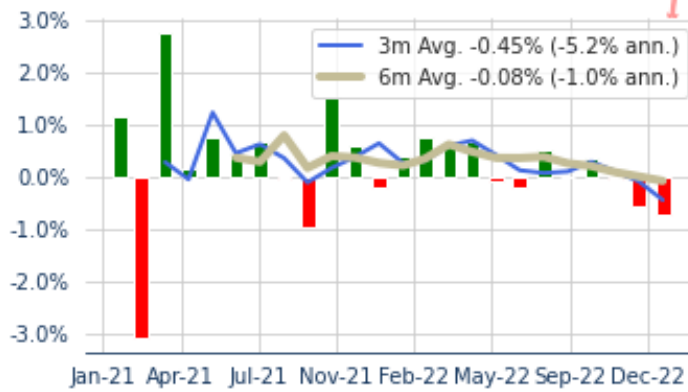


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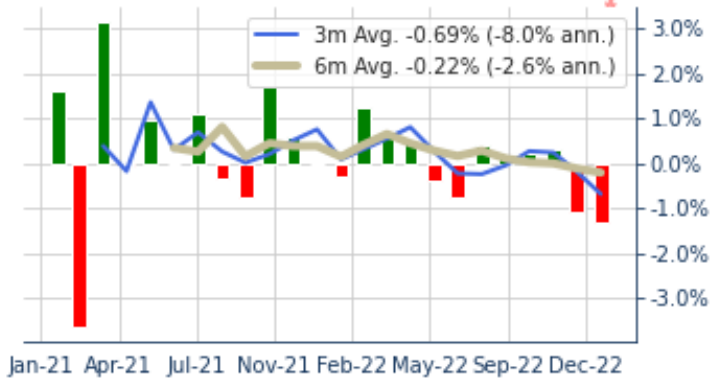
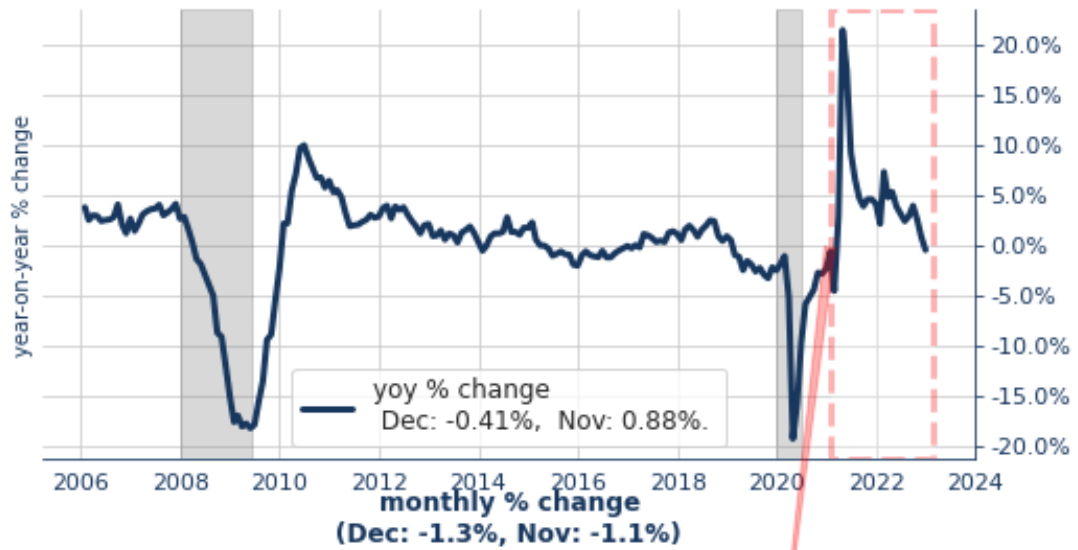
## Industrial Production: Hard Data Continues to Confirm Surveys

**Bottom Line:** The Federal Reserve's industrial production report for December offered "hard data" to continue to confirm what we saw in the "soft" (survey) data throughout the 2nd Half of '22. The auto sector saw a second month of declines in December, dragging down electrical components makers. The aerospace industry remains a source of moderate growth, but this volatile sector bears close watching in the 1st Quarter of '23. Overall, this report confirmed the manufacturing sector moved from a tailwind to a headwind for GDP growth in the 4th Quarter.

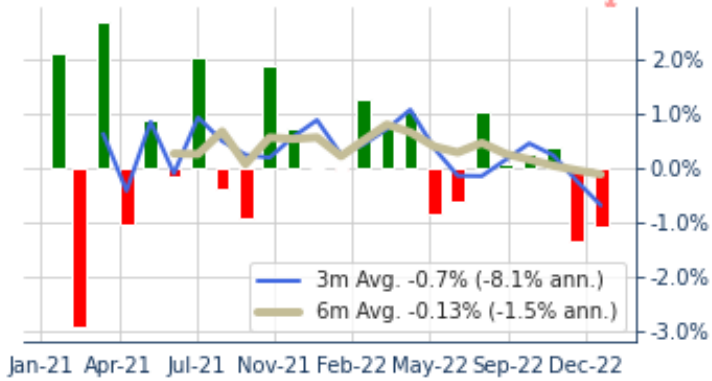
# Industrial Production Total IP



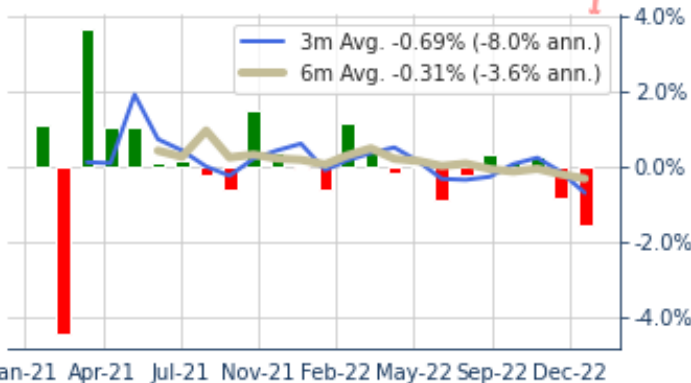
# Manufacturing (NAICS)



# Durable manufacturing

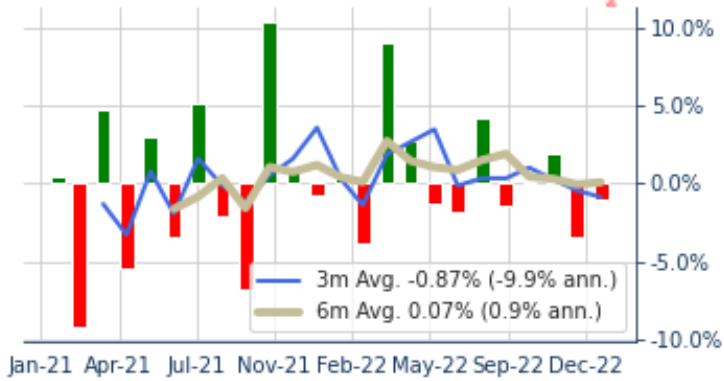
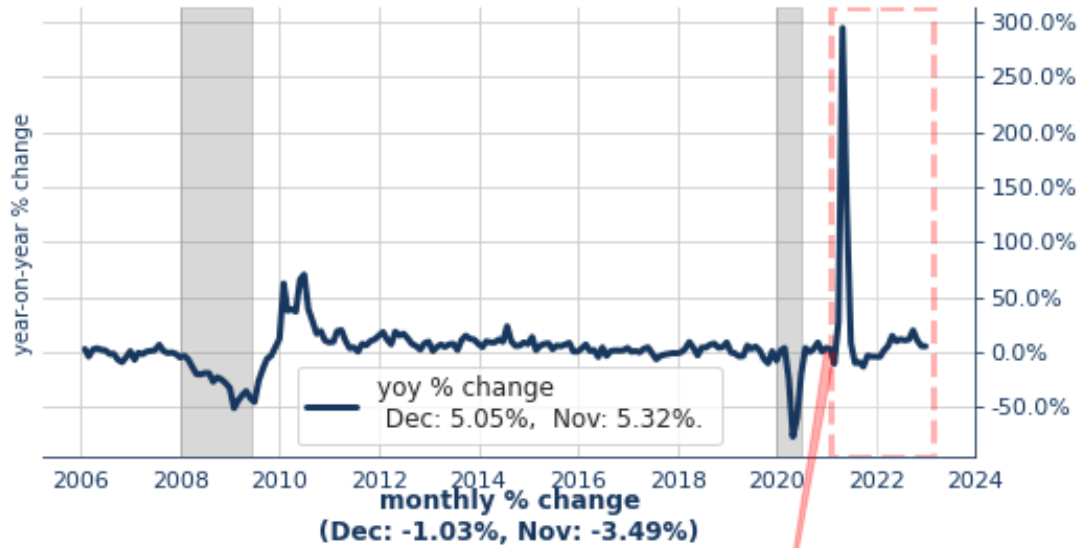


# Nondurable manufacturing

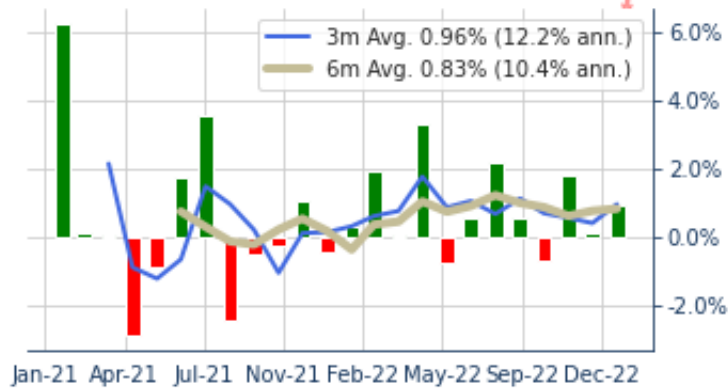


Contingent Macro Advisors 2023 source: Federal Reserve, Consensus from Bloomberg LP

# Motor vehicles and parts

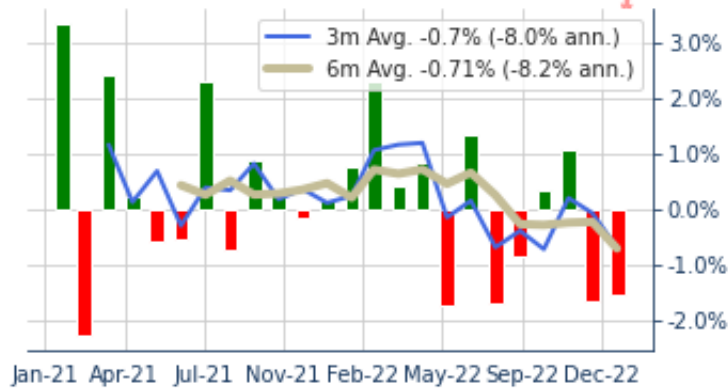


# Aerospace and miscellaneous transportation equipment



Contingent Macro Advisors 2023 source: Federal Reserve, Consensus from Bloomberg LP

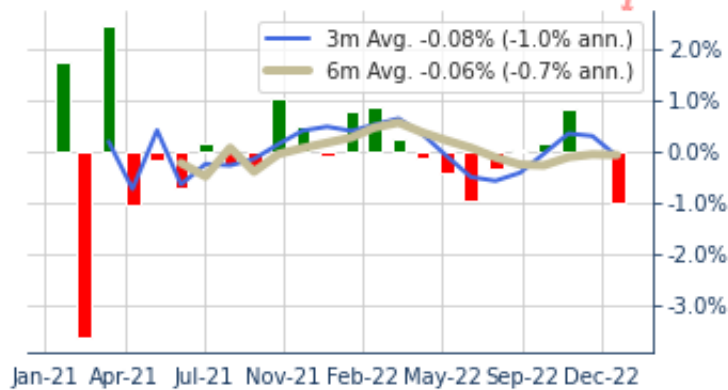
# Electrical equip., appliances, and component



Contingent Macro Advisors 2023 source: Federal Reserve, Consensus from Bloomberg LP



## Food, beverage, and tobacco products



Contingent Macro Advisors 2023 source: Federal Reserve, Consensus from Bloomberg LP

Industrial Production	Dec-22	Nov-22	Total Mar-20 to Apr-20	3m ann % chg	6m ann % chg	YoY % chg	2021	2020	5y
<b>Total IP</b>	<b>-0.72%</b>	<b>-0.58%</b>	<b>-0.00%</b>	<b>-5.22%</b>	<b>-0.98%</b>	<b>1.65%</b>	<b>3.69%</b>	<b>-3.56%</b>	<b>0.40%</b>
<b>Manufacturing (NAICS)</b>	<b>-1.30%</b>	<b>-1.10%</b>	<b>-0.00%</b>	<b>-8.04%</b>	<b>-2.59%</b>	<b>-0.41%</b>	<b>4.19%</b>	<b>-2.26%</b>	<b>-0.02%</b>
Durable manufacturing	-1.09%	-1.36%	-10.00%	-8.08%	-1.56%	0.85%	4.79%	-2.80%	0.13%
Wood products	-2.07%	2.81%	-0.00%	-10.87%	-13.54%	-6.14%	-0.13%	5.44%	-0.97%
Nonmetallic mineral products	0.65%	-0.30%	-10.00%	-1.02%	4.58%	5.69%	-0.17%	0.35%	1.25%
Primary metals	0.84%	-3.41%	-0.00%	-5.55%	-6.18%	-2.83%	5.87%	-5.52%	-1.06%
Fabricated metal products	-1.34%	-0.36%	-0.00%	-4.75%	2.91%	1.75%	5.84%	-7.27%	-0.31%

Machinery	-3.37%	-1.74%	-0.00%	-18.56%	-2.74%	-2.89%	11.98%	-6.75%	-0.67%
Computer and electronic products	-0.99%	-0.69%	-0.00%	-8.56%	-4.67%	-2.91%	9.20%	-1.82%	1.99%
Electrical equip., appliances, and component	-1.52%	-1.65%	-0.00%	-8.13%	-8.25%	-0.44%	5.35%	-0.21%	1.30%
Motor vehicles and parts	-1.03%	-3.49%	-30.00%	-10.20%	0.52%	5.05%	-4.29%	3.56%	0.79%
Aerospace and miscellaneous transportation equipment	0.96%	0.15%	-0.00%	12.14%	10.36%	10.87%	5.39%	-6.10%	-0.35%
Furniture and related products	-1.44%	-3.03%	-10.00%	-21.20%	-10.93%	-5.19%	4.11%	-7.91%	-2.96%
Miscellaneous	-1.64%	-2.39%	-0.00%	-15.07%	-4.14%	1.60%	6.38%	0.48%	1.53%
Nondurable manufacturing	-1.54%	-0.81%	-0.00%	-8.00%	-3.67%	-1.72%	3.58%	-1.69%	-0.17%
Food, beverage, and tobacco products	-1.00%	-0.10%	-0.00%	-1.03%	-0.73%	0.11%	-0.35%	0.25%	0.56%
Textile and product mills	-2.65%	-0.17%	-0.00%	-17.29%	-11.20%	-11.98%	4.56%	-3.18%	-2.68%
Apparel and leather	-0.44%	1.71%	-10.00%	8.90%	6.41%	10.11%	4.11%	-8.54%	0.28%
Paper	-1.59%	-1.17%	-0.00%	-15.35%	-18.01%	-8.23%	0.90%	-4.36%	-2.26%
Printing and support	-3.37%	1.46%	-10.00%	1.92%	-4.82%	-1.17%	3.26%	-8.16%	-2.07%
Petroleum and coal products	-3.13%	-0.62%	-10.00%	-19.14%	0.51%	-2.33%	13.99%	-12.74%	-1.39%
Chemicals	-1.45%	-1.11%	0.00%	-8.22%	-3.83%	-2.01%	6.37%	0.44%	0.26%
Plastics and rubber products	-1.57%	-2.85%	-10.00%	-15.26%	-6.01%	-1.07%	1.99%	-1.51%	-0.26%
Other manufacturing (non-NAICS)	-0.92%	-0.32%	-10.00%	-6.90%	-4.00%	-3.56%	-6.00%	-5.68%	-4.17%
Mining	-0.89%	-1.21%	-0.00%	-8.21%	2.21%	5.75%	9.50%	-16.32%	2.34%
Utilities	3.81%	4.53%	-0.00%	25.10%	4.91%	9.74%	-3.95%	1.98%	1.02%

Electric	2.94%	5.80%	-0.00%	20.47%	2.26%	7.15%	-2.77%	2.04%	0.92%
Natural gas	8.23%	-1.50%	-10.00%	51.13%	19.50%	25.45%	-10.80%	1.43%	1.34%

Month-over-month % change for most recent months, followed by annualized % changes for periods noted. 5- and 10-year are simple averages of annual % changes.