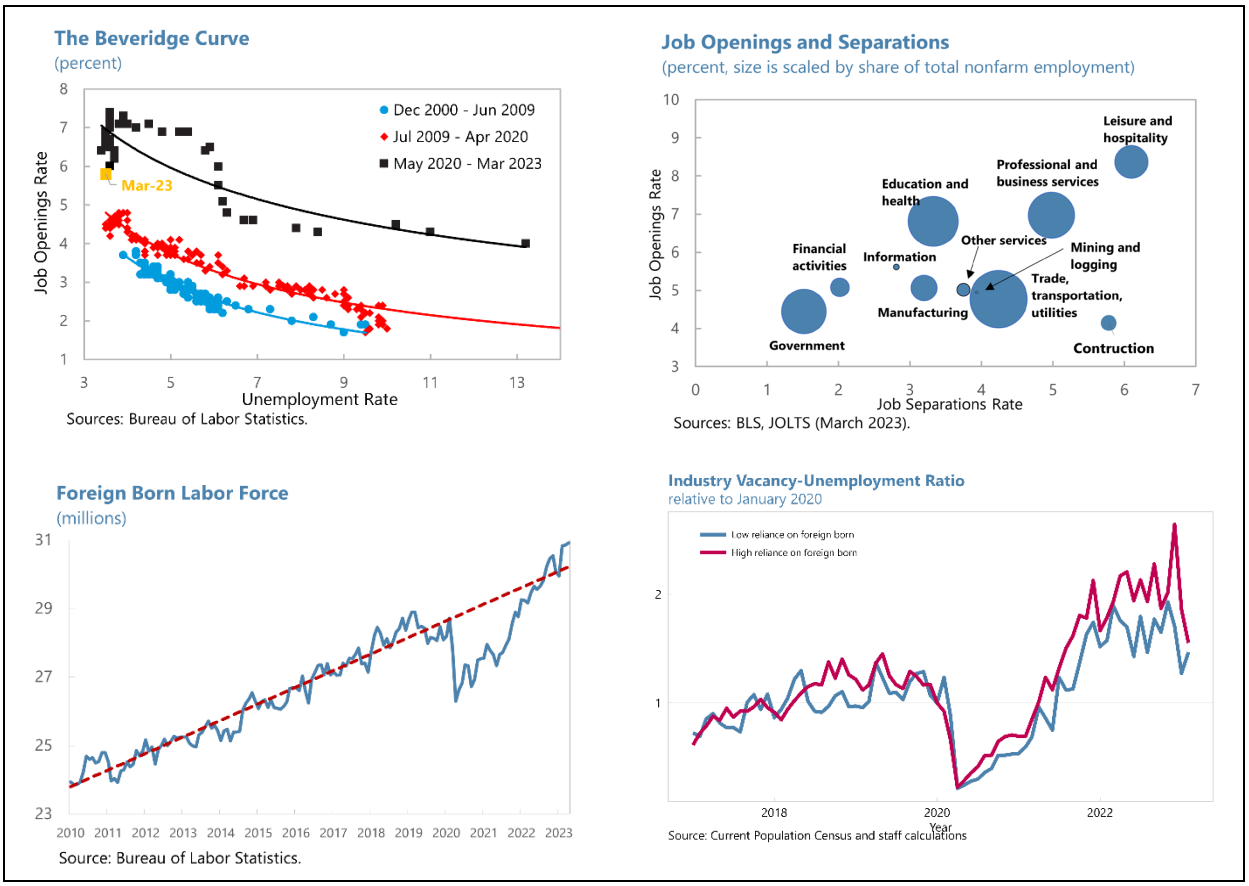
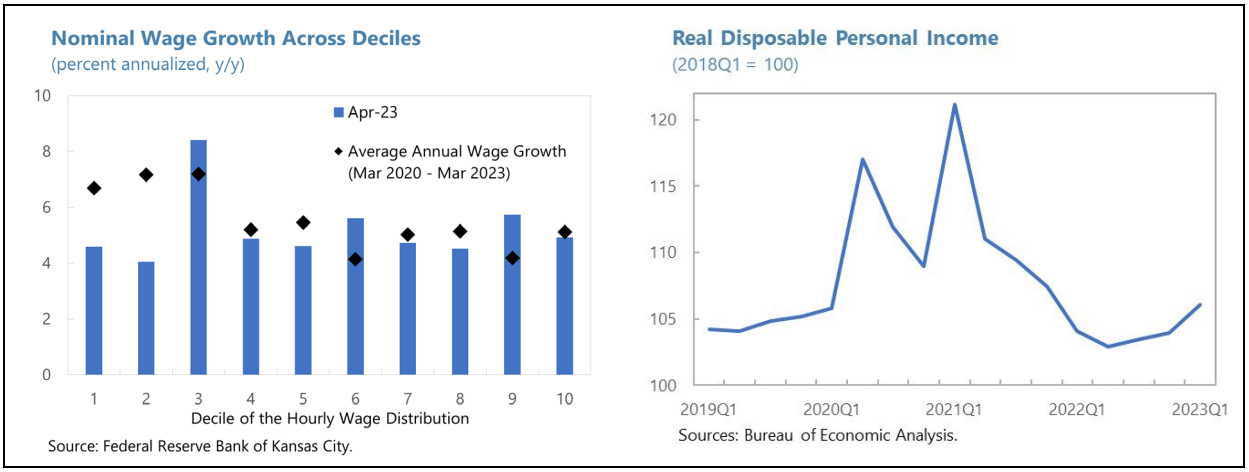
RESILIENT DEMAND AND A ROBUST LABOR MARKET

1. U.S. activity has held up well in the face of a considerable policy tightening. In 2022, the Treasury unwound a large part of its pandemic support measures, the Federal Reserve embarked on the most assertive tightening of monetary policy seen since the early 1980s, and Russia's war in Ukraine led to a significant increase of global energy and food prices. Despite this, real activity in 2022 still grew close to potential, powered by strong consumer demand. Solid demand has persisted into 2023 with growth of 1.3 percent in the first quarter, despite a large drag from inventories.

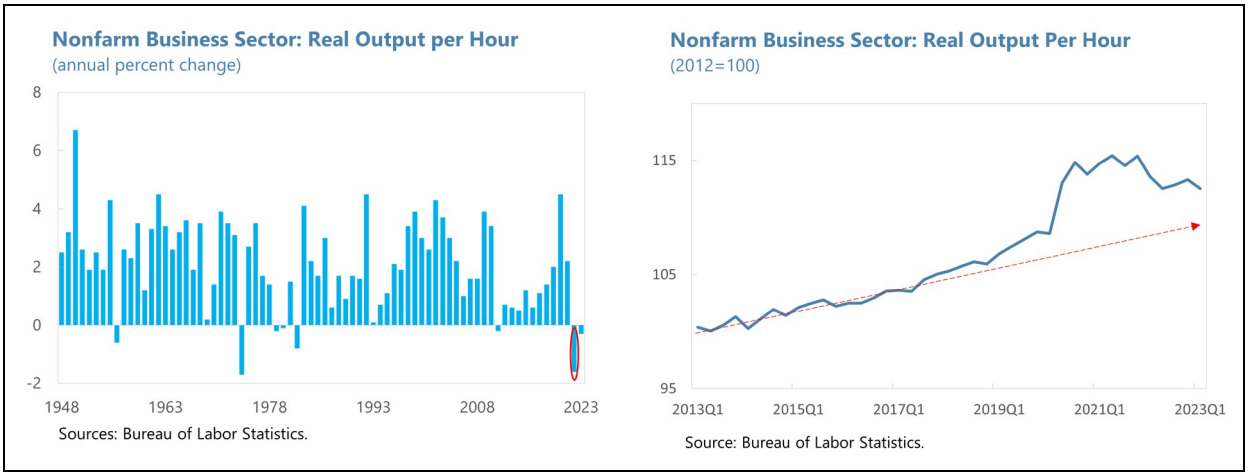
2. The labor market continues to exhibit significant supply-demand imbalances. Prime age labor force participation has risen above its pre-pandemic peak and the unemployment rate for women and African Americans has fallen to historical lows. However, the labor force has failed to return to its pre-pandemic trend, a result of aging demographics and early retirements (although progress has been better for women than for men, Box 1). Vacancy rates are at still-high levels pointing to a significant unmet demand for labor (particularly in lower wage, service sector jobs). Labor supply has been held down by reduced inward migration during the pandemic. However, a rapid upswing in immigration in 2022 has returned the foreign-born labor force to its pre-pandemic trend, easing labor shortages in sectors that are reliant of foreign-born workers (notably accommodation, food services and wholesale trade).



3. This tight labor market has resulted in a rapid rise in nominal wages. Average nominal wage growth accelerated from around 3 percent in 2020 to 5–6 percent in 2022. Wage growth for job switchers has been running even higher and the number of job switchers has risen (particularly in the leisure and hospitality sector). There is some evidence that workers are also moving from smaller to larger firms (Box 2). Since 2022Q3, year-on-year median wage gains have exceeded inflation and wage increases have spread across the wage distribution. As a result, since mid-2022, real disposable household income has been on an upward path.



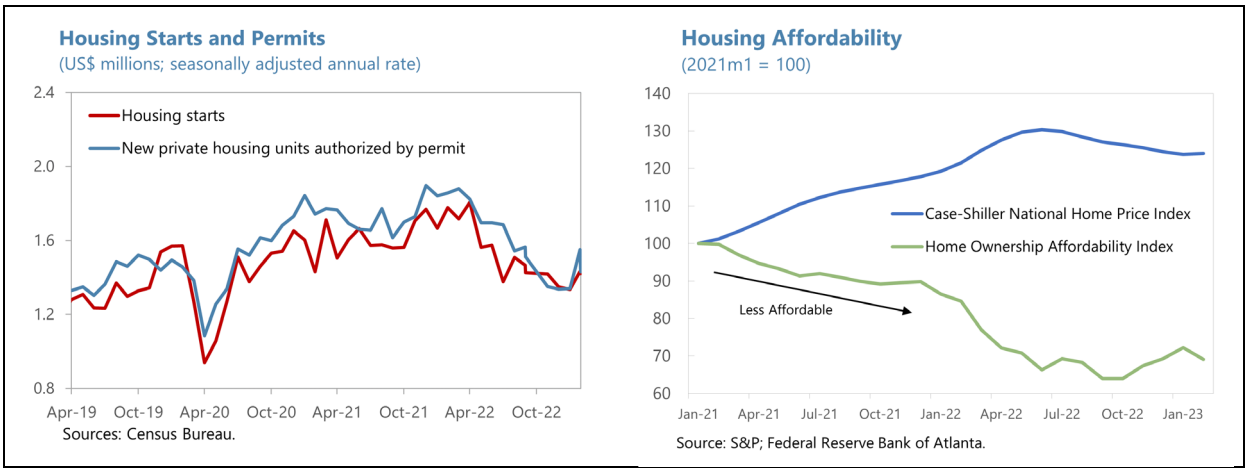
4. Labor productivity picked up during the pandemic but these gains have been largely reversed. Strong investment in equipment and intellectual property during COVID-19, the new modalities of work and commerce, and a compositional effect from declining employment in low productivity sectors appeared to lead to an increase in labor productivity in 2020–21, to a level that was well above the longer-term trend. However, these gains have proven to be transitory and have now largely been reversed (through a fall in labor productivity that is unusually large from an historical perspective).[1]



[1] J. Fernald and H. Li, "The Impact of COVID on Productivity and Potential Output" suggests that industries where it is hard to work from home have performed particularly poorly in terms of productivity.

5. Rising real wages for lower income workers and pandemic-related government transfers made important in-roads into reducing poverty. After accounting for the impact of government programs,[2] the share of the population living in poverty declined markedly during the pandemic (from 11.8 percent in 2019 to 7.8 percent in 2021) and the poverty rate for black and Hispanic households fell by almost twice as much as the national average. Close to half of this improvement came from fewer children living in poverty (mostly due to support from economic impact payments and the fully refundable child tax credit). Unfortunately, these impressive gains appear to have been largely unwound in 2022 with high frequency poverty indicators indicating that the overall poverty rate has gone back to pre-pandemic levels and the number of Supplemental Nutrition Assistance Program recipients beginning to increase (reflecting both the expiration of other benefits and higher costs of food).

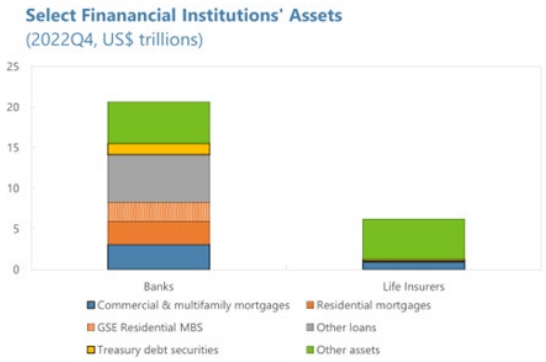
6. The housing sector has suffered the largest impact from the rise in interest rates. After a surge in homebuilding during the pandemic, residential construction fell sharply in 2022, subtracting ½ percentage point from annual growth. However, data on housing starts, housing permits, home sales, and residential investment in 2023Q1 provide some tentative evidence that the contraction is bottoming out. Despite the steep rise in interest rates in 2022, mortgage debt service payments remain below pre-pandemic levels as a share of disposable income, reflecting the fact that many homeowners have refinanced at low, fixed rates. House prices have declined since mid-2022 but remain 38 percent above their end-2019 levels, worsening affordability for new homebuyers.



7. Commercial real estate is adjusting to the shifts in demand for office and retail space that were catalyzed by the pandemic. Vacancy rates in both retail and office sectors have increased and new financing has become more costly. For office space, valuations have been falling (although remain at high levels), default rates have been rising, and banks have been increasing provisioning for their loans. Loan to value ratios for office and retail properties average in the 50–60

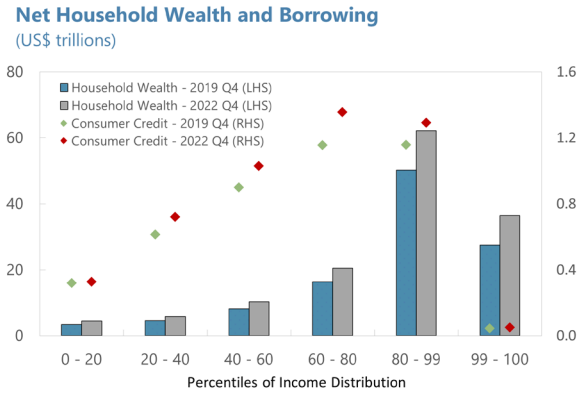
[2] The supplementary poverty measure incorporates the effects on household income of cash and noncash benefits, taxes and tax credits, and work and medical expenses as well as accounting for geographic differences in housing costs.

percent range. However, a large correction in property values could still result in credit losses to holders of commercial real estate debt. Lending to office and retail projects are generally a small share of total bank assets (less than 2 percent for Category II–IV banks as a whole) but there are some specific regional banks with a larger exposure. On the other hand, other commercial property—notably hotels and multi-family housing—have been holding up well.



Source: Federal Reserve Board of Governors.

8. Consumption growth in 2022 was supported by a drawdown of savings but is increasingly being funded from rising disposable income. Real personal consumption at end-2022 was around 1.4 percent above its pre-pandemic trend. This reflects the fact that consumption possibilities were boosted by the approximately 9 percent of 2022 GDP in federal government transfers to households that were made during the pandemic.[3] While there remains a significant savings overhang from the pandemic, there is uncertainty around the degree to which these savings will continue to be deployed in the coming months. Lower and middle-income households have largely returned to their pre-COVID net wealth position and are now increasingly relying on revolving credit and rising disposable income to fund consumption. On the other hand, higher income groups are likely to face a relatively small propensity to consume from their pandemic-era wealth accumulation.

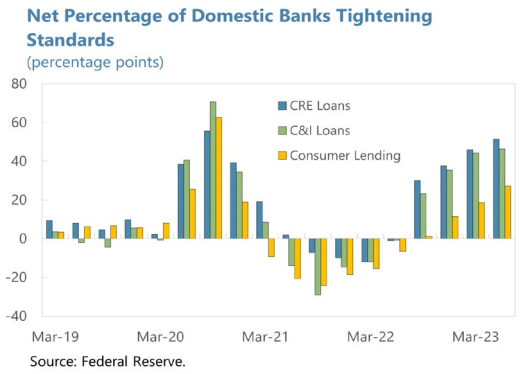


Source: Federal Reserve.

9. Concerns about the ongoing economic slowdown and the possibility of a recession in 2023–24 have caused corporates to be more cautious in their investment plans. Outlays on intellectual property remained healthy in 2022 but there was a notable slowdown in equipment investment. These trends look set to continue in 2023 with surveys pointing to expectations of weak capital expenditure. Nonresidential structures investment has contracted for most of the post-pandemic period and, despite some recovery since late 2022, is currently around 20 percent below its 2019 peak.

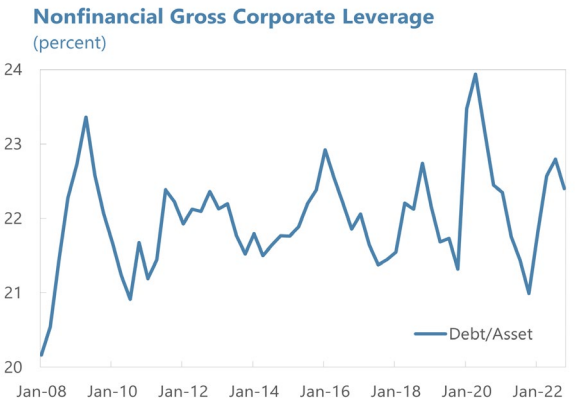
[3] This includes direct payments, enhanced unemployment insurance, more generous child and earned income tax credits, increased food assistance, broader Medicaid eligibility, and tax credits for childcare and to purchase health insurance.

10. Banks have become more conservative in their lending practices. Since mid-2022, the Senior Loan Officer Opinion Survey has seen a tightening of lending standards. There has been a relatively mild tightening in standards for lending to households but a more pronounced impact on standards for commercial and industrial loans and, especially, for commercial real estate.

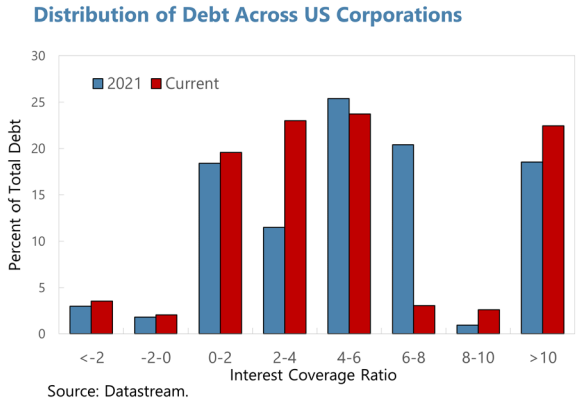


Source: Federal Reserve.

11. Corporate margins are at historic highs. Average after-tax profit margins have risen from around 12 percent before the pandemic to around 16 percent in 2022. This, in part, has been the counterpart to the fall in real wages in 2021 and early 2022. However, rising margins also reflect increased pricing power by firms in a higher inflation environment. Corporate leverage remains at levels similar to the average over the past decade. However, strong corporate earnings and a reliance on mostly fixed rate debt has allowed interest coverage ratios to improve, even for lower rated borrowers.

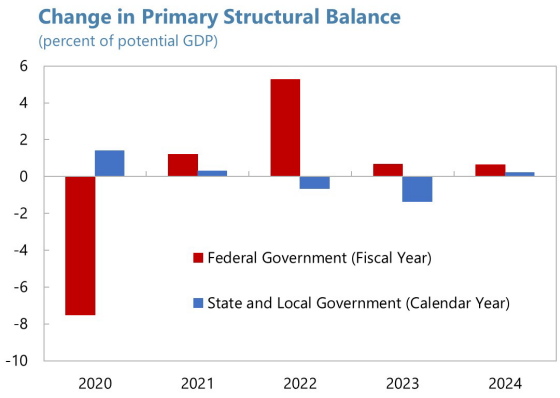


Source: Federal Reserve.



Source: Datastream.
Note: Coverage includes approx. 5,100 US corporations listed in NYSE and NASDAQ.

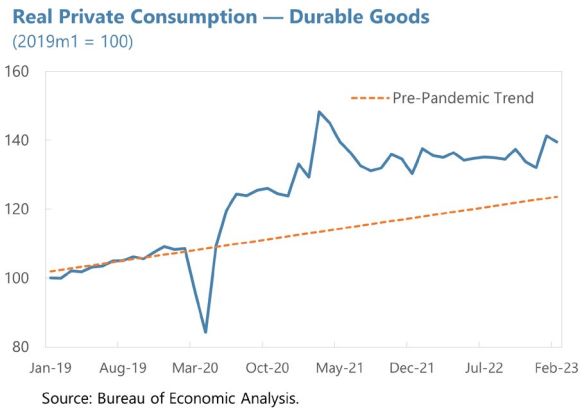
12. Following a significant fiscal contraction in 2022, the general government fiscal stance is expected to be expansionary in 2023 and the U.S. retains some fiscal space. The unwinding of major pandemic-related fiscal measures and a surge in tax revenues led to an improvement in the federal government structural primary deficit of around 5¼ percent of GDP in 2022. In 2023, federal government primary spending is projected to continue falling, as remaining pandemic measures expire and the one-off effects from student loan forgiveness are not repeated. Revenues are also projected to fall, as individual income taxes gradually normalize from the very high level of receipts seen in 2022 (which, in part, reflected unusually high revenues from capital income). On net, the federal

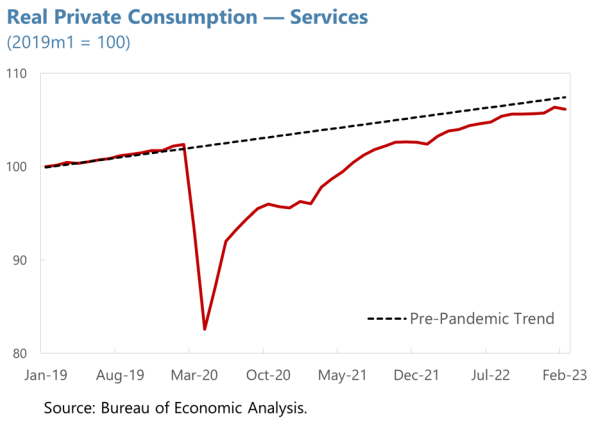


Sources: CBO and latest forecast by IMF staff.

government primary structural balance is expected to improve by around ¾ percent of GDP in FY2023 and ½ percent of GDP in FY2024. At the general government level, the primary balance is expected to worsen by around 2¾ percent of GDP in 2023 as a result of increased state and local deficits as well as statistical issues—mostly linked to the recording of student loan relief—in moving from Treasury data to the NIPA/GFSM basis.

13. The 2022 external position remains moderately weaker than the level implied by medium-term fundamentals and desirable policies (Appendix III). The current account deficit rose significantly during the pandemic as the composition of consumer demand shifted away from services to tradeable goods and a huge fiscal stimulus was put in place. The current account deficit is expected to decline in 2023 and continue falling over the medium-term as demand rebalances back toward services and the extraordinary fiscal support is unwound. The real effective exchange rate appreciated by around 10 percent from January to October 2022 but subsequently reversed course, depreciating 6 percent in the past six months. The dollar is judged to be modestly overvalued.

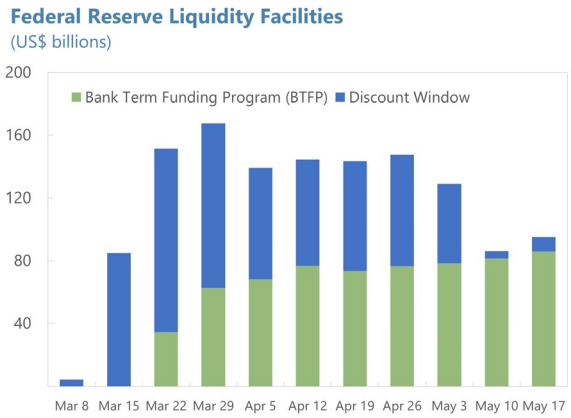




14. In coordination with a number of other countries, the U.S. continues to impose a range of sanctions on Russia and Belarus, connected to Russia's ongoing war with Ukraine. These sanctions have broadened over the past year and include asset freezes or financing restrictions for designated entities, an expansion of the list of specially designated nationals, as well as various investment, import and export restrictions. Some of these measures constitute capital flow management measures introduced for reasons of national or international security.

15. The failure of Silicon Valley Bank (SVB) has increased the risks to financial stability. SVB faced the dual challenges of sizable unrealized losses on its assets (due to making the wrong bets on Treasuries and mortgage-backed securities) and a substantial share of its deposits that were not covered by deposit insurance. These two vulnerabilities interacted perniciously to bring down the bank. Deposit outflows required the bank to liquidate its holdings of liquid assets and realize losses on its securities portfolio. This, in turn, weakened the balance sheet of the bank, undermining confidence and accelerating deposit outflows (particularly for those corporate deposits that were in excess of the deposit insurance cap).

16. Even though SVB was a mid-sized bank, its potential to catalyze broader deposit outflows across the banking system caused regulators to invoke the systemic risk exemption and guarantee all deposits at the bank.[4] A similar blanket guarantee was provided to depositors at Signature Bank (which also had a large share of uninsured deposits). To limit systemic spillovers, the Federal Reserve launched a new facility (the Bank Term Funding Program) to provide liquidity to depositary institutions against high-quality securities that are valued at par (with the intention to reduce the need to sell these securities—and, as a result, realize losses—in times of stress). Finally, the Fed's discount window began to apply the same margins for securities as under the Bank Term Funding Program.[5] These efforts were able to quickly stabilize deposit outflows and restore confidence to the broader banking system.

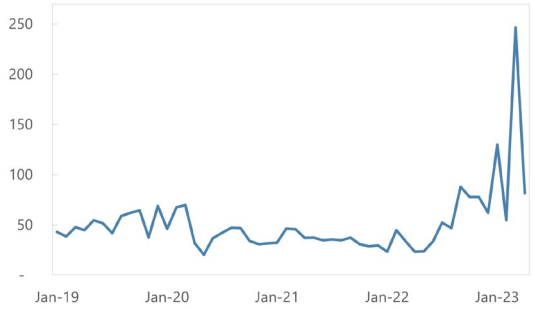


17. The knock-on macroeconomic effects from the failure of SVB are still evolving but systemic financial stability risks have risen. In the weeks following the failure of SVB, equity valuations for small banks have fallen and their cost of funding has risen (albeit modestly). On May 1, First Republic Bank was closed and sold to J.P. Morgan. Since end-February, around US$500 billion (or close to 3 percent of total deposits) have left the banking system, over half of which is from smaller banks. In the face of these outflows, smaller banks have sold a significant share (around 17 percent) of their holdings of agency mortgage-backed securities and reduced their lending. Federal Home Loan Banks have increased their provision of liquidity to commercial banks, funded through the issuance of new debt. Looking forward, as the U.S. banking system is reshaped and resources move out of the regional banks to elsewhere in the financial system, it is likely that credit growth will weaken further. Larger banks and market financing may be unable to substitute for the role of regional banks (particularly in lending to smaller firms and commercial real estate). However, at this stage, there is little to indicate a markedly different path of credit growth than in previous tightening cycles (despite the current tightening episode being faster and with larger increases in the policy rate).

[4] Any losses resulting from the expansion of the guarantee are to be recouped by a special assessment on the deposit insurance premia that are levied on the banking system. Equity and certain unsecured debt holders were required to bear losses.

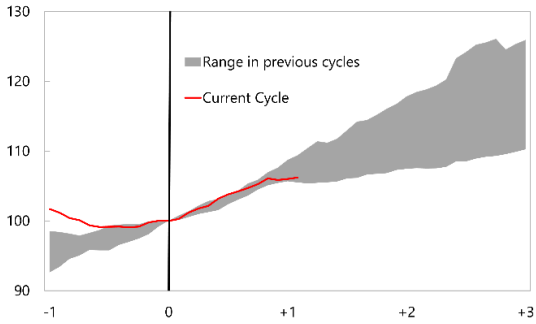
[5] On March 15, the discount window rules were also changed to narrow the spread between the primary credit rate and the federal funds rate and to allow depository institutions to borrow for up to 90 days.

Federal Home Loan Bank Bond Issuance
(US$ billions)



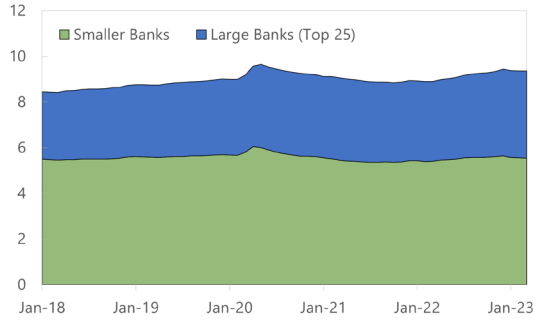
Source: Federal Home Loan Banks Office of Finance

Real Loans and Leases: US Commercial Banks
(index; years around beginning of Fed Funds Rate tightening cycles after 1994)



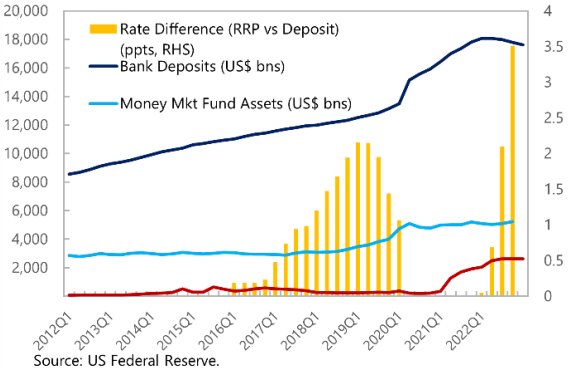
Source: US Federal Reserve and IMF staff calculations.

Total Real Bank Credit
(Jan. 2018 Constant Prices, US$trillions)



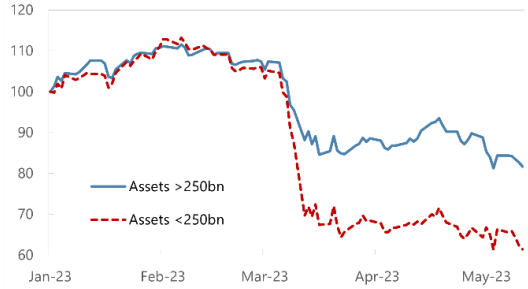
Source: US Federal Reserve and Bureau of Economic Analysis.

Banks, Money Market Funds and Interest Rates



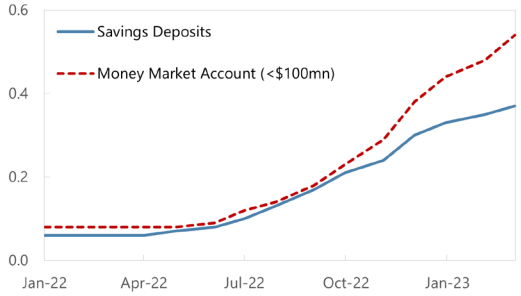
Source: US Federal Reserve.

Equity Prices: Banks in S&P500
(2023/1/2 = 100)



Source: Bloomberg.

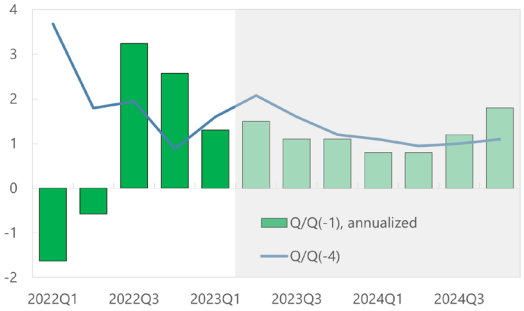
Cost of Funding
(national average; percent)



Source: Federal Deposit Insurance Corporation.

18. The baseline outlook is for a continuing slowdown but without an outright contraction in activity. The significant resilience shown so far in the face of policy tightening, alongside continued momentum in the first quarter of 2023, suggests that annual average growth will slow to 1.7 percent this year and to 1 percent in 2024. On a sequential basis, quarter-on-quarter growth is expected to bottom out in mid-2024 and start picking up in the second half of

Real GDP Growth
(percent)



Sources: Bureau of Economic Analysis and IMF staff calculations.

the year. Employment growth is expected to decline relative to 2022 leading to a steady rise in unemployment with a peak that is slightly below 4½ percent at the end of 2024. The forecast assumes a slow recovery of labor productivity growth (to around 1¼ percent by end-2024). Slowing activity will steadily reduce job openings, allowing the vacancy-unemployment rate to fall below 1 by early 2024.

Text Table 1. U.S. Macroeconomics Outlook

	Real GDP (Q4/Q4 % ch.)		Core PCE Inflation (Q4/Q4, %)		Fed Funds Rate (Q4, %)	
	2023	2024	2023	2024	2023	2024
IMF Staff	**1.2**	**1.1**	**4.1**	**2.8**	**5.4**	**5.2**
Professional Forecasters (May '23)	0.7	N/A	3.7	2.3	N/A	N/A
Market Participants (May '23)	0.5	1.2	3.3	N/A	5.1	3.4
Primary Dealers (May '23)	0.2	1.0	3.5	2.4	5.1	3.5
Federal Reserve (Mar '23)	0.4	1.2	3.6	2.6	5.1	4.3

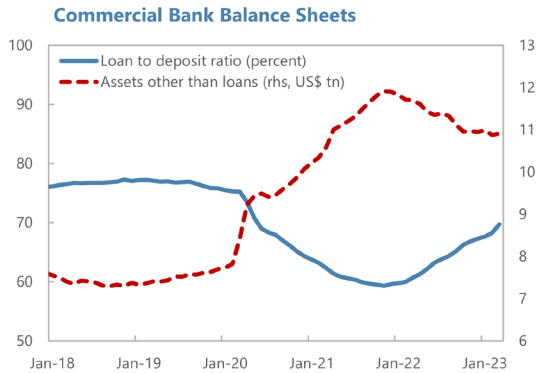
Source: Federal Reserve Bank of Philadephia; Federal Reserve Bank of New York; IMF staff calculations.

19. Authorities' views. The economy has performed very strongly with nearly 13 million jobs created during the course of the Biden administration and the pace of growth exceeding the administration's forecasts. Important results have been achieved in the labor market including bringing Black or African Americans unemployment rates to record lows. Real wages are gradually recovering. Consumer demand remains strong. However, a mild slowdown is expected in 2023 but with growth strengthening in 2024. As supply chain disruptions are being resolved, the pathway to bring down inflation while maintaining a strong labor market is becoming more visible.

20. There are upside risks to activity in the near-term but larger downside risks over a longer horizon. The resilience of the economy and the robustness of labor markets are good news. However, it is possible that the large and rapid increase in interest rates that has already been put in place may not be sufficient to expeditiously bring inflation back to target. With a large share of household and corporate debt contracted at relatively long duration and fixed rates, household consumption and corporate investment have proven less interest-sensitive than in past tightening cycles. This creates a material risk that persistent inflation will cause the Federal Reserve to raise the policy rate by significantly more than is currently expected. On the positive side, near-term growth outcomes could be better than currently anticipated. However, this would only mean that the economy would slow more abruptly at a later stage (possibly in 2024), creating a recession as the even tighter monetary policy takes hold. Such a combination of higher U.S. interest rates, a stronger dollar, and a sharper slowdown in U.S. activity would have significant negative macro-financial spillovers to the rest of the world. Furthermore, a higher path for interest rates could reveal larger, more systemic balance sheet problems in banks, nonbanks, or corporates than we have seen to-date. Unrealized losses from holdings of long duration securities and loans would increase in both banks and nonbanks and the cost of new financing for both households and corporates could become unmanageable. Such a tightening in financial conditions could trigger an increase in

bankruptcies, worsen credit quality, and create potentially systemic stress, particularly for those entities carrying high levels of leverage and with large near-term gross financing needs. These financial stability problems could be further exacerbated if the functioning of Treasury or other markets becomes compromised. The longer that higher interest rates persist, the greater the likelihood that such fractures and systemic stresses will be revealed. Recent failures of large, non-internationally active banks—which have, so far, had only a modest effect on credit conditions—could potentially be a prelude to more serious and ingrained systemic financial stability problems.

21. In addition to this macro-financial risk, brinkmanship over the federal debt ceiling could create a further, entirely avoidable systemic risk to both the U.S. and global economy at a time when there are already visible strains.[6] Since January, the Treasury has been undertaking extraordinary measures to fund the federal government. However, these accounting maneuvers will soon reach their limit, potentially preventing the federal government from meeting its spending obligations. To avoid exacerbating downside risks, the debt ceiling should be immediately raised or suspended by Congress, allowing negotiations over the FY2024 budget to begin in earnest. Furthermore, a more permanent solution to the recurring stand-off should be found through institutional changes that ensure that, once appropriations are approved, the corresponding space on the debt ceiling is automatically provided to finance that spending.



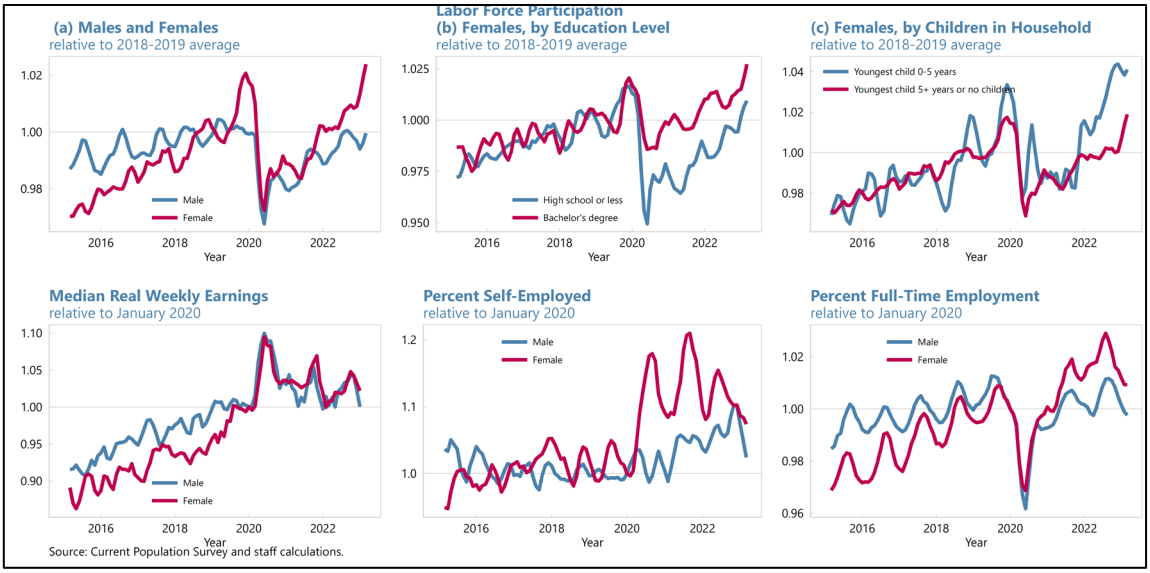
22. Authorities' views. There are important risks facing the outlook, including those arising from the Russian war against Ukraine. More persistent inflation would deepen the trade-offs faced by monetary policy and potentially put further stress on the bank and nonbank sectors of the financial system. A failure to raise the debt ceiling has the potential to create an economic catastrophe in both the U.S. and abroad. Waiting until the last minute to suspend or increase the debt limit can cause serious harm to business and consumer confidence, raise short-term borrowing costs for taxpayers, and negatively impact the credit rating of the United States. Recent events in the U.S. banking system have highlighted the potential financial stability risks arising from the rapid rise in interest rates undertaken over the past year. There is a risk that the ongoing stresses in the banking system could lead to a broad contraction in credit, with negative implications for economic activity. Potential rollover needs and portfolio stress in commercial real estate are of particular concern. In addition, the intensifying impacts of climate change and the increased frequency of extreme weather create a range of risks. Finally, there are transition risks to companies, communities, and workers as the globe shifts away from carbon-intensive energy.

[6] A binding debt ceiling implies that the Treasury will be unable to fulfil its obligations on interest payments and/or other federal expenditures. This would lead to a substantial tightening of financial conditions, potentially combined with a need to abruptly reduce federal spending. For illustrative simulations, see IMF spillover report (2012) or Federal Reserve Board (2013).

Box 1. Impact of the Pandemic on the Labor Market for Women

Female labor market outcomes were negatively impacted by the pandemic. However, the post-COVID recovery of the labor market has, if anything, led to a narrowing of gender differences across a range of variables:

- Relative to the 2018–19 average (rather than to end-2019 outturns which were distorted by a substantial increase of female labor force participation toward the end of the year), the decline in female labor force participation during the pandemic was not measurably larger than that for males. This finding is borne out by a regression that controls for time and state fixed effects, occupation, industry, education, age, and race. Furthermore, as the economy recovered, female participation has rebounded much faster than that for males. Participation by women with young children has been able to more-than-recoup the pandemic-related losses and now stands at all-time highs. Less encouraging, however, is the fact that women without bachelor's degrees were initially more negatively impacted by the pandemic and, even by end-2022, have been unable to reach the average levels of participation they experienced in 2018–19.

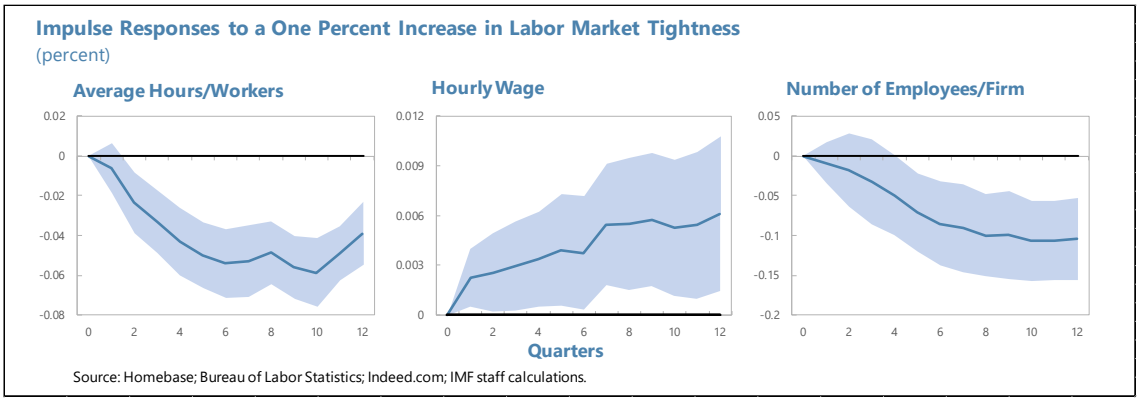


- Real wage gains in 2021–22 led to a reduction in the gender wage gap by about 20 percent relative to the gap in 2018–19 (after controlling for time and state fixed effects, occupation, industry, education, age, and race). The gender wage gap narrowed across education groups and across a range of industries, but this narrowing was most visible for those at the top of the wage distribution.
- In addition to participation gains, the pandemic recovery resulted in an increase in full-time employment and self-employment for women (with a declining number of women working part time).

The causes of the increase in participation will be key to whether these trends will continue. On the one hand, the increased prevalence of remote work (and more flexible work practices) may have increased female attachment to the labor force and reduced barriers to full-time work. On the other hand, declining real wages for households, strong wage growth at the bottom of the wage distribution, and temporary pandemic assistance may have led to a more transitory boost to female participation.

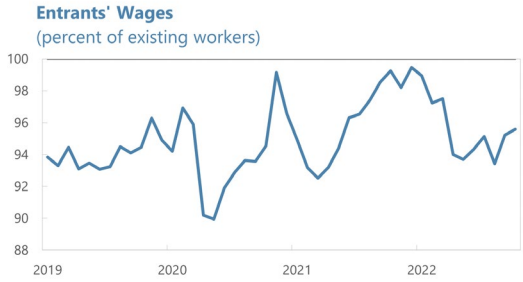
Box 2. The U.S. Labor Market: A Small Business Perspective[1]

Almost one-third of retail jobs and one half of real estate jobs are in firms with fewer than twenty employees. With the highest rates of unfilled vacancies at the smallest firms, understanding the labor market dynamics for smaller businesses is critical to gaining insight on the broader U.S. jobs market. Fortunately, Homebase—a payroll administration provider for small businesses—provides broad ranging data on hours and wages for nearly 9 million workers at 1 million firms. This data shows the following:



Source: Homebase; Bureau of Labor Statistics; Indeed.com; IMF staff calculations.

- When the county-level vacancy-unemployment ratio increases, small firms on average hire more workers and increase their hours. However, when the vacancy-unemployment ratio is already high, smaller firms expand their workforce by less than larger firms (Figure 1), leading to a reduction in small firm's share of the workforce.
- A higher vacancy-unemployment ratio leads to only modestly higher wages for existing employees (i.e., their wage Philips Curve is very flat). However, tighter labor markets increase wages by far more for new hires (the slope of their Philips Curve is almost 3 times steeper). This is consistent with the significant wage growth premium that job switchers receive and is reflected in the rapid growth in entrants' wages (relative to that of incumbents) after the pandemic (see Figure 2).
- In a tight labor market, gross hiring and the turnover of employees increases by more for smaller firms than for larger ones with much of a smaller firm's hiring reflecting the replacement of exiting workers. The data also suggest that in a weaker jobs market workers are prepared to accept a lower compensation package that a smaller business typically provides (presumably because there are fewer outside options). Smaller firms, therefore, provide some "safety net" characteristics that serve to moderate aggregate swings in employment.[2]



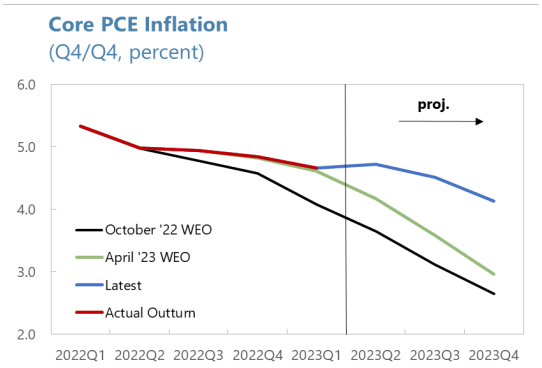
Source: Homebase; IMF staff calculations.

[1] See P. Barrett, S. Chen, L. Lin and A. Weber, "Small Firms and Labor Market Cyclicality: Evidence from U.S. Payroll Data.", forthcoming IMF Working Paper.

[2] This is consistent with aggregate findings using lower frequency data, see for example G. Moscarini and F. Postel-Vinay, "The Contribution of Large and Small Employers to Job Creation in Times of High and Low Unemployment", 2012.

A PERSISTENT INFLATION PROBLEM

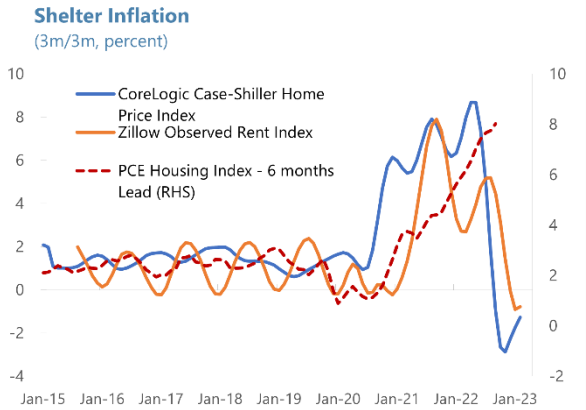
23. Since the 2022 Article IV consultation, core inflation has come down more slowly than had been expected. Lower fuel and energy costs have brought headline inflation down from 7 percent in June 2022 to 4.2 percent in March 2023. Near term inflation expectations are also falling from their mid-2022 peak (Box 4). However, measures of core inflation have proven more persistent, with year-on-year median PCE inflation moving sideways for the past 7 months.



Source: IMF staff calculations.

24. Goods inflation has softened as supply chain constraints have been resolved and consumer demand has rotated away from goods and toward services. A rapid upswing in goods prices took hold in 2021. Since mid-2022, though, year-on-year goods inflation has been falling (although this downward trend was interrupted in March). Several forces are at work. First, there has been a feed through to goods prices from lower energy and shipping costs. Second, consumer demand in the U.S. has rotated away from goods to services (resulting in a stagnant demand for goods). Third, supply chain disruptions have been steadily resolved. Fourth, goods prices have, as in past cycles, been relatively little affected by rising wages and tight labor market conditions.

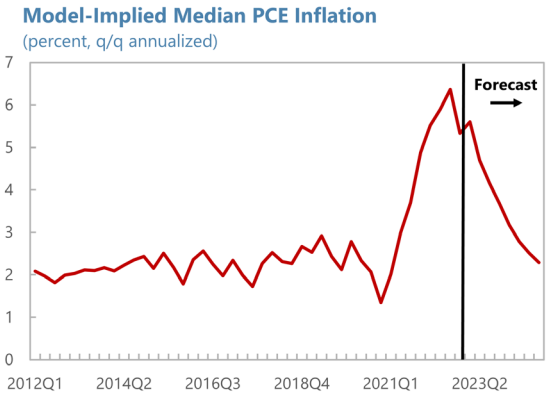
25. With the housing market softening and prices falling, forward indicators suggest shelter inflation will soon start falling. Higher mortgage rates have represented an important headwind to housing. As a result, home prices have been falling since mid-2022. Even though rental vacancies remain at very low levels, the increase in average rents began to slow in mid-2022. Given the lagged relationship between rent and home prices and the PCE price index, this means that shelter inflation should shift from a current contribution of 1½ percent to year-on-year PCE inflation to adding less than 1 percent to PCE inflation by end-year.



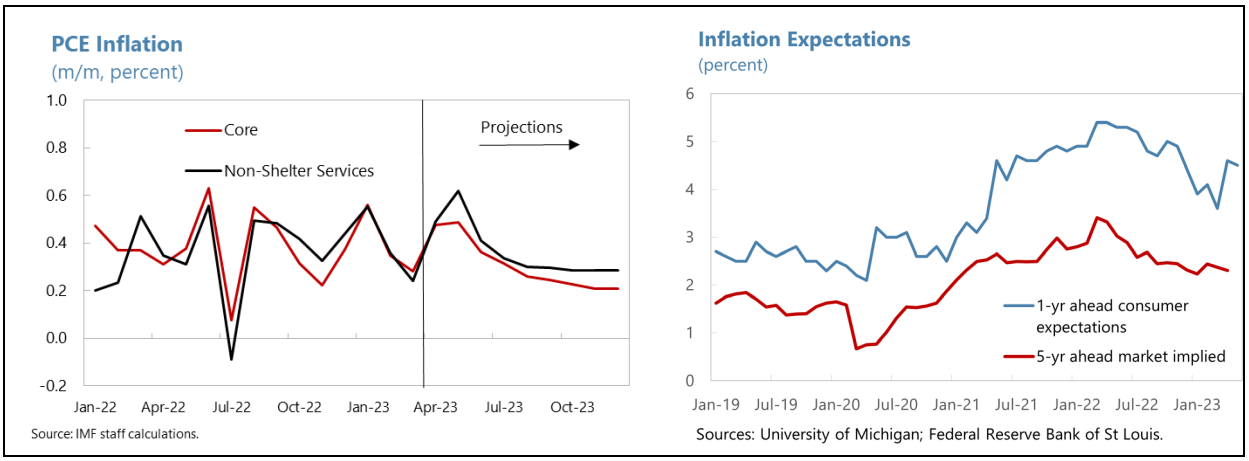
Sources: S&P; Bureau of Economic Analysis.

26. Successful disinflation will require a softening in non-shelter services inflation. Based on recent history, the lagged effect of wage increases in 2022 would add around 0.6 percent to non-shelter services inflation by end-2023 (Box 4). Potentially, this pass-through could be dampened by some compression of corporate margins. However, still-weak labor productivity will work in the opposite direction. Getting inflation back to the Fed's medium-term target would seem to require year-on-year wage inflation to slow from current levels to around 3–4 percent.

27. Inflation is expected to fall slowly to reach around 4 percent by end-year. Achieving this downward path incorporates an expected gradual loosening of labor market conditions and is broadly consistent with model-based forecasts of inflation (that assume a decline in the vacancy-unemployment ratio to around 1.2 by end-2023 and 1-year ahead inflation expectations below 3 percent by end-year). There are, however, upside risks to this inflation outlook. Most notably, persistent labor market tightness could foster continued rapid increases in nominal wages and prevent the forecasted decline in non-shelter services inflation.



Sources: BLS; Fed. Reserve Bank of Cleveland; Univ. Michigan; IMF staff calculations.



Source: IMF staff calculations.
Sources: University of Michigan; Federal Reserve Bank of St Louis.

28. To bring inflation firmly back to the Fed's medium-term target will require an extended period of tight monetary policy. Maintaining the federal funds rate at 5¼-5½ percent until late in 2024 would imply an ex-ante real policy rate that peaks at a little over 3 percent and remains above neutral for the following two years. Model estimates suggest such a path would be sufficient to slow demand, restore balance to the labor market, and lower wage and price inflation. However, models are calibrated on past experiences and so offer an imperfect guide to the unusual dynamics of the current conjuncture. If upside risks to inflation are realized, there would need to be a correspondingly tighter monetary policy to return inflation to target.

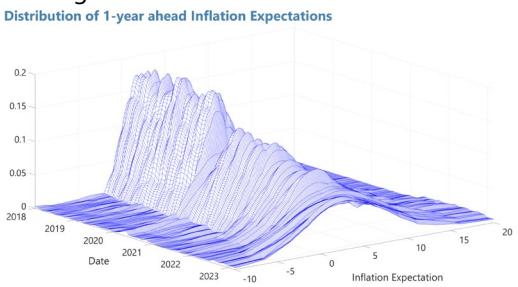
29. The Federal Reserve has demonstrated it has the tools to simultaneously provide temporary liquidity support and tighten monetary policy through higher policy rates. The provision of liquidity through the discount window and the Bank Term Funding Facility should be sufficient to address the near-term liquidity needs of the banks, allowing monetary policy to remain focused on bringing inflation back to target. There would be a high threshold, therefore, whereby systemic market and/or banking system stress would warrant a lowering of the federal funds rate in the coming months.

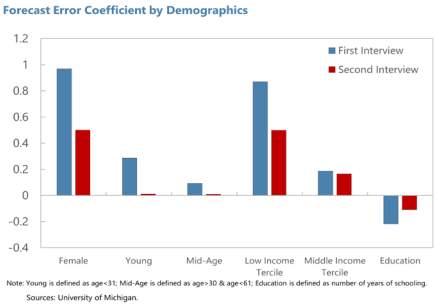
30. Given the important uncertainties facing the U.S. economy, it will be essential for the Federal Reserve to communicate carefully how it assesses the incoming data and to provide clear guidance on what this means for its expected path of the policy rate. Greater emphasis in communications should be placed on the need for interest rates to remain at high levels for an extended period of time. This may help align financial conditions more closely with the intended path for policy. Communications should continue to underscore, though, that the FOMC's guidance is not set in stone and actual policy outcomes will depend critically on incoming data.

31. Authorities' views. The effects of policy tightening are gradually feeding through into the real economy, particularly affecting residential investment. The recent bank failures have also contributed to tighter financial conditions. Nonetheless, much of the impact of higher interest rates is only expected to be seen in activity over the course of the next year, given the lagged effect of monetary policy. Inflation has moderated over the past several months but remains well above the Federal Reserve's longer-run goal of 2 percent. Nonetheless, supply and demand imbalances are gradually improving, with goods disinflation expected to continue and lower housing rents expected to feed through to the PCE price index with a lag. There are also tentative signs of slowing in the labor market, which should help produce the required slowdown in wage growth to cool non-shelter services inflation. Longer term inflation expectations appear to be well-anchored in various surveys of households, markets, and analysts. The Federal Reserve remains very strongly committed to returning inflation to 2 percent and while it is too early to determine if the Fed Funds Rate is sufficiently restrictive, no interest rate cuts are expected this year. Market-implied interest rate expectations are broadly in line with the rate path communicated by the FOMC. Inflation is expected to decline gradually over the next year and return to the Federal Reserve's medium-term target by 2025.

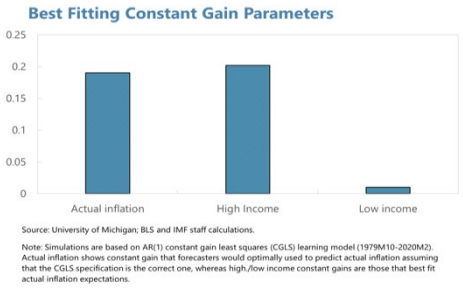
Box 3. Learning and the Formation of Inflation Expectations by Consumers[1]

The responses in the Michigan Survey of Consumers show that U.S. households have very different views on how future inflation is going to evolve. In addition, the size of those differences has increased as inflation moved upwards. This is true for both 1-year and 5–10 year ahead inflation expectations where both the mean and variance of the distribution increased over the past 3 years. Furthermore, surveys of the same individual taken six months apart indicate that females and those with lower income generally expect higher inflation. These two groups change their prediction of inflation the most between surveys and are found to make the largest forecast errors.





To model this complex process of forming household inflation expectations, a learning model was developed that incorporates adaptive learning.[2] Individuals are assumed to forecast inflation based on a simple model of the economy, where they use historical data to update their parameters over time while giving more weight to recent observations. This model provides a good fit of the historical evolution of average inflation expectations. In addition, varying the weight that is attached to new data (versus the past forecast) in the learning process can capture, in a parsimonious way, the differences in expectations across demographic groups, education levels, and household characteristics. For instance, higher income individuals tend to be more attentive to incoming information than lower income individuals.



Adaptive learning was also incorporated into a closed economy DSGE model[3] with an inertial Taylor rule for monetary policy. The model suggests that bringing inflation back to the Fed's 2 percent target by end-2024 would require a somewhat tighter monetary policy (with the near-term path for the federal funds rate around 25 bps higher) compared to the same model where expectations are forward looking and "model consistent".

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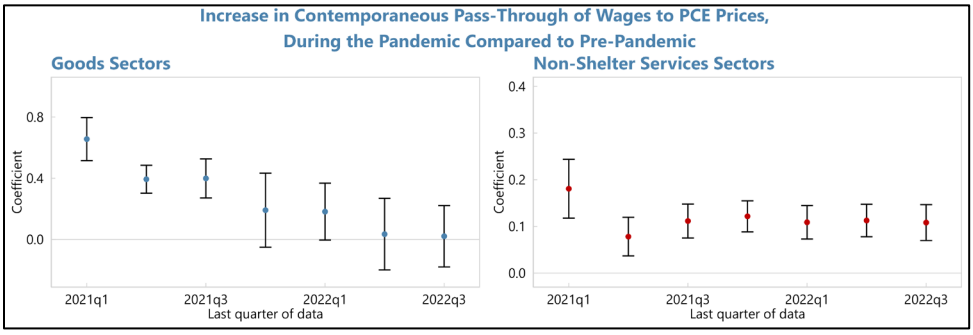
[1] See E. Bae, A. Hodge, and A. Weber, "How Are Consumers Learning About Inflation?", forthcoming IMF Working Paper. See also Chang and others, IMF WP 22/132.

[2] See Evans and Honkapohja (2001), *Learning and Expectations in Macroeconomics* for an overview and Weber (2010) in *Inflation Targeting Twenty Years on: Past Lessons and Future Prospects* for an application to the euro area.

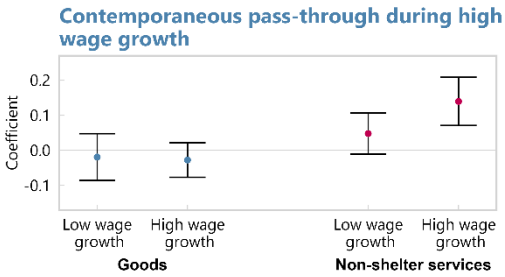
[3] See Slobodyan and Wouters (2012), "Learning in a Medium-Scale DSGE Model with Expectations Based on Small Forecasting Models" 4(2) *AEJ: Macroeconomics* 65–101 where consumers and firms predict near-term inflation through a recursively estimated, simple autoregressive process.

Box 4. The Potential for Wage-Price Pass-Through[1]

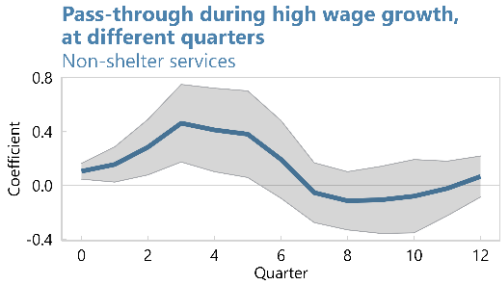
The analysis uses a panel of 73 sectoral prices of the personal consumption expenditure (PCE) index and matches them to effective labor costs in the same sector (constructed from the Current Employment Statistics). Controls are included for nonwage input price changes, sectoral growth in productivity, as well as for time and sector fixed effects.



As inflation has risen, the U.S. economy has seen a higher pass-through from nominal wages to consumer prices in non-shelter services. Historically, the contemporaneous response to higher wages has been 9 percent. In 2021-22, this pass-through rose to 20 percent (40 percent would be full pass-through given the average labor share in non-shelter services). For the goods sector, the pass-through of wages to prices has remained insignificantly different from zero pre- and post-pandemic.



Note: Pass-through estimated using pre-pandemic period.



Wage pass-through appears to be higher in periods of high wage growth as corporate profit margins come under greater pressure or firms perceive higher labor costs to be a permanent shock. Specifically, when wage growth is high (i.e., during sector-quarters where wages are growing year-on-year at more than 4 percent, which makes up around 25 percent of the cases), the pass-through in services sectors is almost three times as large as the average (i.e., 14 percent within the same quarter) as when wage growth is low. Moreover, the passthrough rises to around 41 percent after one year. Interestingly, the pass through to goods is not significant even during periods when wage growth in the sector is high. In 2021–22, around 70 percent of service sector-quarters in our sample experienced wage growth above 4 percent. This significant shift in the level of wage growth, in turn, has been the main force driving the increased pass-through at the aggregate level.

[1] See M. Chin and L. Lin, "The Pass-through of Wages to Consumer Prices in the COVID-19 Pandemic: Evidence from Sectoral Data", IMF Working Paper (forthcoming).

FISCAL IMBALANCES REMAIN UNADDRESSED

32. Significant fiscal legislation[7] was passed in late 2021 and 2022 that will have a lasting impact in reshaping the U.S. economy. Policies included:

- Increased spending on roads, public transit, ports, airports, water, electricity, broadband and an electric vehicle charging network (US$517 billion over 10 years).
- Measures to expand the development and manufacturing of semiconductors through direct spending on research and development, investment tax credits, and other incentives for chip manufacturers (US$79 billion over 10 years).
- Actions to facilitate the transition to a less carbon intensive economy (Box 5) including new investments in clean energy, subsidies for solar and nuclear power, subsidies to purchase electric vehicles, and incentives to improve home energy efficiency (US$386 billion over 10 years).
- Federal subsidies for individuals' purchase of health insurance (US$188 billion over 10 years).

This additional spending was partially offset through new tax measures and expenditure savings including:

- A minimum 15 percent business tax for large corporations (US$222 billion over 10 years).
- A 1 percent excise tax on stock buybacks (US$74 billion over 10 years).
- Prescription drug price reform to reduce drug costs to Medicare through negotiations and rebates (US$140 billion over 10 years).
- Improving tax administration at the Internal Revenue Service (US$101 billion over 10 years).

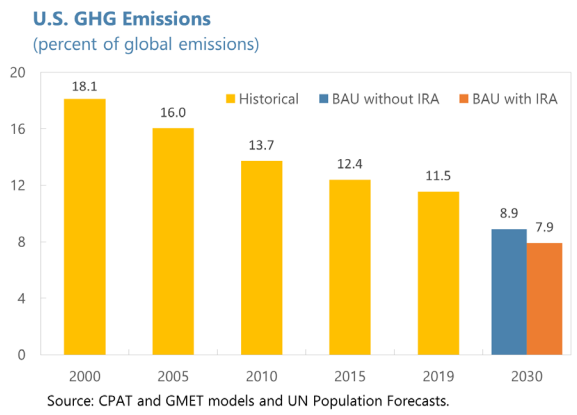
The combined net impact of these various initiatives is to add around 1½ percent of 2022 GDP to the fiscal deficit over the next 10 years (but with a negligible impact on the federal deficit in 2023).

33. Authorities' views. The Bipartisan Infrastructure Law, the CHIPS and Science Act, and the Inflation Reduction Act are among the most significant public investments in U.S. history and will allow the country to rebuild its infrastructure, develop high-skill manufacturing, and create jobs across the U.S. These expenditures are almost completely funded through equitable revenue increases, investments in tax administration, and practical budget savings.

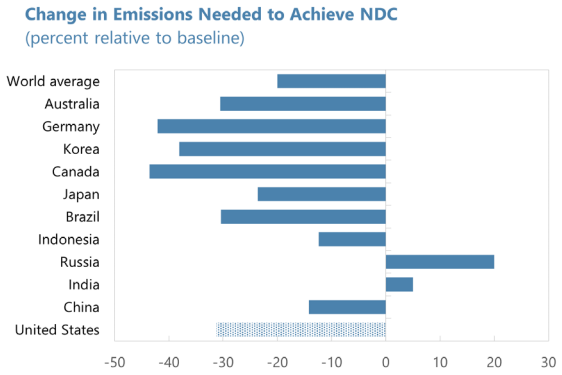
[7] The Infrastructure Investment and Jobs Act (effective November 15, 2021), the Creating Helpful Incentives to Produce Semiconductors and Science (CHIPS) Act (effective August 9, 2022) and the Inflation Reduction Act (effective August 15, 2022).

Box 5. The U.S. Contribution to Global Emissions Reduction

The U.S. contribution to global emissions is substantial although the U.S. share of global emissions fell from around 18 percent in 2000 to 11 percent in 2019. The U.S. contribution to global emissions is expected to fall to 8 percent by 2030. The administration is committed to halving its emissions by 2030 (relative to 2005 levels) and to achieve net zero emissions by 2050. The U.S. NDC implies a reduction in emissions that is similar to that of other advanced economies but greater than that of developing countries, reflecting the principle of differentiated responsibilities.



Source: CPAT and GMET models and UN Population Forecasts.



Source: CPAT and GMET models and UN Population Forecasts.

Given the size of the U.S. economy, its climate efforts have the potential to create significant positive outward spillovers by exploiting economies of scale, spurring innovation and, in so doing, reducing technology costs for the rest of the world. However, local content provisions can create resource misallocation that will reduce, or even negate, these positive spillovers.

The U.S. has also been supporting global climate efforts including the decarbonization of emerging and developing economies through financial commitments to the Green Climate Fund and participation in the Just Energy Transition Partnership.

34. The administration has proposed important supply side fiscal policies which merit adoption. These include:

- Tackling ***poverty*** by increasing the child tax credit, making it fully refundable and advanceable, expanding the earned income tax credit for workers without qualifying children, broadening Medicaid coverage, and expanding nutrition support.
- Incentivizing greater ***labor force participation*** by providing more federal resources for childcare and guaranteeing paid family leave for private sector workers.
- Expanding ***healthcare*** coverage through tax credits for lower income individuals to purchase privately provided health insurance.
- Increasing access to ***education*** including through universal pre-school, subsidizing higher education for lower income households, and supporting vocational training and apprenticeships.
- Improving ***progressivity*** by increasing income tax rates on high earners, taxing carried interest as ordinary income, and ensuring that when appreciated assets are given as a gift (or upon

death), capital gains would be realized and represent taxable income to the donor (or the decedent's estate).

- Increasing the ***corporate income tax*** rate from 21 to 28 percent.
- Revising the ***global minimum tax*** regime, adopting an undertaxed profits rule, and limiting the scope for tax inversions.
- Reducing ***distortions*** and limiting opportunities for tax avoidance by streamlining the corporate income tax and scaling back various embedded incentives (including eliminating all tax preferences for fossil fuel producers).

35. Authorities' views. The administration's policy proposals—as summarized by the President's Budget—are aimed at increasing labor supply, building human capital, and investing in infrastructure, R&D, and clean energy. These efforts should both increase potential growth but also raise living standards and reduce poverty. Priorities include addressing inadequate paid leave and high elder and childcare costs; creating pathways—particularly for lower income workers—to build skills through early childhood education, community college, apprenticeships and worker training; and creating a more equitable tax system including by imposing a global minimum tax on corporate earnings. Recent initiatives like the CHIPS Act had also incorporated similar family-friendly provisions such as requiring applicants requesting over $150 million in federal support to submit a plan to provide access to childcare to their employees.

36. In pursuing these reforms, however, the U.S. should place greater emphasis on reducing its fiscal deficit. This is true both relative to the current policies baseline and the adjustment path proposed in the President's budget. Even though the risk of sovereign stress is low[8] and the U.S. public debt is viewed as sustainable (Appendix II), the general government debt is expected to continue rising by 2–3 percent of GDP per year as aging-related expenditures on health and social security feed into the debt dynamics. Putting debt onto a downward path by the end of this decade would require maintaining a 1 percent of GDP general government primary surplus (an adjustment of around 5 percent of GDP). Even with such an ambitious adjustment, debt would remain well above pre-pandemic levels until 2036. Generating social and political consensus on how such an adjustment will be undertaken will be challenging (Box 6 offers some options). However, precluding increases in the tax burden on those earning under US$400,000 per year or ruling out changes to social security and Medicare will ultimately make such an adjustment infeasible.

37. With the economy operating well above potential, there is a strong case to front-load this needed tightening of fiscal policy. Greater fiscal restraint in 2023-24 would lessen the burden on the Federal Reserve in disinflating the economy and, in so doing, would potentially lessen financial stability risks. To achieve this adjustment, policies that both raise revenues and address imbalances in entitlement programs will likely prove necessary.

[8] Mitigating factors include the strength of institutions, the depth of the investor pool, the role of the U.S. dollar in the international system, and the Fed's stabilizing role.

38. Authorities' views. The administration is conscious that inflation poses a significant burden to the public and has put in place a range of fiscal policies to ensure lower costs for families. That includes historic action to lower prescription drug costs for seniors and allowing Medicare to negotiate lower prices. The President's Budget proposes an ambitious fiscal adjustment, lowering the deficit by nearly US$3 trillion over the next decade. The administration has proposed a range of reforms that would strengthen the supply side of the economy, reduce health costs, and expand coverage, help families, invest in education and training, and requires the wealthy and big corporations to pay their fair share of taxes. Importantly, no one earning less than US$400,000 per year will pay a penny more in taxes.

Box 6. Possible Options to Lower the Federal Debt

A combination of options would be needed on both the revenue and expenditure side of the budget to bring debt down over the medium term. These include:

- Scaling back poorly targeted tax expenditures such as exemptions for employer-provided health care, for individuals selling their principal residence, for mortgage interest, and for state and local taxes (1.4 percent of GDP per year).
- Closing the "carried interest" provision and "step up basis" for capital gains tax (0.1 percent of GDP per year).
- Phasing in a federal consumption tax and/or a carbon tax alongside well-designed assistance to protect the poor (a 10 percent in a broad-based VAT would yield 2 percent of GDP per year).
- Eliminating federal subsidies and tax preferences for fossil fuel producers and carbon-intensive agriculture (0.01 percent of GDP per year).
- Raising the corporate tax rate and/or moving toward a cashflow tax (each 10 percent increase in the corporate income tax rate would yield 0.4 percent of GDP per year).
- Reducing imbalances in the social security system by indexing benefits to chained CPI, raising the income ceiling for social security contributions, or front-loading the planned increase in the retirement age (indexing social security to chained CPI saves 0.08 percent of GDP per year; subjecting earnings greater than $250,000 to social security payroll taxes would yield 0.4 percent of GDP per year).
- Containing health care costs through technological solutions that increase efficiency, encouraging greater cost sharing with beneficiaries, and changing the mechanisms for remunerating healthcare providers (expanding Medicare prescription drug price negotiation as outlined in the FY2024 budget could save 0.1 percent of GDP).
- Reducing the minimum threshold for the estate tax (reducing the minimum threshold for the estate tax to pre-TCJA level could yield 0.02 percent of GDP per year).
- Legislating the globally coordinated agreement on a minimum corporate tax to counter profit shifting and base erosion.

DECARBONIZING THE U.S. ECONOMY

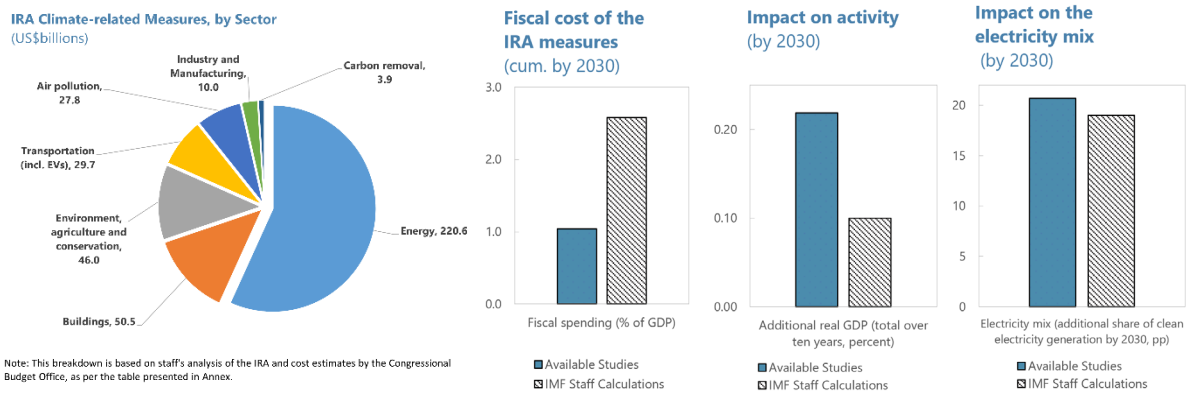
39. Important efforts are being made to decarbonize the U.S. economy but more needs to be done. Based on the Global Macroeconomic Model for the Energy Transition,[9] IRA climate measures would allow for an overall reduction in emissions of around 36 percent by 2030 (relative to 2005 levels), representing a substantial step forward but still below the administration's goal of a 50–52 percent reduction by 2030 (Box 7 and 8). Even with the IRA incentives, deploying green energy generating capacity and achieving the full potential of the IRA will hinge on overcoming real-world challenges such as delays in permitting and inadequate electricity transmission infrastructure. Additional steps to bridge this gap and reach the U.S. emission reduction goals could include a further tightening of state or federal regulations (including on fuel efficiency, clean energy standards, and regulation of power plant emissions), ensuring that the upcoming reauthorization of the Farm Bill prioritizes changing incentives for carbon intensive agriculture and supports carbon sequestration, and building the necessary social consensus to begin pricing carbon. The U.S.'s very flexible labor markets will be an advantage in facilitating decarbonization. Nonetheless, training and financial support for the most affected workers would facilitate a faster reallocation of labor and lower societal costs of this transition. This would help ensure that reducing emissions will garner broad societal support and not leave behind those communities that are currently reliant on fossil fuels for jobs, activity, and local tax revenue.

40. Authorities' views. The administration has advanced significant policies toward decarbonizing electricity and transportation, improving energy efficiency, cutting methane emissions, accelerating carbon capture and removal and other key technologies, and ending deforestation, among other areas. Policies in the Inflation Reduction Act were a critical step forward in pursuit of the U.S. Nationally Determined Contribution, consisting of cutting emissions by around half by 2030 (relative to 2005 levels). Beyond these legislative measures, federal regulators are taking important actions to complement the IRA's "incentive-based" approach, as well as continued momentum at the sub-national level. The administration's strategy is expected to create a significant number of new, well-paying jobs, and the IRA also embeds substantial justice-oriented and place-based measures aimed at supporting disadvantaged communities, such as low-income communities and energy communities. Finally, the U.S. has pledged to double U.S. contributions to the Green Climate Fund and to mobilize Multilateral Development Banks to address climate change.

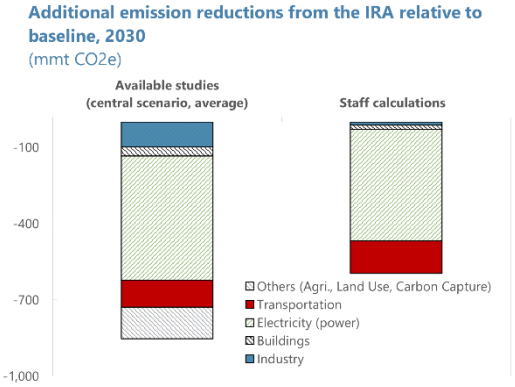
[9] For details see Carton, Evans, Muir and Voigts (2023) "Getting to Know GMMET: The Theoretical Structure and Simulation Properties of the Global Macroeconomic Model for the Energy Transition." (forthcoming).

Box 7. The Inflation Reduction Act: Where Might It Take the U.S.?[1]

The Inflation Reduction Act directs almost US$400 billion to climate-related tax credits, subsidies, grants and loans, as per Congressional Budget Office's (CBO) estimates. More than half of these resources are targeted at incentivizing a shift to green energy production. The remainder is for various programs including to increase energy efficiency and boost the electrification of transportation.



Using the GMMET model, IRA provisions are preliminarily estimated to induce an increase in the share of electricity generation from renewables by 2030 by around 19 percentage points relative to a baseline without the IRA. This is of a similar magnitude to other forecasts.[2] Simulations in GMMET suggest that the fiscal cost of the various incentives from the uptake of subsidies could be larger than estimated by the CBO (i.e., costing an additional 1 percent of GDP over 10 years). The IRA climate measures would add around 0.1 percent to the level of GDP by 2030, taking into account the financing of the Act through higher corporate income taxes. This primarily reflects that expanding electricity generation capacity adds to the economy's productive capacity, more than offsetting any decline in investment from the higher taxes.



These same IRA measures are expected to reduce carbon emissions by around 12 percent by 2030 (relative to a baseline without these policies), mainly driven by measures in the power and transportation sectors.[3] This would allow for an overall reduction in emissions of around 36 percent by 2030. Estimates are, however, sensitive to underlying assumptions (e.g., the supply elasticities of fossil fuels, availability of skilled labor). They also significantly hinge on solving permitting hurdles in expanding investments in renewables.

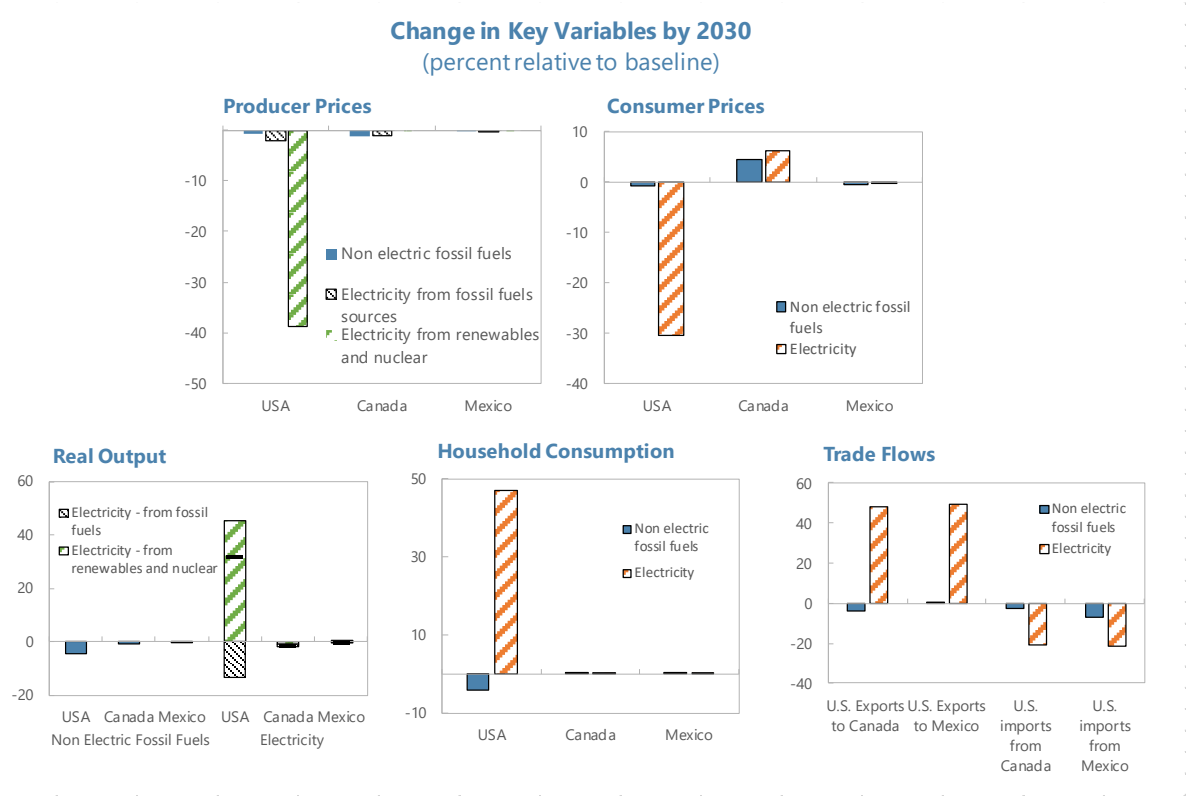
[1] A. Paret and S. Voigts, 2023, "How Close to the U.S. Emissions Goals Does the Inflation Reduction Act Bring Us?", forthcoming IMF Working Paper. The simulation incorporates the effects of tax credits for the investment in and production of clean energy, for the manufacturing of clean energy equipment, for the production of nuclear energy, for individual EV purchases and the installation of chargers, for carbon capture and utilization, and for improving the energy efficiency of buildings.

[2] Annual Energy Outlook 2023 reference scenario, including IRA impact, and estimates by Energy Innovation, and Rhodium group.

[3] The "available studies" comparators include fiscal cost estimates by the Congressional Budget Office, and Energy Innovation (see above), Moody's, University of Pennsylvania, and Baker Institute estimates for GDP effects.

Box 8. Cross Border Effects of the Inflation Reduction Act in North America[1]

Based on the IMF-ENV model, climate and energy related measures in the Inflation Reduction Act should lower electricity prices at the consumer level by around 30 percent in the U.S. by 2030 (driven by the price in electricity from renewables and nuclear), thereby prompting higher electricity consumption by households. The measures will significantly increase the incentives to produce renewable and nuclear electricity in the U.S. resulting in a marginal reduction of Canadian electricity production from both renewables and fossil fuel sources (due to lower U.S. demand for imported power).



Greater reliance on clean energy will reduce U.S. demand for fossil fuels (with U.S. household demand declining by 4 percent by 2030 relative to baseline). This will result in 5 percent less production in the U.S. by 2030, and a marginal decline in U.S. demand for Canada oil and gas. While the estimates do not incorporate any of the new green policies being undertaken in the rest of the world, they suggest that the Act's incentives alone result in a very small "carbon leakage" to the rest of the world (i.e. fossil fuel prices are lower as a result of lower U.S. demand but this has only a small effect on increasing the consumption of fossil fuels in Mexico and Canada, offsetting only around 1 percent of the reduction in U.S. emissions).

[1] J.-M. Fournier, T. Kass-Hanna, L. Masterson, A. Paret, S. Thube, 2023, "Cross-border Effects of Climate Measures in North America", forthcoming IMF Working Paper. Impacts are all shown relative to a baseline without the incentives of the Inflation Reduction Act. In the baseline, Canada maintains a carbon price of $130, as enacted in 2021, while Mexico's price is $3.

COUNTERING GLOBAL FRAGMENTATION

41. Some of the policies put in place to tackle climate change, improve infrastructure, and increase the resilience of U.S. supply chains have introduced policy distortions that will contribute to global fragmentation. Both the Inflation Reduction Act[10] and the CHIPS Act[11] include "Made in America" provisions that discriminate against foreign producers. In addition, the Build America, Buy America Act establishes a domestic content procurement preference for iron, steel, manufactured products, and construction materials used in all federally funded infrastructure projects. More broadly, the administration has repeatedly emphasized its goal of providing, where possible, preferential treatment for U.S. produced products and to encourage the onshoring of production (including for green technologies, semiconductors, steel, and other products). While these measures are aimed toward increasing the security and resilience of supply chains, such protectionist provisions—that include domestic content requirements, or otherwise discriminate between foreign and domestically produced goods and services—distort trade and investment decisions, disrupt global supply relationships, and risk creating a slippery slope that fragments global supply chains and triggers retaliatory responses by trading partners. As such, these "Made in America" policies are ultimately bad for U.S. growth, productivity, and labor market outcomes.[12] As the U.S. undertakes legitimate efforts to boost its supply chain resilience, it should avoid favoring domestic producers over imports or creating incentives that lead to a fragmentation of the global system for trade and investment.

42. The U.S. would be better served by maintaining the open trade policies that have been vital to boosting U.S. economic performance. In addition to instituting new preferences, the U.S. has also kept in place many of the tariffs and other trade distortions that were introduced over the past five years. These should be rolled back as a means to facilitate similar reductions in tariffs by trading partners, including through the ongoing statutory review of the Section 301 tariffs on China. Rather than discriminatory measures, trade policy would be better bolstered by increasing productivity and competitiveness through investments in worker training, apprenticeships, and infrastructure. Doing so would lift the ability of U.S. firms and workers to compete internationally. The U.S. should actively engage with all major trading partners to address the core issues that risk fragmenting the global trade and investment system. This includes finding common ground in areas such as tariffs, farm and industrial subsidies, and services trade. It also includes ensuring that new trade initiatives are used to further trade integration between trading partners, and not as discriminatory tools that create incentives for fragmentation.

[10] The Inflation Reduction Act includes "green" tax credits that are wholly or partially tied to domestic content requirements including tax credits for the purchase of new electric vehicles and tax credits for investments in lower emission electricity generation.

[11] The CHIPS Act authorizes a series of programs to promote domestic research, development, and fabrication of semiconductors but contains provisions that prevent companies which receive federal incentives from materially expanding their semiconductor manufacturing capacity in any "foreign country of concern" for a 10-year period.

[12] Bolhuis and others (2023) estimate that a severe fragmentation scenario, in which trade continues at the global level only within two different country blocks (and not between them), would lead to a long-term reduction in U.S. output of up to 2.9 percent. Cerdeiro and others (2021) estimate that a technological decoupling with China would lower U.S. output by 4 percent over the medium-to-long term.

43. To better capitalize on the significant economic benefits that multilateralism and open trade have brought, the U.S. should redouble efforts to strengthen the WTO. This would mean avoiding discriminatory measures that undermine the rules-based trading system. It would also mean working to restore a well-functioning dispute settlement system by 2024, and to conclude new WTO-based market-opening agreements. Taken together, these actions would help to promote the trade policy certainty that is essential for investment and growth.

44. Authorities' views. The administration is pursuing a targeted industrial and innovation strategy that capitalizes on the U.S. comparative advantages, makes supply chains more resilient and secure, fosters a shift to clean energy, and establishes high standards for labor and environmental practices. This strategy may help reverse the hollowing out of the U.S. industrial base and counter unfair subsidies by non-market economies. In implementing this plan, the administration intends to target specific sectors that are foundational to healthy and sustainable growth and national security and deploy public resources to facilitate innovation and competition in these industries. The U.S. has been coordinating with partners and allies to align approaches, particularly as relates to clean energy and semiconductors. The goal is to move beyond traditional trade deals and develop new partnerships that are aligned with the administration's broader international economic policy. This includes using trade to promote supply chain diversification and the clean energy transition, ensure trust and openness in digital infrastructure, and enhance protections for labor and the environment. Several initiatives are underway to advance these objectives, including the Indo-Pacific Economic Framework for Prosperity, the Americas Partnership for Economic Prosperity, and the U.S.-EU Trade and Technology Council. Finally, the U.S. is committed to reform the multilateral trading system to benefit workers, accommodate national security interests, and ensure sustainable, low-carbon development. In this regard, the U.S. is spearheading a process for WTO reform aimed at modernizing and improving the accessibility of the organization.

FINANCIAL STABILITY RISKS HAVE COME TO THE FOREFRONT

45. The U.S. banking system as a whole is liquid and well-capitalized but recent events have demonstrated that relatively small intermediaries can create systemic financial instability. SVB and Signature bank together accounted for around 1½ percent of system assets but still had wide-ranging effects. This calls into question the appropriateness of the "tailoring" of financial regulations that was put in place in 2018 for smaller banks as well as the decision (in 2015) to modify regulatory capital rules to exempt banks with assets under US$250 billion from reflecting unrealized losses in available for sale holdings in their regulatory capital.[13]

46. The oversight of SVB highlights an insufficiently assertive stance by Fed supervisors. It has become clear that the problems with SVB's business model were well known to supervisors and

[13] The potential risks that these changes created had previously been highlighted both in bilateral surveillance and in the 2020 FSAP. See for example, United States: 2018 Article IV, United States: 2020 Article IV. United States, Financial System Stability Assessment, and United States: Financial Sector Assessment Program – Technical Note – Banking Supervision and Regulation.

that the bank's management had received several warnings linked to the bank's liquidity stress testing, contingency funding, and risk management and modeling practices. Despite this, supervisory actions did not prevent the bank from continuing to grow rapidly and did not precipitate fundamental changes to the bank's operations. Moreover, the SVB episode raises additional questions about the effectiveness of the discount window in providing liquidity under stress (potentially because of stigma and/or due to the margins applied to collateral pledged at the window).

47. The review undertaken by the Federal Reserve sheds light on supervisory failures and will help inform a needed recalibration of financial regulations and supervisory practices. Prudential requirements should be made more stringent for mid-sized banks, subjecting them to similar requirements as large banks. Specific changes for non-internationally active banks (i.e., Category III and IV firms) should include (i) subjecting them to regular stress testing as part of the annual supervisory stress testing process; and (ii) aligning their capital and liquidity requirements with the Basel framework (including applying coverage of the liquidity coverage ratio and the net stable funding ratio). More explicit rules and processes should be instituted to escalate supervisory actions in the event that banks do not respond in a timely way to address supervisory warnings. In addition, the practice of not applying margins to collateral at the discount window should be viewed as an extraordinary step and should be discontinued in March 2024 (i.e., when the Bank Term Funding Program is scheduled to expire).

48. There would be benefit in strengthening the stress testing framework and addressing shortcomings in the prudential frameworks for assessing banks' exposure to interest rate risk. Exemptions for medium-sized banks from annual supervisory stress test introduced in 2018, in combination with rapid balance sheet growth, meant that SVB was not subject to stress testing despite having assets of US$221 billion by end-2022. However, even if the Fed's stress test and capital planning exercise had been applied, it is unclear that the underlying vulnerabilities would have been revealed. The Dodd-Frank stress tests are typically focused on negative macroeconomic scenarios that result in a decline, not increase, in interest rates. Furthermore, the Basel methodology to identify banks with excessive interest rate risk exposure, and then subject them to more intensive supervision, has not been adopted by the U.S. There is also no standardized disclosure requirement on interest rate risk. It would, therefore, be beneficial to examine a broader range of scenarios in stress testing. A more methodical process is needed to assess banks' exposure to interest rate risk—in both the available for sale and the hold to maturity portfolios—and have a supervisory response in cases where these risks are seen to be building. Undertaking stringent integrated solvency-liquidity stress tests should be a key component of the policy response arising from recent events.

49. High leverage, liquidity and duration mismatches, and interconnectedness between non-bank financial institutions and the banks pose additional risks.[14] Flows into money market funds have accelerated following the regional bank failures and there are risks that banks become

[14] The FSOC has released for public comment (i) a proposed analytic framework on how FSOC intends to identify, assess, and mitigate risks to financial stability as well as (ii) a process to remove hurdles to designating nonbank entities as being systemically important and to ensure that the designation process is rigorous and transparent.

increasingly disintermediated if, as is likely, interest rates remain high for an extended period.[15] This reallocation across intermediaries potentially may encounter issues in market liquidity and functioning, with unpredictable consequences. Furthermore, the various failures of crypto-related entities illustrate the need for greater oversight of that sector, including from the perspective of consumer protection. Finally, nonbank intermediaries play an important role in the commercial real estate sector including through real estate investment trusts and commercial mortgage-backed securities. Commercial real estate contains significant leverage, has important near-term financing needs, is going through a significant adjustment to changing patterns of demand, and may well come under pressure as regional banks reduce their exposure. This could have uncertain direct spillovers to the nonbanks and indirectly to the banks (via their lending to intermediaries that have commercial real estate exposure) which merit analysis and monitoring.

50. Data on the operations of the Treasury market has been improving and there is work underway to strengthen the functioning of the Treasury market. The last few years have seen U.S. fixed income markets prove to be insufficiently resilient under stress. A standing repo facility has been established by the Fed to provide liquidity and contain upside spikes to short-term interest rates. Work is underway to establish a Treasury buyback program that could support market liquidity (although not to mitigate episodes of acute market stress). In addition, the interagency working group on Treasury market resilience has put forward proposals to improve market functioning. These include an expansion of all-to-all trading and greater use of central clearing. Some of these have led to rule change proposals that have been circulated for public comment. There now needs to be an effort to translate this work into institutional changes that strengthen the functioning of the Treasury market. Increasing dealer capacity to intermediate the Treasury market by modifying the Supplementary Leverage Ratio may also help.

51. Despite a significant reduction in residential construction and mortgage initiation, financial stability risks from the ongoing housing downturn appear contained. Mortgages have been issued based on generally strong underwriting standards and the robust jobs market is likely to dampen delinquency rates, even as the economy slows. Also, 95 percent of mortgages are at fixed rates which insulates homeowners from the ongoing rise in interest rates. Finally, virtually all homeowners have a sizable home equity buffer which would imply a large decline in house prices would be required for mortgages to become underwater. Nonetheless, some bank and nonbank mortgage providers will need to adapt their business models to cope with significant reductions in refinancing activity and new mortgage origination.

52. A range of FSAP recommendations remain unaddressed. These include: (i) ensuring each Financial Stability Oversight Council member has an explicit financial stability objective in their mandate; (ii) closing a range of data gaps; (iii) finalizing the arrangements for market-wide circuit breakers and providing greater budgetary autonomy for the SEC and CFTC; (iv) reviewing prudential requirements for non-internationally active banks (category III and IV); (v) strengthening the

[15] A. Hodge and A. Weber, "The Heterogeneous Effects of U.S. Monetary Policy on Non-Bank Finance," IMF WP 2023/055, find that contractionary monetary policy shocks also cause sustained outflows from long-term mutual funds, but inflows into money market funds.

consistency of risk management practices by central counterparties; (vi) subjecting mutual funds to SEC-led liquidity stress tests; and (vii) developing a consolidated group capital requirement for insurance companies.

53. Authorities' views. The banking system has evolved in ways that could increase its exposure to deposit runs, including ways related to technology and the growing role of uninsured deposits as a source of deposit funding. Recent failures of specific regional banks have highlighted some of these potential vulnerabilities. The Federal Reserve, FDIC, and Treasury made swift and forceful interventions in the wake of these bank failures to strengthen confidence in the U.S. banking system and protect depositors. The capital and liquidity positions of the overall banking system remain at strong levels and banks are well-positioned to absorb a range of shocks. Nonetheless, there is no scope for complacency. From its beginning, the Biden administration has made it a priority to rebuild FSOC, whose apparatus had been decimated in prior years. Work is already underway to re-examine the current supervisory and regulatory regime to address identified shortcomings and ensure the institutional framework for financial stability is fully fit for purpose. The SEC has proposed rules to mitigate vulnerabilities in money market and open-end funds, while substantial work continues to close data gaps in financial stability monitoring (including on the activities of hedge funds). Steps have been proposed to ensure all markets, including the market for U.S. Treasuries, are able to function fully, even under stressful conditions. The administration remains vigilant also in monitoring and addressing potential risks posed by digital assets and is working with Congress to establish a prudential regulatory framework for stablecoins.

GOVERNANCE AND ANTI-CORRUPTION

54. The U.S. continues with efforts to safeguard the financial system from illicit proceeds of crime, especially from corruption. The 2022 National Strategy for Combating Terrorist and Other Illicit Financing outlines key priorities including closing gaps in the AML/CFT framework, making the AML/CFT framework for financial institutions more effective, and enabling technological innovation while mitigating risks. In establishing a national beneficial ownership registry as provided for in the Corporate Transparency Act, the Financial Crimes Enforcement Network (FinCEN) is currently undertaking public consultations on proposed regulations for accessing beneficial ownership information in the registry. The Treasury's 2022 Action Plan on digital assets is focused, among others, on monitoring risks and strengthening the AML/CFT supervision of digital asset activities. In this regard, the recently released Risk Assessment of Decentralized Finance highlighted the vulnerability arising from the lack of implementation of AML/CFT controls in this sector and identified further work in closing gaps that allow certain decentralized finance services to fall outside of the AML/CFT framework. Finally, work on confiscating assets in the U.S. related to foreign corruption and repatriating them to foreign countries is continuing. Financial institutions have been provided guidance on detecting proceeds of foreign public corruption through the FinCEN 2022 Advisory on Kleptocracy.

55. Progressing in key governance and transparency initiatives will strengthen the U.S. toolkit to combat money laundering and corruption, including from abroad. Advancing on the

creation of the registry of beneficial ownership information and the associated rules on access and verification will help ensure that U.S. companies are not misused for illicit purposes. A law subjecting gatekeepers and enablers (especially lawyers, accountants, and trust and company service providers) to customer due diligence and suspicious transaction reporting obligations has yet to be approved. Ensuring that real estate agents are also subject to comprehensive AML/CFT requirements (e.g., enhanced due diligence for customers who are politically exposed persons) will contribute to mitigating laundering of corruption proceeds in the high-end real estate in the U.S. The renewal of FinCEN's Geographic Targeting Orders, which expires in April 2023, to identify beneficial owners of non-financed purchases of residential real estate is a positive development. To further combat corruption, transparency in government procurement could be improved by ensuring that relevant public procurement authorities have timely access to beneficial ownership information of bidding companies.

STAFF APPRAISAL

56. The U.S. economy has proven resilient in the face of the significant tightening of both fiscal and monetary policy in 2022. Consumer demand has held up particularly well, boosted initially by a drawdown of pent-up savings and, more recently, by solid growth in real disposable incomes. Policy restraint is expected to continue to slow the economy in 2023 with a modest pick-up in momentum later in 2024. Unemployment is expected to rise slowly to 4½ percent by end-2024.

57. Resilient demand and strong labor market outcomes are a double-edged sword that has contributed to more persistent inflation. Goods inflation has moderated and shelter price growth is expected to start slowing in coming months. However, past nominal wage increases are now feeding into non-shelter service prices. Core and headline PCE inflation are expected to continue falling but will remain materially above the Federal Reserve's medium-term target throughout 2023 and 2024. Risks to the path for inflation are skewed upwards.

58. Bringing inflation back to target will require an extended period of tight monetary policy with the federal funds rate remaining at 5¼—5½ percent until late in 2024. Achieving a sustained disinflation will necessitate a loosening of labor market conditions that, so far, has not been evident in the data. If the economy proves less responsive to higher interest rates and/or inflation proves to be even more persistent, the path for the federal funds rate will need to go higher. Given the important uncertainties facing the U.S. economy, it will be essential for the Federal Reserve to communicate carefully how it assesses the incoming data and to provide clear guidance on what this means for the expected path of the policy rate. Greater emphasis should be placed on the need for interest rates to remain at high levels for an extended period of time. Communications should continue to underscore, though, that the FOMC's forward guidance is not set in stone and actual policy outcomes will depend critically on incoming data.

59. The disinflation process should be supported by a tighter fiscal policy. On a general government basis, fiscal policy is expected to be procyclical in 2023. With the economy operating

well above potential and inflation a persistent problem, there is a strong case for greater fiscal restraint in 2023–24. A tighter fiscal stance would lessen the burden on the Federal Reserve in disinflating the economy.

60. A more significant fiscal adjustment will be required over the medium-term to put public debt on a decisively downward path. Achieving this adjustment will require a broad range of policies including both tax increases (even for those earning less than US$400,000 per year) and addressing structural imbalances in social security and Medicare. The sooner this adjustment is put in place, the better. In addition, the debt ceiling should be immediately raised or suspended by Congress and a more permanent solution should be developed to avoid this recurrent debt limit brinkmanship through institutional changes that ensure that, once appropriations are approved, the corresponding space on the debt ceiling is automatically provided to finance that spending.

61. Over the last few years, global concerns have been raised over the resilience of supply chains, including as relates to national security. In this context, the Inflation Reduction Act, the CHIPS Act, and the Build America, Buy America Act have included provisions that are explicitly designed to favor goods and services produced in the U.S. or in North America. We know from experience that protectionist provisions distort trade and investment and risk creating a slippery slope that will fragment global supply chains and trigger retaliatory actions by trading partners. As such, these "Made in America" policies are ultimately bad for U.S. growth, productivity and labor market outcomes.

62. Recent bank failures highlight the potential systemic risks posed by even relatively small financial intermediaries. The past few months have focused attention on poor risk management by individual institutions, vulnerabilities created by the regulatory "tailoring" that was put in place in 2018, and inadequate supervisory oversight. They also raise more important questions about the insufficiently assertive stance taken by bank supervisors as well as the effectiveness of the stress tests that were undertaken to identify the extent of bank vulnerabilities and the potential for systemic contagion. Prudential requirements should be made more stringent for mid-sized banks, subjecting them to similar requirements to larger banks, including the annual supervisory stress testing process and aligning their capital and liquidity requirements with the Basel framework.

63. A range of policies that were proposed in the President's budget would help address supply side constraints to growth but should be implemented within a fiscal envelope that ensures a downward path for the public debt. These include policies to incentivize labor force participation by expanding the earned income tax credit, providing childcare subsidies, and requiring paid family leave. Human capital would be boosted by investments to expand healthcare coverage and increase access to pre-K and higher education. Continued increases in infrastructure investment—including to strengthen resilience to climate change—would help raise productivity and competitiveness. There is also scope for a range of tax changes to raise revenue, make the current system more progressive and equitable, and curtail base erosion and profit shifting.

64. Policies in the Inflation Reduction Act are a big step forward and have the potential to significantly decarbonize the U.S. economy. Policies already put in place should lower greenhouse gas emissions by around 36 percent by 2030 (relative to 2005 levels). However, rapid deployment of green energy generating capacity and achieving the full potential of the Act's measures will hinge on overcoming real-world challenges, such as delays in permitting and electricity transmission siting. Beyond this important policy package, further efforts are needed to ensure emission reductions reach the U.S. objective of a 50–52 percent decline. Additional steps could include a further tightening of state or federal regulations (including on fuel efficiency standards and the regulation of CO2 emissions from power plants), ensuring that the upcoming reauthorization of the Farm Bill prioritizes changing incentives for carbon intensive agriculture and supports carbon sequestration, and building the necessary social consensus to begin pricing carbon. The U.S.'s very flexible labor markets will be an advantage in facilitating decarbonization. Nonetheless, training and financial support for the most affected workers would facilitate a faster reallocation of labor and lower societal costs of the transition. This would help ensure that reducing emissions garners broad societal support and does not leave behind those communities that are currently reliant on fossil fuels for jobs, activity, and local tax revenue.

65. The 2022 external position remains moderately weaker than the level implied by medium-term fundamentals and desirable policies. The current account is likely to remain below its medium-term norm for the foreseeable future. The real exchange rate is around 8 percent more appreciated than prior to the pandemic and appears to be moderately overvalued.

66. 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)

	2019	2020	2021	2022	Projections 2023	2024	2025	2026	2027	2028
National Production and Income										
Real GDP	2.3	-2.8	5.9	2.1	1.7	1.0	1.8	2.1	2.1	2.1
Real GDP (q4/q4)	2.6	-1.5	5.7	0.9	1.2	1.1	2.0	2.1	2.1	2.1
Net exports 1/	-0.1	-0.3	-1.2	-0.4	0.5	0.0	0.0	0.0	0.0	0.0
Total domestic demand	2.3	-2.4	7.0	2.4	1.1	1.0	1.7	2.0	2.1	2.1
Final domestic demand	2.3	-1.9	6.7	1.7	1.6	1.0	1.7	2.1	2.1	2.1
Private final consumption	2.0	-3.0	8.3	2.7	2.0	0.8	1.4	1.7	2.0	2.0
Public consumption expenditure	3.4	2.2	1.3	-0.2	3.0	1.4	1.3	1.3	1.3	1.3
Gross fixed domestic investment	2.6	-1.2	5.7	-0.5	-0.8	1.3	3.2	3.7	3.2	3.1
Private fixed investment	2.5	-2.3	7.4	-0.2	-1.9	0.7	3.0	3.7	3.7	3.8
Public fixed investment	3.1	3.9	-2.3	-2.1	4.9	4.1	3.9	3.5	0.5	0.0
Change in private inventories 1/	0.0	-0.5	0.2	0.7	-0.5	0.0	0.0	0.0	0.0	0.0
Nominal GDP	4.1	-1.5	10.7	9.2	6.0	4.1	4.3	4.2	4.1	4.1
Personal saving rate (% of disposable income)	8.8	16.8	11.9	3.5	4.1	4.0	4.9	4.9	4.9	5.4
Private investment rate (% of GDP)	17.8	17.3	17.6	18.2	17.2	17.1	17.3	17.5	17.8	18.0
Unemployment and Potential Output										
Unemployment rate	3.7	8.1	5.4	3.6	3.7	4.2	4.3	4.0	4.0	4.0
Labor force participation rate	63.1	61.7	61.7	62.2	62.5	62.5	62.4	62.2	62.2	62.2
Potential GDP	1.6	0.4	1.8	2.2	2.1	2.0	2.0	2.0	2.0	2.0
Output gap (% of potential GDP)	0.7	-2.5	1.5	1.4	0.9	0.0	-0.2	-0.2	-0.1	0.0
Inflation										
CPI inflation (q4/q4)	2.0	1.2	6.8	7.1	3.6	2.5	2.4	2.1	2.1	2.2
Core CPI Inflation (q4/q4)	2.3	1.6	5.0	6.0	4.2	2.9	2.7	2.3	2.3	2.3
PCE Inflation (q4/q4)	1.4	1.1	5.7	5.7	3.8	2.6	2.3	1.9	1.9	2.0
Core PCE Inflation (q4/q4)	1.6	1.4	4.7	4.8	4.1	2.8	2.5	2.0	2.0	2.0
GDP deflator	1.8	1.3	4.5	7.0	4.3	3.0	2.5	2.1	1.9	1.9
Government Finances										
Federal balance (% of GDP) 2/	-4.7	-14.9	-12.3	-5.5	-5.6	-5.7	-6.4	-6.2	-5.9	-6.4
Federal debt held by the public (% of GDP)	79.4	99.8	98.4	97.0	96.6	98.4	101.2	103.6	105.8	108.3
General government budget balance (% of GDP)	-5.7	-14.0	-11.6	-3.7	-6.7	-7.0	-7.3	-7.1	-6.9	-7.0
General government gross debt (% of GDP)	108.7	133.5	126.4	121.4	121.8	124.6	127.5	130.1	132.5	134.9
Interest Rates (percent; period average)										
Fed funds rate	2.2	0.4	0.1	1.7	5.1	5.3	4.2	3.2	2.4	2.4
Three-month Treasury bill rate	2.1	0.4	0.0	2.1	5.2	5.3	4.2	3.2	2.4	2.4
Ten-year government bond rate	2.1	0.9	1.4	3.0	3.8	3.8	3.6	3.4	3.4	3.4
Balance of Payments										
Current account balance (% of GDP)	-2.1	-2.9	-3.6	-3.7	-2.8	-2.5	-2.4	-2.3	-2.2	-2.2
Merchandise trade balance (% of GDP)	-4.0	-4.3	-4.7	-4.7	-4.0	-3.7	-3.6	-3.5	-3.5	-3.4
Export volume (NIPA basis, goods)	0.1	-10.1	7.4	6.3	3.6	0.4	2.1	2.3	2.1	2.1
Import volume (NIPA basis, goods)	0.5	-5.8	14.5	6.9	-1.6	-0.4	1.4	2.2	2.1	2.0
Net International Investment Position (% of GDP)	-54.5	-69.8	-77.7	-63.3	-62.5	-62.6	-62.4	-62.2	-62.0	-61.7
Saving and Investment (% of GDP)										
Gross national saving	19.7	19.3	18.0	18.3	16.4	16.9	17.3	17.8	18.1	18.3
General government	-3.1	-11.1	-8.4	-1.3	-4.0	-4.0	-4.5	-4.5	-4.5	-4.7
Private	22.8	30.4	26.4	19.6	20.4	20.9	21.8	22.3	22.6	23.0
Personal	6.8	14.2	9.6	2.6	3.0	3.0	3.6	3.6	3.6	3.9
Business	16.0	16.2	16.8	17.1	17.4	17.9	18.2	18.7	19.0	19.1
Gross domestic investment	21.3	21.1	21.1	21.6	20.6	20.7	21.0	21.2	21.4	21.6
Private	17.8	17.3	17.6	18.2	17.2	17.1	17.3	17.5	17.8	18.0
Public	3.5	3.8	3.5	3.4	3.5	3.6	3.6	3.7	3.6	3.5

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)

	2019	2020	2021	2022	Projections 2023	2024	2025	2026	2027	2028
Real Exports Growth										
Goods and services	0.5	-13.2	6.1	7.1	3.2	0.6	2.0	2.5	2.3	2.2
Goods	0.1	-10.1	7.4	6.3	3.6	0.4	2.1	2.3	2.1	2.1
Services	1.2	-18.8	3.3	8.7	2.4	1.1	1.9	2.7	2.6	2.5
Real Imports Growth										
Goods and services	1.1	-9.0	14.1	8.1	-1.0	0.2	1.6	2.2	2.2	2.1
Goods	0.5	-5.8	14.5	6.9	-1.6	-0.4	1.4	2.2	2.1	2.0
Nonpetroleum goods	1.1	-5.3	15.2	7.6	-2.2	-0.2	1.7	2.4	2.3	2.2
Petroleum goods	-5.8	-12.5	5.5	-0.4	4.1	-2.5	-3.0	-1.7	-1.6	-1.6
Services	4.0	-22.0	12.3	14.2	1.7	3.0	2.8	2.6	2.6	2.5
Net Exports (contribution to real GDP growth)	-0.1	-0.3	-1.2	-0.4	0.5	0.0	0.0	0.0	0.0	0.0
Nominal Exports										
Goods and services	11.9	10.2	10.9	11.7	11.3	11.2	11.1	11.1	11.1	11.0
Nominal Imports										
Goods and services	14.6	13.2	14.6	15.5	14.4	14.0	13.8	13.7	13.6	13.5
Current Account										
Current account balance	-2.1	-2.9	-3.6	-3.7	-2.8	-2.5	-2.4	-2.3	-2.2	-2.2
Balance on trade in goods and services	-2.6	-3.1	-3.6	-3.7	-2.9	-2.7	-2.5	-2.4	-2.4	-2.3
Balance on income	0.5	0.2	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.2
Capital and Financial Account										
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance	-2.6	-3.3	-3.2	-2.7	-2.8	-2.5	-2.4	-2.3	-2.2	-2.2
Direct investment, net	-1.0	0.6	-0.1	0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
Portfolio investment, net	-1.1	-2.6	0.2	-1.3	-0.7	-0.4	-0.2	-0.3	-0.3	-0.3
Financial derivatives, net	-0.2	0.0	-0.2	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Other investment, net	-0.3	-1.3	-3.6	-1.4	-1.7	-1.7	-1.8	-1.6	-1.5	-1.5
Reserve assets, net	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Errors and Omissions	-0.5	-0.3	0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Net International Investment Position	-54.5	-69.8	-77.7	-63.3	-62.5	-62.6	-62.4	-62.2	-62.0	-61.7
Direct investment, net	-8.3	-12.0	-16.5	-11.2	-10.9	-10.8	-10.6	-10.5	-10.3	-10.2
Portfolio investment, net	-40.4	-51.2	-52.2	-42.2	-40.6	-39.5	-38.2	-37.1	-36.1	-35.1
Financial derivatives, net	0.1	0.0	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Other investment, net	-8.3	-9.6	-12.2	-12.9	-13.8	-15.0	-16.2	-17.2	-18.0	-18.8
Reserve assets, net	2.4	3.0	3.1	2.8	2.6	2.5	2.4	2.3	2.2	2.1
Memorandum Items										
Current account balance (US$ billions)	-446	-620	-846	-944	-745	-714	-707	-701	-705	-724
Non-oil trade balance (% of GDP)	-2.6	-3.0	-3.6	-3.8	-3.1	-2.9	-2.8	-2.7	-2.7	-2.6
Foreign real GDP growth	1.8	-4.8	5.8	3.4	2.0	2.3	2.5	2.4	2.3	2.3
U.S. real GDP growth	2.3	-2.8	5.9	2.1	1.7	1.0	1.8	2.1	2.1	2.1
U.S. real total domestic demand growth	2.3	-2.4	7.0	2.4	1.1	1.0	1.7	2.0	2.1	2.1

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

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

	2019	2020	2021	2022	Projections 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Federal Government														
Revenue	16.4	16.2	17.9	19.6	18.4	17.9	17.4	17.8	18.1	18.2	18.2	18.2	18.2	18.1
Expenditure	21.0	31.1	30.1	25.1	24.0	23.5	23.9	24.0	24.1	24.6	23.9	24.2	24.2	24.4
Non-interest	19.3	29.5	28.6	23.2	21.5	20.6	20.8	20.8	20.7	21.1	20.5	20.9	20.9	21.0
Interest	1.8	1.6	1.6	1.9	2.5	2.9	3.1	3.2	3.3	3.5	3.4	3.3	3.3	3.4
Budget balance 1/	-4.7	-14.9	-12.3	-5.5	-5.6	-5.7	-6.4	-6.2	-5.9	-6.4	-5.7	-6.0	-6.0	-6.2
Primary balance 2/	-2.9	-13.2	-10.7	-3.6	-3.1	-2.7	-3.4	-3.0	-2.6	-2.9	-2.3	-2.7	-2.7	-2.8
Primary structural balance 3/ 4/	-3.0	-10.5	-9.3	-4.0	-3.3	-2.7	-3.2	-2.8	-2.5	-2.8	-2.3	-2.6	-2.7	-2.8
Change	-0.8	-7.5	1.2	5.3	0.7	0.6	-0.5	0.4	0.3	-0.3	0.6	-0.4	0.0	-0.1
Federal debt held by the public	79.4	99.8	98.4	97.0	96.6	98.4	101.2	103.6	105.8	108.3	110.0	111.9	113.7	115.5
General Government														
Revenue	30.2	30.8	31.4	32.6	31.9	31.6	31.3	31.7	32.0	32.0	32.0	31.9	31.9	31.9
Expenditure	36.0	44.8	43.0	36.3	38.6	38.5	38.6	38.8	38.8	39.1	38.5	38.6	38.6	38.8
Net interest	2.3	2.1	2.3	2.4	2.6	3.0	3.2	3.3	3.5	3.6	3.5	3.3	3.3	3.3
Net lending 1/	-5.7	-14.0	-11.6	-3.7	-6.7	-7.0	-7.3	-7.1	-6.9	-7.0	-6.5	-6.7	-6.7	-6.9
Primary balance 2/	-3.5	-11.9	-9.3	-1.3	-4.1	-4.0	-4.1	-3.7	-3.4	-3.4	-3.1	-3.4	-3.4	-3.6
Primary structural balance 3/ 4/	-3.7	-8.6	-8.3	-1.8	-4.5	-3.9	-4.0	-3.6	-3.3	-3.4	-3.0	-3.4	-3.6	-3.5
Change	-0.8	-5.0	0.3	6.6	-2.7	0.6	-0.1	0.4	0.3	-0.1	0.4	-0.4	-0.1	0.0
Gross debt	108.7	133.5	126.4	121.4	121.8	124.6	127.5	130.1	132.5	134.9	136.8	138.7	140.5	142.4
incl. unfunded pension liab.	136.2	160.4	148.1	144.5	144.8	147.5	150.3	152.8	155.1	157.4	159.1	160.9	162.6	164.5

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

Note: Fiscal projections are based on Congressional Budget Office forecasts adjusted for the IMF staff's policy and macroeconomic assumptions. Projections incorporate the effects of enacted legislation at the time of the publication of this table. Fiscal projections are adjusted to reflect the IMF staff's forecasts for key macroeconomic and financial variables and different accounting treatment 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.

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: Depository Corporations Survey
(In billions of U.S. dollars unless otherwise indicated, eop)

	2019	2020	2021	2022
Net foreign assets	233	274	327	91
Claims on nonresidents	2894	3112	3411	3439
Central Bank	48	66	47	38
Other Depository Corporations	2846	3046	3363	3401
Liabilities to Nonresidents	-2660	-2838	-3084	-3347
Central Bank	-259	-231	-288	-343
Other Depository Corporations	-2402	-2607	-2796	-3005
Net domestic assets	21032	24366	29213	30411
Net Claims on Central Government	3627	5573	8431	7380
Claims on State and Local Government	654	719	754	710
Claims on Public Nonfinancial Corporations	0	0	0	0
Claims on NBFIs	7016	8238	9172	8723
Claims on private sector	11117	11356	11754	13149
Corporates	1719	1867	1947	2417
Households	9398	9489	9807	10733
Capital and Reserves (-)	2194	2273	2413	2329
Other items, net (-, including discrepancy)	-811	-754	-1515	-2778
Broad Money	20218	23708	27172	26909
Currency in Circulation	1671	1939	2096	2170
Transferable Deposits	2381	4127	6293	6583
Other Deposits	16167	17642	18783	18155
Securities	0	0	0	0
Other Liabilities	1047	932	2368	3594
		(Annual percentage change)		
Net foreign assets	-360.3	17.5	19.2	-72.1
Net domestic assets	6.5	15.9	19.9	4.1
Claims on private sector	3.9	2.1	3.5	11.9
Corporates	9.3	8.6	4.3	24.1
Households	3.0	1.0	3.4	9.4
Broad Money	9.0	17.3	14.6	-1.0
Memorandum items:				
Velocity (GDP/Broad Money)	1.1	0.9	0.9	0.9

Sources: IMF Integrated Monetary Database and Standard Report Forms.

Table 5. United States: Core Financial Soundness Indicators for Deposit Takers

(Percent unless otherwise indicated, eop)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Regulatory Capital to Risk-Weighted Assets	14.5	14.4	14.4	14.1	14.2	14.5	14.8	14.7	16.3	16.4	15.5
Regulatory Tier 1 Capital to Risk-Weighted Assets	12.7	12.8	13.1	13.1	13.2	13.5	13.8	13.7	14.5	14.8	14.5
Non-Performing Loans Net of Provisions to Capital	7.6	4.5	2.5	1.1	0.5	-0.4	-1.3	-1.5	-5.1	-3.4	-4.5
Non-Performing Loans to Total Gross Loans	3.3	2.5	1.9	1.5	1.3	1.1	0.9	0.9	1.1	0.8	0.7
Sectoral Distribution of Total Loans: Residents 1/	95.5	95.2	95.6	95.8	96.1	96.0	96.3	96.3	96.7	96.6	na
Sectoral distribution of total loans: deposit-takers	6.0	5.0	4.1	3.6	3.8	3.9	5.5	4.6	6.1	4.9	na
Sectoral distribution of total loans: other financial corporations	4.4	5.2	6.2	6.7	6.7	6.9	7.3	7.8	8.5	9.4	na
Sectoral distribution of total loans: general government	1.1	1.2	1.3	1.4	1.5	1.6	1.5	1.4	1.4	1.5	na
Sectoral distribution of total loans: nonfinancial corporations	32.1	33.3	34.2	35.0	35.5	35.4	35.3	35.4	36.4	36.3	na
Sectoral distribution of total loans: other domestic sectors	51.9	50.5	49.8	49.1	48.5	48.2	46.7	47.1	44.2	44.5	na
Sectoral Distribution of Total Loans: Nonresidents 1/	4.5	4.8	4.4	4.2	3.9	4.0	3.7	3.7	3.3	3.4	na
Return on Assets	1.4	1.6	1.5	1.5	1.5	1.5	1.7	1.6	0.9	1.4	1.3
Return on Equity	9.3	10.2	9.4	9.7	9.6	9.0	12.2	11.5	7.3	11.6	11.5
Interest Margin to Gross Income	61.9	61.7	62.7	62.6	64.1	65.8	66.9	67.0	64.4	64.6	69.8
Non-Interest Expenses to Gross Income	62.2	61.5	63.2	60.9	59.3	59.0	57.6	57.8	61.4	63.3	60.3
Liquid Assets to Total Assets (liquid asset ratio)	32.7	32.3	32.0	29.9	29.2	28.4	29.0	29.3	35.5	34.7	28.7
Liquid Assets to Short Term Liabilities	178.7	194.7	196.9	205.3	222.1	208.5	202.7	207.2	363.1	436.3	247.9

Source: Haver Analytics, FDIC.

1/ Data available until 2021Q2. For all other series, data available until 2022 Q4.

Appendix I. Risk Assessment Matrix

Risks	Likelihood	Expected Impact	Policy Response
Global Risks			
Intensification of regional conflict(s). Escalation of Russia's war in Ukraine or other regional conflicts and resulting economic sanctions disrupt trade (e.g., energy, food, tourism, and/or critical supply chain components), remittances, refugee flows, FDI and financial flows, and payment systems.	**High**	**Medium.** Trade disruptions, tighter financial conditions and weaker consumer confidence weigh on domestic activity. Shortages in critical supply chain components further raise inflation.	Make investments to increase resilience of financial intermediation and supply chain. Adjust the pace of planned monetary tightening according to the assessed downturn in activity.
Deepening geoeconomic fragmentation. Broader and deeper conflict(s) and weakened international cooperation lead to a more rapid reconfiguration of trade and FDI, supply disruptions, technological and payments systems fragmentation, rising input costs, financial instability, a fracturing of international monetary and financial systems, and lower potential growth.	**High**	**Medium.** Distortions in investment decisions lower potential growth. Trading partners reduce external demand for U.S. exports. Domestic producers limit supply-chain networks, potentially increasing vulnerability to external shocks.	Increase international competitiveness by investing in worker training and infrastructure. Engage with major trading partners to maintain open trade policies.
Abrupt global slowdown or recession. Global and idiosyncratic risk factors combine to cause a synchronized sharp growth downturn, with recessions in some countries, adverse spillovers through trade and financial channels, and markets fragmentation.	**Medium**	**Medium.** Slower growth by trading partners reduces external demand for U.S. exports. Tighter financial conditions and weaker consumer confidence weigh on domestic activity.	Recalibrate the pace of withdrawal of monetary support in event of significant impact on activity.
Commodity price volatility. A succession of supply disruptions (e.g., due to conflicts and export restrictions) and demand fluctuations (e.g., reflecting China reopening) causes recurrent commodity price volatility, external and fiscal pressures, and social and economic instability.	**Medium**	**Medium.** Rising commodity prices further reduce corporate profit margins, weaken household consumption, increase poverty, further raise inflation and inflation expectations from current elevated levels.	Facilitate the expansion of domestic production of food and fuel. Increase the provision of food assistance to lower income households. Accelerate the transition to a low carbon economic model. Monetary policy responds assertively to any de-anchoring of inflation expectations.
Monetary policy miscalibration. Amid high economic uncertainty and volatility, major central banks slow monetary policy tightening or pivot to loosen monetary policy stance prematurely, de-anchoring inflation expectations and triggering a wage-price spiral in tight labor markets.	**Medium**	**High.** Continued high realized wage and price inflation, resulting from a sustained mismatch in supply and demand, proves persistent and causes a de-anchoring of inflation expectations.	Clearly signal that the ex-ante real rate will need to go above neutral, and remain there for some time. Improve the Federal Reserve's communications toolkit.
Cyberthreats. Cyberattacks on critical domestic and/or international physical or digital infrastructure (including digital currency and crypto ecosystems)	**Medium**	**High.** Disruption is widespread including to the supply of essential goods, payments systems, and financial market infrastructure.	Further build resilience in physical and digital infrastructure using the full range of fiscal and regulatory tools.

Risks	Likelihood	Expected Impact	Policy Response
trigger financial and economic instability.			
Domestic Risks			
A more abrupt tightening of financial conditions resulting from stickier than expected inflation. Amid tight labor markets, supply disruptions and/or commodity price shocks, inflation remains elevated, prompting the Fed to keep rates higher for longer and resulting in dollar strengthening, a more abrupt financial and housing market correction, and "hard landing".	**Medium**	**High.** Abruptly tighter financing conditions could cause stress in leveraged corporates, financial institutions, and treasury markets. Higher financing costs and lower credit availability may constrain investment and employment growth, slowing activity with negative outward spillovers.	Tighter financial conditions will be necessary for the monetary transmission but if market functioning is compromised then targeted measures (such as providing liquidity in specific markets) could be considered.
Systemic financial instability, including further deposit outflows in regional banks spreading to the overall banking system. Sharp swings in interest rates, risk premia, and assets repricing amid economic slowdowns and policy shifts trigger insolvencies in weak banks or non-bank financial institutions, causing markets dislocations and adverse cross-border spillovers.	**Medium**	**High.** Broader financial instability will weaken confidence and create uncertainty in monetary policy responses to inflation. Lower credit availability may constrain investment and employment growth, slowing activity.	Strengthen prudential framework. Provide adequate and timely emergency lending to shore up banks. Ensure functioning of key markets, but targeted measures (such as providing liquidity in certain markets) can be provided to address periods of financial instability. Provide clear communication of monetary policy responses.
Persistently slow recovery in labor force participation. Higher wages fail to boost labor supply, leading to a persistent shortfall in labor participation.	**Medium**	**High.** Wage growth would continue to rise, putting pressure on corporate margins, and potentially further fueling inflation. Also, supply constraints would slow activity.	Tighter monetary policy should help rebalance supply and demand in labor markets. Supply side policies (such as paid family leave, childcare, EITC, immigration reform) would help boost labor supply.

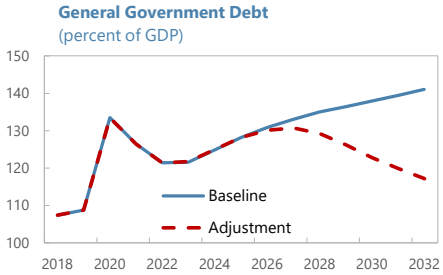
Appendix II. Sovereign Risk and Debt Sustainability Assessment

Following the unprecedented fiscal response to the COVID-19 outbreak, the U.S. budget deficit returned to pre-pandemic levels in 2022. Under the baseline scenario, public debt is projected to rise as a share of GDP over the medium term as aging-related expenditures on health and social security feed into the debt dynamics. 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. Nonetheless, the risks of debt distress are low, and debt is viewed as sustainable.

1. Background. An unprecedented scale of fiscal expansion was introduced in response to the COVID-19 pandemic increasing the fiscal deficit by over 8 percent of GDP. This was followed by large fiscal consolidations in 2021–22, as pandemic-related extraordinary measures unwound. The American Rescue Plan (passed in March 2021) slowed the pace of fiscal contraction in 2021–22 but did not forestall it. The Infrastructure Investment and Jobs Act (passed in November 2021) is estimated to provide little upfront fiscal impulse.

2. Baseline. The staff's baseline is based on current and likely-to-be-passed laws. Under this baseline, public debt is expected to rise over 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 97 percent of GDP in FY2022 to around 116 percent of GDP by 2032, with general government gross debt rising from about 121 percent of GDP to 142 percent of GDP over the same period.

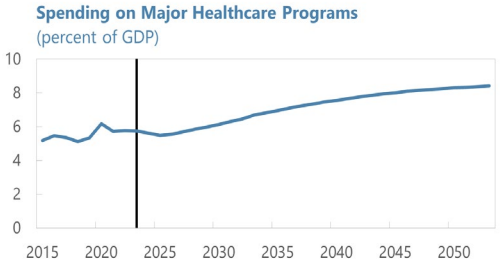
3. Adjustment scenario. The general government primary deficit was 1.3 percent of GDP in 2022 and is projected at 4.1 percent of GDP in 2023. Gradually raising the primary general government surplus over the medium-term to around 1 percent of GDP (1.5 percent of GDP for the federal government) would put the debt-to-GDP ratio on a declining path. The target primary surplus would have to be larger to bring the debt ratio closer to pre-Great Recession levels.



Source: IMF staff calculations.

4. Debt servicing costs. The debt projections benefit from the current favorable interest rate–growth differential, reflecting the safe-haven status of the United States. Under staff's baseline, the effective nominal interest rate is projected to rise gradually from the projected level of 2.5 percent in 2023 to 2.9 percent by 2032 (which is modestly above the 2010–18 average level). Real interest rates will continue to act as a debt-reducing flow over the medium-term.

5. Long-term risks: health expenditures. Due to the ongoing aging of the population, public healthcare expenditures are expected to rise considerably. The CBO projects spending on major health care programs to rise from 5.8 percent of GDP in 2022 to 8.4 percent of GDP by 2053, which is reflected in the staff baseline forecast. Rising healthcare expenditures will considerably increase deficit and risk of sovereign stress in the long term. Increasing efficiency, greater cost sharing with



beneficiaries and changing the mechanism of remunerating healthcare providers will help contain health care cost.

6. Realism. Baseline economic assumptions are generally within the error band observed for all countries. The baseline fiscal projections and implied near-term adjustment are realistic, well within the median range of adjustment in historical and cross-country experience.

7. Mitigating factors. The depth and liquidity of the U.S. Treasury market, as well as its safe-haven status, represents a mitigating factor for the high external and gross financing requirements.

Appendix II. Figure 1. United States: Risk of Sovereign Stress

Horizon	Mechanical signal	Final assessment	Comments
Overall	...	Low	Staff's assessment of the overall risk of sovereign stress is low. Mitigating factors include the strength of institutions, the depth of the investor pool, the role of the U.S. dollar in the international system, and the Fed's stabilizing role.
Near term 1/			
Medium term	Moderate	Moderate	Staff's assessment on the medium-term risk is "moderate", which is aligned with the mechanical signal. The mechanical medium-term signal for the fan chart indicates a "high" risk, driven by the probability of debt non-stabilization and the large uncertainty along the path.
Fanchart	High	...	
GFN	Moderate	...	
Stress test	...	...	
Long term	...	Moderate	Long-term risks are moderate as aging-related expenditures on health and social security feed into debt dynamics.
Sustainability assessment 2/	...		Not required for surveillance-only countries.
Debt stabilization in the baseline			No

DSA Summary Assessment

Commentary: United States is at a low overall risk of sovereign stress and debt is sustainable. Most indicators have started to normalize as the recovery from the COVID-19 shock has proceeded. However, debt is expected to rise for several years before stabilizing. Medium-term liquidity risks as analyzed by the GFN Financeability Module are moderate. Over the longer run, United States should continue with reforms to tackle risks arising from population aging on the social security fund. However, the long time horizon at which these risks would materialize and the authorities' planned measures will help contain risks.

Source: Fund staff.

Note: The risk of sovereign stress is a broader concept than debt sustainability. Unsustainable debt can only be resolved through exceptional measures (such as debt restructuring). In contrast, a sovereign can face stress without its debt necessarily being unsustainable, and there can be various measures—that do not involve a debt restructuring—to remedy such a situation, such as fiscal adjustment and new financing.

1/ The near-term assessment is not applicable in cases where there is a disbursing IMF arrangement. In surveillance-only cases or in cases with precautionary IMF arrangements, the near-term assessment is performed but not published.

2/ A debt sustainability assessment is optional for surveillance-only cases and mandatory in cases where there is a Fund arrangement. The mechanical signal of the debt sustainability assessment is deleted before publication. In surveillance-only cases or cases with IMF arrangements with normal access, the qualifier indicating probability of sustainable debt

Appendix II. Figure 2. United States: Debt Coverage and Disclosures

						Comments
1. Debt coverage in the DSA: 1/	CG	GG	NFPS	CPS	Other	
1a. If central government, are non-central government entities insignificant?					n.a.	
2. Subsectors included in the chosen coverage in (1) above:						

		Subsectors captured in the baseline	Inclusion	
CPS / NFPS / GG: expected / CG	1	Budgetary central government	Yes	
	2	Extra budgetary funds (EBFs)	No	Not applicable
	3	Social security funds (SSFs)	Yes	
	4	State governments	Yes	
	5	Local governments	Yes	
	6	Public nonfinancial corporations	Yes	
	7	Central bank	Yes	
	8	Other public financial corporations	Yes	

3. Instrument coverage:	Currency & deposits	Loans	Debt securities	Oth acct. payable 2/	IPSGSs 3/	
4. Accounting principles:	Basis of recording		Valuation of debt stock			
	Non-cash basis 4/	Cash basis	Nominal value 5/	Face value 6/	Market value 7/	
5. Debt consolidation across sectors:		Consolidated	Non-consolidated			

Color code: chosen coverage; Missing from recommended coverage; Not applicable

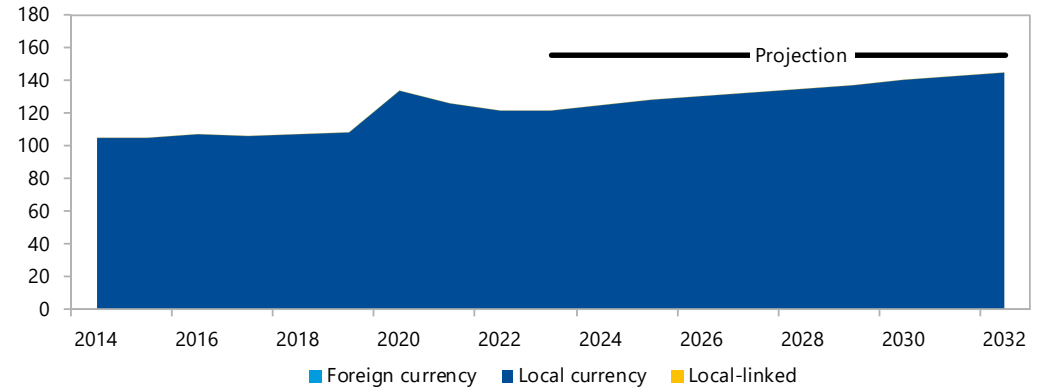
Reporting on Intra-government Debt Holdings

Issuer \ Holder			Budget. central govt	Extra-budget. funds	Social security funds	State govt.	Local govt.	Nonfin. pub. corp.	Central bank	Oth. pub. fin corp	Total
CPS / NFPS / GG: expected / CG	1	Budget. central gov				23.283					23.283
	2	Extra-budget. funds									0
	3	Social security funds									0
	4	State govt.	1549.27								1549.27
	5	Local govt.									0
	6	Nonfin pub. corp.									0
	7	Central bank									0
	8	Oth. pub. fin. corp									0
		Total	1549.27	0	0	23.283	0	0	0	0	1572.55

1/ CG=Central government; GG=General government; NFPS=Nonfinancial public sector; PS=Public sector.
2/ Stock of arrears could be used as a proxy in the absence of accrual data on other accounts payable.
3/ Insurance, Pension, and Standardized Guarantee Schemes, typically including government employee pension liabilities.
4/ Includes accrual recording, commitment basis, due for payment, etc.
5/ Nominal value at any moment in time is the amount the debtor owes to the creditor. It reflects the value of the instrument at creation and subsequent economic flows (such as transactions, exchange rate, and other valuation changes other than market price changes, and other volume changes).
6/ The face value of a debt instrument is the undiscounted amount of principal to be paid at (or before) maturity.
7/ Market value of debt instruments is the value as if they were acquired in market transactions on the balance sheet reporting date (reference date). Only traded debt securities have observed market values.

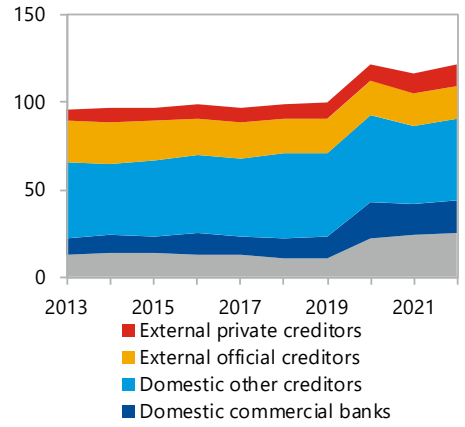
Appendix II. Figure 3. United States: Public Debt Structure Indicators

Debt by Currency (percent of GDP)



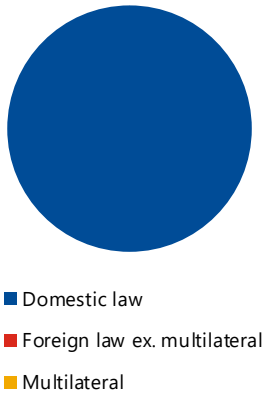
Note: The perimeter shown is general government.

Public Debt by Holder (percent of GDP)



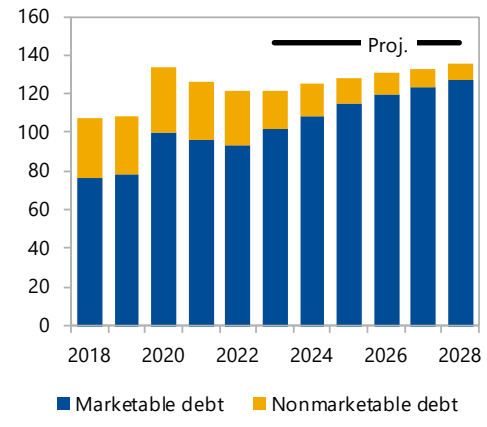
Note: The perimeter shown is general government.

Public Debt by Governing Law, 2022 (percent)



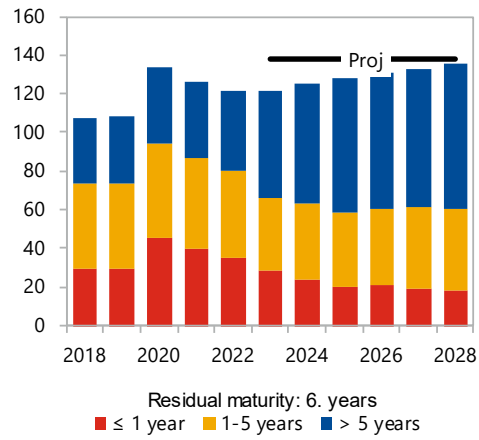
Note: The perimeter shown is general government.

Debt by Instruments (percent of GDP)



Note: The perimeter shown is general government.

Public Debt by Maturity (percent of GDP)



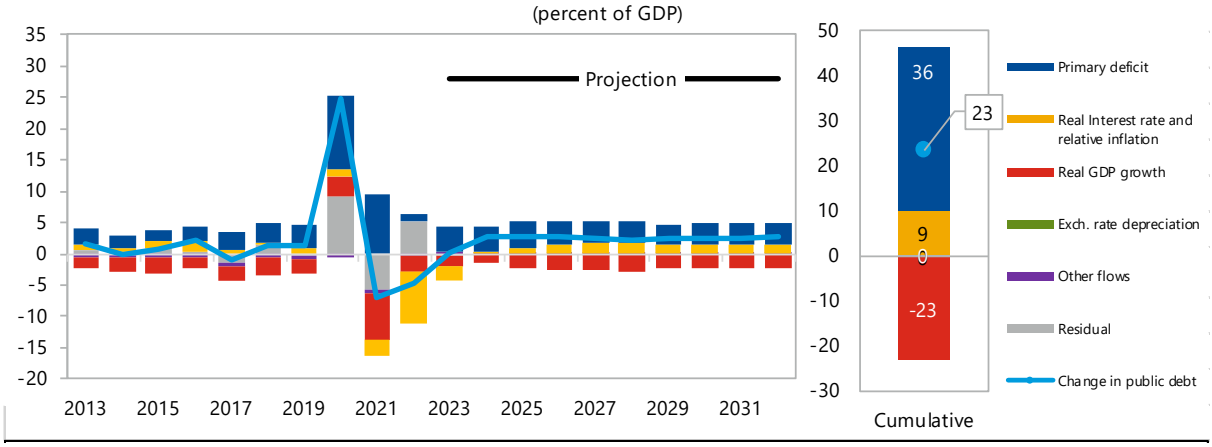
Note: The perimeter shown is general government.

Appendix II. Figure 4. United States: Baseline Scenario
(Percent of GDP unless indicated otherwise)

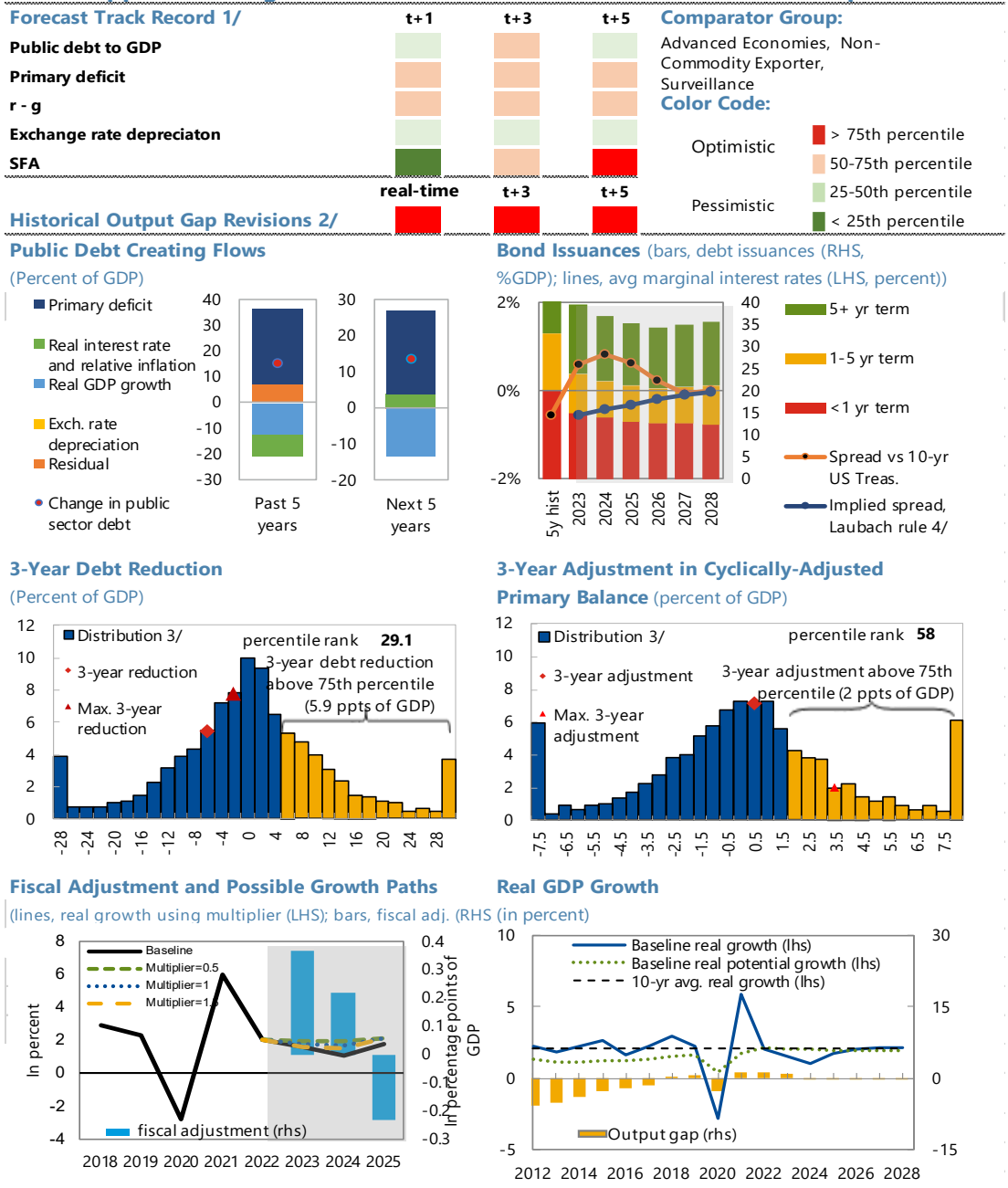
(percent of GDP unless indicated otherwise)

	Actual	Medium-term projection						Extended projection			
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Public debt	121.7	121.8	124.6	127.5	130.1	132.5	134.8	137.1	139.7	142.3	144.9
Change in public debt	-4.8	0.1	2.9	2.8	2.6	2.4	2.3	2.3	2.6	2.5	2.6
Contribution of identified flows	-9.8	0.3	3.0	2.9	2.6	2.4	2.3	2.4	2.6	2.6	2.6
Primary deficit	1.3	4.1	4.0	4.1	3.7	3.4	3.4	3.1	3.4	3.5	3.6
Noninterest revenues	32.1	31.3	30.9	30.7	31.0	31.3	31.4	31.5	31.6	31.7	31.8
Noninterest expenditures	33.4	35.4	34.9	34.8	34.8	34.7	34.8	34.6	35.0	35.2	35.5
Automatic debt dynamics	-10.7	-4.0	-1.1	-1.3	-1.1	-1.0	-1.2	-0.7	-0.8	-0.9	-1.0
Real interest rate and relative inflation	-8.1	-2.1	0.2	0.9	1.5	1.7	1.6	1.5	1.5	1.4	1.4
Real interest rate	-8.1	-2.1	0.2	0.9	1.5	1.7	1.6	1.5	1.5	1.4	1.4
Relative inflation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real growth rate	-2.6	-2.0	-1.3	-2.2	-2.6	-2.7	-2.8 .	-2.3	-2.3	-2.3	-2.4
Real exchange rate	0.0	...	...	...	...	...	... .	...	...	...	...
Other identified flows	-0.4	0.2	0.1	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
Other transactions	-0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contribution of residual	5.1	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs	36.9	36.9	34.3	32.3	31.3	31.7	31.8	31.6	31.5	32.8	33.0
of which: debt service	36.1	33.4	31.1	28.8	28.2	28.9	29.0	29.1	28.7	29.9	30.0
Local currency	36.1	33.4	31.1	28.8	28.2	28.9	29.0	29.1	28.7	29.9	30.0
Foreign currency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Memo:											
Real GDP growth (percent)	2.1	1.7	1.0	1.8	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Inflation (GDP deflator; percent)	7.0	4.3	3.0	2.5	2.1	1.9	1.9	1.9	1.9	1.9	1.9
Nominal GDP growth (percent)	9.2	6.0	4.1	4.3	4.2	4.1	4.1	3.7	3.7	3.7	3.7
Effective interest rate (percent)	0.0	2.5	3.1	3.2	3.3	3.3	3.2	3.1	3.0	3.0	2.9

Contribution to Change in Public Debt



Appendix II. Figure 5. United States: Realism of Baseline Assumptions



Commentary: Realism analysis points to consistently upward revisions of historical output gaps. Other analyses do not point to major concerns: past forecast errors do not reveal any systematic biases and the projected fiscal adjustment and debt reduction are well within norms.

Source : IMF Staff.

1/ Projections made in the October and April WEO vintage.

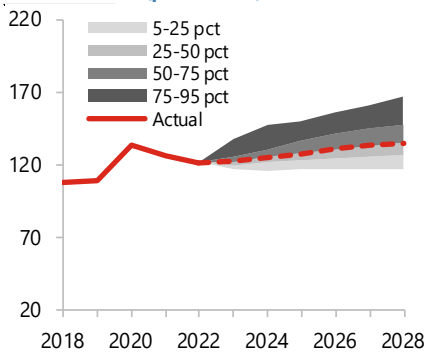
2/ Calculated as the percentile rank of the country's output gap revisions (defined as the difference between real time/period ahead estimates and final estimates in the latest October WEO) in the total distribution of revisions across the data sample.

3/ Data cover annual obervations from 1990 to 2019 for MAC advanced and emerging economies. Percent of sample on vertical axis.

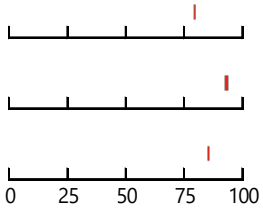
4/ The Laubach (2009) rule is a linear rule assuming bond spreads increase by about 4 bps in response to a 1 ppt increase in the projected debt-to-GDP ratio.

Appendix II. Figure 6. United States: Medium-Term Risk Analysis

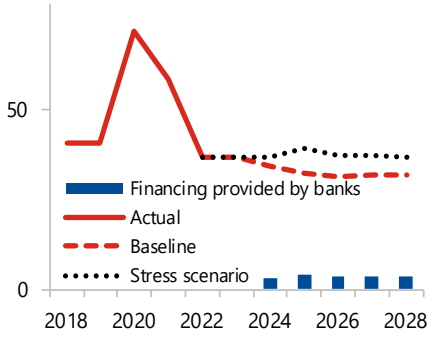
Final Fanchart (pct of GDP)



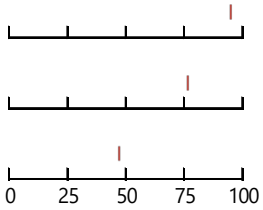
Debt fanchart module	Value	Contrib [1/]	Percentile in peer group [2/]
Fanchart width *(percent of GDP)*	50.2	0.7	
Probability of debt non-stabilizaiton *(percent)*	91.9	0.8	
Terminal debt-to-GDP x institutions index	30.6	0.7	
Debt fanchart index (DFI)		2.2	
Risk signal: [3/]		High	



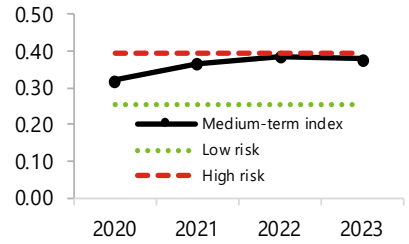
Gross Financing Needs (pct of GDP)



Gross financing needs (GFN) module			
Average baseline GFN *(percent of GDP)*	33.2	11.3	
Banks' claims on the gen. govt *(pct bank assets)*	10.2	3.3	
Chg. In banks' claims in stress *(pct banks' assets)*	3.0	1.0	
GFN financeability index (GFI)		15.7	
Risk signal: [4/]		Moderate	



Medium-term Index (index number)



Medium-term risk analysis

	Value	Weight	Contribution
Debt fanchart index (normalized)	0.5	0.5	0.2
GFN finaceability index (normalized)	0.3	0.5	0.2
Medium-term index	0.4		
Risk signal: 5/	Moderate		
Final assessment:	Moderate		

Prob. of missed crisis, 2023-2028, if stress not predicted: 36.4 pct.
Prob. of false alarms, 2023-2028, if stress predicted: 10.2 pct.

Commentary: Of the two medium-term tools, the Debt Fanchart Module is pointing to a high level of risk, while the GFN Financeability Module suggests lower, but still moderate, level of risk.

Source: IMF staff estimates and projections.

1/ See Annex IV of IMF, 2022, Staff Guidance Note on the Sovereign Risk and Debt Sustainability Framework for details on index calculation.

2/ The comparison group is advanced economies, non-commodity exporter, surveillance.

3/ The signal is low risk if the DFI is below 1.13; high risk if the DFI is above 2.08; and otherwise, it is moderate risk.

4/ The signal is low risk if the GFI is below 7.6; high risk if the DFI is above 17.9; and otherwise, it is moderate risk.

5/ The signal is low risk if the GFI is below 0.26; high risk if the DFI is above 0.40; and otherwise, it is moderate risk.

Appendix II. Figure 7. United States: Long-Term Risk Analysis

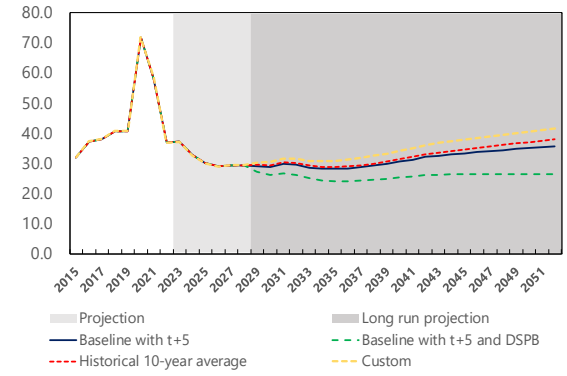
Large Amortization Trigger

Projection	Variable	Risk Indication
Medium-term extrapolation	GFN-to-GDP ratio	
	Amortization-to-GDP ratio	
	Amortization	
Medium-term extrapolation with debt stabilizing primary balance	GFN-to-GDP ratio	
	Amortization-to-GDP ratio	
	Amortization	
Historical average assumptions	GFN-to-GDP ratio	
	Amortization-to-GDP ratio	
	Amortization	
Overall Risk Indication		

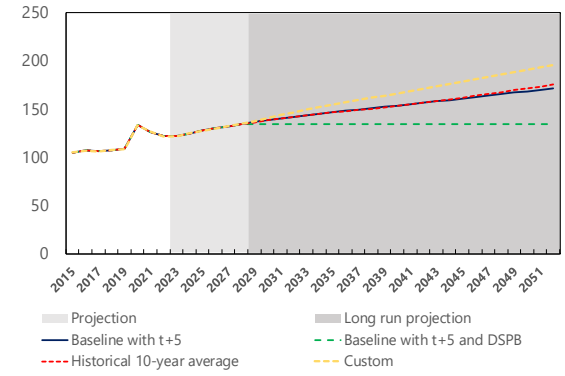
Long-term Projections

	Baseline extension of fifth projection year	Custom baseline
Real GDP growth	2.1%	2.1%
Primary Balance-to-GDP	-3.5%	-4.6%
Real depreciation	-1.9%	-1.9%
Inflation (GDP deflator)	1.9%	1.9%

GFN-to-GDP ratio

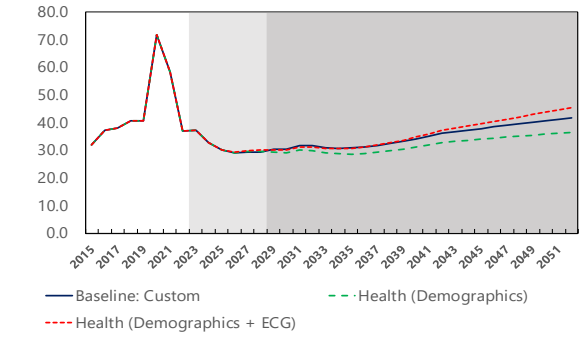


Total public debt-to-GDP ratio

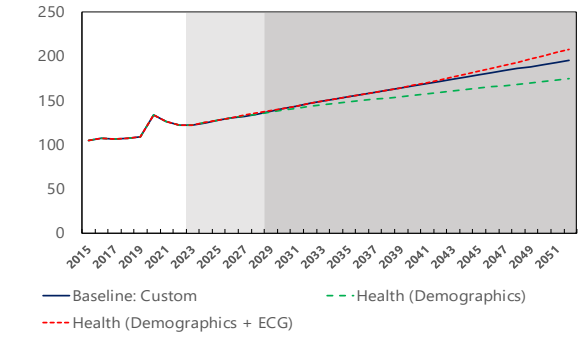


Demographics: Health

GFN-to-GDP ratio



Total public debt-to-GDP ratio



Commentary: The long-term amortization module does not trigger an overall risk indication. Long-term projections show a steady increase in the debt-to-GDP ratio and GFN-to-GDP ratio. The primary balance-to-GDP ratio of the custom baseline is calibrated to match the average increase over the projection horizon as projected by the Congressional Budget Office (CBO). The demographics health module shows a slightly steeper trajectory of the public debt-to-GDP ratio and the GFN-to-GDP ratio. Excess health spending growth is calibrated such that overall health expenditure increases in line with CBO projections.

Appendix III. External Assessment

Overall Assessment: *The external position in 2022 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.* A marginal decline in the trade balance was led by a small deterioration in the services balance, resulting in a CA deficit of 3.7 percent of GDP (versus 3.6 percent of GDP in 2021). Although uncertainty and terms-of-trade changes caused by the war in Ukraine may continue to affect the near term, the CA deficit is projected to decline to about 2½ percent of GDP over the medium term based on an increase in public saving due to gradual fiscal consolidation, reflected in a lower trade deficit.

Potential Policy Responses: Over the medium term, suggested fiscal consolidation aimed at a medium-term general government primary surplus of about 1 percent of GDP should broadly stabilize the debt-to-GDP ratio and address the CA gap. Structural policies to increase productivity and competitiveness include upgrading infrastructure; enhancing the schooling, training, apprenticeship and mobility of workers; supporting the working poor; and implementing policies to increase growth in the labor force (including skill-based immigration reform). Tariff barriers and other trade distortions 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 NIIP, which averaged about –46 percent of GDP during 2016–19, strengthened slightly from –67.8 percent of GDP in 2020 to –74.4 percent of GDP in 2021, before deteriorating slightly again to -64.7 percent of GDP in 2022. Declines in the ratios of both assets and liabilities to GDP in 2022 can be imputed to declines in the value of assets and liabilities, as well as to increases in nominal GDP, to a lesser extent. Under the IMF staff's baseline scenario, the NIIP is projected to remain broadly unchanged through the medium term on the back of developments in portfolio assets and liabilities as the CA balance reverts to its pre–COVID-19 average. **Assessment.** Financial stability risks could surface in the form of an unexpected decline in foreign demand for U.S. fixed-income securities, which are a main component of the country's external liabilities. This risk, which could materialize, for example, as a result of a failure to reestablish fiscal sustainability, remains moderate given the dominant status of the U.S. dollar as a reserve currency. About 60 percent of U.S. assets are in the form of FDI and portfolio equity claims.					
2022 (% GDP)	NIIP: –65	Gross Assets: 112	Debt Assets: 18.8	Gross Liab: 176	Debt Liab.: 54.5	
Current Account	**Background.** The CA deficit was 3.7 percent of GDP in 2022, close to the 2021 level of 3.6 percent of GDP (moving from 3.2 to 3.5 percent of GDP in cyclically adjusted terms), compared with a pre-pandemic deficit of about 2 percent of GDP. On the trade side, its evolution since 2016 is explained mostly by a deterioration in the non-oil goods and services balance. In 2022, the trade balance remained broadly stable relative to 2021 (–3.7 versus –3.6 percent of GDP). Both national savings and investment increased as a percentage of GDP from 2016 to 2021 (with a massive increase in public dissaving due to the pandemic), after which the trend started to revert in 2022, with both national savings and investment converging back toward pre-pandemic levels. Based on an increase in public saving due to gradual fiscal consolidation (and unwinding of the extraordinary fiscal support), reflected in a lower trade deficit, the CA deficit is expected to decline slightly to about 2.5 percent of GDP over the medium term. **Assessment.** The EBA model estimates a cyclically adjusted CA balance of –3.5 percent of GDP and a cyclically adjusted CA norm of –2.3 percent of GDP. The EBA model CA gap is –1.2 percent of GDP for 2022, reflecting policy gaps (–0.6 percent of GDP, mostly driven by the private credit gap)[1] and an unidentified residual (about –0.5 percent of GDP) that may reflect structural factors not included in the model. On balance, the IMF staff assesses the 2022 cyclically adjusted CA to be lower by 1.1 percent of GDP than the level implied by medium-term fundamentals and desirable policies, with a range between –1.8 and –0.4 percent of GDP. This assessment includes a staff adjustor of 0.1 percent GDP to account for the temporary effects of COVID-19 on the travel and transport balances. The estimated standard error of the CA norm is 0.7 percent of GDP.						
2022 (% GDP)	CA: –3.7	Cycl. Adj. CA: –3.5	EBA Norm: –2.3	EBA Gap: –1.2	COVID-19 Adj.: 0.1	Other Adj.: 0.0	Staff Gap: –1.1
Real Exchange Rate	**Background.** After depreciating by 2.3 percent in 2021, the REER appreciated by 8.3 percent in 2022 (when yearly averages are compared). As of April 2023, the REER was 1.1 percent below the 2022 average. **Assessment.** Indirect estimates of the REER gap (based on the IMF staff's CA assessment) imply that the exchange rate was overvalued by 9.4 percent in 2022 (with an estimated elasticity of 0.12 applied). The EBA REER index model suggests an overvaluation of 10.7 percent, and the EBA REER level model suggests an overvaluation of 22.8 percent. Considering all the estimates and their uncertainties, the staff assesses the 2022 midpoint REER overvaluation to be 9.4 percent, with a range of 3.4 to 15.4 percent, where the range is obtained from the CA standard error and the corresponding CA elasticity.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The financial account balance was about –2.7 percent of GDP in 2022, compared with –3.2 percent of GDP in 2021. This was mainly due to an increase in both net other investment and (to a lesser extent) net direct investment, partly offset by a reduction in net portfolio investment. **Assessment.** The U.S. has an open capital account. Vulnerabilities are limited by the dollar's status as a reserve currency, with foreign demand for U.S. 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/ While the fiscal policy gap is estimated to be rather small, at -0.1 percent of GDP, the domestic fiscal policy gap is estimated to amount to around -1.3 percent of GDP.	

Appendix IV. Progress on Past Policy Recommendations

2022 Article IV Policy Recommendation	Action Taken
Monetary policy. Raising the policy rate to around 4 percent by end-2022.	Policy rates were increased rapidly to 4¼ percent at end-2022 and to 5 percent by May 2023.
Fed communication. Publish an internally consistent economic projection and rate path along with quantified alternate scenarios.	Policymakers continue to rely on the summary of economic projections to convey forward guidance.
Improve Treasury market functioning through central clearing, modifying the supplementary leverage ratio, liquidity stress tests for asset managers, lock-in provisions for funds, swing pricing, gates, and/or allowing in-kind redemptions.	November 2022 Progress Report by the Interagency Working Group for Treasury Market Surveillance examined similar policy options. Possible changes remain under consideration.
Supply side reforms including childcare subsidies, providing paid family leave, removing cliffs in social benefits, increasing access to healthcare, education and vocational training, immigration reform.	Health insurance premium subsidies were renewed. Little progress in other areas (although the president's budget proposes similar policies).
Tax reform including higher corporate tax, removing loopholes (e.g., carried interest and step-up basis), reducing estate tax minimum, global agreement on minimum tax.	No progress (although the president's budget proposes similar policies).
Improve safety net by expanding SNAP, improving TANF and Medicaid, making the refundable child tax credit permanent, and expanding the EITC.	No progress.
Putting debt-GDP on a downward path through a 1 percent of GDP general government primary surplus (a 4 percent of GDP medium term adjustment in the primary).	Over the medium term, general government primary deficit now expected to be ½-¾ percent of GDP higher. President's budget proposes 1.8 percent of GDP reduction in federal primary deficit.
Open trade. Roll back tariffs and other trade distortions introduced over the past 5 years, avoid steps to fragment global system, restore functioning dispute settlement at WTO.	No progress. Domestic content requirements in various laws represent a step back.
Climate action including pricing of carbon, regulatory restraint, feebates, eliminating subsidies for fossil fuels and carbon-intensive agriculture, reprioritize spending to mitigation and adaptation goals.	Inflation Reduction Act provides US$391 billion for emissions reduction, transition and adaptation. No pricing of carbon proposed.

FSAP Recommendations	Responsible Authority	Developments
Systemic Risk Oversight and Macroprudential Framework		
Provide an explicit financial stability mandate to all federal FSOC members.	**Congress**	This legislative recommendation has not been implemented.
Prioritize the development of macroprudential tools to address risks and vulnerabilities in the nonbank sector.	**FSOC**	In 2021, the Council made it a priority to evaluate and address the risks to U.S. financial stability posed by three types of nonbank financial institutions: hedge funds, open-end funds, and money market funds. The Council supports ongoing efforts by Council member agencies to address identified risks. For more information, see the Council's 2022 annual report. More recently, the Council has taken further actions to prioritize the development of macroprudential tools to address risks and vulnerabilities in the nonbank sector. On April 21, 2023, the Council issued two proposals for public comment: a proposed analytic framework that outlines the Council's approach to identifying, assessing, and responding to risks to financial stability; and proposed interpretive guidance for the Council's nonbanks designations process. These actions enhance the Council's process. These actions enhance the Council's ability to address financial stability risk and provide transparency to the public on how the Council performs its duties.
Intensify efforts to close data gaps, including reporting disclosures of holdings of collateralized loan obligations (CLOs) and repo markets, to reinforce market discipline.	**OFR**	In February 2019, the OFR promulgated 12 CFR Part 1610, a rule regarding "Ongoing Data Collection of Centrally Cleared Transactions in the U.S. Repurchase Agreement Market". Data collection from private entities deemed "covered reporters" began in October 2019. In September 2020, the OFR launched its Short-Term Funding Monitor, which integrates data collected from centrally cleared repo transactions with triparty repo transaction data from the New York Federal Reserve Bank and other existing data sets previously scattered across many sources, into a combined monitor which users can download via a public application programming interface.

FSAP Recommendations	Responsible Authority	Developments
Banking Regulation and Supervision		
Review prudential requirements for non-internationally active banks (Category III and IV) and ensure they are and continue to be broadly consistent with the Basel capital framework and appropriate concentration limits; and consider extending the full liquidity coverage ratio (LCR) to them.	**FRB, FDIC, OCC (S&R/FBAs)**	As noted in the recent reports, Review of the Supervision and Regulation of Silicon Valley Bank and FDIC's Supervision of Signature Bank, the Federal Reserve, in conjunction with the FDIC and OCC, is evaluating capital and liquidity requirements for these institutions.
Streamline regulatory requirements and consider rewriting key prudential guidance as regulation.	**FRB, FDIC, OCC (S&R/FBAs)**	The Board, FDIC, and OCC are working on a revised framework that is intended to produce more robust and internationally consistent capital requirements for the largest firms, building on improvements made to the capital framework following the 2007-09 financial crisis. The Board, FDIC, and OCC staff continues to revise or make inactive previously issued guidance that has become outdated, has been superseded by subsequent guidance or regulations, or is no longer relevant to the supervision program. In some cases, guidance has been made inactive because more comprehensive guidance on the topic is available in the examination manuals. Additionally, the FBAs have published legal interpretations regarding several regulations.
Introduce heightened standards on the governance of large and complex bank holding	**FRB, FDIC, OCC (S&R/FBAs)**	The Board introduced guidance on the governance of large and complex BHCs (those with total consolidated assets for $100 billion or more). The guidance ("Supervisory Guidance on Board of Directors' Effectiveness") describes the key elements of

FSAP Recommendations	Responsible Authority	Developments
companies (BHCs), enhance the related-party framework, introduce rules on concentration risk management, and include more quantitative standards regarding interest rate risk in the banking book.		effective boards at such institutions and provides illustrative examples of effective board practices. As noted in the recent reports, Review of the Supervision and Regulation of Silicon Valley Bank and FDIC's Supervision of Signature Bank, the Federal Reserve, in conjunction with the FDIC and OCC, is evaluating the supervision and regulation of interest rate risk management.
Insurance Regulation and Supervision		
Increase independence of state insurance regulators, with appropriate accountability.	**States (NAIC)**	It is not substantiated that supervisory independence is undermined if commissioners are appointed and/or elected. Further, recommended reforms at the state government level are beyond the purview of individual state insurance departments. The method of commissioner selection is determined by the legislatures in each state. NAIC has sent this recommendation over to NCOIL, NCSL and to the Legislative Liaisons Bulletin Board for their awareness.

FSAP Recommendations	Responsible Authority	Developments
Require all in-force life insurance business be moved to principles-based reserving (PBR) after a five-year transition period, adjust asset valuation approach to ensure consistency between assets and liabilities, and recalibrate risk-based capital (RBC) to the revised valuation approach.	**NAIC**	It would require a very significant effort for life insurance companies to set up PBR modeling for their in-force business. PBR applies only to new business for several reasons: (1) formulaic reserves are generally conservative for in-force life insurance products, and under PBR, whole life policies will generally pass exemption tests and continue to be valued under the old reserve methodology; (2) Term insurance products will move to PBR relatively quickly since they have a limited duration and will expire; and (3) State law prevents new valuations on existing products that have minimum non-forfeiture benefits derived at the date of issue of the contract.
Develop a consolidated group capital requirement similar to GAAP-Plus insurance capital standard (ICS) for internationally active groups and optionally for domestic groups in parallel with the development of aggregation approaches by the Board and NAIC.	**NAIC and FRB**	The Federal Reserve Board (the Board) and NAIC continue to develop their aggregation approaches, and the United States—along with other interested jurisdictions—is developing an Aggregation Method at the IAIS. The IAIS has developed high-level principles and criteria to assess whether the Aggregation Method provides comparable outcomes to the ICS. The assessment will take place by the end of the monitoring period. The Board and NAIC believe that the Aggregation Method is comparable to the ICS such that it should be considered by the IAIS and its member jurisdictions to be an outcome-equivalent approach for implementation of the ICS. No U.S. regulator intends to adopt the ICS in its current form.
Regulation, Supervision, and Oversight of FMIs		
Increase CFTC resources devoted to CCP	**CFTC**	On December 28, 2020, March 15, 2022, and December 29, 2022 Congress approved additional resources to the CFTC.

FSAP Recommendations	Responsible Authority	Developments
supervision and strengthen rule- approval process to an affirmative approval with a public consultation.		
Collaborate to analyze differences in outcomes of CCP risk management practices and adopt an appropriately consistent, conservative implementation of risk management standards across CCPs.	**FRB, SEC, CFTC**	The Board, SEC, and CFTC have implemented regulatory frameworks as mandated by Title VIII of the Dodd-Frank Act and that are consistent with the PFMI. The authorities also continue to actively cooperate, coordinate, consult, and collaborate on oversight of CCPs, including risk management practices. For example, the authorities continue to coordinate and collaborate on examinations of CCP risk management practices as well as on reviews of proposed changes to those frameworks, including rulemaking. As noted in the 2020 FSAP, authorities continue to analyze key risk management issues and work to address material differences in the outcomes of risk management practices at CCPs, taking into consideration the markets in which CCPs operate and the potential impacts to financial stability.

FSAP Recommendations	Responsible Authority	Developments
Develop and execute more comprehensive systemwide CCP supervisory stress tests.	**FRB, CFTC, SEC**	Preparatory work to conduct a joint supervisory stress test of CCPs began in 2019. Progress was temporarily delayed to address unprecedented COVID-related developments, and more recently, work related to geopolitical events, but engagement will resume. During the pandemic, the authorities endeavored to address the aggregate effect of COVID-volatility, including on CCPs. The SEC developed a COVID-19 Market Monitoring Group to assist in the SEC's efforts to coordinate with and support the COVID-19-related efforts of other federal financial agencies and other bodies, including the President's Working Group on Financial Markets (PWG), Financial Stability Oversight Council (FSOC) and the Financial Stability Board (FSB), among others. The CFTC co-chairs an international working group focused on the effects of margin demands on the financial system during the period of extreme market stress (e.g., early COVID-19 period, early 2022); the relevant standard-setting bodies published a consultative report in late 2021 and a final report near the end of 2022, with further work on mitigating system risks currently in progress across a number of international groups. See also U.S. FSAP Technical Note: Supervision of Financial Market Infrastructures, Resilience of Central Counterparties and Innovative Technologies (July 2020) ("FMIs appeared so far sufficiently robust to manage surges in volumes and volatility in financial markets during the COVID-19 crisis.").
Securities Regulation and Supervision		
Give CFTC and SEC greater independence to determine their own resources, with appropriate accountability.	**Congress**	This legislative recommendation has not been implemented.

FSAP Recommendations	Responsible Authority	Developments
Assess financial stability risks related to mutual funds and stable net asset value (NAV) money market funds (MMFs), including through SEC-led liquidity stress testing.	**SEC**	On May 3, 2023, the SEC adopted amendments to Form PF, the confidential reporting form for certain SEC-registered investment advisers to private funds. Specifically, the final amendments require current reporting by large hedge fund advisers regarding certain events that could indicate significant stress at a fund that could harm investors or signal risk in the broader financial system. The amendments also require quarterly event reporting for all private equity fund advisers regarding certain events that could raise investor protection issues. Finally, the amendments require enhanced reporting by large private equity advisers. The reporting requirements are designed to enhance FSOC's ability to monitor systemic risk as well as bolster the SEC's regulatory oversight of private fund advisers and investor protection efforts. See Final rule: Amendments to Form PF to Require Event Reporting for Large Hedge Fund Advisers and Private Equity Fund Advisers and to Amend Reporting Requirements for Large Private Equity Fund Advisers (sec.gov). On August 10, 2022 the CFTC and SEC jointly proposed to amend Form PF to enhance FSOC's ability to monitor systemic risk as well as bolster the SEC's regulatory oversight of private fund advisers and investor protection efforts. Among other things, the proposed amendments would enhance reporting: by large hedge fund advisers on qualifying hedge funds; on basic information about advisers and private funds they advise; and, concerning hedge funds. See Joint proposed rules: Form PF; Reporting Requirements for All Filers and Large Hedge Fund Advisers (sec.gov). On November 2, 2022, SEC proposed enhancements to the open-end fund liquidity framework to better prepare OEFs for stressed conditions and to mitigate dilution of shareholders' interests. See Proposed Rule: Open-End Fund Liquidity Risk Management and Swing Pricing; Form N-PORT Reporting (sec.gov). On December 15, 2021, SEC proposed amendments to improve the resilience and transparency of money market funds. See Proposed rule: Money Market Fund Reforms; Conformed to Federal Register version (sec.gov)

FSAP Recommendations	Responsible Authority	Developments
Conclude implementation of new broker-dealer capital rules; finalization of market-wide circuit breakers, and delivery of the Consolidated Audit Trail.	**SEC**	Implementation of new broker-dealer capital rules. On June 21, 2019, the SEC adopted final rules addressing the Title VII requirements for, among other things, capital and segregation requirements for broker-dealers; the compliance date for this rulemaking was October 6, 2021 See https://www.sec.gov/news/press-release-2019-105. Finalization of market-wide circuit breakers MWCBs. The MWCBs were triggered four times in March 2020, providing the self-regulatory organizations (SROs) and the SEC with an opportunity to assess its performance. Following completion of an analysis of the MWCBs' operations, the SROs' MWCB rules were made permanent in March and April 2022 without modification to how they operate. The SROs, however, added requirements relating to testing of the MWCBs and identification of circumstances (e.g., a market decline that falls just short of triggering a MWCB) that warrant review by the SROs and reports to the SEC. See, e.g., https://www.sec.gov/rules/sro/nyse/2022/34-94441.pdf. Delivery of the Consolidated Audit Trail. The SEC charged the SROs with developing and building a Consolidated Audit Trail. For information on the SROs' progress, links to the CAT Implementation Plan, which was filed with the Commission on July 22, 2020, as well as the quarterly progress reports QPRs see https://www.catnmsplan.com/implementation-plan.
Increase scrutiny of new registrants and reduce reliance on self-attestations where applicable.	**SEC, CFTC, NFA**	Whether a registered investment adviser is a newly registered firm is one of the risk factors that the SEC Division of Examinations considers in selecting firms for examination. On March 27, 2023, the Division of Examinations published a Risk Alert discussing observations from examinations of newly-registered investment advisers. See https://www.sec.gov/files/risk-alert-newly-registered-ias-032723.pdf. Newly CFTC registered commodity pool operators (CPOs) immediately become eligible for examination by the NFA utilizing NFA's risk assessment/model function.

FSAP Recommendations	Responsible Authority	Developments
		There are a number of factors that, if present, may result in a newly registered CPO being scheduled for examination including background of firm personnel.
AML/CFT		
Legislate to collect beneficial ownership information on formation of U.S. corporations, maintain it, and ensure timely access for authorities.	**Congress**	The AML Act of 2020, which includes the Corporate Transparency Act, was enacted on January 1, 2021, and requires that reporting companies disclose their beneficial owners when they are formed (or, for non-U.S. companies, when they register with a State to do business in the U.S.), and when they change beneficial owners.
Ensure that investment advisers, lawyers, accountants, and company service providers are effectively regulated and supervised for AML/CFT in line with risks.	**Treasury (TFFC)**	The FATF most recently assessed the United States' progress on these action items as a part of the Third Follow-Up to the U.S. Mutual Evaluation. The United States will continue to engage with the FATF on addressing the gaps identified in that assessment. https://www.fatf-gafi.org/media/fatf/documents/reports/fur/Follow-Up-Report-United-States-March-2020.pdf
Systemic Liquidity		
Promote the fungibility of Treasury Securities and Reserves by adjusting assumptions about firms' access to the Discount Window in liquidity metrics.	**FRB (S&R with MA)**	No changes have been made since the FSAP was conducted.
Continue to operate regular fine-tuning OMOs.	**FRB**	In the current operating environment, in which reserves are in excess of $3 trillion, no fine-tuning or reserve management OMOs are needed.
Advance arrangements for providing liquidity to	**FRB, Treasury**	No changes have been made since the FSAP was conducted.

FSAP Recommendations	Responsible Authority	Developments
systemic nonbanks and CCPs under stress, and reconsider restrictions on bilateral emergency liquidity assistance (ELA) to designated systemically important nonbanks.		The Federal Reserve has the ability to provide liquidity to systemic nonbanks under stress through broad-based liquidity facilities under Section 13(3) of the Federal Reserve Act. In addition, for a CCP that the FSOC has designated as systemically important, the Federal Reserve is authorized to provide liquidity on a bilateral basis in unusual or exigent circumstances (among other restrictions). (The recommendation to reconsider restrictions on bilateral emergency liquidity assistance to systemic nonbanks should be directed to Congress.)
Develop robust and effective backup plans in the event the sole provider, Bank of New York Mellon (BNYM), is not able to settle and clear repo transactions.	**FRB (S&R with NY and RBOPS)**	The Federal Reserve continues to engage with market participants on the development of robust plans in the event that BNYM is not able to settle and clear repo transactions, including at an industry level. Market participants continue to offer widespread interest and support for this effort. The Federal Reserve continues discussions in order to develop and implement these plans.
Enhance arrangements to provide liquidity support in foreign currencies to banks and designated systemically important CCPs.	**FRB**	No changes have been made since the FSAP was conducted.
Crisis Preparedness and Management		
Intensify crisis preparedness.	**FSOC, FRB, FDIC, OCC (S&R/FBAs)**	FSOC plays an important role in promoting information sharing and collaboration to address potential risks to financial stability. When the Council discusses potential responses to mitigate potential risks to financial stability, it seeks to collaborate regarding agencies' crisis-management planning and tools that are relevant to those risks.
Continue to use agency discretion actively to	**FRB, FDIC, OCC**	Through operation of the revised resolution plan rule issued by the FDIC and Board in 2019, several firms have become subject to the Title I resolution plan requirement since the effective date of the rule.

FSAP Recommendations	Responsible Authority	Developments
subject a wider array of firms to RRP.	(S&R/FBAs)	The OCC is in the process of reviewing all bank Recovery plans for banks subject to its Recovery Planning requirements in 12 CFR 30 Appendix E.
Continue to undertake, at least yearly, Dodd-Frank Act (DFA) Title II plans, resolvability assessments,	FRB, FDIC	The FBAs continue to review RRPs submitted by firms with an increasing focus on testing a range of firms' capabilities that support resiliency, recoverability, and resolvability.
and crisis management group (CMG) discussions of RRPs and assessments.		The FDIC and the Board also continue to co-chair annual Crisis Management Group (CMG) meetings for U.S. G-SIBs, with the participation of the OCC and SEC, as applicable, and relevant host authorities, to discuss home-and-host resolvability assessments for the firms to facilitate cross-border resolution planning. Further, the FDIC has undertaken institution-specific strategic planning to carry out its orderly liquidation authorities with respect to the largest G-SIBs operating in the United States. The FDIC continues to build out process documents to facilitate the implementation of the framework in a Title II resolution.
Extend OLA powers to cover FBOs' U.S. branches; ensure equal depositor preference ranking for overseas branch deposits with domestic deposits; introduce powers to give prompt and predictable	Congress	This legislative recommendation has not been implemented.

FSAP Recommendations	Responsible Authority	Developments
legal effect to foreign resolution measures.		
This assessment was prepared by the U.S. authorities for the purposes of the IMF's Article IV review and is non-binding, informal, and summary in nature. The updates contained herein do not represent rules, regulations, interpretations, or official statements of the U.S. authorities.		

INTERNATIONAL MONETARY FUND

UNITED STATES

May 26, 2023

STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By | The Western Hemisphere Department (in consultation with other departments)

CONTENTS

FUND RELATIONS

(As of April 30, 2023)

Membership Status: Joined: December 27, 1945; Article VIII

General Resources Account:	SDR Million	Percent of Quota
Quota	82,994.20	100.00
IMF's Holdings of Currency (Holdings Rate)	57,526.59	69.31
Reserve Tranche Position	25,482.8	30.70
Lending to the Fund		
New Arrangements to Borrow	176.22	

SDR Department:	SDR Million	Percent of Allocation
Net cumulative allocation	114,861.89	100.00
Holdings	121,346.54	105.65

Outstanding Purchases and Loans: None

Financial Arrangements: None

Projected Payments to Fund [1/]

(SDR Million; based on existing use of resources and present holdings of SDRs):

		Forthcoming			
	2023	2024	2025	2026	2027
Principal					
Charges/Interest		1.51	1.51	1.51	1.51
Total		1.51	1.51	1.51	1.51

1/ When a member has overdue financial obligations outstanding for more than three months, the amount of such arrears will be shown in this section.

Exchange Rate Arrangements. The exchange rate of the U.S. dollar floats independently and is determined freely in the foreign exchange market. The United States has accepted the obligations under Article VIII, Sections 2(a), 3 and 4 of the IMF's Articles of Agreement and maintains an exchange system free of multiple currency practices and restrictions on the making of payments and transfers for current international transactions, except for those measures imposed for security reasons. The United States notifies the maintenance of measures imposed for security reasons under Executive Board Decision No. 144–(52/51). The last of these notifications was made on May 08, 2023.

Article IV Consultation. The 2023 Article IV consultation was concluded on June 12, 2023. A fiscal Report of Observance of Standards and Codes was completed in the context of the 2003 consultation. The 2023 Article IV discussions took place during May 1–22, 2023. Concluding meetings with Chair Powell of the Board of Governors of the Federal Reserve System, and Treasury Secretary Yellen occurred on May 26. The Managing Director, Ms. Georgieva, and Deputy Managing Director Li participated in the concluding meetings. A press conference on the consultation was also held. The team comprised Nigel Chalk (head), Laila Azoor, Euihyun Bae, Philip Barrett, Moya Chin, Andrew Hodge, Li Lin, Josef Platzer, Anke Weber (all WHD), Jonathan Pampolina (LEG), Anne-Charlotte Paret and Elizabeth Van Heuvelen (SPR). Ms. Elizabeth Shortino (Executive Director) and Mr. Logan Sturm (Advisor) attended some of the meetings. Outreach included discussions with private sector representatives. Unless an objection from the authorities of the United States is received prior to the conclusion of the Board's consideration, the document will be published.

STATISTICAL ISSUES

As of May 16, 2023

I. Assessment of Data Adequacy for Surveillance	
General: Comprehensive economic data are available for the United States on a timely basis. Data provision is adequate for surveillance, including its coverage, periodicity, and timeliness.	
II. Data Standards and Quality	
The United States is an adherent to the Special Data Dissemination Standard Plus (SDDS Plus) since February 18, 2015, and its metadata are posted on the Dissemination Standards Bulletin Board (DSBB). The United States' latest SDDS Plus Annual Observance Report is available on the DSBB.	No data ROSC has been conducted.

Table 1. United States: Table of Common Indicators Required for Surveillance
(As of May 16, 2023)

	Date of latest observation	Date received	Frequency of data[1]	Frequency of reporting[1]	Frequency of publication[1]
Exchange rates	Same day	Same day	D	D	D
International reserve assets and reserve liabilities of the monetary authorities[2]	2023 M3	April 28	M	M	M
Reserve/base money	2023 M3	Apr 25	M	M	M
Broad money	2023 M3	Apr 25	M	M	M
Central bank balance sheet	May 11	May 11	W	W	W
Consolidated balance sheet of the banking system	2022 Q4	Mar 9	Q	Q	Q
Interest rates[3]	Same day	Same day	D	D	D
Consumer price index	2023 M4	May 10	M	M	M
Revenue, expenditure, balance and composition of financing[4]—general government[5]	2023 Q1	Apr 27	Q	Q	Q
Revenue, expenditure, balance and composition of financing[4]—central government	2023 M4	May 10	M	M	M
Stocks of central government and central government-guaranteed debt	2023 M4	Apr 30	M	M	M
External current account balance	2022 Q4	Mar 23	Q	Q	Q
Exports and imports of goods and services	2023 M3	May 4	M	M	M
GDP/GNP (1st release)	2023 Q1	Apr 27	Q	M	M
Gross External Debt	2022 Q4	Mar 31	Q	Q	Q
International Investment Position[6]	2022 Q4	Mar 29	Q	Q	Q

[1] Daily (D), Weekly (W), Biweekly (B), Monthly (M), Quarterly (Q), Annually (A); NA: Not Available.
[2] Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[3] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[4] Foreign, domestic bank, and domestic nonbank financing.
[5] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[6] Includes external gross financial asset and liability positions vis-à-vis nonresidents.