

# The Federal Reserve and the Global Economy

It is a great honor to deliver the Per Jacobsson Foundation Lecture, and I thank the organizers for inviting me. Per Jacobsson, a Swede, was the third Managing Director of the International Monetary Fund (IMF), serving from 1956 to 1963. During his tenure, the Fund supported the return to convertibility of the major European currencies, increased its resources by securing the General Arrangements to Borrow, and established the Compensatory Financing Facility to help member countries cope with temporary fluctuations in international payments.

It is a particular pleasure to be delivering this lecture at the IMF. My service in the IMF was a highlight of my professional career. But I speak now as a central banker, one who faces a new set of responsibilities. My lecture today is on the special challenges that face the Federal Reserve and the global economy in an increasingly interconnected world.

Over the past 50 years, global trade has more than tripled relative to world gross domestic product (GDP), and the ratio of total exports to global GDP now stands at about 30 percent. International trade has not loomed as large in the U.S. national accounts as it has for many other countries, but it is an increasingly important driver of the U.S. economy, with the share of trade in U.S. GDP currently at about 15 percent.

Although the U.S. share of world GDP has gradually declined since the mid-twentieth century, the broader importance of the United States to the global economy has diminished less, or possibly not at all, as a result of increasing financial linkages over the same period. In particular, U.S. residents' ownership of foreign assets has risen to nearly \$25 trillion (more than 140 percent of annual U.S. GDP), reflecting the leading role of U.S. capital markets in cross-border finance. Total foreign investment in the United States is even larger, at more than \$30 trillion. U.S. Treasury

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I am grateful to John Ammer, Christopher Erceg, Joseph Gruber, and Beth Anne Wilson of the Federal Reserve Board's staff for their assistance in preparing this lecture.

securities are a key component of these external liabilities: As the world's favorite safe asset, they are the preferred form of collateral for a range of financial contracts, and they also account for more than half of other countries' foreign reserves.

In a progressively integrating world economy and financial system, a central bank cannot ignore developments beyond its country's borders, and the Fed is no exception. This is true even though the Fed's statutory objectives are defined as specific goals for the U.S. economy. In particular, the Federal Reserve's objectives are given by its dual mandate to pursue maximum sustainable employment and price stability, and our policy decisions are targeted to achieve these dual objectives.<sup>1</sup> Hence, at first blush, it may seem that there is little need for Fed policymakers to pay attention to developments outside the United States.

But such an inference would be incorrect. The state of the U.S. economy is significantly affected by the state of the world economy. A wide range of foreign shocks affect U.S. domestic spending, production, prices, and financial conditions. To anticipate how these shocks affect the U.S. economy, the Federal Reserve devotes significant resources to monitoring developments in foreign economies, including emerging market economies (EMEs), which account for an increasingly important share of global growth. The most recent available data show 47 percent of total U.S. exports going to EME destinations. And of course, actions taken by the Federal Reserve influence economic conditions abroad. Because these international effects in turn spill back on the evolution of the U.S. economy, we cannot make sensible monetary policy choices without taking them into account.

In this lecture, I would like to emphasize both aspects of our global connectedness—spillovers from the United States to foreign economies and the effect of foreign economies on the United States. I will first review the effect of the Fed's monetary policies on the rest of the global economy, particularly the EMEs, which has received considerable attention in recent years. Prior to the spring of 2013, this attention was focused on the international spillover of the Fed's accommodative policies, especially

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<sup>1</sup> The Federal Open Market Committee (FOMC) has judged that 2 percent inflation in the price of personal consumption expenditures is most consistent over the longer run with the Federal Reserve's statutory mandate. For more information, see Federal Open Market Committee (2014). The Fed also has separate responsibilities for promoting financial stability (some of which are spelled out in the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010) that are, in many respects, complementary to the dual mandate. See Yellen (2014) for further discussion.

our asset purchases. But beginning last year, the focus has shifted to the normalization of our policies, as exemplified by last summer's "taper tantrum."<sup>2</sup>

Although the effect of the U.S. economy on other countries is of vital importance to this audience, I will briefly digress to remind you that developments in other economies also can have significant spillovers to the United States, which in turn prompt reactions from U.S. policymakers. For example, in the past few years, the deflationary environment in Japan, together with the fallout from the euro area fiscal crisis, has entailed persistent weakness in those economies, which historically have been among our most important trading partners, are major recipients of our foreign investments, and loom large in the international credit exposures of U.S. banks. These effects have weighed on global growth, which needs to be taken into account in the setting of U.S. monetary policy.

Returning to spillovers from the United States, in the second part of the lecture, I will address prospective outcomes and possible risks associated with the normalization of our policies. In determining the pace at which our monetary accommodation is removed, we will, as always, be paying close attention to the path of the rest of the global economy and its significant consequences for U.S. economic prospects.

In the third part, toward the end of the lecture, I will discuss the responsibilities of the Fed in the world economy. Like other national central banks, we must answer first to our own citizens and taxpayers. But, because of our size, developments in the U.S. economy will always affect foreign economies. And, since the U.S. dollar is the most widely used currency in the world, our interests in ensuring a well-functioning financial system inevitably have an international dimension.

### INTERNATIONAL TRANSMISSION OF MONETARY POLICIES

The recognition that a change in interest rates in one nation can spill over to other countries dates back at least to the eighteenth-century writings of David Hume on the international effect of changes in the money supply.<sup>3</sup> The standard models incorporating the international transmission of monetary policy were developed in Per Jacobsson's tenure at the IMF—the pioneering research in the early 1960s by IMF staffer Marcus Fleming

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<sup>2</sup> See Powell (2013) for an earlier discussion of many of these topics.

<sup>3</sup> See Hume (1742).

and Robert Mundell, which extended standard macroeconomic models to the analysis of an open international economy—work that we know now as the Mundell-Fleming model.

In the Mundell-Fleming framework, as well as in modern developments of the same theme, a shift toward a more accommodative monetary policy in the United States spills over to foreign economies by causing their interest rates to fall—though typically by less than in the United States—and their currencies to appreciate against the dollar. At the same time, international capital flows tend to shift toward foreign economies in response to their relatively more attractive interest rates.

The pass-through of changes in U.S. policy rates abroad depends importantly on how foreign monetary authorities respond. A decline in U.S. policy rates has a relatively large effect on foreign policy rates in economies that opt to limit exchange rate fluctuations, at least for economies with reasonably open capital accounts. Thus, for example, a fall in U.S. policy rates has a commensurate effect on interest rates in Hong Kong. By contrast, the central bank in an economy with a freely floating exchange rate might choose to lower its interest rate by a much smaller amount than in the United States if it believes that domestic conditions so warrant. In this case, the country's exchange rate would appreciate as investors rebalance their portfolios in favor of assets denominated in its currency in response to the higher interest rate differential.<sup>4</sup>

Moving beyond the Mundell-Fleming framework, there is also evidence that monetary policy actions can influence investors' willingness to hold risky assets, the so-called risk-taking channel.<sup>5</sup> Such effects seem to be most potent when financial conditions are stressed. And countries that offer high prospective returns but have weak policy frameworks or other structural vulnerabilities may be particularly sensitive to fluctuations in international investment associated with global risk factors.<sup>6</sup>

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<sup>4</sup> See Mundell (1963) and Fleming (1962). One key implication of the Mundell-Fleming framework is that a central bank can exercise full control over both the exchange rate and the domestic interest rate only when there are significant barriers to international capital mobility. Accordingly, policymakers face the constraint of the "impossible trinity," which states that a country cannot simultaneously have an independent monetary policy, free capital movement, and a fixed exchange.

<sup>5</sup> Several recent papers discuss risk-taking channels through which monetary policy influences financial conditions more broadly than the level of safe interest rates. See Borio and Zhu (2012), Rey (2013), Morris and Shin (2014), Bruno and Shin (forthcoming), and the Hanson and Stein (2015) "reaching for yield" concept.

<sup>6</sup> Studies using panel data typically have found that country-specific factors help explain cross-sectional differences in international investment and capital flows. See, for example, Furceri, Guichard, and Rusticelli (2011), Fratzscher (2012), and Luca and Spatafora (2012). Avdjiev and Takáts's (2014)

International spillovers from monetary policy have been a contentious issue going back at least to the 1920s. To facilitate the United Kingdom's return to the gold standard at its prewar parity in 1925, which valued the pound above purchasing power parity, the Fed cut interest rates substantially. Britain's subsequent departure from gold created further challenges for the Federal Reserve; tight U.S. money policy in the wake of the exit of the sterling bloc from gold in the fall of 1931 helped keep the United States on gold until 1933 but exacted high economic costs on the United States and other countries remaining on gold.<sup>7</sup> During the Bretton Woods period, overly expansionary U.S. monetary policy starting in the second half of the 1960s was exported to trading partners through the system of fixed exchange rates. More than a decade later, the Fed's aggressive tightening under newly appointed Chairman Paul Volcker had unwelcome contractionary effects on other economies. However, the Fed's success in achieving a permanent reduction in inflation through tight monetary policy bolstered the credibility of policies focused on achieving low and stable inflation, and many other countries followed.

Turning to more recent events, I'll next assess the effects of the Fed's quantitative easing and other unconventional monetary policies pursued by central banks in advanced economies since 2008.

### *Effects of Monetary Accommodation since the Global Financial Crisis*

During the period of extensive monetary accommodation after the 2007–08 global financial crisis, there has been heightened concern about the international spillovers of monetary policies—and of ours, in particular. Some EME critics argued that U.S. policy accommodation contributed to a surge of capital inflows and excessive credit growth in their economies, creating risks of financial instability. But, as time wore on, most EMEs seemed glad to receive those flows.

There is little doubt that the aggressive actions the Federal Reserve took to mitigate the effects of the global financial crisis significantly affected asset prices at home and abroad as well as international capital flows. While the Fed's asset purchases were composed wholly of Treasury,

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study of cross-border bank lending during the taper tantrum shows a larger pullback for countries with weaker current account balances, and Sahay and others (2014) find that country-specific market reactions during this period also were affected by high inflation, weak growth prospects, and relatively low reserves.

<sup>7</sup> See Eichengreen (2013).

agency, and agency-backed securities (for legal and practical reasons), the program also aimed to boost the prices of riskier assets and ease financial conditions for the private sector.<sup>8</sup> (And this is what the textbooks say the program should have done.) The preponderance of evidence suggests that the Fed's asset purchases raised the prices of the assets purchased and close substitutes as well as those of riskier assets.<sup>9</sup>

Importantly, evidence—including the evidence of our eyes—shows that foreign asset markets have been significantly affected by the Fed's purchase programs.<sup>10</sup> For example, event studies of announcements associated with the Fed's purchase programs have found that they prompted inflows into investment funds holding both foreign debt and foreign equity securities. For asset prices, the strongest evidence came in the form of reduced foreign bond yields, but valuations of foreign currencies and stock prices also increased appreciably in some cases. The largest market reactions occurred after announcements in late 2008 and early 2009 associated with the initial program of quantitative easing, commonly referred to as QE1, likely at least in part because global financial conditions were extremely stressed at that time, but also perhaps because QE1 demonstrated that it was still possible to ease policy, even when the federal funds rate was constrained by its effective lower bound.<sup>11</sup>

Although much of the recent commentary on spillovers has focused on the United States, it bears mentioning that other countries' monetary policy announcements can leave an imprint on international asset prices, with market reactions to new initiatives announced by the European Central Bank (ECB) in the past few weeks the most recent example.<sup>12</sup> However, event studies tend to find larger international interest rate spillovers for U.S. policy announcements than for those of other central banks.<sup>13</sup>

It is also worth emphasizing that asset purchases are merely one form of monetary accommodation, made necessary when policy interest rates

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<sup>8</sup> See, for example, Bernanke (2010a, 2010b).

<sup>9</sup> See, for example, D'Amico and King (2013); Gagnon and others (2011); Hamilton and Wu (2012); and Rogers, Scotti, and Wright (2014).

<sup>10</sup> See Neely (2011); Fratscher, Lo Duca, and Straub (2013); Rogers, Scotti, and Wright (2014); and Bowman, Londono, and Sapriza (2014). Also, Ahmed and Zlate (2014) show that both conventional and nonconventional U.S. monetary expansion have driven capital flows into EMEs.

<sup>11</sup> See Neely (2011); Fratscher, Lo Duca, and Straub (2013); Rogers, Scotti, and Wright (2014); and Bowman, Londono, and Sapriza (2014).

<sup>12</sup> See Rogers, Scotti, and Wright (2014) and Chen and others (2012) for more systematic evidence.

<sup>13</sup> See, for example, Rogers, Scotti, and Wright's (2014) recent event study of central bank announcement effects on sovereign yields in different countries. Similarly, earlier work by Ehrmann and Fratzscher (2005) finds larger reactions in euro area interest rates to U.S. rate changes than vice versa.

hit their zero lower bound. Earlier studies of the international effects of conventional U.S. monetary policy—namely, changes in the policy rate—have also found significant spillovers to asset prices in other countries.<sup>14</sup> Studies that have compared the spillovers of monetary policy across conventional and unconventional measures generally conclude that the effects on global financial markets are roughly similar.<sup>15</sup>

Given the relatively fast recovery of many EMEs from the crisis, postcrisis monetary accommodation in the United States and other advanced economies created policy challenges for many EMEs.<sup>16</sup> If they resisted currency appreciation pressures by lowering their policy rates, they risked overstimulating domestic demand, exacerbating financial excesses, and overheating their economies. If, instead, they reduced their policy rates less than the U.S. had done while intervening to resist currency appreciation, capital inflows could have increased further, thus partially offsetting their attempts to stabilize their economies. And, if they allowed currency appreciation pressures to pass through to their full extent, this could threaten their recoveries by hurting exports. In the event, EMEs tried to make the best of a difficult set of trade-offs by allowing some exchange rate appreciation, partially reducing their interest rates, and in some countries also using capital controls.

Along with the boost from U.S. monetary policy during this period, many other factors contributed to the easing of global financial conditions between 2009 and 2012, including macroeconomic policy in a number of other countries and other measures that supported stabilization of the global financial system. EME sovereign yields declined by more during that period than can be explained by movements in U.S. Treasury yields alone, and there was a worldwide recovery in markets for riskier assets.<sup>17</sup>

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<sup>14</sup> See, for example, Ehrmann and Fratzscher (2009) and Hausman and Wongsan (2011).

<sup>15</sup> Among studies of spillovers from conventional versus unconventional U.S. monetary policy, Rogers, Scotti, and Wright (2014) report no significant differences in relative announcement effects on advanced foreign economy asset prices and Treasury yields; Bowman, Londono, and Sapriza (2014) find similar EME asset price responses; Takáts and Vela (2014) report mixed results for EMEs, with a weaker post-2007 relationship in levels of EME policy rates with U.S. rates but a stronger post-2008 relationship in levels of five-year yields; and Glick and Leduc (2013) also report similar spillovers to exchange rates. The effects of the Bank of England's quantitative easing program on corporate bond yields and sterling exchange rates are similar to predictions from a model estimated over an earlier period by Joyce and others (2011).

<sup>16</sup> See the discussion in Bernanke (2012).

<sup>17</sup> See Bowman, Londono, and Sapriza (2014). And, over a longer sample, Ahmed and Zlate (2014) show that capital flows to EMEs are affected by factors other than relative interest rates, including relative growth prospects and global risk sentiment.

I would also argue strongly that U.S. monetary policies were not beggar-thy-neighbor policies in that, on balance, they generally did not drain demand from other economies. Federal Reserve staff analysis finds that an easing of monetary policy in the United States benefits foreign economies from both stronger U.S. activity and improved global financial conditions. It also has an offsetting contractionary effect on foreign economies because their currencies appreciate against the dollar. But, on average, model-based estimates imply that the net effect on foreign economies appears to be both modest in magnitude and most likely positive, on net, for most countries.<sup>18</sup> Moreover, because these models do not fully capture benefits from the role of Federal Reserve policies in alleviating the financial market stress and boosting confidence, positive spillovers abroad are likely to be somewhat larger than implied by the models, especially under conditions of extreme financial market stress.

### *The Taper Tantrum of 2013*

We should also expect spillovers when monetary policy is tightened. Central bank communications can be a tricky business, but it has long been understood that shifting perceptions of policy can have an immediate effect on market prices and investors' portfolio decisions. Indeed, financial markets reacted strongly to the first statements by Chairman [Ben] Bernanke in the spring of 2013 that the Fed's asset purchases were likely to decelerate in the near future and come to an end not long after that. Some market participants clearly understood these statements to be broadly in line with previous guidance about the eventual normalization of policy as recovery of the U.S. economy took hold. But others may have grown accustomed to continuing asset purchases; the most recent purchase program, QE3, had been first announced less than a year before and was proceeding at a steady pace of \$85 billion per month.

The onset of the taper tantrum went well beyond a roiling of U.S. financial markets. Spillovers to other advanced economy financial markets included stock price declines, significant increases in sovereign yields, higher overnight interest swap rates in the United Kingdom and euro

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<sup>18</sup> Simulations of the Federal Reserve Board's econometric models of the global economy suggest that the effects are roughly offsetting, so that accommodative monetary policies in the advanced economies do not appear, on net, to have adverse consequences for output and exports in the emerging market economies. Similar results are obtained in model analysis presented in International Monetary Fund (2013).

area, and rising credit spreads in some countries. The ECB and Bank of England responded by using so-called forward guidance to push short-term yields back down in an effort to foster recovery.<sup>19</sup> Spillovers to EME asset markets were significantly stronger. Inflows to EME investment funds reversed sharply, EME currencies depreciated, and other asset prices declined.<sup>20</sup>

### NORMALIZATION OF MONETARY POLICIES

The cumulative effects over half of a decade of the extraordinary actions by the Federal Reserve and other central banks will need to be unwound in the coming years, as progress toward economic recovery makes it necessary to withdraw our substantial monetary accommodation. In the normalizing of its policy, just as when loosening policy, the Federal Reserve will take account of how its actions affect the global economy.

The taper tantrum episode notwithstanding, most EMEs have generally weathered the wind-down of our asset purchases reasonably well so far. The actual raising of policy rates could trigger further bouts of volatility, but my best estimate is that the normalization of our policy should prove manageable for the EMEs. We have done everything we can, within the limits of forecast uncertainty, to prepare market participants for what lies ahead.

Some critics of our policies have argued that, by continuing for so long with quantitative easing, the United States fueled a global boom in asset prices and credit growth that could provide the seeds of the next financial crisis, with the removal of monetary accommodation serving as an eventual trigger.

But I am much more hopeful. First, the Federal Reserve and other central banks are going to great lengths to communicate policy intentions and strategies clearly. Given this, markets should not be greatly surprised by either the timing or the pace of normalization. In fact, it bears mentioning that, following the taper tantrum, when the Fed started to taper its purchases, there was little reaction from markets.

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<sup>19</sup> See Draghi and Constâncio (2013) and Bank of England (2013). The success of forward guidance, of course, depends crucially on the ability of policymakers to make informative statements about their intentions without a formal commitment device.

<sup>20</sup> Powell (2013) notes that EMEs with larger current account deficits experienced both greater depreciations of their currencies and larger increases in their bond yields in mid-2013, suggesting that, while a reassessment of U.S. monetary policy may have triggered the retrenchment from EME assets, investor concerns about underlying vulnerabilities appear to have amplified the reactions.

Second, the tightening of U.S. policy will begin only when the U.S. expansion has advanced far enough, in terms both of reducing the output gap and of moving the inflation rate closer to our 2 percent goal. Thus, tightening should occur only against the backdrop of a strengthening U.S. economy and in an environment of improved household and business confidence. The stronger U.S. economy should directly benefit our foreign trading partners by raising the demand for their exports, and perhaps also indirectly, by boosting confidence globally. And if foreign growth is weaker than anticipated, the consequences for the U.S. economy could lead the Fed to remove accommodation more slowly than otherwise.

Third, the EMEs themselves have generally done a good job of reducing their financial and economic vulnerabilities over the past couple of decades, which should bolster their resilience should normalization lead to financial market stresses. Since the 1990s, many EMEs have made remarkable progress on reducing inflation, improving government debt ratios, building foreign reserves, and better regulating and capitalizing their banking systems. In addition, the development of local-currency debt markets has made EMEs less vulnerable to exchange rate fluctuations. To be sure, some EMEs continue to face a wide array of structural and policy challenges, including, prominently, rapid credit growth. But it does not seem that the overall risks to global financial stability are unusually elevated at this time, and they are very likely substantially less than they were going into the financial crisis.

Nevertheless, it could be that some more vulnerable economies, including those that pursue overly rigid exchange rate policies, may find the road to normalization somewhat bumpier. This gives all the more reason for the Fed and other major central banks to communicate policy intentions clearly and for EMEs to continue to strengthen their policy frameworks and to consider their own policy responses to the forthcoming normalization in the United States and some other advanced economies.

### **THE FED'S RESPONSIBILITY TO THE GLOBAL ECONOMY**

So far, I have focused on the immediate spillovers of U.S. monetary policy abroad and the feedback of those effects to the U.S. economy. More tacitly than explicitly stated has been my view that the United States is not just any economy and, thus, the Federal Reserve not just any central bank. The U.S. economy represents nearly one-fourth of the global economy measured at market rates and a similar share of gross capital flows. The significant size and international linkages of the U.S.

economy mean that economic and financial developments in the United States have global spillovers—something that the IMF is well aware of and has reflected in its increased focus on multilateral surveillance. In this context and in this venue, it is, therefore, important to ask, what is the Federal Reserve’s responsibility to the global economy?

First and foremost, it is to keep our own house in order. Economic and financial volatility in *any* country can have negative consequences for the world—no audience knows that more than this one—but sizable and significant spillovers are almost assured from an economy that is large. There is no question that sharp declines in U.S. output or large deviations of U.S. inflation from its target level would have adverse effects on the global economy. Conversely, strong and stable U.S. growth in the context of inflation close to our policy objective has substantial benefits for the world. Thus, as part of our efforts to achieve our congressionally mandated objective of maximum sustainable employment and price stability, the Federal Reserve will also seek to minimize adverse spillovers and maximize the beneficial effect of the U.S. economy on the global economy.

As the recent financial crisis showed all too clearly, to achieve this objective, we must take financial stability into account. For half a decade, we have been working to understand and better guard against the financial disruptions that were the genesis of the Great Recession. These efforts have spawned many speeches, including some of my own, which testify to our efforts.<sup>21</sup> In these speeches, we often emphasize that, given the integration of global capital markets, what happens in one market affects others. Thus, our efforts to stabilize the U.S. financial system also have positive spillovers abroad.

These financial stability responsibilities do not stop at our borders, given the size and openness of our capital markets and the unique position of the U.S. dollar as the world’s leading currency for financial transactions. For example, the global financial crisis highlighted the extent of borrowing and lending in U.S. dollars by foreign financial institutions. When these institutions came under pressure, their actions contributed to the strains in both foreign and domestic dollar funding markets. To achieve financial stability domestically and maintain the flow of credit

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<sup>21</sup> Bernanke (2014), Fischer (2014), and Tarullo (2014) also discuss concrete steps that U.S. authorities have taken in the past five years to implement financial reform of large financial institutions (including introducing a systematic framework for stress testing, stronger capital and liquidity requirements, and progress on resolution mechanisms for failed institutions), of financial market infrastructures, and in short-term funding markets.

to American households and businesses, we took action. Importantly, we developed swap facilities with central banks in countries that represented major financial markets or trading centers in order to facilitate the provision of dollar liquidity to these markets.

We did so in recognition of the scope of dollar markets and dollar-denominated transactions outside of our country, the benefits they provide to U.S. households and firms, and the adverse consequences to our financial markets if these centers lose access to dollar liquidity. We have continued to maintain swap facilities with a number of central banks. Although usage is currently very low, these facilities represent an important backstop in the event of a resurgence in global financial tensions.

But I should caution that the responsibility of the Fed is not unbounded. My teacher Charles Kindleberger argued that stability of the international financial system could best be supported by the leadership of a financial hegemon or a global central bank.<sup>22</sup> But I should be clear that the U.S. Federal Reserve System is not that bank. Our mandate, like that of virtually all central banks, focuses on domestic objectives. As I have described, to meet those domestic objectives, we must recognize the effect of our actions abroad, and, by meeting those domestic objectives, we best minimize the negative spillovers we have to the global economy. And because the dollar features so prominently in international transactions, we must be mindful that our markets extend beyond our borders and take precautions, as we have done before, to provide liquidity when necessary.

That said, as will be discussed in many venues this weekend and beyond, the world is not without resources to guard against adverse economic and financial spillovers. Most obviously, the IMF has played and will continue to play a critical role in providing liquidity and financial support to member countries. To that end, I hope that the 2010 agreement to increase IMF quotas will be fulfilled.

In this regard, we also should be realistic about what a backstop is. Any global backstop or liquidity facility should have certain features—accountability and monitoring, some degree of stigma in good times, and a high hurdle for usage. In other words, backstops are not built to be liked. In the United States, we are working to ensure that our financial institutions and other market participants are prepared for the

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<sup>22</sup> See Kindleberger (1986).

normalization of monetary policy and the return to a world of higher interest rates. It is equally important that individuals, businesses, and institutions around the world do the same. For our part, the Federal Reserve will promote a smooth transition by communicating our assessment of the economy and our policy intentions as clearly as possible.

### CONCLUDING REMARKS

To summarize and conclude, the Fed's statutory objectives are defined by its dual mandate to pursue maximum sustainable employment and price stability in the U.S. economy. But the U.S. economy and the economies of the rest of the world have important feedback effects on each other. To make coherent policy choices, we have to take these feedback effects into account. The most important contribution that U.S. policymakers can make to the health of the world economy is to keep our own house in order—and the same goes for all countries. Because the dollar is the primary international currency, we have, in the past, had to take action—particularly in times of global economic crisis—to maintain order in international capital markets, such as the central bank liquidity swap lines extended during the global financial crisis. In that case, we were acting in accordance with our dual mandate, in the interest of the U.S. economy, by taking actions that also benefit the world economy. Going forward, we will continue to be guided by those same principles.

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