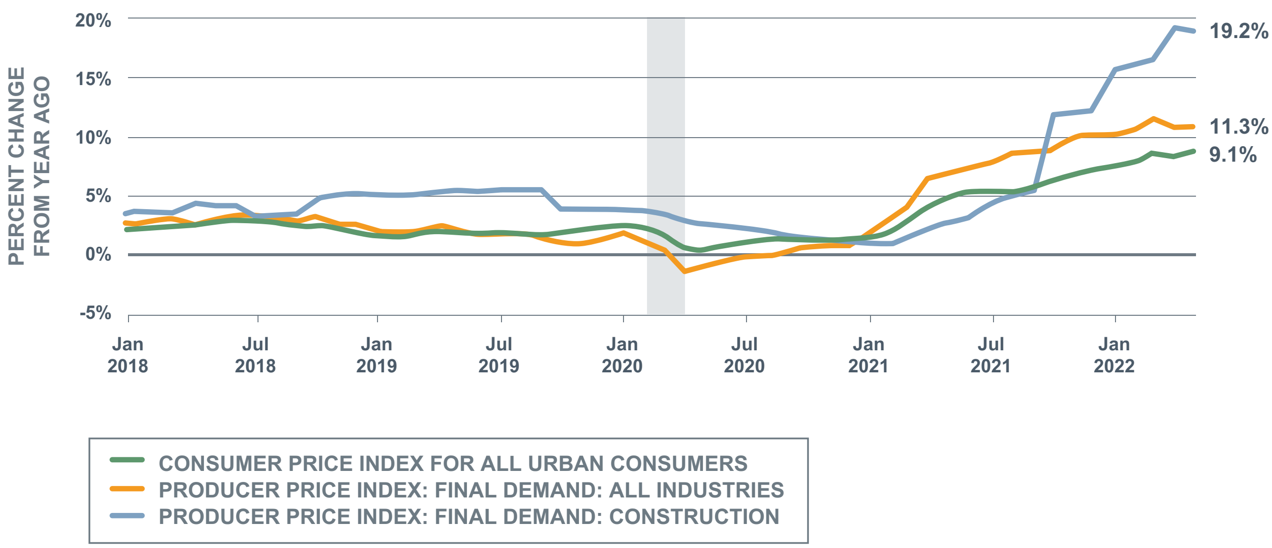
HOW BUMPY IS IT GOING TO GET?

MAPPING RECESSION SCENARIOS

July 2022

Is a recession here? The dashboard indicators are flashing: Consumer Price Index (CPI) hit 8.6% in May and 9.1% in June, a 40-year high; dozens of major companies from Netflix to Tesla have enacted layoffs, with more signaling hiring freezes to come. Consumer confidence has fallen well beyond pandemic lows. The stock market has moved toward bear market territory, and first quarter gross domestic product (GDP) showed contraction of 1.5%, largely due to trade. Moreover, the Federal Reserve's advisory notes suggest long-running tight monetary policy at least through 2024 amid growing concerns about runaway inflation.

Exhibit 1: Consumer and Producer Price Indices



SHADED AREA INDICATES U.S. RECESSION
SOURCE: U.S. BUREAU OF LABOR STATISTICS

Experts continue to debate recession timing and severity, and by July 28 the verdict will be in when the second quarter GDP estimate will be released. Given the current environment, we're ready to call for a recession now. The biggest unknown is the length and severity of the downturn.

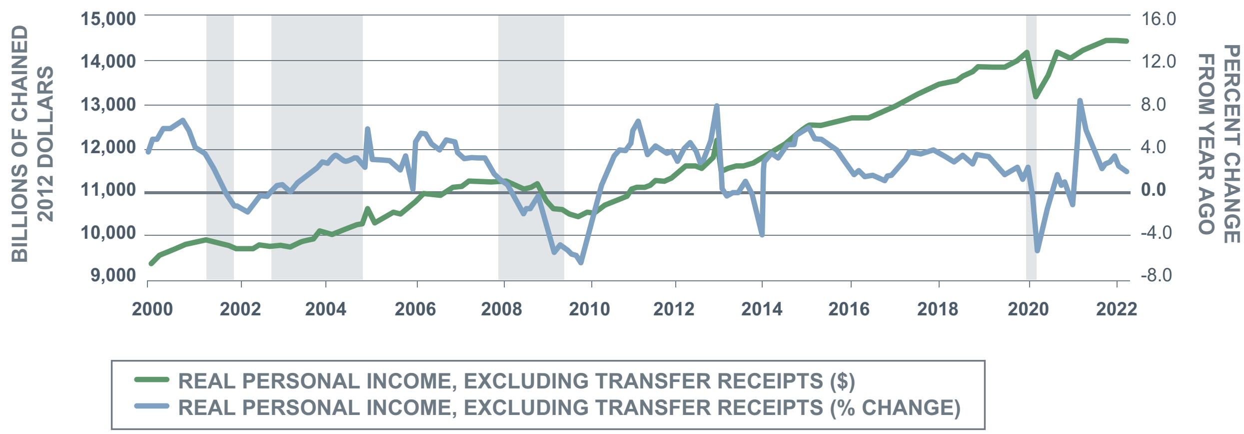
To help our clients plan, we have analyzed various potential outcomes and crafted a base case, which we incorporated into our third quarter Outlook. In this paper we outline those assumptions and what this means for the broader economy, alongside what would happen if conditions are either better or worse than our base case.

> *"Inflationary pressures that are pushing the economy into recession are already negatively impacting the built environment," said Chris Daum, chief executive officer and president of FMI. "We're beginning to see a significant number of subcontractors and vendors unable or unwilling to perform the work that they committed to because of these unprecedented cost pressures."*

The dynamics of the past two years have been different than the typical lead-up to a recession. Pandemic-related shutdowns have disrupted supply chains, causing a shortage of goods and pushing up prices, while the U.S. government flooded the economy with stimulus to fend off the potential of a deeper slowdown. In fact, 2021 felt like a great year. Demand for both goods and services came roaring back, and many firms notched record profits, topping off a decade-long expansion cycle.

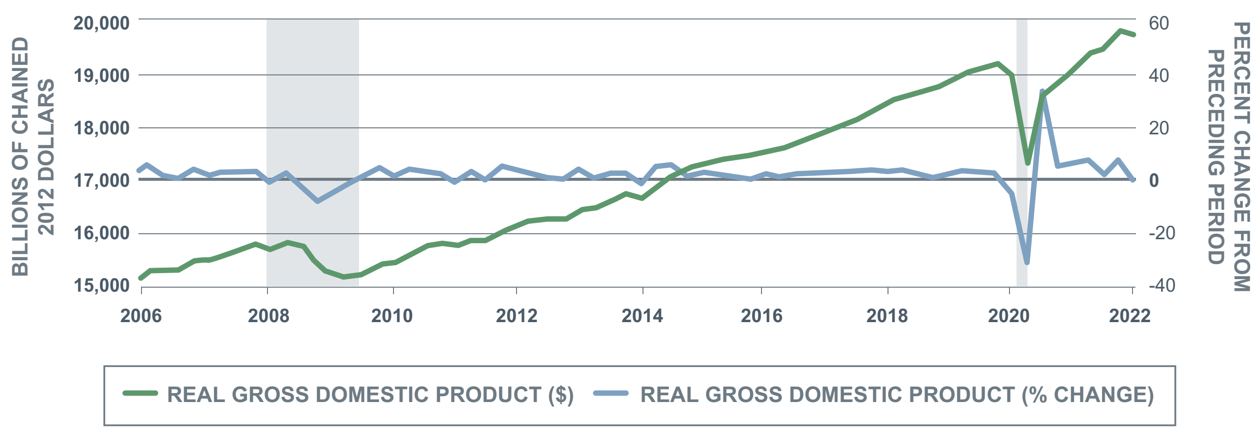
However, poor real wage growth, hampered by historically high inflation, will inevitably slow consumer spending, which will in turn drag on GDP. Further, macro events like Russia's invasion of Ukraine, which upended Europe's energy and agricultural pipelines, have contributed to energy and commodity price pressures, as seen in average U.S. gas prices crossing the $5 a gallon threshold for the first time in history.

Exhibit 2: Real Personal Income



SHADED AREAS INDICATE U.S. RECESSIONS
SOURCE: U.S. BUREAU OF ECONOMIC ANALYSIS

Exhibit 3: Real Gross Domestic Product

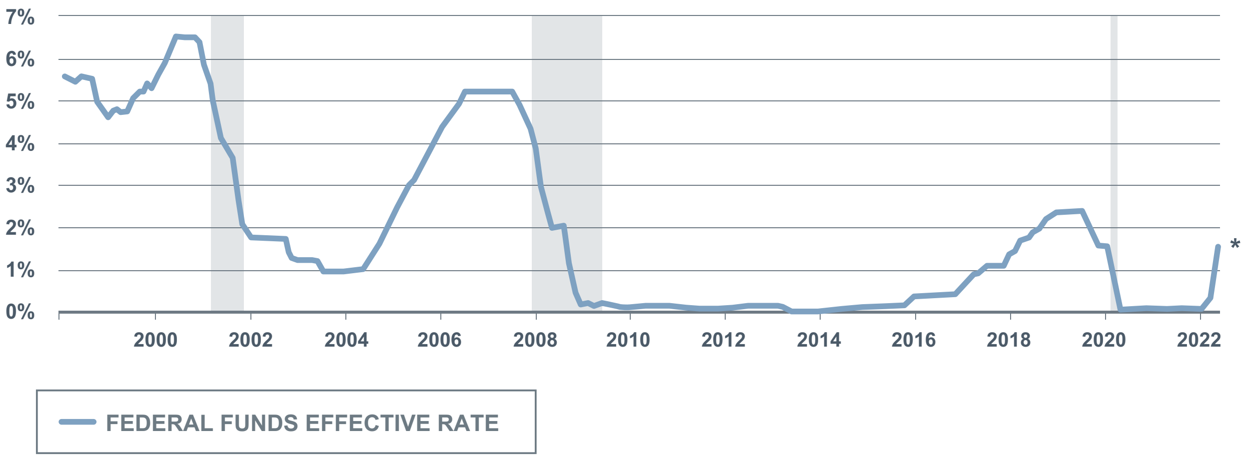


SHADED AREAS INDICATE U.S. RECESSIONS
SOURCE: U.S. BUREAU OF ECONOMIC ANALYSIS

On a global scale, U.S. consumers are better insulated than most from these pressures due to our array of resources and geographic proximity. In fact, as seen in the first quarter trade data, the United States' ability to weather international turbulence can easily become a handicap when a strong dollar discourages other countries from importing U.S. goods and services.

That brings us to the Federal Reserve. The Fed's mission is to support full employment and price stability, objectives which are often in opposition. The announcement in June that the Fed would raise rates by 75 basis points — the biggest policy rate hike since 1994 — felt like a strong move to address inflation, but will also weaken the job market, consumer spending and business investment, which are key ingredients for a traditional recession.

Exhibit 4: Federal Funds Effective Rate



* UPPER LIMIT OF THE FEDERAL FUNDS TARGET RANGE IS 1.75%.
SHADED AREAS INDICATE U.S. RECESSIONS
SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM (US)

Many engineering and construction (E&C) firms are asking how long and how deep will the recession be, and which sectors and geographies will grow or shrink in that time. "Of the 19 construction sectors we track, eight of them grew throughout the Great Recession," said Scott Winstead, president of FMI Consulting. "There is always opportunity for well-positioned firms that choose where they want to play and how they want to play wisely and proactively. That said, the time to diversify markets and/or sectors is when it is not apparent that you need to diversify. As markets and sectors shift, firms in underperforming markets will look to greener pastures."

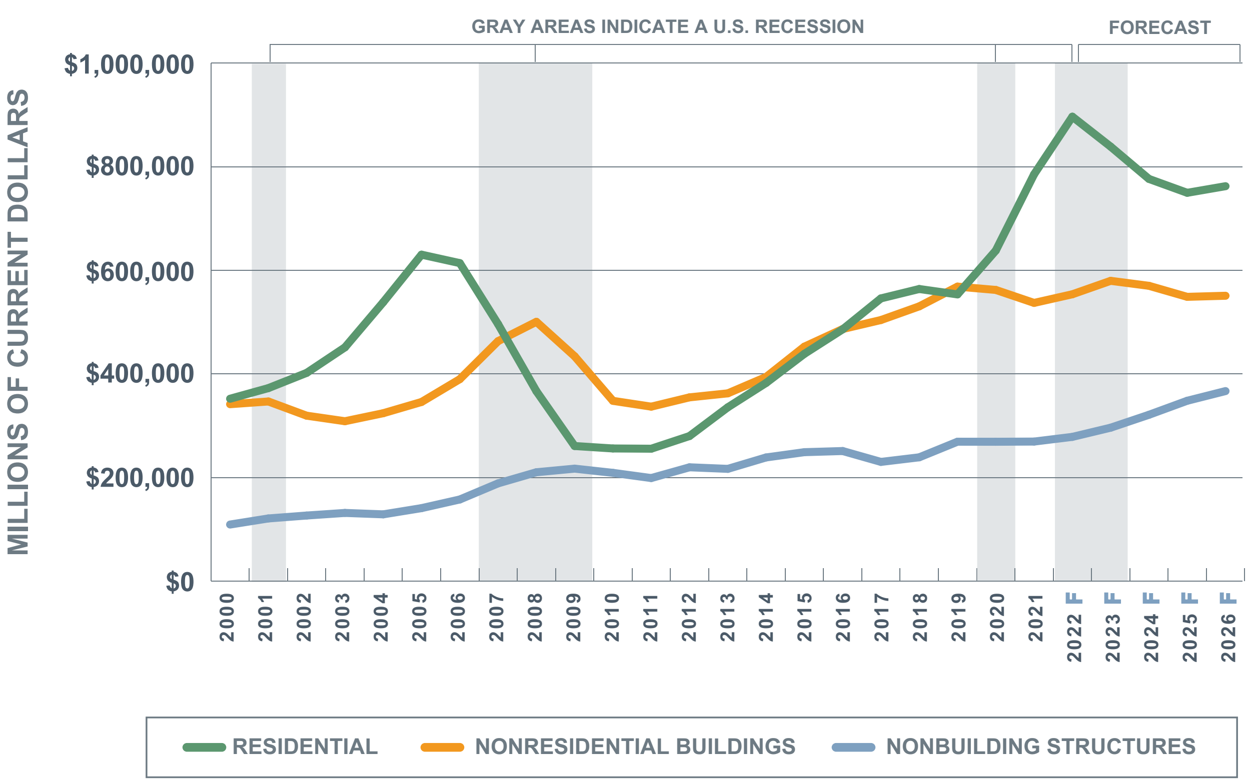
The Road Ahead: Three Possible Scenarios

Given the current conditions, we have developed three potential scenarios for the economy:

- **Base case:** Monetary tightening reinforces economic contraction with a large hit to the job market and asset prices resulting in 12 to 18 months of recession.
- **Better case:** A somewhat controlled soft landing results in six to 12 months of recession.
- **Worse case:** Economic events as outlined in the base case become severe enough to unify accommodative actions of the Federal Reserve and U.S. government to create stimulative policy and other conditions for prolonged and higher inflation, resulting in two or three years of contraction.

With these example scenarios in mind, firms can better strategize for different economic outcomes, understanding that knowledge of their own sectors and geographies will be key to acting.

Exhibit 5: Total Construction Put in Place Estimated for the U.S.



SOURCE: FMI FORECAST Q3 2022

Three Scenarios for Recession in the U.S.

Base case: A balanced correction lasting 12 to 18 months

Under our base case, which we give a 60% probability and which serves as the foundation of our third quarter Outlook and construction spending forecasts, a recession forms as the result of the Fed's actions compounding against naturally falling demand as well as ongoing issues with supply chains. The recession lasts 12 to 18 months.

The Fed continues to increase rates slightly above expectations, implementing another anticipated 75 basis point-raise in July to combat inflation. Tightening of monetary policy is tempered thereafter. While in recession, the Fed funds rate is lowered between 1% and 2%, and the Fed's balance sheet is reduced less than $500 billion before the end of 2022.

This scenario sees the federal deficit expand within the range of $2.3 trillion to $2.5 trillion, with Infrastructure Investment and Jobs Act (IIJA) funds beginning distribution during the second half of the year. Inflation plateaus around this time as rate increases take hold and consumer demand cools. Further, oil prices stabilize amid softer international demand (i.e., China). A strong U.S. dollar and somewhat lasting consumer demand will fuel an expansion of the trade deficit, while unemployment rises. A wave of layoffs occurs across multiple sectors, which moderates inflationary wage pressures. Also, home prices moderate and in some cases decline amid rate increases, a slowing economy and an uptick in subprime credit defaults.

As projected by the Fed, inflation will peak and slow through 2022 and 2023 toward a five-year average between 2.5% and 3.5%. Short-term losses in the stock and bond markets are buoyed by early 2023 as the Fed slows tightening. Though not without pain, the recession ultimately and successfully relieves inflationary pressures.

Outside the U.S., China attempts an unsuccessful economic rescue through infrastructure spending; high wheat prices prompt famine and social unrest in vulnerable parts of the world; and the Ukraine-Russia war becomes a drawn-out conflict with no clear resolution.

Better case: A balanced correction lasting six to 12 months

Assuming a better case, the Fed's strategic plan is a success and leads to balance across the U.S. economy, which becomes well positioned for another long-running expansion cycle. A recession is unavoidable in the short term while global and other external economic forces take a toll on the economy.

A balanced correction would see the Fed funds rate stabilize between 2.5% and 3.0% by the first half of 2023 and remain in the 2.0% to 2.5% range through 2026 while the Fed trims its balance sheet.

Inflation peaks in the second half of 2022 and then slows to below the five-year average toward the end of the year and into 2023, aided by a drop in oil prices. This allows real wages, savings and disposable incomes to rise. The U.S. dollar levels off in time to allow exports to remain healthy relative to imports, and bond markets stabilize in the latter half of 2022 or early 2023, settling into a milder pattern of growth.

Funds from the IIJA come online as planned, though political gridlock limits further fiscal support. The budget deficit is reduced to around $1 trillion by 2023 from more than $2 trillion in the years preceding. Global macro events aid in the correction, with the pandemic downgraded to endemic, and China's economy reopening. We give this scenario a 15% probability.

Worse case: Severe overcorrection lasting two to three years

Under our worse case scenario, the Fed's efforts to constrain inflation trigger a damaging response from markets and policymakers, resulting in a prolonged recession that lasts two to three years. Asset prices collapse, and widespread debt service problems, alongside significant liquidity losses, arise. The Fed and U.S. government ultimately surrender to poor economic conditions with an abrupt return to accommodative monetary and fiscal policies, returning inflation to mid-2022 levels (or worse) by 2025.

Like our base case, the Fed continues to tighten aggressively in July, then tempers rate increases to 25 basis points by the fall. The recession proves severe, prompting the Fed to do an about-face before the second half of 2023, returning to zero interest rate policy and engaging in another round of quantitative easing to revive the economy.

This pushes the Fed's balance sheet from $9 trillion currently to between $13 trillion and $15 trillion, and the global currency markets consider the Fed's inability to break the hold of inflation, hurting the Fed's credibility and therefore power in future moves.

IIJA funds are just the beginning of spending under this scenario, and political parties align to provide stimulus in the form of debt relief for consumers suffering runaway food, housing and utility costs, as well as incurring more costs from student loan forgiveness. This pushes the deficit to around $3 trillion.

Failure to control inflation proves near catastrophic, with demand shocks causing rapidly falling asset prices and a dangerous bout with deflation in 2023. As the economy shudders, highly accommodative monetary policy reignites inflation starting in 2024. The strong U.S. dollar initially constrains exports, pushing the trade deficit beyond $1 trillion by 2024. Oil prices continue to rise through the first half of 2023 until the recession drives prices sharply lower in the second half of the year and into 2024.

Prolonged recession ultimately drives down inflation, after the global economy limps through economic contraction and drawn-out geopolitical conflicts, with widespread unrest in areas affected by food shortages and price shocks. We give this a 25% probability, noting that initial policy levers do not differ much from our base case. However, the market's response, along with the second wave of unified and accommodative policy thereafter, is much more severe and problematic.

Why This Recession is Different

From COVID-19-related shutdowns to economic sanctions over the Ukraine-Russia war, today's economic conditions stem in part from global macro events. Supply chain disruptions and shortages drove up prices, accelerating inflation, while a strong U.S. dollar, insulated from the worst effects of pandemic shutdowns, is causing ruptures in the global trade and financial systems. Now that U.S. policy is in a tightening cycle, the pressure on economic activity has tipped the country into recession.

This is not good news, but it is preferable to the mix of factors that led to previous recessions. Common triggers involve a collapse in asset prices (e.g., the subprime mortgage crisis of 2008), wage freezes (e.g., the 1973 recession) and deflation following a steep drop in demand (e.g., the Great Depression). With the weight of economic pressure sitting with extrinsic factors like sanctions on Russia and COVID-19-related shutdowns, the U.S. has room to rebalance carefully. In the better case, the U.S. will manage to shorten the duration of the correction.

Additionally, for the construction industry, the recession will hit some sectors more profoundly while others may be insulated by full backlogs. For a full sector breakdown, see our third quarter Outlook.

What it Means for E&C and What We're Watching

The downturn will provide a stress test for general contractors and others who have benefited from an extended growth cycle.

"As the market begins to soften, contractors need to take a hard look at how good they really are in certain markets and certain capabilities, and [which owners] do they best match up with as owners become increasingly selective," Daum said.

They can also anticipate how the rebalancing and end of free money supply may affect crucial factors for construction activity. Higher interest rates will impact private development work, like commercial and office construction, because deals will get tougher to pencil, explained Winstead.

The rebalancing period will also have a direct impact on areas such as home prices as the cost of a new build vies with the price of a home. There is considerable and very real risk of deflation hitting the residential market, triggering a spiral of devaluation.

On the nonresidential heavy civil side, the IIJA will fund horizontal infrastructure projects through the forecast period, benefiting the highway and street, transportation, utility infrastructure, power, communications, renewable energy and broadband sectors.

Nonresidential buildings are particularly at risk if there is a stronger downturn as the commercial sector has become accustomed to a prolonged period of zero interest rate policy.

As the Fed attempts to generate a soft landing, putting the brakes on spending may well stem inflation, while our worse case scenario entails an ugly decline into stagflation—uncontrolled inflation and stagnant growth. Markets will be watching the Fed's power to halt inflation amid global uncertainty.

That said, coming off two years of heightened risk due to pricing pressures and materials supply issues, most of the coming risk is already in firms' backlogs or balance sheets.

"Many firms have spent the last five plus years playing catch up with respect to talent development, training and investing in their people, and have learned that if you don't invest in your people through lean times, you're always going to play a deficit position," said Winstead. "The firms that philosophically view the business as an enduring organization regardless of market cycle have outperformed their peers who tend to view their businesses as a collection of projects."

Subsequent papers will dive into the specifics of the recession in specific construction sectors and the impact of global macroeconomic trends on U.S. construction. Understanding your firm's exposure to recession will allow you to plot a course through the downturn into the next cycle.

"The tendency is to think that the growth that they've incurred over the last 10 to 12 years is a reflection of getting better as a firm," said Daum. "In reality, they're just the beneficiaries of an extended growth market."

ABOUT THE AUTHORS

Jay Bowman assists a broad range of stakeholders in the architecture, engineering and construction industry. As the leader of FMI's research and analytics discipline, he develops data-driven, fact-based market intelligence to bring insights that catalyze exceptional company performance and competitive advantage. The research services he oversees include market sizing, forecasting, buying practices, preferences, competitive behaviors and response. Jay can be reached at ***jay.bowman@fmicorp.com.***

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Brian Strawberry leads FMI's efforts in market sizing, forecasting, building products and construction material pricing, and consumption trends. He focuses on primary research methods, including the implementation and analysis of surveys and interviews. Brian also leads and manages various external market research engagements, and constructs tools and models for efficiently performing high-quality analyses. Brian can be reached at ***brian.strawberry@fmicorp.com.***

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