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Robert S. Kaplan: Taking the Long View: Creating a Better Future for Our Children and Grandchildren

Essay by Robert S. Kaplan, president and CEO of the Federal Reserve Bank of Dallas, published on the Federal Reserve Bank of Dallas website, Dallas, 16 April 2018

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Turn on the television or pick up a newspaper and you'll likely see a discussion of what's happening now—the latest scandal, current geopolitical developments, stock market movements, the latest GDP numbers or corporate earnings announcements. This focus on the here and now is so ingrained that we may not be aware of the short-term nature of the news flow. In the midst of this, it is sometimes easy to lose focus on the fact that short-term events often occur as a result of more persistent underlying forces that can take many years to unfold.

What does all this have to do with the work of a central banker? I spend a good part of my time trying to understand economic conditions and make sound monetary policy decisions based on my analysis of those conditions. In this job, I am keenly aware that short-term cyclical developments are only part of the story in understanding the U.S. and global economies.

The Cyclical Versus the Secular

The U.S. economy has historically moved in cycles. That is, it typically behaves in patterns that tend to be, with variations, repeating. There are stretches of time when GDP grows, and these tend to be followed by periods of GDP decline, followed eventually by a return to growth, followed again by a period of decline, and so on. These cycles often repeat themselves although the exact length, magnitude and character of the pattern varies based on a variety of underlying factors.

Economists use models and other analytical techniques to assess and attempt to forecast the performance of the economy in these cycles. Based on these models, economists look for markers and other data that indicate where we are in the cycle as well as the strength and character of the economy's performance. GDP, unemployment, various gauges of manufacturing and service sector activity, and inflation measures are examples of economic indicators that are regularly monitored. These measures are widely reported and tend to fluctuate based on factors such as industry developments, commodity prices, market developments, global developments as well as monetary and fiscal policies, and the stage of the current economic cycle.

In contrast to cyclical events, longer-term secular trends are usually not discussed on the evening news. They are much slower moving underlying trends that usually develop over an extended period of time. They may not be visible or widely reported and can take years to unfold. Examples could include demographic and migration trends, changes in consumer

and industry behaviors due to automation and labor-saving technologies, and elements of global economic integration and development.

In my experience, while cyclical fluctuations often attract our attention, the underlying secular trends usually help explain these shorter-term developments. Underlying structural forces may not capture the headlines because they are slower moving and may not have a material impact for several years. However, these forces are ultimately enormously powerful.

The purpose of this essay is to first discuss the shorter-term cyclical aspects of the U.S. economy and then focus on the longer-term structural trends. In my judgment, it is critical that we more fully understand and address these secular trends if we are to have a more prosperous economic future.

The Near Term

Dallas Fed economists expect U.S. GDP growth of 2.5 to 2.75 percent in 2018. This growth is underpinned by a strong household sector, improved business investment and stronger growth outlook outside the U.S.

Based on this forecast, Dallas Fed economists expect unemployment to dip from 4.1 percent to approximately 3.7 percent during the year. We also expect other measures of labor force slack to tighten. In particular, we focus on U-6, which comprises the unemployed, plus “marginally attached workers” (workers who indicate that they would like a job but have stopped looking for one), plus people who are working part time who would prefer to work full time. This measure now stands at 8.0 percent, near its prerecession low, and we expect it to improve further during 2018. We also consider estimates of the numbers of disabled workers, previously incarcerated individuals as well as other sources of available workers who could potentially return to the workforce in a strengthening job market.

Based on their analysis of the labor market, our economists continue to believe that, while improvements can be made in increasing employment, we are likely at or already past “full employment” in the U.S. Dallas Fed surveys suggest that businesses are increasingly struggling to find workers to fill low- and middle-skills positions. For example, in one of our recent surveys, 61 percent of Texas small-business respondents suggested they are unable to find workers to fill these types of positions. [1] Due to this labor force tightness, it is our view that cyclical wage pressures should build during 2018.

Regarding inflation, we believe that cyclical inflationary pressures are building. However, our economists also believe that these forces are being at least partially offset by the impacts of automation and, to a lesser extent, globalization. Discussions with our business contacts continue to indicate that, due to the impact of automation and business model disruption, pricing power of businesses is more limited than we’re historically accustomed to seeing at this stage in an economic expansion.

While we expect GDP growth to be strong in 2018, we also expect that this growth will moderate in 2019 and 2020. In fact, Dallas Fed economists are forecasting GDP growth of less than 2 percent in 2020 as the short-term stimulus of the recent tax legislation and budget agreement begin to fade and monetary policy and financial conditions become less accommodative.

Longer-Term Structural Trends

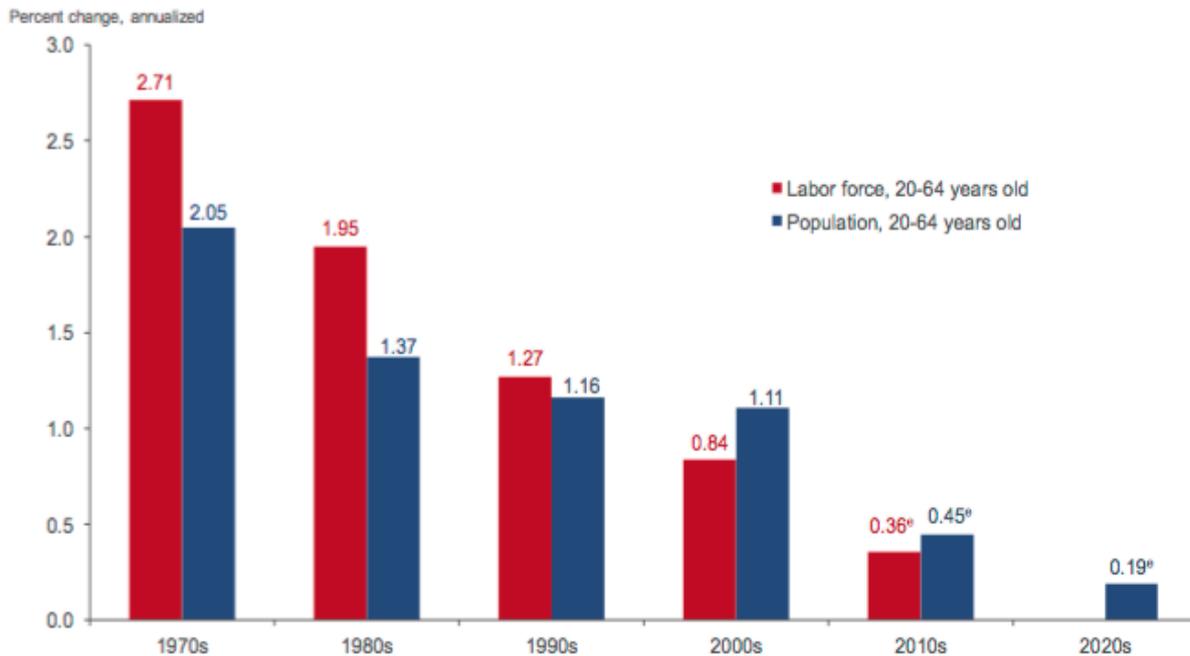
While the near-term cyclical outlook is solid, underlying structural trends are more concerning. I make a point of discussing secular trends in every speech because, as policymakers, if we focus on them, we can impact how they will unfold over the medium and longer term. If we pay insufficient attention to these issues, we may find that they ultimately overwhelm shorter-term cyclical factors and lead to less growth and prosperity in the U.S. economy. I will discuss four overarching secular trends.

Demographics

The U.S. population is aging. In fact, the median age of the population has gone from 35.3 years in 2000 to 37.9 in 2016. [2] The share of population 65 years or older has risen to 15.7 percent from 12.6 percent 10 years ago. [3] Chart 1 shows the ongoing trend of aging demographics—leading to declines in labor force and population growth in the U.S.

GDP growth is made up of growth in the workforce plus the rate of improvement in labor productivity. If workforce growth is slowing, unless we can make up for it through more rapid improvement in labor productivity, we will see lower rates of GDP growth. This slower GDP growth is crucial because it has significant implications for future living standards in the U.S. Because government debt to GDP is historically elevated, growth will be needed to service and pay off this debt and meet future entitlement obligations.

Chart 1: Declining rates of labor force and working-age population growth



NOTE: *e denotes an estimated value.
 SOURCES: Bureau of Labor Statistics through 2017 for labor force growth data; Census Bureau for historical and estimated population growth data from 1970s through 2020s.

The labor force participation rate has declined from 66 percent in 2007 to approximately 63 percent today. Dallas Fed economists believe the bulk of this decline is due to aging of the workforce. In fact, we expect this trend to continue so that the labor force participation rate should decline to 61 percent over the next 10 years. [4]

This demographic challenge is occurring, to varying degrees, across most advanced economies. For example, Germany and Japan have more challenging demographic trends than the U.S. [5]

What can we do about this demographic challenge? First, we could implement programs and policies that encourage higher birth rates among our population. This could help address workforce growth 25 years from now. We can adopt policies that encourage people not in the workforce to join the workforce; these policies could include improved child care, better transportation services for at-risk populations, and incentives for discouraged workers to rejoin the workforce. Another supplement to workforce growth is immigration. Immigrants and their children have made up over half the workforce growth in the U.S. over the past 20 years, and this proportion is likely to be even higher over the next 20 years. (See Appendix for a further discussion of the role of immigration in the economy.)

Technology-Enabled Disruption and Its Implications for Educational Achievement and the Skills Gap

Workers are increasingly being replaced by automation. Consumers are increasingly able to use technology to shop for goods and services. Business models are being disrupted by new approaches to delivering goods and services at lower prices and potentially better

convenience. As a result, business pricing power is increasingly being challenged. In response, businesses are investing more in technology and merging with other companies to achieve greater scale in order to protect gross profit margins. These trends appear to be accelerating globally. [6]

Despite rapid technological change, productivity growth has remained sluggish. Output per worker grew on average by approximately 1.9 percent per year in the 1990s, slowed to 1.3 percent in the 2000s and has slowed further to 1.0 percent since 2010. One explanation may be that technology is having a profound impact on the workforce. In particular, it is changing the nature of middle- skills jobs.

If you are one of the 46 million workers in this country with a high school education or less, or have a “routine” type of middle-skills job, you are likely finding that your job is being either restructured or eliminated as a result of technology. These workers may find another job in a strong job market, but unless they have gotten retrained, they are likely to see their incomes and productivity decline. This may be one reason that we haven’t seen a bigger productivity-growth payoff from recent advances in technology. We measure productivity growth workforce-wide rather than by company or industry. While most industries are materially improving their productivity, workers with less education may be finding their real wages and productivity declining in a new age where skills training and educational achievement levels are increasingly critical to adapting to the job market.

Regarding education, the U.S. is a leader in many areas versus the rest of the world. Unfortunately, several studies suggest that the skill levels and educational achievement levels of our workforce have lagged other developed countries for the last several years. In surveys of 29 participating Organization for Economic Cooperation and Development (OECD) countries, the U.S. ranked 20th in assessments of adult literacy and math skills. [7] In addition, according to recent OECD surveys, the U.S. ranks 24th out of 35 developed countries in measures of math, science and reading skills among 15-year-olds. [8]

Research by Eric Hanushek of Stanford University with Ludger Woessmann of the University of Munich suggests that improvements in U.S. math and science skills could translate into meaningful improvements in potential GDP growth. [9] While these efforts are likely to take years, they could have substantial potential to improve future growth and prosperity in the U.S.

In order to address this powerful structural driver, the U.S. must do more to improve early childhood literacy and college readiness, and do more to strengthen skills training at our high schools and community colleges.

The Potentially Unsustainable Path of Government Debt to GDP

U.S. government debt held by the public now stands at 75 percent of GDP, [10] and the present value of unfunded entitlements is estimated at approximately \$49 trillion. [11] The recent tax legislation and bipartisan budget compromise legislation are likely to exacerbate

these issues. While increasing the level of debt to GDP is a stimulus to economic growth in the short run, that stimulus can turn into a growth headwind when the government takes steps to moderate debt growth, as it certainly must consider doing in the years ahead. As a consequence of this level of debt, the U.S. is much less likely to have fiscal capacity to fight the next recession.

Further, due to this level of government debt as well as historically high levels of corporate debt as a percentage of GDP, the economy is becoming much more interest rate sensitive. That is, increases in interest rates have greater potential to require a higher proportion of cash flow in order to service corporate and government debt obligations. Structural reforms and other actions that flatten the path of future government debt growth may be advisable at this stage of the economic cycle.

Globalization

World economies and financial markets are increasingly integrated and interconnected. This trend is not new, but it certainly has been intensifying over the past many years. Companies increasingly think about their labor force and capital investment decisions in a global manner. Investors increasingly think globally about where to allocate capital. This helps explain why lower labor costs in one country can have an impact on inflation and labor market developments in other countries and it also helps explain why interest rate levels, stock market valuations and occasional market turmoil in one country can ripple through currencies and global markets very rapidly.

Trade is certainly part of this globalization trend. With the World Trade Organization, North American Free Trade Agreement and other trade agreements, global trade has increased. In many cases, this increase in trade, along with technological advances, has been good for the U.S. in terms of consumer benefits and improving corporate efficiency and profits, but, at the same time, it has led to painful job disruption and dislocations in many cities and towns in our nation.

Today, a new trend has emerged which is likely surpassing globalization in terms of job disruption—technology-enabled disruption (described above). That is, if your job is being disrupted today, it is far more likely due to technology-enabled disruption rather than globalization.

Dallas Fed economists believe it makes sense to segment U.S. trading relationships into those which are primarily final goods versus intermediate goods. For example, our trade deficit with China is primarily final goods. Conversely, our trading relationship with Mexico and Canada are primarily intermediate goods. Intermediate goods trading relationships are more indicative of integrated supply chain and logistics arrangements. Dallas Fed research indicates that intermediate goods relationships have allowed U.S. companies to add jobs and increase their global competitiveness.

In this regard, Dallas Fed economists believe that, at this stage in our history, globalization is more likely an opportunity for the U.S. to grow as opposed to a “threat.” With less than 5 percent of the world’s population, we believe that trade is critical to future growth in the U.S. Emerging markets and other growing economies are increasingly important sources of demand for U.S. goods and services.

It is critical that we accurately diagnose globalization and untangle it from the impacts of technology-enabled disruption. Dallas Fed economists believe that updating and modernizing trade agreements is highly appropriate, but our research also indicates that trade is a critical opportunity for the U.S. to grow faster and improve the future prosperity of our nation.

Implications

Popular press and current national discussions tend to focus heavily on shorter-term cyclical developments. Because the near-term outlook for GDP growth is positive, this may lull observers into believing we are on a path to sustained improvement in the economic performance of the U.S. economy. This belief may well distract policymakers and the public from focusing on the powerful structural trends that are likely to create challenges for growth in the medium and longer term.

Leadership is required to take a longer-term view and take steps to create a better economic future for our children and grandchildren. The Dallas Fed forecasts that 2018 will be a solid year for economic growth in the U.S. However, unless our nation initiates structural reforms that improve workforce growth, education and skill levels of our labor force, moderate the expected path of government debt growth, and adopts policies that allow us to capture the opportunities provided by globalization, we are likely to see sluggish rates of GDP growth in the medium and longer term.

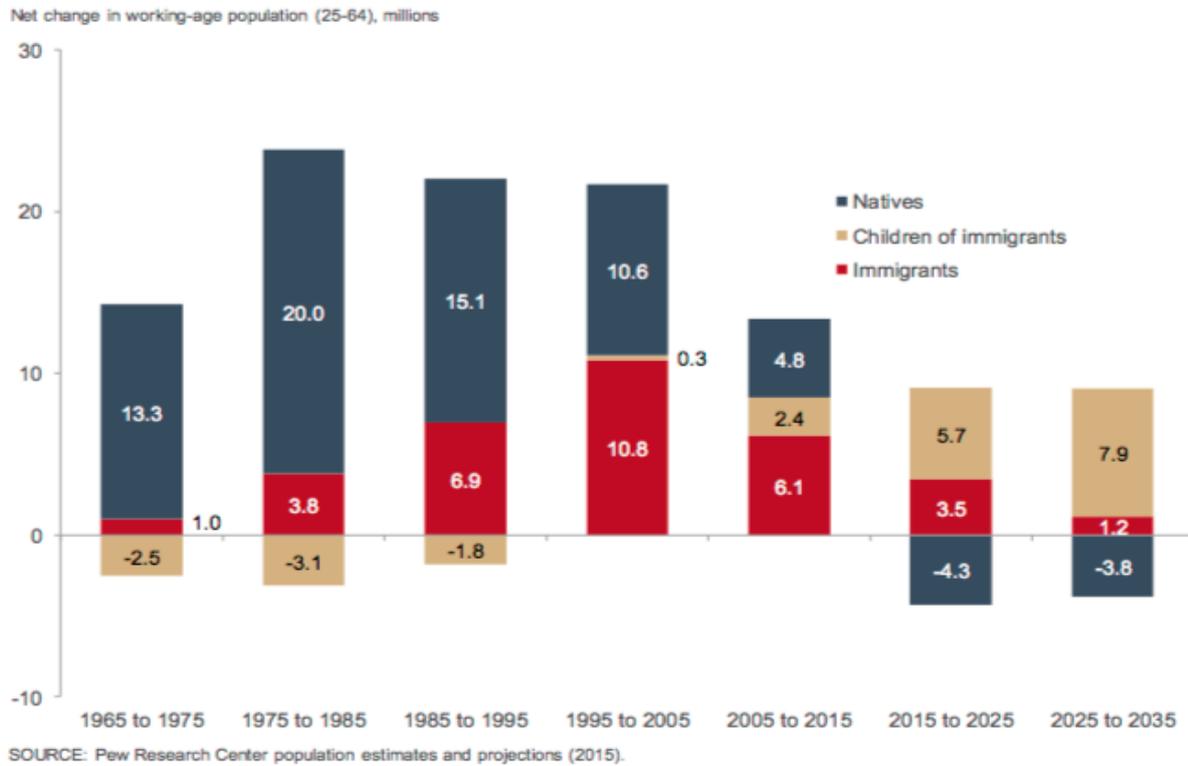
APPENDIX

The Impact of Immigration on U.S. Workforce and Demographic Trends

Dallas Fed research indicates that immigration has been a key element of economic growth in the U.S. However, immigration is not a purely economic issue—which is why it is a highly sensitive and controversial subject. The purpose of this note is to discuss the economic aspects of immigration as a key element in growing the workforce and to explore alternative immigration policies. This discussion is particularly important today in light of the aging U.S. workforce.

Immigrants and their children have made up more than 50 percent of working-age population growth in the U.S. over the past 20 years. [12] As shown in Chart A-1, we expect immigrants and their children to make up an even larger share of working-age population growth over the next 20 years as the retirement of baby boomers leads to a net decline in the working-age population of native-born workers.

Chart A-1: Contribution of immigration to working-age population growth

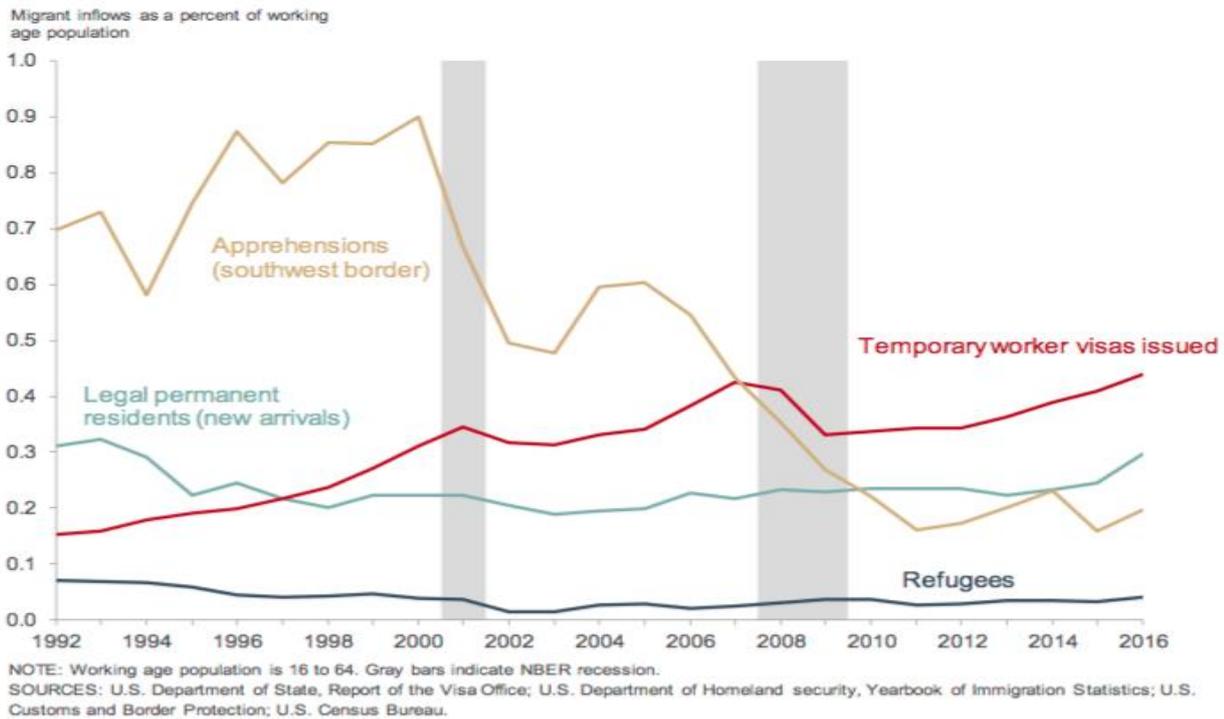


The Mix of Immigration Flows

Although immigration is becoming increasingly important to workforce growth, immigration flows to the U.S. have slowed over the past 10 years. The biggest declines have been in unauthorized immigration, in part, due to housing market declines as a result of the Great Recession (which led to a decline in residential construction work opportunities) as well as more stringent enforcement policies along the Southwest border and in the U.S. interior. Improved economic conditions and falling population growth in Mexico have also played a role in dampening migration to the U.S.

Temporary worker visas have recently increased, as has the flow of new legal permanent residents. Tighter labor markets are likely playing a role in boosting the demand for hiring foreign-born workers, and there is some evidence that this demand can be channeled through legal means. See Chart A-2 for measures of immigration.

Chart A-2: Measures of U.S. immigration

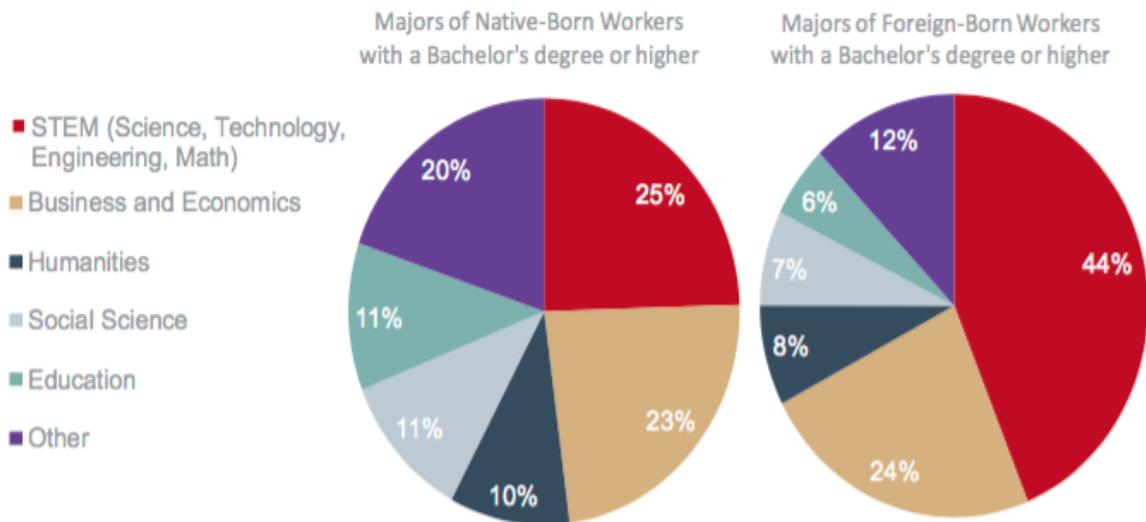


The Importance of Skilled Immigration

Immigration generally contributes to a larger labor force, which has benefits for economic growth, but high-skilled immigration has also been shown to positively influence productivity growth.

Chart A-3 shows that nearly half of college-educated immigrants majored in science, technology, engineering or math (STEM). This far outpaces U.S.-born college-educated workers, about one quarter of which major in STEM fields. High-skilled foreign-born workers have also been shown to patent at higher rates than native workers, largely as a result of their concentration in the STEM fields. [13] This type of innovative activity has been shown to be a key factor in U.S. productivity growth in the post-World War II period. [14]

Chart A-3: College major selection, 2014-16 average



SOURCE: American Community Surveys, 2014-2016.

Impact of Immigration on Native Workers

Does immigration adversely affect the working conditions of native workers? Pia Orrenius, a senior economist at the Dallas Fed, finds very little empirical evidence that immigrants create adverse wage effects among high-skilled workers, while wage and employment effects on low-skilled workers tend to be small. [15] Based on her research with Madeline Zavodny, she has also advocated for greater focus in the U.S. on employment- and merit-based immigration—which tends to bring in higher skilled workers than family-based immigration policies. They argue that demand for low-skilled immigration can be met through a temporary-worker program and that this is preferable to relying on illegal immigration, which has historically tended to be the case. [16]

While immigration is a politically sensitive topic, Dallas Fed research indicates that, due to aging demographic trends, we need to come to grips with immigration reform in order to supplement labor force growth in the U.S. [17] These reforms could encourage greater emphasis on employer-based and skills-based immigration. Whatever the decisions made by policymakers, this discussion is important to creating greater GDP growth in the U.S.

[1] Based on respondents with fewer than 500 employees, Texas Business Outlook Survey, Federal Reserve Bank of Dallas, February 2018.

[2] “The Nation’s Older Population Is Still Growing, Census Bureau Reports,” press release, Census Bureau, www.census.gov/newsroom/press-releases/2017/cb17-100.html.

[3] Census Bureau data.

[4] Bureau of Labor Statistics data.

[5] For example, the share of the population age 65 or older is 21.5 percent in Germany, and 27.1 percent in Japan, according to UN World Population Prospects 2017 data.

[6] “Global Deals Surge Past \$1tn at Fastest Ever Pace,” Financial Times, March 21, 2018.

[7] According to the Program for International Assessment of Adult Competencies’ Survey of Adult Skills (2012, 2015) by the Organization for Economic Cooperation and Development (OECD), the U.S. ranks 17th in literacy and 23rd in math out of 29 countries and 15th in problem-solving in technology-rich environments out of 26 countries. An average of scores across the literacy and math categories places the U.S. 20th.

[8] According to the Program for International Student Assessment (PISA) (2015) by the OECD, the U.S. ranks 19th in science, 20th in reading and 31st in mathematics out of 35 OECD countries. An average of scores across the three categories places the U.S. 24th.

[9] Hanushek and Woessmann (2016) estimate that a sustained 25-point increase in U.S. students’ average PISA scores could lead to an increase of 0.5 percentage points in potential gross domestic product growth in the longer run. See “Skills, Mobility, and Growth,” by Eric Hanushek and Ludger Woessmann, in *Economic Mobility: Research & Ideas on Strengthening Families, Communities & the Economy*, Alexandra Brown, David Buchholz, Daniel Davis and Arturo Gonzalez, ed., St. Louis: Federal Reserve Bank of St. Louis and the Board of Governors of the Federal Reserve System, 2016, pp. 423–49. Also, see “Human Capital in Growth Regressions: How Much Difference Does Data Quality Make?” by Angel de la Fuente and Rafael Doménech, *Journal of the European Economic Association*, vol. 4, no. 1, 2006, pp. 1–36; and “Growth and Human Capital: Good Data, Good Results,” by Daniel Cohen and Marcelo Soto, *Journal of Economic Growth*, vol. 12, no. 1, 2007, pp. 51–76.

[10] Data are from the U.S. Department of the Treasury and Bureau of Economic Analysis as of fourth quarter 2017. 11 “The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds,” U.S. Social Security Administration, July 13, 2017; “The 2017 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,” Centers for Medicare and Medicaid Services, July 13, 2017.

[11] “The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds,” U.S. Social Security Administration, July 13, 2017; “The 2017 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,” Centers for Medicare and Medicaid Services, July 13, 2017.

[12] “Immigration Projected to Drive Growth in U.S. Working-Age Population Through at Least 2035,” by Jeffrey S. Passel and D’Vera Cohn, Factank, Pew Research Center, March 8, 2017.

[13] “How Much Does Immigration Boost Innovation?” by Jennifer Hunt and Marjolaine Gauthier-Loiselle, *American Economic Journal: Macroeconomics*, vol. 2, no. 2, 2010, pp. 31–56.

[14] “Sources of U.S. Economic Growth in a World of Ideas,” by Charles I. Jones, *American Economic Review*, vol. 92, no. 1, 2002, pp. 220–39.

[15] “Does Immigration Affect Wages? A Look at Occupation-Level Evidence,” by Pia Orrenius and Madeline Zavodny, *Labour Economics*, vol. 14, no. 5, 2007, pp. 757–73.

[16] *Beside the Golden Door: U.S. Immigration Reform in a New Era of Globalization*, by Pia M. Orrenius and Madeline Zavodny, Washington, D.C.: American Enterprise Institute Press, 2010.

[17] “Gone to Texas: Migration Vital to Growth in the Lone Star State,” by Pia Orrenius, Alexander Abraham and Stephanie Gullo, *Federal Reserve Bank of Dallas Southwest Economy*, First Quarter, 2018.

Fonte: KAPLAN, Robert S. Taking the Long View: Creating a Better Future for Our Children and Grandchildren. Disponível em: <<https://www.dallasfed.org/news/speeches/kaplan/2018/rsk180416.aspx>> Acesso em: 19 de abril de 2018

William C. Dudley: Important Choices for the Federal Reserve in the Years Ahead

Remarks by William C. Dudley, President and CEO of the Federal Reserve Bank of New York, at the Lehman College, Bronx, New York, 18 April 2018

* * *

It is a pleasure to have the opportunity to speak here today at Lehman College. In my remarks, I will focus on the economic outlook—both over the near and longer term—and I will discuss some of the important monetary policy issues that will be considered in the years ahead, after my tenure at the Federal Reserve Bank of New York is (sadly) over. As always, what I have to say reflects my own views and not necessarily those of the Federal Open Market Committee (FOMC) or the Federal Reserve System. [1]

The Economic Outlook

Over the near term, the economic outlook remains quite favorable. I anticipate that the economy will continue to grow at an above-trend pace in 2018 and 2019, which will put sufficient pressure on the nation's resources to push up inflation to the FOMC's longer-run 2 percent objective.

There are several reasons to be confident in this growth outlook: Monetary policy remains accommodative, financial conditions are still easy, and the global economy is in the midst of a synchronized expansion. Moreover, significant fiscal policy stimulus from tax cuts and increased federal spending will boost real household disposable income and corporate profits, which should support further gains in consumption and capital spending.

In this context, I would not take much signal from the slowdown in consumer spending in the first two months of this year. As I see it, this slowdown was mostly due to two transitory factors: a retrenchment following the spurt in activity from recovery efforts following Hurricanes Harvey, Irma, and Maria, and the delay in this year's tax refund payments to those receiving certain tax credits. [2]

Strong payroll employment gains also suggest that the slowdown in household spending will be temporary. Over the last three months, payroll gains have climbed to a monthly pace of 202,000 jobs, somewhat above 2017's monthly average of 182,000. Robust job gains coupled with moderate growth in labor compensation should ensure that household incomes will continue to rise at a solid rate, even before factoring in the impact of this year's reduction in personal income taxes.

With respect to inflation, most of the evidence is consistent with a slow movement toward the FOMC's 2 percent objective. On a year-over-year basis through February, the overall Personal Consumption Expenditures (PCE) price index and the core PCE price index—which excludes the more volatile food and energy components—have risen by 1.8 percent

and 1.6 percent, respectively, from troughs of 1.4 percent and 1.3 percent last summer. Further gains appear likely at the end of this month, when the sharp decline in cellular telephone services prices that occurred a year ago drops out of the year-over-year calculations.

In the current environment, I see three important issues regarding the appropriate monetary policy stance:

- How quickly to remove monetary policy accommodation—is a gradual path of removal still appropriate now that the unemployment rate is 4.1 percent?
- How far to go in removing monetary policy accommodation—will monetary policy have to move to a somewhat restrictive setting in the years ahead?
- How should the FOMC factor fiscal policy and trade policy developments into its monetary policy decisions?

I will take each of these in turn.

As I see it, a gradual path of interest rate increases remains appropriate. Even though the unemployment rate is low, inflation remains below our 2 percent objective. As long as that is true, the case for tightening policy more aggressively does not seem compelling. My conclusion is reinforced by the fact that we do not know with much precision how low the unemployment rate can go without prompting a significant rise in inflation. We do not directly observe the non-accelerating inflation rate of unemployment, or NAIRU. Rather, we only infer it from the response of wage compensation and price inflation as the labor market tightens.

Also, the U.S. labor market may have more slack than the 4.1 percent unemployment rate suggests. Over the past six months, the unemployment rate has remained steady despite robust payroll gains. As the labor market has improved, more people have been actively seeking employment. As a result, the labor force participation rate has flattened out despite the ongoing aging of the workforce population. Furthermore, because the U.S. labor force participation rate for prime age workers is low compared to many advanced economies, the labor market could conceivably improve even further before encountering significant resource constraints.

That said, the Federal Reserve should not overstay its welcome. It is important to get monetary policy back to a neutral setting before the labor market becomes so tight that wages and prices begin to rise at a pace inconsistent with the FOMC's 2 percent inflation objective. Our mandate from Congress is maximum sustainable employment and price stability—not simply a high level of employment at one point of the business cycle.

With respect to how far the FOMC should go in removing monetary policy accommodation, two major issues stand out. First, what represents a neutral monetary policy setting? Second, under what circumstances would it be appropriate to move beyond neutral to a restrictive setting?

Unfortunately, we do not also observe the neutral real (i.e., adjusted for inflation) short-term interest rate, or r^* . There is a wide range of estimates at any time, and they evolve as the economic environment changes. For example, all else equal, continued buoyant financial conditions amid recent and anticipated future rate hikes imply that r^* may be higher than previously estimated. A shift to a more stimulative fiscal policy could also imply a somewhat higher r^* , at least temporarily.

One's view of the neutral rate may also be influenced by one's assessment of the longer-term economic environment. For example, if we are in a period of "secular stagnation"—characterized by chronic excess global savings and aging populations—then one would expect r^* to remain persistently low. [3] But, if we are in a world of abating headwinds as we recover from the financial crisis, then one would expect r^* to rise over time. This lack of clarity about the environment increases the degree of uncertainty about the level of r^* .

Despite all these uncertainties, one still has to have a viewpoint. In the current circumstances, I would judge that r^* over the medium term is likely to be somewhere around 1 percent. Although that is higher than the estimates from some models, I have nudged up my estimate because financial conditions are still easy and fiscal policy will likely be quite stimulative in 2018 and 2019. [4]

If the neutral real interest rate is around 1 percent, there is still some distance to go before monetary policy actually gets tight. At the FOMC's 2 percent inflation objective, my estimate of r^* implies that the federal funds rate would need to rise to around 3 percent for monetary policy to be considered neutral. Of course, as the factors that influence r^* change, my estimate of r^* will also move around over time.

Whether monetary policy will need to move to a restrictive setting depends crucially on how low the unemployment rate can go without inflation climbing meaningfully above 2 percent. Although the jury is still out on this question, last month's Summary of Economic Projections, or SEP, is instructive. [5] Most FOMC participants—including me—have the unemployment rate moving considerably below their estimate of NAIRU by 2020, with inflation climbing slightly above 2 percent and the federal funds rate moving above their estimates of its likely long-run value. Thus, the March SEP implies that most FOMC participants expect that monetary policy will need to become slightly restrictive in the years ahead.

Recent fiscal and trade policy developments are likely to increase the uncertainty around the distance to a neutral monetary policy stance and the possibility that the FOMC will have to move to a restrictive stance. The shift in fiscal policy toward stimulus is somewhat challenging because of its timing—it is unusual to move fiscal policy sharply in a stimulative direction at a mature stage of a business cycle—and because the shift puts the nation's fiscal path on an unsustainable trajectory. According to the projections released earlier this month from the Congressional Budget Office, or CBO, the federal budget deficit is anticipated to exceed 4½ percent of GDP in 2019, well above the level that would be needed to keep the federal debt-to-GDP ratio from rising. [6] Moreover, the CBO expects that the

pressures on the budget will be substantial over the next decade, with deficit projections ranging between 4½ and 5½ percent of GDP throughout the period. Debt service costs will move sharply upward in coming years as federal debt continues to grow and interest rates likely increase further. Additionally, entitlement spending is likely to increase sharply as members of the baby boom generation continue to retire—myself included. [7]

The shift toward a more aggressive U.S. posture on trade also likely increases uncertainty. On the one hand, such a posture could lead to revised trade agreements that provide the United States with greater access to foreign markets and better protection of intellectual property. This would tend to raise U.S. productivity and real GDP growth. On the other hand, tougher bargaining could lead to retaliation and higher trade barriers, here and abroad. In contrast to the first scenario, this outcome would be quite negative—leading to higher inflation, lower productivity, and slower potential GDP growth. [8] Over time, how U.S. trade policy evolves will have important implications for the performance of the U.S. economy—and, by extension, for U.S. monetary policy. By increasing uncertainty around the economic outlook, these shifts in fiscal and trade policy could make it more difficult for the FOMC to achieve its dual mandate objectives in the years ahead.

Longer-term Monetary Policy Issues

Over the longer term, the FOMC will also need to address a number of other important issues. These include: 1) Determining the appropriate long-term implementation framework for U.S. monetary policy, and 2) deciding whether the strategic framework underlying monetary policy decisions needs to be adjusted to mitigate the risks associated with getting pinned at the effective lower bound for short-term interest rates. [9]

For the first issue, I see two options: return to the “corridor”-type system that was in place prior to the financial crisis, or remain with the framework that has been in place since the crisis—namely, a “floor” system. In a corridor system, reserves in the banking system are scarce, and the federal funds rate is set by adjusting the supply of reserves through open market operations to balance demand and supply at the FOMC’s target range. In contrast, in a floor system, reserves are abundant, so that the interest rate the Federal Reserve pays on excess reserves, or IOER, is the primary tool used to control the federal funds rate.

In my view, the case for retaining the current floor system is very compelling for a number of reasons. First, it is operationally much less complex than a corridor system. In the current regime, the setting of IOER is largely sufficient to maintain the federal funds rate within the FOMC’s target range, as we have seen over the past few years. [10] In contrast, a corridor system requires forecasting the many exogenous factors that affect the amount of bank reserves outstanding, and then engaging in open market operations on a near daily basis to keep reserves at a level consistent with the FOMC’s target range. [11] This task would likely be more difficult now because of greater fluctuation in these exogenous factors relative to when the corridor regime was last in place.

Second, a corridor system constrains the Federal Reserve’s ability to provide the types of lender-of-last-resort backstops that can help support financial stability. Prior to gaining the authority to pay interest on reserves in the fall of 2008, Federal Reserve officials—myself included—were faced with a question: if the take-down on a proposed liquidity facility were large, how would we be able to drain the added reserves on a timely basis to maintain control of the federal funds rate? This was not just a theoretical issue during the financial crisis. The initial auctions of the Term Auction Facility, or TAF, were kept relatively small, in part, because of concerns that larger programs would make it more difficult for the manager of the System Open Market Account (me, in that particular case) to drain sufficient reserves to offset the TAF reserve additions. Similarly, the Term Securities Lending Facility (TSLF)—which involved the swap of Treasury collateral from the Federal Reserve against lower-quality collateral held by primary dealers—was introduced in large part because collateral swaps, unlike cash loans, did not affect the amount of reserves in the banking system. My overall point is that broad-based, open-ended lender-of-last-resort facilities are more difficult to accommodate in a corridor system because of the need to drain any reserve additions to keep the federal funds rate close to the FOMC’s target.

I see this as an important shortcoming of the pre-crisis corridor regime that does not get sufficient attention. Having the ability to introduce broad and credible lender-of-last-resort backstops—well secured by pledged collateral—can be critical when confidence falters and financial stability is at risk. Private sector participants are more likely to continue to engage with their counterparties—and to borrow and lend—when they know a central bank backstop will be available if economic and financial conditions deteriorate. A corridor regime could cause the Federal Reserve to delay or avoid providing such backstops, which could increase financial stability risks by causing lenders and borrowers to disengage with one another earlier. [12]

Although the FOMC has not made a final decision about a future framework for implementing monetary policy, meeting minutes confirm that participants recognize the advantages of a floor system. As the November 2016 FOMC minutes note: “Meeting participants commented on the advantages of using an approach to policy implementation in which active management of the supply of reserves would not be required. Such an approach was seen as likely to be relatively simple and efficient to administer, relatively straightforward to communicate, and effective in enabling interest rate control across a wide range of circumstances.” [13]

The second major issue facing the FOMC is whether to change its strategic framework to mitigate the risk of a return to the effective lower bound for interest rates. Once the federal funds rate is close to zero, the FOMC is constrained in its ability to lower short-term interest rates further, and the other available policy options to provide monetary policy stimulus may be less effective. If the FOMC were unable to provide sufficient stimulus, the economy could have difficulty recovering. In turn, inflation and inflation expectations could fall—and thus raise real interest rates—effectively tightening monetary policy and making the task of generating a sustainable recovery even more difficult.

Some have argued that a desirable way to reduce this risk would be to raise the FOMC's inflation objective from 2 percent to perhaps 3 or 4 percent. Their reasoning is that if the inflation objective were somewhat higher, nominal interest rates at the later stages of the business cycle would also tend to be higher, which would provide greater scope for the FOMC to cut short-term interest rates to stimulate the economy, if necessary.

While recognizing that there is a legitimate effective lower bound risk, I do not support the option of raising the inflation objective, for three reasons. First, I doubt that a higher inflation target would be viewed as consistent with the Federal Reserve's Congressional mandate to pursue price stability. Our employment and inflation mandates have been established by Congress, not by the Federal Reserve.

Second, the risks of being pinned at the effective lower bound for interest rates may be overstated. Only once in the postwar period have we reached the zero lower bound. Upending several decades of effort to anchor inflation expectations around 2 percent might be too high a price to pay to reduce the effective lower bound risk by what might prove to be a small amount. In this vein, it is important to recognize that the FOMC now has a more credible set of tools available to use at the effective lower bound than it did in 2008, when those tools were largely unproven. Forward guidance about the path of short-term interest rates and quantitative easing have been effective in providing monetary policy stimulus in the post-crisis period. Because this is now more broadly appreciated, households and businesses should be more confident that the Federal Reserve has sufficient tools available at the effective lower bound to generate a sustainable economic recovery. This greater confidence, in turn, should help keep inflation expectations from declining—which should also mitigate the risks associated with hitting the lower bound.

Third, there are arguably better ways of reducing risks associated with the effective lower bound than a higher inflation objective. In particular, Congress could increase the size and scope of the automatic fiscal stabilizers that support economic activity and income during economic downturns. For example, Congress could enact legislation in which employment payroll taxes would be automatically reduced when the unemployment rate rose above a particular threshold. With such stabilizers in place, households and businesses would anticipate additional income support in the face of a cyclical downturn. This approach would be more powerful than discretionary fiscal actions that carry a greater degree of uncertainty.

Another option to help better anchor inflation expectations around the current objective would be to move to a price-level targeting, or PLT, regime. Under the current inflation targeting regime, the FOMC follows a "bygones are bygones" policy: Misses of the inflation objective on one side are not deliberately offset by subsequent misses on the other. Therefore, when inflation runs persistently below the objective, policymakers do not strive to push inflation above the objective in the future. Under these conditions, the risk is that inflation expectations will become unanchored to the downside. In contrast, under a price-level targeting regime, the FOMC would commit to make up any shortfalls below its 2 percent objective by allowing inflation to climb above the objective for the time necessary to

eliminate the shortfall. This commitment to offsetting the period of below-target inflation with a period of above-target inflation would, presumably, help keep inflation expectations from becoming unanchored to the downside.

However, a symmetric PLT regime—in which misses have to be made up on both sides of the inflation objective—has an important shortcoming. Compensating for inflation overshoots by deliberately keeping inflation below the FOMC’s 2 percent objective would increase the risk of getting pinned at the effective lower bound for interest rates.

As a consequence, some—including former Chairman Ben Bernanke—have proposed adopting an asymmetric PLT regime. In such a system, misses below the objective would be offset by misses above only when the effective lower bound was binding. Under normal circumstances, misses above the objective would not be offset. Rather, they would be treated as “bygones,” as is currently the case. [14]

However, I suspect that establishing a modified PLT regime would present some challenges. First, for such a modified PLT to be effective in anchoring inflation expectations, households and businesses would have to understand how the regime would work, and view the Federal Reserve’s commitment as credible. One can imagine that such credibility might be hard to sustain during a long spell of inflation misses to the downside. Second, while such a regime might be attractive in broad brush form, the devil lies in the details. If inflation undershot for a few years, what would the desired overshoot path look like? How high would the FOMC permit inflation to go above its objective, and for how long? What would happen if the Fed failed to fully offset past downside misses and cumulative undershoots became sizable?

My view is that we should further study how PLT frameworks might work in practice. [15] But, it is possible that a simpler approach of committing to keeping the average inflation rate around 2 percent over the medium term might be just as appealing. It might be sufficient to better anchor inflation expectations while avoiding the communication challenges and complexity of an asymmetric PLT regime.

In this vein, I also would evaluate whether the inflation goal should be recast as a range of, perhaps, 1½ to 2½ percent, from the current 2 percent objective. A range might have several advantages over a point target. First, it might be viewed as more realistic given that measured inflation will always randomly fluctuate relative to its underlying trend. That is to say, even if the FOMC performs its job exceedingly well, very rarely will the inflation rate, as measured by the PCE price index, be precisely at 2 percent. Second, having a relatively narrow range would send a message that the FOMC is discriminating between two regimes—one in which inflation is within the range and concerns about inflation are low, versus another in which inflation is outside the range and concerns about inflation are more elevated.

Even so, I would not recommend shifting to such a range currently. I would only consider doing so once the FOMC has successfully and sustainably pushed inflation back to its 2

percent objective. Making such a change now might be viewed as “moving the goal posts,” given the persistent shortfall of inflation in recent years relative to the objective. And, doing so now might imply a greater tolerance for missing inflation to the low side in an asymmetric way. That would not be desirable at a time when inflation expectations are, if anything, too low, rather than too high relative to the FOMC’s objective.

To sum up, the economy is broadly in a good place and the short-term economic outlook remains favorable. On a personal level, I am pleased that I will be leaving my current position at a time when the FOMC is likely to be very close to its employment and inflation objectives—recognizing, of course, the terrible damage of the financial crisis and the long time it has taken to get here.

Uncertainty about trade policy and the fact that we are now on an unsustainable fiscal path, however, have raised the longer-term risks. With respect to monetary policy, there are a number of important choices the FOMC will need to make in the years ahead. I have outlined some of my preferences today: continuing with the current floor system for the implementation of monetary policy, and some of the steps that we could take to reduce the risk should interest rates return to the effective lower bound in the future.

Thank you for your kind attention. I would be happy to take a few questions.

[1] Gerard Dages, Jonathan McCarthy, and Paolo Pesenti assisted in preparing these remarks.

[2] Specifically, the Earned Income Tax Credit and the Additional Child Tax Credit.

[3] See, for example, Lawrence Summers, U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound.

[4] See, for example, some estimates based on the frequently-cited Laubach and Williams model. See Thomas Laubach and John C. Williams (2003), “Measuring the Natural Rate of Interest,” *Review of Economics and Statistics*, v. 85, iss. 4, pp. 1063-70; Thomas Laubach and John C. Williams (2016), “Measuring the Natural Rate of Interest Redux,” *Business Economics*, v. 51, iss. 2, pp. 57-67; and Kathryn Holston, Thomas Laubach and John C. Williams (2017), “Measuring the Natural Rate of Interest: International Trends and Determinants,” *Journal of International Economics*, Supplement 1, v. 108, pp. S59-75.

[5] See Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, March 2018.

[6] See Congressional Budget Office (2018), *The Budget and Economic Outlook: 2018 to 2028*, April 9, 2018.

[7] See also William C. Dudley, *The Outlook for the U.S. Economy and Beyond*, January 11, 2018.

[8] For a further discussion, see William C. Dudley, *Making Globalization Work*, March 1, 2018.

[9] The costs of holding cash make possible the use of (slightly) negative interest rates—employed by some countries outside the U.S. in recent years—as a result, the term “effective lower bound” is used here.

[10] Control of the federal funds rate has also been supported by the overnight reverse repurchase agreement facility, which accepts cash from an array of institutional investors at a rate 25 basis points below the interest rate paid on excess reserves.

[11] These exogenous factors include the U.S. Treasury’s cash balance at the Federal Reserve, the foreign central bank repo pool, the overnight reverse repo facility, and currency outstanding.

[12] Because the amount of reserves in a floor system is greater than in a corridor system, this also can be helpful in easing frictions in terms of payment flows. With large reserve balances, banks have higher cash balances at the Fed. As a result, they are less likely to incur daylight overdrafts and, thus, they have less need to monitor, and, at times, delay outgoing payments.

[13] See Minutes of the Federal Open Market Committee, November 1–2, 2016.

[14] See Ben Bernanke, *Monetary Policy in a New Era*, Brookings Institution, October 2, 2017.

[15] Others have proposed adopting a nominal GDP targeting regime, which has its own strengths and weaknesses, but it is not considered here for the sake of brevity.

Fonte: DUDLEY, William C. Important Choices for the Federal Reserve in the Years Ahead. Disponível em: < <https://www.newyorkfed.org/newsevents/speeches/2018/dud180418a>> Acesso em 19 de abril de 2018

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