2022 Q2 Update
Equipment Leasing & Finance
U.S. Economic Outlook

EQUIPMENT LEASING & FINANCE
FOUNDATION
Your Eye on the Future

EQUIPMENT LEASING & FINANCE ECONOMIC OUTLOOK

April 2022

Key Trends to Monitor

Supply Chain Frictions

Russia-Ukraine War

Inflation

EXECUTIVE SUMMARY

Equipment and Software Investment: Despite a slowdown in the fourth quarter, equipment and software investment expanded a robust 13.1% in 2021, the strongest growth in over a decade. Though investment performance was likely solid in Q1, the war in Ukraine and ensuing uncertainty have muddled the outlook for investment in several end-user markets.

Momentum Monitor: Momentum Monitor readings are showing signs of peaking and potential deceleration across several end-user markets. Most Momentum Monitor indices are somewhat weaker than they were 6-9 months ago, signaling slower investment growth in 2022.

Manufacturing Sector: Though manufacturing output held steady in early 2022, high energy prices and surging costs for other key inputs will likely weigh on activity later this year. Many of the supply chain issues that plagued markets in 2021 appear set to return due to the Russia-Ukraine war and China's response to COVID surges in major economic centers.

Small Businesses: Main Street firms are generally holding their own as of early April, and an end to most pandemic-era operating restrictions has improved consumer mobility and boosted demand. However, small businesses continue to contend with staff shortages and supply chain disruptions, which are each contributing to soaring inflation.

Fed Policy: As inflation rages, the Fed adopted a more hawkish posture in Q1. In addition to raising rates by 25bps in March, the Fed is expected to raise rates another 100bps by June and 200bps or more by the end of the year. Whether the Fed can rein in inflation without causing a sharp slowdown or recession is one of the biggest questions facing the economy this year.

U.S. Economy: Though an exceptionally strong labor market and robust housing growth has the U.S. economy on track for solid 2.8% growth in 2022, downside risks are mounting. Russia's invasion of Ukraine and the resulting sanctions, economic turmoil, and supply chain shocks are all likely to contribute to inflation this year. High inflation and the potential for slowing growth have brought the term "stagflation" back into the economic discourse, and such a situation would complicate the Fed's efforts to achieve its desired "soft landing." Relatedly, higher mortgage rates may constrain growth in the housing sector during the second half of the year. All told, the economic outlook is cloudier than it was at the start of the year, though we still expect the equipment and software investment to expand at a moderate pace.

2022 Annual Projections

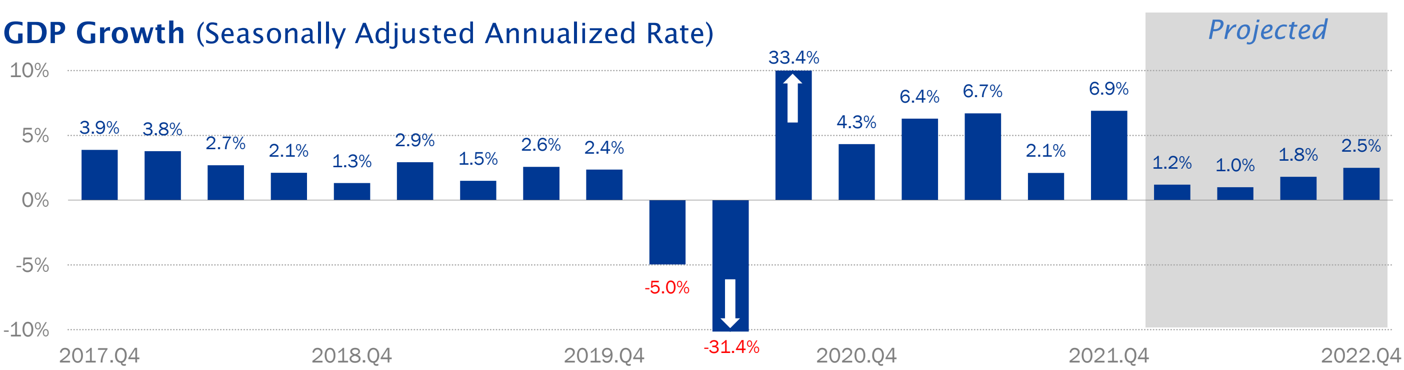
2.8%
GDP Growth

4.2%
E&S Investment Growth

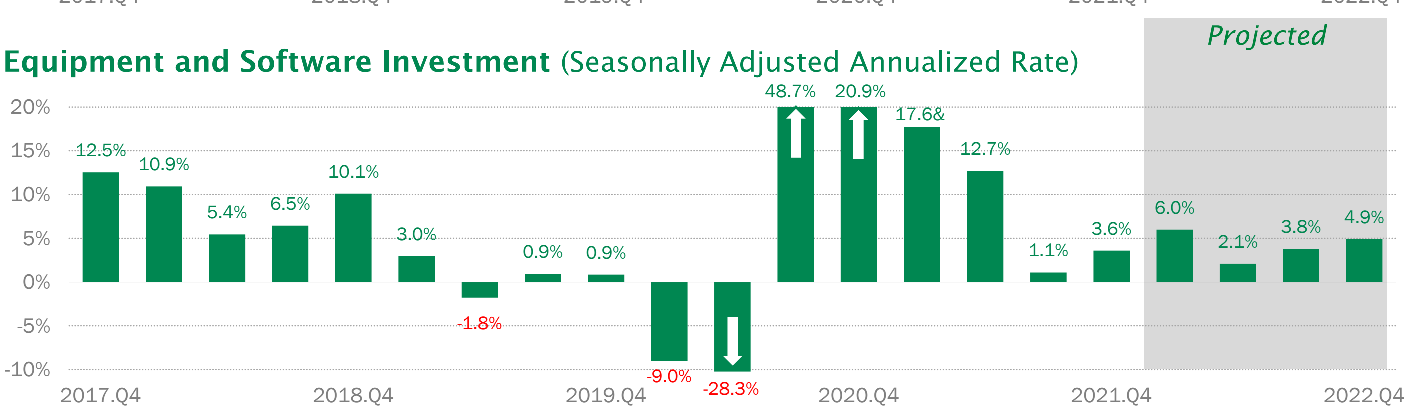
7.4%
Inflation

+250 bp
Change in Fed Funds Rate from Current Range

GDP Growth (Seasonally Adjusted Annualized Rate)



Equipment and Software Investment (Seasonally Adjusted Annualized Rate)



Source: U.S. Bureau of Economic Analysis; Keybridge LLC

MOMENTUM MONITORS

Sectoral Performance

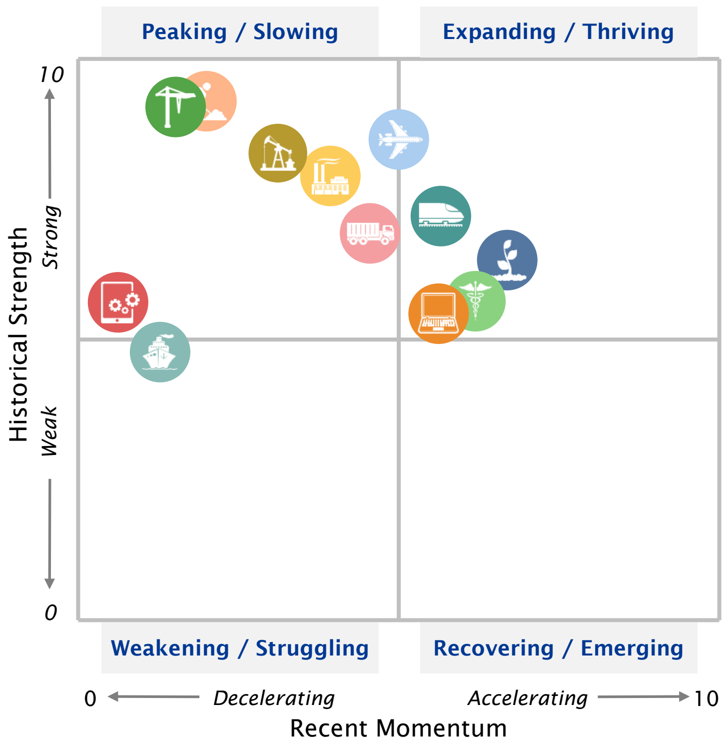
E&S investment rebounds modestly in Q4

Equipment and Software investment increased 3.6% (annualized) in Q4 2021, a decent rebound following tepid growth in Q3.

Of the 12 investment verticals tracked by the Foundation, nine saw investment rise in the fourth quarter while three saw investment weaken. Five verticals experienced double-digit investment growth, including Construction, Other Industrial, Medical, Railroad, and Software.

Looking ahead, seven equipment verticals are in the upper-left quadrant in the Momentum Monitor Sector Matrix (see chart), suggesting that investment growth may peak or begin to slow over the next two quarters. This result is not surprising given the strong rebound in investment following the pandemic, the new headwinds emerging from Russia's invasion of Ukraine, and sustained inflationary pressures. Still, equipment and software investment should continue to expand during the second half of the year for most equipment types, offering abundant opportunities for the equipment finance industry.

Momentum Monitor Sector Matrix



For more information on how to interpret the Momentum Monitor, please refer to the Appendix B (p. 14). A full breakdown of each industry vertical is available at https://www.leasefoundation.org/industry-resources/momentum-monitor/

Movements to Monitor

Equipment Vertical	Q4 Investment Growth Q/Q	Q4 Investment Growth Y/Y	Next 6 Months	Short-Term Outlook
Mining & Oil	+21%	+2.9%	▲	Mining & oilfield machinery investment should benefit from strong demand for domestic production as Russian oil and gas supply is curtailed in the months ahead.
Construction	+14%	+5.8%	▼	Construction machinery investment growth is expected to slow relative to last year's robust expansion as expectations of higher interest rates and their effects on mortgage rates. Growth should remain positive, however.
Software	+5.5%	+14%	▼	Software investment growth appears to have peaked a year ago, and the combination of slowing economic growth and higher inflation are likely to weigh on investment growth this year.
Ships & Boats	-27%	9.2%	▼	Ships & boats investment growth fell sharply in Q4, and the combination of global supply chain tensions and ongoing COVID disruptions will likely mean weaker investment growth this year.

Credit Supply

Lending standards loosen in Q4

Business lending standards eased further in Q4 as credit conditions continued to normalize.

- Overall, lending standards for C&I loans were essentially unchanged at most banks. For loans to large and middle-market firms, a net 14% of banks reported easing lending standards, while a net 9% of banks reported easing standards for loans to smaller firms. Only one bank reported tightening standards for C&I loans.
- Lending standards also eased for commercial real estate ("CRE") loans. A net 10% of banks reported loosening standards for construction and land development loans in Q4, roughly unchanged from Q3.

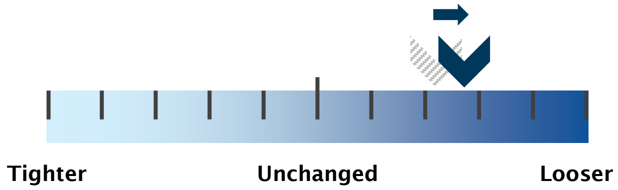
For consumers, credit conditions also eased again in Q4.

- A net 17% reported easing standards on credit cards, while a net 15% of banks reported easing standards on auto loans.
- Meanwhile, standards eased or were unchanged for all categories of residential real estate (RRE) loans except subprime loans, which tightened on net.

Net Change in Credit Supply Conditions

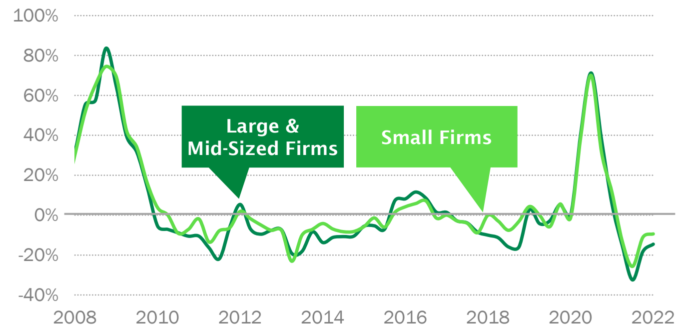
Fed Senior Loan Officer Survey

Banks report looser credit standards in Q4



Tightening Standards on C&I Loans

Percent of Respondents

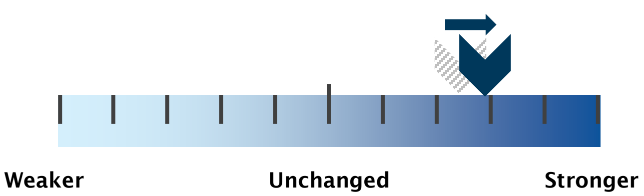


Source: Federal Reserve Senior Loan Officer Survey

Net Change in Credit Demand Conditions

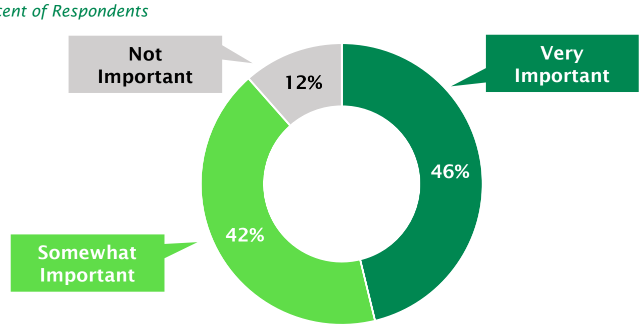
Fed Senior Loan Officer Survey

Demand for credit expands in Q4



"Customer Merger or Acquisition Financing Needs" Driving Stronger Demand for C&I Loans

Percent of Respondents



Source: Federal Reserve Senior Loan Officer Survey

Credit Demand

Business demand increases in Q4

Demand for business loans strengthened in Q4 overall.

- On net, 22% of banks reported stronger C&I loan demand among medium and large firms in Q4, while a net 9% of banks reported stronger demand from smaller firms. Of those reporting stronger demand, the most frequently-cited reason was "customer merger or acquisition financing needs" (see chart).
- Among CRE loans, a net share of banks reported stronger demand for the third straight quarter, especially for multifamily residential properties.

Among households, credit demand varied by loan type.

- A net 23% of banks reported weaker demand for GSE-eligible RRE loans in Q4, continuing the trend from last quarter. Similarly, a net 7% of banks reported weaker auto loan demand, in part due to significant supply chain issues in the automobile sector.
- In contrast, a net 20% of banks reported stronger demand for credit card loans, suggesting that consumers are becoming more dependent on their credit cards after the expiration of several pandemic-era direct payment programs.

Consumer Finances

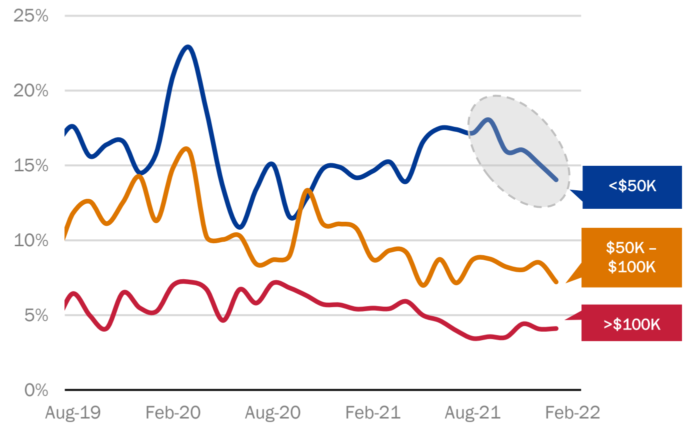
Financial stress remains low despite high inflation

Overall, consumers remain in good financial position thanks to a strong labor market and amassed savings. However, inflation remains a significant concern.

- Decades-high inflation has driven down consumer confidence in recent months. Per the University of Michigan, consumer sentiment fell in February to its lowest level in a decade.
- As real incomes have fallen, spending is slowing. Inflation-adjusted consumer spending fell 0.4% in February.
- However, plentiful jobs and pandemic-era savings have kept most consumers in good shape financially, as evidenced by falling debt delinquency expectations among lower-income households *(see chart)*.

Financial stress may rise in the coming months if inflation remains high, particularly among lower-income consumers who have used up most of the savings accrued over the last two years.

Debt Delinquency Expectations
*Mean Probability (%)**



Source: New York Fed Survey of Consumer Expectations

**Note: Denotes mean probability of not being able to make a minimum debt payment over the next three months.*

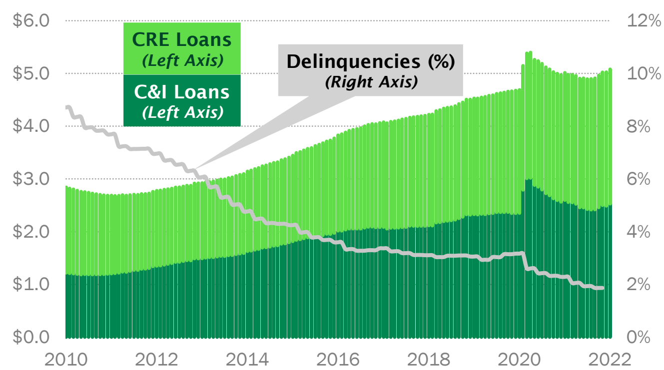
Business Finances

Financial stress continues to decline

Despite rising input costs, labor shortages, and supply chain disruptions (which remain top concerns across industries), business lending activity remains healthy and financial stress continues to fall.

- After swelling to historically high levels in 2020, loan volumes of both C&I and CRE loans have stabilized above pre-pandemic levels and ticked up recently.
- Despite increased loan volumes, however, delinquencies continued to decline in Q4 to the lowest level on record.
- Similarly, the Trepp CMBS Special Servicing Rate fell 25 basis points in February and has generally declined over the last year. Servicing rates improved in four of five major property types, with only the industrial sector showing a modest increase in February.

Business Loan Volume
$ Trillions



Source: Federal Reserve Board

Fed Policy Corner

FOMC raises interest rates by 25 bps

- As anticipated, the FOMC raised the Fed Funds Rate by 25 basis points in March. Projections from the Fed reveal expectations of another 150 – 175 bps of rate increases in 2022 to combat high inflation.
- The Fed also announced it is ending bond purchases in March and could begin shrinking its $9 trillion balance sheet as early as May.
- The central bank raised its forecast for core PCE inflation to 4.1% and pared back its real GDP growth forecast to 2.8% in 2022.

> "[The committee expects] that inflation will peak and begin to come down this year. To the extent that inflation comes in higher or is more persistently high than that, we would be prepared to move more aggressively."
>
> — Jerome Powell, Fed Chairman

> "The implications of the unfolding situation in Ukraine…will also be a consideration in determining the appropriate pace at which to remove accommodation."
>
> — Loretta Mester, President of Cleveland Fed

Main Street Outlook

SMBs contend with labor shortages, supply issues, and high inflation

In general, small businesses are on sound financial footing, and an end to most pandemic-era operating restrictions has improved consumer mobility and boosted demand.

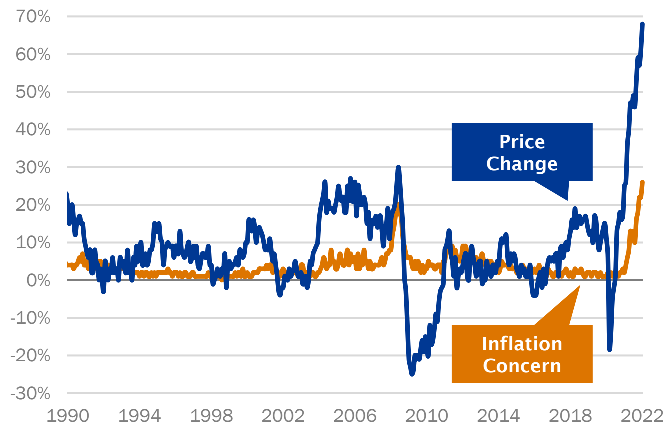
- Per Equifax, small business lending activity held steady in January despite the Omicron surge and high inflation.
- NFIB reports that in March, about two-thirds of small businesses were near or had exceeded pre-pandemic sales levels.
- In mid-March, the share of small businesses reporting a weekly decline in revenues fell to the lowest level since the beginning of the Omicron surge, per the Census Bureau's Small Business Pulse Survey *(see chart below)*.

However, the Main Street recovery continues to be impeded by staffing shortages and supply chain disruptions, which are each contributing to soaring inflation.

- **Labor:** While the labor market has been adding jobs at a rapid pace in recent months, small business owners continue to face hiring difficulties — and are losing business as a result. Indeed, the NFIB reports that 55% of firms have said they faced moderate to significant loss in sales opportunities due to the labor shortage. Notably, there were more than 11 million job openings as of February, far above the 7–7.5 million in late 2019 and roughly twice as many as existed five years ago. To compete for workers, small firms are raising compensation and offering more attractive benefits packages and increased workplace flexibility whenever possible. However, they face stiff competition for talent from larger firms in a historically tight labor market.
- **Supply chains:** Small businesses continue to face the same supply constraints that persisted throughout 2021. These disruptions are showing no signs of abating given Russia's invasion of Ukraine and COVID-related lockdowns in key Chinese industrial cities. Per a March NFIB survey, 45% of small business owners said supply chain problems are worse than they were three months ago, and nearly 90% of businesses expect supply chain issues to continue for at least five months.

Share of Small Firms Reporting Inflation Concern & Price Hikes

Percent, SA



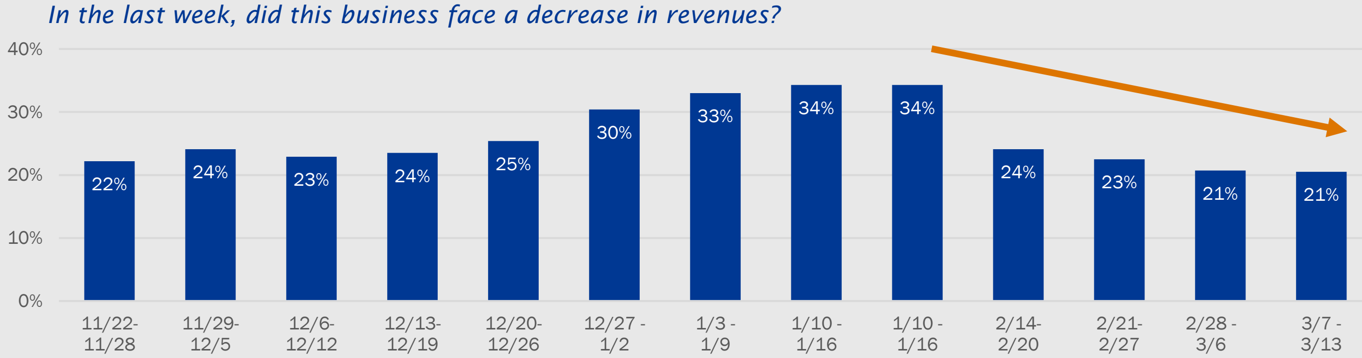
Source: NFIB
Notes: Shows (1) share of SMBs reporting inflation as the most important problem and (2) actual prices changes compared to three months ago.

- **Inflation:** Russia's war with Ukraine carries other economic consequences for small businesses including higher prices for gasoline and other commodities. Altogether, these factors threaten to exacerbate the supply factors that have helped to drive inflation north of 8% Y/Y. Over a quarter of small business owners told NFIB inflation was their single largest problem in operating their business, the highest share in 41 years *(see chart above)*. Meanwhile, a late-February Census Bureau survey found that four of five SMBs reported moderate to large price increases compared to six months ago.

The good news is that Main Street has demonstrated remarkable resilience over the last two years. Still, inflation-related headwinds are clouding the near-term outlook.

Smaller Share of SMBs Experiencing Declining Revenues

In the last week, did this business face a decrease in revenues?



Source: Census Bureau Small Business Pulse Survey

MLFI-25

NBV rises despite supply-side issues

According to ELFA's Monthly Leasing and Finance Index (MLFI-25), new business volume fell to $7.1 billion in February, down 4.1% from February 2021 and down about 1% year-to-date. The 3-month moving average eased by 2.9% in February and is down 1.4% compared to a year ago (see chart). The downward trend reflects geopolitical tensions, ongoing supply chain disruptions, inflation, and rising interest rates.

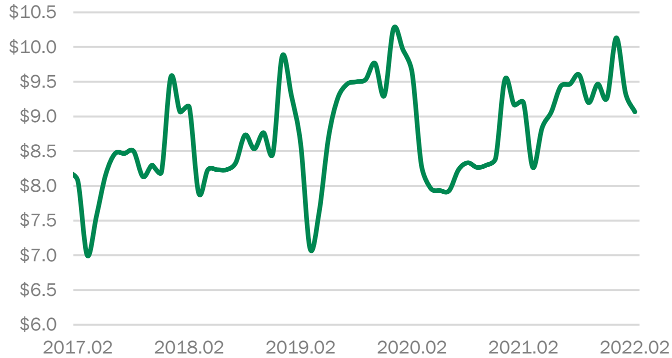
Portfolio performance remained healthy in February. Receivables over 30 days were 1.7 percent, down slightly from 1.8 percent in January and well below the 2.1 percent reading in February 2021. Meanwhile, charge-offs fell to 0.09 percent, down 8bp compared to the previous month and significantly below the 0.55 percent reading from last February. The latest charge-off reading is the lowest recorded since the MLFI-25 began in 2009.

Total credit approvals edged down to 78.2% in February from 78.4% in January but remains near a pandemic-era high.

The total headcount of equipment finance companies was 12% below year-ago levels, though the decline is mostly due to significant downsizing at one MLFI reporting company.

MLFI-25 New Business Volume

Billions, 3-month moving average



Source: ELFA

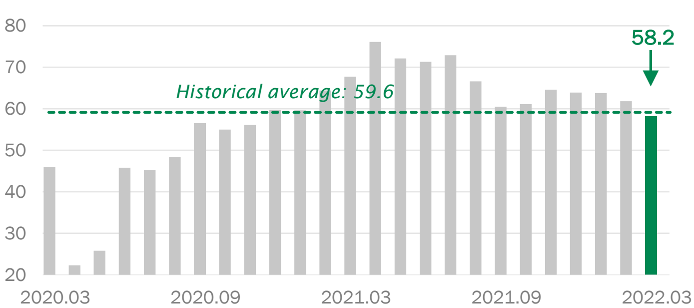
"New business volume...has grown modestly in 2022, as it typically does in the early months. What is eye-catching, however, is the extremely high credit quality reported by respondents. Geopolitical unrest, increasing interest rates, inflation, and continuing supply disruptions all pose headwinds that bear monitoring."

— Ralph Petta, President and CEO, ELFA

MCI-EFI

Industry confidence continues falling amid geopolitical uncertainty

Monthly Confidence Index – Equipment Finance Industry



Source: ELFF

"Through 2021, businesses often used their federal government stimulus money to purchase capital equipment and services. In 2022, these businesses will [increasingly] return to financing their capital equipment purchases."

— James D. Jenks, CEO, Global Finance and Leasing Services, LLC

In March, the Monthly Confidence Index for the Equipment Finance Industry (MCI-EFI) decreased 3.6 points to 58.2, declining for the fourth straight month to the lowest level since November 2020.

- Overall, 21% of respondents expect business conditions to improve over the next four months, down from 24% in February. However, 29% of respondents expect business conditions to worsen, up sharply from 7% in February.
- Hiring expectations were little changed in March: 46% of respondents expect to hire more employees over the next four months (up from 45% in February), while 4% of respondents expect to hire fewer employees over the next four months (up from 0% in February).
- Near-term expectations for access to capital used to acquire equipment improved. 21% expected capital access to increase over the next four months, while 79% expected the same level of capital access. No respondent expected capital access to decrease.

Manufacturing Focus

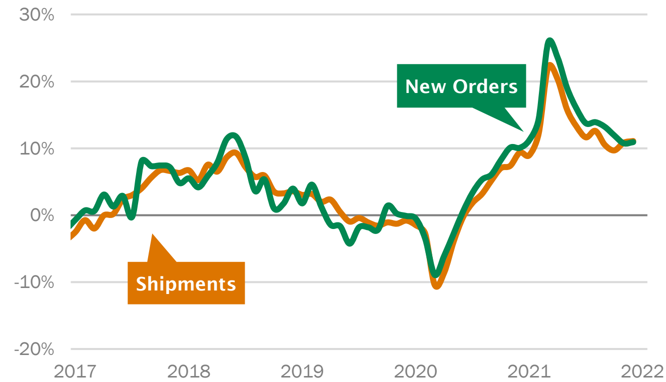
New orders and shipments remain strong

Though both new orders and shipments of core capital goods remain elevated compared to year ago levels (see chart), in February new orders of capital goods decreased for the first time in a year.

- New orders for nondefense, non-aircraft capital goods (a leading indicator of industry performance) eased 0.3% in February but were up 11% compared to last year.
- Shipments of nondefense capital goods excluding aircraft (a concurrent indicator of industry performance) increased 0.5% in February and are up 13% Y/Y, despite continuing supply chain constraints.

While business investment decelerated towards the end of 2021, it is expected to stay in healthy this year, especially if geopolitical tensions lead companies to reshore elements of their supply chain, which may boost domestic investment.

Shipments vs. New Orders of Core Capital Goods
Year-on-year percent change



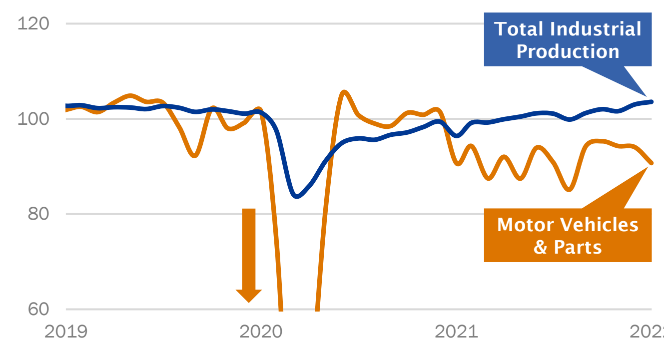
Source: Census Bureau

Industrial production grows in February

Industrial Production rose 0.5 point to 103.6 in February, its strongest reading since 2018.

- Business equipment, business supplies, and materials production improved in February, while production of consumer goods slipped.
- Industrial production for durable goods also improved in February, though production of motor vehicles and parts declined for the third consecutive month *(see chart).*
- Industrial production of business equipment increased by 1.9pp, as transit, information processing, and industrial equipment all rose. Similarly, machinery production grew 0.8% in February and is above pre-pandemic levels.

IP: Total Production vs. Motor Vehicles & Parts
2017 = 100 (SA)



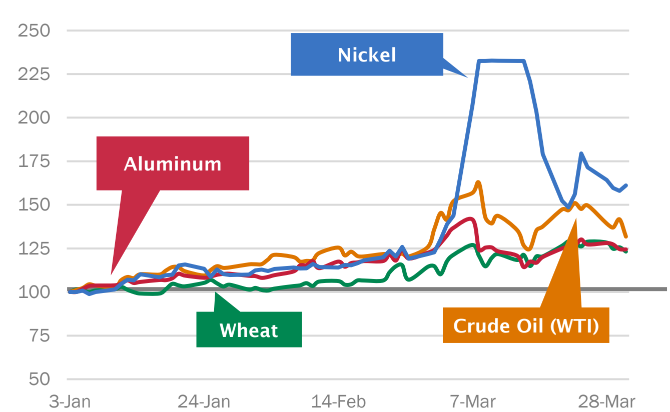
Source: Federal Reserve Board of Governors, G17 report

War in Ukraine triggers commodity price volatility

Russia's invasion of Ukraine and the unprecedented sanctions enacted by Western governments in response has led to wild swings in oil, metal, and crop prices, reflecting both countries' importance in global commodities markets.

- Prices of commodities like wheat, crude oil, aluminum and (especially) nickel have surged since January.
- Increased price volatility, along with other uncertainties stemming from Russia's invasion, threaten the U.S. manufacturing sector by exacerbating inflationary pressures and disrupting already-fragile supply chains.
- At the same time, these supply-related difficulties may redirect focus and investment on domestic extraction and production of oil, grain, and other commodities, potentially benefiting U.S. producers.

Trends in Commodities Prices
Indexed to Jan 3, 2022



Sources: Macrobond Financial

State of the U.S. Economy

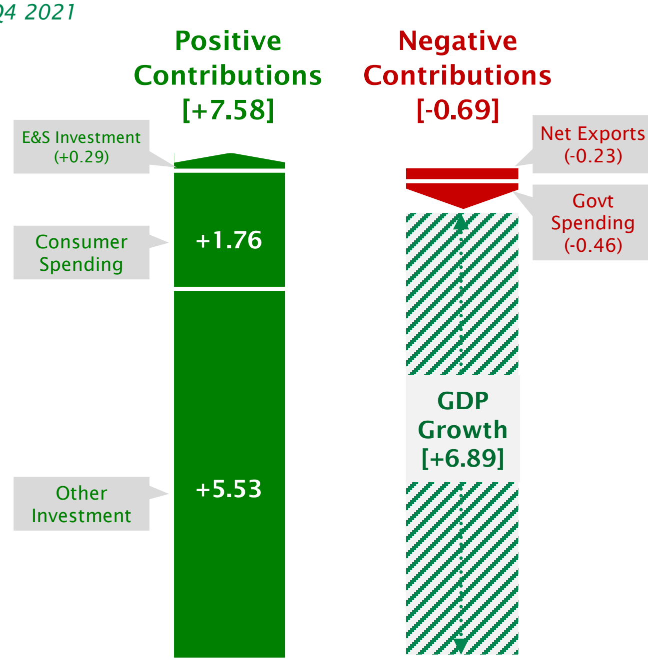
Economy expands at robust 6.9% clip in Q4

The U.S. economy picked up speed in the fourth quarter. Much of the growth during this period — which corresponded to the lull between the Delta and Omicron variant surges — was due to businesses replenishing inventories that had been drawn down earlier in the year. All told, the economy expanded 5.7% in 2021.

- **Consumer spending**, the economy's largest component, rose 2.5% (annualized) in Q4. Spending on goods grew modestly after contracting in Q3, while spending growth for services slowed notably.
- **Equipment and software (E&S) investment**, a subset of overall business investment and the lifeblood of the equipment finance industry, expanded 3.6% following tepid 1.1% growth in Q3.
- **Net exports** made a small negative contribution to growth in Q4.
- **Government spending** fell 2.6% (annualized) as many pandemic-era support measures expired.
- **Other investment** surged in Q4 due to a sharp increase in private inventories. Nonresidential structures investment and residential investment also increased, though at a modest pace.

Contributions to GDP Growth

Q4 2021



Source: Bureau of Economic Analysis (BEA)

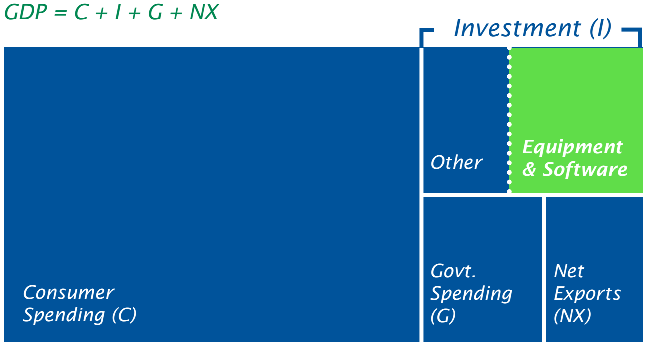
Historic Geopolitical Tension and Uncertainty in 2022

After picking up steam at the end of 2021, several measures of economic activity cooled again in the first quarter as the Omicron variant surged and inflation continued to climb. Though the U.S. public health situation is much improved and the labor market is historically strong, inflation continues to worsen and Russia's invasion of Ukraine has injected more uncertainty into the 2022 economic outlook. Companies wrote off billions of dollars in assets, revenue streams, and investments as they withdrew from the Russian market, and the effects of harsh sanctions are still rippling through global energy and financial markets.

The good news is that the pandemic is unlikely to be a major economic headwind this year (though this could change if new variants emerge), jobs are plentiful, and the housing market is strong. However, other risk factors have led many economists to pare back growth expectations. The elephant in the room is inflation, which is running around 8% Y/Y in the United States and appears likely to worsen before it improves. Supply chains for key commodities and inputs remain under stress, and widespread COVID-related lockdowns in China threaten to worsen the situation. Further, as recent geopolitical events harken back to the Cold War era, the term "stagflation" has reentered the economic discourse. The Fed will have its work cut out in its efforts to raise rates and control inflation without causing a sharp slowdown or recession.

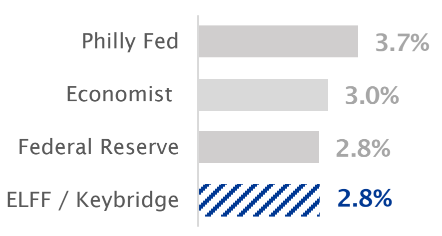
Composition of Gross Domestic Product (GDP)

GDP = C + I + G + NX



Source: Keybridge LLC, based on BEA data

2022 Growth Forecasts



Robust Labor Market

Labor Market Remains Strong as Employers Raise Compensation to Compete for Workers

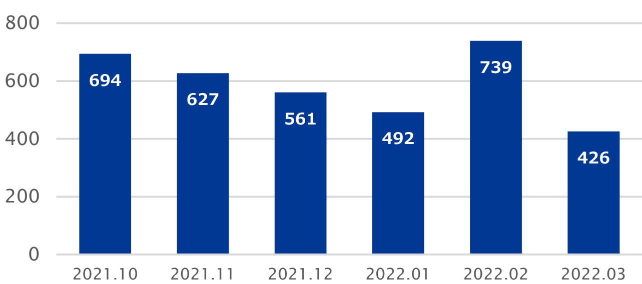
A strong labor market is supporting consumers, even as inflation, dwindling savings, and rising geopolitical uncertainty weigh on sentiment. For example, private nonfarm payrolls have grown by an average of 590,000 per month over the last six months (see chart below), which has driven the unemployment rate down to 3.8%, only slightly above the pre-pandemic rate.

Indeed, consumers are exceedingly confident about their employment status. According to the NY Fed's Survey of Consumer Expectations, the mean expected probability of losing one's job in the next 12 months is just 10.8%, the lowest level since recordkeeping began in 2013. Lower-income households have experienced the strongest improvement in this measure, reflecting the strong wage growth that has occurred in several sectors (e.g., retail & hospitality, accommodations & food services) as employers compete with one another to attract workers. Average hourly earnings for production and nonsupervisory workers (who make up roughly 80% of payrolls) have grown at a 6–7% annualized rate for several months, and while inflation has eroded some of these gains, real (i.e., inflation-adjusted) wages are still above pre-pandemic levels.

Looking ahead, hiring is expected to remain healthy. As of February, there were 11.3 million job openings in the U.S., just shy of the all-time high reached in December 2021. Per NFIB, a net 47% of small businesses reported having positions that they were unable to fill in February, far above any pre-pandemic reading (see chart below). All told, the labor market should remain a bright spot in 2022 and provide consumers with a solid foundation to navigate a time of heightened economic uncertainty.

Private Nonfarm Payroll Growth

M/M Change, thousands (SA)



Source: BLS

Small Businesses Unable to Fill Open Positions

Net Share (SA)

Source: NFIB

Housing Market Still Healthy

Sustained Demand and Low Inventories Likely to Propel Housing Activity

The housing market is expected to remain healthy this year due to a combination of strong demand and limited inventories, although sales activity may slow later in the year if mortgage rates continue to rise, as expected.

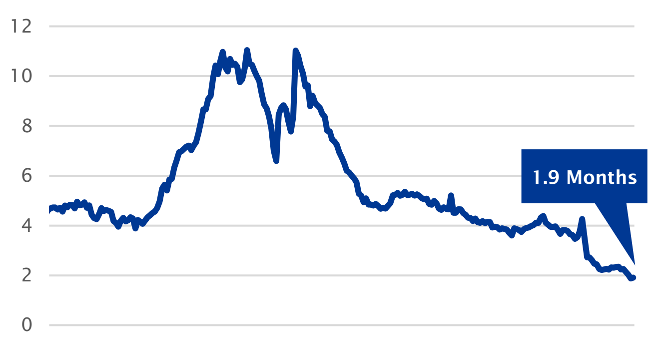
Key drivers of housing market growth include:

- Millennials are entering prime homebuying age, and with many service-sector employers embracing remote or hybrid work arrangements, Gen X and younger Baby Boomers are in the market for larger homes that can double as home offices.
- Investors are helping to fuel intense competition for homes. Per the National Association of Realtors, the current inventory of homes for sale is enough for just 1.9 months of demand (see chart).
- Historically low inventories of homes are mismatched with high demand, a combination that will likely sustain homebuilding activity into 2023.

Affordability remains a factor to monitor, particularly given the recent, rapid rise in mortgage rates. Still, strong demand should keep the housing market on track this year.

Inventory of Existing Homes for Sale

Months Supply at Current Sales Pace, Seasonally Adjusted



Source: NAR

Inflation Shows No Signs of Easing

Price pressures worsen following Russian invasion

CPI inflation rose to 7.9% in February, rising for the 10th time in 12 months and reaching its highest rate since January 1982. A confluence of factors has caused inflation to surge over the past year.

- Federal relief spending stimulated robust consumer demand for durable goods, such as automobiles, electronics, and furniture.
- Ultra-accommodative monetary policy helped fuel the labor market recovery, leading to rapid wage increases and higher prices to compensate.
- Supply chains have struggled to keep pace due to clogged infrastructure, component shortages, and intermittent port closures.

As supply chain disruptions were beginning to ease, Russia invaded Ukraine, causing widespread destruction and triggering a humanitarian crisis while also injecting a new source of supply chain uncertainty (see chart). Commodities have exhibited dramatic price increases in recent weeks: crude oil exceeded $100 a barrel for the first time since 2014 (see chart), and prices for aluminum, fertilizer, steel, and wheat have also surged as the war disrupts both production and trade. These commodities are key inputs for many goods produced and sold in the United States.

Crude Oil Prices

$/bbl

Source: Bureau of Labor Statistics

Inflationary pressures do not appear to be abating, at least in the short term. Commodity prices are likely to remain elevated, as a return to pre-conflict production and trade activity in the region is expected to many years (if it occurs). The tight labor market will continue to drive wages higher, and while the Fed is expected to tighten monetary policy significantly this year, many economists are skeptical that the Fed can rein in inflation while maintaining healthy growth. We expect the economy will face a stiff headwind of high inflation for the foreseeable future.

Supply Chains Facing New Challenges

Russia's invasion of Ukraine and COVID outbreaks in China prolong disruptions

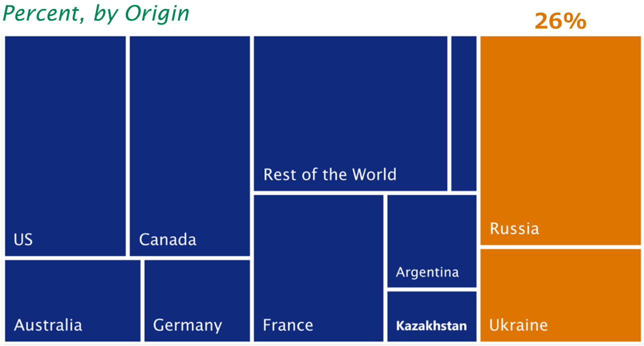
Already strained by the pandemic, global supply chain disruptions are being prolonged and exacerbated by economic sanctions on the Russian economy and COVID-related lockdowns of key Chinese industrial cities. These supply impediments are adding to production delays and inflationary pressures, slowing the global economy.

- Russia's invasion of Ukraine and isolation from global trade is affecting the market for key commodities including energy, metals, and grains *(see chart)*. Russia and Ukraine's absence from supply chains is estimated to impact over 300,000 companies in the U.S. and Europe alone, including agricultural firms, automakers. The added strain to the supply chain crisis could reduce world economic output by $1 trillion and increase global inflation by 3% this year, per the UK's National Institute for Economic Research.
- Supply chains are further roiled by lockdowns of key Chinese cities due to a surge in Omicron cases and China's zero-COVID policy. Widespread shutdowns of manufacturing units and ports in cities like Shenzhen and Dongguan are contributing to congestion and pushing up container freight rates. The Chinese government even went as far as to enact a staggered shutdown of Shanghai in late March.

Supply chain complications from Russia and China in addition to the already present pandemic strain are motivating many companies to rethink trade routes and re-shore operations domestically — a development that Larry Fink of BlackRock (among other business leaders) have claimed marks the beginning of the end of globalization. Regardless of whether such gloomy predictions come to pass in the years ahead, the near-term impact of these events will weigh on growth and push prices higher.

Global Wheat & Meslin Exports in 2020

Percent, by Origin



Source: Food and Agriculture Organization, UN Comtrade.

Return of Stagflation?

The Combination of High Inflation and Slowing Growth is Difficult to Solve

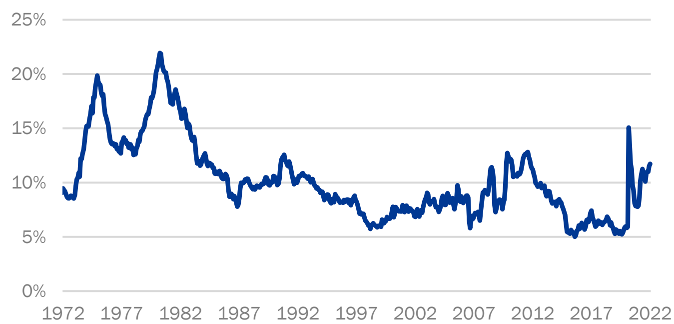
With today's geopolitics reminiscent of the early 1980s, it is worth considering another feature of that era: stagflation, or the combination of slow growth, high unemployment and high inflation. In May 1980, the combined rates of inflation and unemployment, or the so-called "misery index," peaked at 21.9 (14.4% CPI inflation; 7.5% unemployment) and annualized real GDP growth for Q2 1980 was -8.0%. This painful combination epitomizes stagflation. At the time, surging oil prices linked to the Iranian Revolution were fueling inflation. The Fed's aggressive interventions under Chair Paul Volcker ultimately slayed stagflation, though they also triggered a painful recession.

Today, with persistently high inflation and surging energy prices, the risk of stagflation should not be discounted. The OECD estimates that the war in Ukraine will reduce U.S. GDP growth by 0.9 percentage point and increase inflation by 1.4 percentage points over the next year, with Europe facing even more severe economic impacts given their dependence on Russian oil and gas. Labor force participation remains depressed compared to pre-pandemic levels, which should continue to exert upward pressure on wages and, in turn, prices. Importantly, real disposable personal income has declined in 10 of the last 12 months, which will eventually weigh on consumer spending.

Slowing growth and stubborn inflation explain why stagflation has entered the economic discourse. However, while the prospect of stagflation is a key factor to watch, it does not appear to be an imminent economic threat. The misery index increased in recent months, but it is about half of what it was in May 1980 thanks to a low unemployment rate (see chart). Still, current monetary policy is historically accommodative, and an economic slowdown would leave policymakers with few choices for addressing high inflation.

Misery Index

Annual CPI Inflation Rate + Unemployment Rate



Source: BLS

Can the Fed Land the Plane?

Rate Hikes Don't Guarantee a Soft Landing

Even as recently as December, the *highest* forecast by an FOMC member for PCE inflation in 2022 was 3.2%. Three months later, the *lowest* forecast for PCE inflation in 2022 was 3.7%. While it is true that the war in Ukraine worsened the near-term inflation outlook, Chairman Powell recently acknowledged that "we should have moved earlier."

The Fed is now playing catch-up. The FOMC will attempt to tighten monetary policy and tamp down inflation without causing a recession, but uncertainties regarding pandemic-fueled shutdowns in Asia, ongoing supply chain snags, and the war's effect on the global economy make the Fed's task a daunting one. The FOMC appears prepared to take bold action: its median end-of-year forecast for the Fed Funds Rate is now 2%, which would require seven more rate hikes.

However, if the Fed is to achieve a soft landing, these rate hikes need to have an appreciable impact on inflation. Given its current ultra-accommodative posture, even a 200bp increase this year may not be sufficient. At the same time, there is ongoing debate about whether rate hikes will have the desired effect given that a significant amount of inflationary pressure stems from commodities prices and international supply chain issues that are outside the Fed's control. Another risk policymakers must face: if they raise rates too quickly, the economy could slide into recession.

Geopolitical Turmoil

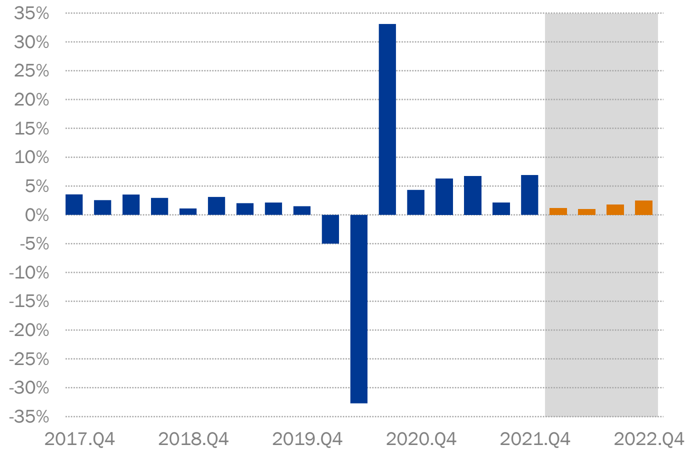
Ukraine War Causing Rifts in Global Economy

Russia's invasion of Ukraine resulted in unprecedented economic sanctions that severed many of the connections between the Russian economy and the world. Ripple effects of these sanctions are being felt worldwide, particularly among countries that depend on Russia or Ukraine for oil, metals, and grains. The war will prolong supply disruptions and add to inflationary pressures that were brought on during the pandemic, slowing U.S. and global growth.

Further, many multinational corporations are grappling with the new reality of being unable to do business in certain countries and must now plan for the possibility of future conflicts elsewhere, including potential Chinese claims on Taiwan. While there are no clear signs of an imminent Chinese invasion, Russia's aggression, Ukraine's resistance, and the potential lessons the war could have for China have raised questions about how Western governments and corporations would respond. Specifically, it is unclear whether U.S. firms (or consumers) would be as willing to support harsh sanctions given China's importance to global supply chains and the U.S. economy. Moreover, the economic implications of cutting Russia off from the global financial system are still evolving. Geopolitical conflict — and the U.S. response to it — will be an important X-factor for equipment finance industry leaders to monitor this year.

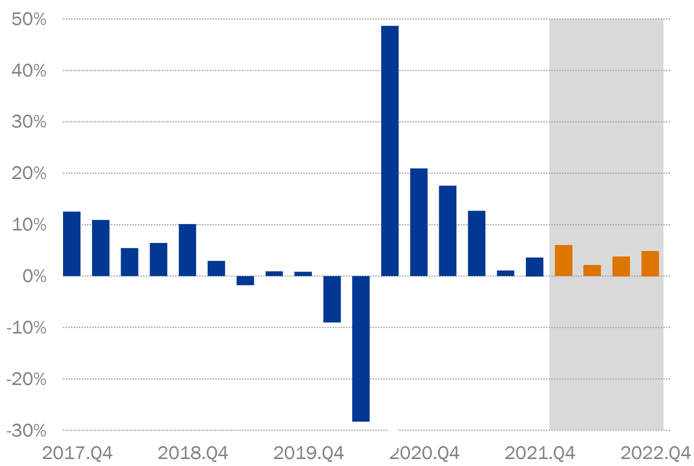
APPENDIX A | KEYBRIDGE FORECASTS

Real GDP Growth (% SAAR)



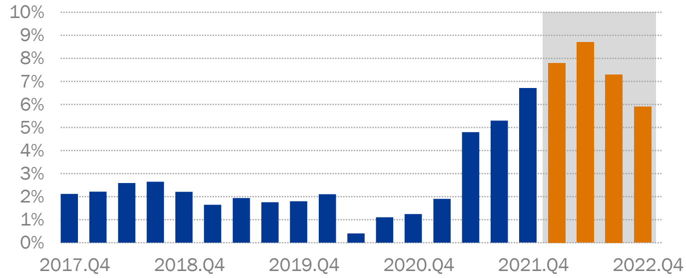
Source: Bureau of Economic Analysis; Keybridge LLC

Real E&S Investment Growth (% SAAR)



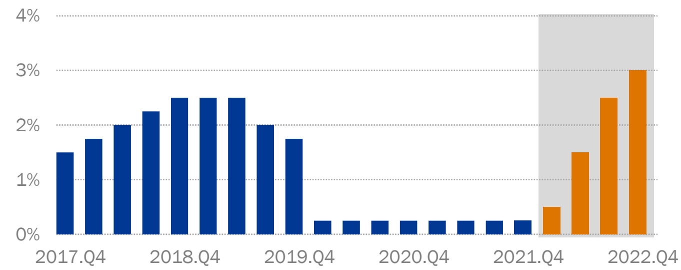
Source: Bureau of Economic Analysis; Keybridge LLC

CPI Inflation (year-on-year %)



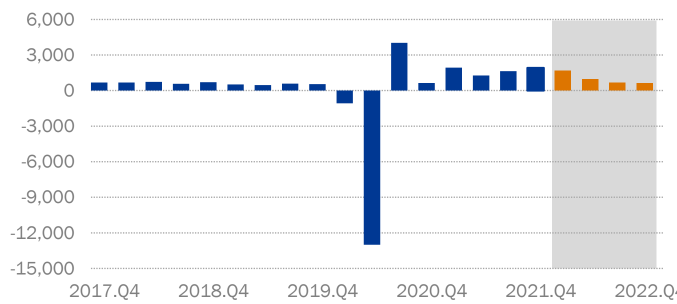
Source: Bureau of Labor Statistics; Keybridge LLC

Fed Funds Target (upper bound, end of period)



Source: Federal Reserve Board of Governors; Keybridge LLC

Total Payroll Growth (thousands)



Source: Bureau of Labor Statistics; Keybridge LLC

INDICATOR,	2020	2021	2022 QUARTERLY ESTIMATES				2022e
			Q1e	Q2e	Q3e	Q4e	
Real GDP *(SAAR %)*	*-3.4%*	*5.7%*	1.2%	1.0%	1.8%	2.5%	**2.8%**
Real Investment in Equipment & Software *(SAAR %)*	*-4.1%*	*13.1%*	6.0%	2.1%	3.8%	4.9%	**4.2%**
Inflation *(year-on-year %)*	*1.2%*	*4.6%*	7.8%	8.7%	7.3%	5.9%	**7.4%**
Federal Funds Target Rate *(upper bound, end of period)*	*0.25%*	*0.25%*	0.50%	1.50%	2.50%	3.00%	**3.00%**
Total Payroll Growth *(thousands)*	*-9,416*	*6,743*	1,685	950	650	600	**3,885**

Note: SAAR % refers to the annualized rate of change in seasonally adjusted data from one quarter to the next, which is the Bureau of Economic Analysis' standard method for reporting growth in the national accounts data.

About the Momentum Monitor

Business leaders require actionable forward-looking intelligence to make strategic decisions. Accordingly, the Foundation commissioned Keybridge LLC to develop a series of custom leading indicators for the equipment sector. The Foundation-Keybridge Equipment & Software Investment Momentum Monitor consists of indices for 12 equipment and software investment verticals. These indices are designed to identify turning points in their respective investment cycles with a ~6-month lead time.

The Momentum Monitor is based on Keybridge's extensive research which shows that not all movements in economic data are reliable signals of future economic trends. Keybridge has operationalized its research by constructing indices, each comprised of between 15 to 20 high-frequency indicators. These indicators undergo rigorous testing to determine the optimal thresholds at which their short-term fluctuations are economically meaningful. In simpler terms, the Momentum Monitor sifts out the "noise" in the data and identifies the dominant trends. As a result, each Momentum Monitor index is statistically optimized to signal turning points in the investment cycle without giving false readings of shifts in momentum.

How to Read the Momentum Monitor

The Momentum Monitor Matrix summarizes the current values of each of the 12 Equipment & Software Investment Momentum Indices based on two factors: Recent Momentum (x-axis) and Historical Strength (y-axis):

- "Recent Momentum" indicates a vertical's recent acceleration or deceleration in the past month relative to its average movement during the previous 3 months. Ratings closer to "0" indicate rapid deceleration, while ratings near "10" represent rapid acceleration.
- "Historical Strength" reflects a vertical's strength in the past month relative to its typical level since 1999. Ratings closer to "0" represent an indicator that is weaker than average, while ratings closer to "10" represent an indicator that is stronger than average.

The matrix consists of four quadrants based on readings for each vertical's recent momentum and historical strength. If a vertical falls in the top-left quadrant, its momentum reading is higher than average, but positive movement has slowed (and perhaps reversed) in recent months — suggesting that Y/Y investment growth may slow over the next two quarters. Verticals in the bottom-right quadrant, however, have momentum readings that are below average, but recent movement shows promise — suggesting that Y/Y investment growth may increase over the next two quarters.