

Indiana Economic Forecast Update

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Recently improved real and financial conditions delay onset of a milder recession into 2023

- We've revised up our projection of real GDP growth in 2022 from 1.8% to 1.9%, and in 2023 from -0.2% to +0.3%. The forecast still includes a mild recession, but now starting Q1 of 2023 rather than late this year, with recovery beginning in Q3. We project GDP to grow 1.8% in 2024, revised up from 1.3% last month.
- Consumer spending has remained stronger than we had expected, although further gains will be limited by the impact of inflation on real disposable income. Implied personal saving rates have dropped to unsustainable levels.
- Inflation is starting to ease but remains problematic and well above Fed targets. We expect core PCE inflation to drop from 4.6% in 2022Q3 to 2.6% by 2023Q4 as commodity supplies improve.
- Payroll gains have been above expectations. This supports short-term growth prospects but makes inflation more difficult to tame.
- Sharply higher mortgage interest rates have decreased the rate of homebuilding, along with sales of existing homes.
- Two counter-cyclical factors will help moderate a recession.
 - Auto production will continue to increase as improved component supplies allow for an inventory rebuild.
 - State and local government payrolls remain well below pre-pandemic levels; healthy budgets should allow for hiring.

Policy assumptions in the November forecast

- The forecast includes COVID relief measures enacted during the pandemic, the Infrastructure Investment and Jobs Act (IIJA), the Consolidated Appropriations Act of 2022 funding federal government for this fiscal year (extended in real terms), the Inflation Reduction Act (IRA), and assumes current tax policy.
- Federal payments to states authorized under the American Rescue Plan jumped in Q2 with a second tranche of funds, but pandemic relief payments will shrink to near zero in 2023.
- The forecast assumes student loan forbearance is extended through December. It does not yet include President Biden's plan to forgive approximately one third of student debt, which is facing both political opposition and legal challenges. However, our analysis is that this debt forgiveness would have relatively minor impacts on the forecast.
- The Fed raises its policy rate to the range of 4.75% - 5% by March 2023, temporarily overshooting the terminal range of 2.5% - 2.75%, and allows its balance sheet to decline by about one third through 2024.

US economic growth by sector

Percent change

	2021	2022	2023	2024	2025
Real GDP	5.9	1.9	0.3	1.8	2.0
Final sales	5.7	1.2	0.8	1.6	1.6
Consumption	8.3	2.8	1.3	1.1	1.7
Light vehicle sales (millions)	14.9	13.7	14.7	15.9	16.3
Residential fixed investment	10.7	-10.4	-16.3	5.0	7.4
Housing starts (millions)	1.61	1.55	1.18	1.24	1.37
Business fixed investment	6.4	3.6	0.1	0.8	1.4
Federal government	2.3	-2.8	2.1	0.4	0.5
Exports	6.1	7.2	3.4	4.6	4.1
Imports	14.1	9.1	0.5	0.8	2.8

Data compiled Dec. 09, 2022.

Source: S&P Global Market Intelligence.

Other key US economic indicators

Percent change

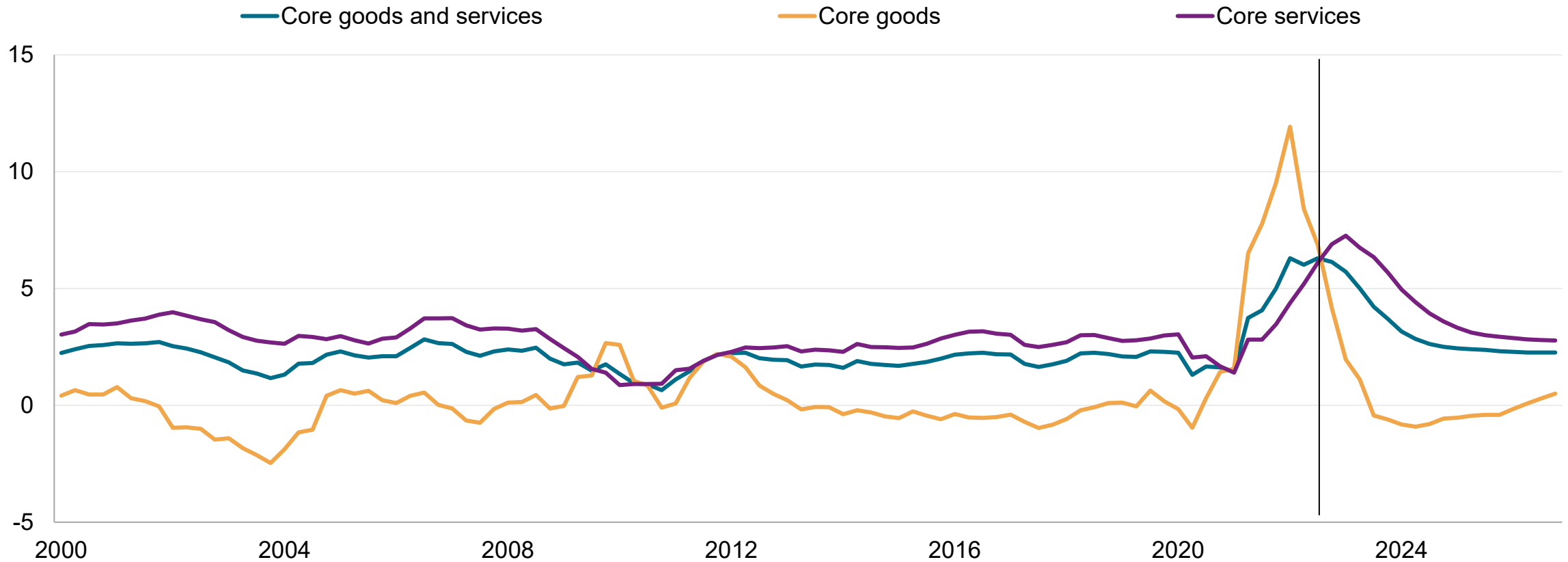
	2021	2022	2023	2024	2025
Industrial production	4.9	4.1	-0.2	1.2	1.8
Payroll employment	2.8	4.1	0.6	-0.3	0.5
Civilian unemployment rate (%)	5.4	3.7	4.6	5.0	4.6
Consumer Price Index	4.7	8.1	4.0	2.3	2.2
Core CPI	3.6	6.2	4.6	2.8	2.4
Brent crude oil price (\$/barrel)	70.70	101.88	87.83	87.42	89.75
Federal funds rate (%)	0.08	1.68	4.77	4.33	2.97
10-year Treasury yield (%)	1.44	2.95	3.59	3.35	3.22
CoreLogic house price index	15.7	13.0	-6.7	-1.2	2.3

Data compiled Dec. 09, 2022.

Source: S&P Global Market Intelligence.

Look for goods and services inflation to reverse as imbalances resolve

US consumer price indices excluding food and energy, percent change y/y



Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence, BLS.

Broader economic slowdown will affect Indiana

- Indiana's payrolls regained pre-pandemic levels in March 2022, ahead of national average.
 - Gains have become more gradual since, led by health care and social services along with transportation.
- Auto manufacturers continue to work to rebuild inventories after two-plus years of supply chain disruption.
 - Semiconductor shortages are gradually easing, allowing completion of mostly-built vehicles.
- Homebuilding in 2021 and 2022 ramped up to the highest levels since prior to 2008, but activity is slowing.
 - Sharp increase in mortgage interest rates during 2022 added to existing affordability issues.
 - Construction material costs remain elevated, while cost of labor has increased considerably.
 - Sales of existing homes have plummeted, as higher mortgage rates impact both buyers and potential sellers.
- Indiana home prices will decline into early 2023, but the drop will be moderate compared with other regions.
 - Price declines will not offset the double-digit gains of the past three years.
- Leisure travel is largely back to normal, while business/convention travel is improving.
- The state is slated to add big industry projects over the next few years, notably in electric vehicle batteries and drivetrain components along with semiconductors.

Key economic indicators for Indiana

Percent change, calendar year basis

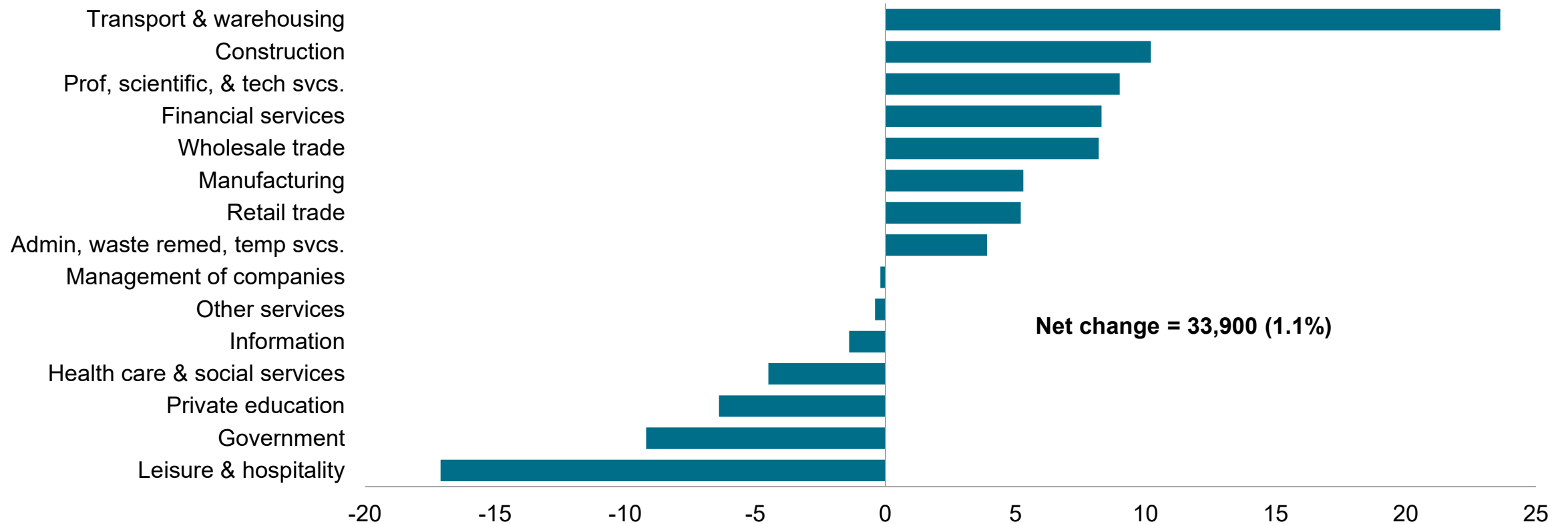
	2021	2022	2023	2024	2025
Payroll employment	3.2	3.1	0.4	-0.7	0.2
Unemployment rate (%)	3.6	2.6	4.0	4.5	4.3
Wage income	8.7	9.8	4.5	3.5	4.4
Personal income	8.5	2.4	3.5	4.0	4.3
Real gross state product	5.8	2.0	-0.1	1.5	1.5
Personal consumption exp.	12.4	10.3	3.5	2.5	3.1
Housing starts (thousands)	28.0	28.0	21.5	22.8	24.4

Data compiled Dec. 09, 2022.

Source: S&P Global Market Intelligence.

Indiana payrolls have more than recovered, but industry results are mixed

Change in Indiana payroll employment, thousands, Feb 2020 - Oct 2022

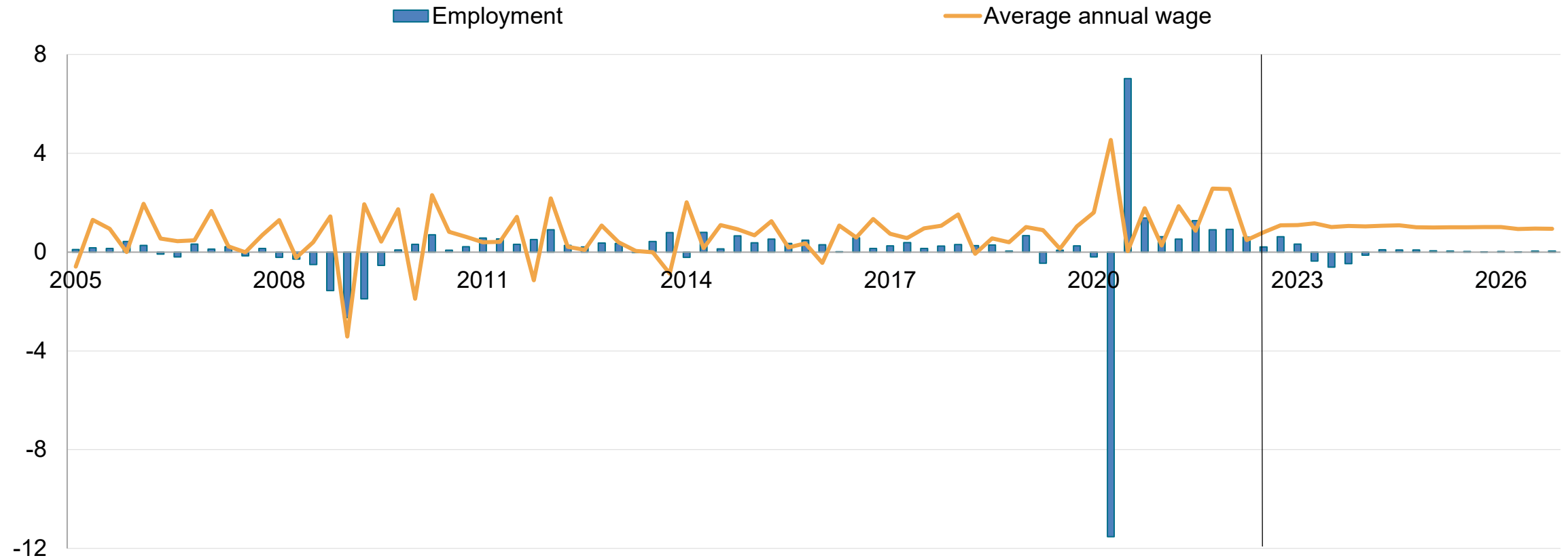


Data compiled Dec. 06, 2022.
Source: S&P Global Market Intelligence.

Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence, BLS.

Payroll growth to turn negative in 2023 then flatten, while wage gains continue

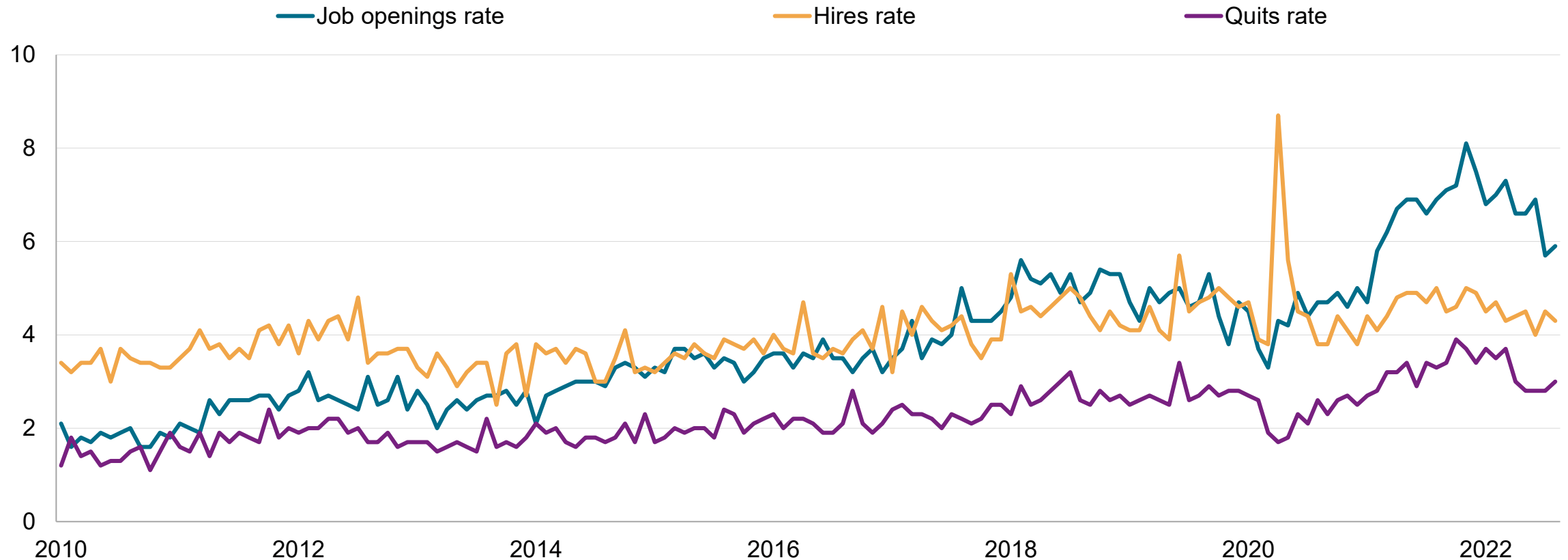
Indiana quarterly employment and wage growth, % change



Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence, BLS.

Indiana job openings have backed off from historic highs, but remain elevated

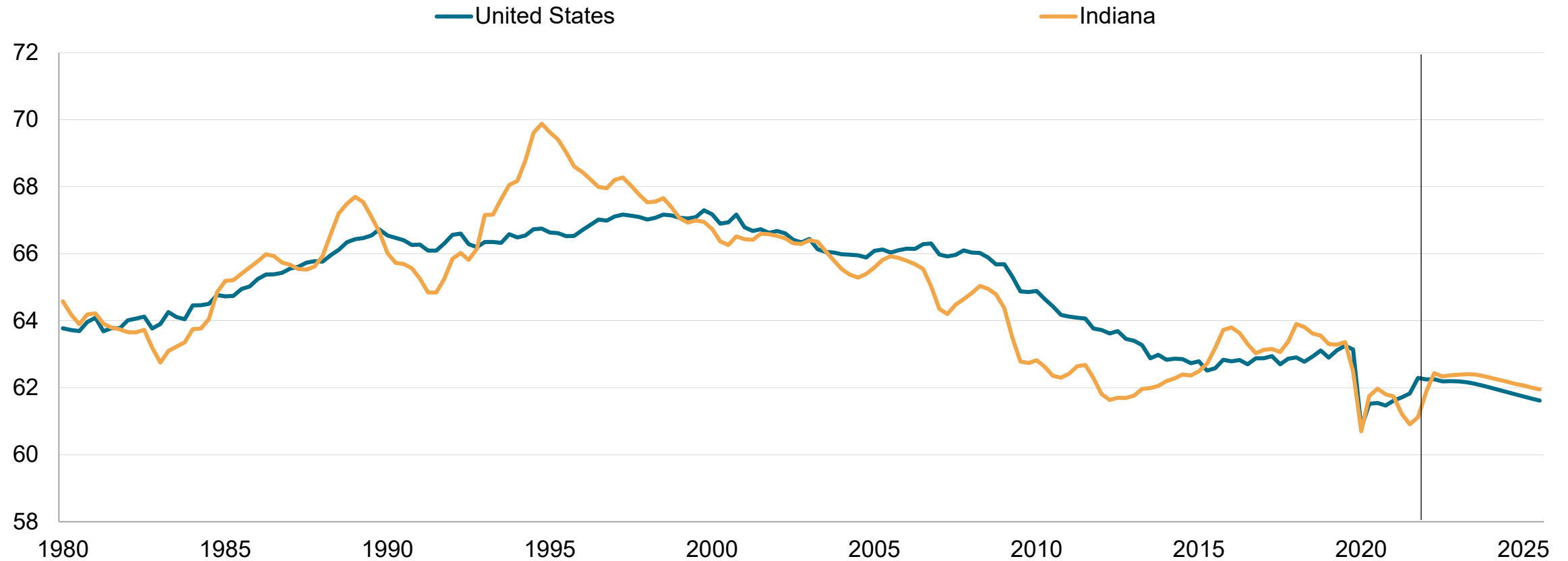
Job Openings and Labor Turnover indicators, Indiana



Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence, BLS

Labor force participation has not recovered from pandemic-era drop; trend was already down

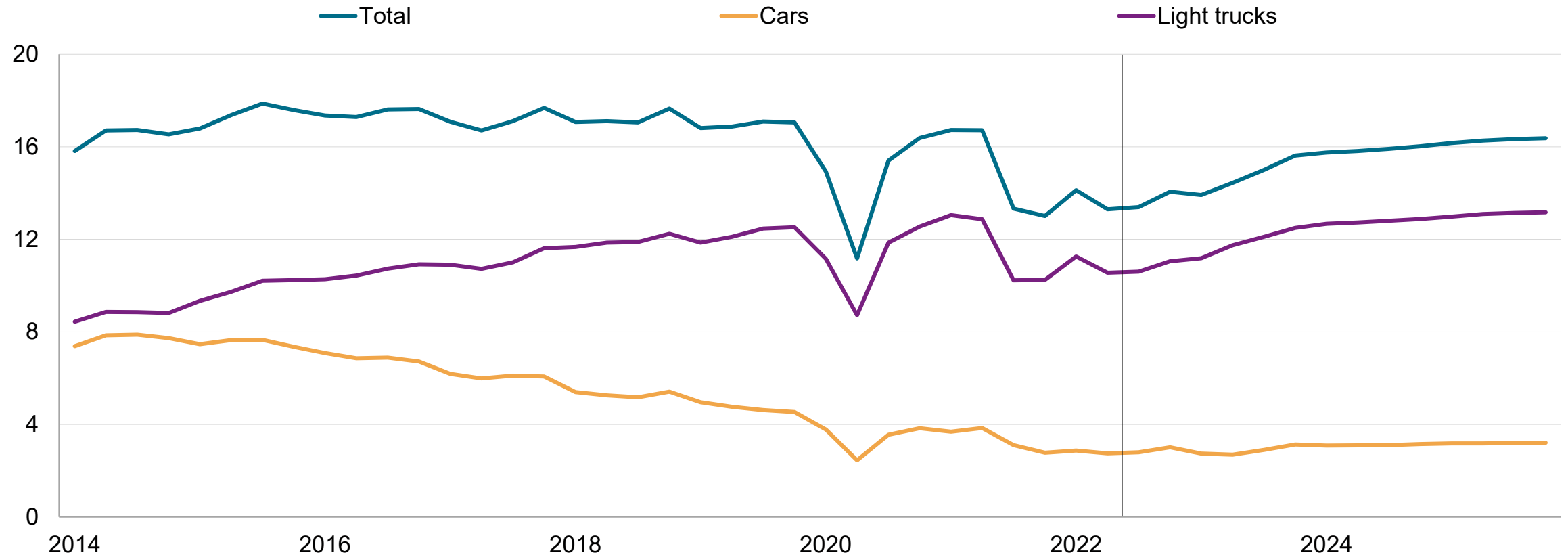
Labor force participation rate, % of population age 16 and over



Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence.

Auto industry still recovering from production shortfall; pent-up demand will support sales even in face of recession

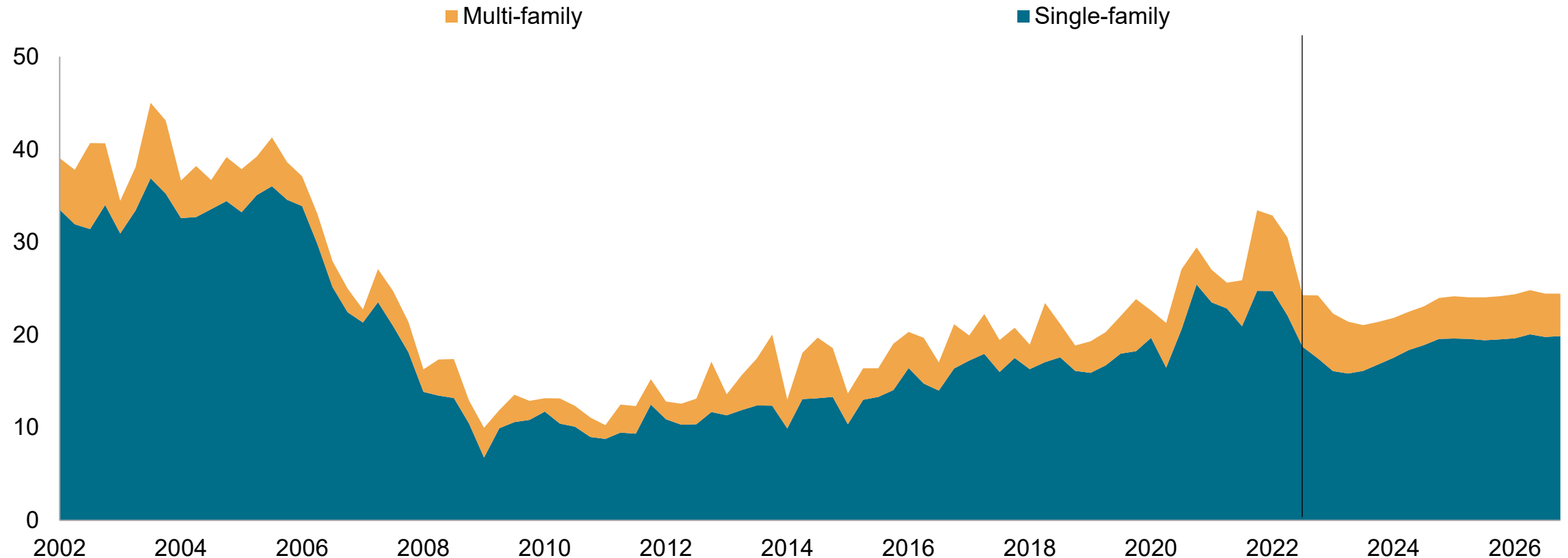
Total light-vehicle sales



Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence.

Homebuilding had finally recovered to nearly pre-2006 levels, but higher interest rates and inflation are causing a pullback

Indiana housing starts, thousands



Data compiled Dec. 09, 2022.

Source: S&P Global Market Intelligence..

Bottom line for Indiana

- The state economy remains on solid footing, despite broader macro concerns
 - Inflation has raised costs on households and businesses, reducing gains from higher wages and revenues.
 - Labor force participation is still in recovery mode, causing reduced activity for some businesses.
 - The state's research and development resources are generating and attracting cutting-edge industry opportunities.
- The outlook for manufacturing output and employment remains solid, even with a potential recession.
 - Recreational vehicle shipments have slowed from the torrid pace of 2021 and 2022 (especially in trailers).
- The pace of homebuilding will slow in 2023, but persistent high home prices will provide support.
 - Supply of homes still generally well below potential demand, especially from younger age groups.
 - Indiana should avoid a sharp decline in home prices, partly because price gains over the past few years were below the levels seen in the hottest markets (some of which now face the sharpest declines).
- Longer-term issues remain the same – labor force must continue to grow in size and skill level to allow existing business to expand and to attract new business
 - Participation in the 55-to-65 year age range has seen a notable decline.
 - The need to provide care for family members (children and seniors) remains an impediment to workforce return.

Evolution of short-term Indiana forecast

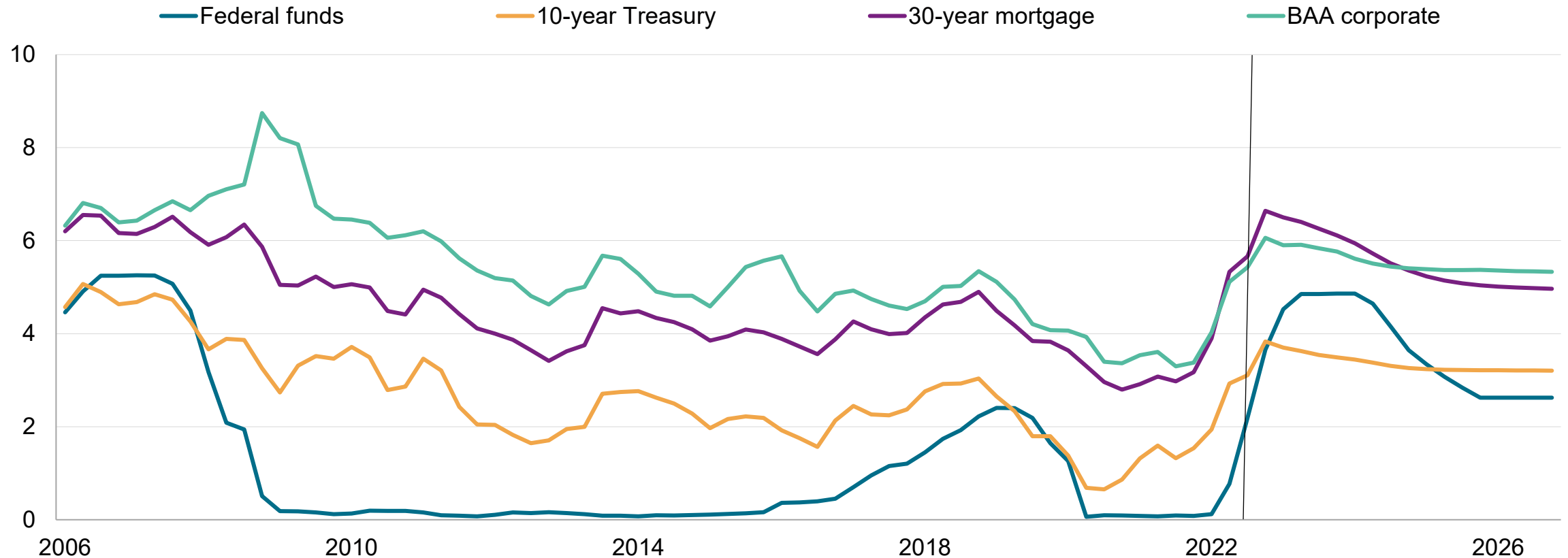
Percent change, calendar year basis

	U.S. Real GDP			Indiana employment			Indiana personal income		
	2022	2023	2024	2022	2023	2024	2022	2023	2024
Dec 2020	3.6	2.6	2.6	1.9	0.4	0.6	2.4	3.8	4.1
Apr 2021	4.3	2.2	2.3	2.0	0.6	0.5	-0.4	3.5	4.3
Dec 2021	4.3	2.6	2.5	3.1	1.5	0.7	0.4	4.7	4.8
Apr 2022	3.0	2.8	2.7	3.2	1.3	0.3	1.1	5.2	5.2
Dec 2022	1.9	0.3	1.8	3.1	0.4	-0.7	2.4	3.5	4.0

Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence.

Fed increases the funds rate to 4.75%-5% by March 2023

Interest rates, percent



Data compiled Dec. 09, 2022.
Source: S&P Global Market Intelligence.

External assumptions in the December forecast

- Tariffs enacted by the US and China since 2017 remain in effect.
- The potential for supply disruptions sent the price of Brent crude up to \$113 per barrel in the second quarter of 2022. However, slowing global growth will cause the price to ease to \$84 next year despite cuts in production recently announced by the OPEC+ countries and the EU sanctioning of Russian exports.
- Growth of real, trade-weighted foreign GDP slows from 3.1% in 2022 to 1.2% in 2023, slow enough to be characterized as a global recession.
- Foreign CPI inflation jumps from 2.8% in 2021 to 5.9% in 2022 before receding to 2.3% by 2024.
- The foreign government bond yield climbs from 0.6% in 2021 to 2.9% by 2024 as central banks around the world tighten monetary policy in response to the recent surge in inflation.

Thank you

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