The Virginia Tech–USDA Forest Service Housing Commentary: Section II
November 2022

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2022 Virginia Polytechnic Institute and State University VCE-ANR

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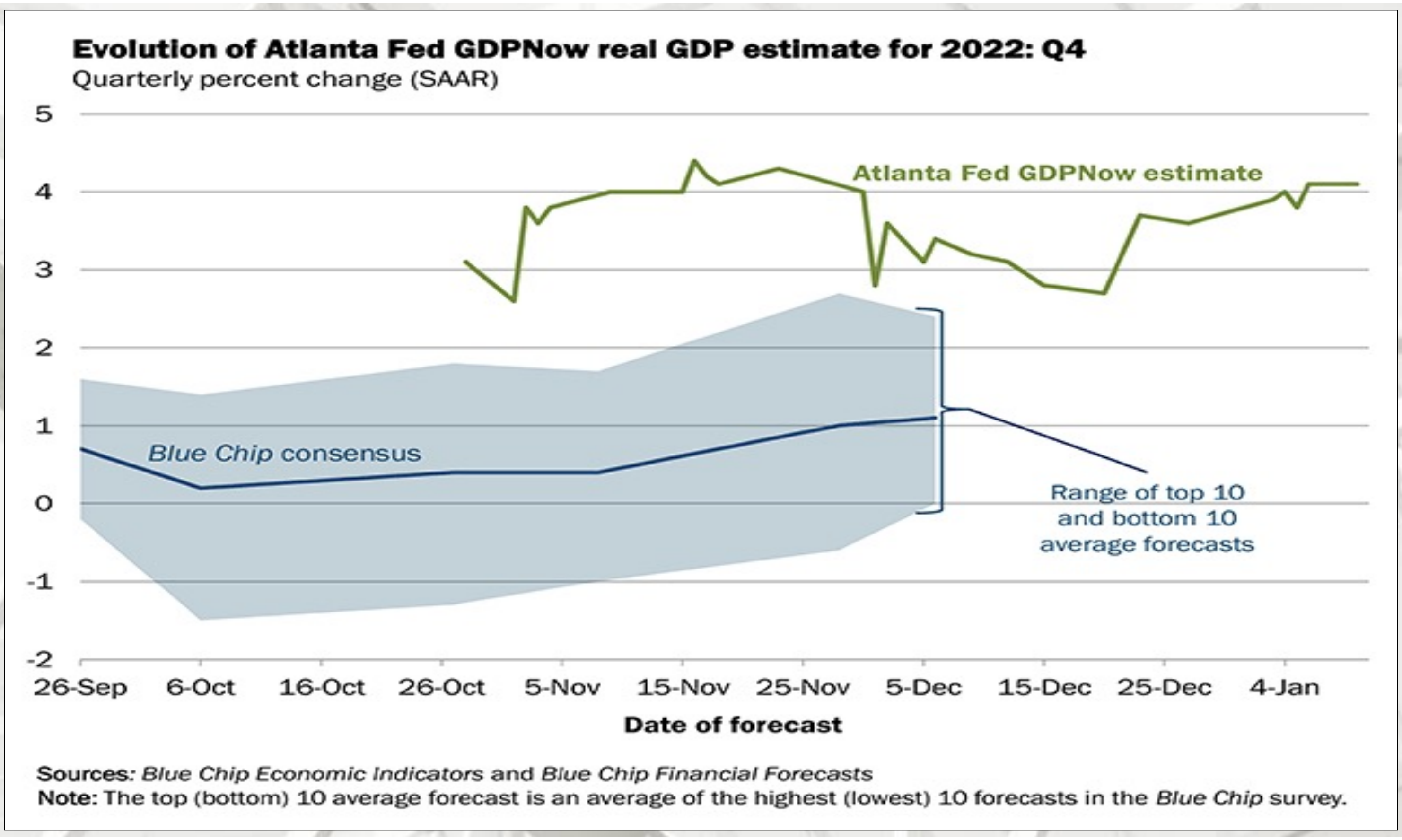
U.S. Economic Indicators



Atlanta Fed GDPNow™

Latest estimate: 4.4 percent — January 10, 2023

"The GDPNow model estimate for real GDP growth (seasonally adjusted annual rate) in the fourth quarter of 2022 is **4.1 percent** on January 10, up from 3.8 percent on January 5. After recent releases from the Institute for Supply Management, the US Bureau of Labor Statistics, and the US Census Bureau, the nowcasts of fourth-quarter real personal consumption expenditures growth and fourth-quarter real gross private domestic investment growth increased from 3.2 percent and 5.8 percent, respectively, to 3.5 percent and 6.8 percent, respectively." – Pat Higgins, Economist, Federal Reserve Bank of Atlanta

Source: https://www.frbatlanta.org/cqer/research/gdpnow.aspx; 1/10/23

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The Federal Reserve Bank of Dallas

Texas Manufacturing Outlook Survey

Texas Manufacturing Growth Rebounds, Though Demand Continues to Decline

"Growth in Texas factory activity resumed in December, according to business executives responding to the Texas Manufacturing Outlook Survey. The production index, a key measure of state manufacturing conditions, rose nine points to 9.7, suggestive of a pickup in output growth.

Other measures of manufacturing activity showed mixed signals this month. The new orders index was negative for a seventh month in a row — suggesting a continued decrease in demand — though it moved up from -20.9 to -9.2. The growth rate of orders index rose nearly 11 points to -9.3. The capacity utilization index turned positive, rising from -3.4 to 8.5, and the shipments index pushed up nine points to 1.9 following two consecutive negative readings.

Perceptions of broader business conditions continued to worsen in December. The general business activity index pushed down further, from -14.4 to -18.8. The company outlook index posted its 10th straight negative reading but moved up two points to -12.8. The outlook uncertainty index retreated five points to 15.6, in line with its average reading of 16.6.

Labor market measures pointed to stronger employment growth and longer workweeks. The employment index climbed eight points to 14.0, a reading significantly above its series average of 7.9. Twenty-four percent of firms noted net hiring, while 10 percent noted net layoffs — on par with the average share of respondents noting layoffs this year. The hours worked index pushed up eight points to 7.2.

Price and wage indexes saw little movement in December. The raw materials prices index was largely stable at 23.7, remaining below its series average of 28.1 for the second month in a row. The finished goods prices index was little changed at 12.5, still slightly above its series average of 9.0. The wages and benefits index ticked down from 36.5 to 35.0." – Emily Kerr, Business Economist, The Federal Reserve Bank of Dallas

Source: https://www.dallasfed.org/research/surveys; 12/27/22

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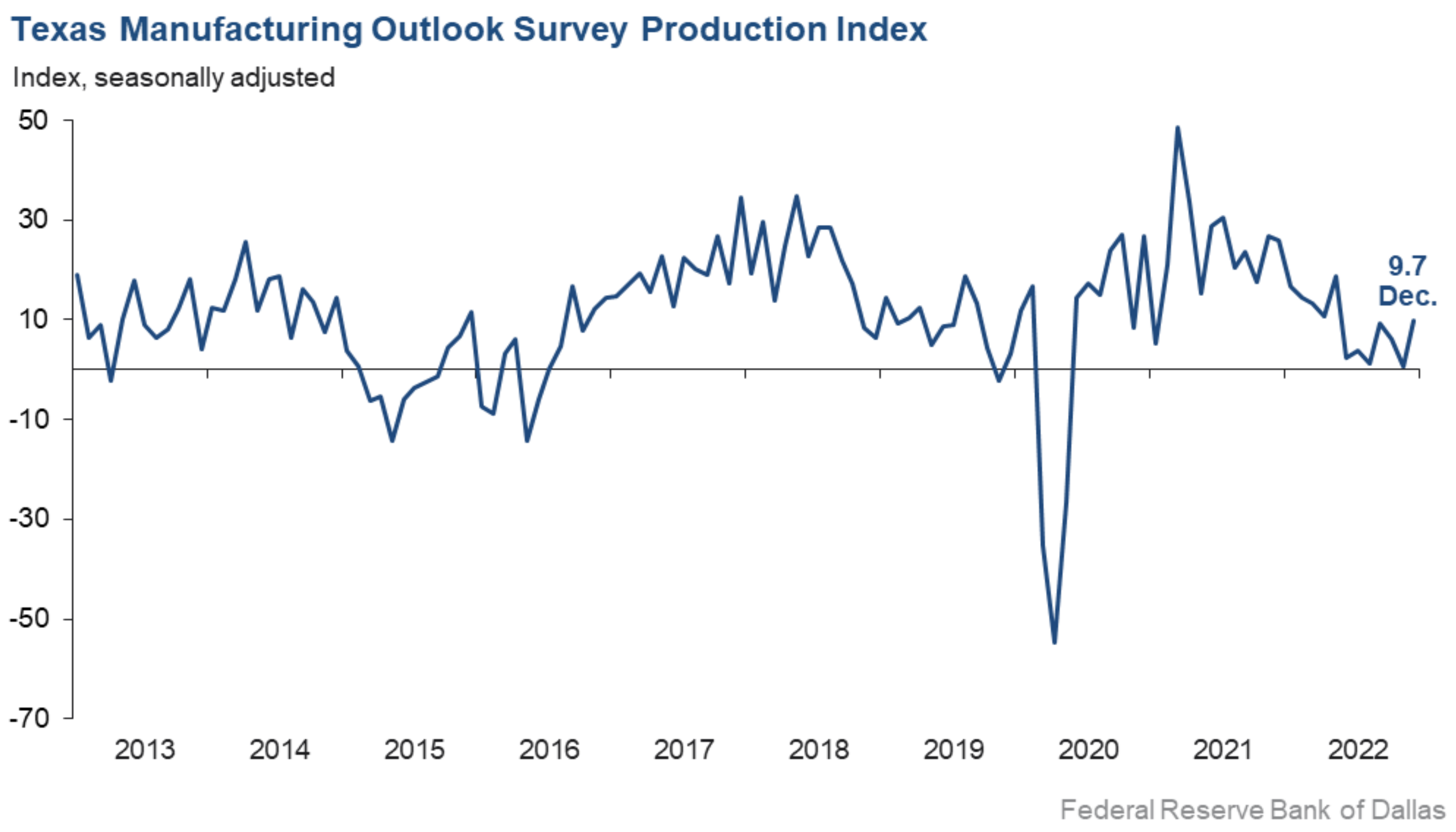
The Federal Reserve Bank of Dallas



"Expectations regarding future manufacturing activity were mixed in December. The future production index remained positive at 10.2, signaling that respondents expect output growth to continue. The future general business activity index remained negative, though it pushed up nine points to -8.3. Most other measures of future manufacturing activity were positive this month." – Emily Kerr, Business Economist, The Federal Reserve Bank of Dallas

Source: https://www.dallasfed.org/research/surveys; 12/27/22

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The Federal Reserve Bank of Dallas

Texas Service Sector Outlook Survey

Texas Service Sector Activity Flat, Outlooks Worsen

"Texas service sector activity remained mostly flat in December, according to business executives responding to the Texas Service Sector Outlook Survey. The revenue index, a key measure of state service sector conditions, fell six points to near zero, suggesting little change in revenue from November.

Labor market indicators pointed to continued growth in employment, but at a slower pace than in November, and fewer hours worked in December. The employment index fell from 8.3 to 5.6, while the part-time employment index fell two points to -1.3. The hours worked index contracted from 4.6 to -1.7.

Perceptions of broader business conditions worsened further in December. The general business activity index fell from -11.0 in November to -19.8 in December. The company outlook index also fell, from -4.1 to -9.9, while the outlook uncertainty index remained elevated at 22.0, well above its series average of 13.2.

Growth in input prices and wages moderated in December, while growth in selling prices picked up slightly. The input prices index edged down from 46.2 to 43.3, while the wages and benefits index fell five points to 20.5, the lowest level since March 2021. The selling prices index increased from 17.6 to 20.1.

Respondents' expectations regarding future business activity were mixed in December. The future general business activity index fell five points to -11.7. The future revenue index remained positive but dropped two points to 33.3. Other future service sector activity indexes such as employment and capital expenditures also decreased, suggesting waning optimism for growth next year." – Amy Jordan, Assistant Economist, The Federal Reserve Bank of Dallas

Source: https://www.dallasfed.org/research/surveys; 12/28/22

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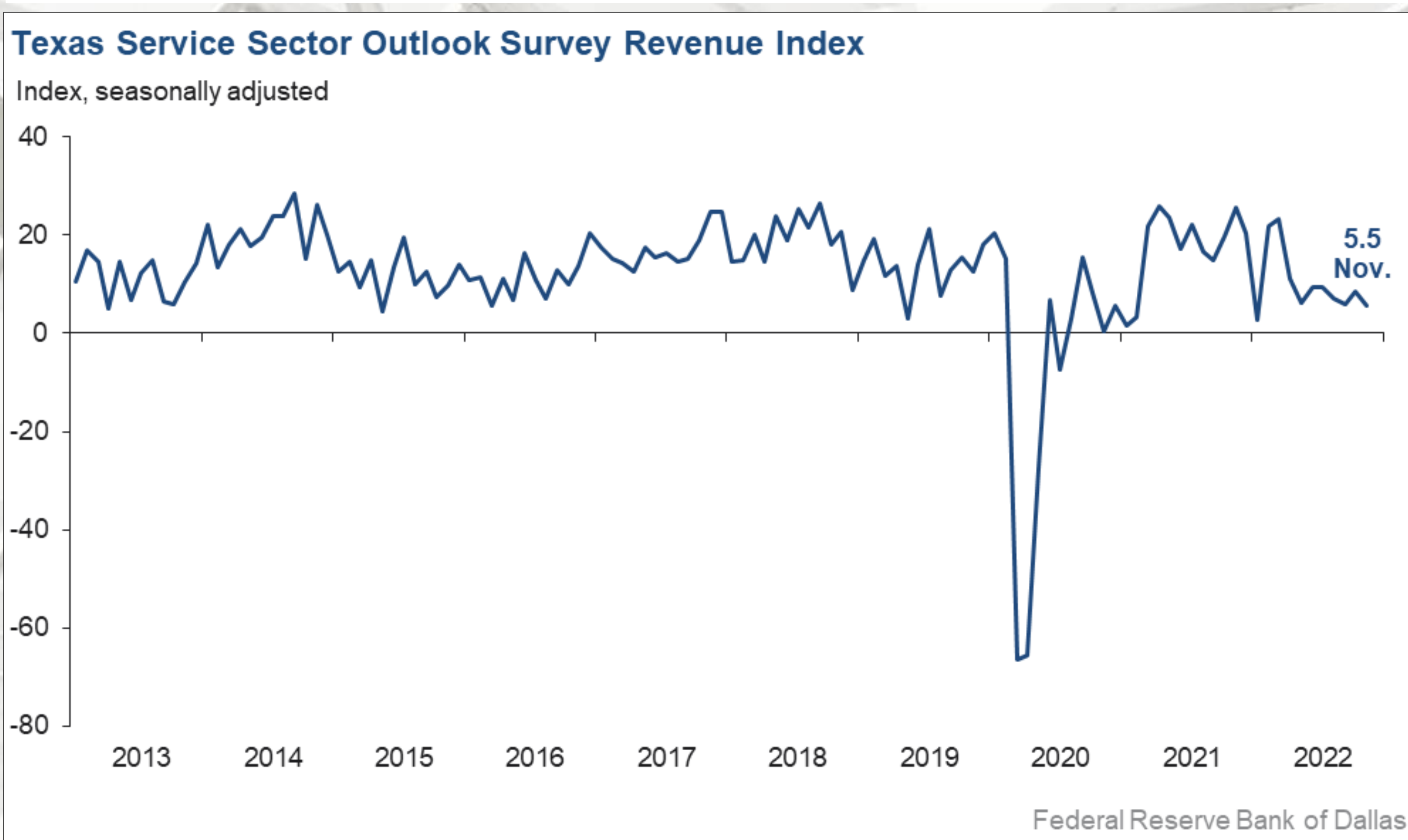
The Federal Reserve Bank of Dallas



Source: https://www.dallasfed.org/research/surveys; 12/28/22

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The Federal Reserve Bank of Dallas

Texas Retail Outlook Survey

Texas Retail Sales Weaken

"Retail sales continued to weaken in December, according to business executives responding to the Texas Retail Outlook Survey. The sales index, a key measure of state retail activity, was little changed at -12.3 — a 10th consecutive month in negative territory. Retailers' inventories continued to increase but at a slower pace than in November, with the index falling from 15.7 to 13.5.

Retail labor market indicators reflected mostly steady employment and shorter workweeks in December. The employment index increased from -4.6 to -0.5, suggesting near-zero growth in employment. The part-time employment index was largely unchanged at -4.9. The hours worked index fell 12 points to -10.7, with the share of firms reporting an increase in employees' average hours worked dropping from 15.2 percent to 3.9.

Retailers' perceptions of broader business conditions continued to worsen in December as both the general business activity and company outlook indexes remained deep in negative territory. The general business activity index fell 11 points to -33.0, while the company outlook index edged down to -13.5. The outlook uncertainty index fell 10 points from 27.7 to 17.6.

Growth in selling prices and wages picked up in December, while growth in input prices moderated. The selling prices index rose three points to 16.7. The wages and benefits index jumped eight points from 10.9 to 18.9, while the input prices index decreased five points to 33.8.

Expectations for future retail growth were mixed in December. The future general business activity index decreased from -17.6 to -27.7, while the future sales index improved slightly to 10.0. Other indexes of future retail activity such as employment and capital expenditures also provided mixed signals, with the future employment index turning negative for the first time since April 2020 and the capital expenditures index remaining positive." – Amy Jordan, Assistant Economist, The Federal Reserve Bank of Dallas

Source: https://www.dallasfed.org/research/surveys; 12/28/22

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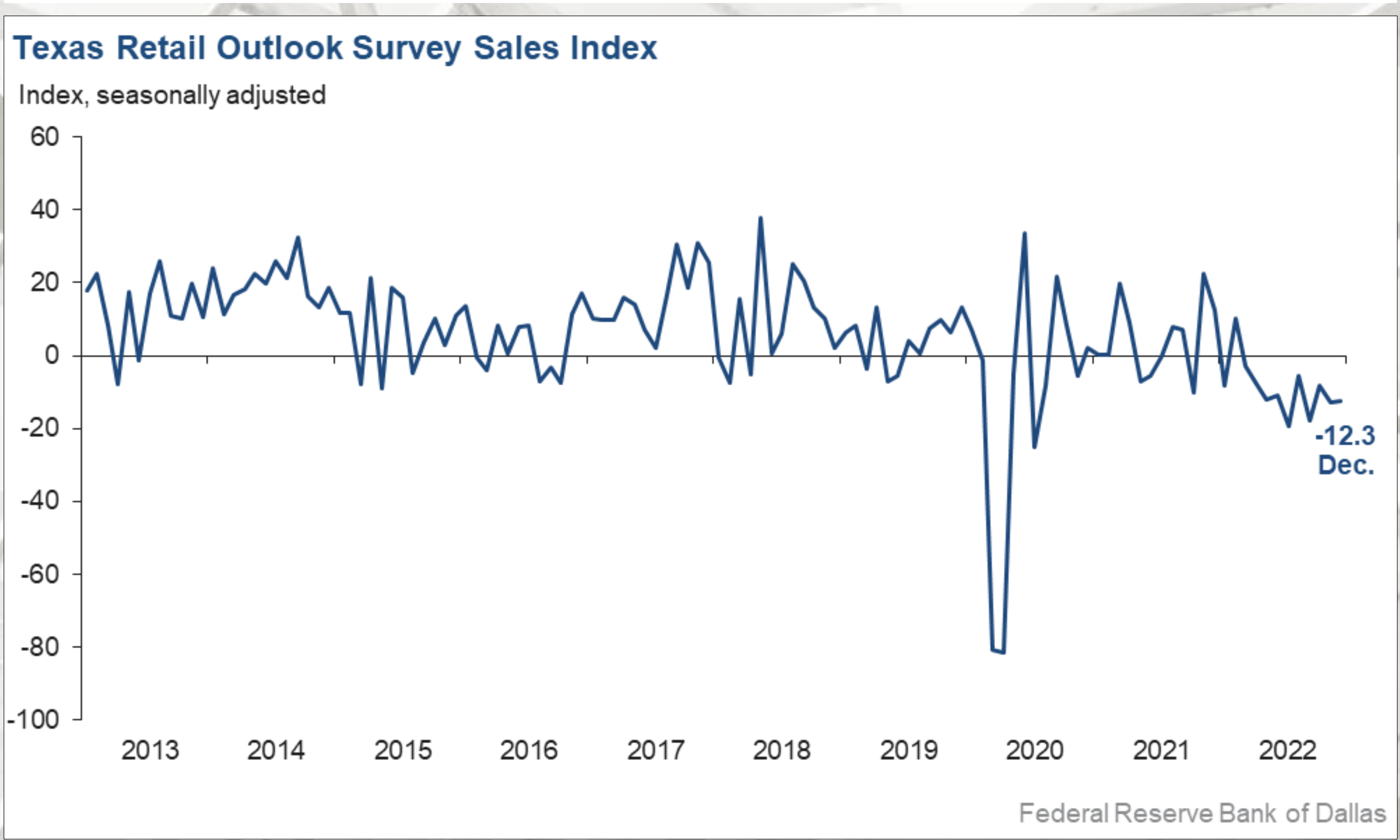
The Federal Reserve Bank of Dallas



Source: https://www.dallasfed.org/research/surveys; 12/28/22

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U.S. Economic Indicators

The Federal Reserve Bank of Kansas City

Tenth District Manufacturing Activity Declined at a Slightly Faster Pace

Regional factory activity declined at a slightly faster pace in December than the previous month. The index for raw materials prices also fell to its lowest level since July 2020.

Factory Activity Declined at a Slightly Faster Pace

"Tenth District manufacturing activity declined at a slightly faster pace than last month, while expectations for future activity were mostly flat or slightly positive (Chart 1). The monthly index of raw materials prices continued to slow in December, but materials prices were still higher than a year ago at most firms and expected to rise moderately in the months ahead. Finished goods price increases were also smaller than last month and more firms than in previous surveys anticipated further easing.

The month-over-month composite index was -9 in December, down from -6 in November and -7 in October. The composite index is an average of the production, new orders, employment, supplier delivery time, and raw materials inventory indexes. The slower pace in factory growth in December was driven by decreased activity in printing, wood products, machinery manufacturing, and food manufacturing. Month-over-month indexes were mostly negative in December. The monthly employment index fell from 3 to 0, its lowest level since 2020 but still indicative of flat employment for the month. Indexes for year-over-year factory activity slowed slightly in December, including the composite index, which decreased from 19 to 15. The future composite index increased from 0 to 2 in December, with the expected volume of new orders index also moving into positive territory for the first time in two months." – Chad Wilkerson, Vice President and Oklahoma City Branch Executive, Federal Reserve Bank of Kansas City

Source: https://www.kansascityfed.org; 12/22/22

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U.S. Economic Indicators

The Federal Reserve Bank of Kansas City

Factory Activity Declined at a Slightly Faster Pace

Special Questions

“This month contacts were asked special questions about price pass through and expectations for wages and prices. In December, 43% of firms expected wages to rise faster compared to the past 12 months, while 23% of firms expected wages to rise at a similar rate and 35% of firms expected wages to rise more slowly. About 27% of all firms facing higher costs (inputs and labor) were able to pass through 80 to 100% of increased costs, while a quarter of firms could only pass through 0 to 20%.” – Chad Wilkerson, Vice President and Oklahoma City Branch Executive, Federal Reserve Bank of Kansas City

Source: https://www.kansascityfed.org; 12/22/22

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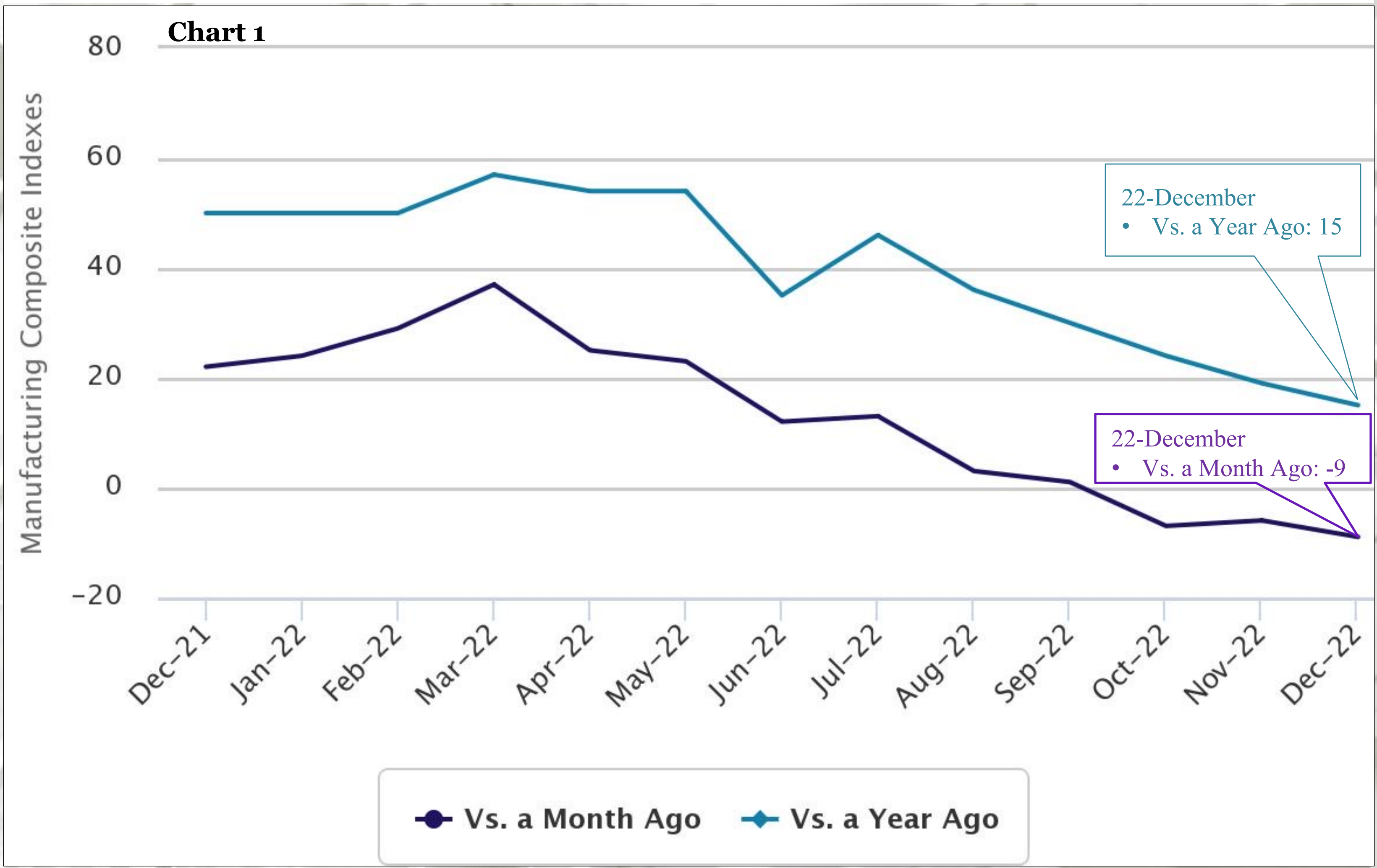
The Federal Reserve Bank of Kansas City



Source: https://www.kansascityfed.org; 12/22/22

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U.S. Economic Indicators

The Federal Reserve Bank of Kansas City

Growth in Tenth District Services Activity Declined Slightly

Regional services firms reported a slight decline in activity in December. The employment index fell for the first time since 2020 and recorded the second lowest level in survey history.

Business Activity Declined Slightly

“Tenth District services activity declined slightly in December, and expectations for future activity slowed moderately but remained positive (Chart 1). Compared to the previous month, the input price index inched upward while the selling price index decreased slightly, reaching its lowest level since May 2020. Expectations for future input and selling price increases fell compared to previous levels.

The month-over-month services composite index was -5 in December, down from 10 in November and 6 in October. The composite index is a weighted average of the revenue/sales, employment, and inventories indexes. The decline in growth was driven by decreased activity in restaurants, wholesale trade, transportation, and autos. Most month-over-month indexes declined and were negative in December. The monthly employment index fell from 6 to -13, the second lowest level in survey history. The year-over-year composite index decreased from 21 to 14, but the wages and benefits, inventory, and capital expenditures indexes inched slightly higher than previous levels. Expectations for services activity decreased from 12 to 4 in December, however indexes for inventory and credit conditions had slightly higher readings than last month.” – Chad Wilkerson, Vice President and Oklahoma City Branch Executive, The Federal Reserve Bank of Kansas City

Source: https://www.kansascityfed.org; 12/23/22

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U.S. Economic Indicators

The Federal Reserve Bank of Kansas City

Business Activity Declined Slightly

Special Questions

“This month contacts were asked special questions about price pass through and expectation for wages and prices. In December, about 39% of firms expected wages to rise faster compared to the past 12 months, while 29% of firms expected wages to rise at a similar rate and 27% of firms expected wages to rise more slowly. About 25% of all firms facing higher costs (inputs and labor) were able to pass through 80 to 100% of increased costs, while 37% of firms could only pass through 0 to 20%.” – Chad Wilkerson, Vice President and Oklahoma City Branch Executive, Federal Reserve Bank of Kansas City

Source: https://www.kansascityfed.org; 12/23/22

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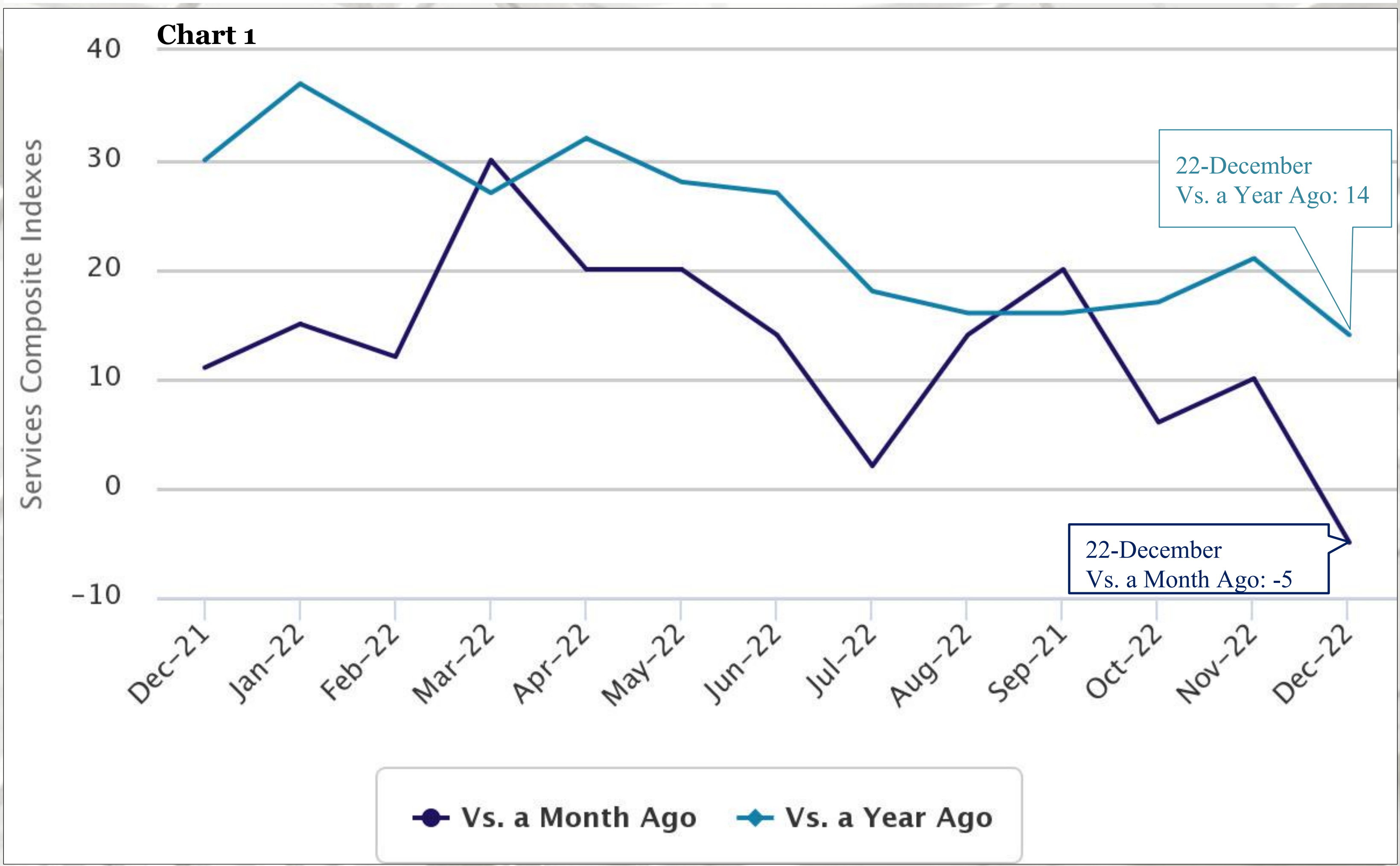
The Federal Reserve Bank of Kansas City



Source: https://www.kansascityfed.org; 12/23/22

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The Federal Reserve Bank of New York

January Empire State Manufacturing Survey

Activity Tumbles

"Business activity contracted sharply in New York State, according to firms responding to the *January* 2023 Empire State Manufacturing Survey. The headline general business conditions index fell twenty-two points to -32.9. New orders and shipments declined substantially. Delivery times held steady, and inventories edged higher. Employment growth stalled, and the average workweek shortened. Input price increases slowed considerably, and selling price increases also moderated. Looking ahead, firms expect little improvement in business conditions over the next six months.

Manufacturing activity fell steeply in New York State, according to the January survey. The general business conditions index fell twenty-two points to -32.9, its lowest level since mid-2020 and the fifth worst reading in the survey's history. Eleven percent of respondents reported that conditions had improved over the month, and forty-four percent reported that conditions had worsened. The new orders index dropped twenty-eight points to -31.1, and the shipments index also declined twenty-eight points to -22.4, pointing to a steep decline in both orders and shipments. The unfilled orders index edged down to -14.3, a sign that unfilled orders were lower. The delivery times index came in at 0.0, indicating that delivery times were unchanged. The inventories index held steady at 4.5, pointing to a small increase in inventories." – Richard Deitz and Jason Bram, The Federal Reserve Bank of New York

Source: https://www.newyorkfed.org/survey/empire/empiresurvey_overview; 1/17/23

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The Federal Reserve Bank of New York

January Empire State Manufacturing Survey

Employment Growth Stalls

"The index for number of employees fell eleven points to 2.8, its lowest level in more than two years, signaling that employment growth stalled. The average workweek index remained negative at -10.4, indicating a decline in hours worked. Input price increases slowed considerably, with the prices paid index dropping eighteen points to 33.0. Selling price increases also moderated, with the prices received index falling six points to 18.8.

Firms Expect Conditions To Remain Weak

The index for future business conditions held steady at 8.0, suggesting that firms expect little improvement over the next six months. New orders and shipments are expected to rise somewhat, while employment is expected to increase only modestly. The capital spending index held steady at 22.3, and the technology spending index rose to 17.0." – Richard Deitz and Jason Bram, The Federal Reserve Bank of New York

Source: https://www.newyorkfed.org/survey/empire/empiresurvey_overview; 1/17/23

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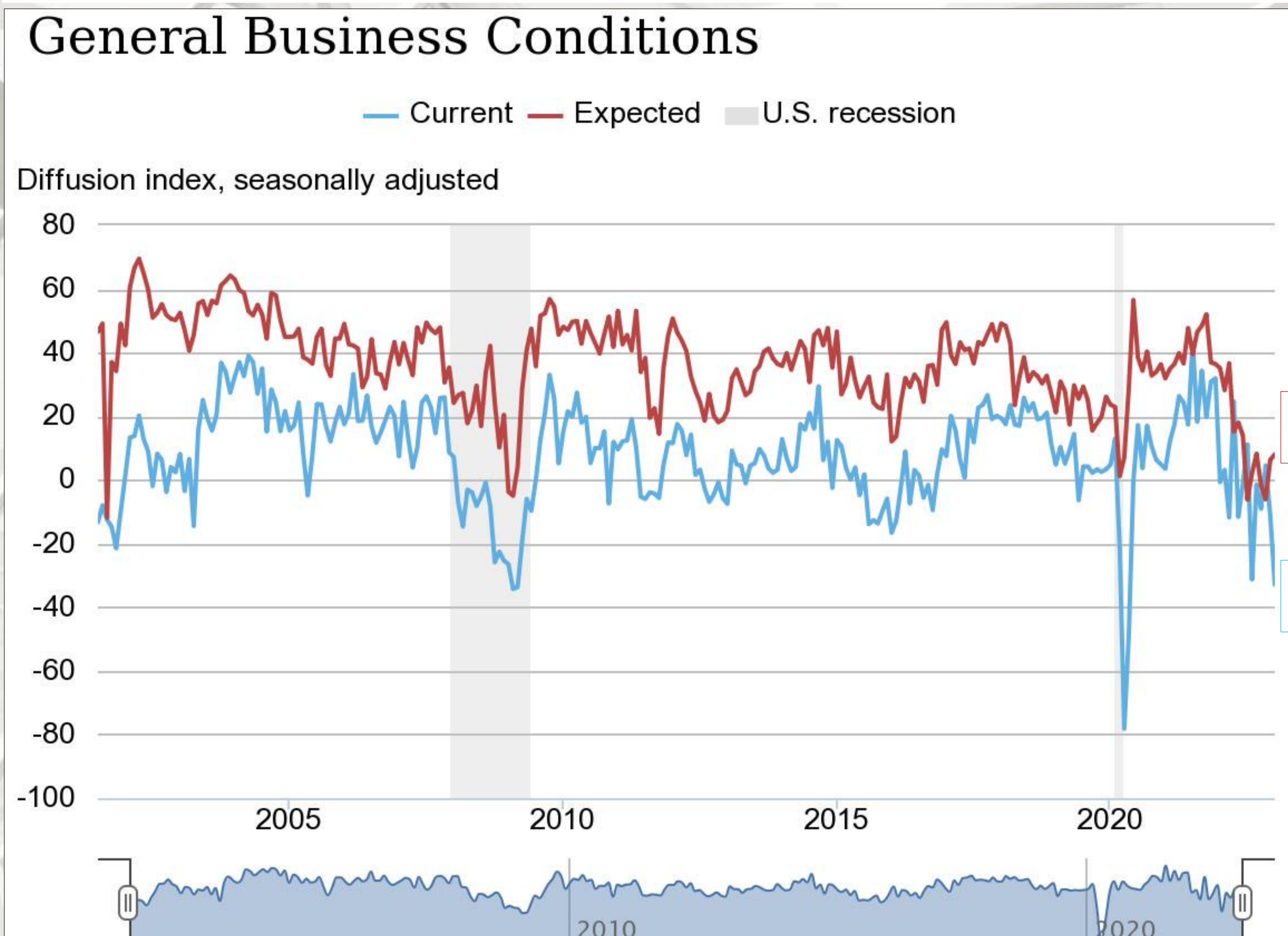
The Federal Reserve Bank of New York



January 2023
8.0

January 2023
-32.9

Source: https://www.newyorkfed.org/survey/empire/empiresurvey_overview; 1/17/23

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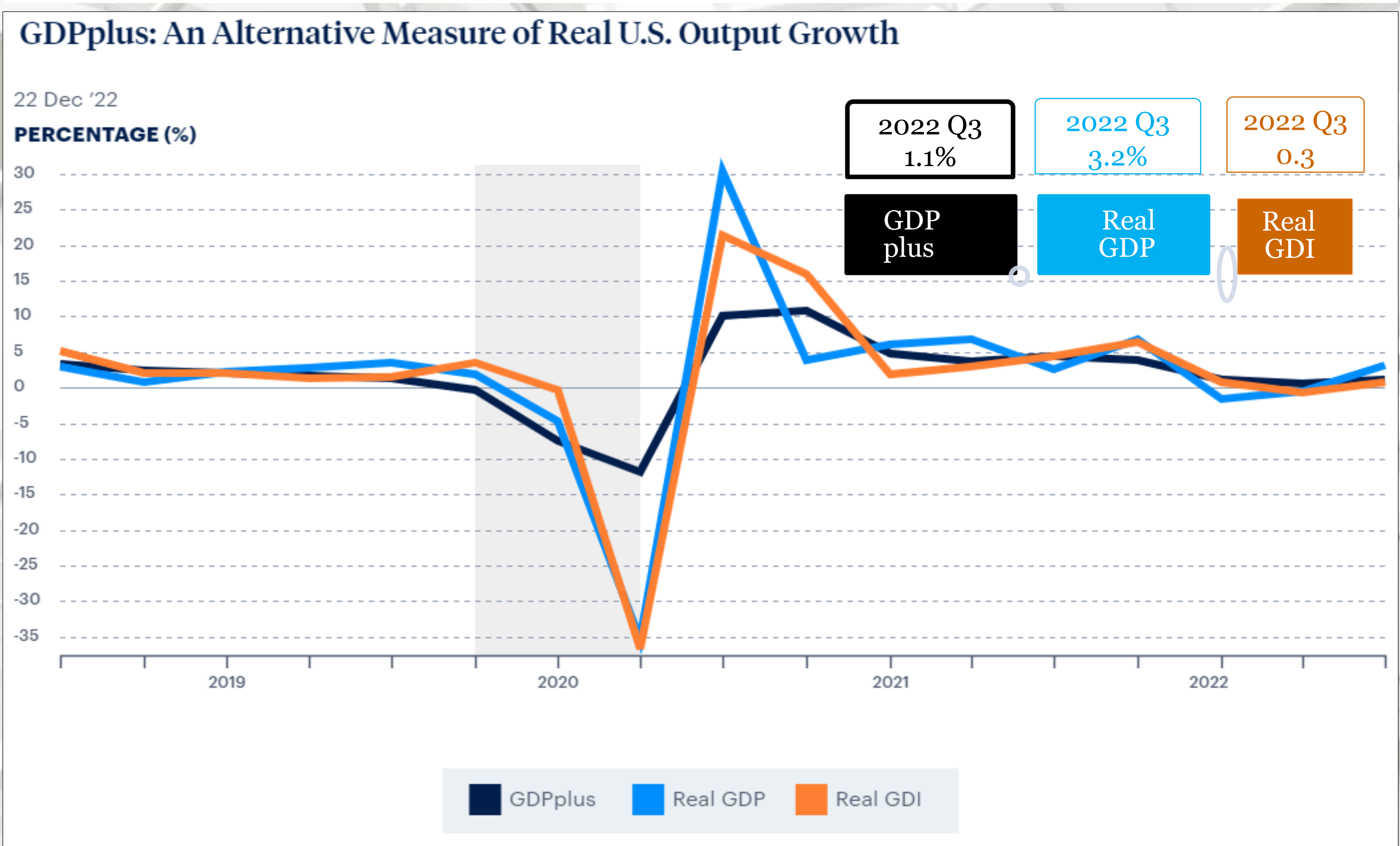
The Federal Reserve Bank of Philadelphia: GDPplus



Notes: Shaded areas indicate NBER recessions. The data measure the quarter-over-quarter growth rate in continuously compounded annualized percentage points.

Sources: Bureau of Economic Analysis (BEA) and NBER via Haver Analytics. Federal Reserve Bank of Philadelphia.

Source: https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/gdpplus; 12/22/22

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The Federal Reserve Bank of Richmond

Fifth District Manufacturing Sector Activity

Manufacturing Activity Improved Modestly in December

“Some Fifth District manufacturing firms reported modest improvements in December, according to the most recent survey from the Federal Reserve Bank of Richmond. The composite manufacturing index climbed into positive territory, increasing from −9 in November to 1 in December. Each of its three component indexes — shipments, new orders and employment — improved, with the index for shipments seeing the most notable increase from −8 in November to 5 in December.

Alongside a slightly positive employment index, the wage index increased notably from 25 to 37 in December, surpassing its October reading of 34. The local business conditions index remained unchanged at −6 in December. However, a larger portion of firms are pessimistic about local business conditions over the next six months, as the expectations index fell to −20 in December.

The indexes for order backlogs and vendor lead time remained firmly in negative territory, indicating that, on balance, businesses continued to see shrinking backlogs and lead times.

The average growth rates of both prices paid and prices received decreased in December. Expectations for both over the next 12 months also decreased and are much lower than current price trends.” – Jeannette Plamp, Economic Analyst, The Federal Reserve Bank of Richmond

Source: https://www.richmondfed.org/research/regional_economy/surveys_of_business_conditions/manufacturing; 12/28/22

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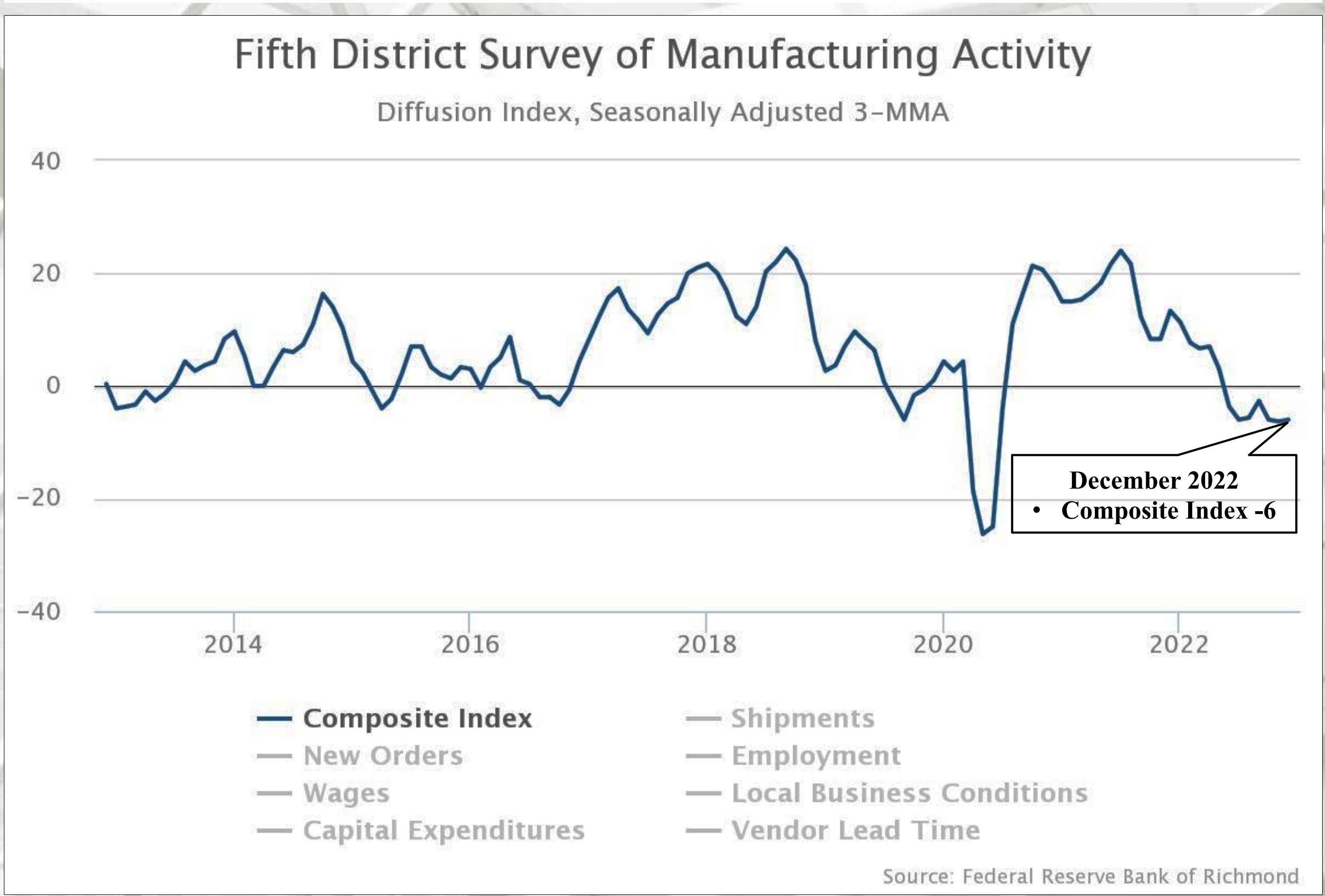
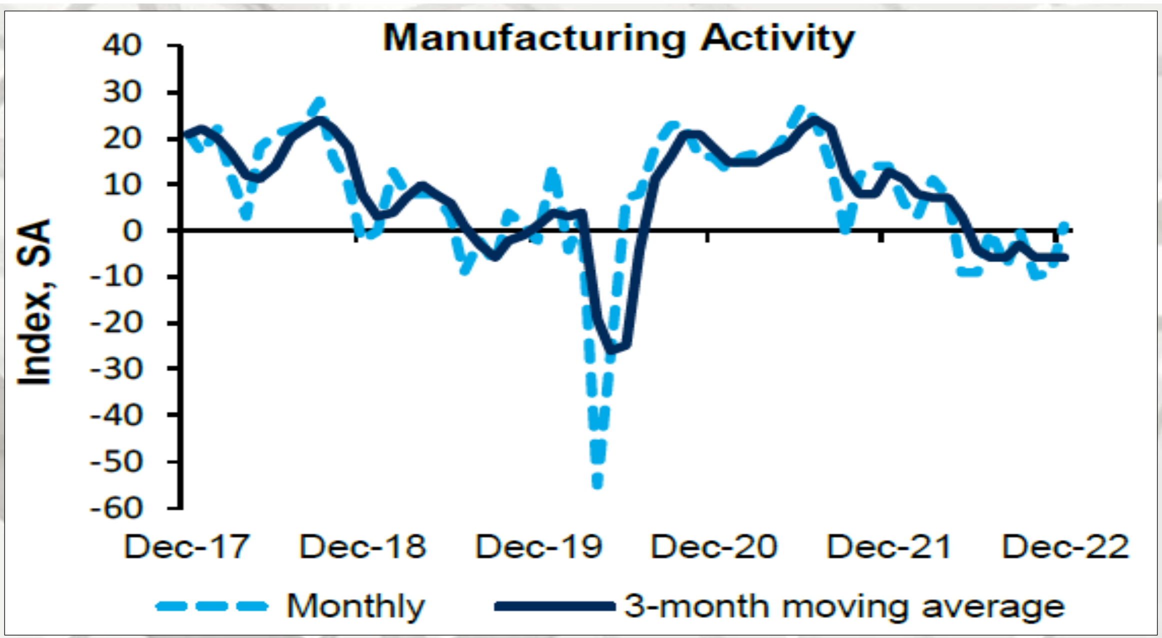
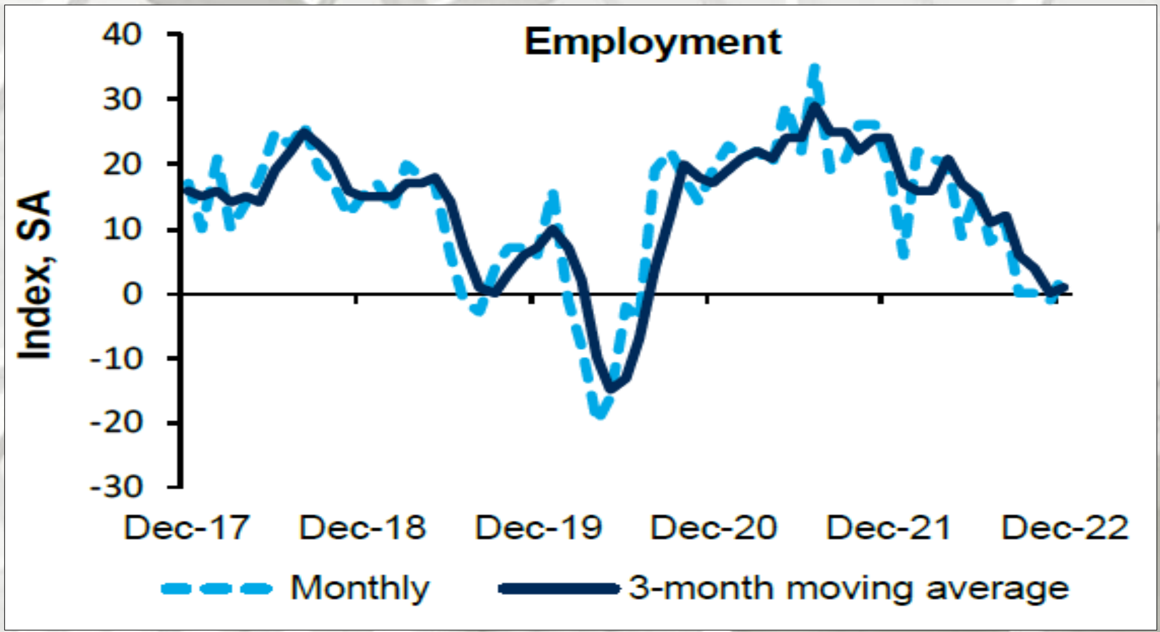
The Federal Reserve Bank of Richmond



Source: https://www.richmondfed.org/research/regional_economy/surveys_of_business_conditions/manufacturing; 12/28/22

The Federal Reserve Bank of Richmond





Source: https://www.richmondfed.org/research/regional_economy/surveys_of_business_conditions/manufacturing; 12/28/22

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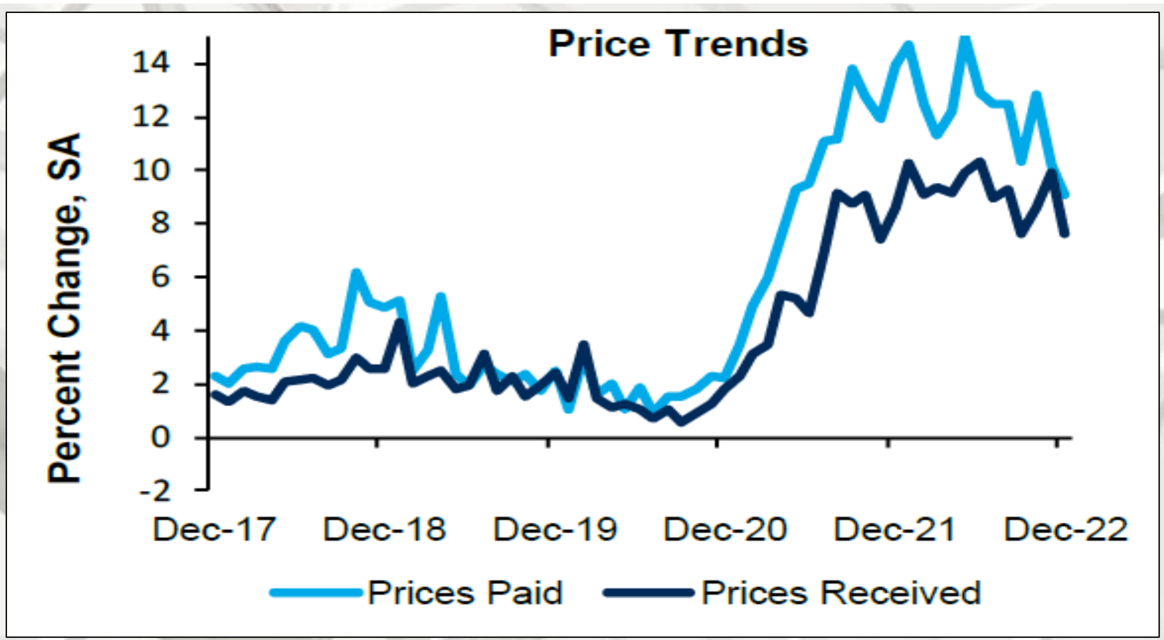
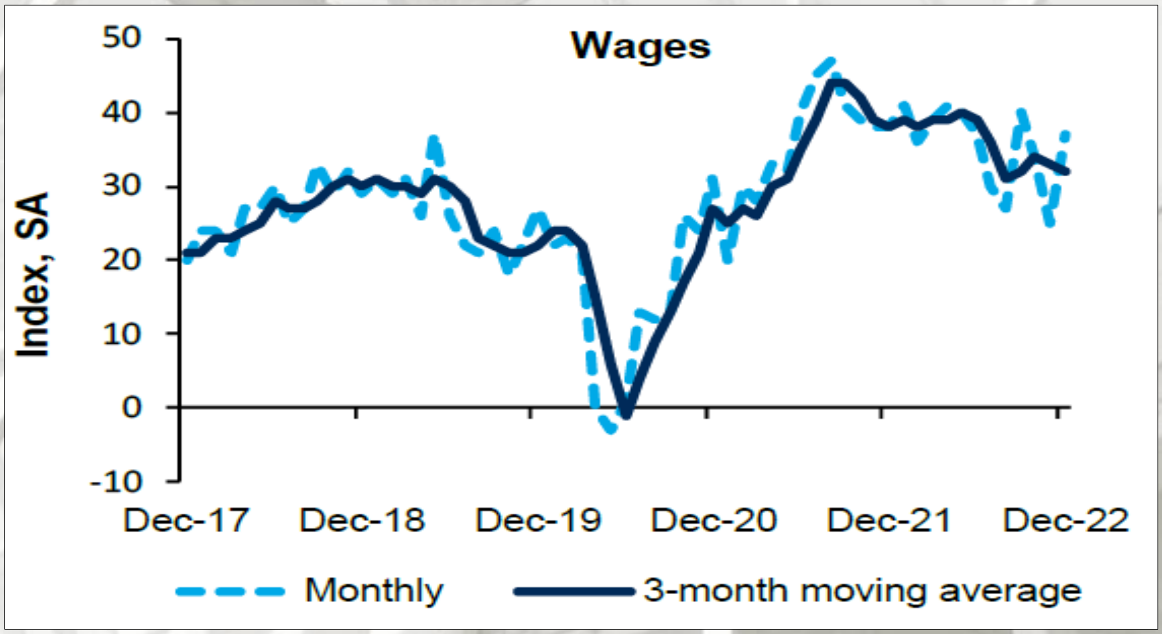
The Federal Reserve Bank of Richmond





Source: https://www.richmondfed.org/research/regional_economy/surveys_of_business_conditions/manufacturing; 12/28/22

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The Federal Reserve Bank of Richmond

Fifth District Survey of Service Sector Activity

Service Sector Activity Softened Further in December

"Fifth District service sector activity softened further in December, according to the most recent survey by the Federal Reserve Bank of Richmond. The revenues and demand indexes fell to −12 and −8, moving deeper into negative territory. Firms' expectations for revenues and demand over the next six months suggest little to no change from current levels. Firms' assessments of current and anticipated local business conditions also remained low. Still, firms continued to report increases in capital spending and equipment & software spending, although the services expenditures index dipped into negative territory.

A larger share of firms reported decreases in their number of employees than increases in December. Their ability to find workers with the necessary skills also deteriorated slightly compared to last month. However, the expectations index for labor availability over the next six months saw a modest increase in December. Firms continued to increase wages and expect further wage increases in the near term.

Growth in prices paid decreased somewhat in December, while growth in prices received increased slightly. Firms expect both to moderate over the coming year." – Roisin McCord, Economic Analyst, The Federal Reserve Bank of Richmond

Source: https://www.richmondfed.org/research/regional_economy/surveys_of_business_conditions/service_sector; 12/28/22

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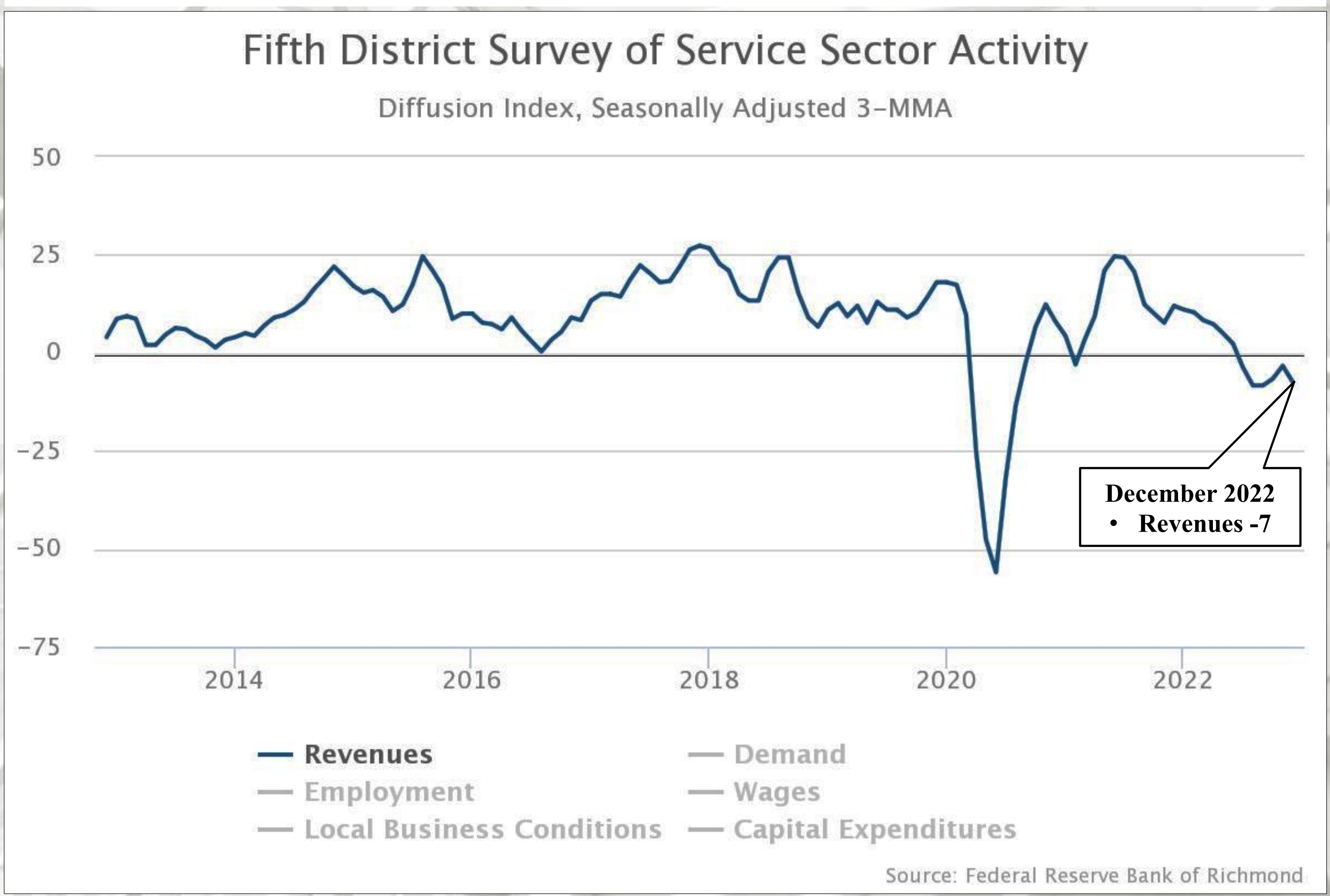
The Federal Reserve Bank of Richmond



Source: https://www.richmondfed.org/research/regional_economy/surveys_of_business_conditions/service_sector; 12/28/22

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U.S. Global Economic Indicators

The Federal Reserve Bank of Dallas

México Economic Update

Méxican economy sends mixed signals toward year-end

"México's proxy for monthly GDP dipped 0.1 percent in November after rising for four straight months. The possibility of a U.S. recession, inflationary pressures, weak investment and monetary tightening are headwinds for the Méxican economy going into next year. Nevertheless, the consensus forecast for 2022 GDP growth (fourth quarter/fourth quarter) compiled by Banco de México rose in November to 3.0 percent (Table 1). Industrial production, exports and retail sales were little changed in the most recent readings, while formal sector jobs fell for the first time since January 2021. In November, the peso strengthened against the dollar, and inflation slowed but remained elevated.

Economic activity dips in November

The global economic activity index (IGAE) — the monthly proxy for GDP growth — fell 0.1 percent month over month in November, a slowdown from October's 0.1 percent and September's 0.7 percent growth (Chart 1). The goods-producing sector (including manufacturing, construction and utilities) fell 0.1 percent in November after increasing 0.5 percent in October. The service-providing sector (which includes trade and transportation) fell 0.1 percent in November after rising 0.1 percent in October. On a year-over-year basis, IGAE rose 4.2 percent in November.

Industrial Production unchanged in October

In October, the three-month-moving average of México's industrial production (IP) index — which includes manufacturing, construction, oil and gas extraction, and utilities — was unchanged from September, while manufacturing alone dipped 0.2 percent (Chart 2). On an unsmoothed, month-over-month basis, total IP was up 0.4 percent in October, and manufacturing IP was up 0.1 percent. North of the border, U.S. IP was down 0.1 percent in October after rising 0.1 percent in September. The correlation between IP in México and the U.S. has increased considerably with the rise of intra-industry trade between the two countries since the early 1990s. México's manufacturing sector could continue slowing down, particularly if U.S. consumer demand decelerates because of high inflation and higher interest rates." – Jesus Cañas, Senior Business Economist, and Ana Pranger, Research Analyst; Research Department, The Federal Reserve Bank of Dallas

Source: https://www.dallasfed.org/research/update/mex/2022/2208.aspx; 12/27/22

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U.S. Global Economic Indicators

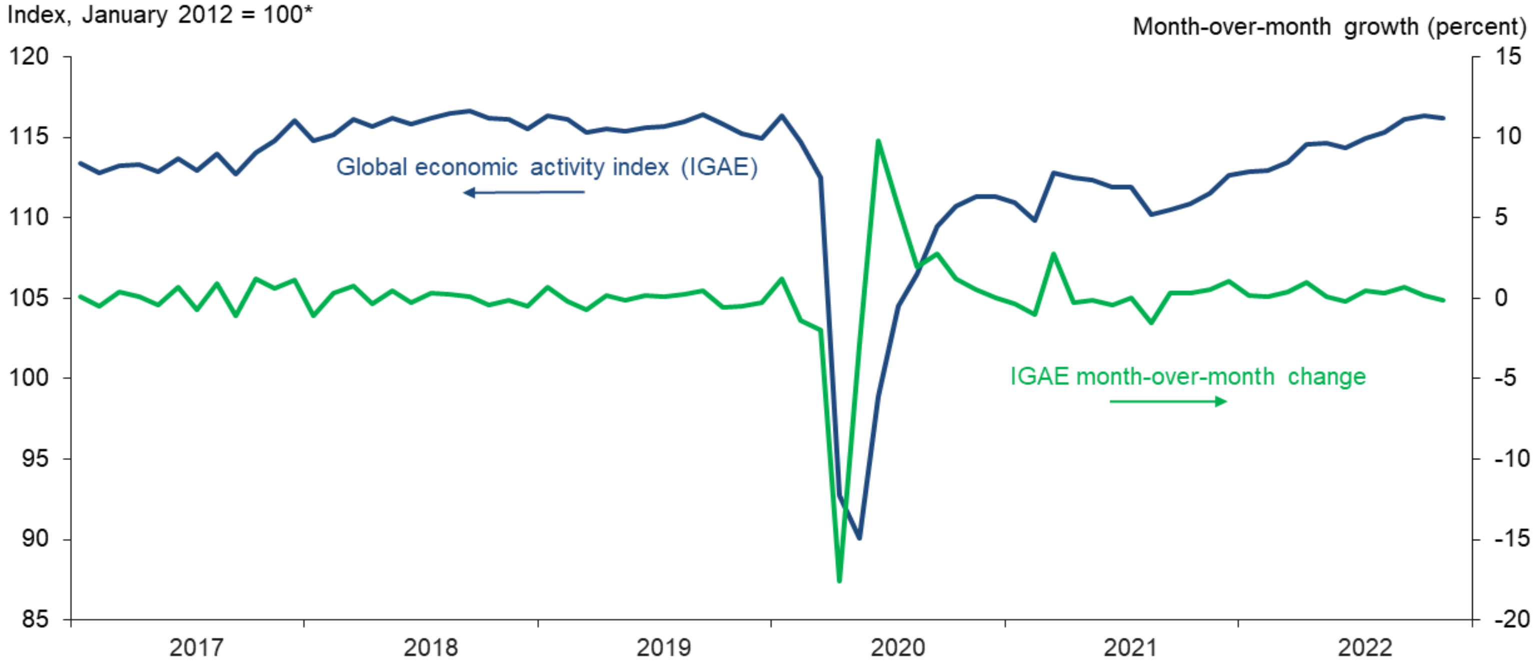
Table 1: Consensus Forecasts for 2022 México Growth, Inflation and Exchange Rate

Table 1: Consensus Forecasts for 2022 Mexico Growth, Inflation and Exchange Rate

	October	November
Real GDP growth (Q4/Q4)	2.1	3.0
Real GDP (average year/year)	2.1	2.8
CPI (Dec. '22/Dec. '21)	8.5	8.4
Exchange rate—pesos/dollar (end of year)	20.4	20.0

NOTE: CPI refers to Consumer Price Index. The survey period was Nov. 18–29.
SOURCE: Encuesta sobre las Expectativas de los Especialistas en Economía del Sector Privado: Noviembre de 2022 (communiqué on economic expectations, Banco de México, November 2022).

Chart 1
Economic activity ticks down



*Seasonally adjusted; real pesos.
NOTE: Data are through September 2022. Data for October and November 2022 are estimated by the National Institute of Statistics and Geography (INEGI) using its timely indicator of economic activity (IOAE).
SOURCE: Instituto Nacional de Estadística y Geografía (National Institute of Statistics and Geography).

Source: https://www.dallasfed.org/research/update/mex/2022/2208.aspx; 12/27/22

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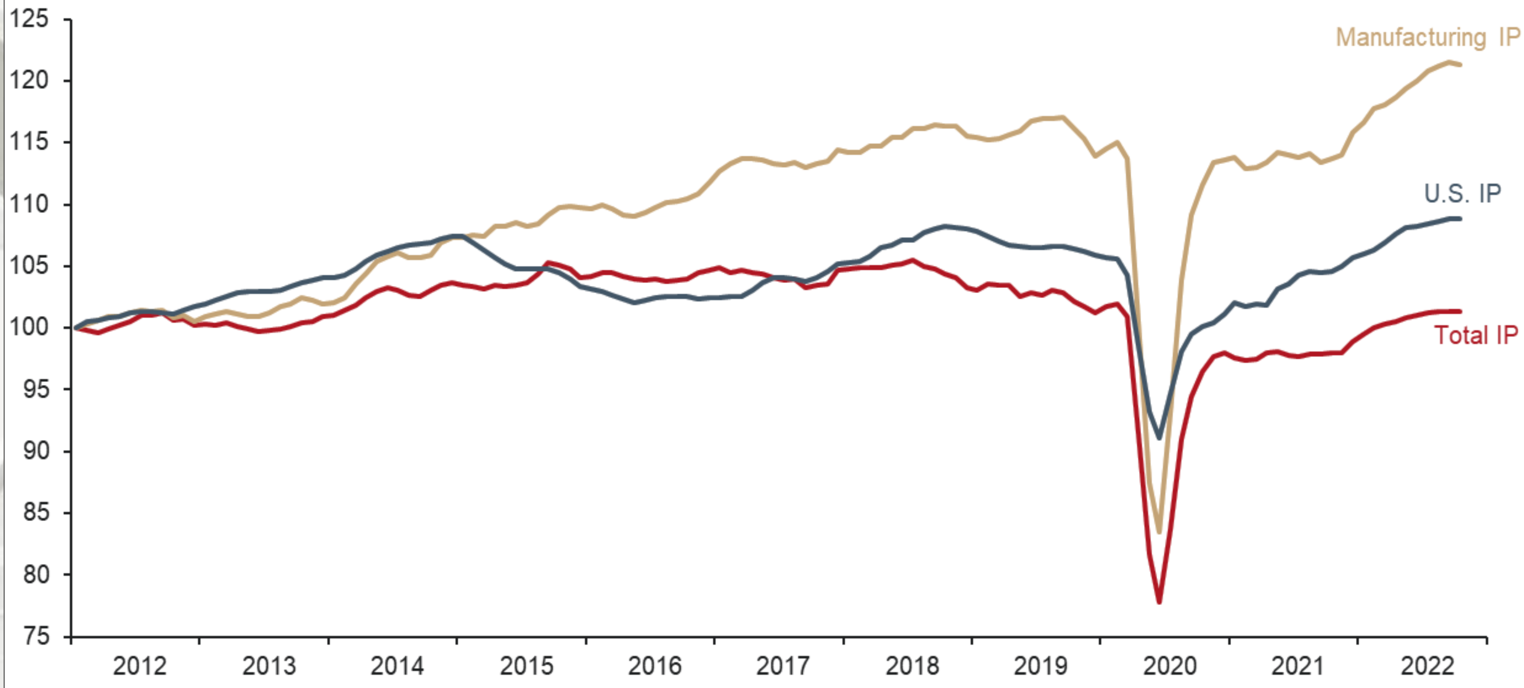
U.S. Global Economic Indicators

Chart 2
Industrial production flat; manufacturing ticks down
Index, January 2012 = 100*



*Seasonally adjusted, three-month moving average.
NOTES: Total and manufacturing IP refer to Mexico. U.S. IP refers to total industrial production in the United States. Data are through October 2022.
SOURCES: Instituto Nacional de Estadística y Geografía (National Institute of Statistics and Geography); Federal Reserve Board.

Source: https://www.dallasfed.org/research/update/mex/2022/2208.aspx; 12/27/22

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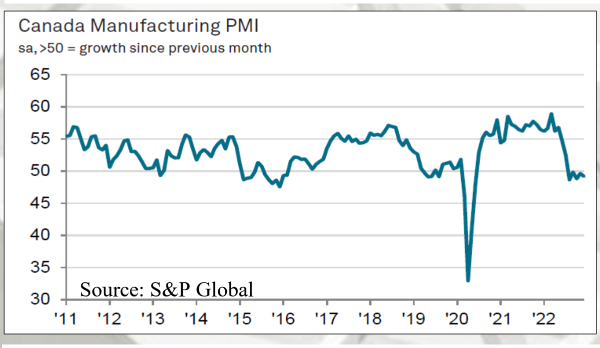
Private Indicators: Global



S&P Global Canada Manufacturing PMI®

"The seasonally adjusted S&P Global Canada Manufacturing Purchasing Managers' Index® (PMI®) registered 49.2 in December, down from 49.6 in November and below the 50.0 no-change mark for a fifth successive month. This marked the longest sequence of decline since a seven-month run from August 2015 to February 2016.

Manufacturing economy registers subdued performance during December

The Canadian manufacturing economy remained in mild contraction territory during December, characterised by further falls in output, new orders and purchasing activity. Inventories were drawn down as firms sought to realign stocks with current production requirements. Delivery delays continued, and again contributed to inflationary pressures which strengthened over the month. More positive was further employment growth, though the latest gains were relatively marginal and slower than in November. Confidence in the future was little changed at a below-par level.

Once again weakness was primarily centred on production and new orders. Both fell for a sixth month in succession, with output down to the greatest degree since August. Conversely, new orders declined at the weakest pace since July, through the rate of contraction was again solid. Firms widely commented that market demand was subdued as the corrosive effects on sales of inflation and uncertainty persisted. …

The Canadian manufacturing economy turned in another relatively subdued performance as 2022 closed, with both production and order books falling since the previous month. Firms reported again that weak market demand reflected both ongoing uncertainty and the negative impact of high inflation. Indeed, cost pressures turned slightly upward during December, arresting the recent easing trend. With supply constraints persisting, price stickiness remains a concern for companies, who remain on average subdued and concerned about the future

More positive was another month of employment growth, as firms sought to fill long-held vacancies, although even here the rate of expansion was marginal amid reports to a reluctance to hire at a time when production and sales continue to fall." – Paul Smith, Economics Director, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/5bb2413861f8478397419b4004880457; 1/3/23

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Private Indicators: Global

S&P Global Eurozone Manufacturing PMI®

"The S&P Global Eurozone Manufacturing PMI® posted below the 50.0 no-change mark in December for a sixth successive month, indicating a deterioration in business conditions facing goods producers across the euro area. However at 47.8, this was up from 47.1 in November and its highest reading for three months, signalling a softer downturn.

Manufacturing downturn eases further as supply conditions stabilise and inflation cools

The intensity of the eurozone manufacturing sector downturn eased in the final month of 2022 as softening inflationary pressures and more stable supply-chain conditions created some respite for goods producers. Weakness in client demand remained evident through slumping new order intakes, leading firms to make further inroads into their backlogs instead. Meanwhile, additional increases in pre- and post-production inventories were seen during December despite purchasing activity and production volumes falling. Nevertheless, employment growth continued, while business confidence also edged up to a seven-month high. A second successive monthly cooling in the rate of loss of factory output brings some cheer for the beleaguered manufacturing sector as we start the new year. The number of optimists regarding the year ahead has also now exceeded pessimists for the first time since August, hinting at a steady improvement in business confidence. Prospects have brightened amid signs of healing supply chains and a marked softening of inflationary pressures, as well as a calming of concerns over the region's energy crisis, thanks in part to government assistance. Hence the supply chain and inflation headwinds facing businesses have moderated from the heightened state of alarm seen in the autumn.

The brighter news is tempered, however, by the ongoing weakness of demand, with inflows of new orders continuing to fall at a far faster rate than companies are reducing output, suggesting that manufacturers will have to cut production sharply further in coming months unless demand revives soon. With the global economic backdrop darkening and eurozone interest rates rising again in December, risks to the demand outlook remain skewed to the downside.

As for the year ahead, in addition to watching for potential fiscal and monetary policy changes, high on the list of issues for manufacturers to watch as we head into 2023 will be the impact on supply chains and commodity prices from the changing response to COVID-19 in China, as well as the possibility of sharply changing energy prices amid the changing geopolitical situation, with the Ukraine-Russia war remaining the key threat to stability in the region." – Chris Williamson, Chief Business Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/60e74b1cea3546e3a73f0cfbe40687c0; 1/2/23

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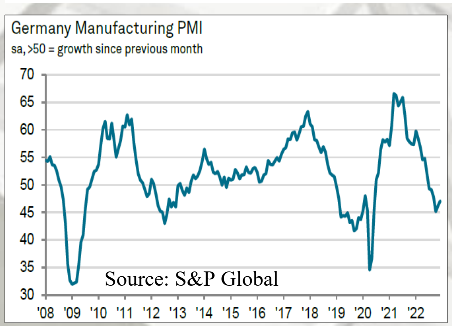
Private Indicators: Global



S&P Global/BME Germany Manufacturing PMI®

"The headline the seasonally adjusted S&P Global/BME Germany Manufacturing PMI® – a single-figure measure of sector performance derived from measures of new orders, output, employment, suppliers' delivery times and stocks of purchases – came in at 47.1 in December. Although still below the 50.0 threshold that separates growth from contraction, the latest reading was up from 46.2 in November and the highest for three months.

Downturn in manufacturing sector eases in December as supply chain frictions fade

The downturn in Germany's manufacturing sector eased at the end of the fourth quarter, helped by a further reduction in supply chain frictions, according to latest PMI® survey data. Improvements in supply-side conditions in turn contributed to a marked cooling of price pressures across the goods-producing sector. Businesses' expectations meanwhile improved notably, but they nevertheless remained pessimistic overall, with weaker demand conditions just one of the factors weighing on sentiment. …

Some of the gloom surrounding the German manufacturing sector has been lifted, with December's PMI survey showing the downturn in factory output levels easing, and less concern towards the year-ahead outlook.

The survey signalled better availability of materials and with it an easing of the decline in production. Still, rapidly falling new orders remains an issue for many manufacturers, particularly intermediate goods producers (i.e. makers of components for other businesses), with high stocks being just one of the factors weighing on demand. With expectations remaining pessimistic, it suggests that in companies' minds the downside risks to future production continue to outweigh any growth opportunities. The outlook has, however, improved compared to the situation a few months ago, with concerns towards gas prices and supplies having subsided somewhat.

On the price front, we're seeing further evidence of disinflationary forces in the manufacturing PMI survey. Although still historically elevated, the rate of factory gate price inflation has more than halved from its peak in the spring of last year, as supply chain bottlenecks ease and firms face greater difficulty passing on cost increases to customers." – Phil Smith, Principal Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/37ed53e3e43d4a85a3699dd4bf9372ff; 1/2/23

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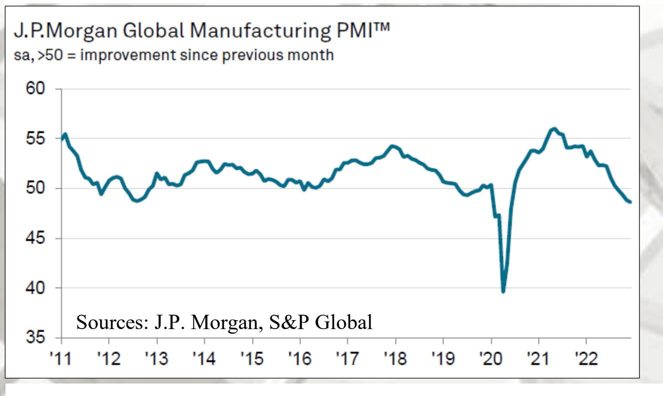
Private Indicators: Global



J.P. Morgan Global Manufacturing PMI™

"The J.P. Morgan Global Manufacturing PMI™ – a composite index produced by J.P. Morgan and S&P Global in association with ISM and IFPSM – fell to a 30-month low of 48.6 in December and remained below the neutral mark of 50.0 for the fourth straight month. Excluding the lows registered during the early months of the global pandemic, the current PMI reading is the lowest since the first half of 2009.

Global manufacturing downturn continues at end of 2022 as output and new orders fall further

December saw the downturn in the global manufacturing sector continue. Although the rate of decline in production eased slightly, the level of new business fell at a sharper pace. The four-largest industrial economies – mainland China, the US, the euro area and Japan – all saw output and new work contract. Global manufacturing production declined for the fifth successive month in December, although the rate of contraction was slightly slower than November's 29-month record. The trend in demand fared worse, with new orders falling at the quickest pace for over two-and-a-half years and new export business declining to one of the greatest extents since mid-2020.

Data broken down by sector suggested that the downturn in production was centred on the intermediate goods industry, as output rose slightly in both the consumer and investment goods categories. All three sub-sectors saw new order inflows deteriorate, with the steepest reduction again at intermediate goods producers. …

There were also signs that the outlook for production volumes may be stabilising, as business optimism rose to a four-month high and the cyclically sensitive new orders-to-finished goods inventories ratio edged higher. Post-production stocks fell for the first time in seven months, while input inventories declined for the second month in a row. Part of the reason for the reduction in the latter was a sharp drop in purchasing activity at manufacturers, as companies continued to dispose of safety stocks built up in response to supply disruptions earlier in 2022. …" – Bennett Parrish, Global Economist, J.P. Morgan

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/61782d8eac584849b191087c4a41ddee; 1/3/23

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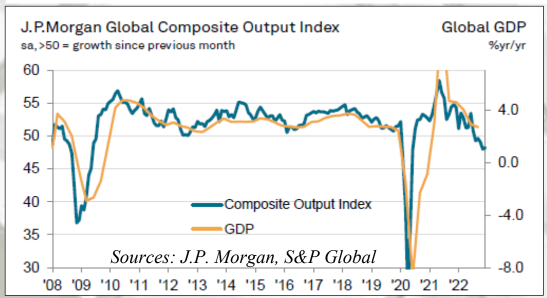
Private Indicators: Global



J.P. Morgan Global Composite PMI™

"The J.P. Morgan Global Composite Output Index – produced by J.P. Morgan and S&P Global in association with ISM and IFPSM – posted 48.2 in December, up a few ticks from November's 29-month low of 48.0. Although signalling a slight easing in the rate of contraction, the reading was still among the weakest registered over the past 15 years.

Downturn in global economic activity moderates in December despite deeper contraction in new orders

The December PMI™ surveys indicated a further contraction of global economic activity. Output decreased for the fifth successive month, as new order intakes fell at the fastest pace in over two-and-a-half years. Job creation subsequently ground to a near-standstill. Similar rates of contraction were signalled in both the manufacturing and service sectors, with the former seeing a slight deceleration and the latter the same pace as the prior month.

A deeper interrogation of the data by sector pointed to broader-based weakness in the services economy, with all three categories of activity covered (business, consumer and financial services) seeing declines. In comparison, the manufacturing downturn was centred on the intermediate goods sector, as consumer and investment goods producers both registered mild upturns. …

New business fell for the fifth month in a row in December. Excluding the lows seen during the early pandemic months, the rate of decline was the steepest since May 2009. International trade flows also deteriorated further. New export orders decreased for the tenth month running and at a rate close to October's near two-and-a-half year record. The weaker trend in demand meant that backlogs of work fell for the sixth consecutive month. …

The global all-industry output PMI rose by 0.2-pts in December. Combined with the uplift in the equivalent index for manufacturing, and stabilisation in the services index, the latest set of surveys raise hopes that the downturn in global economic activity bottomed out at the end of 2022. A recovery in confidence levels also offsets some of the weakness in the demand and labor market indexes. Inflationary concerns moderated, as rates of increase in input costs and selling prices eased." – Bennett Parrish, Global Economist, J.P. Morgan

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/a2054171fdf64194bd2aebd52d16c665; 12/5/22

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Private Indicators
Associated Builders and Contractors

Nonresidential Construction Spending Down 0.3% in November

“National nonresidential construction spending grew 0.9% in November, according to an Associated Builders and Contractors analysis of data published by the U.S. Census Bureau. On a seasonally adjusted annualized basis, nonresidential spending totaled $930.1 billion for the month.

Spending was up on a monthly basis in nine of the 16 nonresidential subcategories. Private nonresidential spending was up 1.7%, while public nonresidential construction spending was down 0.1% in November.

“The average nonresidential contractor starts 2023 with considerable backlog,” said ABC Chief Economist Anirban Basu. “Not coincidentally, contractors also have significant confidence regarding current year prospects, according to ABC’s Construction Confidence Index, which indicates expectations for growth in sales and employment with margins remaining stable.

“November’s construction spending report suggests that this confidence is warranted,” said Basu. “However, there are countervailing considerations. First, growth in nonresidential construction spending in November was not especially broad. Much of the growth came from the manufacturing category, which is partially attributable to construction related to large-scale chip manufacturing facilities. The balance of growth came mostly from conservation and development, which includes flood control expenditures. Were it not for those two categories, nonresidential construction spending would have been roughly flat in November.”” – Erika Walter, Director of Media Relations, ABC

Source: https://www.abc.org/News-Media/News-Releases/entryid/19733/nonresidential-construction-spending-increases-1-in-november-says-abc; 1/3/23

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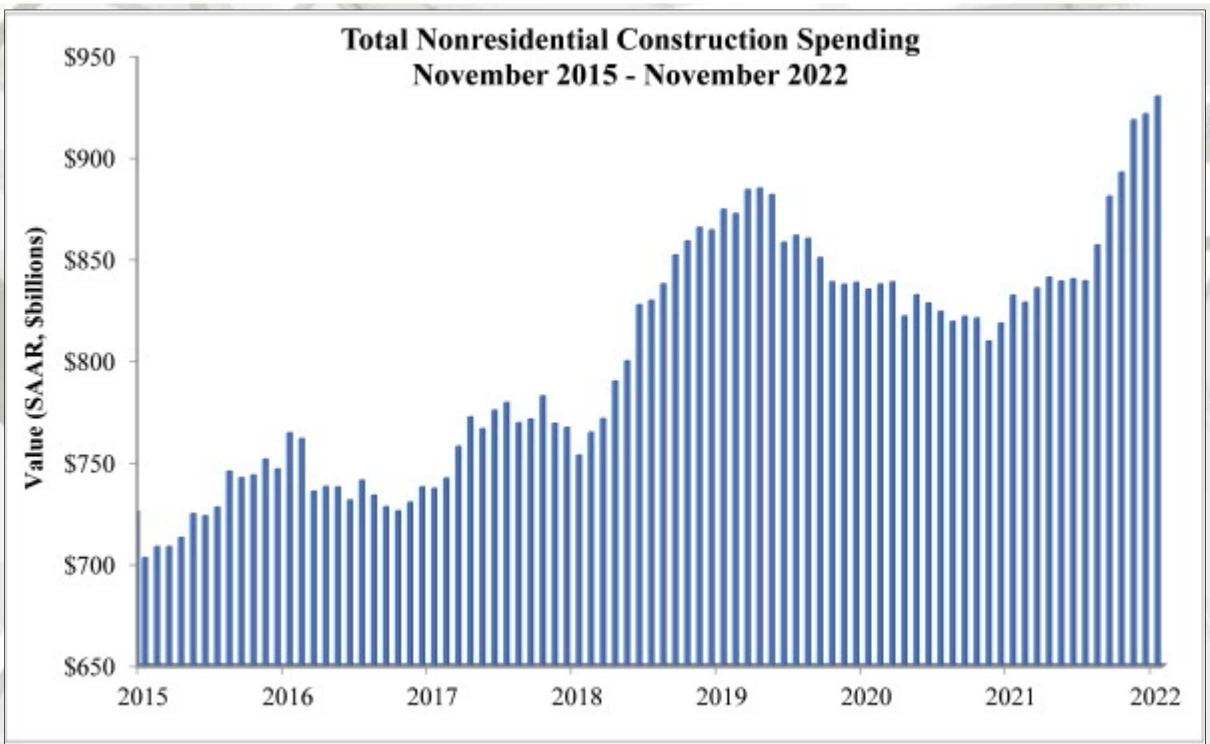
Private Indicators
Associated Builders and Contractors



Source: U.S. Census Bureau

Associated Builders and Contractors

"""Second, backlog could dry up," said Basu. "Anecdotal evidence suggests that banks are more cautious in their lending to the commercial real estate and multifamily segments. Fears of recession this year remain pervasive in an environment characterized by high and rising interest rates. It will be interesting to see how well backlog will hold up as contractors continue to build and the economy heads toward what is likely to be a Federal Reserve-induced recession."""– Erika Walter, Director of Media Relations, ABC

Source: https://www.abc.org/News-Media/News-Releases/entryid/19733/nonresidential-construction-spending-increases-1-in-november-says-abc; 1/3/23

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Private Indicators
Associated Builders and Contractors

Nonresidential Spending Growth, Millions of Dollars, Seasonally Adjusted Annual Rate

	November 2022	October 2022	November 2021	1-Month % Change	12-Month % Change
Total Construction	$1,807,505	$1,803,208	$1,665,191	0.2%	8.5%
Residential	$877,370	$881,782	$832,997	-0.5%	5.3%
Nonresidential	$930,135	$921,426	$832,195	0.9%	11.8%
Conservation and development	$10,896	$9,507	$7,971	14.6%	36.7%
Manufacturing	$125,601	$118,014	$87,868	6.4%	42.9%
Religious	$2,895	$2,781	$2,894	4.1%	0.0%
Power	$109,068	$108,101	$119,155	0.9%	-8.5%
Transportation	$59,392	$58,955	$55,627	0.7%	6.8%
Sewage and waste disposal	$33,328	$33,152	$27,822	0.5%	19.8%
Office	$87,961	$87,642	$85,535	0.4%	2.8%
Educational	$100,593	$100,374	$97,298	0.2%	3.4%
Lodging	$20,308	$20,265	$15,620	0.2%	30.0%
Commercial	$120,669	$120,754	$100,282	-0.1%	20.3%
Health care	$53,985	$54,053	$50,320	-0.1%	7.3%
Communication	$24,780	$24,960	$24,910	-0.7%	-0.5%
Highway and street	$115,973	$117,143	$101,044	-1.0%	14.8%
Amusement and recreation	$27,891	$28,248	$26,195	-1.3%	6.5%
Public safety	$11,697	$11,893	$10,521	-1.6%	11.2%
Water supply	$25,097	$25,585	$19,133	-1.9%	31.2%
Private Nonresidential	$558,344	$549,157	$495,932	1.7%	12.6%
Public Nonresidential	$371,791	$372,268	$336,263	-0.1%	10.6%

Source: U.S. Census Bureau

Source: https://www.abc.org/News-Media/News-Releases/entryid/19733/nonresidential-construction-spending-increases-1-in-november-says-abc; 1/3/23

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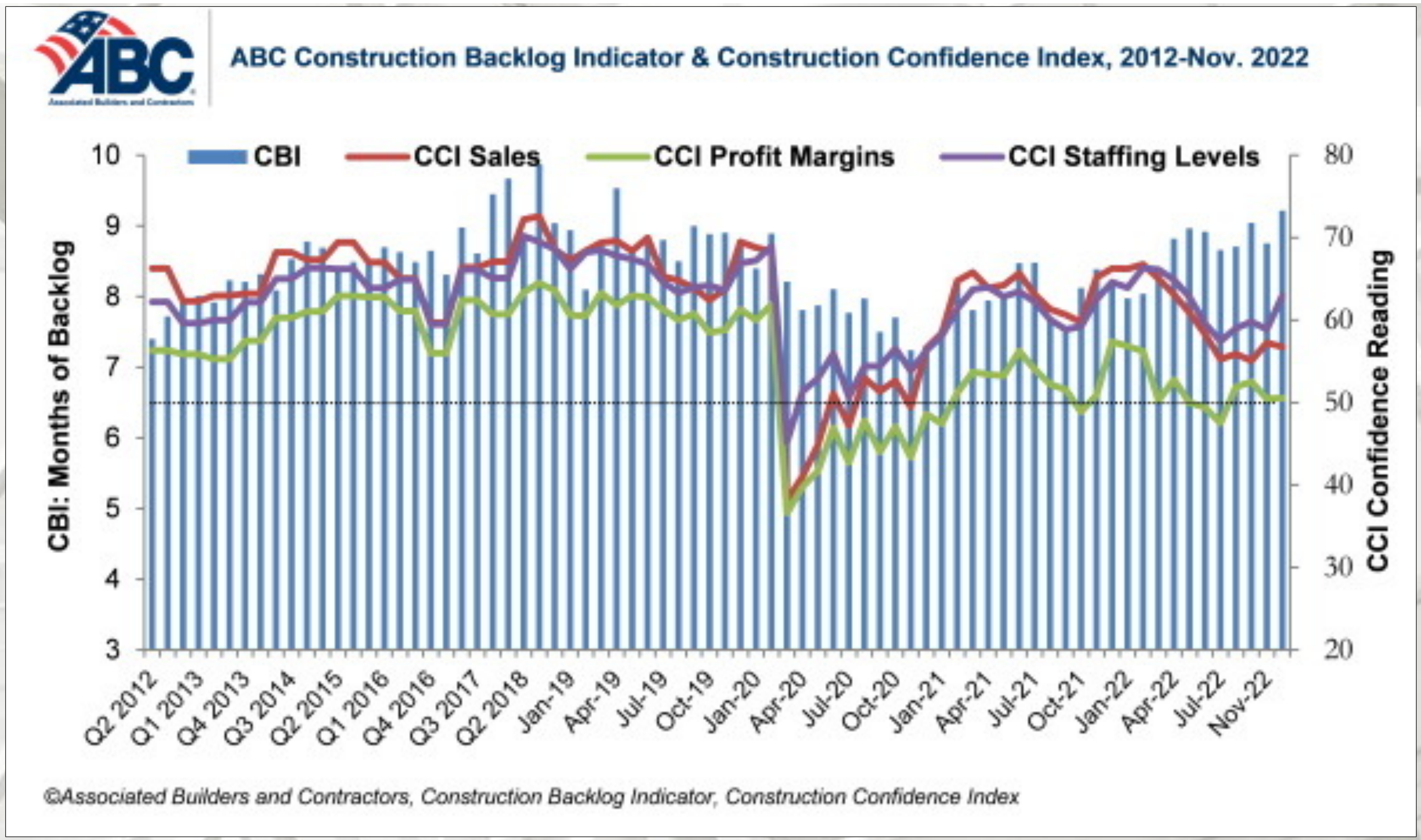
Associated Builders and Contractors



Source: https://www.abc.org/News-Media/News-Releases/entryid/19722/commercial-institutional-and-health-care-construction-drive-abcs-backlog-indicator-to-highest-level-since-q2-2019; 12/13/22

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Private Indicators
Associated Builders and Contractors

ABC's Construction Backlog Indicator Flat in December at Highest Level Since Q2 2019

"Associated Builders and Contractors reports today that its Construction Backlog Indicator remained unchanged at 9.2 months in December, according to an ABC member survey conducted Dec. 20, 2022, to Jan. 5, 2023. The reading is one month higher than in December 2021.

Backlog remains at its highest level since the second quarter of 2019. This has been especially true in the South, which has been the case for many of the past several years.

ABC's Construction Confidence Index reading for profit margins and sales increased in December, while the reading for staffing levels moved lower. All three readings remain above the threshold of 50, indicating expectations of growth over the next six months.

"Contractors enter the new year with plenty of optimism," said ABC Chief Economist Anirban Basu. "Backlog remains elevated, which means that, even if the economy were to enter recession this year, contractors would likely be insulated from significant harm. Rather than fixate on the possibility of a recession, many contractors remain focused on growth, with expectations for rising sales and staffing levels over the next half year. Even the reading on profit margins increased this month, perhaps reflecting an improved supply chain.

"While 2023 continues to be filled with promise, contractors may soon show more concern," said Basu. "Anecdotal evidence suggests that financing commercial real estate projects is more difficult, due in part to recession predictions. The general increase in the cost of capital has also jeopardized many projects, with certain contractors noticing an increase in postponements."" – Erika Walter, Director of Media Relations, ABC

Source: https://www.abc.org/News-Media/News-Releases/entryid/19740/abcs-construction-backlog-indicator-flat-in-december-at-highest-level-since-q2-2019; 1/10/23

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Private Indicators
Associated Builders and Contractors

Construction Backlog Indicator

	Dec. 2022	Nov. 2022	Dec. 2021	1-Month Net Change	12-Month Net Change
Total	**9.2**	**9.2**	**8.2**	**0.0**	**1.0**
Industry					
Commercial & Institutional	9.4	9.6	8.5	-0.2	0.9
Heavy Industrial	8.2	9.5	7.7	-1.3	0.5
Infrastructure	10.0	6.7	7.3	3.3	2.7
Region					
Middle States	8.1	7.8	8.2	0.3	-0.1
Northeast	8.9	8.6	7.5	0.3	1.4
South	11.5	11.5	9.0	0.0	2.5
West	7.2	8.3	8.4	-1.1	-1.2
Company Size					
<$30 Million	7.9	8.5	7.6	-0.6	0.3
$30-$50 Million	13.1	9.8	8.7	3.3	4.4
$50-$100 Million	11.1	10.6	11.3	0.5	-0.2
>$100 Million	14.2	12.7	10.7	1.5	3.5

Source: https://www.abc.org/News-Media/News-Releases/entryid/19740/abcs-construction-backlog-indicator-flat-in-december-at-highest-level-since-q2-2019; 1/10/23

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Private Indicators
Associated Builders and Contractors

Construction Confidence Index

Response	December 2022	November 2022	December 2021
CCI Reading			
Sales	59.0	56.8	66.3
Profit Margins	52.3	50.5	57.4
Staffing	60.9	63.0	64.6
Sales Expectations			
Up Big	9.1%	4.3%	11.5%
Up Small	44.6%	44.9%	53.6%
No Change	24.6%	28.6%	25.1%
Down Small	16.6%	17.8%	8.2%
Down Big	5.1%	4.3%	1.6%
Profit Margin Expectations			
Up Big	2.9%	2.7%	2.7%
Up Small	36.0%	29.2%	45.4%
No Change	35.4%	38.9%	33.3%
Down Small	18.9%	25.9%	15.8%
Down Big	6.9%	3.2%	2.7%
Staffing Level Expectations			
Up Big	4.6%	5.9%	7.7%
Up Small	50.9%	54.1%	53.0%
No Change	31.4%	27.6%	31.1%
Down Small	9.7%	10.8%	6.6%
Down Big	3.4%	1.6%	1.6%

Source: https://www.abc.org/News-Media/News-Releases/entryid/19740/abcs-construction-backlog-indicator-flat-in-december-at-highest-level-since-q2-2019; 1/10/23

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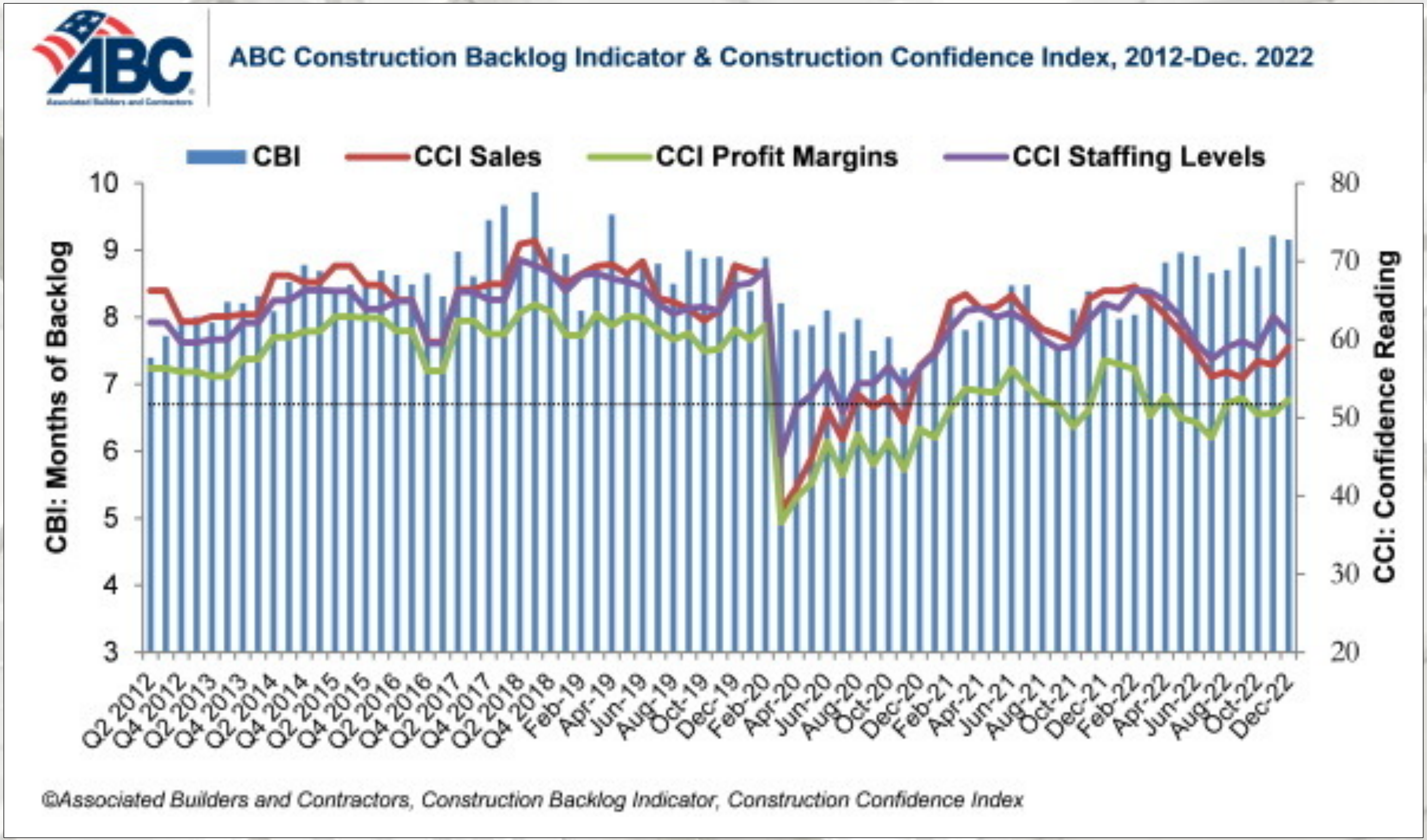
Private Indicators
Associated Builders and Contractors



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Private Indicators
American Institute of Architects (AIA)

Architecture Billings Index November 2022

Architecture firm billings decline further

“After architecture firms experienced their first decline in billings in nearly two years in October, business conditions softened further in November, as the AIA’s Architecture Billings Index (ABI) score fell to 46.6 (any score below 50 indicates a decline in firm billings). While inquiries into new projects continued to rise modestly, the value of new design contracts also declined further in November. This indicates that not only are firms seeing a decline in current work, but that less new work is entering the pipeline as well.” – Katharine Keane, Senior Associate Editor, The American Institute of Architects

“Given the slowdown in new project work, many architecture firms will rely on their near record levels of backlogs to support revenue. Still, firm leaders remain largely optimistic about future business trends. Almost two-thirds of architecture firms project that 2023 will be either a good year or great year for their firm.” – Kermit Baker, Chief Economist, AIA

Source: https://www.aia.org/pages/6576981-abi-november-2022-architecture-firm-billin; 12/20/22

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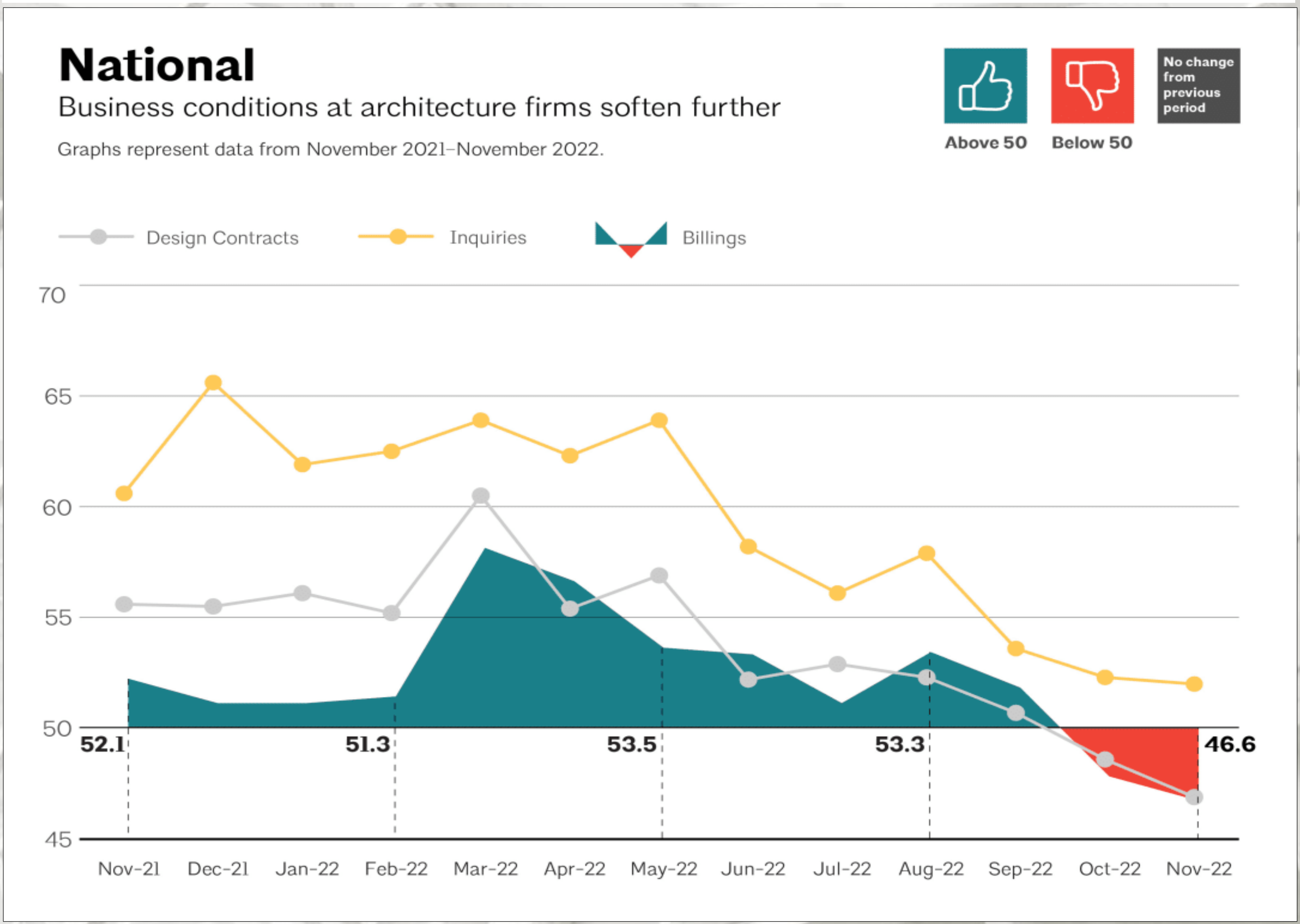
Private Indicators
American Institute of Architects (AIA)



Source: https://www.aia.org/pages/6576981-abi-november-2022-architecture-firm-billin; 12/20/22

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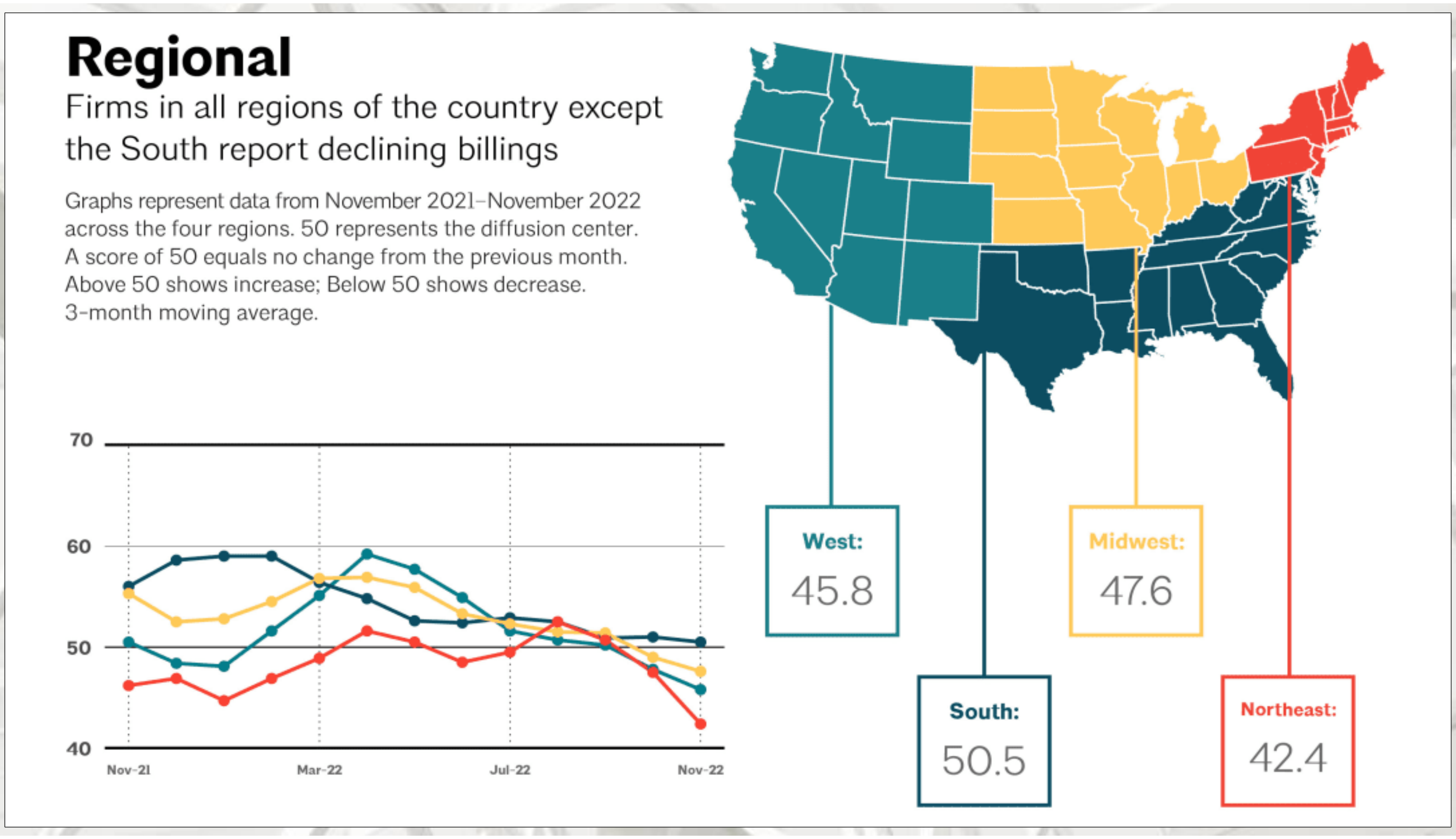
Private Indicators: AIA



Region

"Business conditions also softened in nearly all regions of the country in November. Only firms located in the South, where firms have seen some of the strongest growth throughout the post-pandemic period, reported a small increase in billings. Firms in the Northeast have seen the largest decline in billings so far, and only experienced a few months of growth earlier this year before returning to negative territory." – Katharine Keane, Senior Associate Editor, The American Institute of Architects

Source: https://www.aia.org/pages/6576981-abi-november-2022-architecture-firm-billin; 12/20/22

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Private Indicators: AIA

Sector

"Firms of all specializations also saw weaker business conditions this month, including those with an institutional specialization, where conditions had been fairly robust recently." – Katharine Keane, Senior Associate Editor, The American Institute of Architects

Source: https://www.aia.org/pages/6576981-abi-november-2022-architecture-firm-billin; 12/20/22

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Private Indicators

Dodge Data & Analytics

Total Construction Starts Fall in November

Most sectors see pullback as fewer mega-projects break ground

"Total construction starts fell 18% in November to a seasonally adjusted annual rate of $926.3 billion, according to Dodge Construction Network. During the month, nonresidential building starts lost 25%, nonbuilding shed 21%, and residential starts dropped 5%.

Year-to-date, total construction starts were 14% higher in the first 11 months of 2022 compared to the same period of 2021. Nonresidential building starts rose 36% over the year, residential starts were down 1%, and nonbuilding starts were up 16%.

"Month-to-month volatility in construction activity continues to reign supreme as uncertainty mounts over the economy in 2023," said Richard Branch, chief economist for Dodge Construction Network. "Higher interest rates and fear of recession are first and foremost on the mind of most builders and developers, and potentially restraining starts activity. However, as some material prices head lower and more public dollars come into the market for infrastructure and manufacturing projects, the year is ending with a fair bit of momentum. Next year will be a challenge, but nothing like the sector faced during the Great Recession."" – Cailey Henderson, Account Manager, 104 West Partners

Source: https://www.construction.com/news/November-Starts; 12/19/22

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Private Indicators

Dodge Data & Analytics

"**Nonresidential building** fell 25% in November to a seasonally adjusted annual rate of $361.6 billion. In November commercial starts fell 33%, institutional starts were 12% lower, and manufacturing dropped 69%. Within the entire nonresidential building sector, the only categories to show a gain on a month-to-month basis were healthcare, public buildings, religious, and recreation starts. Through the first 11 months of 2022, nonresidential building starts were 36% higher than the first 11 months of 2021. Commercial starts grew 25%, and institutional starts rose 19%. Manufacturing starts were 160% higher on a year-to-date basis.

The largest nonresidential building projects to break ground in November were the $1.1 billion Harbor-UCLA Medical Center in Torrance, CA, the $800 million Project Velvet Meta data center in Kansas City, MO, and the $500 million Eli Lilly manufacturing campus in Concord, NC.

Residential building starts fell 5% in November to a seasonally adjusted annual rate of $346.5 billion. Single family starts lost 9%, while multifamily starts gained 1%. Through the first 11 months of 2022, residential starts were 1% lower when compared to the same time frame in 2021. Multifamily starts were up 26%, while single family housing slipped 12%.

The largest multifamily structures to break ground in November were the $345 million 601 N. Central Ave. mixed-use building in Phoenix, AZ, the $350 million YMCA of Middle Tennessee residential tower in Nashville, TN, and the $250 million Halletts Point (Building 3) in Astoria, NY.

Regionally, total construction starts in November fell in all five regions. " – Richard Branch, Chief Economist, Dodge Data & Analytics

Source: https://www.construction.com/news/November-Starts; 12/19/22

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Private Indicators

November 2022 CONSTRUCTION STARTS

MONTHLY CONSTRUCTION STARTS

(Millions of Dollars, Seasonally Adjusted Annual Rate)

	Nov 2022	Oct 2022	% Change
Nonresidential Building	$361,644	$479,988	-25
Residential Building	346,537	365,752	-5
Nonbuilding Construction	218,139	277,584	-21
Total Construction	$926,320	$1,123,324	-18

YEAR-TO-DATE CONSTRUCTION STARTS

Unadjusted Totals, in Millions of Dollars

	11 Mos. 2022	11 Mos. 2021	% Change
Nonresidential Building	$373,937	$275,759	36
Residential Building	385,517	390,696	-1
Nonbuilding Construction	224,083	193,112	16
Total Construction	$983,537	$859,567	14

Source: Dodge Data & Analytics

Source: https://www.construction.com/news/November-Starts; 12/19/22

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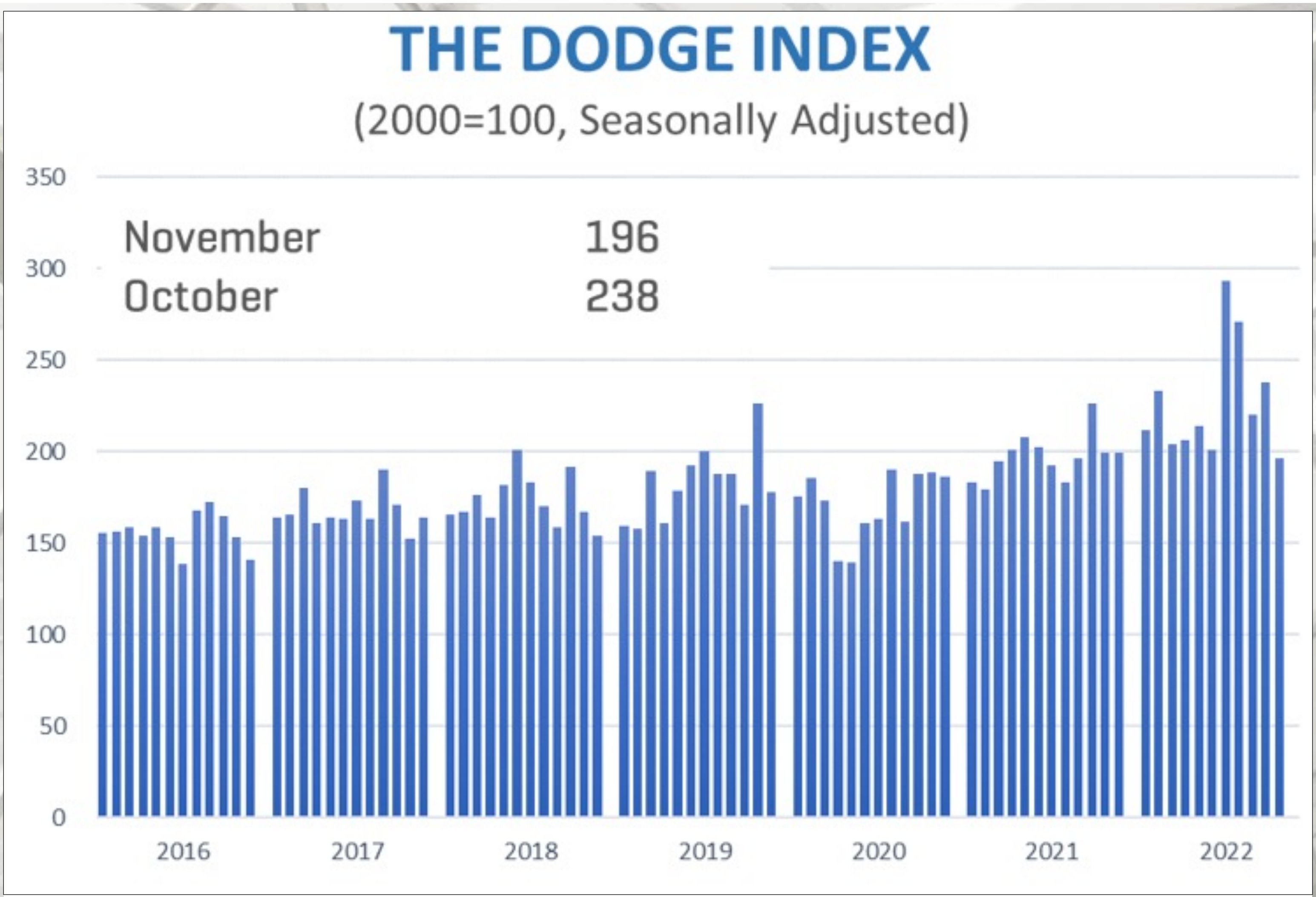
Private Indicators



Source: Dodge Data & Analytics

Source: https://www.construction.com/news/November-Starts; 12/19/22

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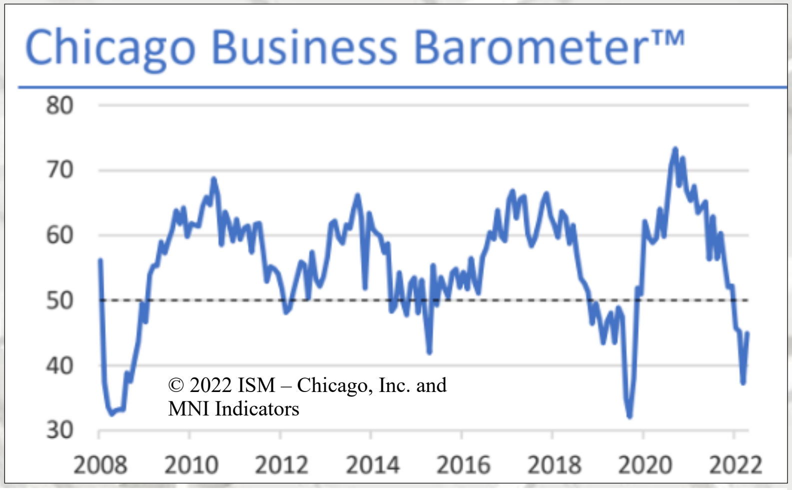
Private Indicators

MNI Chicago

"The Chicago Business Barometer™, produced with MNI, increased by 7.7 points to 44.9 in December. This month's recovery broke a three-month streak of falls, yet the index remained contractive for a fourth consecutive month..



Chicago Business Barometer™ – Improved to 44.9 in December

December Chicago Report™ Signals a Softer Downturn

- The majority of sub-indexes improved over the month, led by Order Backlogs and New Orders whilst upticks in Production and Supplier Deliveries were more muted. Inventories, Employment and Prices Paid all weakened and only Order Backlogs, Supplier Deliveries and Prices Paid were above 50.
- Production rose by 3.3 points to 39.2 in December, improving from November's 29-month low. Material and staff shortages were cited as hampering production, which remained below the 50-breakeven mark since September.
- New Orders jumped by 13.4 points to 44.1, the highest since August. A number of last-minute and year-end blanket orders has provided a solid December boost.
- Order Backlogs saw the largest December increase, rising by 17.6 points to 53.7, giving back more than the November fall. Order Backlog levels are now again in line with the 12-month average of 54.4, due to the unanticipated boost in December orders coupled with continued shortages." – Les Commons, Senior Economist and Lucy Hager, Economist, MNI Indicators

Source: https://www.ism-chicago.org/index.cfm; 12/30/22

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Private Indicators

MNI Chicago

Chicago Business Barometer™

- Employment weakened by 6.3 points to 40.8 in December, the second lowest level since H1-2020 and only marginally above the September low. Firms struggled to replace employees that had retired or changed workplaces.
- Supplier Deliveries rose by 2.8 points to 52.7, as improved response times were experienced.
- Inventories fell by 11.8 points to a five-month low of 48.0 as firms continued to normalize stock levels.
- Prices Paid eased a further 2.1 points to 64.1 in December, the lowest since September 2020. The index has followed a general downward trajectory since November 2021. Some firms are expecting higher labor costs, whilst others highlighted lower demand and falling oil and steel prices pushing prices down. Firms are actively pushing back against higher supplier pricing plans.

We asked firms how they see their capacity utilization rate in this year's lead-up to the holiday season compared to last year. 26% of respondents see capacity utilization at 90%, 21% see it at 80% and 18% at 75% capacity utilization. Close to 12% of firms see production slowing to less than 70% utilization, whilst 18% of firms were unsure as outlooks remain clouded. Only 6% anticipate 100% capacity utilization." – Les Commons, Senior Economist and Lucy Hager, Economist, MNI Indicators

Source: https://www.ism-chicago.org/index.cfm; 12/30/22

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Private Indicators

The Conference Board Leading Economic Index® (LEI)

LEI for the U.S. Declined Again in November

"**The Conference Board Leading Economic Index®** (LEI) for the U.S. decreased 0.8 percent by 1.0 percent in November 2022 to 113.5 (2016=100), following a decline of 0.9 percent in October. The LEI is now down 3.7 percent over the six-month period between May and November 2022 – a much steeper rate of decline than its 0.8 percent contraction over the previous six-month period, between November 2021 and May 2022.

The US LEI fell sharply in November, continuing the slide it's been on for most of 2022 after peaking in February. Only stock prices contributed positively to the US LEI in November. Labor market, manufacturing, and housing indicators all weakened – reflecting serious headwinds to economic growth. Interest rate spread and manufacturing new orders components were essentially unchanged in November, confirming a lack of economic growth momentum in the near term.

Despite the current resilience of the labor market – as revealed by the US CEI in November – and consumer confidence improving in December, the US LEI suggests the Federal Reserve's monetary tightening cycle is curtailing aspects of economic activity, especially housing. As a result, we project a US recession is likely to start around the beginning of 2023 and last through mid-year.

The Conference Board Coincident Economic Index® (CEI) for the U.S. increased by 0.1 percent in November 2022 to 109.4 (2016=100), after an increase of 0.2 percent in October. The CEI rose by 1.2 percent over the six-month period from May to November 2022, faster than its growth of 0.7 percent over the previous six-month period. CEI components – payroll employment, personal income less transfer payments, manufacturing trade and sales, and industrial production – are included among the data used to determine recessions in the US. Only the industrial production index contributed negatively to the CEI in November.

The Conference Board Lagging Economic Index® (LAG) for the U.S. increased by 0.2 percent in November 2022 to 116.4 (2016 = 100), following no change in October. The LAG is up 2.7 percent over the six-month period from May to November 2022, slower than its growth of 4.0 percent over the previous six-month period." – Ataman Ozyildirim, Senior Director of Economic Research, The Conference Board

Source: https://www.conference-board.org/data/bcicountry.cfm; 12/22/22

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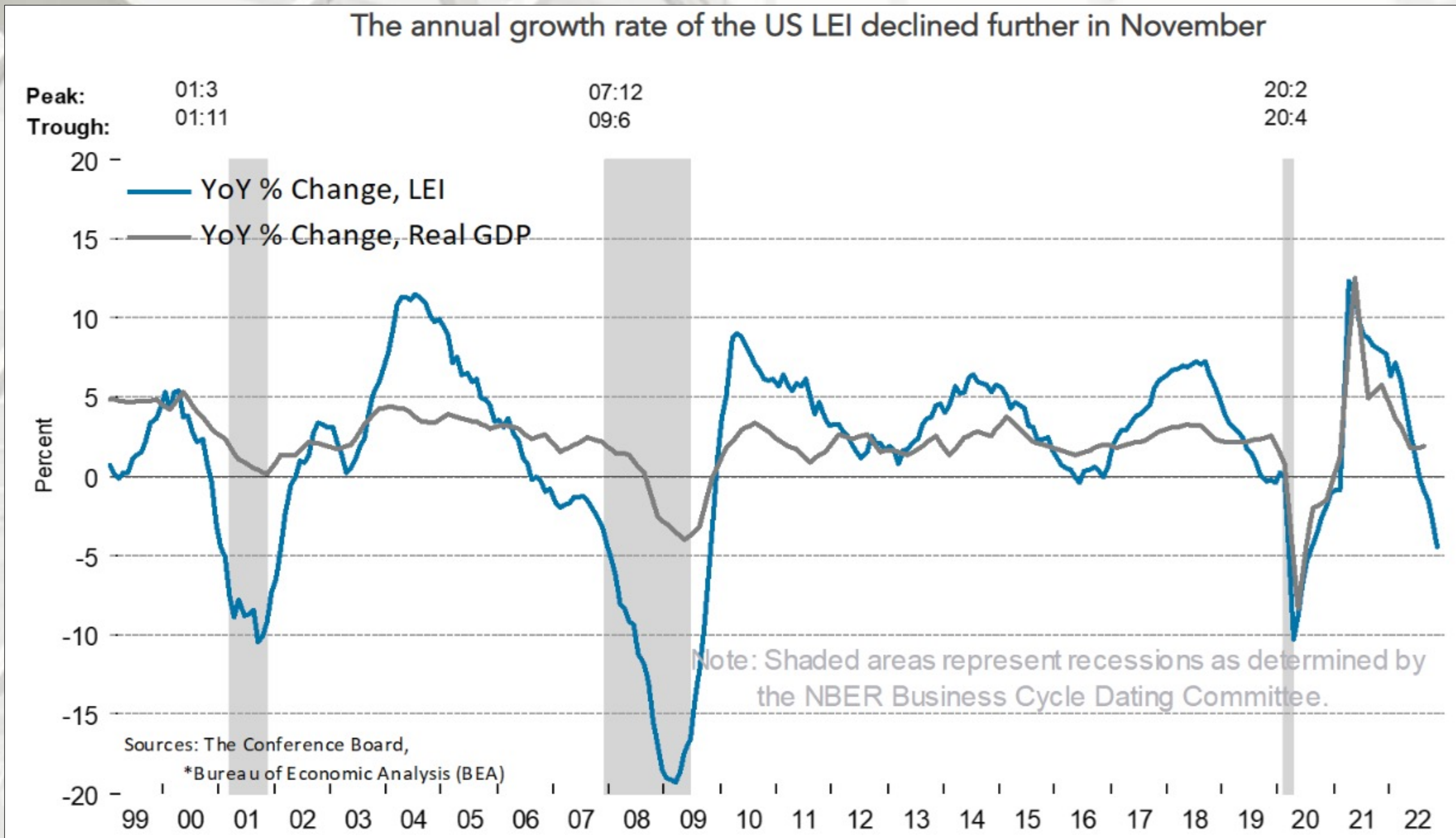
Private Indicators

The Conference Board Leading Economic Index® (LEI) for the U.S. Declined in November

LEI for the U.S. Declined Again in November



Source: https://www.conference-board.org/data/bcicountry.cfm; 12/22/22

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Private Indicators

Equipment Leasing and Finance Association's Survey of Economic Activity: Monthly Leasing and Finance Index

November New Business Volume Up 9 Percent Year-over-year, Down 24 Percent Month-to-month, Up 6 Percent Year-to-date

"The **Equipment Leasing and Finance Association's** (ELFA) **Monthly Leasing and Finance Index (MLFI-25)**, which reports economic activity from 25 companies representing a cross section of the $1 trillion equipment finance sector, showed their overall new business volume for November was $8.6 billion, up 9 percent year-over-year from new business volume in November 2021. Volume was down 24 percent from $11.3 billion in October. Year-to-date, cumulative new business volume was up 6 percent compared to 2021.

Receivables over 30 days were 1.7 percent, unchanged from the previous month and down from 2.2 percent in the same period in 2021. Charge-offs were 0.27 percent, up from 0.26 percent the previous month and up from 0.20 percent in the year-earlier period.

Credit approvals totaled 77.7 percent, up from 77.0 percent in October. Total headcount for equipment finance companies was down 4.7 percent year-over-year.

Separately, the Equipment Leasing & Finance Foundation's Monthly Confidence Index (MCI-EFI) in December is 45.9, an increase from the November index of 43.7." – Amy Vogt, Vice President, Communications and Marketing, ELFA

"Moving into the final month of the year, equipment finance companies report solid performance. Rising interest rates seem to have little or no effect on origination volume in November. The economy grew in Q3 – albeit slowly – and is expected to do so again in the current quarter. Labor markets are stable, inflation woes appear to be abating, consumers are spending, and businesses continue to expand and grow: a recipe for stable growth by providers of equipment financing" – Ralph Petta, President and CEO, ELFA

"New volume continues to be very strong despite continued rate hikes. Charge-offs and delinquency are remaining in check and overall credit quality is good. Employee count is hard to measure because many companies wish to expand, but are having hard times finding people." – Patrick Hoiby, President, Equify Financial, LLC

Source: https://www.elfaonline.org/news/press-room/press-releases/details/2022/12/21/equipment-leasing-and-finance-association-s-survey-of-economic-activity-monthly-leasing-and-finance-index; 12/21/22

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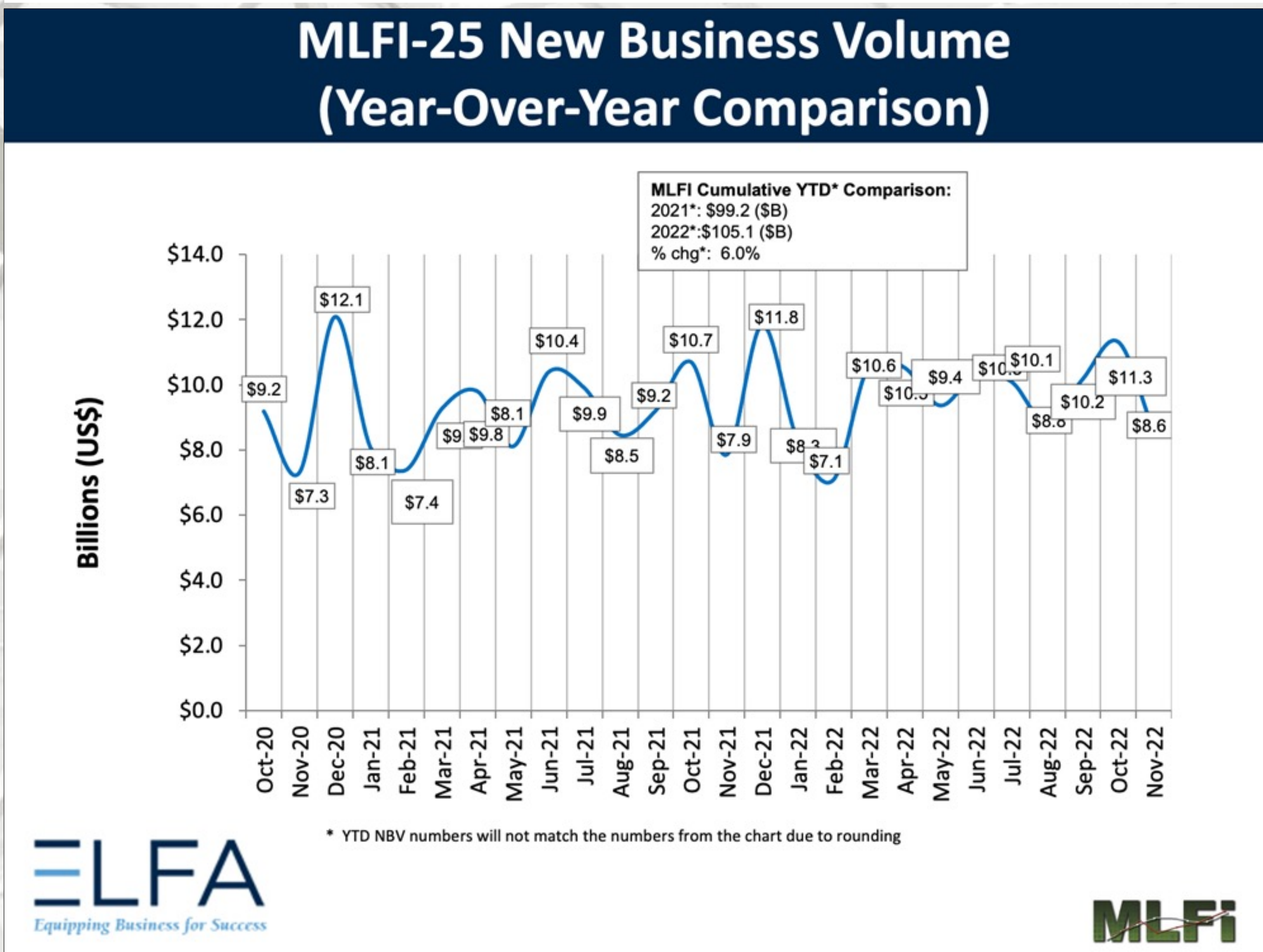

Source: https://www.elfaonline.org/news/press-room/press-releases/details/2022/12/21/equipment-leasing-and-finance-association-s-survey-of-economic-activity-monthly-leasing-and-finance-index; 12/21/22

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Private Indicators

S&P Global U.S. Manufacturing PMI™

US manufacturing operating conditions deteriorate at fastest rate since May 2020

"The seasonally adjusted S&P Global US Manufacturing Purchasing Managers' Index™ (PMI™) posted 46.2 in December, down from 47.7 in November, but matched the earlier released 'flash' estimate. The latest data signalled the fastest decline in operating conditions since May 2020, and was among the sharpest since 2009.

Manufacturing firms in the US indicated a solid decline in the health of the sector during December, according to the latest PMI™ data from S&P Global. The downturn stemmed from weak client demand which drove faster contractions in output and new orders. Muted domestic and foreign customer demand led to a slower rise in employment. Staffing numbers rose only fractionally as pressure on capacity waned and backlogs of work fell sharply. At the same time, firms scaled back their purchasing activity as excess stocks built earlier in the year were utilised to fulfil orders.

Meanwhile, lower prices for some inputs such as metals and fuel led to the slowest uptick in cost burdens since July 2020. In an effort to drive sales and pass on cost savings, firms hiked their selling prices at the softest pace for just over two years.

Production levels at manufacturing firms contracted for the second month running at the end of the year. Output fell at a solid pace that was the quickest in just over two-and-a-half years, as client demand waned and new orders fell further.

Contributing to the quicker decline in output was a sharper downturn in new sales during December. The decrease in new orders was steep overall and among the fastest on record (since May 2007). Companies noted that weak client demand stemmed from economic uncertainty and inflationary pressures leading to lower purchasing power among customers." – Siân Jones, Senior Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/fd49c3c51d79418b9622ad78993a762b; 1/3/23

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Private Indicators

S&P Global U.S. Manufacturing PMI™

"Foreign client demand also contracted as dollar strength and global economic uncertainty weighed on sales made abroad. The fall in new export orders was solid, despite easing to the slowest in three months.

December data signalled a notable slowdown in rates of input cost and output charge inflation at manufacturers. The pace of increase in cost burdens was the softest since July 2020, as firms stated that lower prices for inputs such as fuel, metals and oil-related products dampened the overall upturn in operating expenses. Moreover, the rate of cost inflation was slower than the series average. In an effort to drive sales, firms also registered a softer uptick in selling prices at the end of the year. Cost savings were largely passed through to customers, as output charges increased at the slowest pace in just over two years. Nonetheless, the rate of inflation was quicker than the series trend and historically sharp.

Lower input prices for some items were in part driven by reduced demand for materials. Purchasing activity dropped markedly and at the fastest pace since May 2020. Such a fall also led to broadly unchanged lead times for inputs, as supplier capacity constraints were less apparent than earlier in the year. Weak demand conditions contributed to firms opting to work through excess stocks built earlier in the year, with pre-production inventories falling sharply and stocks of finished goods broadly unchanged on the month.

Backlogs of work contracted at a steep pace in December amid lower new order inflows. Consequently, firms recorded only a slight increase in employment. The rate of job creation was the second-slowest in the current 29-month sequence of growth, as some firms filled long-held vacancies for skilled workers.

Finally, output expectations picked up to a three-month high, but remained historically subdued. Firms expressed concerns regarding the impact of inflation and weak demand on future output." – Siân Jones, Senior Economist, Markit®

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/fd49c3c51d79418b9622ad78993a762b; 1/3/23

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Private Indicators

S&P Global U.S. Manufacturing PMI™

Comment

"The manufacturing sector posted a weak performance as 2022 was brought to a close, as output and new orders contracted at sharper rates. Demand for goods dwindled as domestic orders and export sales dropped. Muted demand conditions also led to downward adjustments of stock holdings, as excess inventories built earlier in the year were depleted in lieu of further spending on inputs. With the exception of the initial pandemic period, stocks of purchases fell at the steepest rate since 2009.

Concerns regarding the outlook for demand weighed on hiring decisions. Job creation was only slight, and largely linked to skilled hires, as firms displayed caution.

Sinking demand for inputs and greater availability of materials at suppliers led to a further easing of inflationary pressures. In fact, the rate of input price inflation fell below the series trend. Selling price hikes also eased, albeit still rising steeply. Slower upticks in inflation signal the impact of Fed policy on prices, but growing uncertainty and tumbling demand suggest challenges for manufacturers will roll over into the new year." – Siân Jones, Senior Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/fd49c3c51d79418b9622ad78993a762b; 1/3/23

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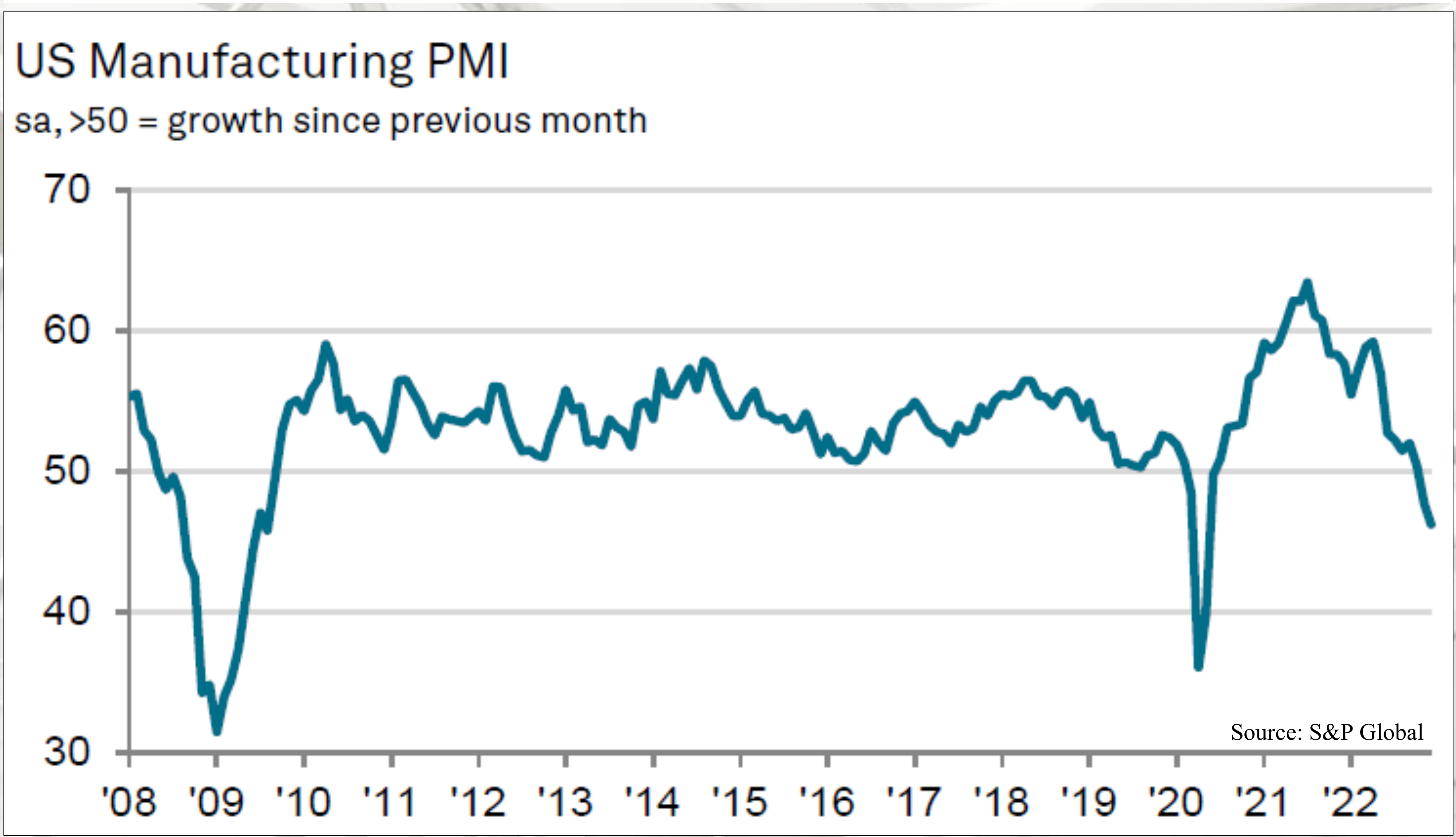

Private Indicators

S&P Global U.S. Services PMI™

Decline in business activity gains pace in December, as demand conditions worsen

"The seasonally adjusted final S&P Global US Services PMI Business Activity Index registered 44.7 at the end of the year, down from 46.2 in November, but up slightly from the earlier released 'flash' estimate of 44.4. The rate of decline in output accelerated for the third month running and was the second-fastest since May 2020. Lower business activity was commonly attributed to a further reduction in new orders, as client demand weakened due to the impact of higher interest rates and inflation on customer spending.

US service providers signalled a sharp fall in business activity at the end of the year, according to the latest PMI™ data. Output levels declined further amid weak demand conditions and another monthly drop in new orders. Domestic and foreign client demand contracted as economic uncertainty and high interest rates led to reduced customer spending. Subdued demand resulted in muted business expectations for output over the year ahead, as concerns regarding inflation and the future order pipeline dampened confidence. Although employment continued to rise, the pace of job creation was only marginal overall as cost saving initiatives and lay-offs weighed on hiring.

Meanwhile, rates of input price and output charge inflation eased to the slowest paces since October 2020. Reductions in costs for some inputs were passed through to customers in an effort to remain competitive and drive sales higher.

Service sector firms continued to record a contraction in new business in December. Lower purchasing power among clients reportedly drove the latest downturn in new orders. The decline in customer demand was strong overall and the steepest in over two-and-a-half years." – Siân Jones, Senior Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/46e32563f20444318304e381a32bfd85; 1/5/23

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S&P Global U.S. Services PMI™

"At the same time, new export orders fell further in December, albeit at the slowest pace for three months. Anecdotal evidence suggested that global economic uncertainty and high inflation in key export markets hampered new export sales.

On the price front, cost pressures softened notably at the end of 2022. Service providers stated that although supplier and wage bills rose sharply, this was partly offset by reductions in some key input prices. The rate of cost inflation moderated to the slowest since October 2020 and was only slightly quicker than the series average.

Firms sought to pass through cost savings, where applicable, in an effort to drive sales higher and remain competitive in December. The pace of increase in output charges eased for the eighth month running. Selling prices at service sector firms rose at the slowest rate in over two years.

In line with lower new order inflows, service providers moderated their hiring activity during December. The rate of job creation was only marginal overall and the seconds lowest since September 2021. Although some companies reportedly hired skilled and temporary staff, others mentioned that redundancies and the non-replacement of voluntary leavers dampened employment growth.

Backlogs of work declined for the third month running, as lower new order volumes allowed firms to work through incomplete business.

Finally, service sector firms registered optimistic expectations regarding the year ahead. That said, the degree of confidence was below the series average amid concerns surrounding inflation, high interest rates and future demand conditions." – Siân Jones, Senior Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/46e32563f20444318304e381a32bfd85; 1/5/23

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Private Indicators

S&P Global U.S. Services PMI™

Comment

"US private sector firms brought 2022 to a close signalling marked obstacles to overcome with relation to the health of the economy. Contractions in output and new business were broad-based and gathered pace in December as customer unease led to dwindling demand and order postponements.

Despite weak demand conditions, firms continued to hire staff. Nonetheless, the pace of job creation was only slight as some firms turned their focus to filling temporary worker and long-held skilled jobs vacancies, whilst others reported instances of employees being laid off.

A notable development through the month was a stark easing in inflationary pressures across the private sector. Muted demand for inputs led to the least marked uptick in costs for over two years, while companies also saw a slower increase in selling prices in a bid to entice customers and boost sales. The pass through of cost savings in the form of customer discounts will likely signal further adjustments to inflation as we enter 2023." – Siân Jones, Senior Economist, S&P Global

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/46e32563f20444318304e381a32bfd85; 1/5/23

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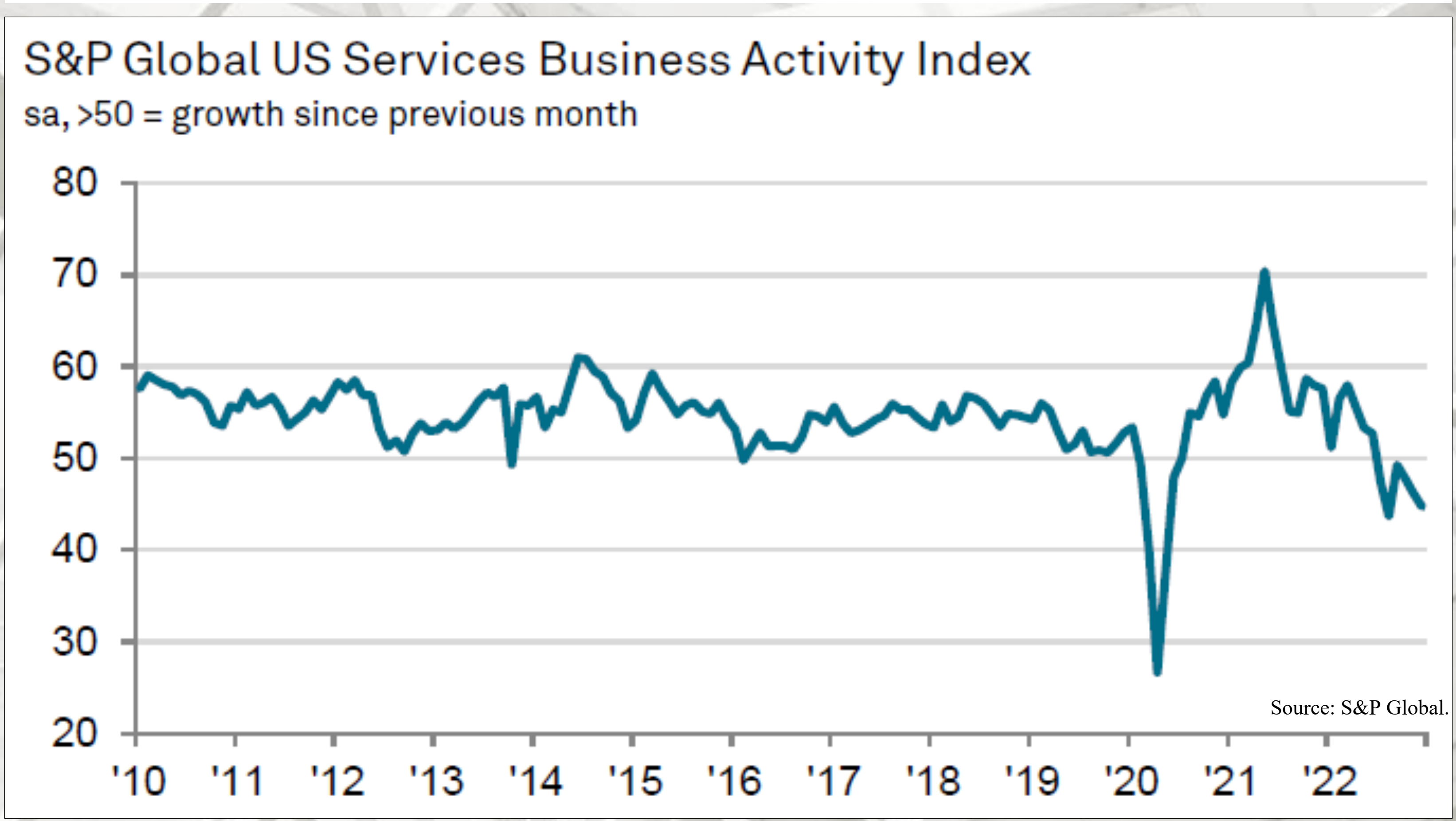

Source: https://www.pmi.spglobal.com/Public/Home/PressRelease/46e32563f20444318304e381a32bfd85; 1/5/23

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Private Indicators

National Association of Credit Management – Credit Managers' Index

Report for November 2022: Combined Sectors

"The National Association of Credit Management's seasonally adjusted Credit Managers' Index (CMI) for December 2022 came in at 51.6 points, marking the third consecutive month of deterioration in the index. Respondents indicated worsening credit conditions, with rising delinquencies, more accounts being referred to collections and increased demand for higher credit limits, said NACM Economist Amy Crews Cutts, Ph.D., CBE®.

"The combined CMI lost 7.5 points since it peaked in April of this year and continues to record its lowest value since May of 2020. While the index technically remains on the expansionary side, the speed of decline in the index value toward the 50-point threshold indicates to me that a recession is on the horizon from the perspective of business activity," Cutts said.

"This month's survey is the first time this year that the majority of respondents have not indicated problems with supply chains or logistics. Instead, they cited troubling trends in payments, with a marked shift in accounts 1 to 30 days past due, increasing demands for higher credit limits due to inflation and difficulty with collections. Some respondents indicated that they believe their customers with new delinquencies may be pushing payments in to 2023 but are worried nonetheless that it indicates more financial distress building in the business sector."

The CMI is centered on a value of 50, with values greater indicating expansion and values lower indicating economic contraction. The combined December CMI fell by 0.4 points to 51.6. The index of favorable factors deteriorated by 0.3 to 55.8, a level that is 13.6 points lower than a year ago and the lowest value since May of 2020. The index of unfavorable factors fell by 0.5 points to a reading of 48.8 points; 2.9 points lower than a year ago and the lowest value recorded since June of 2020." – Andrew Michaels, Editorial Associate, NACM

Source: https://nacm.org/cmi.html; 12/30/22

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Private Indicators

National Association of Credit Management – Credit Managers' Index

Report for November 2022: Combined Sectors

"Half of the categories in the favorable factors list declined in the December survey. The index for new credit applications leads the declining factors, shedding 1.5 points in this month's survey to 55.5, a value 12.1 points lower than a year ago. The index for the amount of credit extended dropped 2.1 points to 55.1, a value that is 16.6 points lower than in December 2021. The index for dollar collections gained 2.0 points to hit 57.7, a level that is 5.7 points lower than a year ago. The sales index gained 0.6 points to sit at 55.1, a full 20 points lower than it was a year ago.

Four of the six unfavorable factor indexes for the combined CMI deteriorated in the December survey. The largest decline was recorded by the index for the dollar amount beyond terms, which fell 1.8 points to 45.8, a value that is 7.7 points lower than one year ago. The index for filings for bankruptcies dropped 1.5 points to 50.9, 4.8 points lower than a year ago. The accounts placed for collections index lost 0.5 points to reach 46.4, a level 5.7 points lower than a year ago. The rejections of credit applications fell 0.1 point to 51.2, which with rounding is unchanged from a month ago but 0.6 points lower than a year ago.

"The unfavorable factors indexes in the combined CMI have been relatively steady over the past year, with only a couple showing more than 5 points of deterioration. However, on the favorable factors side we have seen dramatic double-digit declines in three factors and the remaining index seeing a 5.7-point decline. Sales in particular have dropped sharply, which given the increase in prices that most respondents have implemented, means that unit sales have fallen even further. The Fed continues to fight against inflation with higher interest rates, which in turn dampens demand. The data are starting to show the effects of the monetary tightening, whether in the CMI, the retail sales figures or production statistics. Retail sales had their biggest decline this year in November and manufacturing output led the 0.2% decline in overall industrial production recorded last month."" – Andrew Michaels, Editorial Associate, NACM

Source: https://nacm.org/cmi.html; 12/30/22

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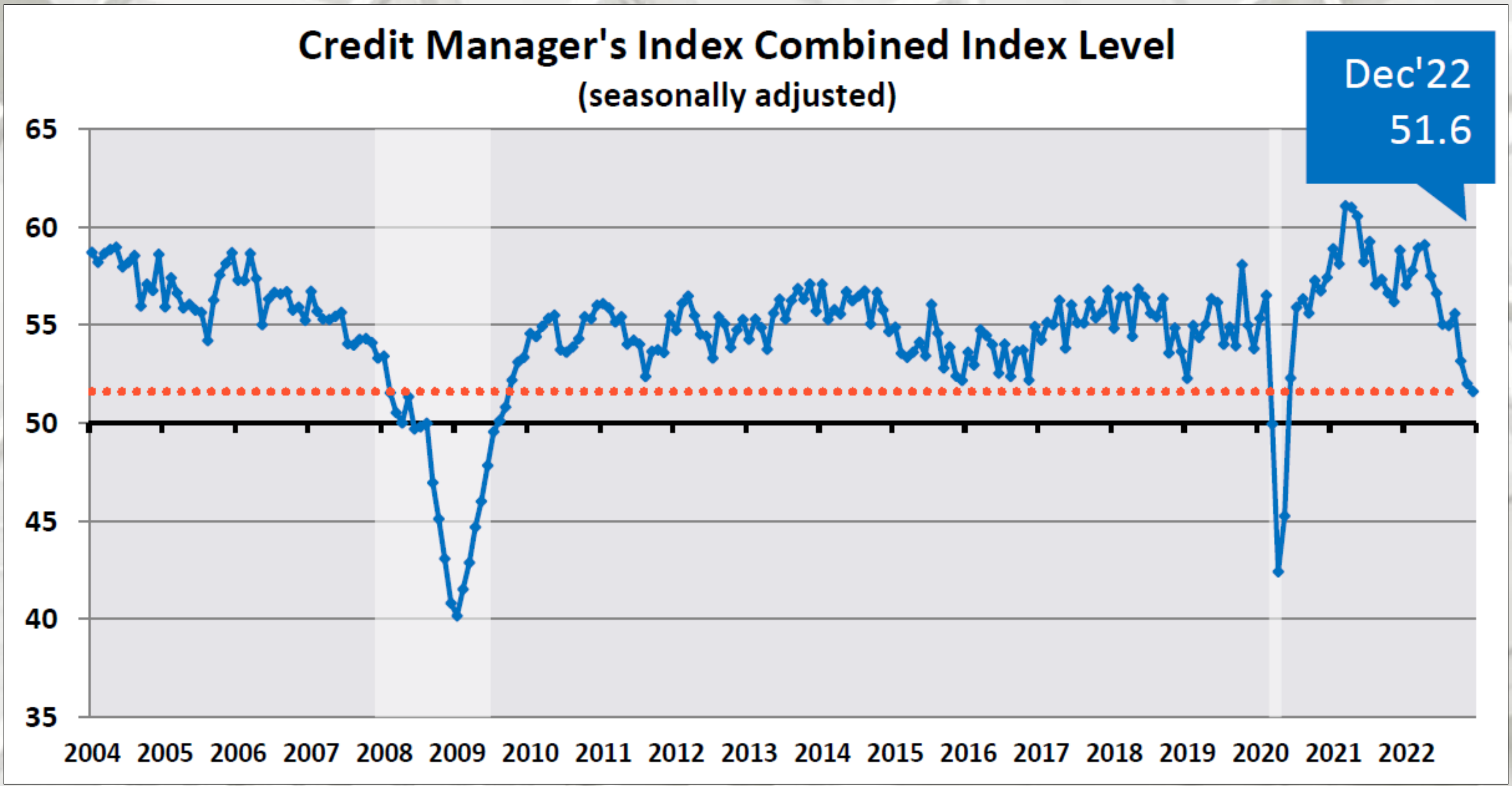
Private Indicators

National Association of Credit Management – Credit Managers' Index



Source: https://nacm.org/cmi.html; 12/30/22

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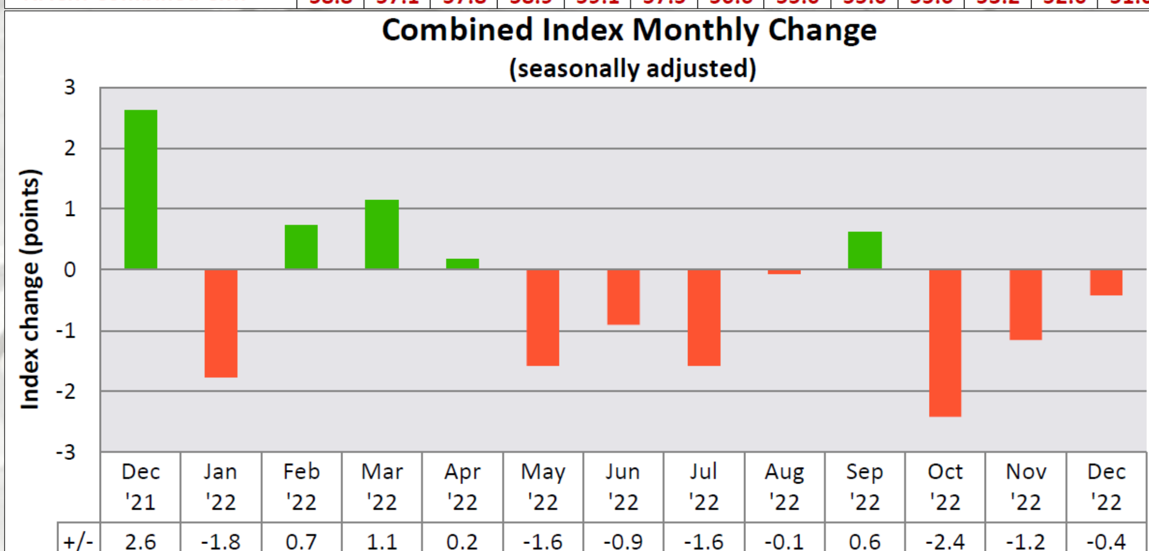
Private Indicators

National Association of Credit Management – Credit Managers' Index

Combined Manufacturing and Service Sectors (seasonally adjusted)	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22
Sales	75.1	71.2	71.3	77.1	74.7	71.6	66.6	65.8	63.0	64.2	55.2	54.5	55.1
New credit applications	67.6	60.6	64.0	68.8	67.1	64.7	64.1	59.7	62.4	61.4	59.0	57.0	55.5
Dollar collections	63.5	62.5	63.2	67.0	65.9	65.5	60.9	61.2	57.7	63.3	54.7	55.7	57.7
Amount of credit extended	71.7	67.2	68.7	69.2	72.1	70.4	67.7	67.6	65.3	66.3	58.7	57.2	55.1
Index of favorable factors	**69.5**	**65.4**	**66.8**	**70.5**	**69.9**	**68.1**	**64.8**	**63.6**	**62.1**	**63.8**	**56.9**	**56.1**	**55.8**
Rejections of credit applications	51.7	51.5	52.3	51.9	51.3	50.7	50.2	50.8	49.4	52.2	52.2	51.2	51.2
Accounts placed for collection	52.1	51.1	52.7	51.5	50.6	51.0	49.7	47.4	49.6	49.4	47.6	46.9	46.4
Disputes	48.2	48.4	48.6	48.0	49.1	49.1	49.4	48.3	49.2	48.2	50.4	48.3	49.1
Dollar amount beyond terms	53.3	53.5	50.9	51.2	54.2	47.2	51.1	46.7	46.4	48.7	49.0	47.6	45.8
Dollar amount of customer deductions	49.3	49.5	49.9	49.0	50.5	48.7	50.7	49.3	49.2	49.1	51.3	49.4	49.4
Filings for bankruptcies	55.7	55.2	56.4	55.8	55.7	56.4	55.8	53.7	57.6	53.5	53.8	52.4	50.9
Index of unfavorable factors	**51.7**	**51.5**	**51.8**	**51.2**	**51.9**	**50.5**	**51.1**	**49.4**	**50.2**	**50.2**	**50.7**	**49.3**	**48.8**
NACM Combined CMI	**58.8**	**57.1**	**57.8**	**58.9**	**59.1**	**57.5**	**56.6**	**55.0**	**55.0**	**55.6**	**53.2**	**52.0**	**51.6**



Source: https://nacm.org/cmi.html; 12/30/22

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Private Indicators

National Federation of Independent Business (NFIB) December 2022 Report

Small Business Optimism Declines as Expectations for Better Business Conditions Worsens in December

Inflation remains top business problem for small employers

“The **NFIB Small Business Optimism Index** declined 2.1 points in December to 89.8, marking the 12th consecutive month below the 49-year average of 98. Owners expecting better business conditions over the next six months worsened by eight points from November to a net negative 51%. Inflation remains the single most important business problem with 32% of owners reporting it as their top problem in operating their business.” – Holly Wade, NFIB

“Overall, small business owners are not optimistic about 2023 as sales and business conditions are expected to deteriorate. Owners are managing several economic uncertainties and persistent inflation and they continue to make business and operational changes to compensate.” – Bill Dunkelberg, Chief Economist, NFIB

Key findings include:

- “Forty-one percent of owners reported job openings that were hard to fill, down three points from November but historically very high.
- The net percent of owners raising average selling prices decreased eight points to a net 43% (seasonally adjusted), historically high.
- The net percent of owners who expect real sales to be higher worsened two points from November to a net negative 10%.” – Holly Wade, NFIB

Source: http://www.nfib.com/surveys/small-business-economic-trends; 1/10/23

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Private Indicators

National Federation of Independent Business (NFIB) December 2022 Report

"As reported in NFIB's monthly jobs report, owners' plans to add positions remain elevated, with a seasonally adjusted net 17% planning to create new jobs in the next three months. Overall, 55% of owners reported hiring or trying to hire in December. Ninety-three percent of those hiring or trying to hire reported few or no qualified applicants for the positions they were trying to fill.

Fifty-five percent of owners reported capital outlays in the last six months. Of those making expenditures, 37% reported spending on new equipment, 22% acquired vehicles, and 12% spent money for new fixtures and furniture. Eleven percent improved or expanded facilities and 4% acquired new buildings or land for expansion. Twenty-three percent of owners plan capital outlays in the next few months.

A net negative 8% of all owners (seasonally adjusted) reported higher nominal sales in the past three months, down one point from November. The net percent of owners expecting higher real sales volumes deteriorated two points to a net negative 10%.

The net percent of owners reporting inventory increases declined five points to a net 0%. Fifteen percent reported increases in stocks and 16% reported reductions. Twenty-three percent of owners recently reported that supply chain disruptions have had a significant impact on their business. Another 30% reported a moderate impact and 32% reported a mild impact. Only 13% of owners reported no impact from recent supply chain disruptions." – Holly Wade, NFIB

Source: http://www.nfib.com/surveys/small-business-economic-trends; 1/10/23

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Private Indicators

National Federation of Independent Business (NFIB) December 2022 Report

"A net 1% of owners viewed current inventory stocks as "too low" in December, up three points from November, overall a good balance. By industry, shortages are reported most frequently in manufacturing (13%), retail (12%), transportation (12%), and agriculture (11%). A net negative 4% of owners plan inventory investment in the coming months.

The net percent of owners raising average selling prices decreased eight points from November to a net 43% seasonally adjusted, the lowest level since May 2021. Unadjusted, 12% reported lower average selling prices and 51% reported higher average prices. Price hikes were the most frequent in wholesale (77% higher, 7% lower), manufacturing (60% higher, 4% lower), construction (59% higher, 8% lower), and transportation (59% higher, 6% lower). A net 24% (seasonally adjusted) of owners plan price hikes, down 10 points from November.

Seasonally adjusted, a net 44% of owners reported raising compensation. A net 27% plan to raise compensation in the next three months, down one point from November. Eight percent of owners cited labor costs as their top business problem and 23% said that labor quality was their top business problem." – Holly Wade, NFIB

Source: http://www.nfib.com/surveys/small-business-economic-trends; 1/10/23

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Private Indicators

National Federation of Independent Business (NFIB) December 2022 Report

"The frequency of reports of positive profit trends was a net negative 30%, down eight points from November. Among owners reporting lower profits, 30% blamed the rise in the cost of materials, 24% blamed weaker sales, 12% cited labor costs, 9% cited lower prices, 8% cited the usual seasonal change, and 3% cited higher taxes or regulatory costs. For owners reporting higher profits, 43% credited sales volumes, 18% cited higher prices, and 17% cited usual seasonal change.

Two percent of owners reported that all their borrowing needs were not satisfied. Twenty-five percent reported all credit needs were met and 62% said they were not interested in a loan. However, loan interest rates have risen substantially, rising from an average of 5% in January, 2022 to 7.7% in December.

The **NFIB Research Center** has collected Small Business Economic Trends data with quarterly surveys since the 4th quarter of 1973 and monthly surveys since 1986. Survey respondents are randomly drawn from NFIB's membership. The report is released on the second Tuesday of each month. This survey was conducted in December 2022." – Holly Wade, NFIB

Source: http://www.nfib.com/surveys/small-business-economic-trends; 1/10/23

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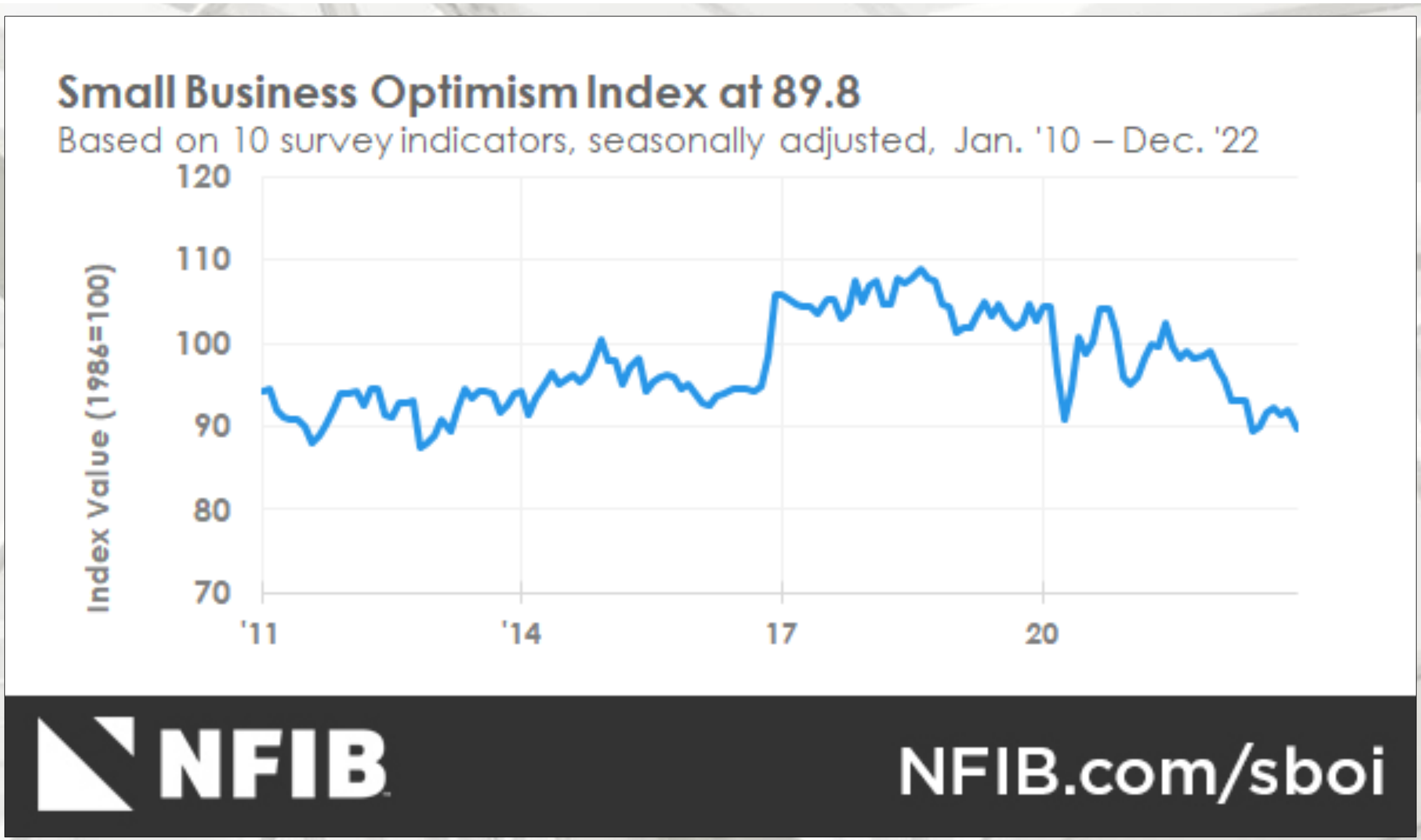

Source: http://www.nfib.com/surveys/small-business-economic-trends; 1/10/23

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Private Indicators

Small Business Optimism

Index Component	Net %	From Last Month
Plans to Increase Employment	17%	▼ -1
Plans to Make Capital Outlays	23%	▼ -1
Plans to Increase Inventories	-4%	— 0
Expect Economy to Improve	-51%	▼ -8
Expect Real Sales Higher	-10%	▼ -2
Current Inventory	1%	▲ 3
Current Job Openings	41%	▼ -3
Expected Credit Conditions	-9%	▼ -3
Now a Good Time to Expand	5%	▼ -1
Earnings Trends	-30%	▼ -8

NFIB NFIB.com/sboi

Source: http://www.nfib.com/surveys/small-business-economic-trends; 1/10/23

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Private Indicators

The Paychex | IHS Markit
Small Business Employment Watch

Small Business Wage Growth Moderates as 2022 Closes

Paychex data also reveals that small business job growth remains steady

“The rate of hourly wage growth for U.S. small businesses continued to decline to 4.95 percent year-over-year in December, according to the latest Paychex | IHS Markit Small Business Employment Watch. Additionally, the Small Business Jobs Index which measures national employment growth for businesses with fewer than 50 workers remained unchanged from the previous month at 99.38.” – Lisa Fleming, Kate Smith, and Tess Flynn, Paychex, Inc.

“The Paychex | IHS Markit Small Business Jobs Index flattened in December, following nine-months of moderation. Additionally, small business hourly wage growth is starting to slow as the Fed takes measures to fight inflation.” – James Diffley, Chief Regional Economist, IHS Markit

“Despite various headwinds including inflation, difficulties in staffing, and changing regulations, U.S. small businesses have continually proven to be innovative and resilient through the challenges presented to them since the start of the pandemic. As we enter 2023, small business owners and their employees are working more hours and finding ways to deal with inflation and higher credit costs.” – John Gibson, President and CEO, Paychex

Source: https://www.paychex.com/employment-watch; 1/3/23

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Private Indicators

The Paychex | IHS Markit
Small Business Employment Watch

"In further detail, the December report showed:

- At 99.38, the December 2022 national jobs index was unchanged from the previous month and remains a full point higher than the monthly average during the year leading up to the pandemic (March 2019 – February 2020).
- Hourly earnings growth year-over-year slowed to 4.95 percent in December, its weakest level since March 2022.
- One-month annualized hourly earnings growth was below four percent for the third time during the past four months.
- At 0.48 percent, one-month annualized weekly hours worked growth was positive for the fourth consecutive month.
- Leisure and hospitality continue to rank first among sectors in hourly earnings growth (6.75 percent) and last in weekly hours worked growth (-0.52 percent).
- The jobs index in the South improved for the third consecutive month, increasing to 100.72. The South has led the pace of small business growth among regions for the past nine months.
- Tennessee improved 3.20 percent in 2022, representing the highest growth rate among states. Although Tennessee ranked last among states one year ago in December 2021, the state now ranks seventh at 100.34.
- Houston (102.75) and Dallas (102.08) have the two strongest jobs indexes among metros for the seventh consecutive month." – Lisa Fleming, Kate Smith, and Tess Flynn, Paychex, Inc.

Source: https://www.paychex.com/employment-watch; 1/3/23

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Private Indicators

The Paychex | IHS Markit
Small Business Employment Watch

December Job Index	December Wage Data
Index	Hourly Earnings
99.38	$31.09
12-Month Change	12-Month Growth
-1.54%	+4.95% (+$1.47)

Source: Paychex | IHS Markit Small Business Employment Watch

Source: https://www.paychex.com/employment-watch; 1/3/23

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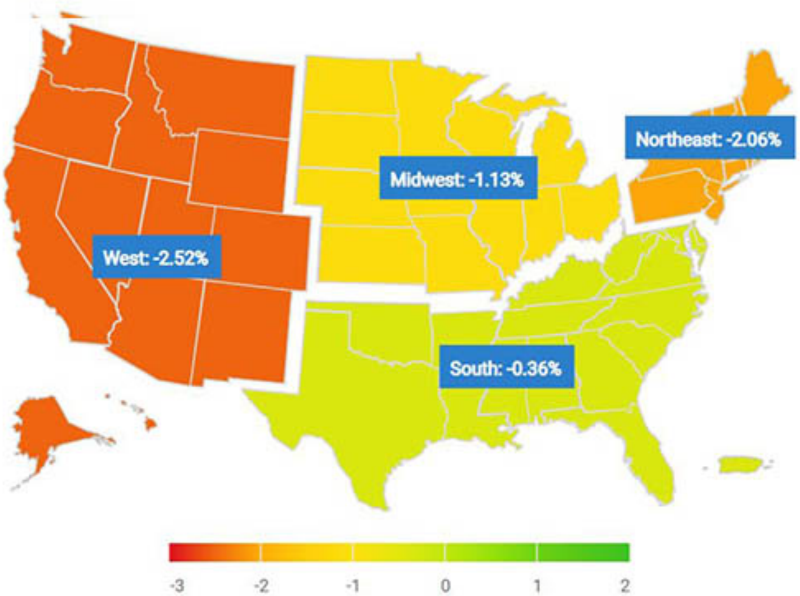
Private Indicators

The Paychex | IHS Markit Regional Jobs Index

Regional Performance



Region	Index	Change
Midwest	99.28	-1.13%
Northeast	98.81	-2.06%
South	100.72	-0.36%
West	98.67	-2.52%

Change 12-Month

Source: Paychex | IHS Markit Small Business Employment Watch

Source: https://www.paychex.com/employment-watch; 1/3/23

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Demographics

Harvard Joint Center for Housing Studies

The Surge in Household Growth and What It Suggests About the Future of Housing Demand

"As rising interest rates cooled demand for housing in 2022, new data on household growth is helping provide a better picture of just how hot demand had been between 2019 and 2021.

Three household surveys released over the past few months by the Census Bureau all show nearly unprecedented levels of household growth from 2019 through 2021. The American Community Survey (ACS), Housing Vacancy Survey (CPS/HVS), and American Housing Survey (AHS) each report that annual household growth between 2019 and 2021 averaged between 2.0 million and 2.4 million per year (Figure 1). This level of household growth is well above the 1.4-1.5 million per year pace averaged in 2017-2019, prior to the pandemic, which itself was already higher than previous levels or the 1.2 million households per year average baseline growth rate for 2018-2028 that we projected in 2018.

Much of the acceleration in household growth was driven by a pickup in growth among millennials, continuing a longer-term trend that has been building since 2016. Indeed, while the number of older adult households has been growing significantly and steadily over the past ten years, the biggest changes in household growth over the past five years have been among adults under age 45 (Figure 2). The number of households headed by 25-34 year-olds grew by 300,000 per year in 2016-2021, up sharply from average annual growth of 45,000 households between 2011-2016, a difference of 260,000 additional households per year. The number of households headed by adults aged 35-44 grew even more rapidly, by fully 400,000 per year in 2016-2021 after having declined by an average of 150,000 per year in 2011-2016, which was a swing of 550,000 households per year in overall household growth among this age group. Such a pickup in growth in this age group cannot be explained by growth in the underlying population alone, and suggests older millennials were now forming the households that had been delayed earlier in the decade." – Daniel McCue, Senior Research Associate, Harvard Joint Center for Housing Studies

Source: https://www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-suggests-about-future-housing-demand; 1/19/23

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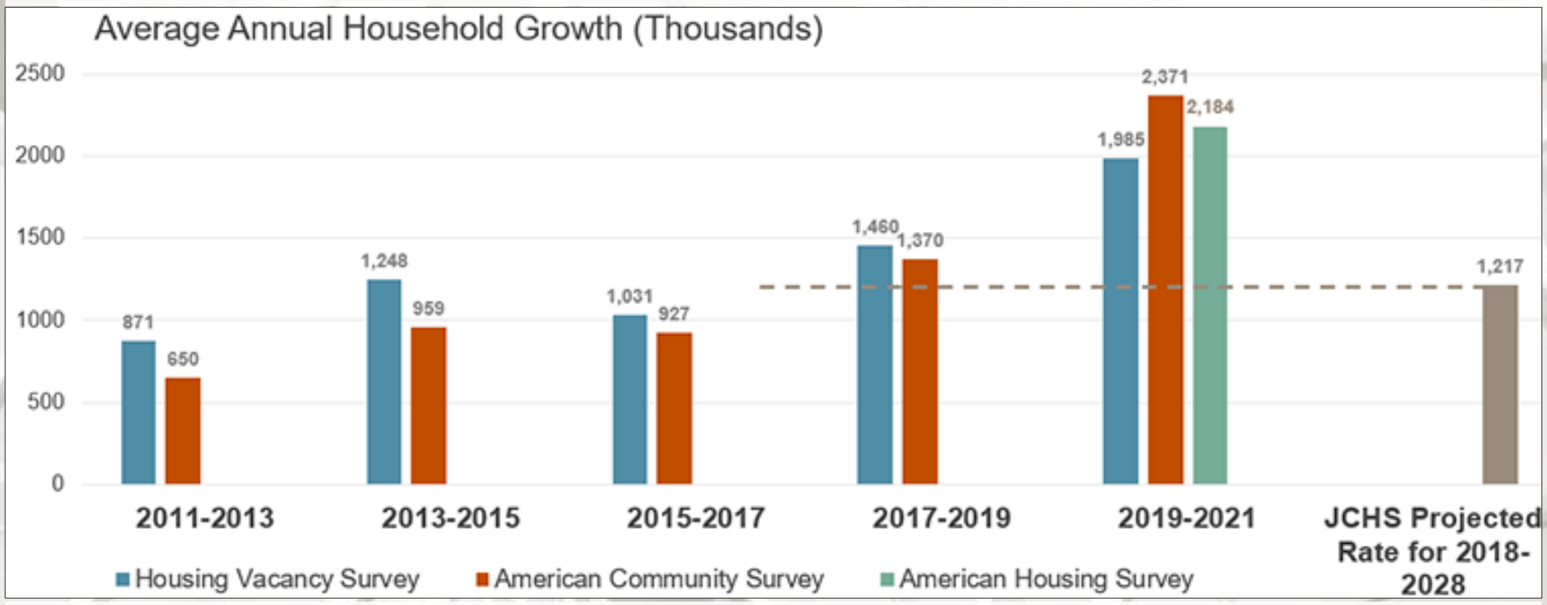
Harvard Joint Center for Housing Studies

The Surge in Household Growth and What It Suggests About the Future of Housing Demand

Figure 1: According to various surveys, us household growth surged in 2019-2021



Source: JCHS tabulations of US Census Bureau data and JCHS 2018 Household Growth Projections.

"Various economic factors in 2020 and 2021 enabled many people – largely millennials – to form and head new households when they had not been able to do so for years previously. Wages were up 4.9 percent in 2021 as the unemployment rate dropped from 6.7 percent in December 2020 to 3.9 percent in December of 2021. Three rounds of stimulus payments helped adults grow savings for deposits or down payments, and the pause in student loan payments left borrowers an average of $200 per month to spend on other items. These factors seem to have enabled the release of years of pent-up demand for new households." – Daniel McCue, Senior Research Associate, Harvard Joint Center for Housing Studies

Source: https://www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-suggests-about-future-housing-demand; 1/19/23

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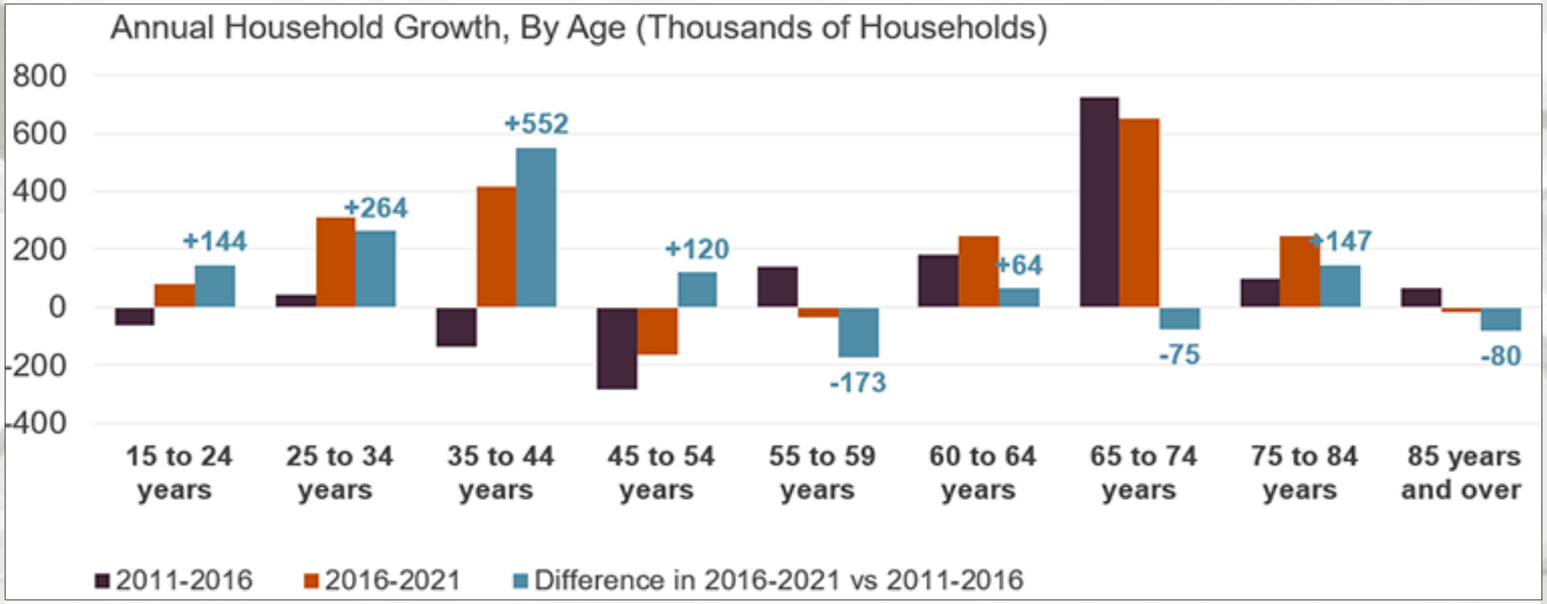
Harvard Joint Center for Housing Studies

Figure 2: The recent surge in household growth has been driven by a sharp turnaround in growth among younger households



Source: JCHS tabulations of US Census Bureau data.

"Indeed, household growth can be generated either by growth in the size of the adult population or growth in the share of the population heading an independent household – or both. The surge in household growth among millennials appears to have been driven by sharp growth in the share of the population heading their own household – also known as the headship rate (Figure 3). Headship rates were up across age groups, but rose most among those aged 25-34 and 35-44 – ages that had the largest declines earlier in the decade. As a result, by 2021 headship rates for most age groups had recovered nearly all ground lost during the Great Recession and were back to levels from 2011." – Daniel McCue, Senior Research Associate, Harvard Joint Center for Housing Studies

Source: https://www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-suggests-about-future-housing-demand; 1/19/23

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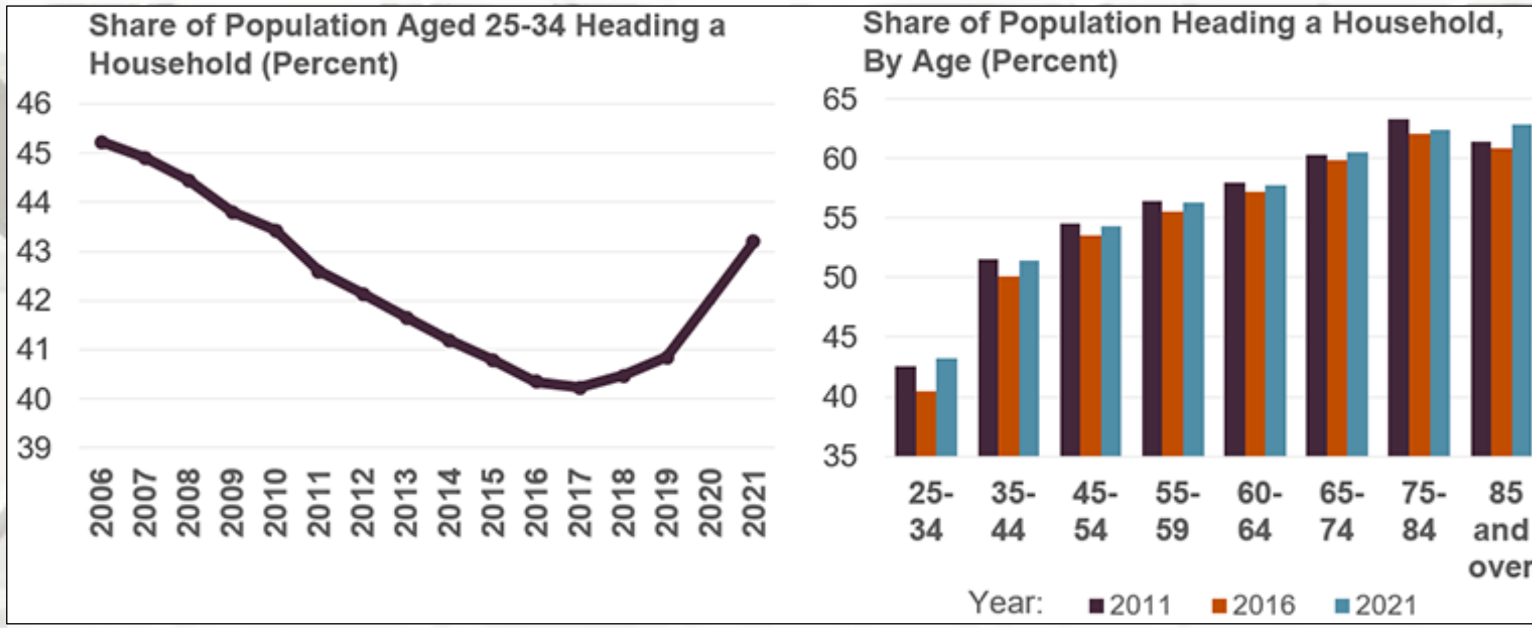
Demographics

Harvard Joint Center for Housing Studies

Figure 3: Increased household formations lifted the share of younger adults heading households in 2016-2021



Source: JCHS tabulations of US Census Bureau, American Community Survey data.

"As such, the widespread rise in the share of people heading households between 2016-2021 provided an extra boost to household growth that came on top of that expected from growth in the underlying adult population during that time. Our calculations suggest that the rising headship rates were responsible for about 640,000 of the 1.7 million average annual household growth during that period (Figure 4). This came in sharp contrast to 2011-2016, when falling headship rates dragged down household growth by about 579,000 per year below the average levels that population growth alone would have generated. The reversal in the role of headship rates from being a headwind to household growth in 2011-2016 to a tailwind in 2016-2021 led to a significant surge in household growth, equivalent to a swing of 1.2 million additional households per year." – Daniel McCue, Senior Research Associate, Harvard Joint Center for Housing Studies

Source: https://www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-suggests-about-future-housing-demand; 1/19/23

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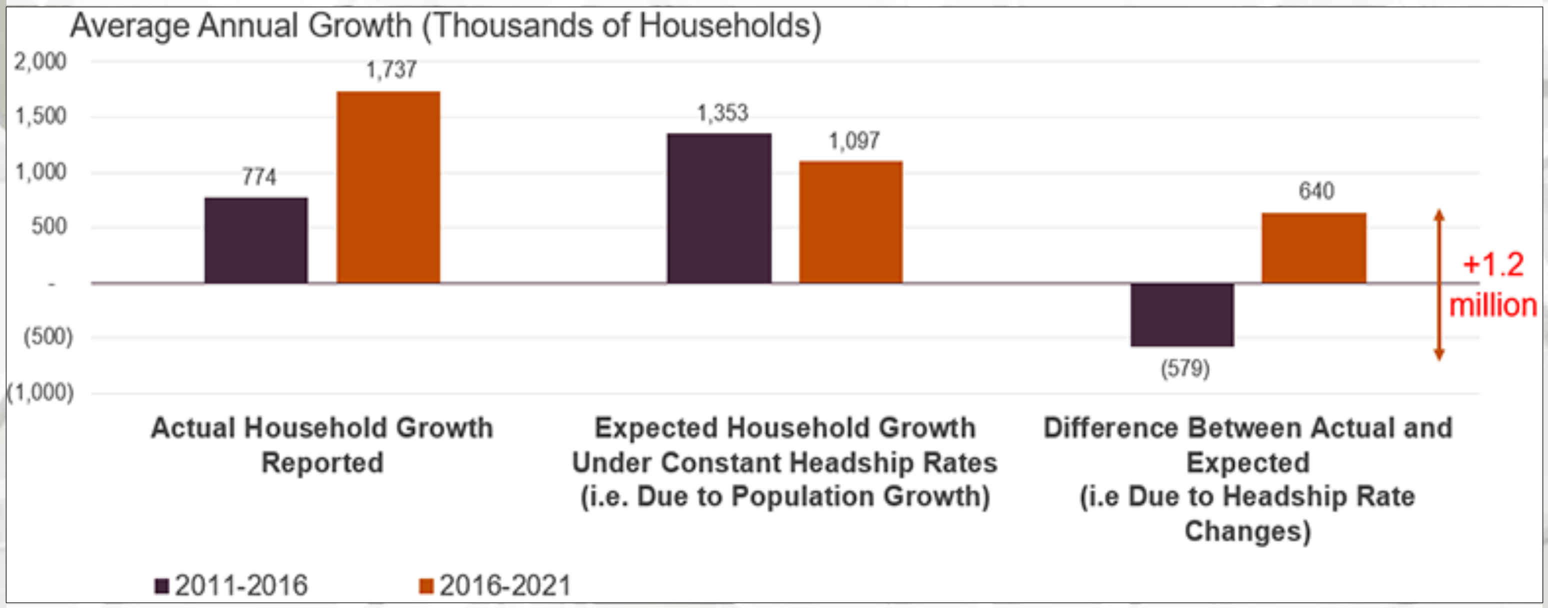
Figure 4: Headship rates increases helped lift household growth in 2016-2021



Source: JCHS tabulations of US Census Bureau, American Community Survey data.

"That so much of the recent acceleration in household growth was dependent on headship rate changes, rather than population growth, explains how we could have such a high level of household growth at a time when population growth in the US was hitting hit record lows. In fact, in each of the years 2019, 2020, and 2021, the Census Bureau reported new 100-year lows in population growth." – Daniel McCue, Senior Research Associate, Harvard Joint Center for Housing Studies

Source: https://www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-suggests-about-future-housing-demand; 1/19/23

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Demographics

Harvard Joint Center for Housing Studies

The Surge in Household Growth and What It Suggests About the Future of Housing Demand

"However, its dependence on headship rate increases also suggests the current surge in household growth is temporary. Headship rates for most age groups have recovered to rates from a decade ago, and with deteriorating affordability for both renters and homeowners over the past year, further gains in household formation may be limited. Additionally, looking back over the decades, headship rate changes have historically had a net negative effect on household growth anyway, lowering it by an average of 200,000 per year since 1990, which further suggests the current period of rising headship rates may be an aberration and not a lasting trend.

With additional increases in headship rates unlikely, population growth will retake its historical role as the main driver of household growth. But population growth has slowed to a near standstill, and it remains unclear when and if it will fully recover. So, although we haven't felt it yet because of the jump in headship rates and the fact that some of the decline in population growth has been fewer births (which don't affect household growth), the record low population growth levels will soon be reflected in lower levels of household growth. And these lower levels could be around for a while.

Over the long term, less population growth could also mean future household growth will continue to depend more on driving factors that are less stable and predictable, such as immigration and headship rates and the factors that support them, including changes in incomes and housing affordability. Given that household growth is the largest source of new housing demand, the impact on markets could be significant." – Daniel McCue, Senior Research Associate, Harvard Joint Center for Housing Studies

Source: https://www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-suggests-about-future-housing-demand; 1/19/23

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Economics

U.S. Census Bureau

NEW Business Formation Statistics

December 2022

BUSINESS APPLICATIONS

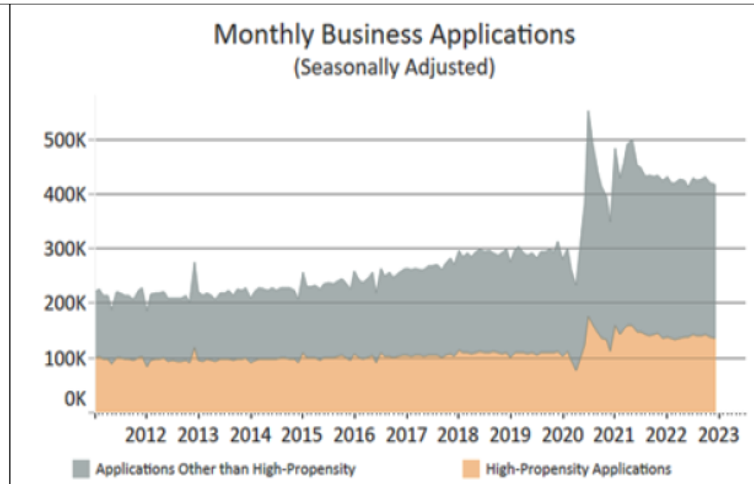
U.S. Business Applications:	DEC 2022	DEC 2022 / NOV 2022
Total	417,055	-0.3%°
High-Propensity	134,670	-2.2%°
With Planned Wages	47,433	-2.8%°
From Corporations	46,898	-0.8%°

Next release: February 10, 2023

(°) Statistical significance is not applicable or not measurable.

Data adjusted for seasonality.

Source: U.S. Census Bureau, Business Formation Statistics, January 17, 2023



Source: U.S. Census Bureau, Business Formation Statistics, January 17, 2023

Business Formation Statistics, December 2022

Business Applications

"The U.S. Census Bureau announced the following seasonally adjusted business application and formation statistics for December 2022. The Business Application Series describe the business applications for tax IDs as indicated by applications for an Employer Identification Number (EIN) through filings of the IRS Form SS-4. The Business Formation Series describe employer business formations as indicated by the first instance of payroll tax liabilities for the corresponding business applications. Business Applications for December 2022, adjusted for seasonal variation, were 417,055, a decrease of 0.3 percent compared to November 2022." – U.S. Census Bureau

Source: https://www.census.gov/econ/bfs/pdf/bfs_current.pdf; 1/17/23

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Economics

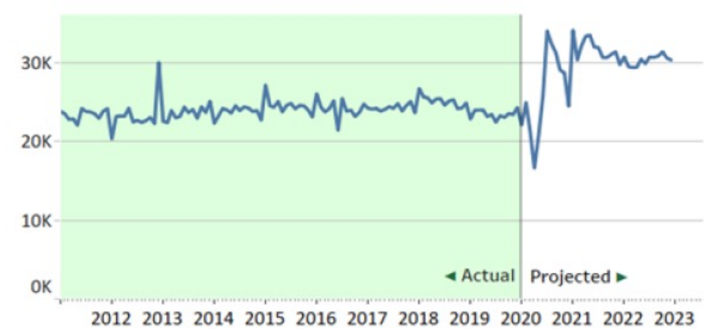
U.S. Census Bureau

December 2022

BUSINESS FORMATIONS		
U.S. Total Projected Business Formations:	DEC 2022	DEC 2022 / NOV 2022
Within 4 Quarters	30,292	-0.8%°
Within 8 Quarters	39,163	0.4%°

Next release: February 10, 2023
(°) Statistical significance is not applicable or not measurable.
Spliced - Data adjusted for seasonality.
Source: U.S. Census Bureau, Business Formation Statistics, January 17, 2023

Monthly Business Formations within 4 Quarters
Spliced (Actual and Projected)
(Seasonally Adjusted)



Source: U.S. Census Bureau, Business Formation Statistics, January 17, 2023

Projected Business Formations - At a Glance

		US	Northeast	Midwest	South	West
Within 4 Quarters	DEC 2022	30,292	4,816	4,753	12,298	8,425
	DEC 2022 / NOV 2022	-0.8%	-0.8%	-3.6%	+1.7%	-2.8%
Within 8 Quarters	DEC 2022	39,163	6,203	6,146	16,138	10,676
	DEC 2022 / NOV 2022	+0.4%	-0.4%	-3.0%	+4.6%	-3.2%

Details may not equal totals due to rounding. Regions defined by Census Bureau Geography Program. Statistical significance is not applicable or not measurable.
Data adjusted for seasonality. Green Percentage changes are greater than zero (+). Red Percentage changes are less than zero (-). Z = absolute value < 0.05.

Business Formation Statistics, December 2022

"Projected Business Formations (within 4 quarters) for December 2022, adjusted for seasonal variation, were 30,292, a decrease of 0.8 percent compared to November 2022. …" – U.S. Census Bureau

Source: https://www.census.gov/econ/bfs/pdf/bfs_current.pdf; 1/17/23

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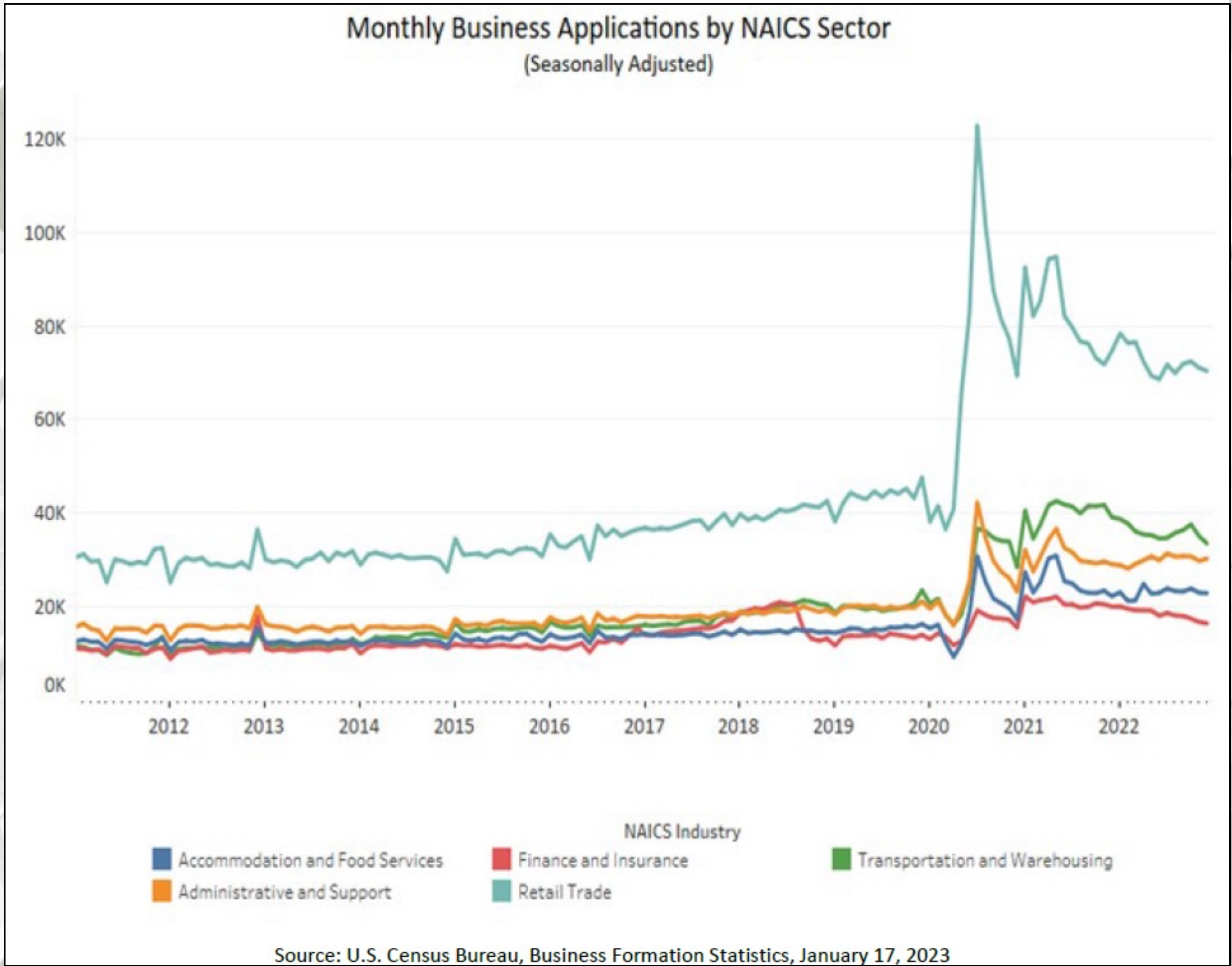
NEW Business Formation Statistics

December 2022



Source: https://www.census.gov/econ/bfs/pdf/bfs_current.pdf; 1/17/23

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