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UNITED STATES

STAFF REPORT FOR THE 2020 ARTICLE IV CONSULTATION

July 17, 2020

KEY MESSAGES

The U.S. is in the midst of an unprecedented social and economic shock. The longest expansion in U.S. history has been derailed by the unanticipated advent of COVID-19. To preserve lives and support public health, it was necessary to put in place a broad-based shutdown of the U.S. economy in March. Despite the gradual easing of state lockdown restrictions and lifting of stay-at-home orders starting in late April, the collateral economic damage has been enormous. First, and foremost, as of July 16, more than 136,000 Americans have tragically lost their lives and many more have become seriously ill. Almost fifteen million Americans have lost their jobs, many small and large businesses are under financial stress, and future prospects are highly uncertain. Reopening decisions will have to be handled carefully to mitigate the economic costs while containing the ongoing rise in COVID-19 infection rates. It will likely take a prolonged period to repair the economy and to return activity to pre-pandemic levels. All in all, globally there will be difficult months and years ahead and it is of particular concern that the number of COVID-19 cases in the U.S. is still rising.

The poorest households face particularly precarious prospects. The economic costs of the crisis are being borne disproportionately by the poor and vulnerable, bringing into stark relief deep inequities that have long afflicted the U.S. The pandemic has also underscored some of the structural shortcomings of the U.S. health system whereby the provision of healthcare is fragmented, decentralized, predominantly employer-based, at high cost, and with a significant share of low-income households lacking coverage. The nature of the pandemic has created particularly large strains for labor intensive, face-to-face services (which tend to employ a large share of lower-income workers) and the unemployment rate among lower income households, that have few financial buffers, is expected to remain high for a protracted period. Poverty rates and other social strains are expected to exceed those that were experienced in the wake of the global financial crisis.

A forceful policy response has been put in place. U.S. policymakers have acted quickly and assertively to protect livelihoods and businesses and to mitigate the lasting economic costs of the pandemic. The Federal Reserve took unprecedented steps to provide monetary stimulus, to underpin the smooth functioning of domestic and

international financial markets, to support the flow of credit, and to strengthen the transmission of monetary policy. At the same time, a range of fiscal measures were put in place to assist small businesses and specific sectors (such as airlines), increase resources to healthcare providers, expand unemployment insurance, create incentives for firms to retain workers, transfer cash directly to households, and provide resources to state and local governments.

Further policy efforts will be needed to counter the pandemic and also address a range of deep-rooted social and economic challenges that continue to afflict the U.S. Prior to the pandemic, even after a decade-long expansion, the U.S. faced troubling social and economic outcomes related to poverty; inequalities of opportunity and declining socioeconomic mobility; an increasingly polarized income distribution; rising barriers to trade and foreign investment; and an unsustainable medium term path for public debt. It will be important, therefore, to ensure that policy solutions put in place to tackle the consequences of the pandemic are simultaneously geared toward reshaping the existing systems for social assistance, education and healthcare (to expand opportunities and lessen inequities); investing in infrastructure; helping create more open, stable, and transparent trade policies, underpinned by a strengthened international system; and, over the medium-term, putting the public debt-GDP ratio on a downward path.

Pursuing these multiple objectives will require a further round of fiscal measures in the coming months that boost demand, increase health preparedness, and support the most vulnerable. The U.S. has some fiscal space and it should be deployed quickly to hasten the recovery from the second quarter contraction, permanently improve the social safety net, and facilitate a broader remaking of the U.S. economy. Efforts are also needed to prepare for future health crises (or for a resurgence in COVID-19) and ensure that those without medical insurance have access to affordable, quality health care.

There is also potential to bolster the monetary support that has already been put in place to more quickly return the economy to full employment and 2 percent inflation. In the coming months, asset purchases could be scaled up to increase policy stimulus and the Federal Reserve could adapt its forward guidance to more firmly anchor market expectations about the future path for policy. These actions could potentially be supported by the introduction of yield curve control. The current credit and liquidity facilities should be regarded as emergency tools and should be phased-out (as planned). The risk-reward trade-off does not appear to favor the introduction of negative policy rates in the U.S. context.

Efforts should be made to reverse existing trade restrictions and tariff increases while working with partner countries to address policies that distort trade flows and investment decisions. There is a clear need to address longstanding global trade and investment distortions in areas such as tariffs, farm subsidies, industrial subsidies, and services trade. However, the imposition of import tariffs (and other steps taken by the administration) is undermining the openness and stability of global trade by increasing restrictions on trade in goods and services, and catalyzing a cycle of retaliatory trade responses. The imposition of countervailing duties on imports from countries that the Department of Commerce finds to have an undervalued currency represents a significant risk to the multilateral trade and international monetary system which could potentially escalate trade tensions harming the U.S. economy and having negative spillovers for other countries. Instead, the U.S. should work constructively with its trading partners to better address these underlying distortions.

There is space to further improve financial oversight. The priorities should include introducing an explicit financial stability mandate for the principal regulators, increasing the budgetary independence of the Commodity Futures Trading Commission, Securities and Exchange Commission and state-level insurance regulators, developing macroprudential policies to mitigate the growing vulnerabilities outside of the core banking system, and intensifying the crisis preparedness function of the Financial Stability Oversight Council. There is scope to improve risk management and the stress testing of central counterparties as well as to transition to principles-based reserving and develop consolidated group capital requirements for insurers. Prudential requirements for non-internationally active banks should be reviewed to ensure that they are, and continue to be, broadly consistent with the Basel capital framework and appropriate liquidity and concentration limits. Finally, important data gaps continue to obscure regulators' visibility on the nature of systemic interconnections and vulnerabilities; this will require sustained efforts to address.

Approved By
**Nigel Chalk and
 Tamim Bayoumi**

Discussions took place by video conference during July 6-13, 2020. The Article IV team has also worked closely with the FSAP team over the past year. Concluding meetings with Chair Powell and Secretary Mnuchin were held on July 15 and 16, 2020, respectively. Staff's assessment is based on information available as of July 10, 2020. The team comprised of Nigel Chalk (head), Carlos Caceres, Li Lin, Javier Ochoa, Dan Pan, Suchanan Tambunlertchai, Yannick Timmer, Anke Weber, and Peter Williams (all WHD), Jean-Marc Fournier and Ian Parry (FAD), Nico Valckx (RES), and Diego Cerdeiro (SPR).

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THE PRE-COVID LANDSCAPE

- 1. The U.S. began 2020 in the midst of the longest expansion on record.** Over the past decade, the U.S. economy had steadily grown, improving living standards for much of the population. Unemployment was at a 50-year low, labor force participation was rising (as a tight labor market drew workers into employment), and real wages were going up, notably for those at the lower end of the income distribution. All-in-all, the economy appeared to be in a favorable situation with output close to potential, unemployment near the natural rate, and policy settings at neutral (Box 1).
- 2. Even with these favorable economic outcomes, however, poverty remained stubbornly high.** The latest data indicate that 38 million Americans (around 12 percent of the population) were living in poverty in 2018 and poverty rates were particularly high for female-headed households and those without a college degree.
- 3. Recent protests have underscored the continuing struggle with racial inequities in the U.S.** These are evident across a range of socio-economic outcomes: the median income and net wealth of African American and Hispanics is well below that for Whites, poverty rates are far higher, and educational attainment is lower. African Americans face much higher rates of incarceration and are far more likely to lack health insurance.

Selected Socio-Economic Indicators (by Race/Ethnicity)

	Overall	White, not Hispanic	African American	Hispanic
Unemployment rate (June 2020)	11.1	10.1	15.4	14.5
Unemployment rate (February 2020)	3.5	3.1	5.8	4.4
Official poverty measure (2018)	11.8	8.1	20.8	17.6
For population aged under 18	16.2	8.9	29.5	23.7
For high school education only	13.1	10.1	22.8	14.6
Families with female head of household	26.8	20.6	31.7	31.1
Supplementary poverty measure (2018) ¹	12.8	8.7	20.4	20.3
Median household income (US\$ thousand, 2018)	63.2	70.6	41.4	51.5
Median household net wealth (US\$ thousand, 2016)	97.3	171.0	17.6	20.7
Public high school graduation rate (2018) ²	85	89	79	81
Share of 25-29 year-olds with bachelor's degree (2019)	39	45	29	21
Incarceration rate (2018, per 1000 adult population)	0.56	0.27	1.5	0.8
Non-elderly population without health insurance (2018)	10.4	7.5	11.5	19.0
COVID-19 death rate (per 100,000 population) ³	36.8	30.2	69.7	33.8

¹ Incorporates impact of federal assistance programs and subtracts necessary expenses (such as taxes and medical expenses).

² Share of students in cohort who graduate within 4 years with a regular high school diploma.

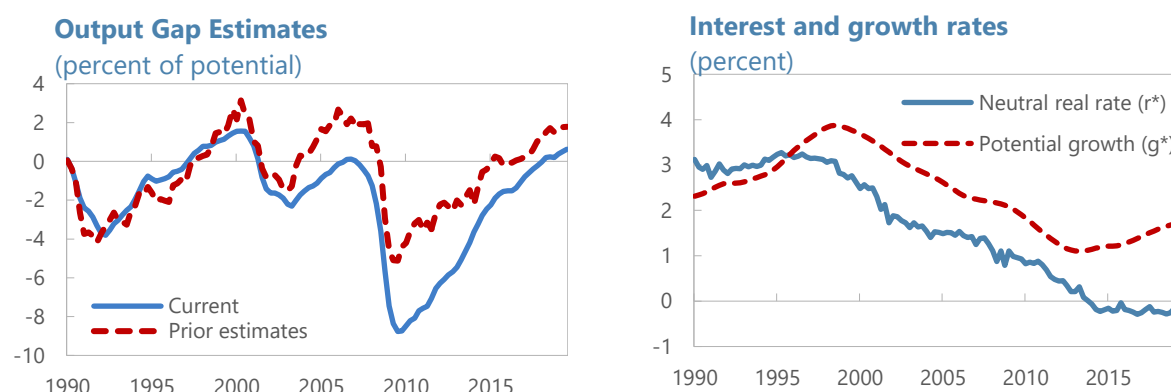
³ Break down by race available for 40 states and the District of Columbia which provide data. Data as of July 7, 2020.

Sources: Bureau of Justice Statistics, Census Bureau (American Community Survey), Centers for Disease Control and Prevention, National Center for Education Statistics, Federal Reserve Survey of Consumer Finances.

Box 1. Reading “the Stars”

The objective of this modeling exercise is to estimate a consistent parameterization of the steady state equilibrium for the U.S. (i.e., with inflation at 2 percent, wage growth equal to trend productivity growth plus long-run inflation expectations, the federal funds rate at the neutral rate, unemployment at the NAIRU, and output equal to potential). The model incorporates an IS-relationship to describe the business cycle, a Philips Curve that relates inflation to the output gap, and a Taylor Rule describing movements in the federal funds rate. It uses a factor approach to incorporate a broader range of indicators of activity, inflation, underutilization of labor, and wages than in similar approaches. The structural relationships and additional data generate more precise estimates, with similar or lower degrees of instability in real-time use, than similar models.

The results suggest that, since 2000, the U.S. economy has consistently operated below full capacity. Following the 2008-9 recession, it moved further away from potential than is typically assessed and only reached full employment in late 2018. This is corroborated by a lack of wage and price pressures, even at very late stages in the cycle. Since the mid-1990s, the neutral rate of interest has declined substantially in inflation-adjusted terms. Potential growth has experienced a secular decline after the dot-com bust (but saw some modest increase in the last few years as investment picked up and labor force participation rose). Taken together, these estimates suggest that prior to the COVID-19 pandemic, the U.S. economy can be characterized as being close to its balanced growth path.

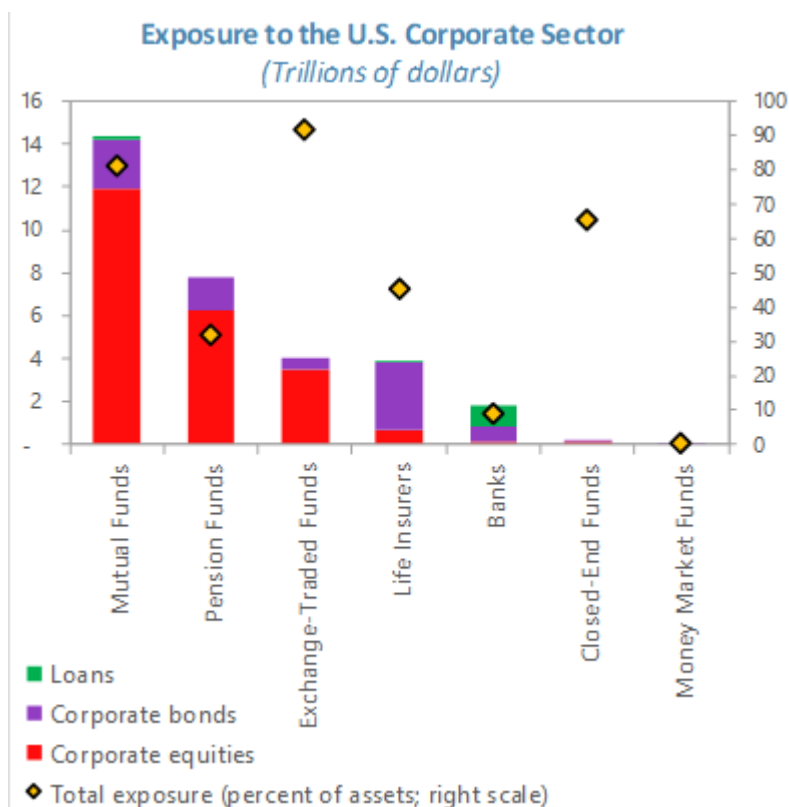


¹ See P. Williams, Y. Abdi, and E. Kopp “Reading the Stars” IMF Working Paper (forthcoming).

4. A decade of low interest rates and steady economic expansion has led to a rise in balance sheet vulnerabilities.

The banking system entered 2020 well-capitalized and with substantial liquidity buffers (see the 2020 Financial System Stability Assessment). The most salient financial stability concern stems from high levels of corporate leverage and a weakening of underwriting standards across a range of corporate liabilities. The debt of non-financial corporates was 47 percent of GDP at end-2019. Of this amount, 25 percent of GDP was in the form of investment grade corporate bonds and commercial paper with a further 14 percent of GDP in non-investment grade bonds and leveraged loans.

Most of this debt is being held by nonbank investors. Despite these relatively high levels of indebtedness, vulnerabilities have been mitigated to some extent by the debt being issued on relatively favorable terms and, in many cases, the indebted companies hold significant amounts of liquid assets.



5. Trade restrictions and tariffs have risen and trade policy uncertainties over the past few years have been high, with negative consequences for the U.S. and global activity.

The U.S. has put tariffs on steel, aluminum, and certain household appliances. Despite the January agreement with China to de-escalate tensions, 25 percent tariffs were kept on around US\$200 billion of imports from China. There are also ongoing disputes with member states of the European Union (over digital taxation, subsidies to Airbus, and autos). Finally, in February, the Department of Commerce finalized a rule that allows currency undervaluation to be considered as a countervailable subsidy, creating uncertainty about the exchange rate analysis that would underpin application of the rule and potentially resulting in countervailing duties. On the positive side, the U.S., Mexico and Canada Agreement has come into effect on July 1, 2020, alleviating trade uncertainty within the trading block and provided some degree of modernization in services, e-commerce, and data transparency (although the agreement contained more stringent rules-of-origin requirements).

THE POLICY RESPONSE TO THE CRISIS

6. The economic outlook shifted dramatically with the rapid spread of COVID-19. As the number of cases multiplied, first in China and subsequently in Europe, U.S. asset markets sold off and portfolios were rapidly reallocated toward safe and liquid assets. The market movements were jarring with the equity markets falling by one-third over the space of the month and the 10-year Treasury yield falling by around 100 basis points. Systemic liquidity problems also began to emerge in a range of U.S. asset markets (including in the market for U.S. Treasuries) as well as in overseas dollar funding markets. By mid-March, the number of identified cases in the U.S. began to accelerate upwards and, as in many other countries facing similar circumstances, states began issuing stay-at-home orders. This was part of a concerted, necessary effort to contain the spread of the virus and protect the elderly and those with underlying medical conditions.

7. The resulting sudden-stop in activity from the shutdown caused unemployment to surge. The unemployment rate rose from 3.5 percent in February to 14.7 percent in April (close to 20 percent, once misclassification errors are taken into account¹) and the labor force participation rate fell from 63.4 percent in February to 60.2 percent in April. In the space of just two months, unemployment went from a 50-year low to its highest level in close to 90 years as over 25 million Americans lost their job. In the subsequent months, labor market conditions have improved: the unemployment rate fell to 11.1 percent by June (even as misclassification errors have been reduced) and the employment-population ratio rose to 54.6 percent (close to the previous historical low which occurred shortly after World War II). Job losses have disproportionately affected lower income households, those without a college education, women, African Americans and Hispanics, many of whom have insufficient buffers to cope with the unprecedented size of the economic shock. In addition, of particular importance given the public health crisis that has triggered the jump in unemployment, many of these workers potentially face losing their employer-provided health insurance along with their jobs².

8. Output is expected to contract by 37 percent in the second quarter but there are signs that the collapse in activity has bottomed out. Personal consumption spending fell by 18 percent between February and April with particularly acute contractions in the consumption of labor-intensive services that involve face-to-face interactions like restaurants, hotels, and retail. The weakness in consumer demand appears largely driven by a fall in discretionary spending by high-income individuals (mostly on services). There was a bounce-back in activity in May, as businesses reopened and begin to rehire workers, and consumption grew by 8 percent between April



Sources: Chetty et al. (2020), Visa Inc. and MasterCard 8-k filings. Note: In Jan. 2020 retail sales were growing at roughly 5% nominal terms, so we adjust the Chetty et. al data, which is compared to the seasonally adjusted Jan 2020 level, up by the same amount.

¹ Some workers, who were not at work during the reference week for the household survey data collection, were classified as employed but absent from work. However, analysis by statisticians at the Bureau of Labor Statistics suggests that many of these workers should have been classified as unemployed on temporary layoff.

² Laid-off workers, or those whose hours have been reduced, can opt to continue their coverage for a limited period but are typically required to pay the insurance premium themselves.

and May. There has been significant variability in both the path for the virus and the activity outcomes across the states (Box 2). Furthermore, the drop in global oil prices is having important implications for both investment and production in the U.S. oil sector (Box 3).

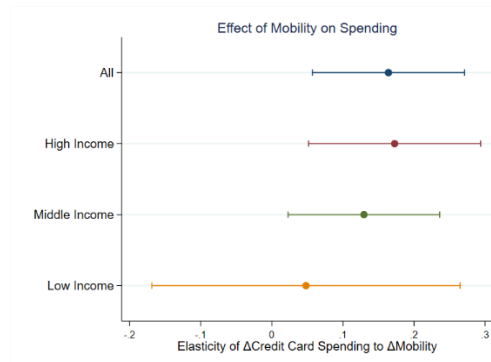
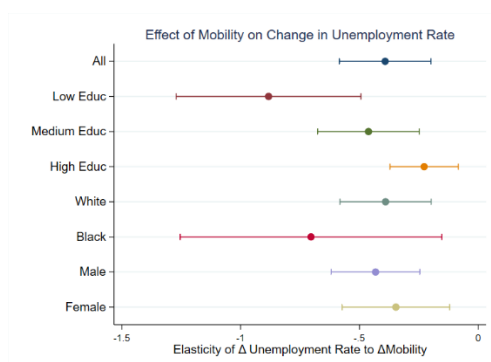
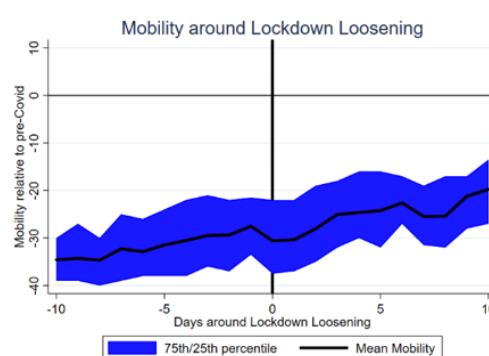
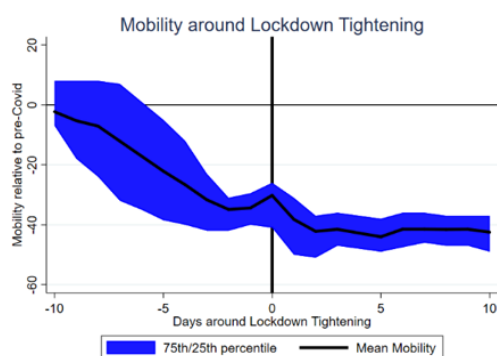
9. Household saving has risen to very high levels. In May, households saved 23 percent of disposable income (up from a saving rate of around 8 percent prior to the pandemic). This spike in personal saving has been a result of both compressed consumption and the large boost to household income arising from government transfers to households (both the direct economic impact payments and the expanded unemployment insurance that were part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act). While it is too early to assess the likely medium-term behavioral response to these government transfers, analysis of past direct payments to households in the U.S. suggest these payments do not typically translate into a significant boost to consumption.³ On the other hand, supplemental unemployment benefits are expected to support consumption for those households facing reduced hours or unemployment.

10. The external position was moderately weaker than the level implied by medium-term fundamentals and desirable policies in 2019 (Annex I). In the next few years, an increase in private-sector saving and a decline in investment is expected to offset the increased fiscal deficit. This would imply a current account deficit of around 2 percent of GDP in the coming years. However, there is significant uncertainty surrounding this forecast.

³ For example, Sahm, Shapiro, and Slemrod (2012) find that only between 20 and 30 percent of households used previous direct transfers for spending (the majority went toward paying down debt).

Box 2. The Impact of Re-opening on Activity—A State-Level Perspective

Mobility—a *de facto* measure of reopening—has picked up at a relatively steady pace. Mobility linked to retail and recreation activity declined by around 40 percent during the full-lockdown period, largely occurring *prior* to governments issuing stay-at-home orders (a similar pattern emerges looking at reservations on Opentable). More recently, mobility started rising even before restrictions were loosened. This suggests that individuals' changing concerns about their health or their economic well-being—rather than statutory decisions—have been a key constraint in determining the pace at which activity returns (although it remains unclear how expectations about changes to stay-at-home orders are influencing mobility behavior).¹ Corroborating other data, the decline in mobility has had particularly large effects on the employment of low income workers and on discretionary consumption (such as elective health care, hotels, and restaurants), particularly of higher income households.

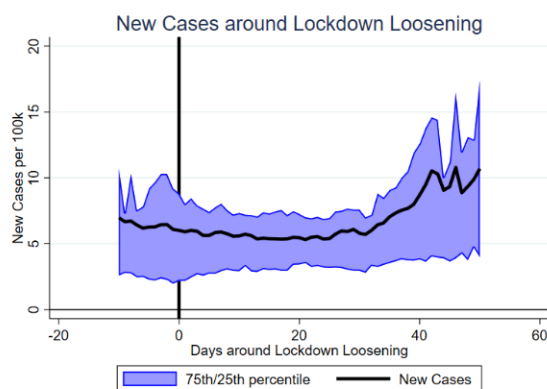
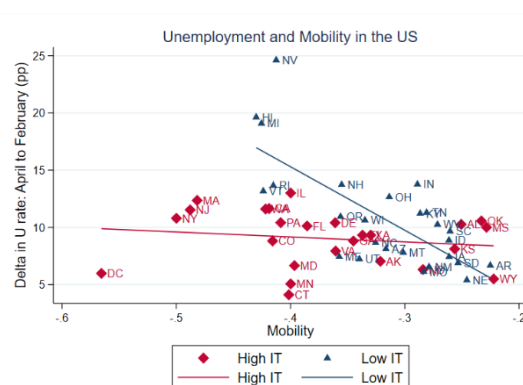


Box 2. The Impact of Re-opening on Activity—A State-Level Perspective (Concluded)

The extent of job losses is correlated with the decline in mobility only for those states where their mix of activities utilizes a relatively low level of IT. While all states have seen significant job losses, the increase in unemployment in states that are strong adopters of IT has shown little correlation with the degree to which mobility fell. More technology-oriented states seem able to shift quickly to working-from-home modalities and, in doing so, their job losses were less sensitive to declines in mobility.² This would suggest that there will be a significant tradeoff to be weighed in states that are less IT intensive between the speed of reopening, public health outturns, and the size of job losses they are willing to accept (given that a larger share of activity will require the physical presence of workers).

Policymakers will continue to need to carefully manage the public health risks from reopening.

There is emerging evidence of an increased spread of the virus around 30 days after stay-at-home orders are loosened. However, the causal link is complicated by the increased rate of testing that has been taking place over the same period and the significant heterogeneity in state experiences. Nonetheless, it seems clear that lifting restrictions too quickly risks a renewed increase in infection rates which, in turn, could necessitate a pause or reversal of reopening decisions (with negative implications for employment and activity).

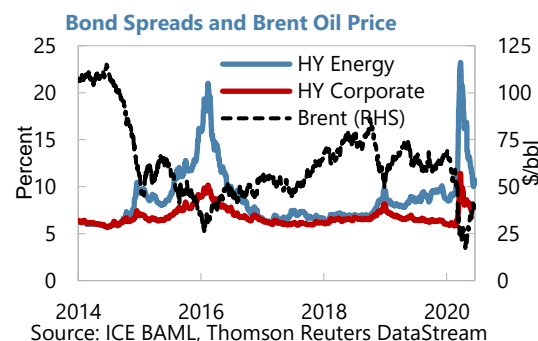


¹ See also S. Chen, D. Igan, N. Pierri, and A. Presbitero, "Tracking the Impact of COVID-19 and Mitigation Policies in Europe and the United States", IMF Working Paper, 2020.

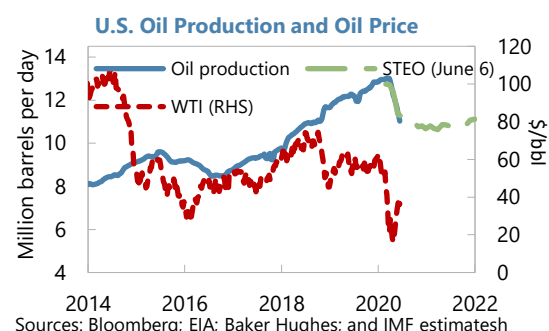
² The results are similar controlling for state-level characteristics (e.g. GDP per capita, population density, industry composition).

Box 3. Impact of the Pandemic on the U.S. Oil Sector¹

The global COVID-19 outbreak abruptly reversed the upward trend in global oil prices. The COVID-19 outbreak led to severe lockdown measures worldwide, limiting mobility and hitting hard the transport sector (which accounts for 60 percent of oil demand). The WTI spot price fell to unprecedented levels in April, impacting oil and gas producers and leading to a dramatic cut in worldwide oil production and investment. The WTI spot price subsequently recovered but remains 40 percent below pre-COVID levels.



The fall in prices has severely damaged the financial health of many U.S. shale producers and oil field service companies. Current market pricing would imply a negative outlook for shale oil investment, particularly for those companies with large debt refinancing needs. Yields on oil company debt remain at exceptionally high levels and energy firm bankruptcies have risen to a decade-long high. So far, 215 oil firms and 204 servicing firms have filed for bankruptcy and the 1-year ahead probability-of-default across U.S. energy firms reached a record high in March. The average break-even price for new shale oil wells in the U.S. (of around US\$45) makes much of *new* U.S. production non-economic. Already oil rig counts have fallen to a record low. However, the break-even for *existing* production is somewhat lower (around US\$25). The Energy Information Administration expects U.S. oil production to fall in 2020 and 2021 for the first time since 2016 (from 12.3 mb/d in 2019 to 10.8 mb/d by 2021).



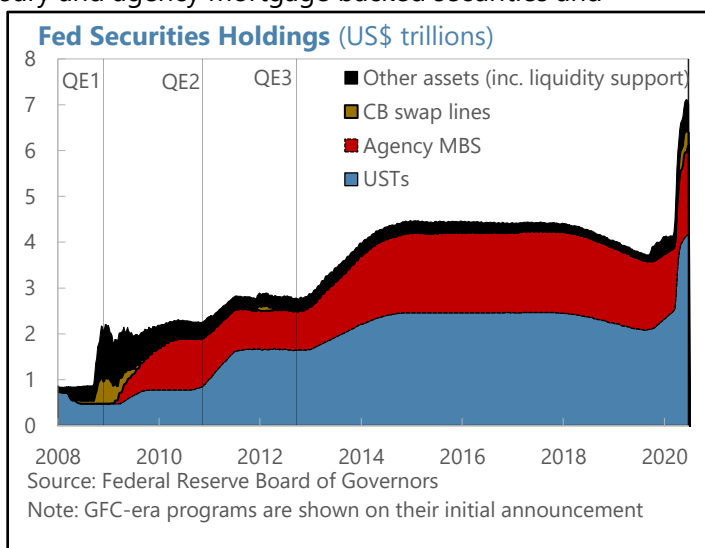
The U.S. shale oil and gas industry will likely face more difficulty adapting to the current circumstances than during the 2014-16 drop in oil prices. In 2014, oil prices moved down from very high levels but then fairly quickly rebounded to above break-even prices, allowing production to rebound. The lower prices also prompted significant cost reductions and efficiency gains as the sector restructured. Any oil price forecast is subject to significant uncertainty but, given the nature of the shock, prices are expected to stay compressed for longer than in 2014. The sector has also taken on significant amounts of leverage relative to 2014 (prompted by historically loose financial conditions). Furthermore, depending in part on policy actions that are taken, COVID-19 has the potential to trigger an accelerated shift to a lower carbon economy (which would structurally lower demand). Such an environment may mean that many higher-cost U.S. producers are non-viable (possibly permanently) and the number of bankruptcies (or possibly acquisitions) is likely to continue rising.

The impact of lower oil prices on consumption is likely to be relatively muted. During the last significant oil price decline, the elasticity of consumption to lower oil prices had already fallen relative to past oil price cycles (see Box 1 of the [2016 Article IV report](#)). In addition, in this cycle, the transmission of lower oil prices to the economy via financial conditions and confidence is likely to be swamped by the broader impacts of the pandemic and the associated policy response. As such, it is likely to prove difficult to identify a measurable positive effect of lower oil prices on consumption even in the *ex post* data.

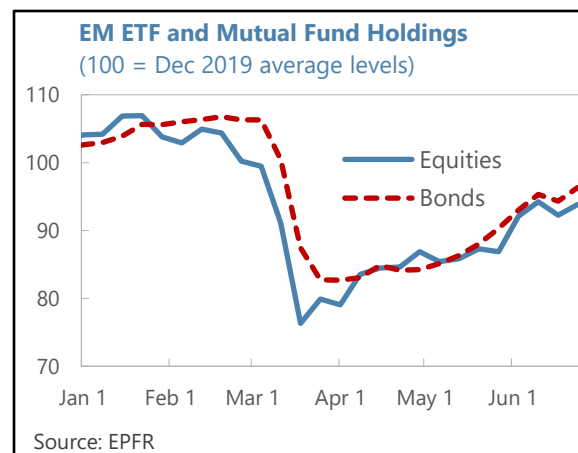
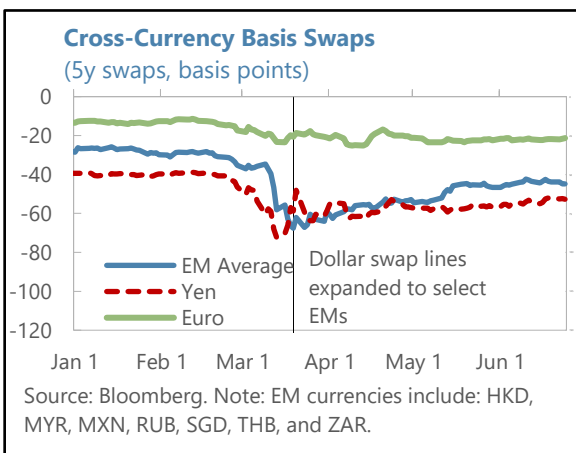
¹ Authored by Nico Valckx (RES).

A. Federal Reserve Actions

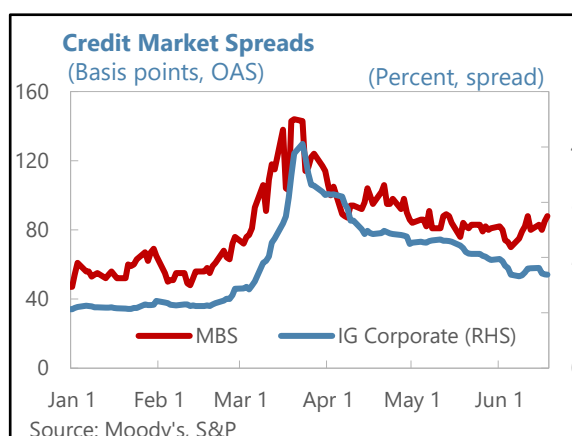
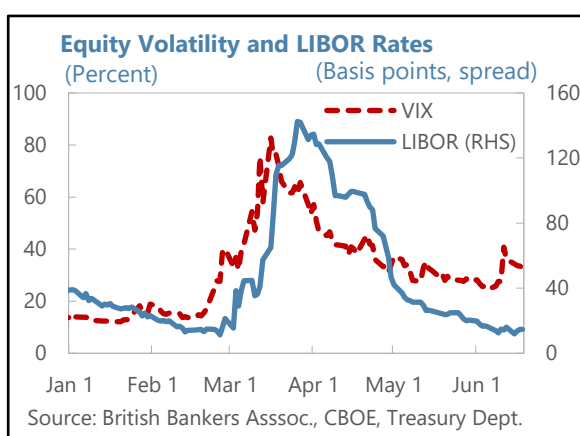
11. The Federal Reserve reacted quickly as the scale of the burgeoning pandemic became clear. In an unscheduled meeting on March 15, the FOMC lowered the federal funds target range to 0 to ¼ percent and indicated it would maintain rates at this level until it is confident that the economy has weathered recent events and is on track to achieve the Fed’s maximum employment and price stability goals. To support the smooth functioning of fixed income markets the Fed significantly increased its holdings of Treasury and agency mortgage backed securities and undertook large-scale overnight and term repo operations. This caused the Fed balance sheet to expand by around US\$2 trillion between mid-March and mid-April, and to continue to grow rapidly thereafter. These efforts were very effective in rapidly normalizing liquidity conditions and market functioning in key fixed income markets. This also had positive spillover effects by easing financial conditions globally and increasing access to new loans for a range of overseas sovereign and corporate borrowers.



12. To reduce strains in global dollar funding markets, the Fed expanded its swap lines with a range of central banks and established a temporary repo facility for foreign and international monetary authorities with accounts at the Federal Reserve Bank of New York. The new swap lines included those with Australia, Brazil, Denmark, Korea, Mexico, New Zealand, Norway, Singapore, and Sweden. In addition, the cost of the swap lines was reduced, and their maturity was extended.



13. During the second half of March, the Fed announced new facilities to support credit markets and to directly lend to non-financial entities. Section 13(3) of the Federal Reserve Act permits the Fed, in unusual and exigent circumstances, to provide liquidity to the financial system by discounting the liabilities of individuals, partnerships, and corporations. Supported by funding from the CARES Act, the emergency lending facilities that were introduced (Box 4) were structured around either (i) a Fed standing facility providing liquidity to financial institutions, collateralized by specific assets; (ii) providing Fed liquidity to a special-purpose vehicle which, in turn, provides collateralized loans to financial institutions or purchases bonds and loans outright; or (iii) direct lending through the Main Street Lending program to smaller companies and nonprofit organizations. Congress appropriated US\$454 billion to the Treasury to backstop these facilities and to absorb potential credit losses. The announcement effect of these programs served to boost liquidity in a range of credit markets.



14. The steps taken by the Federal Reserves were well-designed, forceful and instrumental in supporting demand and restoring the normal functioning of financial markets. In light of the significant uncertainties facing policy makers in March, it was appropriate to tackle the burgeoning problems in market functioning through multiple points of entry, backing a broad range of institutions and asset markets. Deploying large and front-loaded purchases of Treasuries and mortgage-backed securities alongside the various credit facilities allowed spreads on investment grade corporate bonds to fall by 200 basis points, equity markets to rebound, and both market volumes and bid-ask spreads to return to more normal levels. The expansion of swap lines with other central banks, and the easing of the terms for accessing these resources, helped to mitigate strains in global dollar funding markets. In addition to the positive effects on the U.S. economy, these programs had positive spillovers to many other countries, helping to maintain market functioning in global credit and dollar funding markets and—in conjunction with the various actions taken by other countries—facilitating a broad-based loosening of global financial conditions.

Box 4. Federal Reserve 13(3) Facilities

Primary Dealer Credit Facility. Loans to primary dealers for up to 90 days, backed by a wide range of margin-adjusted collateral (including Treasury and agency debt, investment grade corporate debt, international agency securities, commercial paper, municipal bonds, mortgage and asset-backed securities, and equities).

Money Market Mutual Fund Facility. Loans to depository institutions, bank holding companies and branches of foreign banks for up to 12 months collateralized by assets (including Treasury and agency securities, asset-backed commercial paper, unsecured commercial paper, certificates of deposit, short-term municipal debt) that are purchased by the borrower from money market funds.

The Primary / Secondary Market Corporate Credit Facility.¹ Primary / secondary market purchases of corporate bonds, syndicated loans, or corporate bond ETFs for issuers that were investment grade on March 22. The secondary market facility SMCCF will aim to create a corporate bond portfolio that is based on a broad, diversified market index of U.S. corporate bonds.

Commercial Paper Funding Facility.¹ Secondary market purchases of three-month commercial paper (including municipal and issuers with a foreign parent).

The Term Asset-Backed Securities Loan Facility.¹ Loans to holders of highly-rated asset-backed securities containing auto or student loans, credit card receivables, equipment loans, leveraged loans, or commercial mortgages.

The Municipal Liquidity Facility.¹ Purchase of notes issued by states and qualifying counties and cities with maturities of less than 24 months.

Paycheck Protection Program (PPP) Liquidity Facility. Provision of term financing to depository institutions that providing PPP loans.

Main Street Lending Programs.¹ Purchase of existing or new bank loans, with maturities up to 4 years, to firms with up to 10,000 workers or with annual revenues of less than US\$2.5 billion. Banks initiating the loans will retain a 5 percent share in the loan, and firms participating in the program will be subject to certain conditions (e.g., they must make reasonable efforts to retain workers, not use the loans for early repayment of other debts, and meet the limits on executive compensation, stock buybacks, and payment of dividends). A separate facility will provide funding to certain nonprofits.

¹ Structured as a special purpose vehicle (SPV) funded by loans from the Federal Reserve and capitalized by Treasury resources.

B. Fiscal Actions

15. Through four rounds of legislation in March and April, Congress moved swiftly to provide substantial assistance to households, businesses and state and local governments (Box 5). Compared to other advanced economies, including in Europe, the U.S. legislated larger temporary direct support, in the form of enhanced unemployment benefits and cash transfers, partly as a result of its social safety net traditionally being smaller (and so automatic increases in social assistance tend to be weaker in the U.S. than in many other advanced economies).

16. These significant fiscal efforts came at a substantial cost. The federal government primary deficit is expected to rise from around 3 percent of GDP in FY2019 to 16 percent of GDP in FY2020. This will cause the federal debt to rise steeply, to close to 100 percent of GDP by end-2020.

Under current policies, the path for debt-GDP is expected to continue increasing over the medium-term. State and local government deficits are expected to more than double in size this year, even as many states are cutting lower-priority spending to adhere to balanced budget requirements.

17. Despite their high cost, this fiscal package provided essential “life support” for the U.S. economy and increased the incentive for individuals to adhere to stay-at-home orders. By seeking to preserve employer-employee relationships and prevent corporate bankruptcies, the fiscal measures have cushioned the impact of the pandemic on the macroeconomy and lessened the lasting economic scars from the shutdown of activity that the pandemic made necessary. These measures complemented the important efforts that were taken by the Federal Reserve and helped maintain balance in the mix of fiscal and monetary policy responses. The fiscal packages supported healthcare providers in their response to the pandemic and provided temporary breathing space to state and local governments. Although there have been some implementation delays and errors, the direct cash payments, expanded unemployment benefits, and food assistance have protected household income, contained the overall increase in poverty rates, and allowed families to adhere to stay-at-home orders without facing significant economic hardship.⁴

18. As more is learned about the nature of the pandemic and its economic implications, policy interventions will need to pivot toward measures targeted to firms and households that are most in need of support and to policies that provide the greatest stimulus to activity and job creation. For instance, the business tax provisions in the CARES Act provided important liquidity to firms but future measures should focus on incentivizing new investment. Similarly, once infection rates are contained, policies should not create undue disincentives for individuals to return to work or for capital and labor to be reallocated in a way that best adapts to a post-pandemic world.

⁴ Based on recent U.S. Current Population Survey data, Parolin and others (2020) show that in the absence of the CARES Act, poverty rates would have risen to 16.3 percent in 2020. However, based on their simulations, the income transfers in the CARES Act have the potential to maintain poverty rates at pre-crisis levels.

Key Fiscal Measures in Responses to COVID-19

Main measures	Amount (percent of 2020 GDP)
Total 1/	14.8
Measures with budget impact	12.3
Support for households	3.7
<i>of which:</i>	
Tax rebates to individuals	1.5
Enhanced/expanded/extended unemployment benefits	1.4
Food (Supplemental Nutrition Assistance Program expansion and others)	0.2
Distributions from tax-advantaged retirement funds	0.02
Others (include paid sick, medical and family leaves, ect.)	0.6
Support for businesses	5.4
<i>of which:</i>	
Payroll support for the airline industry	0.1
Paycheck protection program and other SBA grants and loans	3.5
Employee retention credit	0.3
Deferred tax payment	0.1
Others (include higher limits for losses for taxpayers, grant to SBA's EIDL program, ect)	1.4
Transfers to subnational governments	0.8
Supporting the health system	1.5
Others (include agency appropriations)	1.0
Measures without budget impact	2.6
Credit assistance for air carriers and businesses critical to national security	0.3
Backstopping the Federal Reserve's emergency lending programs	2.3

1/ Including the "Coronavirus Preparedness and Response Supplemental Appropriations Act", the "Families First Coronavirus Response Act", the "Coronavirus Aid, Relief and Economy Security Act" and the "Paycheck Protection Program and Health Care Enhancement Act".

Source: CBO and IMF staff calculations.

Box 5. Fiscal Response to the Pandemic

Support for households

- **Cash payments.** US\$1,200 per adult (plus US\$500 per child) for those with gross annual income of less than US\$75,000 (US\$150,000 for a couple filing jointly), after which the benefit is reduced by 5 percent for those earning income in excess of that limit.
- **Enhanced/expanded unemployment benefits.** Expanded eligibility for state unemployment insurance to include the self-employed and individual contractors. The duration of benefits was extended to 39 weeks with a supplemental payment of US\$600 per week paid until end-July 2020. The supplement resulted in 5 out of 6 workers receiving benefits in excess of their previous earnings (for the median workers benefits amount to 134 percent of earnings).
- **Food assistance.** An expansion of child nutrition programs and food stamps.
- **Distributions from tax-advantaged retirement funds.** Individuals are allowed to withdraw up to US\$100,000 from retirement funds without penalty.
- **Tax filing deadlines** for individuals were delayed from April to July.

Support for businesses

- **Assistance to severely distressed sectors.** US\$29 billion was provided to support airlines (include grants and loans) and a further US\$17 billion of direct loans or guarantees for businesses critical to national security. Companies receiving direct loans or loan guarantees are required to limit executive compensation and not undertake share buybacks. In addition, US\$454 billion was appropriated to backstop the Section 13(3) Federal Reserve facilities described above. This corporate assistance is monitored by an independent inspector general and a congressional oversight panel.
- **Paycheck protection program.** The Small Business Administration would provide loans and guarantees to companies with up to 500 employees (including independent contractors and the self-employed) to cover payroll costs, mortgage/rent payments, utilities and health benefits. The loans are eligible for partial or total forgiveness depending on the extent to which the firm maintains its pre-crisis number of employees on payroll.
- **Employee retention tax credit.** A tax credit, which equals to 50 percent of the qualified wage paid by eligible employers through end 2020 with a cap of \$5,000 per employee, provides incentives for businesses to keep workers on their payroll.
- **Delay in tax deadlines.** Businesses can delay their quarterly estimated tax payments until after October 15, 2020 and defer payroll tax payments until the end of the year (then paying them in installments in 2021-22).

Support to health providers and state and local governments

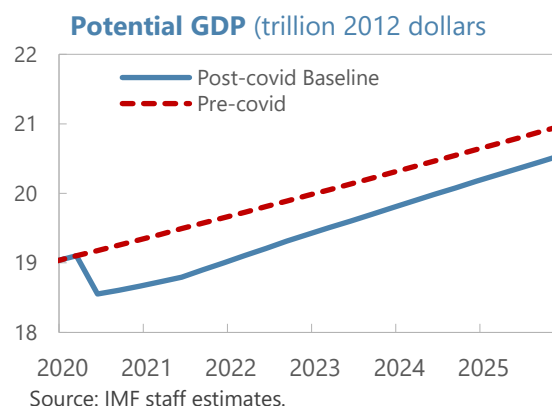
- **Transfers to subnational governments.** US\$150 billion was provided as transfers to state and local governments.
- **Healthcare.** US\$175 billion was appropriated to hospitals to support their work in treating the sick and a range of measures were introduced to address medical supply shortages, fund COVID-10 testing, and expand telehealth services.

SDR28 billion for the IMF's New Arrangement to Borrow

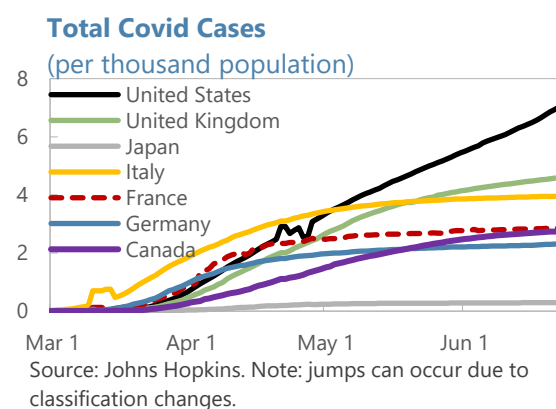
OUTLOOK AND RISKS TO THE RECOVERY

19. The economy is projected to recover only gradually, and the outlook is subject to tremendous uncertainties and sizable risks. Following a rebound in activity in the second half of the year, GDP is projected to end 2020 around 6½-7 percent below end-2019 levels, recovering a further 4 percent in 2021. GDP is expected to steadily rise in the years ahead but, by 2025, would remain 4-5 percent below the level of activity that was expected pre-pandemic.

20. There is expected to be a large and persistent widening of the output gap. Clearly, there is tremendous uncertainty about even the path of output and that is amplified in trying to estimate potential GDP (which is, after all, unobservable). However, staff views that COVID-19 has had an immediate impact on the level of potential GDP as full capacity in various sectors has diminished relative to the pre-pandemic period (due to public health conditions). In staff's baseline it is assumed that the constraints on safe activity in a range of in-person services will remain binding for some time.



21. The principal risk to this outlook, and the one that is the most difficult to quantify, is that a resurgence in the number of COVID-19 cases in the U.S. could lead to a renewed, partial shutdown of the economy in order to preserve lives, particularly of vulnerable populations. A cautious public health approach (by both local governments and the population at large) will mitigate this risk but the recent increase in infection rates is already leading to a slowdown or partial reversal of reopening decisions in some states. Adding to these uncertainties are the prospects for other policy changes—such as the reopening of schools and the resumption of cross-border travel and immigration—whose effects are highly uncertain and have an important potential to impact the path of the pandemic and the pace of recovery in activity and employment.

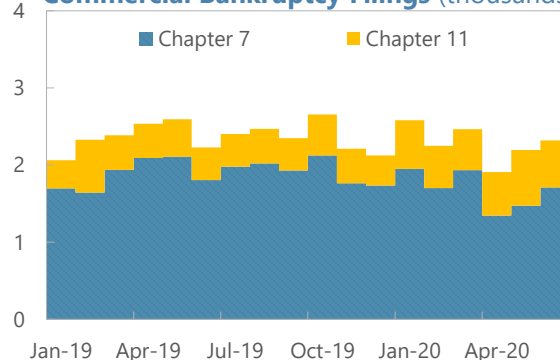


Economic Forecasts (percent)						
	2019	2020	2021	2022	2023	Longer Run
	Projections					
Real GDP Growth (annual average)						
IMF		-6.6	3.9	3.3	2.3	1.6
CBO	2.3	-5.8	4.0	2.9	2.1	1.8
SPF		-5.6	3.1	4.1	2.2	2.0
Real GDP Growth (Q4/Q4)						
IMF		-6.9	5.1	2.8	2.0	1.6
CBO	2.3	-5.9	4.8	2.2	2.1	1.8
FOMC		-6.5	5.0	3.5	...	1.9
Output Gap (eop)						
IMF	1.0	-4.1	-1.1	-0.5	-0.4	...
CBO	1.0	-6.4	-3.4	-3.0	-2.7	...
Unemployment Rate (eop)						
IMF		9.7	7.4	5.7	4.6	4.0
CBO	3.5	10.5	7.6	6.9	6.3	4.4
SPF (annual avg)		10.8	8.1	6.2	5.1	4.1
FOMC		9.3	6.5	5.5	...	4.2
PCE Inflation (Q4/Q4)						
IMF		0.7	2.1	2.0	2.0	2.0
CBO	1.4	0.4	1.3	1.7	1.8	2.0
SPF		0.8	1.7	1.8	...	...
FOMC		0.8	1.6	1.7	...	2.0
Core PCE Inflation (Q4/Q4)						
IMF		0.8	1.8	1.9	1.9	2.0
CBO	1.6	0.6	1.3	1.7	1.8	2.0
SPF		1.3	1.6	1.8	...	...
FOMC		1.0	1.5	1.7	...	...
Federal Funds Rate (eop)						
IMF		0.1	0.1	0.1	0.1	1.9
CBO (3m T-Bill)	2.4	0.2	0.2	0.2	0.2	2.3
SPF (3m T-Bill)		0.4	0.2	0.6	0.9	...
FOMC		0.1	0.1	0.1	...	2.5

Sources: CBO projections are from the Budget and Economic Outlook July 2020; FOMC projections are from the June 2020 Summary of Economic Projections; SPF is the Federal Reserve Bank of Philadelphia's Survey of Professional Forecasts, May 2020.

22. Even with a relatively optimistic path for the virus and the eventual availability of treatments and a vaccine, there are other significant uncertainties surrounding the economic propagation of the COVID-19 shock. Despite important recent improvements, the dramatic rise in unemployment has inevitably resulted in a fracturing of many employee-employer relations. These will take time to repair. In addition, by June, 4.6 million workers had left the labor force. The hysteresis literature suggests, under the best of circumstances, it

Commercial Bankruptcy Filings (thousands)



Source: Epiq AACER Court Data

will take time for many of them to return to active job search or employment. Furthermore, the drop in demand for a range of activities, could lead to a wave of corporate bankruptcies as well as necessitate a significant reallocation of capital and labor across the economy.⁵ There are frictions associated with such an economic restructuring which will inevitably take a toll on the pace of recovery. Finally, pervasive excess capacity is likely to dampen prospects for new investment in many sectors.

23. Additional policy efforts or rapid progress on vaccines or therapeutics would have important in accelerating the pace of recovery. Staff's outlook does not incorporate any future monetary or fiscal policy stimulus beyond that which has already been put in place (while it seems likely that another fiscal package will be legislated, it is difficult at this stage to predict the size or composition of that stimulus). The forecasts also does not assume a vaccine discovery is imminent. Additional policy efforts to stimulate demand or rapid progress on vaccines or therapeutics would have important effects in accelerating the pace of recovery. Beyond these policy efforts, it is worth emphasizing that the U.S. has proved time and again that it has the flexibility to adapt to shifts in the economic environment as well as the talent and human capital to innovate in new and unexpected ways. The new innovations necessary to achieve a restructuring of the U.S. economy could potentially drive a revival in productivity and investment in new industries and (at least temporarily) boost potential growth.

24. The very large amount of slack in the economy increases the risk of an extended period of low, or even negative, inflation. Persistently high levels of unemployment are likely to put downward pressure on wages and the global excess capacity in tradable goods and commodities is likely to present a source of imported disinflation.⁶ There could be countervailing forces that will push up costs (e.g. from a potential need to re-shore production in certain industries or adaptations that will be needed to ensure customer safety). However, these pressures are likely to manifest as shifts in relative prices but not through a generalized upswing in core or headline inflation. If inflation remains low, or even negative, for an extended period, this would mute the impact of monetary policy loosening (given the effective lower bound) and could lead businesses and consumers to delay their purchases (further weakening demand). A disinflationary path would be particularly problematic in the face of the expected increase in public, household, and corporate indebtedness that lies ahead (potentially giving rise to balance sheet stress and necessitating debt write-downs by creditors).

⁵ Recent legislation may help facilitate faster and less expensive small business bankruptcies. In February 2020, the Small Business Reorganization Act (SBRA) entered into force, which introduces a simpler version of Chapter 11 for small and medium enterprises. The CARES Act raises the applicable thresholds for the SBRA, so that it now covers a much larger number of enterprises (firms with debt of up to US\$7.5 million). There are ongoing discussions in Congress regarding a budget increase for the bankruptcy courts, including an increase in the number of judges and a recall of retired judges.

⁶ Although signs point to the demand downturn being stronger than supply contractions, there are also concerns that inflation is no longer properly measured due to rapid changes in the consumption bundle, disappearing goods, and sharp changes in the quality of goods (Cavallo 2020).

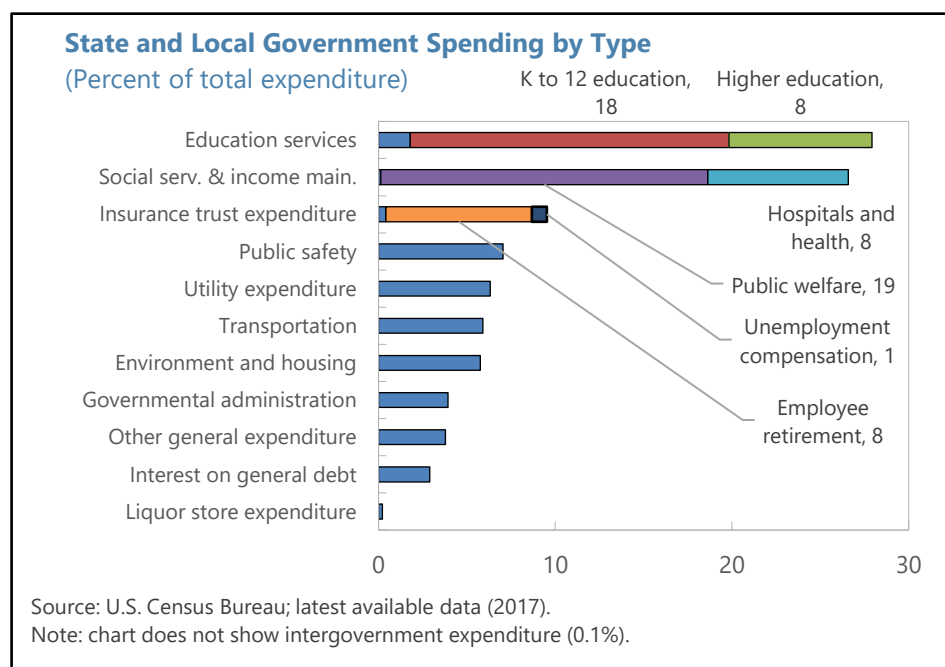
25. There are already urgent warning signs that the depth of the economic contraction and the sectoral distribution of economic losses will lead to a systemic increase in poverty, adding to longer-term risks to growth. Poverty rates were already high (e.g. relative to other advanced economies) even prior to the pandemic. There is also an important racial dimension to poverty in the U.S. with African Americans and Hispanics more likely than White households to be in poverty, unemployed, and without health insurance. The loss of income in the second quarter has been particularly incident on lower income workers although, over the near-term, the supplemental unemployment insurance and economic impact payments will help mitigate the effects of the pandemic on lower income households. However, over the next year or two, the poverty rate is likely to spike above levels reached during the global financial crisis (a period when the official poverty rate rose above 15 percent, levels last seen in the mid-1960s). Even under staff's baseline projection, the median household's disposable income could take several years to recover to its 2019 levels⁷. All in all, the risk ahead is that a large share of the U.S. population will have to contend with an important deterioration of living standards and significant economic hardship for several years to come. Such elevated levels of poverty can, in turn, further weaken demand and exacerbate longer-term headwinds to growth (e.g. by preventing the accumulation of human capital, eroding labor force participation, or contributing to social unrest).

26. The significant increase in debt levels gives rise to important vulnerabilities. The fiscal response to the pandemic that has already been put in place is expected to lead general government debt to rise to 160 percent of GDP by 2030. It will go even higher if—as seems likely—further fiscal stimulus is put in place. The job losses will lead to increased household indebtedness and balance sheet strains that are likely to manifest themselves (e.g. in the form of an increase in foreclosures and personal bankruptcies). Corporate debt has increased above the already-high pre-pandemic levels as firms have drawn on credit lines and (particularly for investment grade firms) issued new debt to build up cash buffers. Low, or possibly negative, inflation, the need for a significant resource reallocation across sectors, and a slow return of corporate earnings to pre-pandemic levels will combine to cause corporate failures to rise (Box 6). Finally, equity and bond market valuations appear stretched, leaving the economy vulnerable to new bouts of market volatility and a potential future tightening of financial conditions.

27. Finally, it is worth noting the specific risks facing state and local governments. The bulk of public health care interventions that have been required to respond to the pandemic has rested on state and local government budgets. At the same time, local education authorities have had to handle shifting classes to online formats and ensuring students had access to adequate technology to continue learning. Furthermore, social assistance and unemployment insurance spending predominantly takes place at the state and local level. Finally, states are reliant on sales tax revenues which have plummeted. As a consequence, state and local finances have shifted from close to primary balance to an expected deficit of 2-3 percent of GDP in 2020. However, aside from Vermont, state governments face balanced budget requirements which is already leading some states to pro-

⁷ As an indication, following the 2008-9 recession, real GDP fell peak-to-trough by 4 percent and returned to pre-recession levels within 3 years. Despite this, real median household income fell by over 8 percent and took nine years to recover.

cyclically cut spending in certain areas. A contraction in spending by state and local governments presents downside risks for two broad reasons. First, from a macroeconomic perspective, a fiscal tightening by subnational governments in 2020-21 would constitute an important headwind to the efforts by federal policymakers to boost activity. Second, social assistance, health and education spending make up around two-thirds of state and local outlays. This will likely mean that spending cuts by state and local governments will be particularly incident on low income households and the unemployed, at a time when they need more support (not less).



28. Authorities' views. The authorities recognized the extraordinary degree of uncertainty surrounding any forecast of the outlook for the U.S. economy. However, they were confident that the third and fourth quarter would record historically high growth and significant gains in employment. Officials believed that, notwithstanding recent increases in COVID-19 cases, the public health efforts by federal, state and local governments over recent months had left the U.S. economy well-placed to pursue a phased reopening. The expected economic revival would be strengthened by the range of policy efforts that had been introduced to provide resources to households, firms and state and local governments. They noted that the design of the support packages already put in place had been progressive, providing more resources to lower income groups. This had allowed households to maintain a solid liquidity position which will support demand in the coming months. The authorities agreed that the principal risk ahead arises from a resurgence in COVID-19 infections but that risk was mitigated by a significant expansion in testing and the ongoing development of therapeutics and vaccines. They saw little risk that the economy would be shut down again, especially given the improvements made in public health preparedness. They also noted that the lack of balance sheet imbalances prior to the crisis would allow for a rapid recovery in activity that was in contrast to the experience following the global financial crisis. While recognizing the increase

in public debt as a vulnerability, the authorities were confident that the U.S. could support such debt levels and this was clearly being reflected in market pricing of sovereign risk.

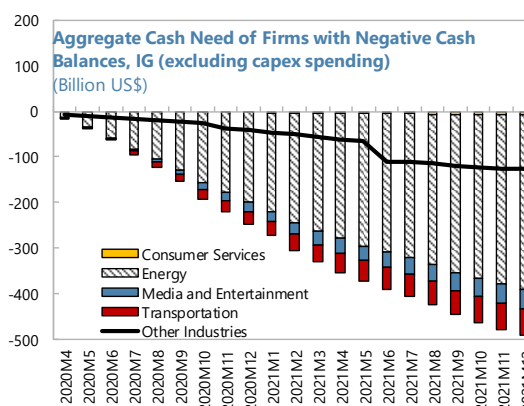
Box 6. Liquidity and Solvency Prospects for the Corporate Sector ¹

Corporate stress tests were undertaken to assess the U.S. corporates' liquidity and solvency challenges going forward. The data sample includes 750 U.S. firms, that together account for two-thirds of total corporate borrowing. Staff's baseline forecasts were mapped into sectoral revenue losses across 18 sectors. Based on the terms of the companies' outstanding debts and assumptions on the evolution of costs, the corporates' liquidity (net cash) and solvency (net equity) positions were projected.

Corporates are expected to face important liquidity challenges from the collapse in revenues as a result of the pandemic.

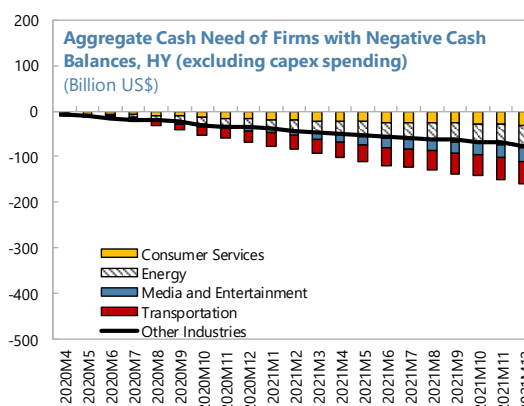
Among those firms that were investment-grade as of March 22, 2020, the largest liquidity needs arise from the operating losses and debt rollover needs of the energy sector. In total, the sector's outstanding debt is US\$580 billion (or 10 percent of investment grade loans and bonds) but they account for almost 70 percent of corporate liquidity needs through end-2020. If these energy firms are unable to issue new debt, over 80 percent of the outstanding debt stock in the sector would hit a binding liquidity constraint by year-end and be unable to meet their obligations.

The estimated liquidity needs in other sectors amounts to between US\$290-619 billion by end-2020 (depending on the extent to which these firms maintained their pre-crisis investment levels).



A significant proportion of non-investment grade firms could face solvency risks, particularly for those sectors hit hardest by the crisis.

Around 15 percent of the debt of non-investment grade, non-energy firms (or US\$485 billion in total borrowing) are predicted to have negative equity by end-2020. These firms are mostly concentrated in entertainment, technology, and transportation industries. These firms should presumably end up in some form of bankruptcy proceedings. The debt issuance needs in 2020 by the remaining solvent, high-yield firms are relatively modest (between US\$90-140 billion depending on the level of investment spending these firms undertake).



¹ Based on C. Caceres, D. Cerdeiro, S. Tambunlertchai, and D. Pan, "U.S. Corporate Stress Tests", IMF Working Paper (forthcoming).

THE FUTURE DIRECTION OF FISCAL POLICY

29. The priority ahead should be to design (and build a political consensus around) a package of fiscal policies to accelerate the post COVID-19 recovery. Policymakers should continue to provide funding for the immediate health response. In addition, given the severity of the crisis and the relatively small size of automatic stabilizers in the U.S., a new fiscal package should be legislated in the next few months that includes substantive, discretionary policy actions. These would need to be sustained over the coming years, until the recovery is well-established and the output gap has been significantly narrowed. Such a stimulus package should be designed to simultaneously address the deep-rooted social and economic challenges that continue to beset the U.S., address environmental concerns, de-escalate trade conflicts, and meet the challenges and opportunities presented by a more accelerated shift to digitalization.

30. Given the depth of the contraction and the downside risks articulated above, the fiscal package would need to be large. A model-based analysis suggests that, under staff's current baseline, the appropriate additional fiscal package could be in the order of 10½ percent of GDP over the next three years (Box 7). If, however, downside risks to activity materialize, the needed fiscal actions would have to be proportionally larger. For example, a 1 percent of GDP increase in the end-2020 output gap would add about 1½ percent of GDP to the size of the desired fiscal package over the next three years. This emphasizes the need for policymakers to remain agile and respond proactively to the evolution of the economy and the trajectory of the pandemic, quickly adjusting the size and composition of the fiscal response as both economic and public health conditions change. It is also worth underlining that an insufficiently ambitious fiscal response would risk leaving the U.S. with an unbalanced policy mix that puts too much pressure on the monetary authorities to respond, without commensurate help from the fiscal side.

A. Tax Policies

31. The expected increase in poverty and income polarization makes it appropriate to increase personal income tax credits and target them toward the most vulnerable. The main tools to achieve this would be to increase the generosity of, and eligibility for, the Earned Income Tax Credit (especially for childless workers) and to raise the child tax credit (making it fully refundable up to a specific income level). Targeted credits could also be put in place for job training or relocation expenses to facilitate the return of displaced workers to the labor force. Given the high marginal propensity to consume of lower-income households, such credits would have relatively large multipliers and provide a significant boost to consumer spending. This support could be front-loaded and made more tangible for recipients by making advanced payments of these credits (although this would need to be administered carefully to avoid fraud or a misallocation of resources).

32. To ease the cashflow needs of companies, simplify the tax system, and provide incentives to invest, the business tax should be fully converted to a cash flow tax (whereby all new capital investments would be immediately expensed). The 2017 tax reform allowed for

temporary expensing of equipment investment which complemented the existing tax incentives for R&D investment (resulting in around 80 percent of total investment being expensed). These provisions should be made permanent and expanded to ensure that the cost of all new investments could be immediately expensed. This would allow the deductibility of interest costs associated with the financing of such investments to be gradually phased out (which would have the benefit of lessening the debt bias currently built into the tax system). Full expensing would target tax relief to new investments (rather than the existing capital stock) and would provide greater tax certainty (i.e., avoiding cliff effects associated with the scheduled expiration of existing expensing provisions)⁸. The tax benefit for new investments could either be made creditable against other tax obligations or refundable in order to increase the liquidity benefits to firms (particularly for those with limited income or taxable losses). Gradually phasing-out interest deductions would provide a temporary net subsidy to the returns on new investments which could help accelerate some investment decisions. Considerations to “border adjust” this cashflow tax (i.e., to move the business tax to a destination-based cashflow tax) should take into account issues related to the compatibility of such a tax regime with WTO obligations as well as other potential outward spillover effects (e.g. due to ensuing exchange rate adjustments and implications for the corporate tax systems of other jurisdictions).⁹

B. Tackling Poverty and Supporting Displaced Workers

33. In the coming months, poverty looks set to rise. The tax credits described above will help but should be complemented by a permanent expansion in the eligibility for, and size of, social assistance. Such policies will also mitigate the racial inequities in economic outcomes (although it should be recognized as representing only one step in addressing these complex socioeconomic issues). Measures should focus on increased funding for the Supplemental Nutrition Assistance Program and a temporarily suspension of work requirements that have been attached to this program. Consideration could be given to increasing direct cash aid to poor families (e.g. through the Temporary Assistance for Needy Families program) and temporarily expanding the Section 8 housing voucher program (to ensure poor families are able to cover their rent).

34. The COVID-19 outbreak has brought to the forefront existing weaknesses in the decentralized and fragmented U.S. health system. The U.S. system predominantly delivers health coverage through employer-provided insurance, overall costs are high, and 25.6 million Americans lack health coverage. The pandemic has provided a dramatic new backdrop for the longstanding public policy debate over how, or whether, to remake the current structure of the U.S. health system.

⁸ It is worth noting that the evidence over the past few years has, however, not pointed to particularly large supply-side effects arising from either the lower statutory rate or the expensing provisions included in the Tax Cuts and Jobs Act (see E. Kopp, D. Leigh, S. Mursula, and S. Tambunlertchai, “U.S. Investment since the Tax Cuts and Jobs Act of 2017,” IMF Working Paper 19/120, 2019). However, the relatively modest impact on long-term investment decisions could, in part, be a result of concerns over the scheduled expiration, or potential future reversal, of some of the provisions of the Act.

⁹ See A. Auerbach, M. Devereux, M. Keen and J. Vella, “Destination-Based Cash Flow Taxation”, Oxford Legal Studies Research Paper No. 14, 2017.

The most immediate concern in the months ahead is that families may lose their employer-provided health insurance in the event they become unemployed, adding to the high number of already-uninsured Americans. Efforts to preserve employer-employee relations will certainly be important in mitigating this risk. Nevertheless, given the nature of the current health crisis and the expected persistence of relatively high levels of unemployment, it will be crucial to ensure that health programs for low income families (such as Medicaid and the Child Health Insurance Program) are able to meet the potential increased demand from the newly unemployed. As in previous recessions, consideration could be given to temporarily increasing the federal share of spending on Medicaid.¹⁰ Further incentives could be introduced to encourage states to expand Medicaid and/or further raise the income limits for Medicaid eligibility.¹¹ States could also launch campaigns to increase awareness of available health insurance options (to widen coverage among low income and vulnerable groups).

¹⁰ The Family First Coronavirus Response Act increased the Federal Medical Assistance Percentage (FMAP) by 6.2 percentage points during the COVID19 emergency, although this is below the 12 percent increase put in place during the Global Financial Crisis.

¹¹ The Medicaid expansion was intended to be national but the June 2012 Supreme Court ruling essentially made it optional for states. Medicaid eligibility for adults in states that did not expand their programs is quite limited, with a median income limit at just 41 percent of poverty. If the 14 states that have not yet adopted the Medicaid expansion do so, an estimated 2.8 million uninsured adults would have access to Medicaid coverage in 2021 (see Garfield and others, 2020).

Box 7. Potential Size of the Needed Fiscal Stimulus—A Buffer-Stock Model Approach¹

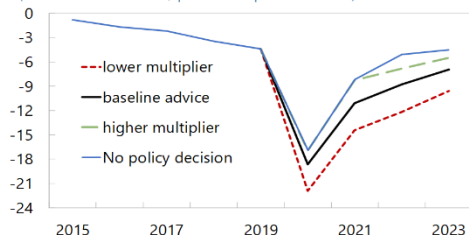
A “Buffer-Stock” model quantifies the additional fiscal stimulus needed to bring the U.S. economy close to full employment while being cognizant of debt sustainability concerns.² In this stochastic structural model, fiscal policy is constrained by implementation lags and fiscal expansion erodes buffers (leading to higher borrowing costs). However, up-front stimulus has the benefit of lessening hysteresis effects (i.e., decline in labor force participation or the depreciation of human and physical capital).

The model calibration is tailored to the U.S. economy. The fiscal multiplier is set between 0.6 and 1 when the economy is in equilibrium (see Ramey, 2019), but is state contingent (increasing to above 1 at the bottom of the cycle). The primary balance deteriorates by 0.35 percent of GDP for each 1 percent fall in GDP. Interest rates increase by 0.5 basis points for each 1 percent increase in the debt-to-GDP ratio. The debt level at which the risk of a loss of market access prompts the government to pursue consolidation is set at 200 percent of GDP. Finally, continued health concerns that prevent certain businesses from operating at full capacity in 2021 are embedded in the potential output forecast.

The analysis would argue for a stimulus of about 10½ percent of GDP through 2023 to restore the economy quickly to full employment. Under current policies, the structural primary general government balance would tighten substantially in the second half of 2020, as most of the measures introduced in the CARES Act phase out. This would lead an output gap of about 5 percent in 2020 and 1.7 percent in 2021. Given historically low borrowing costs and a strong demand for U.S. Treasuries, bringing activity back to potential as quickly as possible becomes a driving consideration in calibrating fiscal policy. As a result, the model recommends a fiscal path that brings the economy to full employment by 2022. Under this fiscal path, general government debt would rise to about 155 percent of GDP by 2023.

Structural Primary Balance

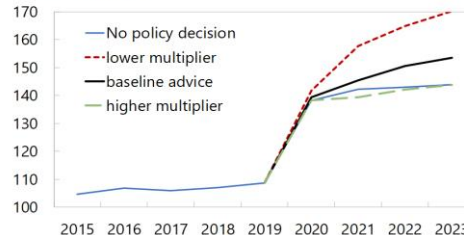
(General Government, percent of potential GDP)



Source: IMF staff calculations based on the Buffer-stock model of the government (IMF WP 159/19).

General government gross debt

(Percent of GDP)



Source: IMF staff calculation based on the Buffer-stock model of the government (IMF WP 159/19).

The size of the appropriate stimulus is sensitive to the model calibration. If multipliers or the interest rate elasticity to debt-GDP were larger, less stimulus would be needed. By contrast, if the output gap starts 1 percent of GDP larger than in the baseline forecast, the recommended cumulative stimulus over three years would be 1.5 percent of GDP higher. Moreover, in the event of a vaccine for COVID-19, the economy would be able to quickly operate at higher levels of capacity utilization and the optimal stimulus would be significantly larger.

¹ Prepared by Jean-Marc Fournier (FAD) and Li Lin.

² See also Fournier (2019) and Fournier and Lieberknecht (2020).

35. Over a longer horizon, there is a need to more systematically upgrade the federal and state social safety net. The multitude of federal, state and local programs to aid the poor could be simplified based on a careful evaluation of which programs provide the best cost-benefit trade-off. The redesign of the social safety net should eliminate “cliffs” in the phase out of social benefits (to avoid very high marginal tax rates on low income workers as their household income rises).

36. There is scope to increase poor families’ access to quality education. To improve educational outcomes and move toward greater equality of opportunity there is a need to better prioritize spending on early childhood education, universal pre-K, and support for science, technology, engineering and mathematics programs. There is also an urgent need to redesign the funding model for public schools to reduce funding differentials across districts and to provide more resources to schools with a higher concentration of poor students. The existing local funding model serves to perpetuate social and racial inequities, providing schools in poor neighborhoods with significantly less resources than those in wealthier neighborhoods (despite having to contend with greater challenges in educating children from poorer households). Given the high costs of tertiary education, an expansion of apprenticeship and vocational programs could offer attractive, well-paying, non-college career path to workers of all ages. Finally, there is a need to invest more in preparing students for college—particularly first generation students and those from low income households—and, once those students are enrolled, to fund programs that foster retention (including by supporting students in managing the financial dimensions of their college investment).

37. Given the extraordinary nature of the current shock to activity and the changing contours of the labor market, the recently legislated changes to unemployment insurance eligibility should be made permanent. In the CARES Act, the self-employed, those seeking part-time employment, and independent contractors were made eligible for state-level unemployment insurance programs. This recognizes the changing nature of employee-employer relationships (e.g. with increasing number of “gig” workers) and should be made a permanent feature of the system. The economic impact payment and supplemental unemployment benefits should be phased out. Support to poorer households should, instead, be provided through an upgraded, means-tested social safety net. Given that such changes to social assistance will take time to put in place, consideration could be given to legislating a temporary unemployment insurance supplement. Such a supplement should be time-bound, more targeted to poorer households, and with lower replacement rates (so as to incentivize those that are able to do so to return to work). Given the likely needed reallocation of labor to higher-skilled, IT-intensive jobs, income support for the unemployed could usefully be complemented by new schemes to retrain workers and facilitate their return to the labor force (including through assistance with geographic mobility). Finally, the Families First Coronavirus Response Act requires employers with less than 500 employees to provide paid sick leave and paid family leave to all workers that face specific challenges related to COVID-19 (e.g. because of a need to self-quarantine or to care for a child). Consideration should be given to expanding this provision to require all employers to provide paid family leave, with terms that are similar to the provisions legislated in 2019 for federal workers.

C. Public Health

38. The COVID-19 crisis has highlighted the need for further funding of both domestic and international public health efforts to increase readiness and provide protection against future pandemics. In the U.S., as elsewhere, healthcare capacity has proven inadequate during the crisis and there has been significant variability across states and localities in the public health response to the pandemic (and the results of those responses). Guaranteeing adequate health supplies globally and working with other countries to develop a strategy for production, purchase, and distribution of therapeutics and vaccines will be essential. To improve future responses to pandemics, one option would be for the U.S. (preferably as part of a multilateral effort) to establish a “standing army” for public health. This would encompass significant idle capacity in testing and medical supplies as well as a rapid-response unit that could be deployed for testing, tracking and treatment of viruses. Building such a capability would be a multi-year endeavor and require permanent and stable funding that is potentially outside the usual, annual discretionary appropriations process. In addition, as discussed above, greater efforts will be needed to ensure that the whole population has access to quality and affordable healthcare (e.g. by expanding access to Medicaid to a broader set of lower income households).

D. Support for State and Local Governments

39. To mitigate the risk, discussed earlier, that state and local budget balance rules trigger a procyclical fiscal consolidation, a large increase in transfers to states should be appropriated (Box 8). Following the 2008 financial crisis, despite the 5.7 percent of GDP fiscal package put in place by the federal government, a significant share of the demand impulse was offset by state and local governments having to pro-cyclically contract spending and increase taxes (to comply with their own balanced budget rules). A significant increase in federal transfers to states would, therefore, be indispensable in helping to avoid subnational governments partially undoing efforts at the federal level to provide demand support. Such transfers would also help avoid cuts to social assistance, healthcare, and education that are likely to need greater funding as the economy recovers from COVID-19. Over time, such discretionary transfers could be complemented with, or replaced by, a sharing of federal VAT revenues with the states (see below).

E. Infrastructure

40. The U.S. needs significant infrastructure investment to bring the quality of the capital stock into line with other advanced economies. To upgrade the scope and quality of U.S. infrastructure, the American Society of Civil Engineers recommends a permanent increase in general government investment of around US\$2 trillion (about 10 percent of GDP). Around one-half of this amount would be for surface transportation needs. In addition, there is a need for additional “green” investments of around 0.2 percent of GDP per year (Box 9). Once the reopening of states is more advanced, these needs could initially be met by an acceleration of projects that are already in the pipeline as well as undertaking previously-identified maintenance and repair needs. In subsequent years, there would be a need to carefully prioritize new projects. Such investments could be

undertaken through discretionary programs—such as the Better Utilizing Investments to Leverage Development scheme—which would avoid automatic apportionment of funds and allow for a more competitive process in allocating federal resources. The direct infrastructure spending would likely have large demand effects and energy efficient investments would help speed up the reduction in carbon emissions. Since much of this investment would take place at the state and local level, federal support would mainly serve to co-finance infrastructure priorities identified by subnational governments.

F. Boosting Consumption

41. When the pandemic fades and localities can safely reopen, consideration could be given to offering temporary vouchers to incentivize consumption. Such vouchers could be targeted at sectors that are most affected by the crisis (e.g. airlines, travel, or restaurants) or at energy-efficient goods. They can help bring forward consumption plans and provide a front-loaded, temporary demand boost when it is most needed. A gradual phase-out would avoid creating an “air pocket” in consumption as vouchers expire. Alternatively, consideration could be given to offer federal incentives to states to encourage them to temporarily reduce their sales tax on certain goods which would also boost consumption (although that approach would lead to more uneven effects across states since sales tax rates vary and five states have no sales tax at all).

G. Transparency and Accountability

42. To maintain transparency and build public support, federal and state governments should establish platforms to provide clear and timely information on the use of public monies. The CARES Act creates three new oversight bodies: (i) the Pandemic Response Accountability Committee, comprised of an Inspector General’s panel, to conduct oversight of the COVID-19-related relief funds; (ii) a Special Inspector General for Pandemic Recovery, within the Treasury Department with responsibility for monitoring the Treasury’s US\$500 billion fund for targeted loans to businesses; and, (iii) a Congressional Oversight Commission. These new bodies should be fully operationalized and have the tools, access to information, and resources to fulfil their mandates and to coordinate with other oversight institutions. It is particularly important at the current juncture—given the size of the federal taxpayer-funded resources being deployed—that oversight bodies actively investigate potential fraud, waste or abuse and provide ongoing analysis and monitoring of COVID programs (both to undertake ex-post assessments of program effectiveness and help with the design of subsequent fiscal measures). In addition, there should be transparency about the distribution of relief funds and loans (including publishing names and beneficial ownership information of recipients and using open public procurement processes). Such provisions would complement the important analysis and accountability function that is already being undertaken by the Congressional Budget Office and General Accounting Office.

H. Medium-term Measures to Reverse the Increase in Public Debt

43. The historic size of the fiscal packages, coupled with a lower level of nominal GDP, will cause a sizable jump in the U.S. debt-to-GDP ratio. Low interest rates will provide some breathing space but the structural primary balance will, over time, need to be brought to a modest surplus in order to stabilize the debt path, which was already on an unsustainable upward trajectory even prior to the pandemic (Appendix III). This adjustment will partly occur naturally as emergency programs expire. However, difficult political decisions will be needed to phase-in policies—once the economy is on a much firmer footing—that raise revenues and reduce spending (many of which Fund staff have long argued for). These could include:

- **A federal value-added tax.** The United States is the only advanced economy without a VAT and consumption tax revenues (in the form of sales taxes collected at the state and local level) are low (at around 2 percent of GDP, compared with an OECD average of 7 percent of GDP). The VAT should have a single federal rate with minimal exemptions and consideration could be given to sharing the revenues with state and local governments). A 5 percent VAT would provide around 1.5 percent of GDP in new federal revenues. Given the VAT's regressive effects it will be doubly important to ensure that, before a federal VAT is introduced, there is an effective safety net for the poor that is already in place. In any case, the VAT should be introduced only after the recovery is firmly established.
- **Higher fuel taxes.** The currently low oil price provides an opportunity to significantly increase federal taxes on gasoline and diesel fuel. In principle, this could be done at a relatively early stage and loosely tied to the increased infrastructure outlays. However, the automatic earmarking to states through the Highway Trust Fund should be avoided in order to allow state and federal government to better-prioritize projects. Each 35 cents per gallon in tax would add about 0.2 percent of GDP to federal revenues. The increase in fuel taxes should be closely coordinated with the calibration of the carbon tax (with fuel taxes used to price the externalities specifically associated with auto use—such as congestion and accidents—and the carbon tax aimed at the broader environmental externalities of carbon emissions).

Box 8. The Impact of COVID-19 on State Budgets

The pandemic is expected to trigger sharp declines in state revenues. Personal income and sales taxes have been hard hit from job losses and plunge in retail sales. Based on updated budget projections from 41 states, revenues are likely to be 8 and 13 percent lower in 2020 and 2021, respectively.

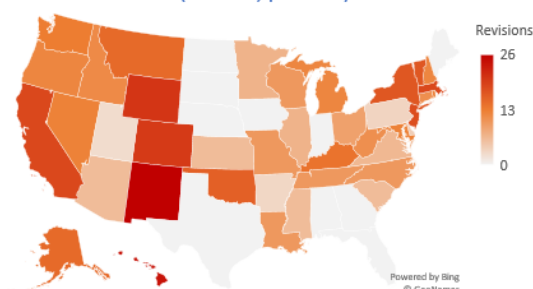
The size of downward revisions varies across states. For FY2021, budget estimates of the potential decline range from about 3 percent for Utah or Arkansas to about 25 percent for Hawaii and New Mexico. States with stricter lockdown measures and where oil and gas revenues represent an important revenue source will face the largest revenue losses.

State savings funds are well below the projected revenue losses. The sum of end-year balances and rainy day funds was about US\$113bn at end-2019. For most states, their savings funds are well below the downward revisions in revenues for FY2020 and FY2021 and most states have rules that delay or limit the amount of funds that can be withdrawn.

States are also facing mounting health spending. The CARES Act appropriated US\$45bn Federal Emergency Management Agency funding to protect public health and safety, and a US\$150bn Coronavirus Relief Fund to offset expenses directly related to the pandemic. However, increased enrollment in Medicaid are likely to add to state spending obligations (even though the Family First Coronavirus Response Act temporarily increased the federal sharing of Medicaid cost by 6.2 percentage points).

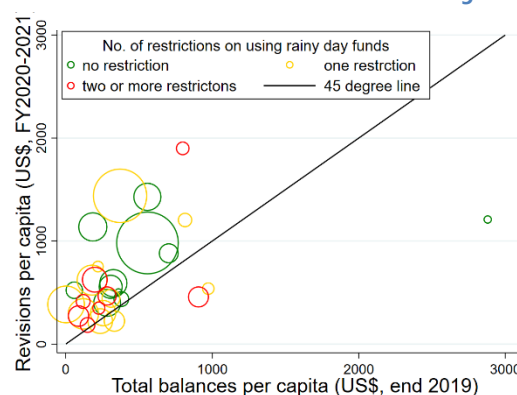
States are starting to make significant cuts to spending to meet balanced budget requirements. New York State will cut aid to local governments by US\$8bn while Georgia and Washington plan a reduction of about 15 percent in agency budgets in FY2021. School districts are reliant on the Education Stabilization Fund (of US\$31 bn) that was appropriated by the CARES Act but it is unclear if this will be sufficient to protect education budgets. Some states have already announced revenue increases (e.g. California will raise business taxes) or will borrow from special revenue funds (e.g. Illinois and California).

Downward revisions of tax revenues projections (FY2021, percent)



Source: Center on Budget and Policy Priorities, and Pennsylvania Independent Fiscal Office.

State-level revenue shortfalls and savings



Box 9. A Historic Opportunity to Transition to a Lower-Carbon Economy

The need for sizable fiscal stimulus comes at a time when there is also an urgent need to address climate mitigation and adaption. This confluence of events provides a historic opportunity to adopt fiscal policies that will facilitate a shift toward more environmentally-sustainable economic growth model. A combination of fiscal measures could be introduced at the federal level including:

Promoting greener car use and transportation. Lower emission vehicles could be incentivized by taxes and subsidies on car ownership that are linked to emissions or fuel efficiency (replacing the existing fuel economy requirements placed on car manufacturers). In addition, federal outlays could be used to subsidize the construction of a more integrated nationwide network of charging stations for electric vehicles (it is estimated that US\$2.2 billion in charging infrastructure could be needed cumulatively by 2025)¹.

Better pricing of the various externalities associated with auto use. Federal resources could incentivize the adoption of smart technologies on U.S. roads so as to tax car owners based on miles driven (with variable charges for congestion and peak-period road usage as well as incentives for high occupancy vehicles). This could initially supplement and eventually replace reliance on gas taxes. Such technologies could also allow auto insurance to be based on miles driven (scaled to the driver's risk profile). Converting a larger part of the fixed costs of owning a car into a variable cost that is based on distance driven would help internalize the costs of congestion, accidents, carbon emissions and air pollution.

Incentivizing lower-emission means of power generation. Fees could be imposed on power generators that have high rates of emissions and subsidies could be provided to greener means of power generation. This offers a more market-based approach to incentivize cleaner power than through a regulatory approach.

Investing in buildings' energy efficiency. This could include direct subsidies or tax credits to improve the energy efficiency of buildings through retrofits (possibly with higher subsidies provided to lower income families) as well as direct spending to increase the energy efficiency of public buildings.

Fiscal incentives to promote forest sequestration. A nationwide tax-subsidy scheme could create incentives for landowners to store carbon (potentially monitoring such efforts through satellite imagery). Similar incentives could be provided to other objectives such as preserving or increasing biodiversity.

Increasing the share of surface transportation spending on public transportation. The allocation of federal resources for infrastructure could put a greater premium on maintaining and improving public transportation infrastructure (rather than building new road capacity). This could include investments in metro and light rail systems in urban areas, high speed intercity rail along highly-traveled routes, expanding electric bus fleets and bus rapid transit systems. Deferred maintenance needs alone are estimated at US\$90 billion while covid-19 has created significant additional funding gaps in many public transport systems².

Investing in climate-resilient infrastructure. The priorities include building and updating infrastructures to withstand severe natural hazards, strengthening climate change risk assessments, and providing incentives for mitigation³. Additional funds could be made available to support state and local governments' mitigation efforts, building on the 2018 Disaster Recovery Reform Act that provided funding to FEMA's National Public Infrastructure Pre-Disaster Fund.

¹ M. Nicholas, "Estimating Electric Vehicle Charging Infrastructure Costs Across Major U.S. Metropolitan Areas" International Committee on Clean Energy, 2019.

² The American Public Transportation Association, "Public Transportation Infrastructure: Critically Needed Investments", May 2019 and "The Impact of the COVID-19 Pandemic on Public Transit Funding Needs in the U.S.", May 2020.

³ Homeland Security, "National Mitigation Investment Strategy", August 2019.

- **Introducing a carbon tax.** A carbon tax that rises steadily to US\$75 per ton by 2030 would generate revenues of around 1 percent of GDP¹². Such a tax would increase electricity prices by 60 percent, raise gasoline prices by 20 percent, and more than double the price of natural gas. The tax would reduce carbon emissions by around 27 percent and, over the next decade, would prevent 65,000 premature deaths from local air pollution. The tax could be implemented relatively easily by integrating carbon charges into the existing gas tax and applying similar charges to coal, natural gas, and other oil products. There would need to be integrated support programs for poor households and some sectors that are most affected by the higher energy prices.
- **An increase in corporate income tax rates.** In 2017 the U.S. reduced its business tax rate to 21 percent (in line with the OECD average). However, the revenue needs across a range of countries perhaps now creates the scope to advance discussions on Pillar 2 of the BEPS Initiative (imposing a minimum tax on the global income of multinational corporations) and to undertake a coordinated increase in the corporate rate.¹³ The impact on growth of a higher marginal corporate tax rate could be greatly mitigated by moving to a cashflow tax (as is proposed above).
- **Entitlement reforms.** The authorities will need to counter the pressures on the finances of the social security trust fund through accelerating the planned increase in the retirement age, increasing the progressivity of benefits, raising the maximum taxable earnings for social security contributions, and indexing benefits and contributions to chained CPI. The increase in the retirement age should be accompanied by an increase in the age of Medicare eligibility (but with provisions within Medicaid to provide coverage to lower income households). Such measures could reduce the fiscal deficit by over 4 percent of GDP over the medium term. Containing rising healthcare costs will also be important. This could be achieved through greater cost sharing with beneficiaries and drug manufacturers, efficiency innovations (e.g. electronic health care records, telehealth services), and incentives to increase efficiency and price transparency by healthcare providers. There is also scope to apply antitrust solutions to cases where market concentration of health providers or insurers has been rising rapidly.

44. Authorities' views. The authorities recognized that the U.S. would have to put in place further fiscal stimulus to accelerate the recovery. There was support for providing more help to small businesses, to incentivize investment, encourage companies to rehire, and to facilitate workers' return to work (including potentially through a re-employment bonus). They argued that

¹² In the 2015 Paris Agreement, the US pledged to reduce greenhouse gases by 26–28 percent below 2005 levels by 2025 (although the US is now set to withdraw from the Paris Agreement in November). To be consistent with temperature stabilization goals, measures equivalent to a global carbon tax of at least \$75 per ton are needed by 2030. While more than 60 carbon tax and emission trading schemes have been implemented to date, the global average carbon price is still very low at around US\$2 per ton.

¹³ The U.S. recently suggested a pause in the G20/OECD-led process to reform the international corporate tax system (given the need to focus on the pandemic). This makes it unlikely that consensus on fundamental reform of the international tax architecture can be achieved by end 2020 and may result in countries implementing unilateral measures such as digital services taxes.

maintaining healthcare coverage would be best-achieved by ensuring that individuals were able to preserve employer-employee relationships. The authorities emphasized that the precise contours of such policies would, however, have to be designed by the Congress, in consultation with the administration. They underlined the significant fiscal space that the U.S. continues to have, even after the historically unprecedented tax and spending decisions taken over the past few months, and that policy support could be sustained for several years, if needed. They were concerned that assistance to state and local governments should not end up providing a bail-out to states that had pursued poor policies in the past, but emphasized that any resulting contraction in subnational fiscal demand could be offset by further stimulus in other sectors of the economy. The administration was committed to high levels of transparency and accountability in its deployment of public monies and had already provided significant information to the public that struck the right balance between proper oversight and appropriate protection of borrowers' proprietary information.

OPTIONS FOR ADDITIONAL MONETARY STIMULUS

45. In response to COVID-19, the Fed has already taken extraordinary actions to support the economy and maintain the smooth functioning of financial markets. Despite this, the Fed's own forecasts anticipate that both inflation and employment will remain below its medium-term goals for the next several years. This could exacerbate longer-term damage to the economy and create the risk of a downward de-anchoring of inflation expectations. This points to a need to strengthen monetary support in the coming months to more quickly bring the economy back to maximum employment and 2 percent inflation. Such additional support would complement the fiscal measures that are outlined above and would have positive spillover effects through supporting demand and further easing financial conditions globally. However, these policies are likely to provide additional incentives for financial risk taking, increased leverage, and a shift of resources toward more risky activities (indeed, these are likely to be the principal transmission channels of these monetary policies).

A. Asset Purchase Programs

46. Empirical evidence suggests that past asset purchases have had measurable effects on financial conditions. Between 2009 and 2014, the Fed purchased US\$2 trillion in Treasury securities, which are estimated to have lowered 10-year Treasury yields by around 100 basis points (although there are a range of estimates in the literature and there appears to be evidence of diminishing returns with each round of purchases).

47. There are some downsides to the Fed maintaining a very large balance sheet over an extended horizon. If the Fed holds a relatively long duration portfolio of assets, there is a potential for mark-to-market losses on the Fed's bond portfolio and, if the rate of interest on excess reserves rises above the average return on its asset holdings, for a reduction in its net income position. A significant increase in the Fed's asset holdings could have adverse effects on trading volume or increase political pressure on the Fed to maintain its purchases. Increasing asset purchases could encourage greater risk-taking and excessive leverage, amplifying financial stability risks. Finally,

exiting an expanded asset purchase program would need to be handled carefully (as the “taper tantrum” vividly demonstrated).

48. On balance, there appears to be scope to further scale up purchases of Treasury bonds and mortgage backed securities to provide greater monetary stimulus in support of the recovery. Purchases of Treasury and agency debt is a well-trodden policy option that is straightforward to communicate. However, with short-term interest rates already expected to remain at the effective lower bound for several years, the effect of such purchases is likely to be relatively modest.

B. Forward-Guidance

49. There appear to be relatively few downsides to strengthening forward guidance, although there are potential reputational risks if the central bank makes commitments that subsequently become difficult to carry through on. If sufficient consensus can be built among voting members of the FOMC, the Fed could commit to maintain the policy rate at the lower bound at least until core or headline PCE inflation rises above 2 percent for a sustained period of time. The Fed would explicitly aim to temporarily overshoot its medium-term inflation goal. This would help raise inflation expectations (or prevent a downward de-anchoring of inflation expectations) and lower real interest rates today, providing direct support to aggregate demand. Alternatively, a policy of temporary price level targeting could be pursued to provide greater structure around the Fed’s strategy.

50. The Fed could complement its more explicit forward guidance by strengthening other tools for communication. As has been argued in previous Article IVs, this could include replacing (or supplementing) the Summary of Economic Projections with a quarterly, internally-consistent economic projection that is endorsed by the FOMC. Such a projection would include a description of the FOMC’s view of risks around this baseline forecast (potentially with alternative quantified scenarios that show the range of risks around this baseline and the likely policy path if those scenarios were realized). Such a set of quantified scenarios could be especially valuable at the current juncture given the significant uncertainty about the outlook resulting from COVID-19. Finally, the Fed could provide greater clarity on the planned size of its future asset purchases and, in time, give clear and early guidance on how it will eventually normalize its balance sheet.

C. Yield Curve Control

51. Yield curve control could represent an additional strategy to strengthen the Fed’s forward guidance on the future path of policy rates. Even if market participants currently expect the federal funds rate to remain at its effective lower bound through the medium term, the introduction of an effective yield curve control policy could help prevent those expectations from changing prematurely (as happened during the previous recovery). The downside to yield curve control is that, given the size and global nature of the Treasury market, enforcing a yield target could require very large purchases of government bonds, which, in turn, could increase risks to the

Fed's balance sheet (that would rise along with the duration of the bonds that are purchased). Furthermore, there is relatively little empirical evidence on the extent to which yield curve control can boost demand and support a faster recovery (especially when yields are already at historic lows). Finally, capping yields will inevitably dampen the important price signals that the Treasury markets provide (at least at shorter maturities).

52. Despite these downsides, yield curve control that is focused on the short-to-medium part of the yield curve could be a useful complement to an enhanced approach to forward guidance. One possibility is for the FOMC to commit to not raise rates until PCE inflation rises above 2 percent. The Fed could then cap interest rates at zero at maturities at least until the horizon at which the FOMC-endorsed forecast of PCE inflation rises above 2 percent. Doing so would reinforce the FOMC's guidance on how long it expects to remain at the effective lower bound. The parameters for yield curve control could then be revisited on a quarterly basis. However, as with an expansion of asset purchases, it should be expected that the incremental stimulus implied by such a policy is likely to be relatively modest. Rather, it's main effect would be to strengthen forward guidance and provide some insurance that yields in the future will remain aligned with that guidance.

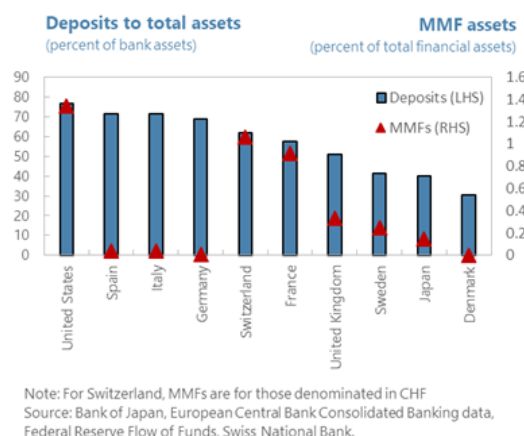
D. Negative Interest Rates

53. The target range for the federal funds rate is now at 0 to ¼ percent and the Fed could follow other central banks and target a negative policy rate. Targeting a negative federal funds rate could lower rates across the yield curve and strengthen the effects of forward guidance, helping to stimulate demand. However, where banks are unable to pass negative rates on to depositors, negative rates could worsen bank profitability and cause a reduction, not increase, in lending. Tiering (i.e. exempting a portion of reserves from the negative rate) could, though, cushion some of the negative impact on bank profitability and steps could be taken to forestall wholesale cash hoarding by financial firms, insurance companies, and pension funds (to increase the effectiveness of negative policy rates).¹⁴

54. On balance, the risk-reward trade-off for negative rates does not appear to favor the introduction of negative policy rates in the U.S. The effects of negative rates on activity and inflation are likely to be small and highly uncertain (especially given the limits on how negative the policy rate could be). In addition, the U.S. banks are more reliant on deposit funding than European

¹⁴ For example, cash hoarding can be disincentivized by moving toward an electronic central bank currency.

or Japanese banks which could dissipate (or reverse) the potential stimulative effects of such a policy. Finally, negative rates would reduce the profitability of money market mutual funds and could trigger a significant withdrawal from such funds (which are important providers of liquidity to the broader financial system). Money market funds may also be pushed by negative rates to change their product offerings and start investing in riskier, higher yielding assets. These effects could represent risks to market functioning and financial stability that would be difficult to predict.



E. Expanded Lending or Increased Purchases of Marketable Securities

55. The size and duration of the existing credit and loan facilities could potentially be expanded. Many of these facilities are slated to terminate over the next 3-6 months. So far, the various facilities (excluding central bank swap lines) have been well below their announced size. In addition, only around one-half of the US\$454 billion appropriated by Congress as a backstop for these facilities has been committed so far. An expansion of such credit facilities would increase the Fed's footprint in the allocation of credit but would increasingly put the Fed in the uncomfortable position of determining the entities that are—and are not—eligible for Fed purchase programs. This, in turn, could create controversy, increase political scrutiny, and ultimately undermine the Fed's independence and reputation. Scaling up the size of the Fed's security purchases could also result in a loss of market functioning (as the Fed becomes a significant buy-and-hold investor in certain assets).

56. On balance, direct lending and the purchase of marketable securities should continue to be used for emergency liquidity support but not relied on to provide demand stimulus. The introduction of a broad range of facilities was instrumental in correcting market dysfunction and improving the transmission of monetary policy. Their broad scope was warranted by uncertainties about which parts of the financial system would face market dysfunction. In this regard they have been successful. However, going forward, if there were a need to do more to provide credit, or credit guarantees, to certain parts of the system such activities should be undertaken by the Treasury rather than by the Federal Reserve¹⁵.

57. Authorities' views. The Federal Reserve was actively considering a range of further policy options that could be used, if needed, to counter the effects of the pandemic. Policymakers had a significant amount of ammunition that could be deployed and there was no limit to the amount of

¹⁵ For example, in 2009, the American Recovery and Reinvestment Act introduced Build America Bonds which provided a subsidy to state and local governments of 35 percent of the interest (or a refundable tax credit directly to the bondholders). The Troubled Asset Relief Program also introduced the Home Affordable Modification Program which offered interest rate reductions, fixing the interest rate, principal reduction or forbearance, and term extension to homeowners that were facing foreclosure.

liquidity the Fed could provide to financial markets. There was a strong commitment by the FOMC to doing everything necessary to support the economy for as long as was needed. While the Fed was ready to use its full range of tools to support the U.S. economy—including asset purchases and changes to forward guidance—it did not regard negative interest rates as an appropriate or useful policy for the U.S. No decision had yet been taken on yield curve control and discussions around the topic were at an early stage. The FOMC intended, in the coming months, to return to the completion of its monetary policy framework review, which could lead to revisions to its Statement on Longer-Run Goals and Monetary Policy Strategy. The expectation was that the various 13(3) interventions would expire gradually in the coming months, as had been previously announced, and that take-up of the facilities would depend on the broader trajectory of the economy.

FINANCIAL SYSTEM OVERSIGHT

58. The ongoing, real-time, economic and financial stress test experienced over the past few months has shown the U.S. financial system to be both resilient and flexible. Banks entered the current crisis with sizable capital and liquidity buffers and nonbanks and capital markets have largely absorbed unprecedented shifts in portfolios. However, the ongoing recession, combined with the rise in corporate leverage and migration of risks to nonbank financial institutions could result in a severe financial strain. Banks' capital depletion rates are expected to be large, given the sharp economic contraction, but manageable. Stress tests contained in the FSSA found that, even in a downside scenario—relative to the already-stressed baseline forecast—banks would need a relatively small amount of incremental capital (i.e., 1.7 percent of GDP over a three year horizon) to meet Tier-1 common equity regulatory requirements; these needs could largely be met from a temporary suspension of shareholder payouts.¹⁶ Nonetheless, future capital depletion is subject to multiple sources of uncertainty, including the duration and intensity of COVID-19 containment measures. Banks are generally very liquid and, even under severe assumptions (i.e., a 40 percent drawdown of credit and liquidity lines, and closure of repo markets), only one GSIB would be unable to fund its cash needs for 30 days.

59. Despite extraordinary shifts in economic outcomes and a massive global portfolio reallocation, systemic financial stability concerns have been relatively muted. Market dysfunction was quickly resolved through the Federal Reserve's provision of emergency support and regulatory frictions were quickly addressed through temporary carve-outs of exposures under the emergency credit and liquidity facilities.

60. The Federal Reserve has taken steps to prohibit share buybacks and limit dividend payments by banks. Although the Federal Reserve did not object to banks' capital plans it did take steps to preserve bank capital by suspending share repurchases and capping dividends (to be below the bank's income over the preceding four quarters). These restrictions are applicable for the third

¹⁶ The Federal Reserve released the results of its Comprehensive Capital Analysis and Review exercise as well as additional COVID-19 sensitivity analysis. The results suggest that the largest U.S. banks would face up to US\$700 billion in credit losses and some of them would fall close to the minimum capital requirement in the most severe sensitivity test

quarter and may be extended on quarter-by-quarter basis. Banks will have to re-assess their capital needs and resubmit capital plans later this year. While these measures were welcome, more stringent actions are needed to preserve strong capital buffers. This should involve tighter limits on dividend distributions and a re-evaluation of the differential treatment of buybacks and dividend payments. Finally, the binding period for these measures should be extended into 2021.

61. There are areas where institutional changes could further strengthen systemic oversight and lessen vulnerabilities. As elaborated in greater detail in the accompanying FSSA, an explicit financial stability mandate should be provided to all of the federal FSOC members and crisis preparedness efforts of the FSOC should be intensified. The development of macroprudential tools to manage systemic risks in the nonbanks remains an important priority and the FSOC should direct its members to work together on this issue. To strengthen their independence, the Commodity Futures Trading Commission and Securities and Exchange Commission should be given greater independence to determine their own resources (rather than as part of an annual appropriations process). It would be appropriate to increase the Commodity and Futures Trading Commission's resources that are devoted to the supervision of central counterparties, make risk management requirements consistent across these entities, and execute more comprehensive systemwide stress tests of central counterparties. Within the existing framework of state-level regulation and supervision of insurance, there is a need to increase the independence of state insurance regulators, gradually transition to principles-based reserving for insurers, and develop a consolidated group capital requirement that is consistent with international practice. Plans should be developed to ensure market functioning is preserved in the event the Bank of New York Mellon becomes unable to settle and clear repo transactions. Finally, the provision of bilateral emergency liquidity assistance to systemically important nonbanks should be permitted.

62. There are also some aspects of the supervisory and regulatory framework that could be strengthened. For example, the most salient aspects of prudential guidance for banks could be reformulated as regulation. Also, following the recent tailoring of regulations, prudential requirements for non-internationally active banks should be reviewed to ensure they are, and continue to be, broadly consistent with the Basel capital framework and appropriate liquidity and concentration limits. Liquidity stress testing could be applied by the SEC to money market funds. The federal banking agencies should encourage banks to explicitly allow for the use of the discount window in their short-term liquidity planning (allowing Treasuries and bank reserves to be fully fungible). Finally, there is a continuing need to address data gaps to provide financial regulators with a fuller picture of the entire financial system and the interconnections between institutions and markets.

63. Progress is also needed to address data gaps. Data gathering on bilateral repo, triparty repo, securities lending, and asset management is at early stages. The trade reporting and compliance engine (TRACE) pilot for data reporting on Treasury securities should be a permanent feature of the system. To build a clear view of interconnections, data on interbank exposures should be expanded from the six U.S. GSIBS to a fuller sample of banks. Finally, data is needed to provide a better picture of the holdings of collateralized loan obligations, institutions' direct and indirect exposures to leveraged and private loans, and the various channels that connect nonbanks with the rest of the system.

64. Authorities' views. The U.S. financial system entered the current crisis in a strong position and has handled well the upheaval experienced over the past few months. The U.S. authorities reacted quickly with a number of significant actions, such as liquidity facilities available to banks and nonbanks. They would continue to carefully scrutinize developments, including in levels of leverage and credit quality in the months ahead. The policy actions taken to mitigate financial market disruptions and support the economy had led to much-improved financial conditions. However, market conditions remain fragile and require continued support. Clear communications will help mitigate the risk of market participants becoming complacent. The authorities were carefully considering the recommendations of the FSAP and were continuing to work to strengthen the institutional framework for financial stability, which remains advanced in implementing the G-20 financial regulatory reforms and meeting international standards. They will continue to review regulation and supervision to maintain safety and soundness of the U.S. financial system while calibrating requirements to the level of risk posed

TRADE POLICY

65. The crisis underscores the importance of open trade for the U.S. and global economies.

As the pandemic spread, the U.S. avoided the use of trade restrictions on critical health products and food, providing a positive example to others. However, the U.S. still maintains the bulk of the trade restrictions and tariffs that were imposed in 2018-19 and U.S. exports continue to be adversely affected by similar measures taken by trading partners. Also, the U.S. decision to block appointments to the WTO Appellate Body will detract from the enforceability of WTO legal rulings and could weaken other members' adherence to WTO obligations. The authorities should work actively with others on WTO reform to address important gaps in WTO rules. Efforts should be made to reverse trade restrictions and tariff increases while working with partner countries (through both bilateral channels and the WTO) to address the policies that distort trade flows and investment decisions.

66. The application of countervailing duties on imports from countries that the Department of Commerce finds to have an undervalued currency could potentially escalate trade tensions and have negative spillovers for other countries. In particular, treating currency undervaluation as a subsidy to be countervailed raises concerns both in the finance and trade spheres. The threat of trade penalties could potentially impinge on monetary policy decisions and discourage exchange rate flexibility, while complicating effective dialogue that underpins economic surveillance. Furthermore, other countries might pursue a similar policy, perhaps using their own standards and methodologies, with the potential for a broadening use of trade restrictions and a further increase in trade tensions.

67. Authorities' views. The administration remained committed to pursuing the benefits of open international trade and investment but recognized there were clear shortcomings in the operation of the existing system. The authorities highlighted various efforts to incentivize investment and production in the U.S., including the United States-Mexico-Canada Agreement. This high-standard agreement, with two of the largest trading partners, includes innovative new

provisions that will incentivize production in the U.S. and promote the development of North American supply chains. The U.S. is pursuing a trade agreement with the United Kingdom and seeks to conclude a comprehensive, high-standard agreement with Kenya that can serve as a model for additional agreements in Africa, leading to a network of agreements that contribute to Africa's regional integration objectives. The authorities believed that significant reform of the World Trade Organization is needed, particularly in the area of dispute settlement, but also in the areas of transparency and the application of special and differential treatment for developing countries. The authorities highlighted the Economic and Trade Agreement between the U.S. and China, which went into effect in February 2020, and they expected this agreement to have a significant positive impact for both China and the U.S. Nonetheless, the U.S. had a number of serious concerns about certain acts and policies being undertaken by China (which were detailed in the administration's section 301 report). Accordingly, the U.S. has kept in place tariffs on a wide range of Chinese goods. Finally, the authorities indicated their concern that France's digital services tax was unreasonable or discriminatory and, as a result, burdened or restricted U.S. commerce. This justified the imposition of ad valorem duties of 25 percent on a range of French products. The authorities indicated that similar assessments were being made of other countries' taxes on digital services but no decision had yet been made in these cases. The authorities underlined their commitment to preserving and renewing an international consensus on the taxation of multinational enterprises in a rapidly changing global economy, including through discussions at the OECD.

GOVERNANCE AND TRANSPARENCY¹⁷

68. The U.S. is substantially effective at investigating and prosecuting money laundering and cooperating with other jurisdictions over corruption proceeds in the U.S. Since last year's consultation the U.S. has improved its compliance on customer due diligence by requiring all covered FIs¹⁸, to collect and verify beneficial ownership information for companies and some trusts that are customers.¹⁹ Nonetheless, there remain some serious shortcomings related to entity transparency and the content and coverage of preventive measures, including in relation to identifying politically exposed persons, that may make it easier for foreign corrupt officials to hide their proceeds in the U.S., including proceeds that might be diverted from COVID-19 related spending initiatives. Measures should be further strengthened to facilitate timely access to beneficial ownership information of all customer types and to obtain such information about companies upon formation (and thus speed up investigations and help prevent the abuse of legal entities for money

¹⁷ In line with the Framework for Enhanced Engagement on Governance, this section updates efforts to prevent foreign public officials from concealing the proceeds of corruption in the U.S. economy. The extent to which the U.S. criminalizes and prosecutes the bribery of foreign public officials ("supply side of corruption") will be reported on in the 2021 Article IV Consultation. The OECD peer review of the U.S. framework to assess the implementation and enforcement of the Convention on Combating Bribery of Foreign Public Officials in International Business Transactions is due to be adopted in October 2020.

¹⁸ Banks, brokers or dealers in securities, mutual funds, and future commission merchants and introducing brokers in commodities.

¹⁹ See FSSA. The FATF upgraded the U.S. technical compliance with customer due diligence requirements from partially to largely compliant, see: <http://www.fatf-gafi.org/media/fatf/documents/reports/fur/Follow-Up-Report-United-States-March-2020.pdf>

laundering purposes). Improvements are also needed to make lawyers, accountants, and trust and company service providers subject to customer due diligence and suspicious transaction reporting obligations. Action is also needed to address money laundering risks in high-end real estate, where real estate agents are not subject to comprehensive AML/CFT requirements and where non-bank mortgage lenders and originators have limited awareness of obligations, especially with regard to politically exposed persons.

STAFF APPRAISAL

69. The longest expansion in U.S. history has been derailed by the unanticipated advent of COVID-19. To preserve lives and support public health, it was necessary to put in place a broad-based shutdown of the U.S. economy in March. Despite the gradual easing of state lockdown restrictions and lifting of stay-at-home orders starting in late April, the collateral economic damage has been enormous. First, and foremost, as of July 16, more than 136,000 Americans have tragically lost their lives and many more have become seriously ill. Almost fifteen million Americans have lost their jobs, many small and large businesses are under financial stress, and future prospects are highly uncertain. Reopening decisions will have to be handled carefully to mitigate the economic costs while containing the ongoing rise in COVID-19 infection rates. It will likely take a prolonged period to repair the economy and to return activity to pre-pandemic levels. All in all, globally there will be difficult months and years ahead and it is of particular concern that the number of COVID-19 cases in the U.S. is still rising.

70. The poorest households face a particularly precarious situation. The economic costs of the crisis are being borne disproportionately by the poor and vulnerable, bringing into stark relief deep inequities that have long afflicted the U.S. The pandemic has also underscored some of the structural shortcomings of the U.S. health system with the provision of healthcare fragmented, decentralized, predominantly employer-based, at high cost, and with a significant share of low-income households lacking coverage. The nature of the pandemic has created particularly large strains for labor intensive, face-to-face services (which tend to employ a large share of lower-income workers) and the unemployment rate among lower income households, that have few financial buffers, is expected to remain high for a protracted period. Poverty rates and other social strains are expected to exceed those that were experienced in the wake of the global financial crisis.

71. In the face of this unprecedented shock, U.S. policymakers acted quickly and assertively to protect livelihoods and businesses and to mitigate the lasting economic costs of the pandemic. The Federal Reserve took unprecedented steps to provide monetary stimulus, to underpin the smooth functioning of domestic and international financial markets, to support the flow of credit, and to strengthen the transmission of monetary policy. At the same time, a range of fiscal measures were put in place to assist small businesses and specific sectors (such as airlines), increase resources to healthcare providers, expand unemployment insurance, create incentives for firms to retain workers, transfer cash directly to households, and provide resources to state and local governments.

72. Further policy efforts will be needed to counter the pandemic and also address a range of deep-rooted social and economic challenges that continue to afflict the U.S.

Prior to the pandemic, even after a decade-long expansion, the U.S. faced troubling social and economic outcomes related to poverty; inequalities of opportunity and declining socioeconomic mobility; an increasingly polarized income distribution; rising barriers to trade and foreign investment; and an unsustainable upward path for public debt. It will be important, therefore, to ensure that policy solutions put in place to tackle the consequences of the pandemic are simultaneously geared toward reshaping the existing systems for social assistance, education and healthcare (to expand opportunities and lessen inequities); investing in infrastructure; helping create more open, stable, and transparent trade policies, underpinned by a strengthened international system; and, over the medium-term, putting the public debt-GDP ratio on a downward path.

73. Pursuing these multiple objectives will require a further round of fiscal measures in the coming months that boost demand, increase health preparedness, and support the most vulnerable.

The U.S. has some fiscal space and it should be deployed quickly to hasten the recovery from the second quarter contraction, permanently improve the social safety net, and facilitate a broader remaking of the U.S. economy. Efforts are also needed to prepare for future health crises (or a resurgence in COVID-19) and ensure that those without medical insurance have access to affordable, quality health care.

74. There is potential to bolster the monetary support that has already been put in place.

In the coming months, asset purchases could be scaled up to increase policy stimulus and the Federal Reserve could adapt its forward guidance to more firmly anchor market expectations about the future path for policy. Now would be an opportune time to begin shaping Fed communications around an internally-consistent economic projection that is endorsed by the FOMC with alternative, quantified scenarios that show the range of risks around this baseline. These actions could potentially be supported by introduction of yield curve control. The current credit facilities should be regarded as unusual and exigent tools and should be phased-out (as planned). The risk-reward trade-off does not appear to favor the introduction of negative policy rates in the U.S. context.

75. Efforts should be made to reverse existing trade restrictions and tariff increases while working with partner countries to address policies that distort trade flows and investment decisions.

There is a clear need to address trade and investment distortions in areas such as tariffs, farm subsidies, industrial subsidies, and services trade. However, the imposition of import tariffs (and other steps taken by the administration) is undermining the openness and stability of global trade by increasing restrictions on trade in goods and services, and catalyzing a cycle of retaliatory trade responses. The potential imposition of countervailing duties on imports from countries that the Department of Commerce finds to have an undervalued currency represents a significant risk to the multilateral trade and international monetary system which could potentially escalate trade tensions, harming the U.S. economy and having negative spillovers for other countries. Instead, the U.S. should work constructively with its trading partners to better address these underlying distortions.

76. The external position was moderately weaker than the level implied by medium-term fundamentals and desirable policies in 2019.

An increase in private sector saving and a decline in

investment is expected to offset the increased fiscal deficit. This would imply a current account deficit of around 2 percent of GDP in the coming years. However, there is significant uncertainty surrounding this forecast.

77. The real-time economic and financial stress test experienced over the past few months has shown the U.S. financial system to be both resilient and flexible. While the crisis has been devastating on many dimensions, the financial system has responded flexibly to the unprecedented macro-financial shock. The system experienced important liquidity problems in the early days of the crisis but these were quickly resolved by prompt action by the Federal Reserve. Banks entered the current crisis with sizable capital and liquidity buffers and nonbanks and capital markets have largely absorbed the unprecedented shifts in portfolios. Nonetheless, the crisis is at an early stage and deteriorating credit quality of both household and corporate lending is likely to be increasingly visible in the coming months. This argues for continued restraint on banks' capital distribution plans.

78. The Financial Sector Assessment Program findings reveal a number of areas where the U.S. system of financial oversight could be adapted to further mitigate systemic risks. The priorities should include introducing an explicit financial stability mandate for the principal regulators, increasing the budgetary independence of the Commodity Futures Trading Commission, Securities and Exchange Commission, and state-level insurance regulators, developing macroprudential policies to mitigate the growing vulnerabilities outside of the core banking system, and intensifying the crisis preparedness function of the Financial Stability Oversight Council. There is scope to improve risk management and the stress testing of central counterparties as well as to transition to principles-based reserving and develop consolidated group capital requirements for insurers. Prudential requirements for non-internationally active banks should be reviewed to ensure they are, and continue to be, consistent with the Basel capital framework and appropriate liquidity and concentration limits. It would be appropriate to allow banks to assume full access to the discount window as part of the liquidity planning process (allowing Treasuries and bank reserves to be fully fungible). Finally, important data gaps continue to obscure regulators' visibility on the nature of systemic interconnections and vulnerabilities; this will require sustained efforts to address.

79. It is recommended that the next Article IV consultation take place on the standard 12-month cycle.

Table 1. United States: Selected Economic Indicators

(percentage change from previous period, unless otherwise indicated)

	2018	2019	Projections					
	2018	2019	2020	2021	2022	2023	2024	2025
National production and income								
Real GDP	2.9	2.3	-6.6	3.9	3.3	2.3	1.9	1.8
Real GDP (q4/q4)	2.5	2.3	-6.9	5.1	2.8	2.0	1.9	1.8
Net exports 1/	-0.3	-0.1	0.1	-0.2	-0.1	0.0	0.0	0.0
Total domestic demand	3.1	2.4	-6.5	4.0	3.3	2.3	1.9	1.8
Final domestic demand	3.0	2.3	-5.9	4.0	3.3	2.2	1.9	1.8
Private final consumption	3.0	2.6	-7.8	5.4	3.7	2.3	1.8	1.8
Public consumption expenditure	1.7	1.8	1.7	1.7	1.3	1.1	0.8	0.6
Gross fixed domestic investment	4.1	1.8	-5.0	1.4	3.3	3.0	2.8	2.6
Private fixed investment	4.6	1.3	-6.7	1.2	3.6	3.2	3.0	2.9
Public fixed investment	2.0	4.5	3.4	2.7	2.3	2.0	1.7	1.5
Change in private inventories 1/	0.1	0.1	-0.6	0.0	0.0	0.0	0.0	0.0
Nominal GDP	5.4	4.1	-5.4	6.1	5.4	4.3	3.9	3.8
Personal saving rate (% of disposable income)	7.7	7.9	16.2	11.2	8.4	7.8	7.8	7.8
Private investment rate (% of GDP)	17.6	17.5	16.9	16.4	16.4	16.6	16.7	16.9
Unemployment and potential output								
Unemployment rate	3.9	3.7	9.2	8.1	6.3	5.0	4.3	4.2
Labor force participation rate	62.9	63.1	62.0	62.3	62.5	62.4	62.3	62.2
Potential GDP	1.6	1.6	-0.9	0.7	2.1	2.0	1.9	1.9
Output gap (% of potential GDP)	0.2	0.9	-4.9	-1.8	-0.6	-0.4	-0.4	-0.5
Inflation								
CPI inflation (q4/q4)	2.2	2.0	0.9	2.4	2.3	2.3	2.2	2.2
Core CPI Inflation (q4/q4)	2.2	2.3	1.2	2.0	2.2	2.2	2.2	2.2
PCE Inflation (q4/q4)	1.9	1.4	0.7	2.1	2.0	2.0	2.0	2.0
Core PCE Inflation (q4/q4)	1.9	1.6	0.8	1.8	1.9	1.9	1.9	1.9
GDP deflator	2.4	1.7	1.2	2.1	2.0	2.0	2.0	2.0
Government finances								
Federal balance (% of GDP) 2/	-3.8	-4.6	-18.0	-10.4	-5.4	-4.5	-4.7	-4.9
Federal debt held by the public (% of GDP)	77.4	79.2	99.6	107.4	106.8	106.8	107.4	108.3
General government budget balance (% of GDP)	-5.8	-6.3	-22.8	-11.5	-7.4	-6.5	-6.5	-6.3
General government gross debt (% of GDP)	107.1	108.7	138.2	142.2	142.8	143.9	145.3	146.6
Interest rates (percent; period average)								
Fed funds rate	1.8	2.2	0.4	0.1	0.1	0.1	0.1	0.1
Three-month Treasury bill rate	2.0	2.1	0.4	0.1	0.0	0.0	0.0	0.0
Ten-year government bond rate	2.9	2.1	0.9	0.9	1.3	1.7	1.8	1.8
Balance of payments								
Current account balance (% of GDP)	-2.19	-2.2	-2.2	-2.1	-2.1	-2.1	-2.0	-2.0
Merchandise trade balance (% of GDP)	-4.3	-4.0	-3.9	-3.8	-3.8	-3.8	-3.7	-3.7
Export volume (NIPA basis, goods)	4.3	0.2	-11.2	6.3	5.5	4.6	2.9	2.3
Import volume (NIPA basis, goods)	5.0	0.3	-9.2	6.9	4.6	3.7	2.4	2.1
Net international investment position (% of GDP)	-47.0	-51.6	-61.2	-59.8	-58.8	-58.5	-58.3	-58.2
Saving and investment (% of GDP)								
Gross national saving	18.4	18.1	17.9	17.4	17.4	17.6	17.8	18.0
General government	-3.3	-3.8	-15.1	-9.1	-4.9	-4.0	-3.9	-3.9
Private	21.8	21.9	32.9	26.5	22.3	21.5	21.7	21.9
Personal	5.9	6.1	13.1	8.7	6.4	5.9	5.9	5.9
Business	15.9	15.8	19.8	17.7	15.9	15.7	15.9	16.0
Gross domestic investment	21.0	20.9	20.7	20.1	20.1	20.2	20.4	20.6
Private	17.6	17.5	16.9	16.4	16.4	16.6	16.7	16.9
Public	3.3	3.4	3.8	3.7	3.7	3.7	3.7	3.7

Sources: BEA; BLS; FRB; Haver Analytics; and IMF staff estimates.

1/ Contribution to real GDP growth, percentage points.

2/ Includes staff's adjustments for one-off items, including costs of financial sector support.

Table 2. United States: Balance of Payments

(annual percent change unless otherwise indicated)

	2018	2019	Projections					
			2020	2021	2022	2023	2024	2025
Real exports growth								
Goods and services	3.0	0.0	-10.8	6.7	4.7	4.0	2.8	2.4
Goods	4.3	0.2	-11.2	6.3	5.5	4.6	2.9	2.3
Services	0.7	-0.4	-10.1	7.3	3.3	2.8	2.7	2.6
Real imports growth								
Goods and services	4.4	1.0	-9.3	6.7	4.3	3.5	2.3	2.1
Goods	5.0	0.3	-9.2	6.9	4.6	3.7	2.4	2.1
Nonpetroleum goods	6.0	1.0	-9.4	7.5	5.1	4.2	2.7	2.4
Petroleum goods	-4.9	-7.0	-7.1	-3.8	-3.2	-3.2	-3.2	-3.2
Services	1.6	4.2	-9.8	5.9	2.8	2.3	2.1	2.1
Net exports (contribution to real GDP growth)	-0.3	-0.1	0.1	-0.2	-0.1	0.0	0.0	0.0
Nominal exports								
Goods and services	12.2	11.7	10.7	10.8	10.9	11.0	11.1	11.1
Nominal imports								
Goods and services	15.3	14.6	13.6	13.7	13.7	13.8	13.9	13.8
Current account								
Current account balance	-2.2	-2.2	-2.2	-2.1	-2.1	-2.1	-2.0	-2.0
Balance on trade in goods and services	-2.8	-2.7	-2.7	-2.6	-2.6	-2.6	-2.5	-2.5
Balance on income	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Capital and Financial Account								
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance	-2.0	-1.8	-2.2	-2.1	-2.1	-2.1	-2.0	-2.0
Direct investment, net	-2.0	-0.8	-0.8	-1.0	-1.0	-0.9	-0.9	-1.0
Portfolio investment, net	0.2	-0.6	-0.2	0.6	0.8	0.2	0.4	0.6
Financial derivatives, net	-0.1	-0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
Other investment, net	-0.1	-0.3	-1.1	-1.7	-1.7	-1.4	-1.4	-1.5
Reserve assets, net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Errors and Omissions	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Net International Investment Position								
Direct investment, net	-47.0	-51.6	-61.2	-59.8	-58.8	-58.5	-58.3	-58.2
Portfolio investment, net	-4.7	-8.2	-9.4	-9.8	-10.4	-10.8	-11.3	-11.9
Financial derivatives, net	-36.0	-37.4	-43.6	-40.6	-37.8	-36.1	-34.4	-32.7
Financial derivatives, net	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1
Other investment, net	-8.7	-8.5	-11.0	-12.0	-13.1	-14.0	-14.9	-15.9
Reserve assets, net	2.2	2.4	2.7	2.5	2.4	2.3	2.2	2.1
Memorandum items								
Current account balance (US\$ billions)	-450	-480	-436	-447	-478	-496	-500	-510
Non-oil trade balance (% of GDP)	-2.8	-2.8	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Foreign real GDP growth	2.6	1.6	-7.3	4.7	3.3	2.7	2.6	2.5
U.S. real GDP growth	2.9	2.3	-6.6	3.9	3.3	2.3	1.9	1.8
U.S. real total domestic demand growth	3.1	2.4	-6.5	4.0	3.3	2.3	1.9	1.8

Sources: BEA; FRB; Haver Analytics; and IMF staff estimates.

Table 3. United States: Federal and General Government Finances
(percent of GDP)

	2018	2019	Projections										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Federal government													
Revenue	16.4	16.3	13.1	15.2	17.3	17.5	16.9	17.0	17.5	17.9	17.8	17.8	17.8
Expenditure	20.2	21.0	31.1	25.6	22.7	22.0	21.7	21.9	22.1	22.2	22.7	22.2	22.4
Non-interest	18.6	19.2	29.4	23.9	21.2	20.7	20.5	20.9	21.1	21.1	21.6	21.1	21.3
Interest	1.6	1.8	1.7	1.7	1.5	1.3	1.1	1.0	1.0	1.1	1.1	1.1	1.1
Budget balance 1/	-3.8	-4.6	-18.0	-10.4	-5.4	-4.5	-4.7	-4.9	-4.6	-4.3	-4.9	-4.3	-4.6
Primary balance 2/	-2.2	-2.9	-16.2	-8.7	-3.9	-3.2	-3.6	-3.9	-3.6	-3.2	-3.8	-3.2	-3.5
Primary structural balance 3/ 4/	-2.2	-3.0	-13.9	-7.6	-3.5	-3.0	-3.4	-3.7	-3.4	-3.0	-3.5	-3.0	-3.2
Change	-0.5	-0.8	-10.9	6.3	4.1	0.5	-0.4	-0.3	0.3	0.4	-0.5	0.5	-0.2
Federal debt held by the public	77.4	79.2	99.6	107.4	106.8	106.8	107.4	108.3	108.8	109.0	109.8	109.9	110.4
General government													
Revenue	29.6	29.4	25.5	28.4	30.4	30.4	30.0	30.3	30.9	31.2	31.1	31.1	31.1
Expenditure	35.4	35.7	48.3	40.0	37.7	36.9	36.5	36.6	36.6	36.7	36.9	36.5	36.6
Net interest	2.2	2.2	2.4	2.2	2.0	1.8	1.6	1.5	1.3	1.3	1.3	1.3	1.3
Net lending 1/	-5.8	-6.3	-22.8	-11.5	-7.4	-6.5	-6.5	-6.3	-5.7	-5.5	-5.7	-5.4	-5.6
Primary balance 2/	-3.6	-4.1	-20.5	-9.3	-5.4	-4.8	-4.9	-4.9	-4.4	-4.2	-4.4	-4.1	-4.3
Primary structural balance 3/ 4/	-3.4	-4.4	-16.9	-8.1	-5.0	-4.5	-4.6	-4.6	-4.1	-3.9	-4.0	-3.7	-3.9
Change	-1.2	-1.0	-12.5	8.8	3.1	0.5	-0.1	0.0	0.5	0.2	-0.2	0.4	-0.2
Gross debt	107.1	108.7	138.2	142.2	142.8	143.9	145.3	146.6	147.4	148.0	148.8	149.2	149.8
incl. unfunded pension liab.	136.6	135.4	164.5	168.1	168.2	168.9	169.9	170.9	171.2	171.4	171.8	171.8	172.0

Sources: Congressional Budget Office; Office of Management and Budget; and IMF staff estimates.

Note: Fiscal projections are based on Congressional Budget Office forecast adjusted for the IMF staff's policy and macroeconomic assumptions. Projections incorporate the effects of legislations in responses to the COVID-19 outbreak (Coronavirus Preparedness and Response Supplemental Appropriations Act, Families First Coronavirus Response Act, Coronavirus Aid, Relief and Economy Security Act and Paycheck Protection Program and Health Care Enhancement Act), tax reform (Tax Cuts and Jobs Act, signed into law end-2017) as well as the Bipartisan Budget Act of 2018 passed in February 2018. Fiscal projections are adjusted to reflect the IMF staff's forecasts for key macroeconomic and financial variables and different accounting treatment of financial sector support and of defined-benefit pension plans and are converted to a general government basis. Data are compiled using SNA 2008, and when translated into GFS this is in accordance with GFSM 2014. Due to data limitations, most series begin 2001.

1/ Includes staff's adjustments for one-off items, including costs of financial sector support.

2/ Excludes net interest.

3/ Excludes net interest, effects of economic cycle, and costs of financial sector support.

4/ Percent of potential GDP.

Table 4. United States: Core Financial Soundness Indicators for Deposit Takers

(Percent unless stated otherwise, eop)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Regulatory capital to risk-weighted assets	14.7	14.5	14.4	14.4	14.1	14.2	14.5	14.8	14.7
Regulatory tier 1 capital to risk-weighted assets	12.6	12.7	12.8	13.1	13.1	13.2	13.5	13.8	13.8
Non-performing loans net of provisions to capital	17.6	15.7	11.7	8.8	7.2	6.6	5.7	4.7	4.3
Non-performing loans to total gross loans	3.8	3.3	2.5	1.9	1.5	1.3	1.1	0.9	0.9
Sectoral distribution of total loans: residents	95.6	95.5	95.2	95.6	95.8	96.1	96.0	96.3	96.3
Sectoral distribution of total loans: deposit-takers	6.0	6.0	5.0	4.1	3.6	3.8	3.9	5.5	4.8
Sectoral distribution of total loans: other financial corporations	3.8	4.4	5.2	6.2	6.7	6.7	6.9	7.3	7.7
Sectoral distribution of total loans: general government	0.9	1.1	1.2	1.3	1.4	1.5	1.6	1.5	1.4
Sectoral distribution of total loans: nonfinancial corporations	31.8	32.1	33.3	34.2	35.0	35.5	35.4	35.3	35.5
Sectoral distribution of total loans: other domestic sectors	53.1	51.9	50.5	49.8	49.1	48.5	48.2	46.7	46.8
Sectoral distribution of total loans: nonresidents	4.4	4.5	4.8	4.4	4.2	3.9	4.0	3.7	3.7
Return on assets	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.4
Return on equity	2.3	2.7	3.3	2.8	3.0	3.2	2.9	3.4	3.5
Interest margin to gross income	65.2	60.8	63.5	63.7	63.4	65.1	67.0	68.3	66.2
Non-interest expenses to gross income	64.5	63.6	61.7	64.7	60.7	59.6	61.6	58.4	57.3
Liquid assets to total assets (liquid asset ratio)	12.7	13.4	14.5	14.5	13.2	12.8	13.2	12.7	11.7
Liquid assets to short term liabilities	66.1	74.1	88.3	90.0	91.2	98.2	97.7	89.3	80.6

Note: 2019 data is the 2019Q3 value.

Appendix I. External Sector Assessment

Overall Assessment: <i>The external position in 2019 was moderately weaker than the level implied by medium-term fundamentals and desirable policies in 2019. Larger private-sector saving is expected to largely offset the 2020 fiscal packages, resulting in a relatively steady CA deficit in the coming years. The deep economic contraction, and the effects of actual and prospective changes in fiscal, trade, and labor-market (including e.g. immigration) policies add uncertainty to the assessment.</i>						
Potential Policy Responses: Given the unprecedented social and economic fallout from the coronavirus outbreak and associated containment measures, the U.S should expand fiscal efforts to ease the burden of the shutdown on households and firms. Once the immediate health crisis has subsided, the U.S. should also use its fiscal space to put in place a front-loaded package that would increase investment in infrastructure, facilitate the transition to a lower carbon economy, and offer consumption subsidies to kick-start demand. Over the medium term, fiscal consolidation, aimed at a medium-term general government primary surplus of about 3/4 percent of GDP, should be reinvigorated to put the debt-GDP ratio on a downward path and address the CA gap. Structural policies to increase competitiveness include: upgrading infrastructure, enhancing schooling, training and mobility of workers, supporting the working poor, and policies to increase growth in the labor force (including skill-based immigration reform). Tariff barriers should be rolled back, and trade and investment disagreements with other countries should be resolved in a manner that supports an open, stable, and transparent global trading system.						
Foreign Asset and Liability Position and Trajectory	Background. The net international investment position (NIIP), which averaged about -41 percent during 2014-17, decreased further from -46.4 percent of GDP in 2018 to -51.3 percent of GDP in 2019, including due to valuation effects of -4.9 percent of GDP. Under staff's baseline scenario, the NIIP is projected to decline by about [2] percent of GDP through the medium term, on the back of sustained current account deficits. Assessment. Financial stability risks could surface in the form of an unexpected decline in foreign demand for US fixed income securities, which are the main component of the country's external liabilities. This risk, which could materialize e.g. due to a failure to re-establish fiscal sustainability, remains moderate given the dominant status of the US dollar as a reserve currency. Around 63 percent of US assets are in the form of FDI and portfolio equity claims.					
2019 (% GDP)	NIIP: -51.3	Gross Assets: 136.8	Debt Assets: 46.4	Gross Liab.: 188.1	Debt Liab.: 95.4	
Current Account	Background. The US CA deficit decreased from 2.4 percent of GDP in 2018 to 2.3 percent in 2019 (from 2.4 to 2.0 in cyclically adjusted terms), compared with a deficit of 2.1 percent of GDP in 2014. The evolution since 2014 is explained by a deterioration of the non-oil balance. The large fiscal deficit did not lead to an increase in the CA deficit in 2019 due to an improving oil balance and strong income account. However, trade-balance outturns continued to be difficult to interpret as a result of shifts in the timing of exports and imports due to tariffs. The fiscal expansion in the wake of the COVID-19 crisis is expected to be offset by higher private-sector savings. Higher net exports due to compressing imports are projected to offset a weaker income account. The CA deficit is expected to remain at around 2 percent of GDP. Assessment. The EBA model estimates a cyclically adjusted CA of -2 percent of GDP, and a cyclically adjusted CA norm of -0.7 percent of GDP. The cyclically adjusted CA gap is -1.3 percent of GDP for 2019, reflecting policy gaps (-0.7 percent of GDP, of which -0.7 percent corresponds to fiscal policy) and an unidentified residual (about -0.6 percent of GDP) that may reflect structural factors not included in the model. On balance, staff assesses the 2019 cyclically adjusted CA to be -0.8 to -1.8 percent of GDP lower than the level implied by medium-term fundamentals and desirable policies.					
2019 (% GDP)	Actual CA: -2.3	Cycl. Adj. CA: -2.0	EBA CA Norm: -0.7	EBA CA Gap: -1.3	Staff Adj.: 0.0	Staff CA Gap: -1.3
Real Exchange Rate	Background. After depreciating by 1 percent in 2018 (pa), the real effective exchange rate (REER) appreciated by 2.8 percent in 2019 (pa). As of end-2019 the REER was thus still about 17 percent higher than the average for 2014. Through March 2020, the USD appreciated 3.2 percent in real terms relative to the 2019 average. Assessment. Indirect estimates of the REER (based on the EBA current account assessment) imply that the exchange rate was overvalued by 11.4 percent in 2019 (applying an estimated elasticity of 0.11). The EBA REER index model suggests an overvaluation of 8.1 percent, and the EBA REER level model suggests an overvaluation of 10.9 percent. Considering all the estimates and their uncertainties, staff assesses the 2019 average REER to be somewhat overvalued, in the 8-14 percent range, with a midpoint of 11 percent. /1					
Capital and Financial Accounts: Flows and Policy Measures	Background. Net financial inflows were about 1.8 percent of GDP in 2019, compared with 2.2 percent of GDP in 2018. Stronger net portfolio investment flows were offset by weaker direct and other investment flows. Assessment. The United States has an open capital account. Vulnerabilities are limited by the dollar's status as a reserve currency with foreign demand for US Treasury securities supported by the status of the dollar as a reserve currency, and, possibly, by safe-haven flows.					
FX Intervention and Reserves Level	Assessment. The dollar has the status of a global reserve currency. Reserves held by the United States are typically low relative to standard metrics. The currency is free floating.					
1/ The midpoint is obtained from the CA model gap, applying an estimated semi-elasticity of 0.11. The range stems from the largest absolute discrepancy between the CA model and the set of REER models.						

Appendix II. Risk Assessment Matrix

Nature of Risk	Likelihood of Realization	Expected Impact if Risk Materializes	Policy Response and Recommendations
External Risks			
Prolonged COVID-19 outbreak	High	High	
	Containment measures intensify or need to be re-introduced. Longer containment and uncertainties about the intensity and the duration of the outbreak reduce supply (including through global value chains' disruption) and domestic and external demand. Deteriorating economic fundamentals and the associated decline in risk appetite result in a second wave of financial tightening. Rising bankruptcies translate into higher unemployment and financial institutions' losses.	Tighter financial conditions would result in debt service and refinancing difficulties for corporates and households. High unemployment would result in subdued consumption and longer-term damage to participation and human capital. Financial institutions' losses would impair the availability of credit, with further adverse implications for growth.	Fiscal packages should aim at minimizing undue balance sheet dislocations, preserve employer-employee relations, and support household income. Monetary policy should remain accommodative and prevent an excessive tightening of financial conditions. Asset purchases and the emergency credit facilities can be scaled up to address market disruptions in credit markets.
More protectionism	High	Medium	
	Pandemic-prompts protectionist actions (e.g., export controls) that stay in place and deteriorating economic conditions re-ignite broader protectionist measures.	Additional tariff and nontariff barriers or the threat of new actions reduce growth both directly and indirectly through confidence effects (increasing financial market volatility). A retreat from cross-border integration would have wide-ranging negative effects on trade, capital flows, growth, confidence, and global cooperation on financial regulation.	Efforts should be made to reverse trade restrictions while working with partner countries (through both bilateral channels and the WTO) to address the policies that distort trade flows and investment decisions. The application of countervailing duties could potentially escalate trade tensions.
Widespread social discontent and political instability	High	Medium	
	Social tensions erupt due to dissatisfaction with the policy response to the epidemic and the economic fallout—including massive unemployment, higher incidence of poverty and shortages of essentials.	Beyond immediate economic disruption and adverse confidence effects, the resulting political instability complicates reaching political consensus on policies to address the pandemic. This could exacerbate perceptions of social and racial injustice. Public protests may also lead to an increased COVID infection rate.	Potential measures include improving the system of social assistance, supporting the unemployed, increasing resources to healthcare providers, increasing health preparedness, and ensuring that those that are currently without medical insurance have access to affordable, quality health care.
Oversupply in the oil market	High	Medium	
	Supply increases following the breakdown of the OPEC+ agreement together with demand shocks mean that energy prices remain at depressed levels. Uncertainty about future production contribute to continued high price volatility.	Low oil prices would lead to subdued investment spending (structures) in the U.S. energy sector. Energy firms would face higher funding costs, with an increased number of bankruptcies.	The Federal Reserve's Section 13(3) credit facilities can provide liquidity support to cash-constrained, but solvent, energy corporates. In addition, fiscal measures could be deployed, if needed, to facilitate adjustment by the industry to lower prices.

Nature of Risk	Likelihood of Realization	Expected Impact if Risk Materializes	Policy Response and Recommendations
Domestic Risks			
Rising vulnerabilities in the U.S. corporate sector	Medium	High	
	Rise in corporate leverage and migration of risks to nonbank financial institutions in recent years compounded with ongoing economic disruption could result in severe financial strain. The rising share of risky debt markets—leveraged loans, high-yield bond and private debt—represent an important source of vulnerability in a downturn.	Following a shock to earnings or availability of new financing, highly leveraged corporates may experience significant stress, leading to higher credit spreads, potential downgrades, inability to refinance debt, and defaults. Widespread use of weaker covenants in risky debt markets could result in larger losses if defaults were to materialize.	Emergency liquidity support could be extended in case financial market dislocations become apparent. Stringent actions would be needed to preserve strong capital buffers, including through tighter limits on dividend distributions and buybacks. Over the medium-term, macroprudential tools should be developed and deployed to address vulnerabilities in the nonbank sector.
Risks facing state and local governments	Medium	Medium	
	Public finances of state and local government become under stress in the presence of a large shock—for instance, during the ongoing pandemic. Public health care interventions rest largely on state and local government budgets. Social assistance and unemployment insurance spending predominantly takes place at the state and local level. Finally, states are reliant on sales tax revenues, and would be affected significantly by lower demand.	Balanced budget requirements would induce states to cut spending. Fiscal tightening by subnational governments would constitute an important headwind to federal efforts to boost activity. Spending cuts by state and local governments will unavoidably reduce social assistance, health, and education spending (two-thirds of state and local outlays), and will be particularly incident on low income households and the unemployed.	To support state and local governments in the provision of essential services, and to mitigate the effects of procyclical fiscal consolidation triggered by state and local budget balance rules, a large increase in federal transfers to states should be appropriated. This would also have the advantage of avoiding cuts to social assistance, healthcare, unemployment insurance, and education.
<p>Note: The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. Conjectural risks are especially relevant over shorter horizons (up to 2 years) given the current baseline. Structural risks (omitted from this streamlined version) remain salient over shorter and longer horizons (up to 3 years).</p>			

Appendix III. Public Debt Sustainability Analysis

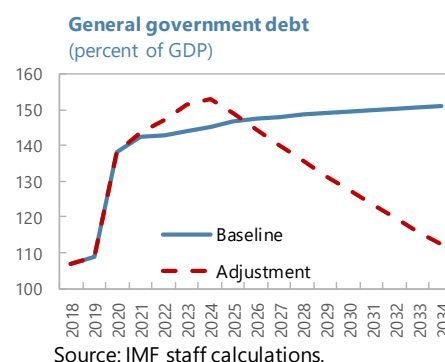
Due to the unprecedented fiscal response to the COVID-19 outbreak, the U.S. budget deficit has increased considerably in 2020, and the U.S. public debt-to-GDP ratio is on an unsustainable path. Under the baseline scenario, public debt is projected to rise over the medium term, as age-related spending pressures on entitlement programs assert themselves. In addition, tax cuts and discretionary spending increases enacted since late-2017 are adding pressure on U.S. public finances. Gross financing needs are large, albeit manageable given the global reserve currency status of the U.S. dollar. A credible medium-term fiscal adjustment featuring reprioritization of budget programs and revenue-gaining tax reform is needed to put public debt on a downward path.

A. Background

1. Background. Significant fiscal consolidation measures were legislated in 2011–13 to tackle the high public debt ratio, which had doubled at the federal government level since 2007 due to the Great Recession and associated fiscal measures. However, the Bipartisan Budget Acts of 2013, 2015, and 2018 reversed some of the cuts scheduled to take place since FY2014, with only partial offsets from savings generated through mandatory spending cuts in later years. In addition, the Tax Act of 2015 and the Tax Cuts and Jobs Act of 2017 extended several tax cuts while introducing new ones. Finally, an unprecedented scale of fiscal expansion has been introduced in response to the COVID-19 pandemic. As a result, fiscal deficits are projected to rise substantially in the near term and to sustain in the medium to long term.

2. Baseline. The staff's baseline is based on current laws. Under this baseline, public debt is projected to rise considerably in 2020 reflecting the automatic and discretionary fiscal responses to the current economic downturn but also a smaller economy. Public debt is expected to continue rising in the medium term as age-related spending pressures on entitlement programs assert themselves. Federal debt held by the public is projected to increase from about 79 percent of GDP in FY2019 to around 109 percent of GDP in 2029, with general government gross debt rising from about 109 percent of GDP to 148 percent of GDP during this period.

3. Adjustment scenario. The general government primary deficit was 4.1 percent of GDP in 2019 and is projected at 20.5 percent of GDP in 2020. Reflecting the still considerable output gap in staff's baseline projections and the historically low borrowing cost, staff recommends an additional 10½ percent of GDP stimulus through 2023 to bring the economy to full employment, which would push public debt to higher levels. Nevertheless, gradually raising the primary general government surplus in the medium-term to around ¾ percent of GDP (1¾ percent of GDP for the federal government) would be necessary to put the debt-to-GDP ratio firmly on a downward path. The target primary surplus would have to be larger to bring the debt ratio closer to pre-Great Recession levels by 2034.



4. Debt servicing costs. The fiscal projections benefit from the current favorable interest rate-growth differential, reflecting accommodative monetary policy and the safe-haven status of the United States. Under staff's baseline, the effective interest rate is projected to rise gradually from the current level of 1.0 percent to 2.0 percent by 2029, which remains considerably below its 2009–17 average level. Thus, real interest rates will act as a debt-reducing flow over the medium-term.

5. Realism. Baseline economic assumptions are generally within the error band observed for all countries. The baseline fiscal projections and implied near-term adjustment are outliers compared with historical and cross-country experience, but are nevertheless realistic, reflecting the large but temporary fiscal expansion in response to the pandemic.

6. Stress tests. The public debt dynamics are sensitive to growth and interest rate assumptions. An increase of 100 basis points in the sovereign risk premium would raise the public debt ratio to about 156 percent of GDP by 2029, about 8 percentage points of GDP above the baseline. Similarly, were real GDP growth to be one standard deviation below the baseline, the public debt ratio would increase by about 3 percentage points above the baseline. A scenario involving a 1 percentage point of GDP larger fiscal deficit over the next two years would increase public debt ratio by about 4 percentage points above the baseline by 2029. A combined macro-fiscal shock could raise the public debt ratio to as high as 161 percent of GDP by 2029. An exchange rate shock does not have major implications for debt sustainability in the United States given that all debt is denominated in local currency and the reserve currency status of the dollar.

7. Mitigating factors. The depth and liquidity of the U.S. Treasury market as well as its safe-haven status represent a mitigating factor for the high external and gross financing requirements. However, given the uncertainties on global capital dynamics over the medium-term, risks to external and gross financing requirements remain.

Appendix III. Figure 1. United States: Public DSA–Risk Assessment

Heat Map Baseline (2015-2025)

Debt level 1/

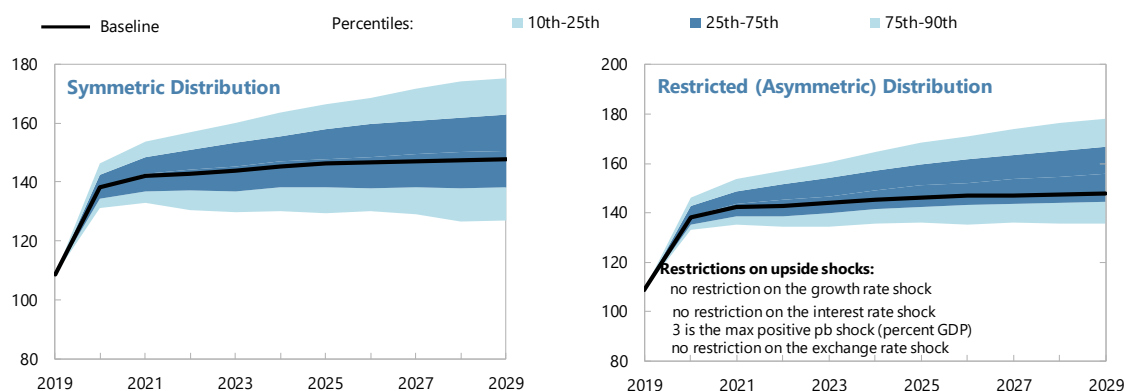
Gross financing needs 2/

Debt profile 3/

Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

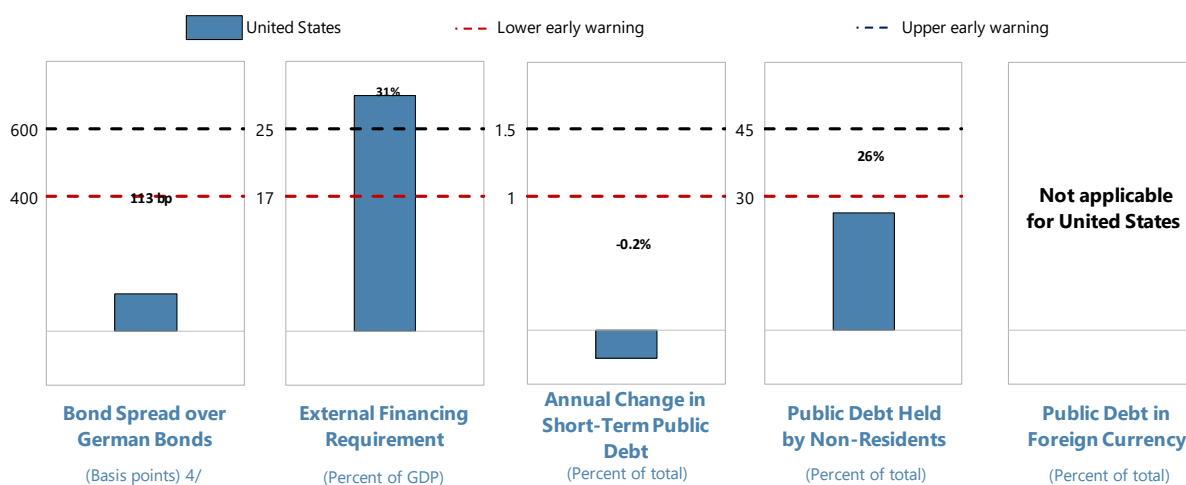
Evolution of Predictive Densities of Gross Nominal Public Debt

(Percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks)



Source: IMF staff

1/ The cell is highlighted in green if debt burden benchmark of 85% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant

2/ The cell is highlighted in green if gross financing needs benchmark of 20% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.

Lower and upper risk-assessment benchmarks are:

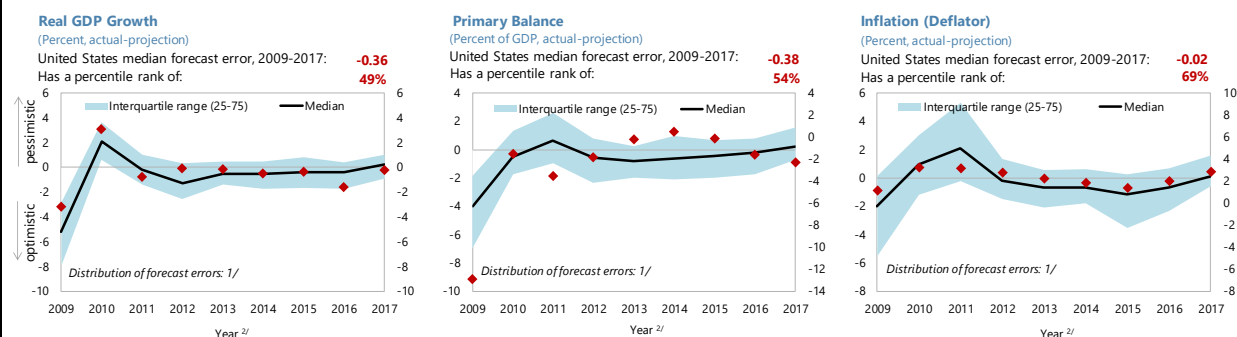
400 and 600 basis points for bond spreads; 17 and 25 percent of GDP for external financing requirement; 1 and 1.5 percent for change in the share of short-term debt;

30 and 45 percent for the public debt held by non-residents

4/ An average over the last 3 months, 09-Apr-20 through 08-Jul-20

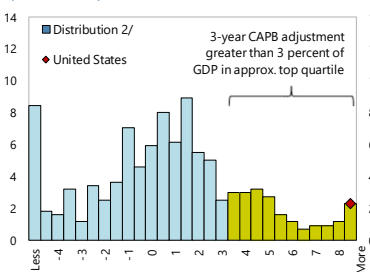
Appendix III. Figure 2. United States: Public DSA–Realism of Baseline Assumptions

Forecast Track Record, versus all countries

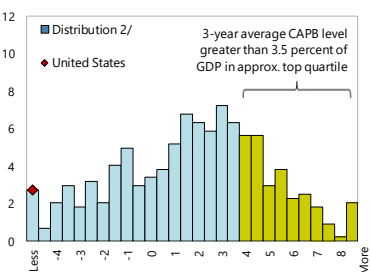


Assessing the Realism of Projected Fiscal Adjustment

3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB) (Percent of GDP)

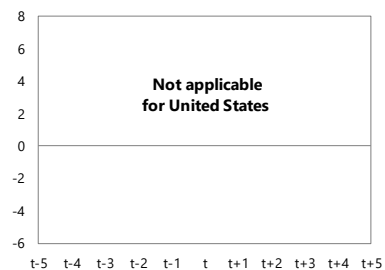


3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB) (Percent of GDP)



Boom-Bust Analysis

Real GDP growth (Percent)



Source : IMF staff

1/ Plotted distribution includes all countries, percentile rank refers to all countries. Projections made in the spring WEO vintage of the preceding year

2/ Data cover annual observations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis

Appendix III. Figure 3. United States: Public DSA–Baseline Scenario

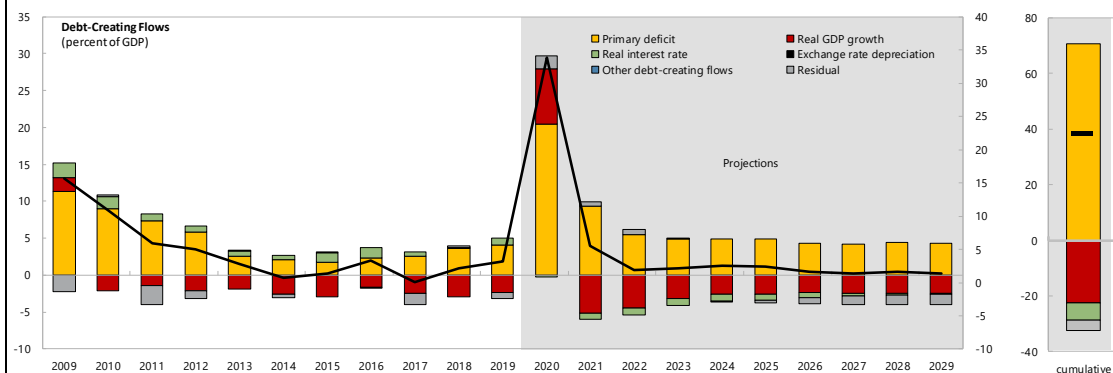
(percent of GDP, unless otherwise indicated)

Debt, Economic and Market Indicators 1/

	Actual			Projections										As of July 08, 2020		
	2009–2017 2/	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Sovereign Spreads		
Nominal gross public debt	101.3	106.9	108.7	138.2	142.2	143.0	143.9	145.2	146.3	146.8	147.1	147.5	147.8	Spread (bp) 3/		111
Public gross financing needs	39.7	41.4	41.6	59.1	48.2	42.4	41.8	43.8	42.3	40.3	36.3	29.8	26.8	CDS (bp)		3
Real GDP growth (percent)	1.7	2.9	2.3	-6.6	3.9	3.3	2.3	1.9	1.8	1.7	1.7	1.7	1.7	Ratings	Foreign	Local
Inflation (GDP deflator, percent)	1.5	2.4	1.7	1.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Moody's	Aaa	Aaa
Nominal GDP growth (percent)	3.2	5.4	4.1	-5.4	6.1	5.4	4.4	4.0	3.9	4.0	4.0	4.0	4.0	S&P's	AA+	AA+
Effective interest rate (percent) 4/	2.8	2.7	2.7	1.0	1.6	1.4	1.4	1.5	1.5	1.7	1.8	1.9	2.0	Fitch	AAA	AAA

Contribution to Changes in Public Debt

	Actual			Projections													Cumulative	Debt-stabilizing primary balance 9/
	2009–2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029					
Change in gross public sector debt	3.6	1.0	1.8	29.5	4.0	0.7	1.0	1.3	1.1	0.5	0.3	0.5	0.3	39.1	-2.6			
Identified debt-creating flows	4.4	0.8	2.6	27.8	3.4	0.1	0.8	1.4	1.5	1.4	1.4	1.7	1.7	41.2				
Primary deficit	5.0	3.6	4.1	20.5	9.4	5.5	4.9	4.9	4.9	4.4	4.2	4.4	4.3	67.3				
Primary (noninterest) revenue and grants	29.7	29.1	28.9	25.0	27.9	29.8	29.9	29.6	29.9	30.4	30.6	30.6	30.1	293.8				
Primary (noninterest) expenditure	34.6	32.7	33.0	45.5	37.3	35.3	34.8	34.5	34.7	34.8	35.0	34.4		361.0				
Automatic debt dynamics 5/	-0.6	-2.7	-1.5	7.3	-5.9	-5.4	-4.1	-3.5	-3.4	-3.0	-2.8	-2.7	-2.6	-26.1				
Interest rate/growth differential 6/	-0.6	-2.7	-1.5	7.3	-5.9	-5.4	-4.1	-3.5	-3.4	-3.0	-2.8	-2.7	-2.6	-26.1				
Of which: real interest rate	1.1	0.2	0.9	-0.2	-0.8	-1.0	-1.0	-0.9	-0.8	-0.6	-0.4	-0.2	-0.2	-6.1				
Of which: real GDP growth	-1.7	-2.9	-2.4	7.5	-5.1	-4.5	-3.1	-2.6	-2.6	-2.4	-2.4	-2.4	-2.4	-20.0				
Exchange rate depreciation 7/	0.0	0.0	0.0	...	...	...	...	...	...	...	...	...	...	...
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Net privatization proceeds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Other liabilities (bank recap. and PSI sweetener)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Residual, including asset changes 8/	-0.8	0.1	-0.8	1.7	0.6	0.6	0.2	-0.1	-0.4	-0.9	-1.1	-1.3	-1.4	-2.1				



Source: IMF staff

1/ Public sector is defined as general government

2/ Based on available data

3/ Bond Spread over German Bonds

4/ Defined as interest payments divided by debt stock at the end of previous year

5/ Derived as $[r - p(1+g) - g + ae(1+r)] / (1+g+p+gp)$ times previous period debt ratio, with r = interest rate; p = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency-denominated debt; and e = nominal exchange rate depreciation

6/ The real interest rate contribution is derived from the denominator in footnote 4 as $r - \pi(1+g)$ and the real growth contribution as $-g$

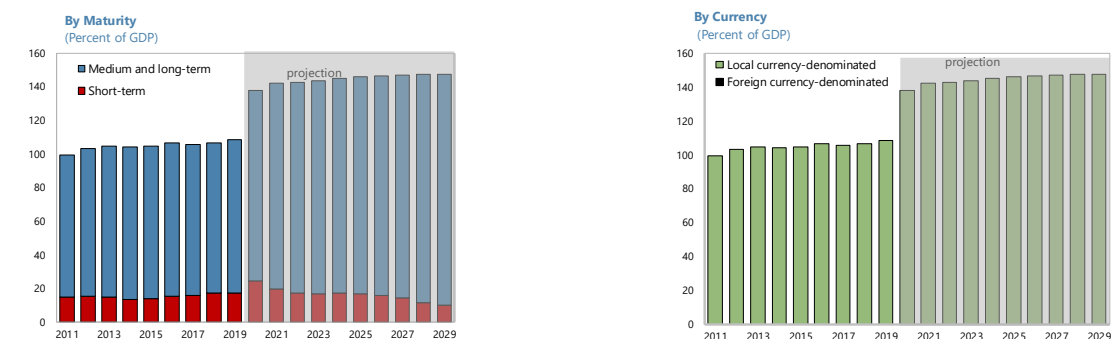
7/ The exchange rate contribution is derived from the numerator in footnote 2/ as $ae(1+r)$

8/ For projections, this line includes exchange rate changes during the projection period. Also includes ESM capital contribution, arrears clearance, SMP and ANFA income, and the effect of deferred interest

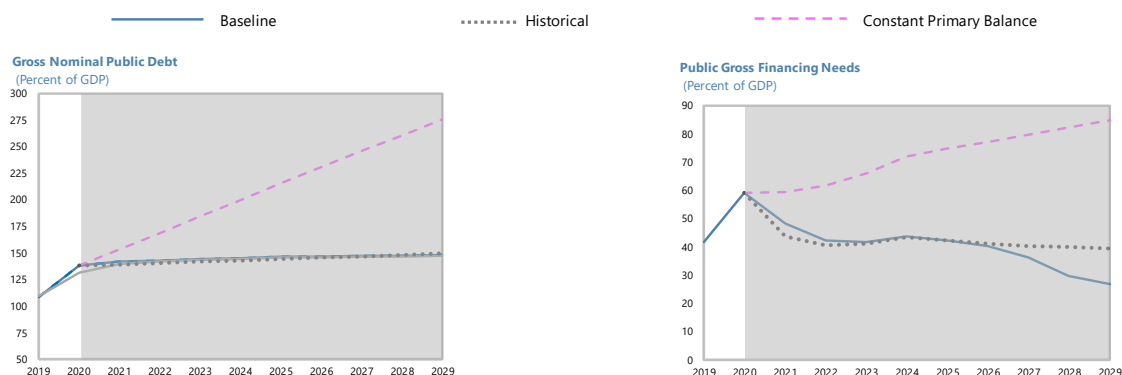
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year

Appendix III. Figure 4. United States: Public DSA—Composition of Public Debt and Alternative Scenarios

Composition of Public Debt



Alternative Scenarios



Underlying Assumptions (Percent)

Baseline scenario	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Historical scenario	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Real GDP growth	-6.6	3.9	3.3	2.3	1.9	1.8	1.7	1.7	1.7	1.7	Real GDP growth	-6.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Inflation	1.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Inflation	1.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Primary balance	-20.5	-9.4	-5.5	-4.9	-4.9	-4.9	-4.4	-4.2	-4.4	-4.3	Primary balance	-20.5	-4.1	-4.1	-4.1	-4.1	-4.1	-4.1	-4.1	-4.1	-4.1
Effective interest rate	1.0	1.6	1.4	1.4	1.5	1.5	1.7	1.8	1.9	2.0	Effective interest rate	1.0	1.6	1.9	2.2	2.4	2.6	2.8	3.0	3.2	3.3
Constant primary balance scenario																					
Real GDP growth	-6.6	3.9	3.3	2.3	1.9	1.8	1.7	1.7	1.7	1.7											
Inflation	1.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1											
Primary balance	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5											
Effective interest rate	1.0	1.6	1.4	1.4	1.4	1.4	1.6	1.8	1.9	2.0											

Source: IMF staff

Appendix III. Figure 5. United States: Public DSA–Stress Tests



Appendix IV. External Debt Sustainability Analysis

Appendix IV. Table 1. External Debt Sustainability Framework, 2015-2025
(In percent of GDP, unless otherwise indicated)

	Actual					Projections							Debt-stabilizing non-interest current account 6/ -3.1
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		
Baseline: External debt	94.2	92.1	90.7	91.8	88.4	96.2	93.3	91.1	90.0	88.9	87.7		
Change in external debt	1.1	-2.2	-1.4	1.1	-3.4	7.8	-2.9	-2.2	-1.2	-1.0	-1.2		
Identified external debt-creating flows (4+8+9)	-0.3	0.4	-2.7	-3.3	-0.3	8.3	-1.5	-0.6	0.3	0.5	0.6		
Current account deficit, excluding interest payments	2.2	2.1	1.9	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0		
Deficit in balance of goods and services	2.7	2.6	2.6	2.9	2.7	2.1	2.1	2.0	1.8	1.8	1.8		
Exports	12.5	12.0	12.2	12.3	11.8	10.8	10.9	11.0	11.1	11.2	11.2		
Imports	15.2	14.5	14.9	15.2	14.5	12.9	13.0	13.0	13.0	13.0	13.0		
Net non-debt creating capital inflows (negative)	1.0	0.7	-0.8	-0.8	1.1	0.0	0.0	0.2	0.2	0.1	0.1		
Automatic debt dynamics 1/	-3.6	-2.5	-3.8	-4.7	-3.6	6.1	-3.6	-2.9	-2.0	-1.6	-1.6		
Contribution from nominal interest rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Contribution from real GDP growth	-2.6	-1.5	-2.1	-2.5	-2.1	6.1	-3.6	-2.9	-2.0	-1.6	-1.6		
Contribution from price and exchange rate changes 2/	-1.0	-1.0	-1.7	-2.2	-1.6	...	...	...	...	...	...
Residual, incl. change in gross foreign assets (2-3) 3/	1.4	-2.5	1.3	4.4	-3.1	-0.5	-1.4	-1.6	-1.5	-1.5	-1.8		
External debt-to-exports ratio (in percent)	753.3	770.0	741.6	744.1	749.6	888.8	855.2	827.6	807.3	792.2	779.5		
Gross external financing need (in billions of US dollars) 4/	17825.6	17643.6	17802.7	18732.7	19101.7	19118.6	20427.1	21036.1	21656.8	22244.1	22779.9		
in percent of GDP	97.8	94.3	91.2	91.0	89.1	94.3	95.0	92.9	91.6	90.6	89.3		
Scenario with key variables at their historical averages 5/						96.2	95.1	93.7	92.5	91.2	89.6	-3.7	
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation						
Real GDP growth (in percent)	2.9	1.6	2.4	2.9	2.3	2.3	0.5	-6.6	3.9	3.3	2.3	1.8	
GDP deflator in US dollars (change in percent)	1.0	1.0	1.9	2.4	1.7	1.7	0.5	1.2	2.1	2.0	2.0	2.0	
Nominal external interest rate (in percent)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Growth of exports (US dollar terms, in percent)	-4.7	-1.8	6.7	6.4	-0.4	4.9	6.9	-13.2	6.9	6.3	5.6	4.7	
Growth of imports (US dollar terms, in percent)	-3.5	-1.7	6.8	7.8	-0.5	4.9	7.3	-15.8	6.5	5.3	4.4	4.0	
Current account balance, excluding interest payments	-2.2	-2.1	-1.9	-2.2	-2.2	-2.3	0.4	-2.2	-2.1	-2.1	-2.0	-2.0	
Net non-debt creating capital inflows	-1.0	-0.7	0.8	0.8	-1.1	0.3	1.0	0.0	0.0	-0.2	-0.2	-0.1	

1/ Derived as $[r - g - r(1+g) + ea(1+r)]/(1+g+r+gr)$ times previous period debt stock, with r = nominal effective interest rate on external debt; r = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as $[-r(1+g) + ea(1+r)]/(1+g+r+gr)$ times previous period debt stock. r increases with an appreciating domestic currency ($e > 0$) and rising inflation (based on GDP deflator).

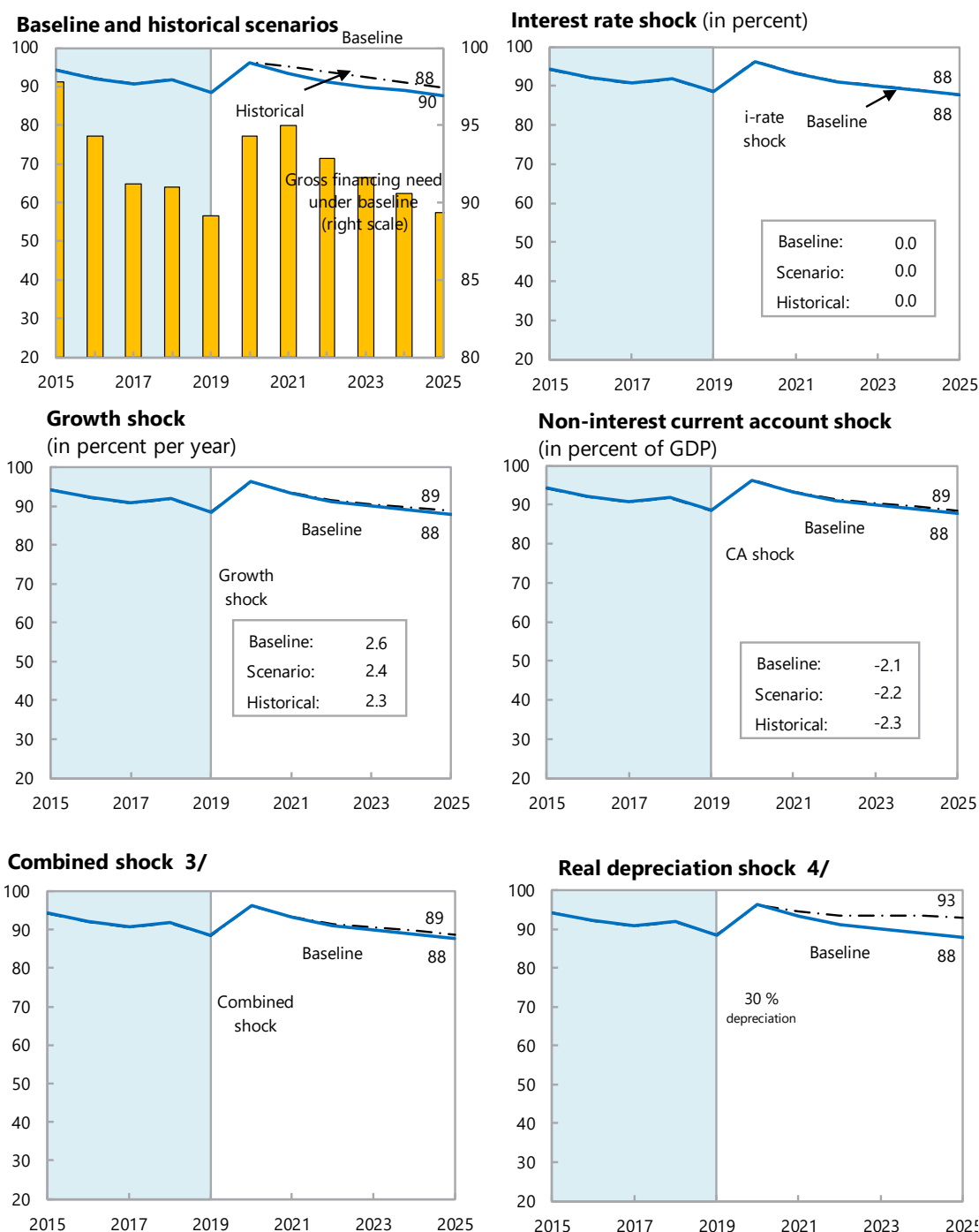
3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Appendix IV. Figure 1. External Debt Sustainability: Bound Tests 1/ 2/
(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.

2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.

3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

4/ One-time real depreciation of 30 percent occurs in 2020.



Appendix V. Draft Press Release

IMF Executive Board Concludes 2020 Article IV Consultation with United States

FOR IMMEDIATE RELEASE

WASHINGTON, DC – July 31, 2020 the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation¹ with United States.

The economic outlook has shifted dramatically with the rapid spread of COVID-19. [135,000] Americans have tragically lost their lives and many more have become seriously ill. The sudden-stop in activity, arising from the shutdown, has caused an abrupt contraction in activity and a surge in unemployment. The unemployment rate now stands at 11.1 percent and fifteen million Americans have lost their job over the past 4 months. These job losses have disproportionately affected lower income households, those without a college education, women, African Americans and Hispanics, many of whom have insufficient buffers to cope with the unprecedented size of the economic shock. The economy is expected to contract by around 6½ percent in 2020 and expand by around 4 percent in 2021.

There has been a strong and proactive response to this unprecedented shock to the economy. Congress moved swiftly to provide substantial assistance to households, businesses and state and local governments. These important fiscal efforts have, however, come at a substantial cost. The federal government primary deficit is expected to rise from around 3 percent of GDP in FY2019 to 16 percent of GDP in FY2020 and the federal debt is expected to approach 100 percent of GDP by end-2020. State and local government deficits are also expected to more-than-double in size this year.

The Federal Reserve also reacted quickly as the scale of the burgeoning pandemic became clear. In an unscheduled meeting on March 15, the FOMC lowered the federal funds target range to 0 to ¼ percent and indicated it would maintain rates at this level until it is confident that the economy has weathered

¹ Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

recent events and is on track to achieve the Fed's maximum employment and price stability goals. There was a significant increase in Fed purchases of Treasury and agency mortgage backed securities, new credit facilities were launched to backstop institutions and ensure the smooth functioning of a range of financial markets, and the Fed expanded bilateral swaps with a range of central banks to normalize conditions in dollar funding markets.

Executive Board Assessment²

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² At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here:

<http://www.IMF.org/external/np/sec/misc/qualifiers.htm>.

United States: Selected Economic Indicators

	2018	2019	Projections					
			2020	2021	2022	2023	2024	2025
Real GDP (% change from previous period)	2.9	2.3	-6.6	3.9	3.3	2.3	1.9	1.8
Real GDP (q4/q4)	2.5	2.3	-6.9	5.1	2.8	2.0	1.9	1.8
Output gap (% of potential GDP)	0.2	0.9	-4.9	-1.8	-0.6	-0.4	-0.4	-0.5
Unemployment rate (q4 avg.)	3.8	3.5	9.7	7.4	5.7	4.6	4.3	4.2
Current account balance (% of GDP)	-2.2	-2.2	-2.2	-2.1	-2.1	-2.1	-2.0	-2.0
Fed funds rate (end of period)	2.2	1.7	0.1	0.1	0.1	0.1	0.1	0.1
Ten-year government bond rate (q4 avg.)	3.0	1.8	0.8	1.0	1.5	1.7	1.8	1.8
PCE Inflation (q4/q4)	1.9	1.4	0.7	2.1	2.0	2.0	2.0	2.0
Core PCE Inflation (q4/q4)	1.9	1.6	0.8	1.8	1.9	1.9	1.9	1.9
Federal fiscal balance (% of GDP)	-3.8	-4.6	-18.0	-10.4	-5.4	-4.5	-4.7	-4.9
Federal debt held by the public (% of GDP)	77.4	79.2	99.6	107.4	106.8	106.8	107.4	108.3

Sources: BEA; BLS; Haver Analytics; and IMF staff estimates.