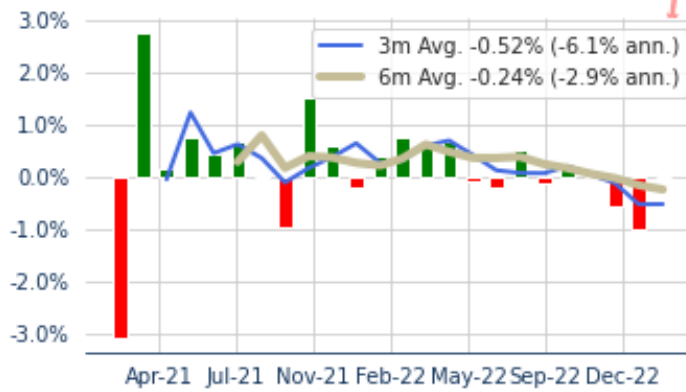


15.Feb.2023

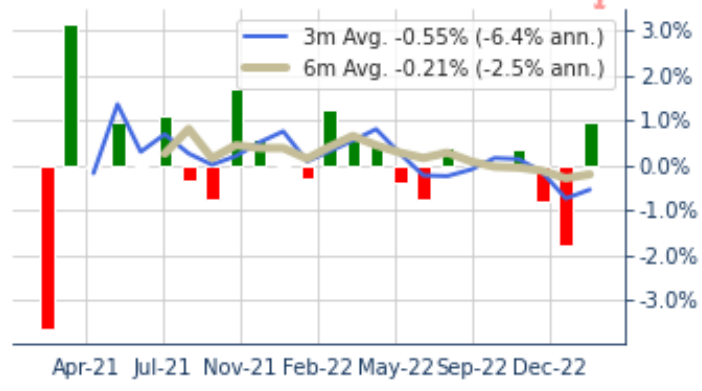
Industrial Production: Hard Data Continues to Confirm Surveys

Bottom Line: The Federal Reserve's industrial production report for January offered more "hard data" to confirm what the "soft" (survey data) showed for much of the 2nd half of 2022. While not quite as weak as the survey data suggested, IP was flat in January, well below expectations for a rebound, and was revised to show an even more significant decline for December. Durable goods manufacturing rebounded but remained in a downtrend. Auto production was decelerating on a trend basis, while the aerospace industry was still enjoying modest to moderate gains. **Overall, the manufacturing sector moved from a tailwind to a headwind for growth over 2022 and looks likely to remain a modest headwind in early '23.**

Industrial Production Total IP

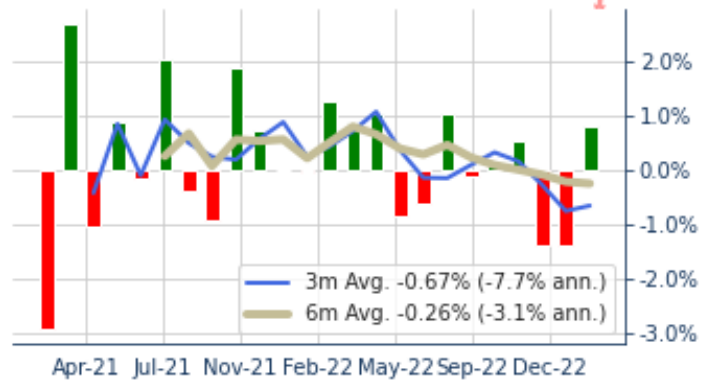
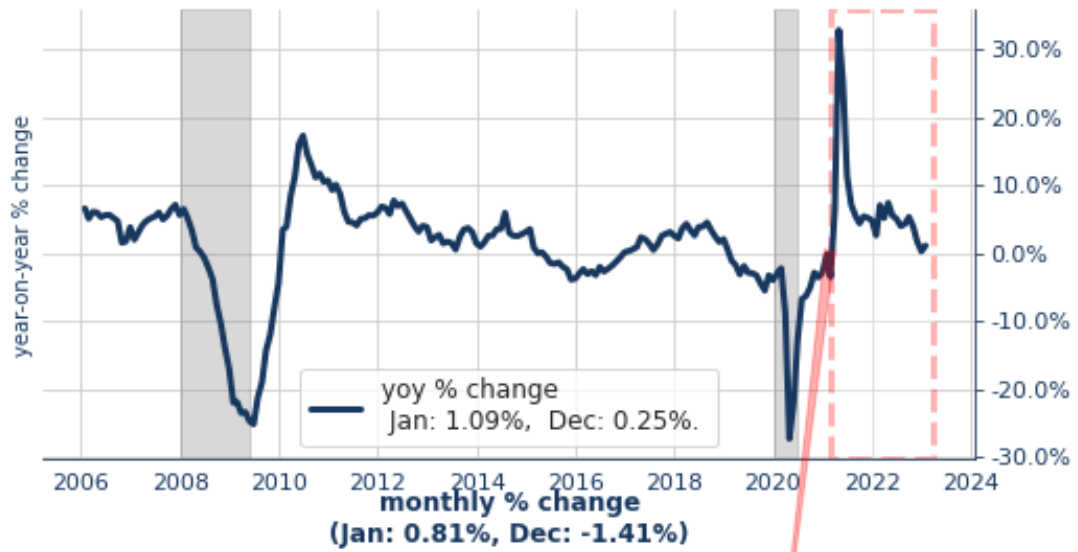


Manufacturing (NAICS)

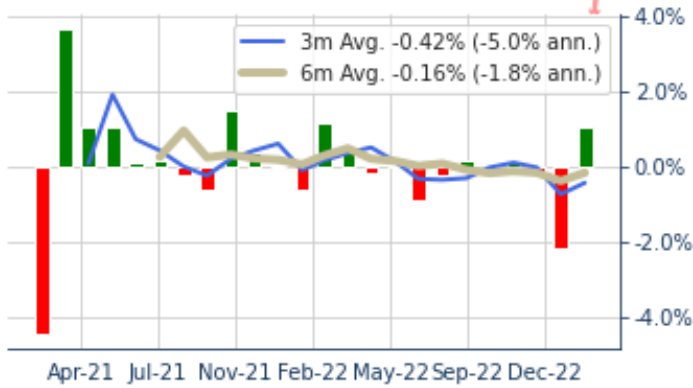


Contingent Macro Advisors 2023 source: Federal Reserve, Consensus from Bloomberg LP

Durable manufacturing

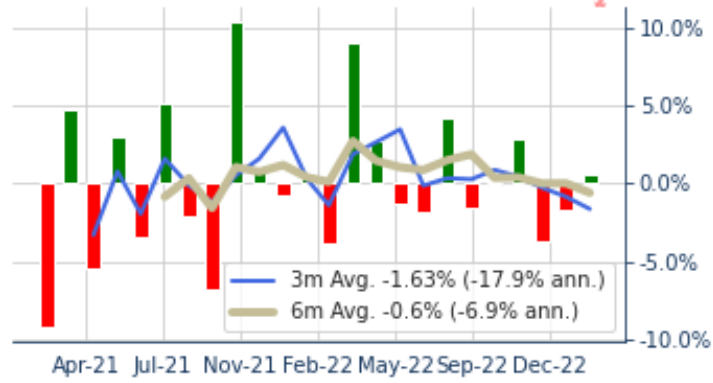
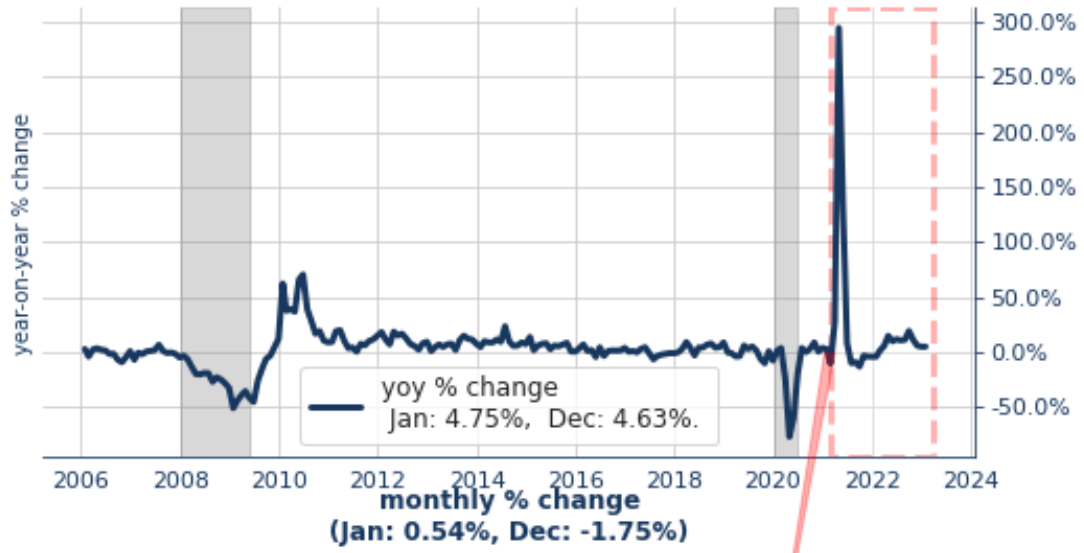


Nondurable manufacturing

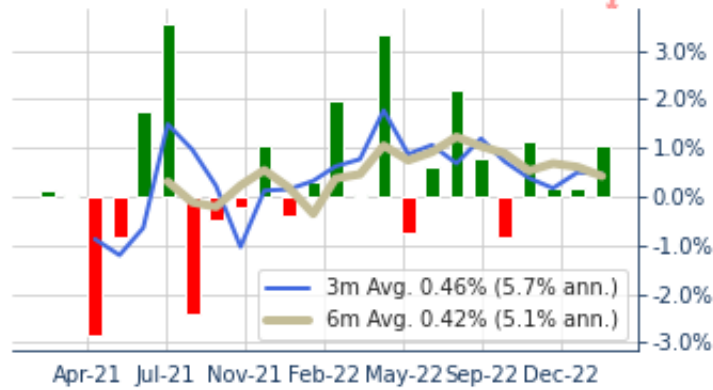


Contingent Macro Advisors 2023 source: Federal Reserve, Consensus from Bloomberg LP

Motor vehicles and parts

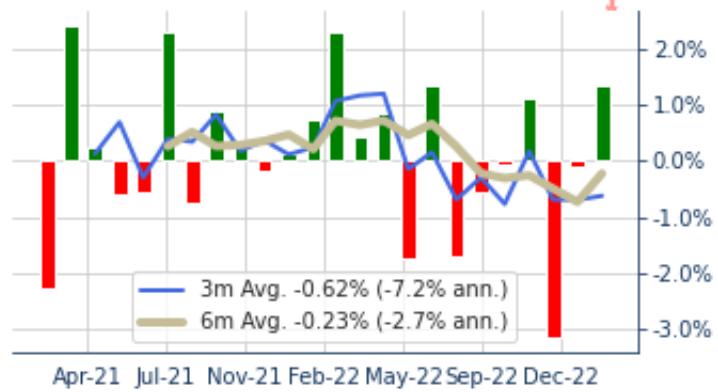
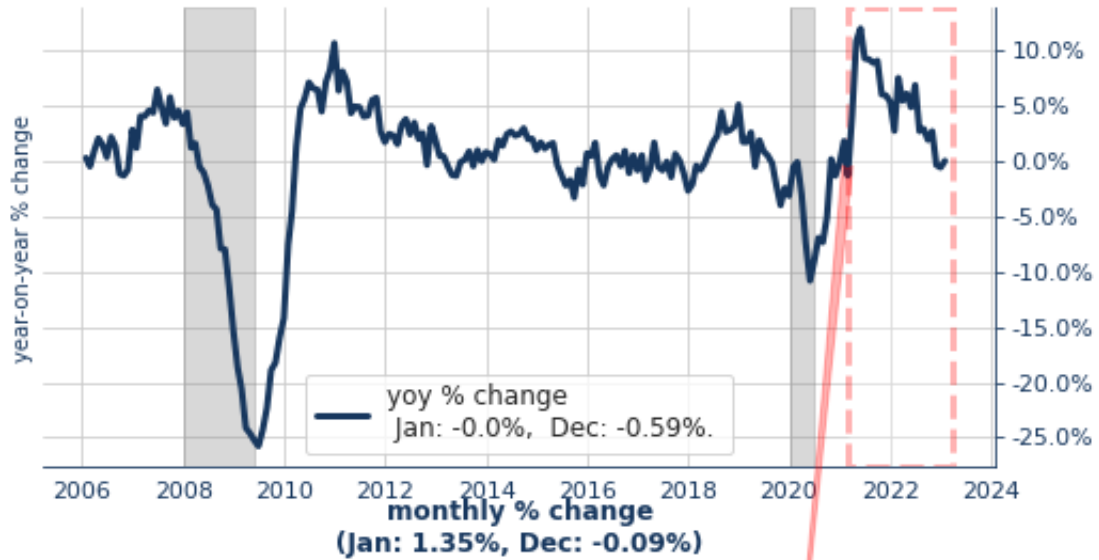


Aerospace and miscellaneous transportation equipment



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	Jan-23	Dec-22	3m ann % chg	6m ann % chg	YoY % chg	2022	2021	5y
Total IP	0.03%	-1.02%	-6.13%	-2.91%	0.79%	1.15%	3.69%	-0.18%
Manufacturing (NAICS)	0.94%	-1.77%	-6.48%	-2.54%	0.34%	-0.90%	4.19%	-0.12%
Durable manufacturing	0.81%	-1.41%	-7.78%	-3.12%	1.09%	0.25%	4.79%	-0.23%
Wood products	-0.97%	-1.42%	-6.25%	-13.26%	-5.78%	-5.32%	-0.13%	-0.07%
Nonmetallic mineral products	2.39%	-0.83%	3.86%	7.23%	7.16%	4.43%	-0.17%	1.23%
Primary metals	0.09%	-2.20%	-19.48%	-14.19%	-3.55%	-6.24%	5.87%	-2.25%
Fabricated metal products	0.40%	-0.72%	-3.60%	-1.17%	2.37%	1.34%	5.84%	-0.99%
Machinery	1.74%	-2.55%	-5.96%	3.34%	-1.83%	-1.62%	11.98%	-0.36%

Natural gas	-14.83%	11.45%	-34.83%	-17.18%	-12.99%	23.86%	-10.80%	-1.29%
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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.