

# U.S. Economic Comment

- FOMC preview: higher rates in March; looking for guidance thereafter
- Recession risks: US likely to weather the storm

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## FOMC: What's Next?

It is difficult to imagine the Federal Open Market Committee not raising short-term interest rates at its meeting on March 16. Fed Chair Jerome Powell provided an unusually strong signal at his Congressional testimony on March 2 that he was inclined to hike interest rates. In addition, two key economic reports since then support the case for tighter monetary policy (a robust employment report and another elevated reading on consumer prices). The change in the federal funds rate is almost certain to be 25 basis points, as Chair Powell also indicated that the Fed would be moving cautiously because of uncertainty generated by the conflict between Russia and Ukraine.

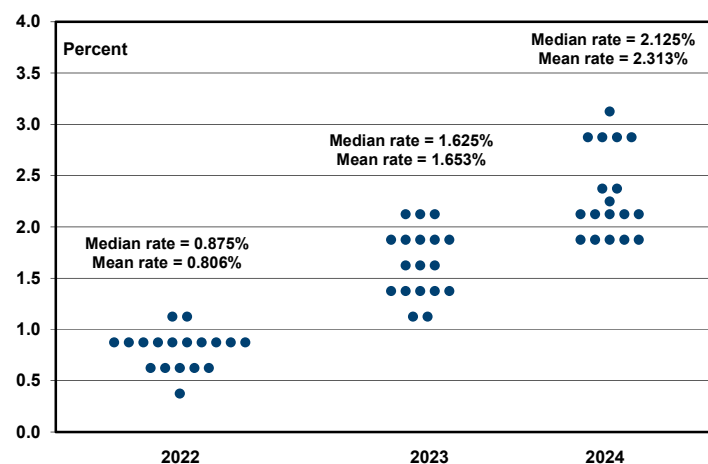
Although there is little mystery about the immediate decision of the FOMC, the upcoming meeting could be the most interesting one in years, as policymakers will need to form a plan that will tame inflation without worsening downside risks on economic growth. Mr. Powell offered little guidance in his Congressional Testimony, but Fed officials will provide a new set of forecasts at this meeting, and the Summary of Economic Projections (SEP) will offer clues.

The dot plot will be especially revealing. Given recent developments on the inflation front, we expect the median dot to take at least one step higher, signaling a shift of 100 basis points for the year rather than 75 that was implied in the December plot (chart). We would not be surprised at the median dot signaling a change of 125 basis points.

We also will be interested in dots other than the median. If those in the lower end of the range were to make a distinct shift upward, that would signal little resistance to Fed tightening and a hawkish bias on the Committee. It would lead one to have confidence that the FOMC will follow through with the shifts implied by the median dot. We will also take note of the dots in the upper end of the range, as they will indicate how far some officials will be willing to move – will someone show a federal funds rate of 1.875 percent, which could be achieved with increases of 25 basis points at each of the remaining seven meetings this year?

The inflation figures in the SEP will be interesting. Mr. Powell abandoned late last year the view that inflation pressure was transitory, but nevertheless, officials still had a favorable outlook in December, as the median projection at that time called for headline inflation of 2.6 percent this year and core inflation of 2.7 percent. Given that

## FOMC Rate View: Year-End 2022, 2023 & 2024\*



\* Each dot represents the expected federal funds rate of a Fed official at the ends of 2022, 2023, and 2024. Normally, this graph would contain 19 projections (seven governors of the Federal Reserve Board and 12 reserve bank presidents), but one governorship was open at the December 2021 meeting.

Source: Federal Open Market Committee, Summary of Economic Projections, December 2021

the price index for personal consumption expenditures rose at a 7.1 percent annual rate in January, inflation over the balance of the year would need to total 2.2 percent (annual rate) to achieve the December expectation, a tall order given that recent movement in the price of crude oil suggests additional hefty increases in gasoline prices in the months ahead.

The forecast for GDP growth in the SEP will offer clues on how the FOMC might proceed. The projection for 2022 made in December was reasonable at 4.0 percent. If something close to that view is maintained in the upcoming projection, officials would not seem to be deeply concerned about downside risks, and thus they would probably proceed with aggressive tightening. Noticeably slower growth, in contrast, would lead the Fed to hesitate in raising rates.

## Recession Risks

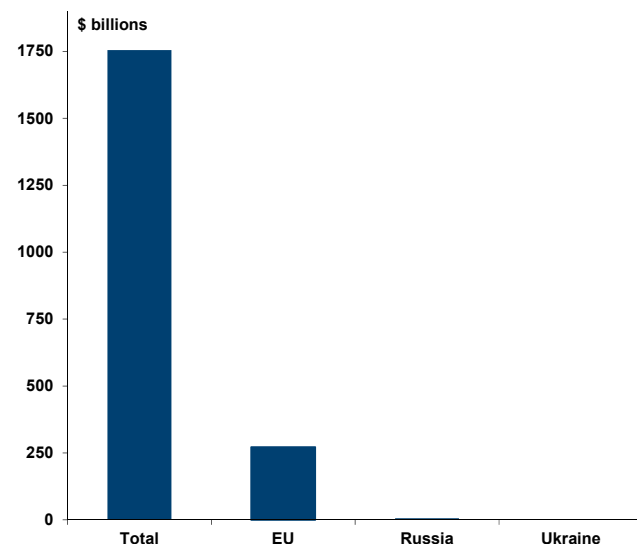
Fed officials no doubt will be giving careful consideration to the growth forecast because of the downside risk that has emerged with the conflict between Russia and Ukraine. We see two avenues for slower growth in the US because of this war: disruptions to international trade, and reductions in spending because of budgets constrained by high energy prices. We have not revised our forecast at this time (approximately three percent, Q4-over-Q4) because the environment is unsettled and uncertainty is unusually high, but we believe that the expansion will remain on track.

Disruptions to trade do not seem to represent a serious challenge, as the volume of direct trade with Russia and Ukraine is small: only 0.4 percent of US exports last year went to Russia and less than 0.1 percent went to Ukraine (chart; the volumes are so small that they barely register on the chart). Similarly, only a small amount of US imports came from these countries (1.0 percent and less than 0.1 percent, respectively; a chart on import volumes looks almost the same as the export chart). Most of the imports from Russia involved energy products, which can presumably be replaced by domestic production. Given the limited amount of trade with Russia and Ukraine, interruptions of direct trade are not likely to have a perceptible effect on the US economy.

While the direct effect of the conflict on trade will be inconsequential, there could be noticeable indirect effects. Most important, European economies have much closer ties to Russia than the US does, and these economies could slow noticeably, which would have feedback effects on the US. Last year, more than 15 percent of US exports went to countries in the European Union, and more than 17 percent of our imports came from this region. Weakness in Europe could unfold both because of a loss of an export market and because of shortages of key raw materials. Europe, of course, is dependent on Russia for much of its energy needs, but Russia also exports a notable amount of industrial metals. Both Russia and Ukraine export large amounts of wheat and other grains.

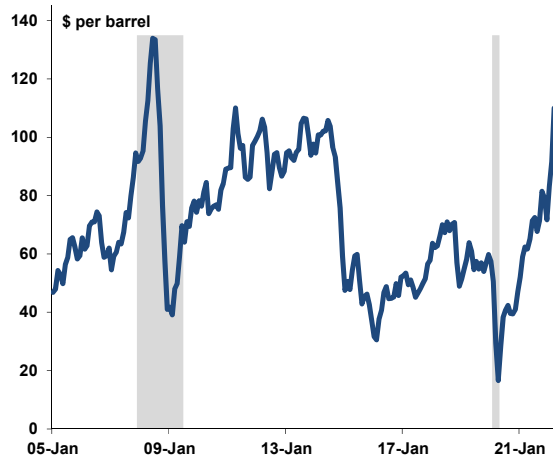
For the United States, the most immediate risk of recession is from the constraining influence of higher energy prices. The run-up in the prices of crude oil and gasoline in recent weeks has been striking, but at the same time, several factors lead us to expect the US economy to absorb the surge without tipping into recession.

### U.S. Exports of Goods\*



\* Annual totals for 2021, not seasonally adjusted.  
Source: U.S. Census Bureau via Haver Analytics

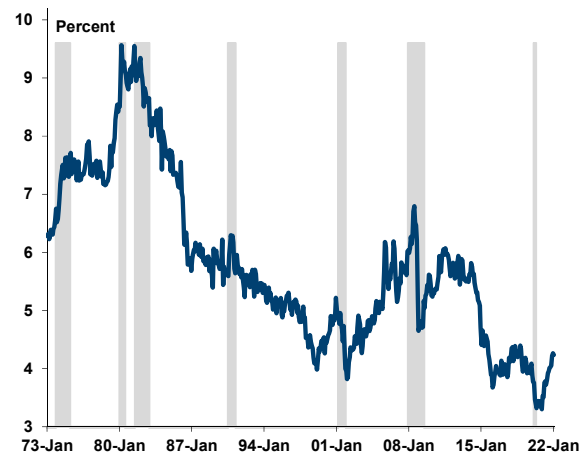
### The Price of Crude Oil\*



\* West Texas Intermediate. Monthly average data. The last observation is a quote for March 11, 2022. The shaded areas indicate periods of recession in the United States.

Sources: The Chicago Mercantile Exchange and The National Bureau of Economic Research via Haver Analytics; Bloomberg

### Energy Share of Consumer Spending\*



\* Spending on energy goods and services as a share of total personal consumption expenditures. The shaded areas indicate periods of recession in the United States.

Sources: Bureau of Economic Analysis and The National Bureau of Economic Research via Haver Analytics

First, we hesitate to call the recent jump in energy prices a shock. A shock is a novel development that leaves individuals and businesses in uncharted territory. However, we have been here before. The price of crude oil was close to the current level of \$110 per barrel from 2011 through 2014, and the expansion at that time remained on track despite the high cost of fuel (chart, above left). The economy was in recession in 2008-09 when energy prices were a bit higher, which could suggest problems if crude prices continue to climb. However, that earlier downturn was more the result of the housing bust than elevated energy prices.

Examining the role of energy prices in the household budget also would ease concern to a degree. Energy outlays as a share of total consumer spending were in the neighborhood of seven percent when the first oil shock hit in the early 1970s (and that was a true shock, as oil prices, which had been remarkably stable in prior years, rose more than 180 percent from the end of 1972 to the beginning of 1974). Today, energy outlays are about four percent of total consumer spending (chart, above right). The downward trend in the energy share over the past several decades partly reflects the movement toward energy-efficient vehicles and appliances. In addition, energy, being a necessity rather than a luxury good, naturally becomes a smaller share of the budget as standards of living rise.

Some back-of-the-envelope calculations also suggest that the jump in energy prices should not be debilitating. The typical individual drives 12,000 to 15,000 miles per year (let's say 13,500), and the average miles per gallon for vehicles in the 2020 model year (latest available) was 25.4. With gasoline prices now approximately \$1.20 above last year's average, the typical household will be paying an approximately \$650 more for gasoline this year, or approximately \$55 per month. This amount could be trimmed by efforts to limit driving. Of course, this amount covers only driving; home heating bills also will climb.

Many, perhaps most, households can make adjustments and cover these added expenses in their current budgets. Another factor that should be considered in thinking about the ability of individuals to cover added expenses is the robust nature of the aggregate household balance sheet. Households have accumulated a huge pool of saving in the past two years – approximately \$2.5 trillion more than an extrapolated pre-pandemic trend, which can be drawn on to maintain living standards.

We also believe that the domestic economy will remain on track because the US is now a major producer of oil. The United States is currently extracting approximately 11 million barrels of oil per day, up from approximately five million before the fracking industry took off, and this sector has the potential to boost

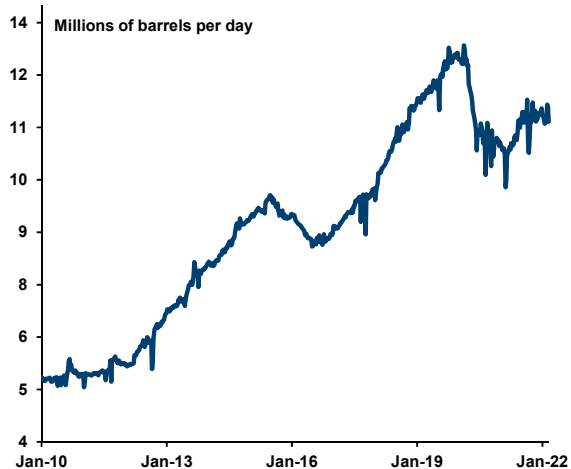
production to 12-13 million barrels per day (chart, left). Elevated energy prices will boost this sector, providing a source of growth that can at least partly offset areas that might weaken because of high energy costs.

A similar point can be made by focusing on the trade sector. The US in years past ran a sizable trade deficit in petroleum products, which meant that higher energy prices led to a transfer of financial wellbeing and purchasing power from the US to a foreign country. Today, the deficit is modest and could be easily balanced if frackers were to boost production (chart, right). Unlike past bursts in energy prices, the current episode will not result in a meaningful international transfer of purchasing power.

The farm sector in the US also might receive a lift. Wheat prices have surged because of anticipated reductions in exports of grain from Russia and Ukraine. The United States is a major producer of wheat, and domestic farmers will be able to increase acreage and command higher prices – another boon.

We maintain a generally favorable view on the US economy, and we suspect that Fed officials also will have an optimistic tilt. We will see for sure with the latest set of projections from policymakers and from the comments of Chair Powell at his press conference.

### Crude Oil Production\*



Source: U.S. Energy Information Administration via Haver Analytics

### Imports & Exports of Petroleum Products\*



\* Monthly imports and exports of petroleum products and preparations, not seasonally adjusted.

Source: U.S. Census Bureau via Haver Analytics

## Review

| Week of March 7, 2022             | Actual   | Consensus  | Comments   |
|-----------------------------------|--|--|--|
| <b>Trade Balance (January)</b>    | <b>-\$89.7 Billion</b><br><b>(\$7.7 Billion Wider Deficit)</b> | <b>-\$87.3 Billion</b><br><b>(\$6.6 Billion Wider Deficit)</b> | The trade deficit deteriorated in January, with exports falling 1.7% and imports increasing 1.2%. Much of the slippage was concentrated in goods trade, where the deficit widened by \$7.1 billion to \$108.9 billion. The service surplus eased slightly after improving substantially in the prior two months (-\$0.6 billion to \$19.2 billion). The marked widening in the trade deficit in January sets the stage for a sizeable negative contribution to GDP growth in Q1 from net exports.  |
| <b>Job Openings (January)</b>     | <b>11.263 Million</b>  | <b>10.950 Million</b>  | Job openings slipped in January, but the change was modest and occurred from a record of 11.448 million in December. The performance in the past two months added an accent to the surge in job postings over the past year, which pulled openings well above the record of 7.558 million in the prior expansion. The quit rate eased to 2.8% of employment from a record of 3.0% in November/December, but it was above all readings prior to those in the current expansion.   |
| <b>CPI (February)</b>             | <b>0.8% Total,</b><br><b>0.5% Core</b>                         | <b>0.8% Total,</b><br><b>0.5% Core</b>                         | Energy prices surged 3.5% in February, the 14th increase in the past 15 months. Food prices continued their upward march since the spring of last year, with a jump of 1.0%. The core component advanced 0.5% for the third consecutive month. A portion of the increase seemed related to a return to normal activities as the spread of the virus subsided (higher prices for hotel stays, airfares, apparel, admissions to sporting events). Residential rents also were a source of pressure, with rent of primary residence rising 0.6% after an increase of 0.5% in January. Before the pandemic, increases of 0.3% were the norm. The latest advance in the headline CPI pushed the year-over-year change to 7.9%, up from 7.5% in January. The year-over-year advance in the core measure rose four ticks to 6.4%. |
| <b>Federal Budget (February)</b>  | <b>-\$216.6 Billion</b>  | <b>-\$214.0 Billion</b>  | Year-over-year growth in federal revenues was firm in February at 16.7%, although it eased slightly from advances ranging from 19% to 41% per month from August thru January. Federal spending declined 9.4%, reflecting considerable easing in pandemic-related outlays. The deficit for the first five months of FY2022 totaled \$476 billion, down from \$1.05 trillion in the same period in FY2021.   |
| <b>Consumer Sentiment (March)</b> | <b>59.7</b><br><b>(-4.9%)</b>                                  | <b>61.0</b><br><b>(-2.9%)</b>                                  | Surging prices of household essentials (gasoline and groceries), as well as negative headlines about war in the Ukraine, weighed on consumer attitudes in early March, as the University of Michigan sentiment gauge dropped to the lowest level of the current expansion thus far (and seventh reading in the past eight months below the recession low of 71.8 in April 2020). The influence of high gasoline prices was evident in the year-ahead inflation measure, which rose to 5.4% from 4.9%. The March observation was the highest since 1981. The long-term measure was unchanged at 3.0%, an elevated reading from a longer-term perspective.   |

Sources: Bureau of Economic Analysis (Trade Balance); Bureau of Labor Statistics (Job Openings, CPI); U.S. Treasury Department (Federal Budget); University of Michigan Survey Research Center (Consumer Sentiment); Consensus forecasts are from Bloomberg

## Preview

| Week of March 14, 2022                                     | Projected   | Comments  |
|--|---|---|
| <b>PPI<br/>(February)<br/>(Tuesday)</b>                    | <b>0.8% Total,<br/>0.6% Ex. Food &amp; Energy</b> | Available quotes suggest prices of wholesale energy products jumped in February, and food prices should remain on their firm trajectory (average monthly increase of 1.0% in the past 12 months). Continued supply disruptions and firm demand are likely to exert upward pressure on goods prices excluding food and energy (average gain of 0.8% per month in the past 12 months). Recent increases in services prices also have been brisk (0.6% per month in the past 12 months). |
| <b>Retail Sales<br/>(February)<br/>(Wednesday)</b>         | <b>0.4% Total,<br/>0.7% Ex. Autos</b>             | A drop in sales of new motor vehicles could depress the auto component, and some areas could cool after strong results in January (building materials, nonstore), but an easing in Covid and movement toward normal activities could boost results elsewhere. Higher prices also will be a factor in pushing the published figures higher.  |
| <b>Housing Starts<br/>(February)<br/>(Thursday)</b>        | <b>1.720 Million<br/>(+5.0%)</b>                  | A pickup in permit issuance suggest a rebound in single-family housing starts in February after back-to-back declines pushed activity to the low portion of the range from the past year. Multi-family activity cooled only slightly in January after jumping to the highest level of the current expansion. Strong demand for rental units because of elevated home prices could continue to support multi-family construction.  |
| <b>Industrial Production<br/>(February)<br/>(Thursday)</b> | <b>0.4%</b>                                       | A jump in manufacturing payrolls and a longer factory workweek raise the prospect of a strong contribution from manufacturing production to total IP in February. Increase in employment and the rotary rig count also suggest a boost from mining activity. Temperatures close to historical norms suggests a drop in utility output after a surge of 6.9% in January.   |
| <b>Existing Home sales<br/>(February)<br/>(Friday)</b>     | <b>6.20 Million<br/>(-4.6%)</b>                   | The prospect of higher interest rates in coming months could pull some fence-sitters into the market in February, but a drop in mortgage applications suggests that previous increases in mortgage rates may dent demand after a jump in sales in January. Moreover, sky-high prices and tight inventories may be squeezing some potential buyers out of the market.  |
| <b>Leading Indicators<br/>(February)<br/>(Friday)</b>      | <b>0.3%</b>                                       | The index of leading economic indicators is likely to rebound in February after the surge in Omicron cases weighed on results in January (negative contributions from a shorter factory workweek and an increase in initial claims likely reflected virus-related absenteeism). Positive contributions from the slope of the yield curve, ISM new orders, the manufacturing workweek, and unemployment claims point to the 20th advance in the past 22 months.                        |

Source: Forecasts provided by Daiwa Capital Markets America

## Economic Indicators

| March/April 2022  |   |   |   |  |
|---|---|---|---|--|
| Monday  | Tuesday   | Wednesday   | Thursday  | Friday   |
| 7   | 8   | 9   | 10  | 11   |
| <b>CONSUMER CREDIT</b><br>Nov \$39.3 billion<br>Dec \$22.4 billion<br>Jan \$6.8 billion | <b>NFIB SMALL BUSINESS OPTIMISM INDEX</b><br>Dec 98.9<br>Jan 97.1<br>Feb 95.7<br><br><b>TRADE BALANCE</b><br>Nov -\$80.1 billion<br>Dec -\$82.0 billion<br>Jan -\$89.7 billion<br><br><b>WHOLESALE TRADE</b><br>Inventories Sales<br>Nov 1.7% 1.7%<br>Dec 2.6% 0.8%<br>Jan 0.8% 4.0%                                    | <b>JOLTS DATA</b><br>Openings (000) Quit Rate<br>Nov 10,992 3.0%<br>Dec 11,448 3.0%<br>Jan 11,263 2.8%  | <b>UNEMPLOYMENT CLAIMS</b><br>Initial Continuing (Millions)<br>Feb 12 0.249 1.474<br>Feb 19 0.233 1.469<br>Feb 26 0.216 1.494<br>Mar 05 0.227 N/A<br><br><b>CPI</b><br>Total Core<br>Dec 0.6% 0.6%<br>Jan 0.6% 0.6%<br>Feb 0.8% 0.5%<br><br><b>FEDERAL BUDGET</b><br>FY2022 FY2021<br>Dec -\$21.3B -\$143.6B<br>Jan \$118.7B -\$162.8B<br>Feb -\$216.6B -\$310.9B | <b>CONSUMER SENTIMENT</b><br>Jan 67.2<br>Feb 62.8<br>Mar 59.7  |
| 14  | 15  | 16  | 17  | 18   |
|   | <b>PPI (8:30)</b><br>Ex. Food Final Demand & Energy<br>Dec 0.4% 0.6%<br>Jan 1.0% 0.8%<br><b>Feb 0.8% 0.6%</b><br><br><b>EMPIRE MFG (8:30)</b><br>Jan -0.7<br>Feb 3.1<br>Mar --<br><br><b>TIC DATA (4:00)</b><br>Total Net L-T<br>Nov \$216.8B \$137.9B<br>Dec -\$52.4B \$114.5B<br>Jan -- --<br><br><b>FOMC MEETING</b> | <b>RETAIL SALES (8:30)</b><br>Total Ex. Autos<br>Dec -2.5% -2.8%<br>Jan 3.8% 3.3%<br><b>Feb 0.4% 0.7%</b><br><br><b>IMPORT/EXPORT PRICES (8:30)</b><br>Non-petrol Nonagri.<br>Imports Exports<br>Dec 0.4% -1.9%<br>Jan 1.4% 2.9%<br>Feb -- --<br><br><b>BUSINESS INVENTORIES (10:00)</b><br>Inventories Sales<br>Nov 1.5% 1.1%<br>Dec 2.4% -0.4%<br><b>Jan 1.1% 3.2%</b><br><br><b>NAHB HOUSING INDEX (10:00)</b><br>Jan 83<br>Feb 82<br>Mar --<br><br><b>FOMC DECISION (2:00)</b><br><b>CHAIR POWELL'S PRESS CONFERENCE (2:30)</b> | <b>INITIAL CLAIMS (8:30)</b><br><b>HOUSING STARTS (8:30)</b><br>Dec 1.708 million<br>Jan 1.638 million<br><b>Feb 1.720 million</b><br><br><b>PHILLY FED INDEX (8:30)</b><br>Jan 23.2<br>Feb 16.0<br>Mar --<br><br><b>IP &amp; CAP-U (9:15)</b><br>IP Cap.Util.<br>Dec -0.1% 76.6%<br>Jan 1.4% 77.6%<br><b>Feb 0.4% 77.8%</b>                                      | <b>EXISTING HOME SALES (10:00)</b><br>Dec 6.09 million<br>Jan 6.50 million<br><b>Feb 6.20 million</b><br><br><b>LEADING INDICATORS (10:00)</b><br>Dec 0.7%<br>Jan -0.3%<br><b>Feb 0.3%</b> |
| 21  | 22  | 23  | 24  | 25   |
| <b>CHICAGO FED NATIONAL ACTIVITY INDEX</b>  |   | <b>NEW HOME SALES</b>   | <b>INITIAL CLAIMS</b><br><b>CURRENT ACCOUNT</b><br><b>DURABLE GOODS ORDERS</b>  | <b>PENDING HOME SALES</b><br><b>REVISED CONSUMER SENTIMENT</b>   |
| 28  | 29  | 30  | 31  | 1  |
| <b>U.S. INTERNATIONAL TRADE IN GOODS</b><br><b>ADVANCE INVENTORIES</b>                  | <b>FHFA HOME PRICE INDEX</b><br><b>S&amp;P CORELOGIC CASE-SHILLER HOME PRICE INDEX</b><br><b>CONSUMER CONFIDENCE</b><br><b>JOB OPENINGS &amp; LABOR TURNOVER (JOLTS)</b>  | <b>ADP EMPLOYMENT REPORT</b><br><b>REVISED GDP</b>  | <b>INITIAL CLAIMS</b><br><b>PERSONAL INCOME, CONSUMPTION, PRICE INDEXES</b><br><b>CHICAGO PURCHASING MANAGERS' INDEX</b>  | <b>EMPLOYMENT REPORT</b><br><b>ISM MFG INDEX</b><br><b>CONSTRUCTION SPENDING</b><br><b>VEHICLE SALES</b>   |

Forecasts in Bold.

## Treasury Financing

| March/April 2022   |  |   |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
|--|--|---|--|---|--------|------|---------------|--------|------|---|--|------|-------|--------------|--------|------|--|--|------|-------|-------------|--------|------|-------------|--------|------|---|--|------|-------|--------------|--------|------|--------------|--------|------|-------------|--------|------|--|
| Monday   | Tuesday  | Wednesday   | Thursday   | Friday                                      |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 7  | 8  | 9   | 10   | 11  |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| <b>AUCTION RESULTS:</b><br><table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Cover</th> </tr> </thead> <tbody> <tr> <td>13-week bills</td> <td>0.380%</td> <td>2.99</td> </tr> <tr> <td>26-week bills</td> <td>0.710%</td> <td>3.21</td> </tr> </tbody> </table> |  | Rate  | Cover  | 13-week bills                               | 0.380% | 2.99 | 26-week bills | 0.710% | 3.21 | <b>AUCTION RESULTS:</b><br><table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Cover</th> </tr> </thead> <tbody> <tr> <td>3-year notes</td> <td>1.775%</td> <td>2.39</td> </tr> </tbody> </table> <b>ANNOUNCE:</b><br>\$45 billion 4-week bills for auction on March 10<br>\$35 billion 8-week bills for auction on March 10<br>\$35 billion 17-week CMBs for auction on March 9<br><b>SETTLE:</b><br>\$45 billion 4-week bills<br>\$35 billion 8-week bills<br>\$35 billion 17-week CMBs |  | Rate | Cover | 3-year notes | 1.775% | 2.39 | <b>AUCTION RESULTS:</b><br><table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Cover</th> </tr> </thead> <tbody> <tr> <td>10-yr notes</td> <td>1.920%</td> <td>2.47</td> </tr> <tr> <td>17-week CMB</td> <td>0.550%</td> <td>3.45</td> </tr> </tbody> </table> |  | Rate | Cover | 10-yr notes | 1.920% | 2.47 | 17-week CMB | 0.550% | 3.45 | <b>AUCTION RESULTS:</b><br><table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Cover</th> </tr> </thead> <tbody> <tr> <td>4-week bills</td> <td>0.195%</td> <td>3.03</td> </tr> <tr> <td>8-week bills</td> <td>0.265%</td> <td>3.15</td> </tr> <tr> <td>30-yr bonds</td> <td>2.375%</td> <td>2.46</td> </tr> </tbody> </table> <b>ANNOUNCE:</b><br>\$111 billion 13-,26-week bills for auction on March 14<br><b>SETTLE:</b><br>\$111 billion 13-,26-week bills |  | Rate | Cover | 4-week bills | 0.195% | 3.03 | 8-week bills | 0.265% | 3.15 | 30-yr bonds | 2.375% | 2.46 |  |
|  | Rate   | Cover   |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 13-week bills  | 0.380%   | 2.99  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 26-week bills  | 0.710%   | 3.21  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
|  | Rate   | Cover   |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 3-year notes   | 1.775%   | 2.39  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
|  | Rate   | Cover   |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 10-yr notes  | 1.920%   | 2.47  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 17-week CMB  | 0.550%   | 3.45  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
|  | Rate   | Cover   |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 4-week bills   | 0.195%   | 3.03  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 8-week bills   | 0.265%   | 3.15  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 30-yr bonds  | 2.375%   | 2.46  |  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 14   | 15   | 16  | 17   | 18  |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| <b>AUCTION:</b><br>\$111 billion 13-,26-week bills   | <b>ANNOUNCE:</b><br>\$45 billion* 4-week bills for auction on March 17<br>\$35 billion* 8-week bills for auction on March 17<br>\$35 billion* 17-week CMBs for auction on March 16<br><b>SETTLE:</b><br>\$45 billion 4-week bills<br>\$35 billion 8-week bills<br>\$35 billion 17-week CMBs<br>\$48 billion 3-year notes<br>\$34 billion 10-year notes<br>\$20 billion 30-year bonds | <b>AUCTION:</b><br>\$35 billion* 17-week CMBs   | <b>AUCTION:</b><br>\$45 billion* 4-week bills<br>\$35 billion* 8-week bills<br><b>ANNOUNCE:</b><br>\$111 billion* 13-,26-week bills for auction on March 21<br>\$34 billion* 52-week bills for auction on March 22<br>\$22 billion* 2-year FRNs for auction on March 23<br>\$16 billion* 20-year bonds for auction on March 23<br>\$14 billion* 10-year TIPS for auction on March 24<br><b>SETTLE:</b><br>\$111 billion 13-,26-week bills        |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 21   | 22   | 23  | 24   | 25  |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| <b>AUCTION:</b><br>\$111 billion* 13-,26-week bills  | <b>AUCTION:</b><br>\$34 billion* 52-week bills<br><b>ANNOUNCE:</b><br>\$45 billion* 4-week bills for auction on March 24<br>\$35 billion* 8-week bills for auction on March 24<br>\$35 billion* 17-week CMBs for auction on March 23<br><b>SETTLE:</b><br>\$45 billion* 4-week bills<br>\$35 billion* 8-week bills<br>\$35 billion* 17-week CMBs                                     | <b>AUCTION:</b><br>\$22 billion* 2-year FRNs<br>\$16 billion* 20-year bonds<br>\$35 billion* 17-week CMBs | <b>AUCTION:</b><br>\$45 billion* 4-week bills<br>\$35 billion* 8-week bills<br>\$14 billion* 10-year TIPS<br><b>ANNOUNCE:</b><br>\$111 billion* 13-,26-week bills for auction on March 28<br>\$50 billion* 2-year notes for auction on March 28<br>\$51 billion* 5-year notes for auction on March 28<br>\$47 billion* 7-year notes for auction on March 29<br><b>SETTLE:</b><br>\$111 billion* 13-,26-week bills<br>\$34 billion* 52-week bills | <b>SETTLE:</b><br>\$22 billion* 2-year FRNs |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| 28   | 29   | 30  | 31   | 1   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |
| <b>AUCTION:</b><br>\$111 billion* 13-,26-week bills<br>\$50 billion* 2-year notes<br>\$51 billion* 5-year notes  | <b>AUCTION:</b><br>\$47 billion* 7-year notes<br><b>ANNOUNCE:</b><br>\$45 billion* 4-week bills for auction on March 31<br>\$35 billion* 8-week bills for auction on March 31<br>\$35 billion* 17-week CMBs for auction on March 30<br><b>SETTLE:</b><br>\$45 billion* 4-week bills<br>\$35 billion* 8-week bills<br>\$35 billion* 17-week CMBs                                      | <b>AUCTION:</b><br>\$35 billion* 17-week CMBs   | <b>AUCTION:</b><br>\$45 billion* 4-week bills<br>\$35 billion* 8-week bills<br><b>ANNOUNCE:</b><br>\$111 billion* 13-,26-week bills for auction on April 4<br><b>SETTLE:</b><br>\$111 billion* 13-,26-week bills<br>\$16 billion* 20-year bonds<br>\$14 billion* 10-year TIPS<br>\$50 billion* 2-year notes<br>\$51 billion* 5-year notes<br>\$47 billion* 7-year notes  |   |        |      |               |        |      |   |  |      |       |              |        |      |  |  |      |       |             |        |      |             |        |      |   |  |      |       |              |        |      |              |        |      |             |        |      |  |

\*Estimate