Thank you, Ilan, and thanks to the Central Bank of Brazil for organizing this event. It is a pleasure to have the opportunity today to talk about the issue of globalization. As always, what I have to say today reflects my own views and not necessarily those of the Federal Open Market Committee or the Federal Reserve System.

Although the debate about the benefits and challenges of globalization is not new, it has recently come into sharper focus. This debate is important to all of us, and I think it is particularly relevant to Brazil given its importance in the global economy.

Globalization means different things to different people. In my remarks today, I will focus on the role of globalization as a force for international economic integration and economic development. I will highlight three themes:

First, the important role that trade plays in promoting higher standards of living globally.

Second, how changes in trade can create challenges for industries and their workers when they lose competitiveness. Insufficient attention has been given to this issue. We must do better in addressing the very large costs that can be imposed on particular communities and households.

Third, the answer to those challenges is not greater protectionism. Instead, we need to provide greater support to displaced workers so they can obtain the skills needed to find new well-paying jobs. We also need to ensure that there are strong global institutions and international cooperation to help manage the effects of globalization. This includes responding to the challenges stemming from financial globalization—the flow of capital across national borders.

These issues are important to me as a central banker, as they affect the long-term health and productivity of the U.S. economy, the economic opportunities available to our people, and the efficiency and stability of the global financial system.

The debate around globalization, particularly in advanced economies, reflects many factors. Undoubtedly, the global financial crisis and subsequent slow recovery have been significant. But, just as important have been longer-term trends, such as growing income inequality, the loss of middle-income jobs, and the rise of large emerging market economies such as China and India.

Although the debate about globalization is not new, I believe we are at a particularly important juncture. If support for liberalized trade and an integrated global economy were to suffer a significant setback, the consequence could be slower economic growth and lower living standards around the world.

While considerable effort has gone into liberalizing trade and developing the existing set of trade agreements, that does not mean they cannot be improved upon. I have no doubt some trade agreements could be enhanced or updated. Some may not adequately address recent changes in the global economy—such as the rise of digital trade—and may need to be refreshed. And, important trade barriers still remain that should be addressed. In particular, from a U.S. perspective, the access of U.S. firms to some foreign markets and the protection of intellectual property rights are issues that deserve close attention. But, in addressing these issues, we should take care to preserve the vital benefits of trade to higher standards of living in both advanced and emerging market economies. Our focus should be on further strengthening an open trade regime, and, as appropriate, amending and improving these agreements.
The Pace of Globalization

To begin, let me briefly describe the pace of globalization as a reminder of what is at stake. Global economic integration has increased dramatically in recent decades. Trade in goods and services, for example, has grown from nearly 40 percent of global GDP in 1990 to 54 percent in 2016. Over the same period, the stock of foreign direct investment has increased from roughly 10 percent of global GDP to 36 percent. Put simply, national economies and financial systems have become more integrated and interdependent.\(^2\)

This rapid growth in trade reflects falling trade barriers, declining transport costs, and improved information and communication technology. These trends have enabled the development of complex global supply chains that allow companies to manage their production more efficiently.

Emerging market economies now make up a much larger share of global trade, the global economy, and global growth. As an illustration, emerging market economies have accounted for 70 percent of global economic growth since the crisis—double their share from two decades ago.\(^3\) This growth has provided much-needed support to world economic activity, as advanced economies have recovered slowly from the crisis.

Rising economic integration is also evident when we examine the trade relationship between Brazil and the United States. Bilateral trade flows in goods have risen from $17 billion in 1994 to nearly $57 billion in 2016. The United States is Brazil’s second-largest export market, and an important destination for manufactured goods. In 2016, the stock of U.S. direct investment in Brazil was $64 billion, up from $18 billion in 1994.\(^4\) Recent initiatives announced by the Brazilian authorities—including a large and transparent infrastructure concession program and greater foreign participation in the oil and gas and aviation industries—underscore the potential for further increases in foreign direct investment.

The Benefits of Open Trade

Increased trade, through its longer-term impact on productivity, has been a key contributor to global growth and prosperity since the Second World War. Openness to trade brings many benefits to the supply side of the economy, including:

- larger markets, greater specialization opportunities, and the increased ability to exploit economies of scale and scope;
- faster transmission of technology and innovation; and
- greater competitive pressure on domestic firms to increase their productivity.

Collectively, these forces lead to a more efficient allocation of a country’s scarce resources—one that is more closely aligned to its international comparative advantage.

As a consequence, consumers can benefit from lower prices, higher real incomes, and greater variety and quality of goods and services. Increased openness may also reduce wasteful rent-seeking behavior on the part of protected industries and the related costs of corruption.

Openness to trade has certainly played a large role in the economic ascent of Asia. Following the rise of Japan, Korea, Taiwan, and others, fast growth in China and India has lifted hundreds of millions of people out of extreme poverty—an unprecedented feat in human history. Reflecting these gains, a number of emerging market countries have become strong supporters of open trade, a sign of how much the world has changed in recent years.

Benefits from open trade are evident in Brazil.\(^5\) Following its dramatic trade reforms in the 1990s, productivity growth in Brazil increased. Brazil also has leveraged its ample and diverse natural resource endowments to become a leading exporter of iron ore and a number of...
agricultural products. And, the country has benefitted from the rise of China—total export volumes more than doubled between 2000 and 2010, and have now nearly tripled. Brazilian multinational companies are also important global players in industries such as mining and metals, food, paper products, and transportation equipment.

But, increased openness to trade is not a panacea in and of itself. Actual benefits depend on a range of other critical factors. These include macroeconomic policy, the business and regulatory environment, the legal and tax regime, labor and product market flexibility, and the quality of infrastructure and public services, such as education. While the gains from a liberalized trade regime are not guaranteed, the alternative of trying to achieve a high standard of living by following a policy of economic isolationism will fail. Trade has played a key role in nearly all of the high-growth success stories since the middle of the last century.

The Challenges of Open Trade

It is important to recognize that while trade and international integration tend to increase the overall economic pie, the distribution of the larger pie may be very uneven. In fact, slices for some particular groups may even shrink. Some workers—particularly those in industries that are less competitive and whose skills may have become less relevant—can be hurt and can find adjustment difficult. Successful adjustment often requires individuals to change industries and to relocate to different regions. So, while trade is almost always a win for a country’s economy, not everyone within that economy will be a winner. This is especially the case where the policies to cushion the negative consequences of trade and to facilitate adjustment are lacking or inadequate.

Effects are country- and industry-specific, and depend on initial endowments and conditions. Low-income workers in emerging markets, for example, may find it more difficult to adapt, given weaker safety nets and fewer financial resources available to deal with adverse economic shocks. The bigger the adjustment process, the more the gains from trade will tend to be eroded.

While the rise in the skill premium from trade liberalization has been well established for both developed and developing countries, determining the aggregate impact of trade on jobs has been more challenging. To date, the evidence has been mixed. We need further research in this area to determine with more confidence a reasonable range of estimates for these employment effects.

Although evidence of the extent to which jobs have been lost due to global trade is inconclusive, job losses that are attributed to trade tend to be viewed differently. That is, they are seen as having been “lost to foreigners” and are often viewed as a consequence of the policy decision to liberalize trade in the first place.

The challenge of adjusting to open trade is a serious issue that has not received the degree of attention it fully deserves. This may partly reflect the fact that the burden has been borne unequally and spread out over a long time period. It also may reflect the fact that the winners from trade have often tended to have a stronger voice than those who have been the losers.

Research has documented that the effects on individuals of job dislocation—including those resulting from trade—can be significant and long lasting. Older workers tend to suffer larger earnings losses, and often face more difficult transitions. Displaced workers may not have the appropriate skills to find good jobs in other areas of the economy, including in growing export sectors.

When the affected industry represents a large share of the local economy, the damage is often magnified. In this case, the burden can become more widespread as the level of wages across the community is negatively affected. And, this doesn’t begin to capture the full human toll—
including the impact on workers who have lost confidence in the future and the poorer health outcomes that occur because of increased stress.

Research on Brazil has found that workers employed in regions facing larger tariff cuts experienced declines in formal sector employment. They also generally did not migrate to more favorable regions. Instead, they either became unemployed, moved into the informal sector of the economy, or—when more fortunate—moved into another sector within the same region.

We should find better ways to help communities that are struggling because of the effects of free trade. In the United States, we have historically experienced a high degree of geographic labor mobility—much higher than in other advanced economies. The ability to move in search of better opportunities, when possible, has helped to mitigate some of the adverse effects of trade. But, mobility has declined in the United States in recent years, implying that the adjustment costs to trade may have increased.

**Protectionism Is Not the Answer**

Given these costs of global integration and more liberalized trade, what is the best path forward? Although protectionism can have a siren-like appeal because of its potential to provide short-term benefits to particular segments of the economy, in the longer term it would almost certainly be destructive.

Countries need to compete better, not compete less. Trade barriers are a very expensive way to preserve jobs in less competitive or declining industries. They blunt opportunities in export industries and they reduce the affordability of goods and services to households. Indeed, such measures often backfire, resulting in harm to workers and diminished growth.

A better course is to learn from our experience. From a U.S. standpoint, we should work to reduce remaining foreign trade restrictions that impair our ability to capitalize on our comparative advantages. For example, market access restrictions can mean that certain U.S. industries cannot realize their full potential. Similarly, weaknesses in the protection of intellectual property rights limit the ability of U.S. producers to realize the full returns from their investments. This lowers profits and diminishes incentives to grow the business and employ more workers.

If we are going to enhance the benefits of free trade and better manage its costs, it is critical that we continue to strengthen the global rules-based system. On the positive side, I would point to the World Trade Organization’s Trade Facilitation Agreement, which addresses customs procedures and could reduce global trade costs significantly. But, at a broader level, the momentum behind global trade reform has clearly waned in recent years. This has occurred even though there are a number of areas that would benefit from further reform, such as agriculture and services. That momentum needs to be rekindled and reaffirmed. Although advanced economies historically have tended to lead the way, it is important that large emerging market countries now play a greater role. This is appropriate given their growing prominence in the global economy.

There are many approaches to dealing with the costs of globalization, but protectionism is a dead end. Trade restrictions address the symptoms and not the underlying problems, and they introduce other costs and distortions. While such measures might generate a temporary boost to growth from greater domestic production and consumption, these would likely be offset by a range of other costs. Over time, such measures would retard productivity growth and thereby shrink the economic pie. As an illustration, import substitution models that were pursued by many emerging market economies following the Second World War eventually led to poorer economic outcomes. Such was the experience in Brazil, which helped trigger the reforms of the early 1990s.
In assessing the benefits and costs of trade, it is important to understand that a nation’s trade balance reflects much more than its trade policy. Just as important are the country’s saving and investment spending proclivities, which are affected by many factors, including tax and fiscal policies. For example, in the United States, we have a chronic trade deficit because domestic investment spending exceeds our domestic saving. Foreign capital inflows make up the gap. In this process, the foreign exchange value of the dollar plays an important equilibrating mechanism. If the domestic saving/investment imbalance is unchanged, then any reduction in the trade balance from higher trade barriers will need to be offset by lower exports. The domestic currency will appreciate to cause the trade deficit to widen to accommodate the desired capital inflows. Thus, trade restrictions affect the composition of trade but not the gap between exports and imports, which is determined by the difference between domestic savings and investment. At the end of the day, the protectionist country would produce more goods in sectors protected by higher trade barriers but also fewer goods for export.

The expectation that higher trade barriers would save jobs ignores these critical second-round effects. Moreover, the story may not end there. What happens if another country that now faces higher trade barriers responds by raising its own barriers? That would push production even further out of high-value-added exports that are now deterred by the higher foreign trade barriers and into those exports that face lower trade barriers, or into the goods protected by the higher domestic trade barriers. Raising trade barriers would risk setting off a trade war, which could damage economic growth prospects around the world.

Measures that raise trade barriers typically would protect lower-wage, import-competing jobs, but would also weigh on the prospects for jobs in the more efficient export sector, which tend to be higher-paying. The outcome would be countries producing more where they have a competitive disadvantage, and less where they have a competitive advantage—the exact opposite of what we should be aiming for. For example, in the United States, one of our largest manufacturing exports is aerospace parts (which requires skilled labor) and one of our largest imports is apparel (which requires less skilled labor).

These second-round effects would also likely hurt productivity growth. Scarce resources would be used less efficiently and trade protection would likely lessen the level of competitive pressure that helps drive innovation. Moreover, lower productivity growth would likely lead to a slower improvement in a nation’s living standards over time.

Better Approaches to Deal with Globalization

Rather than protectionism, a better policy would be to help domestic workers and companies compete more effectively, rather than compete less. We need additional mechanisms that allow us to more fully capture the benefits from liberalized trade and to more proactively mitigate its costs. Ideally, policy should also better address job losses and income inequality from automation and other technological advances.

How we respond should depend on regional and industry circumstances. These include the nature of trade impacts, the skill sets and location of the workers that have been affected, and the amount of resources that can be mobilized to facilitate adjustment.

Increasing specialization brings real economic benefits, but can also leave workers more exposed to shifts in demand for their services, potentially on short notice. These issues are not going away, especially as emerging market economies take on a larger role in the global economy and automation continues apace. If we are to maintain a more open trade regime, globalization must be socially and politically sustainable. For that to be the case, we have to provide greater support to those who are hurt by trade. Policies should include more assistance with job retraining, help with job search and mobility, and broader unemployment support.

We also need to do more research into what measures have been effective in economies
around the world, and we should encourage greater experimentation with new approaches. Getting the balance right between providing assistance and making sure that individuals hurt by trade can get back on their feet and achieve their earning potential will be a challenge, and we need a better understanding of what actually works.

More generally, we need to do a better job positioning our workforce to cope with globalization and technological change. Improvements across a range of areas—including not only education and training, but also the business regulatory environment and infrastructure investment—could support greater worker mobility. These measures would also promote higher productivity growth. While the scope and scale of issues differ substantially by country, many of these issues may also be relevant in Brazil.

There are various measures available in current trade agreements, such as antidumping measures and countervailing duties for dealing with “unfair” trade, as well as escape clauses that provide safeguards for industries that face a sudden surge of imports. Again, the challenge is to ensure that such measures are effective, that they help facilitate rather than retard adjustment, and that they are not abused so as to avoid foreign competition. But, both sanctions and temporary relief have been provided for in global trade rules. We should be willing to use them when their use would lead to more equitable outcomes and would help sustain political support for a more open trade regime.

Financial Globalization Is Also Important

Financial globalization—the flow of capital across national borders—is also an important issue that must be considered. These flows help to support global economic integration in the trade of goods and services. This is a large, complex subject—and one the Central Bank of Brazil is well acquainted with, having successfully managed the pressures of heavy capital inflows as well as outflows during periods of stress. The tremendous damage of the global financial crisis underscores the importance of this issue. As with issues related to trade, achieving effective financial globalization requires robust and mutually supportive measures at both the domestic and international levels.

First, the high level of cross-border capital flows—and their potentially volatile nature—further underlines the importance of solid domestic fundamentals, including exchange rate flexibility, a credible monetary policy framework, sustainable fiscal policy, sufficient foreign exchange reserves, and a strong financial system.

The United States has a special responsibility to keep its own house in order, given the large size of its financial markets and the U.S. dollar’s status as a reserve currency. Indeed, the U.S. financial system was the epicenter of the global financial crisis. I believe that promoting economic growth and financial stability at home is the most important contribution the United States can make to promoting growth and stability worldwide.

With that in mind, U.S. monetary policy can have a significant impact on global financial conditions, including exchange rates, and shifts in U.S. monetary policy can lead to consequential shifts in global capital flows. Therefore, good communication and transparency from the Federal Reserve is needed. In this respect, I believe we have made a number of improvements in recent years that have facilitated smoother market adjustments to policy changes. One example is the process by which the Federal Reserve began the normalization of its balance sheet last year. We foreshadowed our intentions and initiated a program that was transparent in its design and ramped up only slowly. While the Federal Reserve has a domestic mandate set for it by the U.S. Congress, it needs to be mindful of the international effects of its actions, which can have important potential consequences for the global economy and financial markets.

A high level of global interdependence also requires robust cooperation and effective international
institutions. To provide one example, I have traveled several times a year for the last decade to Basel, Switzerland, to discuss economic, monetary, and regulatory policy with foreign central bankers at the Bank for International Settlements (BIS). This dialogue—supported by ongoing bilateral discussions between central banks—helps build trust, understanding, and the valuable relationships that are crucial during periods of stress.

The global financial crisis put the need for a more robust and resilient financial system in stark relief. Such a regime is necessary if we are to maintain the flow of credit to the real economy—both domestically and internationally—during times of stress. Over the last decade, policymakers have implemented a range of reforms that have materially strengthened the banking system, including higher capital and liquidity buffers for the major international banks.10

International coordination has been essential to the successful implementation of these reforms. Banking is a global business that requires a high degree of regulatory consistency and as level a playing field as possible to avoid distortions and regulatory arbitrage. Under the auspices of the Basel Committee on Banking Supervision of the BIS, a wide-ranging set of reforms has been introduced progressively, including the recent finalization of the Basel III reforms.11

Tighter regulation of international banks must be complemented by effective supervision, and much progress has been made in improving home/host supervisory cooperation. In a local context, cross-border supervisory coordination has taken on increased importance as Brazilian banks have expanded internationally in recent years. Still, greater clarity around how large global banks will be resolved is required if we are to successfully end “too big to fail.”

Finally, it is increasingly clear to me that we also need to develop a better shared understanding of the proper role of exchange rate policies and reserve accumulation in a healthy and fair global trading system. To be sure, in a world of volatile capital flows, experience has shown that having adequate reserve cushions has helped many emerging market economies ward off costly instability. Indeed, Brazil’s large stock of foreign exchange reserves has been a key pillar of stability through turbulent periods. But, reserves are a relatively expensive form of insurance, and excessive reserve accumulation can undermine global adjustment, shift burdens onto trading partners, and erode political support for continued trade openness. As I have said on other occasions, I think that part of the solution lies in further improving the international safety net, so that countries have more efficient and less costly ways of ensuring resilience.12

To conclude, although the benefits from an open trade regime remain compelling, we must also recognize that such a regime imposes costs, and these need to be forcefully addressed. Focusing on these costs is necessary if globalization—including its financial dimensions—is to work for all of us.

Thank you for your time. I would be happy to take some questions.

1 Mary Amiti, John Clark, Gerard Dages, Matthew Higgins, Emily Howard, and Tom Klitgaard assisted in preparing these remarks.
2 Figures from UN World Investment Report, IMF World Economic Outlook Database, World Bank World Development Indicators.
3 IMF World Economic Outlook, April 2017, in market exchange rate terms.
4 Figures from U.S. Bureau of Economic Analysis, IMF.
This negative consequence of higher trade barriers can be illustrated most starkly by the estimates of the costs per job saved through protectionist measures. Researchers that have studied this closely estimate that the costs per job saved from protectionist measures in the United States typically run into the hundreds of thousands of dollars per year. To illustrate, consider the case of import restrictions on Chinese tires. The cost of a job saved was estimated at $900,000 per year while the measures were in place, or more than 20 times the average worker’s compensation. Hufbauer and Lowry, “US Tire Tariffs: Saving Few Jobs at High Cost”, Peterson Institute for International Economics, April 2012.

The U.S. provides some assistance to workers displaced due to trade through its Trade Adjustment Assistance (TAA) program. A recent academic paper finds that TAA-trained workers have higher cumulative earnings (after 10 years) than similar workers who didn’t receive the training. These higher earnings reflect both higher incomes and greater labor force participation, with returns concentrated in the most disrupted regions, where workers are more likely to switch industries and move to labor markets with better opportunities in response to training. Hyman, Benjamin (2017) “Can Displaced Labor Be Retrained? Evidence from Quasi-Random Assignment to Trade Adjustment Assistance,” University of Pennsylvania.


For further discussion, see recent Committee on the Global Financial System (CGFS) report, Structural Changes in Global Banking after the Crisis.

Other committees of the BIS, including the CGFS, which I chair, and the Financial Stability Board, which the BIS hosts, play an important role in analyzing international financial stability issues and developing related policy prescriptions.