

# The Federal Reserve's Role in the Global Economy: A Historical Perspective

By Michael Weiss



The Globalization and Monetary Policy Institute at the Federal Reserve Bank of Dallas sponsored the Bank's centennial conference analyzing the evolution of the U.S. central bank, from its beginnings 100 years ago to its future influencing global monetary policy. The gathering, held Sept. 18–19 at the Dallas Fed, included the inaugural Robert V. Roosa Memorial Lecture, a conversation with former Federal Reserve Chairman Paul A. Volcker. The conference was organized by Dallas Fed Vice President and Globalization Institute Director Mark A. Wynne and institute senior fellow Michael D. Bordo, a professor of economics at Rutgers University.

The conference program was divided into three sessions: “Beginnings: The Gold Standard, Global Conflict and the Great Depression,” “Coming of Age: From Bretton Woods to the Great Inflation to the Great Moderation” and “Globalization 2.0: Monetary Policy in a Global Context: Past, Present and Future.”

The first session featured two presentations. Barry Eichengreen, professor of economics and political science at the University of California, Berkeley, began his discussion of “Doctrinal Determinants, Domestic and International, of Federal Reserve Policy, 1914–1933” by arguing that international considerations made up only a part of the factors—though not negligible—intermittently shaping the Federal Reserve's outlook and policies during an initial era that ended in 1933.

## Monetary Policy Doctrines

Eichengreen said the period was characterized by a series of doctrines. The Gold Standard Doctrine predominated at the time the Federal Reserve System was created. Gold inflows and outflows often signaled changes in central bank policy. Still, there wasn't a rigid rule. Rather, the gold standard was not

just a statutory requirement but also a way of thinking. “The gold standard was not a mechanical set of rules,” Eichengreen said. The Real Bills Doctrine, mirroring central bank thinking of the late 19th and early 20th centuries, stressed the notion that the central bank should provide an “elastic currency”—as much money and credit as needed for business purposes (as opposed to speculative ones).

The Reifler–Burgess Doctrine, which followed, closely resembled Real Bills and proposed that the Federal Reserve had “multiple instruments to intervene.” Reifler–Burgess, however, concluded that the level of interest rates—whether achieved through discount-window borrowing or open market operations—was the only adequate way to summarize the stance of monetary policy. The subsequent Warburg Doctrine, named for German-American banker Paul Warburg, accompanied the U.S.'s ascension as an emerging market of the 20th century. The doctrine, which carried “a distinctive foreign policy element,” sought to “enhance the international role of the dollar” as a means of promoting U.S. economic competitiveness. Warburg, a Fed Board member at the institution's 1914 founding, argued that the central bank as a market maker for trade acceptances could regulate interest rate movements. The Warburg Doctrine, however, was ill-equipped to deal with the integration of monetary and fiscal policy, Eichengreen said.

The Strong Doctrine, named after Federal Reserve Bank of New York Governor Benjamin Strong, countered the Real Bills Doctrine, suggesting that rather than interest rates, the central bank should focus on money and credit aggregates. Strong, an ally of Bank of England Governor Montagu Norman and a pragmatist, “believed in discretionary policy” absent specific rules and thought stable exchange rates encouraged U.S. commodity exports. The subsequent Harrison Doctrine represented a tempera-

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mental rather than a doctrinal departure: George Harrison served as Strong's deputy for almost nine years before taking over at the New York Fed.

### Greater Fed Latitude

The Glass–Steagall Doctrine epitomized in the Glass–Steagall Act of 1932 relaxed collateral requirements on Federal Reserve notes, providing a bit of distance from the Gold Standard Doctrine, and allowed a greater range of securities against which the Fed could lend, thus countering Real Bills. Conceptually, Glass–Steagall provided an incremental step toward the policies of Franklin Roosevelt and the Roosevelt Doctrine. A reflationary period in the wake of the Great Depression, it is characterized as a time of inconsistent policy and wavering from the gold standard.

Eichengreen traced the doctrines from the post-World War I recession through central bank open market purchases in 1932. Following WWI, preservation of the gold standard in the U.S. set the stage for the gold standard's international restoration. "The dollar was the lynchpin of the international system," Eichengreen said. During 1924 and 1927, the U.S. experienced gold inflows, with international considerations "playing a subsidiary role." During the great crash and its aftermath, 1929–30, the Fed loosened and provided emergency liquidity but subsequently, in accordance with the interest-rate-driven Reifler–Burgess Doctrine, mistakenly believed its work was over in 1931 and tightened monetary policy in the first of "its critical errors." The Fed, amid congressional pressure as unemployment exceeded 20 percent, engaged in expansionary open market operations in April to August 1932, even as the gold reserve ratio of the New York Fed declined to nearly 50 percent at the end of June 1932. Some have suggested that the Fed retreated in July because of the possibility of a gold standard crisis.

Discussant Harold James, a Princeton University professor of history and international affairs, noted that the Paul Warburg Doctrine sought to define the Federal Reserve along the lines of foreign central banks of the period. Warburg's brother, with whom he was in regular contact, was an adviser to Kaiser Wilhelm II and was working to reform the German financial system. So in essence, the Warburg approach was being applied in two places simultaneously. The use of the word "reserves" in the

title of the U.S. central bank has in its essence "a distinctly foreign and security dimension to it," James said. Warburg makes frequent analogies to armies and defense.

### Absence of International, Political Pressure

The session's second paper, "Navigating Constraints: The Evolution of Federal Reserve Monetary Policy, 1935–1959," examined Federal Reserve policy during the 1950s, when the central bank's efforts appeared effective, and how the Fed evolved following the disastrous Depression era. The paper, written by David C. Wheelock, deputy director of research at the Federal Reserve Bank of St. Louis, and Mark A. Carlson, a senior economist at the Board of Governors of the Federal Reserve System, was presented by Wheelock.

The paper proposed that a significant portion of the Fed's success in the 1950s owed to the absence of political and international pressures of the prior periods. The Fed of the 1950s didn't confront policy limitations of the 1930s, when gold inflows inhibited its open market operations, and the 1940s, when the central bank was called upon to maintain low interest rates for Treasury debt amid World War II. After the war, the Fed sought to control inflation

**After World War II, the Fed sought to control inflation while still maintaining low interest rates.**



Richard Fisher, Guillermo Ortiz and John Taylor

**The Fed's focus on the real U.S. economy and unemployment while viewing balance of payments objectives as a lesser concern represented the shift that assigned the U.S. Treasury greater responsibility for managing international affairs.**

while still maintaining low interest rates. Two 1930s reforms were significant to later events—the Gold Reserve Act of 1934, allowing the Treasury to intervene in gold and foreign exchange markets, and the Banking Act of 1935, providing the Federal Reserve Board of Governors greater powers relative to the regional Fed Banks and reconstituting the Federal Open Market Committee to seven governors and five Reserve Bank presidents.

Drawing on a statistical analysis of expected measures of inflation and the output gap (the difference between the economy's actual output and its capacity), the authors concluded that the Fed responded to macroeconomic conditions by adjusting the reserves they required banks to hold beginning in the mid-1930s—increasing reserve requirements to damp credit availability. Fed policy was constrained through WWII and in the immediate postwar years by a need to keep interest rates low in support of Treasury funding operations. The Defense Production Act in 1950 provided the Fed powers to directly regulate consumer and real estate credit markets and influence lending activity.

In March 1951, the Fed and Treasury reached an agreement freeing the Fed of the responsibility to limit government debt yields, which could become more responsive to market forces. Changes in reserve requirements remained a basic Fed tool of monetary policy in the 1950s even as gold outflows drained \$1.5 billion in reserves from the banking system during the first half of 1958 and the balance of payments deficit reached \$4 billion in 1959. Political pressures re-emerged in the 1960s, marking an end of a decade in which enlightened policymakers and a stable environment produced “one of the Fed's better decades.”

Discussant Gary Richardson, the Federal Reserve System historian, said Fed inaction during the 1930s reflected institutional constraints and legal limitations on open market intervention and operation of the discount lending window through which banks could borrow funds. Additionally, the presence of the gold standard carried intellectual limits on actions the Fed was willing to take.

**Bretton Woods and the Dollar Peg**

The conference's second session, “Coming of Age: From Bretton Woods to the Great Inflation to the Great Moderation,” picked up the Fed timeline

with the 1944 Bretton Woods Agreement of managed exchange rates and continued to the period of relative business-cycle tranquility of the mid-1990s. The session's first paper was “Federal Reserve Policy and Bretton Woods,” by Bordo and Owen Humpage, a senior economic advisor at the Federal Reserve Bank of Cleveland. Bretton Woods sought to install a currency adjustment system that would avoid the problems of the 1920s, Bordo said. However, just as the agreement was becoming fully operational, dollar convertibility concerns weighed on U.S. actions, forcing policymakers to sometimes reluctantly consider global implications of U.S. economic policy as the dollar became the key international reserve currency. At the same time, some abroad resented what was viewed as the dollar's “privileged” standing. The dollar initially was pegged to gold at \$35 per ounce, with developed nations' currencies pegged to the dollar.

The Fed's focus on the real U.S. economy and unemployment while viewing balance of payments objectives as a lesser concern represented the shift that assigned the U.S. Treasury greater responsibility for managing international affairs. It also had the consequence of eliminating the constraint of foreign policy on domestic inflation, ultimately dooming Bretton Woods, Bordo said.

By 1960, total external dollar liabilities exceeded gold holdings, Humpage said. They rose by \$5.5 billion in 1960 and by \$55.4 billion from December 1969 to March 1973—indicative of the so-called Triffin dilemma (named after Belgian economist Robert Triffin) of rising international demand for dollars enabling large U.S. current account deficits. Amid U.S. inflation that remained high relative to modest price growth before 1965, Bretton Woods unwound from 1971 to 1973, when floating exchange rates replaced the pegged rates of the Bretton Woods era.

Bordo and Humpage concluded that once Fed policies after 1960 began focusing on domestic objectives—employment and maintaining growth—often at the exclusion of international issues, Bretton Woods' days were numbered. Moreover, the removal of international constraints loosened some of the restrictions on U.S. monetary policy, setting the stage for the “Great Inflation,” beginning in the 1970s.

Discussant James Boughton, a senior fellow at the Center for International Governance Innovation, said he held a more positive view of the Bretton

Woods era. It paved the way for an era of world prosperity and relative peace. Its collapse was the product of internal contradictions and U.S. policy shortcomings. The system that emerged in the years after Bretton Woods, rather than relying on a single economy such as the U.S., assumed prosperity in multiple countries. The system replaced a single creditor economy in the world with 17 creditor economies, many only decades removed from the devastation of WWII.

Boughton questioned whether Bretton Woods' demise is lamentable. Inflation became a byproduct of the Fed's responsibility to promote employment (and with it growth). Even in the absence of Bretton Woods, the U.S. dollar's global primacy remains. And finally, he observed, the aftermath of Bretton Woods hasn't been as successful as it should've been. Leaders at times have lost sight of the goal of high employment and growth rates within a broad framework of monetary and fiscal policy.

In the question-and-answer session, Bordo said it is unclear whether Bretton Woods was the reason for successful economic results in the immediate postwar period or if some of the success represented catch-up from WWII.

### Increasing International Stature

Edwin Truman, nonresident senior fellow at the Peterson Institute for International Economics, presented his paper "The Federal Reserve Engages the World (1970–2000): An Insider's Narrative of the Transition to Managed Floating and Financial Turbulence," which argued that U.S. monetary policy has come to dominate global monetary policy to a far greater extent than before. During the last three decades of the 20th century, the Fed emerged as the closest thing to a world central bank in an increasingly globalized economic and financial system.

Truman cited four areas where he devoted particular attention to the Federal Reserve's role. First was U.S. external accounts, which predominated in 1970 and by 2000 had eased, only to reemerge in subsequent years. It was an example of the global economy's impact on Federal Reserve actions. Early on, amid the 1973–74 rapid increase of global oil prices, U.S. international economic policy was aimed at restoring "a sufficient current account surplus to support U.S. net private cash outflows."

Second, Fed attention to the dollar's value in

foreign exchange markets predominated in the early years only to decline later. The basic view loosely linked the dollar to the current account. The depreciating dollar was widely viewed as an exogenous source of inflation (aided by rising commodity prices, especially oil). The early Reagan administration adopted a "minimalist" approach to the currency.

As the dollar rebounded following the U.S. domestic fight against inflation during the Volcker Fed, it wasn't until the second half of the Reagan administration (this time with little Fed involvement) that there was action to ease the dollar's value, which gained 45 percent between 1980 and 1985. After peaking in March 1985, it declined by 27 percent amid the Plaza Accord Group of Five finance ministers' declaration on Sept. 22, 1985, that "some further orderly appreciation of the main non-dollar currencies against the dollar is desirable." By the February 1986 Louvre Accord of the Group of Six countries, the dollar's depreciation had become worrisome, prompting agreement to seek stability.

In 1994, Fed Chairman Alan Greenspan, in collaboration with the Clinton Treasury, decried a weak dollar as "neither good for the international financial system nor good for the American

economy." The strong dollar policy of the next 20 years resulted.

The third example of key Fed involvement was the Great Inflation, belatedly recognized as a home-grown issue rather than the product of external forces. Though the ending date of the Great Inflation is difficult to pin down, it followed Volcker's high-interest-rate policies of the early 1980s.

The fourth example was Fed management and prevention of external financial crises, which tended to raise the profile of the U.S. central bank. Reflecting the openness of the U.S. economy relative to the 1960s, the 1990s were a period when the Fed went global. The on-again, off-again Fed participation in the currency swaps market illustrated policymakers' ambivalence during the 1990s. With the exception of arrangements involving Canada and Mexico, the swaps program was terminated in 1998 as the European Central Bank (ECB) was beginning operation and the euro came into being. But currency swaps quickly reappeared in preparation for possible market disruption in the Y2K millennium computer transition and then again following the 9/11 terror attacks. It was most extensively used in support of global financial stability efforts during the Great Recession.



Richard Fisher and Paul Volcker

## The challenge for the Fed is initially toward domestic monetary policy objectives.



Michael Bordo and Harold James

On the broader international stage, the Fed's swap lines provided key support to Mexico during its 1994 peso devaluation as the central bank worked with the Treasury to gain approval of a \$40 billion Mexican debt restructuring. The 1997–98 Asian debt crisis brought about a second high-profile intervention. The Fed took on additional leadership roles during the Russian financial crisis in 1998 and the collapse of the Long-Term Capital Management hedge fund.

In all, Fed decision-making or direct intervention was involved 14 times in global interventions from the 1970s to the start of the new millennium. The cumulative impact was key to the emergence of the Fed as the global central bank.

### Crisis Illustrates Integrated Markets

A policy panel, "Perspectives of the Fed's Role in International Crises," was the final segment of session II. Moderated by Dallas Fed President and CEO Richard Fisher, the panelists were: Donald Kohn, senior fellow in economic studies at the Brookings Institution and a member of the Federal Reserve Board of Governors from 2002 to 2010, the last four years as vice chairman; Charles Bean, who retired June 30, 2014, as deputy governor for monetary policy at the Bank of England; Guillermo Ortiz, chairman of Grupo Financiero Banorte and governor of the Banco de México from January 1998 until December 2009; and Stephen Cecchetti, professor of international economics at the Brandeis International Business School and former Bank for International Settlements economic adviser and head of the Monetary and Economic Department.

The Fed's central role in the Great Recession and global financial crisis reflected increasing international integration of markets and deep dollar-asset markets, Kohn said. As the U.S. subprime mortgage crisis was transmitted around the world, the U.S. central bank became a primary liquidity backstop and the crisis manager. The building crisis was a reflection of outsized spending in the U.S. that led to extensive borrowing abroad, Kohn said. Foreign banks' pursuit of presumably "very safe assets" led to the promotion of mortgage-backed securities that had received top grades from U.S. credit rating agencies. The securities conveyed the image of liquidity, which turned out to be illusory during the crisis, and spread risk to emerging markets.

Currency swaps between central banks providing liquidity to the global financial system were part of the crisis response, with 14 countries participating. Once market panic abated, the amount of the swaps lessened, indicating the correctness of the central bankers' response. "Did they work?" Kohn asked rhetorically. "I think they did." The emergence of the swaps raised a boundary problem, namely, which nations to include, specifically among emerging markets. Within that group, there were three criteria: 1) participants needed to have significant financial mass; 2) they required a prudent financial policy; 3) inclusion in the swaps program would be of benefit.

In dealing with such a massive financial crisis in the future, Kohn said, the lack of a lender of last resort globally could be a problem. The Fed participated in a coordinated rate reduction with the ECB in October 2008 that sought to bolster confidence in the banks through their joint efforts. The Fed has always played a leadership role, Kohn said, as evidenced by other central banks following the lead of U.S. policymakers.

### Expansionary Policy Benefits All

Bean, reflecting on the international aspects of Fed crisis efforts, said the Group of 20 (G-20) finance ministers debated whether advanced economies had pursued unconventional monetary policies at the expense of emerging markets. The discussion may have reflected underlying concerns—specifically, that developed markets wouldn't stand behind emerging markets in the face of instability that could result from withdrawal of the expansionary policies. Emerging-market financial leaders, most notably in Brazil, have suggested that a byproduct of the measures may have been dollar depreciation as policy was eased and capital flight as the prospects for normalization increased, Bean said.

Terming such actions, where they occurred, as spillover effects, Bean said macroeconomic model simulations suggest that the crisis management's net effect globally was expansionary. "Given that the world economy was—and still is—suffering from insufficient aggregate demand, I conclude that the Fed's monetary policies were helpful not only domestically but also for the rest of the world," Bean said. Problems lay less with Fed-led actions and

more with “the unwillingness of some other countries to adjust their policies enough to restore and rebalance the pattern of global aggregate demand.” This would include consolidation in some advanced economies of unsustainable fiscal deficits, structural market and labor reforms in advanced and emerging markets, and moving the thrust of aggregate demand toward those countries incurring “chronic current account surpluses,” Bean said.

The challenge for the Fed is initially toward domestic monetary policy objectives. Only when those are satisfied can the Fed and the rest of the “central bank fraternity” turn toward risk mitigation. Those economies experiencing the side effects of major central bank policies would best serve their interests by not only avoiding excessive credit creation and risk concentration but also by putting “some sand in the wheels” of the processes that produce excessive currency inflows and subsequent outflows, Bean said.

### **U.S. Policy Spillover into Mexico**

Ortiz discussed Fed spillover effects on Mexico. The U.S. central bank’s initial responsibility is domestic and becomes international to the extent that broader considerations affect domestic employment and inflation, Ortiz said. Still, speaking as a central banker during the last crisis and as the finance minister during Mexico’s so-called Tequila Crisis in 1993–94 that included peso devaluation, he said the Fed must consider the impact of its policies. Mexico’s gross domestic product (GDP) is highly correlated with U.S. industrial production. Thus, capital flows imply that Mexican monetary policy can’t long deviate from that of the U.S., Ortiz said.

During the Tequila Crisis, Fed currency swaps helped provide “window dressing” in efforts to stabilize the peso. The New York Fed established a trust fund secured by revenues from Mexico’s state-owned oil company, *Petróleos Mexicanos*, or Pemex, and the Fed’s support was crucial for establishment of a stabilization fund.

During the most recent global financial crisis, Mexico didn’t suffer a “severe financial dislocation,” Ortiz said. “We made financial stability an objective.” The Fed, acting as a lender of last resort, was able to offer a \$30 billion currency swaps line, of which Mexico drew \$3.2 billion to bolster liquidity.

Through the two crises, Ortiz pointed to three

lessons learned: 1) Fed policy leads Mexican policy; 2) the Fed’s orientation is domestic and spillovers are global, reflecting the dollar’s status as a reserve currency; 3) the International Monetary Fund (IMF) is the only institution with the responsibility for global financial stability. In the future, Fed actions must reflect a coordinated approach with the IMF.

### **Backstopping the Global Financial System**

Cecchetti discussed the dual dollar-based financial system—international and offshore use (accounting for 80 percent of trade finance and 87 percent of currency transactions) versus domestic, where the U.S. banking system boasts total assets of \$11 trillion. The two came together during the financial crisis when foreign central banks borrowed U.S. dollars via the Federal Reserve’s liquidity facilities—30 countries in all, with borrowing peaking at \$553 billion in December 2008.

Although the program was a success, especially because it came together rapidly during a difficult period, it’s worth asking how best to manage risk on an ongoing basis, ensuring foreign currency liquidity without reliance on central banks. Cecchetti suggested five non-mutually exclusive possibilities. One option, banning intermediaries such as banks from offering foreign currency accounts, would be foolish and would lead to inventive countermeasures in order to maintain trade activities, Cecchetti said. A second option, making reinsurance the responsibility of authorities where the activity occurs, would lead to large, expensive reserves, he said, noting that aggregate foreign exchange reserves total \$14 trillion, roughly 20 percent of global GDP. The cost in loss of real return below the global marginal product of capital equals roughly 0.2 percent of global GDP each year.

A third option is a regional reinsurance through pools of foreign exchange reserves, in the form of multilateral agreements. This has the benefit of lessening the burden on any one nation’s resources. However, the size of such a fund suggests that overall reserve requirements wouldn’t significantly reduce an individual nation’s requirements. A fourth option, supranational organization involvement, would resemble the IMF’s flexible credit line created in 2009. It would have the tendency to shift decisions to politicians, might well stigmatize coun-

tries seeking to draw on the line and could prove insufficient during a liquidity crisis.

The final option is placing the reinsurance burden with the issuing central bank. In the case of dollar transactions, the Fed would take this responsibility on the assumption that a collapse of the foreign market for the reserve currency will ultimately harm the domestic market as well. “That is, the currency use itself is a globally systemic activity, whose collapse has an effect on everyone,” Cecchetti said. Moreover, the dollar’s reserve currency role conveys a financing benefit of 0.5 percent of GDP per year, providing a benefit for the U.S. to more formally take on the reinsurance burden. It would also prompt the Fed to act in its “enlightened self-interest” and to provide currency swap lines beyond the five it currently has established that primarily reflect its domestic interests. (Those lines are with the central banks of Canada, the U.K., Japan and Switzerland and with the ECB.) Moral hazard issues remain unresolved. Still, the financial crisis underscored the need for a lender of last resort, and that responsibility falls on the Fed, by virtue of the dollar’s role as a reserve currency.

### **Roosa Lecture: Volcker on Lessons Learned, Future Challenges**

Former Fed Chairman Paul Volcker was interviewed by Dallas Fed President Fisher during the Roosa Lecture, a centerpiece of the two-day conference. Volcker discussed how inflation was broken in the early 1980s and the lessons of that period that can be applied to the most recent crisis when “a lot went wrong.” The ongoing U.S. balance of payments deficit is indicative of “a lack of discipline in financial markets and in policy” that led “to a massive financial collapse in the U.S. and elsewhere in the world,” Volcker said. An institutional system is needed that can provide a “warning signal” of future shocks, while supranational organizations such as the IMF lack the resources to tackle them alone.

Volcker said any rules-based monetary policy—such as that proposed by conference speaker and Stanford University economist John Taylor, linking policy rates to an economy’s output and inflation—must maintain an active role for central bankers. “I believe we would want to always leave room for discretion,” Volcker said, noting price stability as a prevailing central tenet.

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Volcker reviewed the 1984 collapse of Continental Illinois Bank of Chicago, when the Federal Deposit Insurance Corp.'s bailout of the bank included guarantees to depositors as well as bondholders, a prelude to today's discussion of too-big-to-fail institutions. In the current context, the nation's banks resist downsizing, Volcker said. "My problem is that you can't break them up enough to make them go away." Shadow banks and derivatives markets pose an even greater threat than banks, which have become "less important than the rest of the market."

Looking to the future, the Federal Reserve remains a valuable institution. "It retains a respect and independence that is unique among regulatory agencies," Volcker said. "You can't have a strong regulatory system without the Federal Reserve."

#### **In Support of Rules-Based Policy**

The third and final conference session, "Globalization 2.0: Monetary Policy in a Global Context: Past, Present and Future," offered a forward view. Taylor, who also chairs the Globalization and Monetary Policy Institute's advisory board, presented his paper "The Federal Reserve in a Globalized World Economy." It argues that rules-based monetary

policy yields superior economic performance, especially relative to the 1970s immediately following Bretton Woods' demise when policy was "highly discretionary and unfocused." In subsequent years, reliance on rules-based policymaking broke down following the Great Moderation of the 1990s, including during the recent economic crisis, leading to tensions among advanced countries and with emerging economies, Taylor said.

Policy makers kept rates "too low, too long" during the 2000s, relative to what a rules-based approach (such as Taylor's namesake Taylor rule) would prescribe. Pointing to policy shortcomings that aren't confined to the U.S., he said various central banks' unconventional interventions, such as bond purchases, have the net effect of leaving the participants likely worse off than had they followed a rules-based approach. Increasingly, there is a trade-off in favor of output stability over price stability. In a two-country situation in which Country 1 seeks very low interest rates, Country 2 could well react with concern about exchange rate appreciation and keep its rate too low—relative to what a rules-based approach would suggest—ultimately causing increased price volatility and output instability.

In real life, Fed quantitative easing in response to the financial crisis prompted Japan's central bankers to employ a set of unconventional measures including large-scale asset purchases to offset currency appreciation against the dollar and to bolster economic output, Taylor said. Similarly, the ECB's moves toward asset purchases also reflect a response to Fed policy and its global repercussions. The cycle of policy action and reaction may seek to thwart competitive devaluation but could end up becoming an interest rate war or "an unconventional monetary policy war."

Taylor urged a return to a rules-based approach, suggesting Congress pass legislation requiring the Fed to report which rules it is following and the strategy employed. Such action would help diminish volatile capital flows reacting to "fear of free-falling exchange rates." The Fed as a global leader would push other central banks to return to greater rules-based policy, Taylor said.

Conference participants commenting on the Taylor paper suggested that imposition of rules may be inappropriate in some circumstances. Kohn said



The policymaker panel

that while the Fed was clear in its 2 percent inflation target, adherence to the Taylor rule amid the financial crisis would have pushed rates below the target, with effects spreading beyond the U.S. Discussant Richard Clarida, Columbia University professor of economics, said Taylor's logic was "impeccable" but doesn't account for a collection of central bank policies that, while reflecting cooperation among policymakers, may be misguided or the result of misreading a given situation—"cooperation is easy to implement—just don't make the policy mistake and revert to non-cooperative optimal," he said. More than three years later, Clarida said, it remains difficult to see whether global policymaker decisions—many following Taylor rule thinking initially—are more the result of a common problem or a common response that encountered a zero-bound constraint. The result is that "QE begets QE."

### **Unprecedented Actions Become the Norm**

The conference's final paper was "Unprecedented Actions: The Federal Reserve's Response to the Global Financial Crisis in Historical Perspective," by Frederic Mishkin, a Fed governor from 2006 to 2008 and banking professor at Columbia University, and Eugene White, a Rutgers University economics professor. Their paper proposed that despite the "triumph of rules over discretion" during the Great Moderation, central bank implementation of unprecedented measures is more the norm than the exception and the product of reconciling central bank mandates for price stability and financial stability.

Central banks, beginning in the late 19th century, lived in a world without systemically important financial institutions and a nonglobalized financial market. Policymakers could simply follow English essayist Walter Bagehot's proposition that when fulfilling lender-of-last-resort responsibilities, central banks should lend freely, charge a premium and do business only with solvent institutions. Adherence to this doctrine has given way to contingent rules and preemptive actions to handle adversity. Reliance on a Bagehot-like rule during the banking panics of 1930–33 deepened the Depression and motivated the provisions of the Banking Act of 1935 providing the Fed with authority for "unprecedented discretionary" actions

in "unusual and exigent circumstances."

The provision was used when the Fed established liquidity facilities in the wake of the Penn Central bankruptcy in 1970 to ensure availability of short-term corporate funding after the commercial paper market seized up. Following the Continental Illinois Bank collapse of 1984, the Fed feared a resulting panic and installed full insurance for all creditors, making them whole—in the process raising moral hazard concerns in the context of too-big-to-fail institutions.

The 1987 stock market crash prompted concerns about the stability of the clearing and settlement system of the stock and futures markets. The Fed provided liquidity to banks, which, in turn, provided brokers with funds in the hope of averting a larger shock. Fed involvement proved short-lived, and a recession was averted. The central bank again took action during the Long-Term Capital Management collapse in 1999, helping form a 16-bank consortium that helped avoid a formal default. The crisis highlighted the ability of nonbanks such as hedge funds to create financial instability. Fed reductions of the fed funds rate in support of the rescue contributed to what was labeled the "Greenspan put"—named after then Fed Chairman Alan Greenspan—a form of moral hazard in which financial institutions expect monetary policy to help them recover from bad investments, Mishkin and White noted.

Mishkin and White argued that, rather than strictly following rules, central banks should follow contingent rules that limit moral hazard. Unprecedented Fed actions should be judged not by whether discretion was employed, but instead by whether their imposition adequately constrained moral hazard.

Discussant Steven Kamin of the Federal Reserve Board of Governors, said policymakers should avoid deviating from stability rules. The paper, he suggested, "didn't discuss implementing incentives aimed at avoiding liquidity risk."

Former Fed Chairman Volcker, responding to the paper, said the scope of future Fed crises could grow even larger with the dollar, as the global reserve currency, under attack. "Sooner or later, if the dollar ever comes into question, we will have a real problem in the world economic situation ... in the political situation," he said, suggesting that

thought be given to the dollar's replacement as a world currency.

### **At the Forefront of a Global Economy**

Thus, the conference came full circle—beginning with the U.S. economy emerging on the world stage in the era of the gold standard and concluding on a note of concern about future implications of the dollar's role as the preeminent global reserve currency and the Fed's standing as *the* global central bank.

During the Federal Reserve System's first years, policymakers worked to establish a durable institutional framework and learned in the initial years of the Great Depression the extent of their powers, only to subsequently discover limitations when they tightened policy too quickly, lengthening and deepening the Depression.

Working with the U.S. Treasury to keep a lid on federal funding expenses during WWII and immediately afterward, the Fed in the 1950s oversaw a decade of economic expansion. It was a time when the Fed could concentrate on the domestic impacts of its policies as the Treasury took on international aspects. A mounting U.S. balance of payments deficit hastened the demise of the postwar Bretton Woods system of dollar-gold anchored exchange rates in the early 1970s, and less than a decade later, the Volcker-led Fed confronted double-digit U.S. inflation.

In an era of floating exchange rates in which the dollar stood as the world's reserve currency, 100 years after the Fed's founding, its policies carry increasingly broad implications. The recent financial crisis, with its roots in the U.S. mortgage market and its continuing reverberations in Europe and Japan, illustrates the globalization of finance and of Fed monetary policy.

As the Fed carries out its dual mandate of ensuring stable prices and maximum employment in the U.S., central bankers must increasingly weigh international responses that bear on the central bank's ability to achieve its goals. Still, conference participants suggested, a prudent domestically focused approach may offer the best opportunities for achieving success that extends beyond the U.S. and aids global growth.