to think about how we manage an economy in which the zero nominal interest rate is a chronic and systemic inhibitor of economic activity, holding our economies back below their potential.<sup>81</sup>*

If this is the case, then the Federal Reserve System's large staff of research economists should devote continued and increased efforts to studying the open questions about the efficacy of unconventional monetary policies. Alternative monetary policy proposals, including nominal GDP targeting, also merit further research and consideration.

Like the financial panic of 1907, the financial crisis of 2007–8 and its aftermath have motivated scrutiny of the current monetary and financial system from both ends of the political spectrum. Part of this scrutiny concerns the objectives, or goals, of monetary policy, including the emphasis on very low and stable inflation. There are increasing calls for the Fed to return to an emphasis on employment and to deal with systemic risk in the financial system. This will require undoing political and regulatory capture from the financial industry and strengthening central bank accountability to the public.

## **RESTORING ACCOUNTABILITY**

The previous sections have described shortcomings in the Fed's promotion of a resilient and equitable economy. These shortcomings result in part from a misalignment of the Fed's interests with those of society at large. Any hope of reforming the Fed must begin by reforming its institutional structure and governance to correct this misalignment.

In a democratic society, policymakers must be held accountable to the public, either through elections or other means. Federal Reserve officials are not required to run for office, but their decisions have large political and distributional implications, and they too must be held accountable to ensure that monetary and financial markets serve all Americans. Legislators on both sides of the political spectrum have recognized the need for a more transparent, accountable Federal Reserve.

### *Independence*

In a representative democracy, some public policy tasks are assigned to popularly elected officials and others to unelected technocrats. Optimal assignment depends on the nature of the task.<sup>82</sup> Since the 1970s, there have been two main justifications for delegating monetary policy to unelected technocrats at

independent central banks. First is a concern that elected officials would be tempted to overstimulate the economy for electoral gain.<sup>83</sup> As Alan Blinder explains, “the pain of fighting inflation (higher unemployment for a while) comes well in advance of the benefits (permanently lower inflation). So shortsighted politicians with their eyes on elections would be tempted to inflate too much.”<sup>84</sup> The second is the perception that monetary policy, unlike fiscal policy, has limited distributional consequences, and therefore is apolitical and does not require elected officials to make value judgments.

In fact, these two justifications are subtly contradictory: The desire to inflate for political gain arises precisely because some groups benefit more than others from monetary stimulation.<sup>85</sup> Moreover, neither of these is a strong justification for central bank independence in the U.S. today. In regard to the first, inflation is not too high—if anything, it is too low—and with appropriate checks and balances, the temptation to pursue overly inflationary policy for electoral gain can be managed. In regard to the second, monetary policy has important distributional consequences, as we have outlined in this report. During the recent crisis in particular, monetary authorities engaged in “quasi-fiscal” operations when the Fed rescued some banks and bondholders but not others.<sup>86</sup> Consumers hurt by banks’ predatory behavior, merchants paying the cost of anti-competitive financial practices, or workers hurt by a weak labor market deserve a voice in the conduct of monetary and regulatory policy.<sup>87</sup>

Independence is not a one-dimensional, binary concept; there are different types and degrees of central bank independence, and the optimal arrangement depends on other fiscal and institutional structures and social goals.<sup>88</sup> Institutional arrangements that limit coordination between monetary and fiscal policy can needlessly constrain the effectiveness of both.<sup>89</sup>

### *Regulatory Capture and Conflicts of Interest*

The Fed’s statutory independence has not insulated it from political pressure. Daron Acemoglu and Simon Johnson write:

*In recent decades the Fed has given way completely, at the highest level and with disastrous consequences, when the bankers bring their influence to bear—for example, over deregulating finance, keeping interest rates low in the middle of a boom after 2003, providing unconditional bailouts in 2007–8, and subsequently resisting attempts to raise capital requirements by enough to make a difference.*<sup>90</sup>

More effective financial regulation requires reform of Fed governance to minimize regulatory capture by financial sector interests. As noted above, each regional Reserve Bank is governed by three different classes of directors. In practice, all three classes have strong financial sector ties, while labor and consumer interests are underrepresented. In 2010, 56 of 91 directors surveyed had a background in finance.<sup>91</sup>

Directors’ and former directors’ affiliations with financial firms pose reputational risks to the Fed. Many of the Fed’s board members own stock in or work for banks that the Fed supervises and regulates.<sup>92</sup> The New York Fed President, for example, was at the center of bailouts of banks that played a role in his appointment.<sup>93</sup> The Fed should follow the central banks in Australia, Canada, the U.K., and the European Union in requiring its directors to disclose potential conflicts of interest. Like the Bank of Canada, the Fed should also prohibit its directors from participation in any real, potential, or apparent conflicts of

interest, from having affiliations with entities that perform clearing and settlement responsibilities in the financial services industry, and from dealing in government securities.<sup>94</sup>

A report of the Government Accountability Office suggests multiple improvements to the management and disclosure of conflicts of interest by Fed officials.<sup>95</sup> This report should be an important reference in the design of new governance policies. The report also notes that diversity should be prioritized: The 108 directors in 2010 included 90 men, of whom 78 were white, and 17 women, of whom 15 were white.

The process of selecting and reappointing Fed presidents also requires reform. The Fed should make public a more detailed set of criteria to be used to guide selection and reappointment, and should provide mechanisms for public involvement in the process. For example, the Fed currently hires a search firm to identify candidates, and the Board of Governors interviews finalists.<sup>96</sup> The Fed should provide opportunities for members of the public to serve on the search committee and submit questions for the interviews. The Fed should also publicly report statistics on the diversity of its initial and final candidate pools.

### *Transparency and Discretion*

One argument in favor of single-objective monetary policy, like inflation targeting, is that it makes it easy to evaluate how good a job the central bank is doing. As N. Nergiz Dincer and Barry Eichengreen emphasize, when the central bank has more objectives, transparency becomes even more important because evaluating central bank efficacy requires information about plans, actions, and accomplishments across a wide variety of dimensions.<sup>97</sup>

Transparency is even more important if the Fed is to continue conducting discretionary, as opposed to rule-based, monetary policy. Proposals to legislate explicit rules for Fed policymaking—for example, requiring that the Fed follow the Taylor rule—are not an optimal approach to providing accountability. Federal Reserve staff and officials are experts in their fields, so allowing them to use discretion when evaluating many complex economic and financial conditions should improve policy outcomes. However, discretion must be accompanied by high transparency so that elected officials and the public are informed of the rationales behind policy decisions and can evaluate effectiveness. Fortunately, the Fed, like many central banks around the world, has been following a trend of increased transparency.<sup>98</sup>

### *Accessible Communication That Reaches Main Street*

The general public's understanding and approval of the Fed are quite low; many households are uninformed about the Fed and its objectives and policies, and Americans are generally less aware of the Fed than they are about other government institutions. The Fed has made substantial efforts to improve its communication strategy in recent years, which has helped the most financially savvy members of the public better understand its actions, but still more improvements are needed for Fed communication to reach the average household. The Fed has to compete for households' attention in the new media landscape. This requires ramping up its use of social and interactive media and television, using more accessible language, and explicitly tailoring communications to address the varying concerns of different demographic and socioeconomic groups.<sup>99</sup>

Communication is a two-way street, and more channels for the public to provide input are needed. Narayana Kocherlakota, outgoing Minneapolis Fed President, notes that “[i]n order for the Fed to continue to be effective, it needs to communicate its policy decisions transparently to the public.



Conversely, it also needs the public's input into how those policies are affecting them."<sup>100</sup> Toward this end, the Fed has created a Community Advisory Council (CAC) comprised of 15 members "with knowledge of fields such as affordable housing, community and economic development, small business, and asset and wealth building, with a particular focus on the concerns of low-and moderate-income consumers and communities."<sup>101</sup> The first meeting of the CAC occurred on November 20, 2015. The minutes or a recording of these meetings, and Fed officials' responses to concerns raised in them, should be publicized.

## **RETHINKING THE TOOLS**

If the Fed is to pursue a broader set of objectives that promote equitable growth, including full employment and financial stability, it will need to expand its policy tools. Prior to the 2007 financial crisis, monetary policy worked primarily with a single instrument, the federal funds rate. Recall that in the conventional monetary policy framework, the central bank adjusts the federal funds rate in response to changes in output and inflation. The Taylor rule does not explicitly include a term related to asset prices or stock market or housing market conditions, for example, though changes in the federal funds rate affect these conditions.

In general, however, the federal funds rate is not the appropriate tool for maintaining financial stability because it is too blunt an instrument to target specific types of financial imbalances.<sup>102</sup> "Pricking" an asset price bubble by raising the policy interest rate can require undesirably large movements in interest rates.<sup>103</sup> Moreover, the effects of interest rates on financial stability are not perfectly clear. While it is often the case that lower interest rates encourage increased risk-taking in the financial sector—what traders call "reaching for yield"—and contribute to instability, in some circumstances higher interest rates may also cause distressed financial intermediaries to take larger risks.<sup>104</sup> Rather than relying on this inefficient instrument, the Fed should take a more proactive role in promoting and enforcing prudential regulatory measures, though this will likely require governance reforms to better balance the interests and voices participating in Fed policymaking. Tools that address financial sector risks more directly, as this section will discuss, are a useful complement to interest rate policy.

Another reason to introduce a wider variety of monetary policy tools is that the effectiveness of changes in the federal funds rate at achieving policy objectives can vary with the state of the economy. In normal times, movements in the federal funds rate result in corresponding movements in other interest rates, including mortgage and auto loan rates and business loan rates. Since 2007, however, the relationship between the federal funds rate and rates on consumer loans has weakened.<sup>105</sup> When the financial crisis hit, large cuts in interest rates did not stop the crisis from becoming a severe international recession, and prolonged low interest rates are creating new problems in the domestic and international economies.<sup>106</sup>

Credit booms tend to precede especially severe and prolonged recessions.<sup>107</sup> The United States has a long history of using various instruments to dampen the credit cycle, although these instruments have been used less frequently in the past three decades.<sup>108</sup> Since the financial crisis, there is growing interest in the use of macroprudential tools, which address system-wide resilience, to limit the frequency and severity of credit-fueled asset bubbles. Why should the Federal Reserve be responsible for macroprudential policy instead of some other institution? A major reason is that monetary policy has side effects that affect macroprudential policy and vice versa, making coordination of policies very important. This is easier to do if a single institution has primary responsibility for both monetary and macroprudential policy.<sup>109</sup>

### *Countercyclical Margin and Collateral Requirements*

After the stock market crash of 1929, it was perceived that credit-financed securities speculation had contributed to the run-up in stock prices before the crash. To curb such speculation, the Securities and Exchange Act of 1934 granted the Federal Reserve the power to set initial *margin requirements* that limit the share of securities purchases that can be bought with credit (Regulation T). The Fed adjusted the margin requirement 23 times between 1934 and 1974, and since then has maintained a 50 percent margin requirement—meaning that for every \$100 of shares an investor wishes to purchase, at least \$50 must come from her own funds or collateral.<sup>110</sup>

Rather than maintaining a constant margin requirement, the Fed could set the margin requirement countercyclically. By deterring run-ups in leverage during boom times, countercyclical margin requirements would reduce financial market volatility.<sup>111</sup> Countercyclical margin requirements should be applied broadly across asset classes to be effective, since a variety of financial products and derivatives allow investors to speculate on stock prices without directly purchasing stocks. Similarly, the Fed could adjust loan-to-value ratios in the case of a real estate bubble. Increasing margin and down payment requirements could have curbed the tech and housing bubbles more effectively than adjusting interest rates.

Collateral-based lending can also contribute to system-wide risk because the value of collateral increases during a bubble, allowing a greater volume of lending and reinforcing the bubble. An increase in collateral requirements during boom periods would act as an automatic stabilizer.<sup>112</sup>

### *Capital Requirements*

Borrowers and banks do not fully take into account their individual contribution to systemic risk, and therefore take on more risk and leverage than is socially optimal.<sup>113</sup> High leverage means that shocks to the financial system are amplified.<sup>114</sup> Capital requirements are one way that the Fed, in its regulatory and supervisory roles, can address the negative externalities of excessive risk and leverage.<sup>115</sup>

When financial institutions are “too big to fail” or “too interconnected to fail,” the likelihood that the government will bail them out in case of crisis provides an implicit subsidy to the bank in the form of reduced lending costs.<sup>116</sup> One proposed way to address this problem is to directly regulate banks’ size or activities, for example by reimposing the Glass-Steagall Act’s separation between commercial and investment banking. The Lincoln Amendment to the Dodd-Frank Act would have required banks to create a separation between plain vanilla, FDIC-insured banking activities and more exotic types of activities that would not benefit from taxpayer-funded insurance. This section was repealed following extensive Wall Street lobbying.

However, reinstating Glass-Steagall may not be necessary for addressing too big to fail or systemically important financial institutions (SIFIs). A more effective strategy is to introduce higher capital requirements and let the market decide which banks add enough value to maintain their current size.<sup>117</sup> In July 2015, the Dodd-Frank Act imposed a surcharge capital requirement on SIFIs. Banks must hold a baseline amount of capital set by Basel III regulations, and the surcharge amount takes into account the riskiness and size of each particular bank. JP Morgan was subject to the highest surcharge, 4.5 percent. This led JP Morgan to slim down so its surcharge would be reduced to 4 percent.<sup>118</sup> Scaling up the SIFI surcharge could improve the soundness of the financial sector.

In addition to increasing the level of capital requirements, making capital requirements countercyclical would contribute to even greater financial stability.<sup>119 120</sup> Countercyclical capital adequacy rules reduce swings in asset prices and help monetary policymakers achieve inflation and output outcomes with smaller movements in interest rates.<sup>121</sup>

### *Regulations on Derivatives*

Derivatives are financial instruments whose value is linked to the price of some underlying item.<sup>122</sup> Derivatives can be used to trade and manage risk, but can also be misused as gambling instruments for speculation. When financial institutions devote excessive resources to innovation in speculative activities, such as originating derivatives and credit default swaps, they divert capital from the core lending business and threaten financial stability.

In 2014, the Securities and Exchange Commission finalized new rules on derivatives regulation under the Dodd-Frank Act. One major problem with the new rules is the treatment of derivatives trading by overseas affiliates of U.S. banks. Derivatives regulations only apply to foreign affiliates' derivative contracts if the American banks explicitly guarantee the contracts, so banks can avoid regulation by removing explicit guarantees while continuing to implicitly back affiliates' risky derivative contracts.<sup>123</sup>

### *Attention to Shadow Banks*

Macroprudential regulation should extend beyond banking and cover any institutions that could have systemic consequences, including shadow banks. Shadow banks are financial institutions that in some ways act like banks but are not regulated like banks. Like commercial banks, they raise short-term funds in money markets and use these funds to buy longer-term assets. Unlike commercial banks, since they are not subject to the same regulations, they cannot borrow from the Fed in emergencies and do not have traditional depositors.<sup>124</sup> Following the Gramm-Leach-Bliley Act of 1999, regulatory arbitrage fueled the growth of shadow banking and shadow insurance industries like Merrill Lynch, GE Capital, Fannie Mae, and Freddie Mac.<sup>125</sup>

### *International Coordination*

Large central banks, especially the Fed, need to recognize that their actions have not only domestic but also foreign consequences. Huge imbalances have built up in the international monetary and financial system as a result of policies focused on short-term macroeconomic fine-tuning to the neglect of financial instabilities and international spillovers.<sup>126</sup> Monetary accommodation in the core economies has created problematically easy monetary conditions in emerging markets. Rebalancing the international monetary and financial system will require structural reforms to reduce reliance on demand management policies.

International considerations were a stronger influence on Fed decision-making in the 1960s but became less of a focus after the collapse of the Bretton Woods system.<sup>127</sup> The Fed did, however, make some attempts at international coordination during the recent crisis. For instance, the Fed arranged dollar swap lines with 14 other central banks starting in December 2007 and coordinated with the European Central Bank, Bank of England, Bank of Canada, Swiss National Bank, and Swedish National Bank to ease policy rates following the collapse of Lehman Brothers, even issuing a joint statement.<sup>128</sup>

Recommended reforms to the international monetary system include a Sovereign Debt Restructuring Mechanism (SDRM) and global reserve system reform. Although sovereign debt crises occur regularly, there is no formal legal and political procedure to restructure unsustainable sovereign debt.<sup>129</sup> The

absence of international rule of law for the resolution of sovereign defaults means that disputes are resolved in an inefficient and inequitable manner.<sup>130</sup> An SDRM could provide orderly and rapid restructuring of unsustainable sovereign debt, reducing costs to sovereign debtors and their creditors.<sup>131</sup>  
132 133

The U.S. dollar is the global reserve currency that many countries use to settle their international trade accounts. Foreign countries hold large quantities of U.S. dollars to facilitate trade. This special status is damaging to stability and equity both domestically and internationally.<sup>134</sup> Many emerging market countries in Asia and Latin America responded to financial crises in the 1990s by strengthening their external balances, leading to an increase in foreign exchange reserves and allowing U.S. external deficits to grow unchecked.<sup>135</sup> Developing countries lend to the U.S. government at near-zero interest rates to attain dollar reserves.<sup>136</sup> A new global reserve could be used as an active instrument of global macroeconomic stabilization policies and pursuit of global public goods like development and climate change. A U.N. commission laid out a variety of forms that a new global reserve system might take. A combination of approaches, including expansion of regional reserve arrangements and extension of the current system of special drawing rights seems most feasible.

## **CONCLUSION**

The Federal Reserve is a product of political and social compromise, and it can be changed. The effects of central bank policy on economic inequality cannot be ignored. This report suggests that the Fed should adjust its objectives and tools to promote a more equitable economic system in which prosperity is broadly shared. In particular, the Fed should emphasize full employment, broad-based wage growth, and financial stability and access at least as strongly as it emphasizes price stability. Macroprudential policies, including countercyclical margin and collateral requirements, higher capital requirements, and stronger regulations on derivatives, will help the Fed achieve these objectives. Reforms to the Fed's governance structure and communication strategy can improve the Fed's accountability to the public.

Promotion of full employment and strong wage growth is not exclusively dependent on monetary policy. Many other local, state, and federal policies and proposals have important consequences for employment conditions and the income distribution. The Fed's enormous and highly qualified staff of research economists should prioritize research on these policies.

## APPENDIX A

### Timeline: The Federal Reserve's First Century

1907: Severe financial panic catalyzes creation of National Monetary Commission

1913: President Wilson signs Federal Reserve Act

1914–19: Federal Reserve assists Treasury in financing the war by marketing war debt and maintaining low interest rates

1929: Stock market crash and beginning of Great Depression

1932–33: Banking Acts give Fed more regulatory authority over national banks; U.S. abandons gold standard

1935: Banking Act expands power of the Fed and shifts power from regional reserve banks to the Board

1939–45: To support the government's ability to finance WWII, FOMC maintains the rate on Treasury bills at 0.375 percent

1946: Full Employment Act

1951: Treasury-Federal Reserve Accord establishes Fed's independence from Treasury

1956: Bank Holding Company Act broadens Fed's regulatory powers

1965–81: Great Inflation

1971: President Nixon ends convertibility of dollar to gold, leading to end of Bretton Woods system

1980–1989: Savings and Loan crisis and financial deregulation

1981–82: Recession and Volcker disinflation

1987: Black Monday stock market crash; Fed provides liquidity to markets.

1999: Financial Services Modernization Act (Gramm-Leach-Bliley)

1998–2006: Average home price nearly doubles

2007–09: Financial and housing market crisis and Great Recession

2008–15: Federal funds rate at zero lower bound; Fed uses unconventional monetary policy (see "Timeline: The Federal Reserve 2007-15")

Notes: The main source for this timeline is <http://www.federalreservehistory.org/Events/>

## APPENDIX B

### Timeline: The Federal Reserve 2007–15

September 18–December 11, 2007: FOMC reduces federal funds rate target three times from 5.25 to 4.25 percent.

December 12, 2007: FOMC authorizes swap lines with the European Central Bank (ECB) and the Swiss National Bank (SNB) and creates a Term Auction Facility (TAF) to auction funds to depository institutions.

January 22 and 30, 2008: FOMC reduces federal funds rate target to 3 percent.

February 13, 2008: Economic Stimulus Act of 2008 signed by President Bush.

March 7–17, 2008: Fed extends swap lines and TAF, establishes Primary Dealer Credit Facility, approves financing arrangement announced by JPMorgan Chase and Bear Stearns, and allows securities dealers to borrow from the Fed on similar terms as banks. Discount window borrowing term extended from 30 to 90 days.

March 18 and April 30, 2008: FOMC reduces federal funds rate target twice to 2 percent.

July 13, 2008: Fed authorizes the Federal Reserve Bank of New York (FRBNY) to lend to the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac).

July 30, 2008: Housing and Economic Recovery Act of 2008 reforms regulatory supervision of Fannie Mae and Freddie Mac under new Federal Housing Finance Agency.

September 7, 2008: Fannie Mae and Freddie Mac placed under government conservatorship.

September 15, 2008: Lehman Brothers files for Chapter 11 bankruptcy.

September 16, 2008: FRBNY authorized to lend up to \$85 billion to the American International Group (AIG).

September 18–29, 2008: FOMC expands existing swap lines and authorizes new swap lines with the central banks of Japan, U.K., Canada, Australia, Sweden, Denmark, and Norway.

September 19, 2008: Fed announces new liquidity facility and plans to purchase short-term debt obligations issued by Fannie Mae, Freddie Mac, and Federal Home Loan Banks from primary dealers.

October 3, 2008: Emergency Economic Stabilization Act establishes \$700 billion Troubled Asset Relief Program.

October 6–21, 2008: Fed begins to pay interest on depository institutions' required and excess reserves, creates new liquidity programs, increases swap lines, and reduces federal funds rate target to 1.5 percent.

October 29, 2008: FOMC reduces federal funds rate target to 1 percent.

November 24, 2008: Bailout of Citigroup.

November 25, 2008: Fed begins large-scale asset purchases (LSAP) of up to \$100 billion of U.S. agency debt and \$500 billion of mortgage-backed securities (MBS).

December 16, 2008: FOMC reduces federal funds rate target to near zero.

November 3, 2010: Fed begins \$600 billion LSAP of U.S. Treasury securities over eight months (QE2).

August 9, 2011: Fed issues forward guidance.

September 21, 2011: In Maturity Extension Program, Fed purchases long-term U.S. Treasury securities and sells short-term Treasury securities over nine months.

January 25, 2012: Announcement of explicit 2% inflation goal.

September 13, 2012: Fed announces \$40 billion per month LSAP for unspecified duration (QE3).

December 18, 2013: Fed begins to taper securities purchases.

Note: For more detailed timeline, see <https://www.stlouisfed.org/financial-crisis/full-timeline>

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