



Strategic Analysis

August 2022

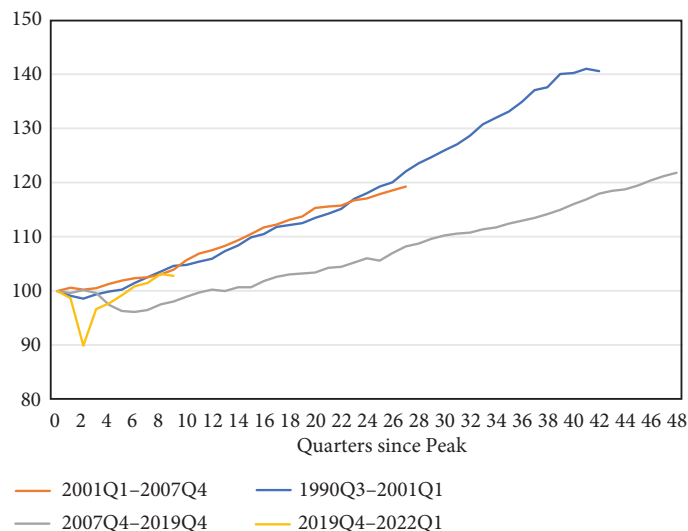
AVOIDING A RECESSION: THE FED CONUNDRUM

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Introduction

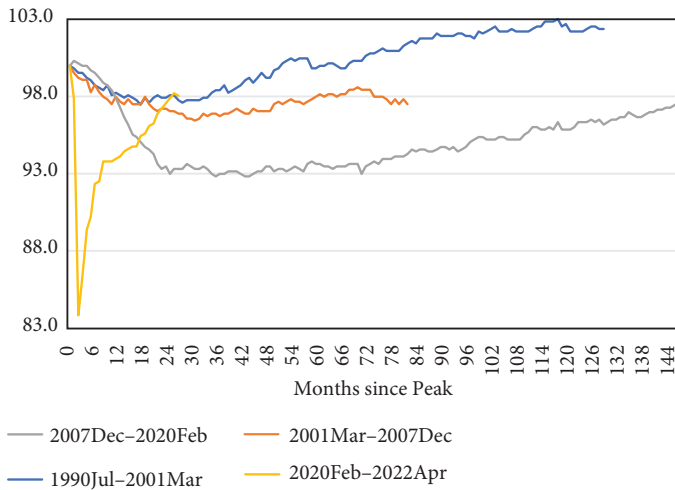
Two years after the start of the pandemic-triggered recession, the United States economy has achieved an impressive recovery. As Figure 1 shows, the drop in GDP in 2020 has been followed by a sharp recovery in the last year and a half. Despite the small drop in output in 2022Q1, real GDP is now (at the end of 2022Q1) around 3 percent above its precrisis level. A similar, V-shaped recovery can be observed with regards to the employment-to-population ratio in Figure 2, although in this

Figure 1 Recoveries of Real GDP in the Previous Four Cycles (peak=100)



Source: BEA, authors' calculations

Figure 2 Recoveries of the Employment-to-Population Ratio in the Previous Four Cycles (peak=100)



Source: BLS, authors' calculations

case the precrisis level has not yet been reached, remaining 2 percent below its pre-pandemic peak.

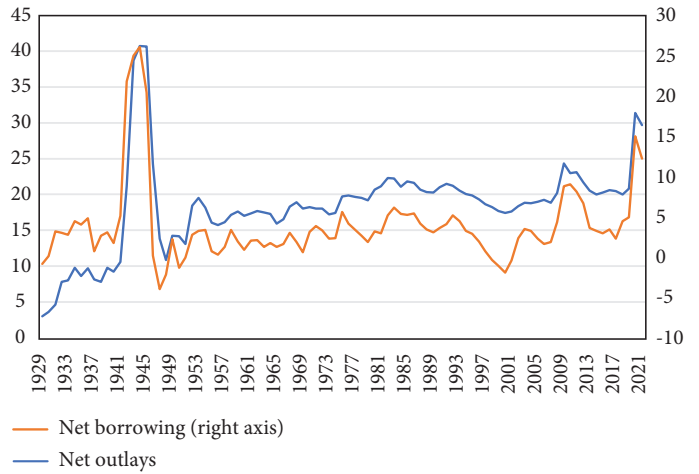
Figure 1 and Figure 2 also show that the pace of the recovery comes in stark contrast to the experience of recent cycles. As we have repeatedly documented elsewhere (Papadimitriou, Nikiforos, and Zezza 2016), the prior three recoveries have been the slowest in the postwar history of the United States.

To a certain extent the pace of the recovery is related to the nature of the crisis itself. When the lockdowns were eased, it was expected that there would be a resumption in economic activity. At the same time, none of this would have been possible without the fiscal stimulus that took place in 2020 and 2021. Over these two years, as Figure 3 shows, government expenditure and the government deficit increased to their highest levels since World War II.

This increase in government expenditure and the deficit led to a sharp increase in personal disposable income and household net lending. Figure 4 shows the sharp increase in real disposable personal income during the pandemic following the two rounds of fiscal stimulus in 2020 and 2021. Figure 4 also shows that in the early part of 2022, disposable income fell below its pre-pandemic trend.

On the negative side, the last couple of years have been marked by a sharp increase in the current account deficit. As can be noticed in Figure 5, the beginning of the 2009 recovery saw an increase in the current account deficit along its pre-2007

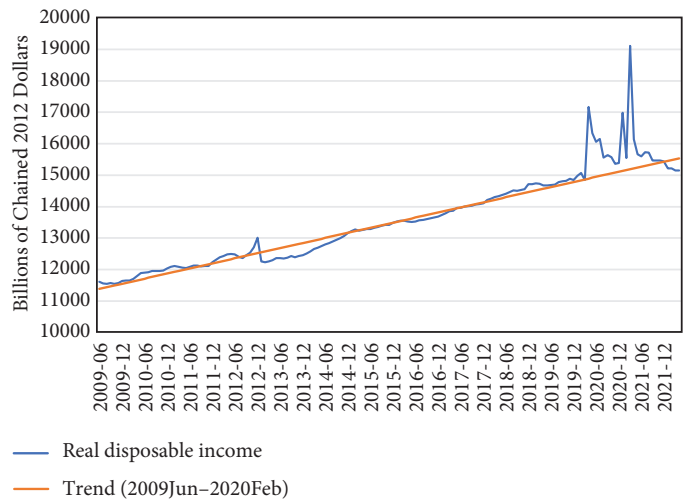
Figure 3 Federal Government: Net Outlays, and Net Borrowing (percent of GDP, 1929–2021)



Source: BEA, authors' calculations

Note: Net borrowing does not contain capital transfer and net purchases of nonproduced assets (see NIPA table 3.2)

Figure 4 Real Disposable Personal Income (2009–22)



Source: BEA, authors' calculations

pattern. This changed in 2011 when the trade deficit for petroleum products started decreasing due to shale gas extraction; it has now converged toward zero. This improvement in the petroleum product trade deficit allowed the overall trade deficit to remain relatively constant, despite the increasing trade deficit for all other goods. In the last two years, however, despite the relatively stable trade balance for petroleum products, there was an

acceleration of the trade deficit for nonpetroleum products that led to an overall trade deficit of close to 5 percent in 2022Q1.

This is an important development because, together with the decrease in the government deficit projected by the Congressional Budget Office (CBO), it will lead to the private sector running a deficit for the first time since 2007. A negative balance for the private sector implies an increase in its indebtedness and financial fragility. We discuss these issues in more detail with reference to the baseline scenario below.

Another issue that the US economy has been facing during the postpandemic recovery is the high inflation rate. As we will explain in more detail in the following section, we believe that this increase in inflation is primarily due to pandemic-related disruptions, the war in Ukraine, and the beginning of a new commodity super cycle, and is largely unrelated to the level of demand or the US economy’s growth rate. For this reason, the monetary policy tightening, which is aimed at bringing about an orderly decrease in demand and inflation, is not going to work as envisaged.

Moreover, this monetary policy tightening is likely to lead to a financial crisis. As we have discussed in previous writings (Papadimitriou, Nikiforos, and Zezza 2016, 2020; Nikiforos and Zezza 2018; Nikiforos 2020), over the last several decades there have been two parallel processes at play in the US economy: an asset market price overvaluation and an increase in the fragility of corporate balance sheets. Because of this, increasing interest

rates and tapering the asset purchases from the Fed can trigger a financial crisis with very severe consequences for growth and employment. We simulate this in Scenario 1, below. In such an eventuality inflation might fall, but this will come at the cost of a full-blown financial crisis—with obvious consequences for the US and global economies.

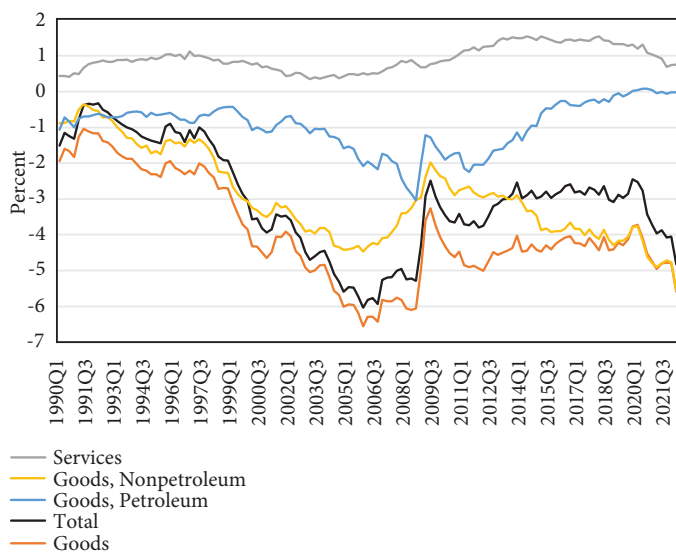
If a financial crisis takes place, a new fiscal stimulus would be necessary. In Scenarios 2 and 3, we simulate the effect of an increase in government expenditure. Scenario 2 simulates a deficit-financed increase with no offsetting revenue increase, while Scenario 3 presents the case of a deficit-neutral fiscal expenditure increase, where the taxation of high-income households increases by an equivalent amount. We find that in both cases there are significant macroeconomic effects.

Inflation

The annual rate of increase in the consumer price index (CPI) dropped to a pandemic low of 0.2 percent in May 2020 and has since increased rapidly to close to or above 8 percent in 2021—it was 8.5 percent in May 2022, two years after reaching its nadir (Figure 6). This is the highest level the rate of inflation has reached since the early 1980s.

There have been two main approaches to interpreting this increase. The first emphasizes the rapid increase in aggregate demand and decrease in unemployment due to the aggressive

Figure 5 Trade Balance (1990Q1–2022Q1)



Source: BEA, authors’ calculations

Figure 6 Consumer Price Index for All Urban Consumers (percent change from the previous year)



Source: BLS

fiscal expansion of the last two years. From that point of view, the fiscal stimulus has led to an overheating of the economy and to a decrease in the unemployment rate below what is considered to be the “non-accelerating inflation rate of unemployment” (better known by the ugly acronym NAIURU). According to the conventional, new-Keynesian/neoclassical macroeconomic model, if policymakers (i.e., the central bank and the government) do not cool off the economy and demand and employment remain at such high levels, there will be a nominal wage–price spiral that will lead to accelerating inflation. The story goes that an increase in the rate of inflation will lead to the formation of expectations of higher inflation in the future, leading to an increase in nominal wages, which will then feed into a further price increase, with the result being a never-ending wage–price spiral. Policymakers’ duty in this case is to increase interest rates in order to decrease demand and to bring unemployment to its NAIURU and inflation to its target. This process, of the central bank navigating the economy toward the target inflation rate and the NAIURU, is assumed to be smooth—although it is admitted that in some cases the unemployment rate must rise above the NAIURU before settling back to it.

Another potential explanation for the current increase in inflation emphasizes the pandemic-induced disruptions in the global economy, which led to the increase in the prices of several commodities, goods, and services, and of course the increase in the price of oil and wheat due to the war in Ukraine. It is evident that the pandemic created a severe disruption in global value chains mainly because of the slowdown in production of crucial goods, as well as the disruption of transportation networks around the globe. Microchips are probably the most well-known and obvious example of goods that have not been able to be produced in the necessary quantities, resulting in a slowdown in the production of other goods that use them, ranging from cars and telephones, to computers, televisions, kitchen devices, and videogame consoles, causing a concomitant increase in the price of these goods. Given China’s approach to the pandemic, most notably its insistence on zero-COVID policies, and its central role in global value chains, these disruptions are expected to continue in the near future. Another important dimension of pandemic-related problems has been the disruptions of transportation networks that have brought about huge backlogs at many of the world’s important transportation hubs. Moreover, the recovery from the pandemic led to a rapid increase in the price of many commodities. Because of

Russia’s role as an oil exporter and Ukraine as a wheat exporter, this increase was then further amplified by the war in Ukraine.

According to this explanation, the increase in the inflation rate is largely independent of the state of aggregate demand in the United States. Even if the fiscal stimulus was much smaller and the economy had not grown over the last two years—assuming total US GDP was the same today as it was before the pandemic started two years ago, or even a little lower than that—the rate of inflation would still be at similar levels.

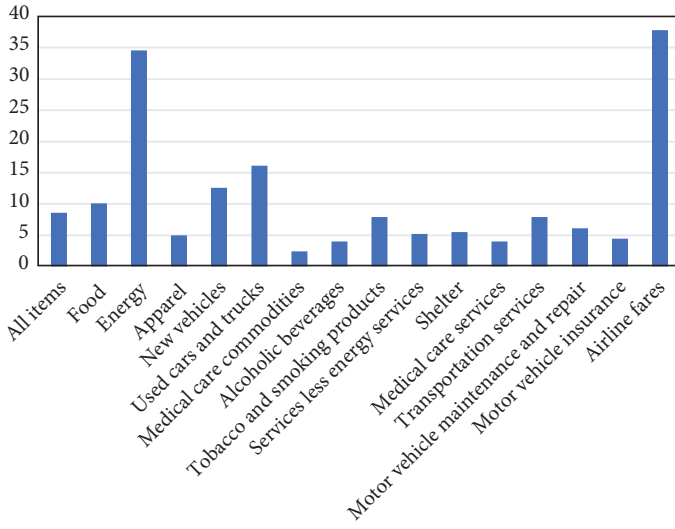
From that point of view, the solution to the problem of high inflation is not to decrease demand, but first to fix the problems in the global value chains and then to deal with the disruptions in the markets for oil, gas, and food, notwithstanding the war in Ukraine continuing—at least in the short run.

Subscribing to this view does not mean that demand has played no role at all. If the US economy had remained at the same levels of output as those in 2020 during the height of the pandemic, it is likely that inflation would not have taken off. As we will show below, it will probably take another deep crisis for inflation to fall without having to deal with the aforementioned issues. But is this really an optimal policy scenario? Would it be worth GDP not recovering from the pandemic slump? Is it preferable to trigger another recession just for the sake of reducing inflation?

This second, supply-push, explanation of the current inflation seems more convincing if one looks at the data. Figure 7a presents the breakdown of inflation by expenditure category. It is clear that high rates of inflation are concentrated in the sectors directly affected by both the pandemic and the increase in oil and food prices, namely energy, food, and vehicles. Inflation for shelter has to do with base effects: the related market only started recovering in the spring of 2021. If we take these effects into account—by calculating price increases over two-year periods—shelter inflation is not higher today than it was in the five years before the pandemic. Finally, the increase in airline fares is due to a mix of base effects, higher fuel prices, and high demand, as people can now travel more easily after two years of pandemic lockdowns.

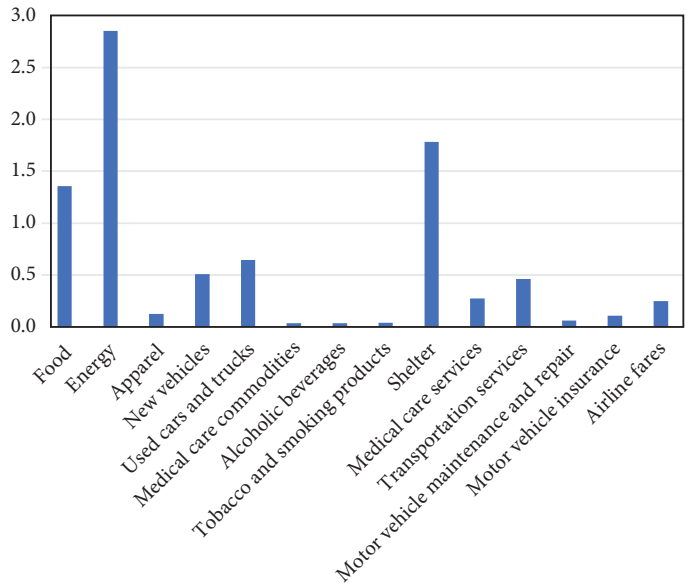
Figure 7b presents each category’s contribution to the overall inflation rate. We get a similar picture as above: except for shelter, all the remaining categories’ contributions are due directly to pandemic-related disruptions. The inflation in food, energy, new and used vehicles and parts, transportation services, and airline fares gives us 6 percentage points out of the

Figure 7a Consumer Price Index for All Urban Consumers (CPI-U) (US city average by expenditure category, May 2021–May 2022)



Source: BLS

Figure 7b Consumer Price Index: Contribution by Expenditure Category (May 2021–May 2022)



Source: BLS

8.5 percentage points of inflation. If we also consider the base effects related to shelter inflation, the overall inflation rate does not seem out of place and is largely unrelated to the state of demand in the US economy.

As the usual explanation goes, for inflation to remain high, there must be feedback effects between prices and nominal wages. Price shocks might lead to temporary increases in the rate of inflation, but for these increases to persist, nominal wages must follow. Figure 8a shows that the annual percentage change in average nominal earnings has increased compared to before the pandemic, but only by 2 percent. It is also noteworthy that nominal wage inflation has been stable over the last nine months and has not followed the increase in price inflation. For these reasons, one can be cautiously confident that the rate of inflation will not accelerate over the next few months and that, save other price shocks, it will subside. We get a similar picture if we analyze the wider employment cost index as opposed to average earnings, even though it is only available at quarterly frequencies (Figure 8b).

The fact that the inflation rate in the United States is to a large extent unrelated to aggregate demand and the growth rate can be observed from an international comparison as well. Figure 9 shows the inflation rate (total and core) and the growth

rate in the United States, the United Kingdom, and the eurozone. If we compare the United States with the eurozone, we see that there is indeed a negative correlation between inflation and growth. However, this is not the case if we compare the United States with the United Kingdom. The latter has experienced a higher rate of inflation over the last year but with practically no growth compared to its pre-pandemic peak. A similar conclusion emerges in Figure 10, which plots the growth and inflation rates in selected OECD countries for the period 2019–21. The graph’s data do not show any obvious correlation between growth and inflation—positive or negative.

Baseline Scenario

As is our common practice, we build our baseline scenario around the CBO’s annual “Budget and Economic Outlook,” which is published once per year and provides forecasts of the growth rate, the inflation rate, and the federal government’s fiscal stance. The model the CBO uses is a conventional new-Keynesian/neoclassical model with demand playing a role only in the short run, while the medium and long run are supply-side determined and there is a dichotomy between the real and the financial sides of the economy.

Our model—which belongs to what has come to be known as the stock-flow consistent (SFC) approach to macroeconomic modeling—is in a way antipodal to the CBO’s model. Demand plays a role both in the short and long run, and there is an explicit modeling of the interactions on the real and financial sides.

Despite these differences—or maybe exactly because of these differences—a useful exercise to perform with our model is to ask what are the necessary conditions for the CBO projections to materialize given the structural configuration of the US economy. More precisely, the question we are asking in this baseline simulation is: What would the private sector’s behavior have to be for the CBO’s projections regarding fiscal outcomes, the rate of inflation, and GDP growth to materialize, given the behavior of imports, exports, and other structural variables of the US economy?

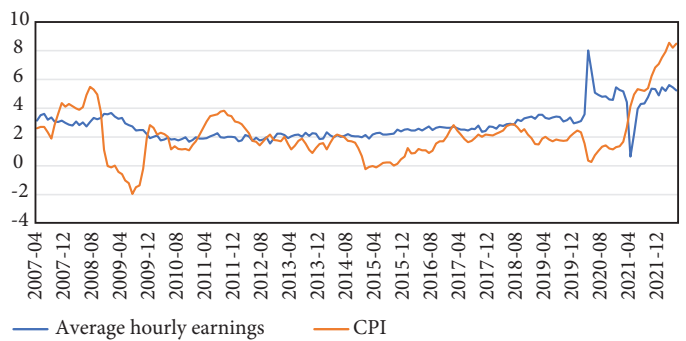
For our simulations, we make assumptions that are as “neutral” as possible: US trading partners have the growth and inflation rates projected by the International Monetary Fund; equity and real estate market prices are assumed to increase mildly by 2 percent annually; and the effective federal funds rate is assumed to grow according to the Federal Open Market Committee’s median projection.

The projections for the upcoming four years from the CBO’s “Budget and Economic Outlook 2022–32” (CBO 2022) are presented in Table 1. As can be seen, the CBO is projecting a sharp decrease in the federal deficit this year as the pandemic stimulus phases out. More precisely, the CBO is projecting an overall fiscal consolidation of 8.2 percentage points of GDP: from 12.4 percent of GDP in 2021 to 4.2 percent in 2022. In the following years the fiscal deficit is projected to remain relatively stable, with a slight uptick in 2025.

Moreover, the CBO is projecting a relatively robust growth rate of 3.8 percent this year, which converges to what appears to be its “natural”—according to the CBO—level of 1.6 percent by 2025. The inflation rate is expected to be elevated this year (but at a much slower pace compared to the beginning of the year), at 4.5 percent, and then converge to its target rate of 2 percent by 2025.

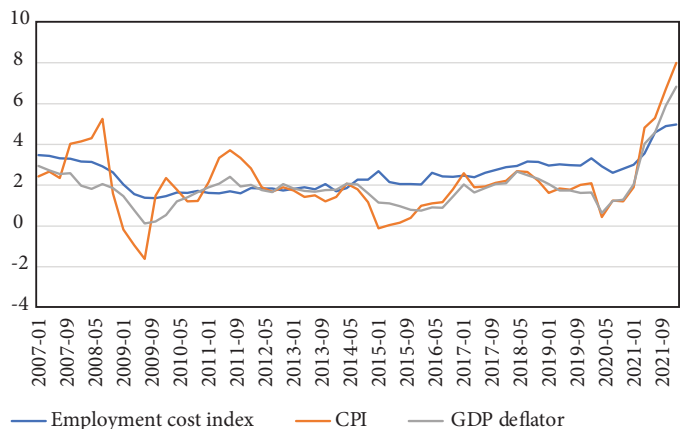
Our baseline simulations yield some interesting results, which are summarized in Figure 11. The balance of the overall government broadly follows the CBO’s projections—the underlying assumption here is that the local and state government balance will not change over the projection period and, therefore,

Figure 8a Average Hourly Earnings of All Employees (total private, percent change from the previous year)



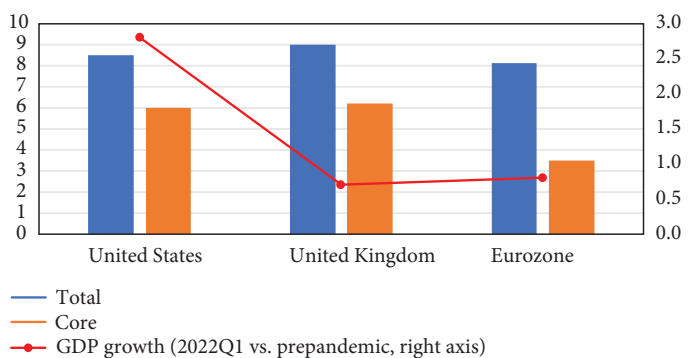
Source: BLS

Figure 8b Employment Cost Index: Wages and Salaries (private industry workers, percent change from the previous year)



Source: BLS, BEA

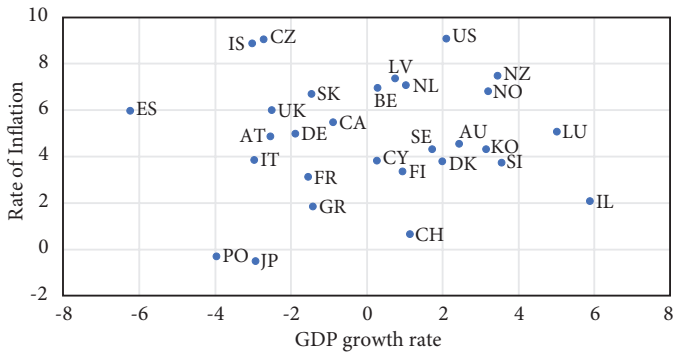
Figure 9 Inflation and Growth: United States, United Kingdom, and Eurozone



Note: Inflation refers to the period May 2021–May 2022 for the United States and the eurozone and April 2021–April 2022 for the United Kingdom

Source: BLS, BEA, ONS (Office for National Statistics, UK), Eurostat

Figure 10 GDP Growth Rate and Inflation in OECD Countries (2019–21, percent)



Source: IMF (2022)

the projected change in the federal government balance will be reflected in the general government balance.

On the other hand, the current account deficit is projected to increase and reach 5.7 percent of GDP by the end of the projection period—essentially following its trend since 2019 (Figure 12).

The result of the decrease in the government deficit and the increase in the current account deficit is that the private sector’s balance will become negative starting this year. It is not hard to see that if the government balance starts hovering around 4 percent, while at the same time the current account deficit surpasses 5 percent, the private sector balance *has to* become negative: minus 1 percent or more.

If this happens, this will be the first time since 2007 that the private sector records a deficit. Overall, as we can see in Figure 12, the private sector is usually a net lender, with a balance hovering around 4 percent to 5 percent of GDP. The only periods when the private sector was a net borrower were the late 1990s and early 2000s, a situation that then led to the sharp increase in private indebtedness that was eventually followed by the 2007 crisis.

Our baseline simulations show that some of the basic underlying structural characteristics of the US economy from that period have persisted. Despite the significant positive effect that shale gas extraction has had on the trade and current account balances over the last decade (see discussion above), the current account deficit over the last several years has been increasing, and thus the “normalization” of the fiscal stance makes it necessary for the private sector to become a net borrower. In this case, private indebtedness will increase. Figure 13 presents the simulated private sector debt-to-GDP ratio associated with

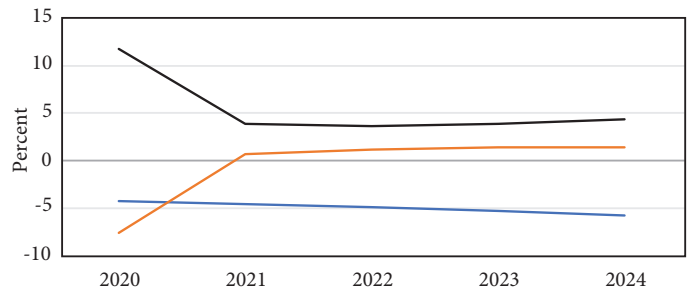
Table 1 CBO Baseline Projections (2022–25)

Year	Deficit	Outlays	Revenues	Growth Rate	Inflation Rate
2021	12.4	30.5	18.1	5.7	4.2
2022	4.2	23.8	19.6	3.8	5.2
2023	3.8	22.4	18.6	2.8	2.7
2024	3.9	21.9	18.0	1.6	2.1
2025	4.7	22.3	17.6	1.5	2.1

Source: CBO (2022)

Note: Deficit, outlays, and revenues as percentage of GDP

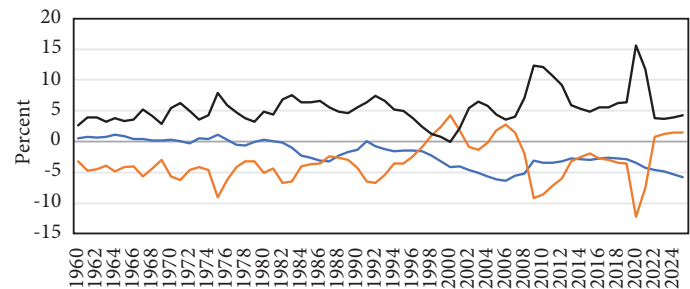
Figure 11 Baseline Scenario: Main Sector Balances, Actual and Projected (2020–25)



— Foreign
— Private (investment minus saving)
— Government deficit

Source: BEA, authors’ calculations

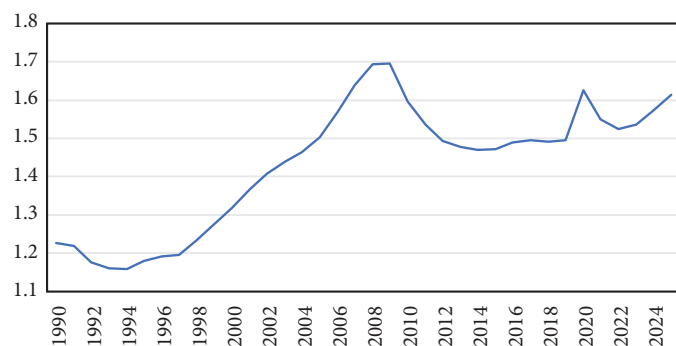
Figure 12 Baseline Scenario: Main Sector Balances, Actual and Projected (1960–2025)



— Government deficit
— Foreign
— Private (investment minus saving)

Source: BEA, authors’ calculations

Figure 13 Baseline Scenario: Private Sector Debt-to-GDP Ratio, Actual and Projected (1990–2025)



Source: BEA, authors' calculations

the baseline scenario. Over the projection period, the debt-to-GDP ratio increases substantially. This comes in contrast with the decrease and then relative stability that prevailed from after the 2007–9 crisis until the pandemic.

Within the wider fundamental uncertainty that currently prevails, two factors are important for our simulation results. First is the trade balance of petroleum products. Over the last seven years or so, this trade balance has fluctuated around zero. Will this increase now due to the war in Ukraine? Recent reports point to an increase in exports of US petroleum products to Europe substituting for Russian exports. It is unclear, however, if this increase will be macroeconomically significant. The second factor relates to projecting the rate of inflation. Whatever its vices might be, a high rate of inflation tends to decrease the *real* burden of debt—at least for those whose nominal incomes increase due to inflation. This might be a positive side effect of the currently elevated rate of inflation.

The End of the Two Minskyan Processes?

Two obvious problems that present downside risks for the US economy are the overvaluation of the stock market and fragile corporate balance sheets. These risks become much more tangible and important because of the reversal of the loose monetary policy that has prevailed over the last decade and a half.

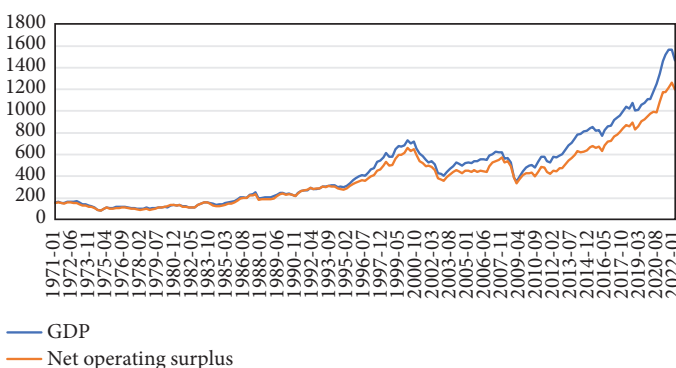
Figure 14 and Figure 15 present two indices of market valuation. Figure 14 shows the cyclically adjusted price–earnings ratio (CAPE) as calculated by Robert Shiller; as of May 2022, the valuation of the market is at the levels of August and September

Figure 14 Shiller Cyclically Adjusted Price-to-earnings Ratio



Source: <http://www.econ.yale.edu/~shiller/data.htm>

Figure 15 Ratio of Market Capitalization to GDP and Net Operating Surplus (1971Q1–2022Q1, 1975Q1=100)



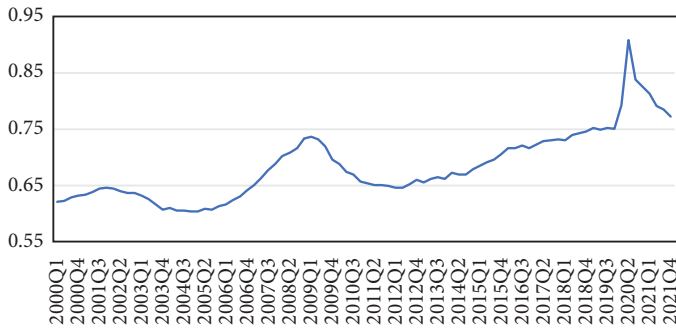
Source: BEA, Wilshire Associates, authors' calculations

1929 and is only below its late 1990s level. This is true despite the very large stock market correction that has taken place over the last few months.

Figure 15 presents the ratios of market valuation (captured by the Wilshire 5000 index, which measures the market value of the stocks that are traded in the United States) to nominal GDP and to total net profits, respectively. The latter ratio aims to capture the effects of the increase in the profit share that has been observed in the United States over the last four decades (an increase in profits, all other things equal, warrants an increase in a firm's market valuation). Data are available only since the beginning of the 1970s, so it is not possible to make comparisons with the 1920s. Both ratios are now above their late 1990s level.

Figure 16 presents the corporate nonfinancial sector's liabilities as a percent of GDP. It shows that overall liabilities are

Figure 16 Nonfinancial Corporate Business, Liabilities-to-GDP Ratio (2000–20)



Source: Federal Reserve, BEA, authors' calculations

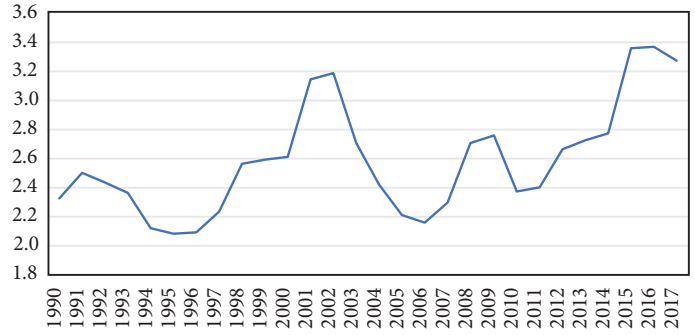
now at a higher level than before the crisis in 2007, although they have recently decreased compared to their all-time high during the pandemic.

Data from other sources confirm the fragility of corporate balance sheets. In its 2019 “Annual Economic Report,” the Bank for International Settlements (BIS 2019) reported that the corporate sector’s gross leverage—defined as gross debt over earnings before interest, tax, depreciation, and amortization—surpassed its pre-2007 level, as well as its previous peak at the end of the 1990s (Figure 17a)

That report also mentions that the share of corporate debt issued with a BBB rating—the lowest investment-grade rating—increased from 25 percent in 2000 to 36 percent in 2019. Figure 17b—with data from the same report—shows the share of bonds with an A rating in investment-grade corporate bond mutual funds’ portfolios decreased in the period between 2010 and 2019. At the same time, the share of BBB bonds increased from 18 percent to 45 percent. *Financial Times* (Henderson 2019) published some calculations in the same range that showed that the share of the market capitalization with a credit rating above BBB has fallen to 50 percent, which is below its level in the late 1990s or 2007.

Finally, there is a recent literature that highlights the existence of “zombie firms,” or what Hyman Minsky called Ponzi firms, namely those whose cash flows are not sufficient to cover the interest payments on their debt. Banerjee and Hofmann (2018) and McGowan, Andrews, and Millot (2017) define zombie firms as firms over ten years old with an interest coverage ratio that has been less than one for at least three consecutive years. Banerjee and Hofmann (2018) also use a narrower

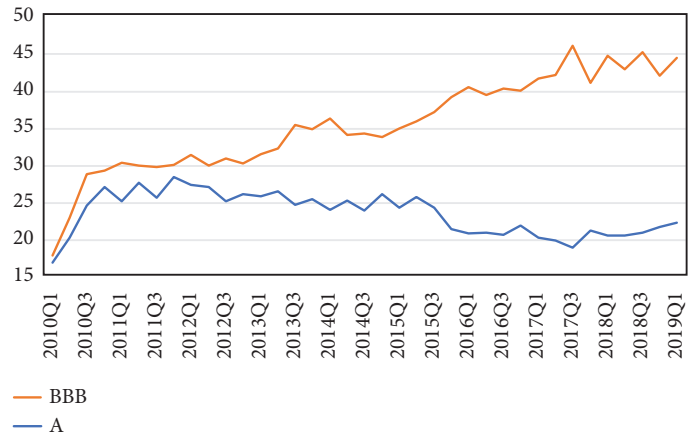
Figure 17a Gross Leverage of US Corporate Sector



Source: BIS (2019)

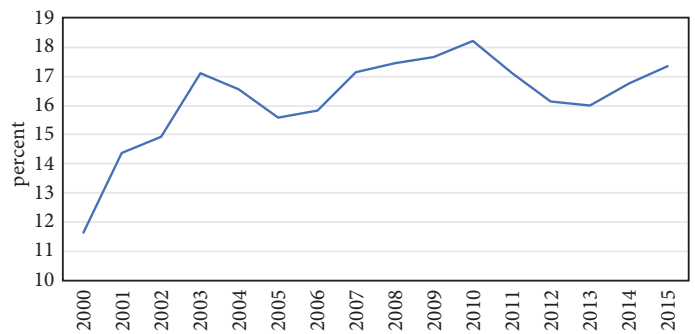
Note: Defined as gross debt of listed firms on EBITDA

Figure 17b Average Percentage of Investment-grade Corporate Bond Mutual Fund Portfolios Invested in Bonds



Source: BIS (2019)

Figure 17c Share of Zombie Firms



Source: BIS (2017)

definition of firms with a ratio of their assets' market value to their replacement cost (Tobin's q) that is below the median within their sector in any given year.

The aforementioned 2019 BIS "Annual Economic Report" and previous studies (e.g., BIS 2017; Banerjee and Hofmann 2018) show that the share of zombie firms has increased considerably over the last three decades in most developed countries. In the United States this share was 17.4 percent in 2015, which is above its precrisis level (Figure 17c).

Figure 16, above, shows that since 2019 the overall corporate debt-to-GDP ratio has been rising at a faster pace due to the conditions imposed by the pandemic. This means that it is unlikely that the fragility observed before the pandemic might have decreased—if anything the opposite should have happened.

The panic in the markets in the fall of 2018, the last time the Federal Reserve tried to tighten monetary policy, is related to this overvaluation of the stock market (the market was overvalued back then) and the fragility of corporate balance sheets. The Fed never clearly acknowledged it, but these issues seem to have played an important role in the course reversal that followed and its decision to decrease the benchmark interest rate even after almost ten years of recovery and a historically low unemployment rate at the time. The main difference is of course inflation. In late 2018, the rate of inflation was close to the targeted 2 percent, and that was used as a justification for the lack of urgency in raising interest rates. Today the Damoclean sword of inflation obliges the Fed to maintain its credibility and act in accordance with the conventional macroeconomic analysis that

it has adopted along with most major central banks—to raise interest rates as monetary policy usually dictates.

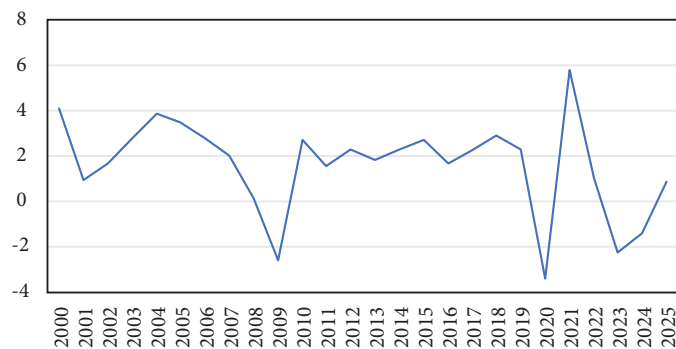
Overall, this analysis shows that over the last decades we have had the development of two synchronized Minskyan processes: an asset market overvaluation and a gradual weakening of corporate balance sheets. These processes were facilitated by the loose monetary policy (i.e., the low interest rates and the direct asset purchases by the Fed) that has been in place over the last fifteen years. As we have emphasized in previous reports, these Minskyan processes have made the US economy increasingly vulnerable to monetary policy tightening or other shocks (Papadimitriou, Nikiforos, and Zezza 2016, 2020; Nikiforos and Zezza 2018; Nikiforos 2020).

To evaluate the effects of such a market correction, we simulate a scenario where it is assumed that the stock market falls until the end of 2022 and then stabilizes for the rest of the projection period. More precisely, the S&P 500 Index falls to around 2800 by the end of 2022, down from its peak of 4800 in January 2022; as of June 12, 2022, it was halfway there at 3800. Moreover, in our scenario the fall in the stock market and the tightening of financial conditions induces a deleveraging and decrease in expenditure by households and firms.

The results of our simulations are presented in Figure 18 and Figure 19. Figure 18 shows that the fall in the stock market and the private sector deleveraging result in the growth rate dropping into negative territory in 2023 and 2024.

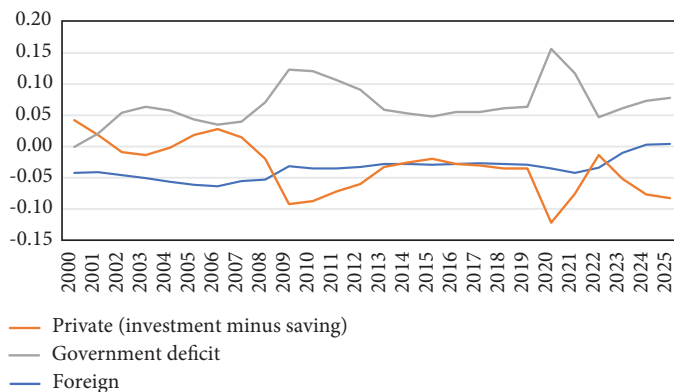
In Figure 19 we can see that the private sector's effort to deleverage and the decrease in its expenditure lead to an increase in its financial balance, which never enters negative

Figure 18 Scenario 1: GDP Growth Rate (percent)



Source: BEA, authors' calculations

Figure 19 Scenario 1: Main Sector Balances, Actual and Projected (2000–25)



Source: BEA, authors' calculations

territory (as it does in the baseline scenario) and then increases to close to 8 percent by the end of our simulation period. On the other hand, the drop in the growth rate leads to a better current account balance compared to the baseline and an increase in the government deficit.

The point of this scenario is not to project what will happen. However, it can give us an idea of the order of magnitude of a potential crisis in the following years. A crisis of this magnitude will most likely decrease the rate of inflation. But the important question is if it is worth inducing such a large drop in output (and employment) to lower the inflation rate.

At the same time, this scenario is showing us that the increase in interest rates and the Fed’s tapering of asset purchases is unlikely to achieve a smooth, “soft landing” toward lower inflation. The sharp drop in output will not be caused by a drop in consumption and investment due to the direct effect of higher interest rates, but rather because of the financial instability that has cumulated over the last several decades with regards both to asset markets and corporate balance sheets.

Fiscal Stimulus: Deficits and the Balanced-Budget Multiplier

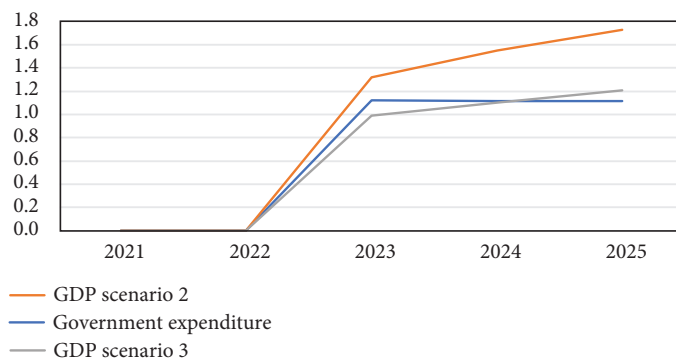
In the case of a crisis, another round of fiscal stimulus will become necessary. In what follows we simulate two related scenarios that we have addressed in previous reports (Papadimitriou, Nikiforos, and Zezza 2019, 2021). The motivation for these scenarios originally came from proposals to increase the tax rate on high-income households and increase government spending by the same amount. In particular, we simulated a scenario that assumed a 10 percentage point increase in the average tax rate paid by the top 1 percent of the income distribution, which would be accompanied by an equivalent increase in government expenditure. Such an increase in government expenditure could be used to fund infrastructure or expand access to education and childcare (such as in the American Families Plan that was proposed last year but never made it through Congress).

We based our scenarios on data from the CBO’s “The Distribution of Household Income, 2018” (CBO 2021), according to which the average pretax income of the top 1 percent of households (1.2 million households) in 2015 was \$2 million. As a result, the total revenues from a 10 percentage point increase in the tax rate would yield around \$240 billion in 2018, or approximately 1.16 percent of GDP.

Thus, our scenario can provide a good point of reference for how a stimulus of (slightly above) 1 percent of GDP can impact the US economy. As mentioned above, we simulate two variations. Scenario 2 assumes an increase in fiscal expenditure of this size without any increase in taxes; therefore, the government deficit increases. Scenario 3 is a balanced-budget scenario with the increase in government expenditure being matched with an increase in taxation along the lines explained above.

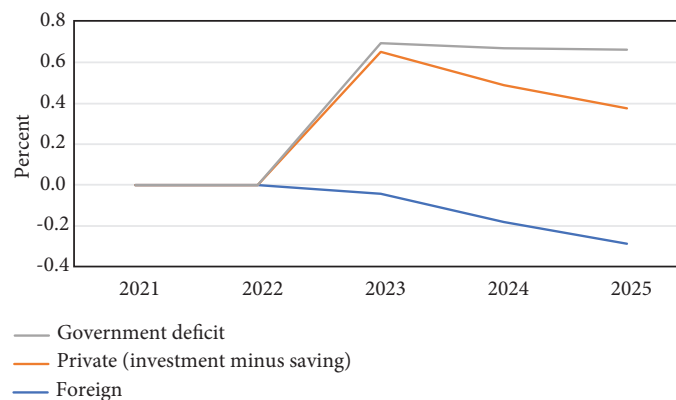
For our simulations, we extrapolate the data by assuming that the top 1 percent’s total market income for the period 2019–25 grows at the same rate as nominal income. Moreover, following the related literature, we assume that higher taxation acts as a disincentive to generate and/or report more income, which is captured by the elasticity of top incomes with respect to the net-of-tax rate (if the tax rate is τ , then the net-of-tax rate

Figure 20 Scenarios 2 and 3: Change in Government Expenditure and GDP as a Percentage of Baseline GDP



Source: BEA, authors’ calculations

Figure 21 Scenario 2: Main Sector Balances, Difference from Baseline Scenario (2000–25)



Source: BEA, authors’ calculations

is $1-\tau$). The elasticity measures the percent increase in average reported income when the net-of-tax rate increases by 1 percent. For our calculation, we use a value of 0.25 for this elasticity, which is the average estimated value in the literature. Finally, we adjust for a marginal propensity to consume of 0.2 for the top 1 percent.

The two scenarios are implemented on top of the baseline scenario starting in 2023, so our simulations cover three years of their potential effects.

The results for Scenario 2 are presented in Figure 20 and Figure 21. Figure 20 shows that by the end of the simulation period, real GDP is 1.7 percent above the baseline. However, even under the “balanced budget” scenario there are significant gains of around 1.2 percent. Obviously these results depend on high-income households’ low propensity to consume: the higher their propensity to consume, the lower would be the overall benefits in terms of output.

Finally, Figure 21 shows that in Scenario 2 there is an increase in the government deficit compared to the baseline (around 0.7 percent by 2025). This is mirrored by a deterioration in the current account balance (around 0.3 percent) due to higher output and higher demand for imports, and an improvement in the private balance by the remaining 0.4 percent.

Conclusion

This Strategic Analysis report analyzed the current state of the US economy and its prospects for ensuing years. In summary, the key takeaways are as follows.

First, the current recovery has been an important macroeconomic success. Output and employment have bounced back quickly from the trough experienced during the pandemic. The aggressive fiscal expansion is undoubtedly one of the main reasons for achieving it.

Second, on the negative side, the recovery has been accompanied by a significant increase in the trade deficit and inflation. Inflation, as we argued, is to a large extent unrelated to the level of demand or the pace of the recovery and is mostly related to the disruptions due to the pandemic, increases in the prices of oil and food, and the war in Ukraine.

Third, the increase in the trade deficit is important because, if it is coupled with the CBO’s projections for a drastic increase in the government deficit, it implies that, for the first time since 2007, the private sector will become a net borrower beginning

in 2022. If this happens, it also follows that private sector debt will start increasing at a pace akin to the pre-2007 period.

Fourth, two Minskyan processes have taken place in the United States over the several last decades: the increase in the indebtedness of the corporate sector, whose balance sheets have become fragile, and the increase in stock market prices, which recently reached historic heights. These two processes have been facilitated by the Federal Reserve’s loose monetary policy over the same period. As a result, by tightening monetary policy we risk causing a financial crisis, with severe consequences for the US economy in terms of output and employment.

Finally, we show that fiscal stimulus—to finance programs like the American Families Plan or to further expand infrastructure—can be helpful even under a budget-neutral scenario where the related increase in government expenditure is matched by an increase in taxation of high-income households.

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