



MORNING BRIEFING

January 25, 2024

Defense, Semis & Solar

Check out the accompanying [chart collection](#).

Executive Summary: Demand for military goods is up, but that only benefits contractors if they can keep costs in check and produce defect-free goods. A look at earnings from RTX, Textron and others. ... The semiconductor industry's shares have started 2024 with a bang, but some areas within the industry are doing better than others. ... Renewable energy is making inroads around the world as it has become competitive with fossil fuels, Jackie reports citing IEA data. In particular, falling solar equipment prices have helped the sunniest power source become the fastest growing renewable option.

Industrials: Playing Defense. War and hostilities afflict many areas of the world that are of immense political and economic importance to the US. So, it would seem logical for defense stocks to be on a roll. War makes politicians remember why they spend billions on military equipment and it consumes ammunition that needs replacing. Yet, the S&P 500 Aerospace & Defense industry's stock price index, is up only 6.6% over the past year through Tuesday's close, lagging far behind the S&P 500's 21.0% gain over the same period ([Fig. 1](#)).

Some of the blame for the index's lackluster performance can be laid at the feet of Boeing, which has suffered from producing planes with manufacturing defects. The most recent dilemma: Loose—or missing—bolts. Boeing is the largest company in the industry and its shares are essentially flat over the past year. If Boeing shares were excluded, the S&P Aerospace & Defense stock price index would be up 9.7% over the past year.

The best performing stock in the S&P 500 Aerospace & Defense industry is TransDigm Group, a roll up of businesses that manufacture parts for commercial and military planes. The parts, which are used in new planes and in the aftermarket, are highly engineered and/or hard to commoditize. TransDigm shares have risen 56.5% over the past year and earnings are expected to grow from \$22.03 in the fiscal year that ended September 30, 2023, to \$32.34 in FY-24 and \$37.65 in FY-25.

Textron shares rose almost 8% Wednesday, bringing their one-year gain to 22.9%, after the company reported Q4 earnings per share growth of 30.1% and gave 2024 earnings guidance of \$6.20-\$6.40 a share, well above analysts' forecast of \$5.97, according to a

January 24 MarketWatch [article](#). Textron is best known for its Beechcraft and Cessna aircraft, Bell military helicopters, and other military systems.

General Dynamics' shares gained 4.7% Wednesday after reporting earnings, bringing its shares' one-year gain to 10.9%. Other strong performances have come from the shares of Howmet Aerospace, up 43.1% over the past year through Tuesday's close, and Huntington Ingalls Industries, up 16.2%.

There are some defense companies that have struggled with tight supplies and rising prices, resulting in squeezed margins and middling returns that fall somewhere between RTX shares' 10.0% decline and L3Harris Technologies shares' 4.9% gain over the past year.

Here's a look at some of the macro factors affecting the industry as well as recent earnings out of RTX.

(1) *Flattish real US defense spending.* Companies in the S&P 500 Aerospace & Defense industry sell commercial aircraft, military aircraft and equipment, and aftermarket parts in both areas. Business related to commercial aircraft has benefited from the rebound in domestic travel in the US after the Covid-related meltdown in 2020. The number of passengers passing through TSA checkpoints has recovered to 2019 levels as has revenue passenger miles on US carriers flying both domestically and internationally ([Fig. 2](#) and [Fig. 3](#))

On its face, US defense spending appears robust. In the GDP accounts, it's at record levels at \$1,009 billion during Q3, up 39.5% from its recent low of \$723 billion in Q2-2016. When those figures are adjusted for inflation, however, the government's spending doesn't seem quite so prolific. Real defense spending is on a par with what was spent in 2008 ([Fig. 4](#)).

While new orders for nondefense aircraft and parts have risen to new highs, new orders for defense aircraft and parts have been flattish over the past 15 years ([Fig. 5](#) and [Fig. 6](#)). Neither of these data points are adjusted for inflation.

International defense spending is growing in some countries more quickly than it is in the US. Global military spending increased 3.7% in real terms in 2022 to a new high of \$2.2 trillion, according to an April 24, 2023 [press release](#) from the Stockholm International Peace Research Institute. European countries increased their spending sharply, 13% y/y, boosted by spending in Ukraine and Russia.

Spending increased elsewhere in Europe too, in reaction to Russian aggression. Military spending by Central and Western European countries hit \$345 billion, and in real terms their spending finally surpassed what they spent in 1989, when the Cold War was ending. Large spending increases in 2022 occurred in Finland (36%), Lithuania (27%) and Poland (11%). The countries with the largest military budgets are the US (\$877 billion, up 0.7% in 2022), China (\$292 billion, up 4.2%), and Russia (\$86.4 billion, up 9.2%).

(2) *RTX deals with contracts and inflation.* Like Boeing, RTX has struggled with equipment defects, but its Q4 earnings topped estimates on Tuesday. Contaminated metal in some of RTX's Pratt & Whitney engine parts require inspections and grounded planes, the company announced last summer. The problem could cost up to \$7 billion to fix, a September 11 [WSJ article](#) reported.

Nonetheless, RTX reported Q4 adjusted earnings of \$1.29 per share on \$19.8 billion of sales, topping expectations for earnings of \$1.24 per share and revenue of \$19.7 billion. Sales were up 10% y/y, while earnings per share rose only 2% y/y.

Here's how Chris Calio, RTX's incoming CEO described the current market environment in Tuesday's earnings [conference call](#): "Starting with commercial aero, we saw solid air traffic growth this past year with global revenue passenger miles back to 2019 levels and domestic air travel now 5% above 2019 levels as we exited the year. The strong recovery has helped drive significant aftermarket demand for both wide-body and narrow-body aircraft, with growth expected to continue into 2024. On the defense side, increases in global spending have led to a defense backlog which is now at \$78 billion, up \$9 billion from a year ago."

In 2023, RTX's revenue from commercial aftermarket business rose 23%, commercial original equipment revenue jumped 20% and defense revenue increased 4%. The company's defense business has had "challenges" with fixed-price development programs and rising material costs. RTX plans to ensure future contracts have better protection from supplier inflation.

This year RTX expects organic sales growth of 7%-8% and adjusted earnings of \$5.25-\$5.40 per share, a 4%-7% increase from 2023's adjusted EPS of \$5.06. RTX shares rose 5.3% on Tuesday to \$89.55, outpacing the S&P 500's 0.29% increase.

(3) *Earnings expected to fly.* The S&P 500 Aerospace & Defense industry is expected to grow revenues by 8.9% this year and 6.8% in 2025 ([Fig. 7](#)). The industry's earnings are expected to grow even faster, by 34.1% this year and 21.0% in 2025 largely because

Boeing's earnings are rebounding from losses in 2022 and 2023 ([Fig. 8](#)). The industry's forward P/E of 21 isn't far from its high of 23 and its well off of its recession-lows of 11 ([Fig. 9](#)).

Information Technology: Soaring Semis. The first month of the year isn't even in the rearview mirror and the S&P 500 Semiconductors stock price index has risen 11.9% ytd through Tuesday's close ([Fig. 10](#)). That tops the S&P 500 Information Technology sector's 5.8% ytd return and the S&P 500's 2.0% gain.

Analysts are very optimistic about the industry's earnings, which are expected to grow 37.4% this year and 26.7% in 2025 ([Fig. 11](#)). However, earnings news from the industry this week has been mixed. Taiwan Semiconductor Manufacturing and ASML Holding reinforced optimism about demand for chips in handsets and for artificial intelligence. Conversely, news about demand for chips used in cars and in industrial applications hasn't been as rosy. Here's a quick look at the details.

(1) *Global recovery underway.* In the wake of Covid, there was a glut of excess inventory, which led to a sharp slowdown in the sale of semiconductors. Roughly one year later, the semiconductor inventory correction is over in certain categories. Global sales peaked in May 2022 at \$51.7 billion, fell to a low of \$39.7 billion in February 2023 and have since rebounded sharply to \$48.0 billion as of November 2023 ([Fig. 12](#)).

The strength of semiconductor sales in the US is confirmed by US industrial production of semiconductors, which has jumped 21.5% from the January 2023 bottom ([Fig. 13](#)).

(2) *Demand strong at the high-end.* Taiwan Semiconductor Manufacturing Co. (TSMC) is the world's largest contract chip manufacturer and counts Apple and Nvidia as customers. TSMC expects 2024 revenue to grow 20% y/y, a nice rebound from the 9% y/y revenue decline it reported last year. TSMC benefits from the resumption of growth in smartphone shipments and the booming demand for chips used in artificial intelligence, a January 18 [WSJ article](#) reports.

Taiwan Semi is ASML's largest customer and the semi equipment manufacturer reported Q4 earnings that beat analysts' estimates yesterday. While ASML CEO Peter Wennink warned that 2024 would be a flattish year, he expects "significant growth" in 2025, a January 24 [Barron's article](#) reported.

Starting last year, the Dutch government prevented the company from shipping its most technologically advanced semiconductor equipment to China. Nonetheless, the company

managed to book orders of more than 9 billion euros in Q4, more than triple Q3 results, bolstered by strong demand for the company's highest-end equipment.

Shares of semiconductor manufacturers benefitting from the AI halo have rallied, including TSMC (9.7% ytd through Tuesday's close) and Nvidia (20.9%). ASML shares jumped 8.9% on Wednesday, bringing its ytd gains to 11.9%.

(3) *Weakness in auto/industrial chips.* Texas Instruments warned on Tuesday that demand for chips used in cars has declined and demand from industrial customers is weak. The company also provided revenue guidance for the current quarter that fell short of analysts' forecasts.

TI's report echoed Mobileye Global's warning in early January that "excess inventory at its customers will result in a drop in sales and earnings this year," a January 4 [WSJ article](#) reported. The company, which specializes in chips used in driver assistance features, expects 2024 revenue could fall roughly 9% y/y, far from the 23% increase analysts had been expecting.

Shares of auto-related semiconductor companies have had a tough start to the year, including Mobileye (-34.4% ytd through Tuesday's close), On Semiconductor (-8.1), NXP Semiconductors (-2.5), and Texas Instruments (2.3).

Disruptive Technologies: Solar Shines. The pace of global renewable energy additions picked up last year, jumping by almost 50% y/y to 510 gigawatts (GW). That's the fastest growth in two decades and renewable energy additions are expected to continue growing strongly reaching 710 GW by 2028, according to a [report](#) on renewable energy from the International Energy Agency.

More renewable energy production capacity will be added around the world in the next five years than has been installed since the first commercial renewable energy power plant was built more than 100 years ago, the report states. The IEA forecasts that 25% of our electricity globally will come from solar and wind power by 2028, double today's levels. And in seven European countries, the amount of electricity generated by renewables is expected to rise to more than 50%, with Denmark in the lead generating around 90% of its electricity via wind and solar by 2028.

Much of the gains in renewables is due to the growth of solar power, which has benefitted from declining equipment prices. Let's take a look at some of the report's highlights.

(1) *Solar makes economic sense.* Because equipment prices have fallen, the cost of solar power is now competitive with electricity produced using fossil fuels, the report states. In 2023 about 96% of newly installed, utility-scale solar and onshore wind capacity had lower generation costs than new coal and natural gas plants. Also, three quarters of the new solar and wind plants produced cheaper power than existing fossil fuel plants.

Last year global manufacturing capacity for solar equipment jumped and prices for that equipment fell. “[S]pot prices for solar PV modules declined by almost 50% year-on-year, with manufacturing capacity reaching three times 2021 levels.”

China is expected to maintain its 80%-95% share of the global solar supply chain, even as other countries attempt to increase their manufacturing capabilities in the area. The report warns that countries developing their own EV supply chains, like the US, may increase the security of their supply chains and boost local economies, but their efforts may also increase the cost of deploying solar in those markets.

The IEA expects solar and wind power will grow even more price competitive in the years ahead.

(2) *Higher costs blow wind off course.* EU and US wind projects—particularly those located offshore--have been bruised by the impact of inflation, with rising interest rates and higher equipment costs taking a toll.

Some developers who signed power purchase contracts prior to the spike in interest rates have had to cancel their projects due to the change in economics. Most Western manufacturers have reported losses over the past two years. The IEA suggests the industry should improve the way auctions are designed and the way contract pricing is indexed to prevent these problems in the future.

While the IEA has increased its global forecast for solar capacity additions, it has decreased its forecast for wind additions around the world, except for in China where interest rates remain low and capacity is still expected to increase

(3) *China leads the way.* Almost 60% of the new renewable energy capacity that’s expected to be added worldwide by 2028 will be in China, the IEA report predicts. The country is expected to reach its national 2030 renewables target six years early. Last year alone, China increased the electricity produced via solar power by 116% and wind power by 66%.

Over the next five years, the country's renewable electricity capacity growth is expected to triple compared with the previous five years. China is expected to roll out almost four times more renewable capacity than the EU and five times more than the US. The aggressive rollout is helped by its low interest rates and ample manufacturing capacity.

China's inexpensive labor has historically been a key reason for companies to set up manufacturing facilities in the country. It will be interesting to track whether low-cost electricity from renewable energy sources will give China an advantage in the future.

Calendars

US: Thurs: Real GDP & Price Index 2.0%/2.2%; Core PCED 2.0%; Goods Trade Balance Advance -\$88.7b; Durable Goods Orders & Nondefense Orders Ex Aircraft 1.0%/0.2%; Initial & Continuous Jobless Claims 200k/1.84m; New Home Sales 640k; Kansas City Fed Manufacturing Index; Chicago Fed National Activity Index; Wholesale Inventories -0.2%; Natural Gas Storage. **Fri:** Personal Income & Spending 0.3%/0.4%; Headline & Core PCED 0.2%*m/m*/2.6%*y/y* & 0.2%*m/m*/3.0%*y/y*; Pending Home Sales 1.6%; Baker Hughes Rig Count. (FXStreet estimates)

Global: Thurs: ECB Interest Rate Decision 4.50%; Germany Ifo Business Climate Index, Current Assessment, Business Expectations 86.7/88.6/84.9; France Business Survey 100; UK Gfk Consumer Confidence -21; UK CBI Distributive Trade Survey -30; BoJ Monetary Policy Meeting Minutes; Lagarde. **Fri:** Eurozone M3 & Private Sector Loans -0.7% & 0.6% *y/y*; Germany Gfk Consumer Climate Index -24.3; Germany Buba Monthly Report; France Consumer Confidence 90; Spain Unemployment Rate 11.9%; Japan Leading & Coincident Indicators. (FXStreet estimates)

Strategy Indicators

Stock Market Sentiment Indicators ([link](#)): The Bull-Bear Ratio rose to 3.09 this week after slipping the prior two weeks to 2.54 from 3.32—which was the highest since early August 2021. Bullish sentiment climbed 4.4ppts this week to 52.9%, after sinking 8.6ppts (to 48.5% from 57.1%) over the prior two-week period to its lowest percentage since the week of October 31. Three weeks ago, the report urged caution when bullish sentiment reached 57.1%—equaling the late July 2023 peak. Meanwhile, bearish sentiment fell from 19.1% last week to 17.1% this week—just below the final reading of 2023, which was the fewest bears since summer 2021. The correction count fell to 30.0% this week, after a three week climb of 7.4ppts (to 32.4% from 25.0%), which was the highest since early October. Turning to the AAll Sentiment Survey (as of January 18), the short-term outlook for stocks fell in the latest survey, while pessimism rose and neutral sentiment increased to a level above its historical average. The percentage expecting stock prices to rise over the next six

months fell 8.2ppts to 40.4%—remaining above its historical average of 37.5% for the 11th successive week. The percentage expecting stocks to fall over the next six months increased 2.6ppts to 26.8%, below its historical average of 31.0% for the 11th straight week. The percentage expecting stock prices will stay essentially unchanged over the next six months jumped 5.6ppts to 32.9%, moving above its historical average of 31.5% for the first time in seven weeks.

S&P 500 Q4 Earnings Season Monitor: With 83 companies having reported Q4 results through mid-day Wednesday, the Q4-2023 earnings season is now nearly 17% complete, and the early indications suggest a weaker revenue and earnings surprise than in Q3-2023. Among the companies that have reported so far, aggregate y/y earnings growth is trailing revenues growth. Revenues are ahead of the consensus forecast by 0.4%, and earnings have missed estimates by 0.2%. At the same point during the Q3 season, revenues were 0.7% above forecast, and earnings had beaten estimates by 8.7%. The early results are heavily impacted by Delta Airlines' loss. Without Delta, the earnings surprise improves to 2.9% and the revenues surprise edges up to 0.3%. Just 55% of the 83 companies has reported a positive revenues surprise, while 75% has reported an earnings beat. If it holds to the end of the season, the percentage with a positive revenues surprise would be the weakest since Q4-2016 and the percentage with positive earnings surprises would be the lowest since Q4-2022. Among the 83 reporters so far, the aggregate y/y growth rates has improved since Q3-2023 for revenues, and weakened for earnings: to 3.6% from 1.3% for revenues growth and to -2.7% from 2.9% for earnings growth. While we expect y/y revenues growth rates to remain positive yet again in Q4 and for a 13th straight quarter, earnings growth will be positive on a y/y basis for the only a second time in five quarters. Slightly fewer companies have been reporting positive y/y earnings growth in Q4(58%) than positive y/y revenues growth (61%). These figures will continue to change as more Q4-2023 results are reported in the coming weeks.

Global Economic Indicators

US PMI Flash Estimates ([link](#)): “Output growth fastest for seven months at the start of 2024, prices charged rise at slowest pace since May 2020,” according to January’s flash estimate report. The C-PMI increased to a seven-month high of 52.3 in January from 50.9 in December, with both the service sector and manufacturing sector improving. The NM-PMI climbed to a seven-month high of 52.9 from 51.4 in December, while the M-PMI moved back above 50.0 to a 15-month high of 50.3, though manufacturers continued to see a drop in production (49.7) amid intensifying supply issues. According to the report, there was a broad-based improvement in demand conditions for both goods and services, pushing business confidence to a 20-month high. Turning to pricing, average prices charged for goods and services rose at significantly reduced rate in January. According to the report, “With prices rising in January at the lowest rate since the initial pandemic lockdowns in early 2020, companies report that selling price inflation is now below the pre-pandemic average and consistent with consumer price inflation dropping below the Fed’s 2% target.”

Eurozone PMI Flash Estimates ([link](#)): January saw the Eurozone’s downturn moderating, but price pressures intensifying. The Eurozone’s C-PMI edged up from 47.6 in December to a six-month high of 47.9 in January, with downturns persisting in both the manufacturing and service sectors. The manufacturing sector contracted for the 10th straight month in January, though the decline was the smallest since April, with the M-PMI climbing from 44.4 in December to a nine-month high of 46.6 this month. Meanwhile, the NM-PMI slipped from 48.8 in December to a three-month low of 48.4 in January. Looking at the two largest Eurozone economies, Germany’s C-PMI edged down to a three-month low of 47.1 in January, with the NM-PMI falling to a five-month low of 47.6. while the M-PMI climbed to an 11-month high of 45.4, with both still entrenched in negative territory. Meanwhile, France recorded another steep contraction in January, with its C-PMI slipping to a four-month low of 44.2, with the NM-PMI at a four-month low of 45.0 and the M-PMI at a four-month high of 43.2. However, the manufacturing PMI output index is as at 44-month low of 40.5. In contrast, the rest of the region as a whole returned to growth after five months of decline, posting the largest, though still modest, expansion since last June. Turning to pricing in the overall Eurozone, the report notes that while disruptions to shipping in the Red Sea caused supply chains to lengthen for the first time in a year, manufacturing costs continued to fall on average. Service sector costs, however, accelerated showing the biggest rise in prices charged for goods and services since last May; this rate of inflation was at a 32-month low in October.

Japan PMI Flash Estimates ([link](#)): Private sector activity in Japan showed a renewed expansion in output at the start of this year after slowing to a standstill at the end of last year. C-PMI climbed from 50.0 in December to a four-month high of 51.1 at the start of this year, led by the service sector, with its NM-PMI climbing from 51.5 in December to 52.7 in January, the highest reading since September. Meanwhile, manufacturing continues to contract with Japan’s M-PMI deteriorating for the eighth consecutive month, though output declined at a slightly slower pace in January, rising to 47.4 from 46.8 in December. As for prices, input price inflation persisted in January, though its level dipped from December’s three-month high, while output charges increase at their slowest pace since June 2021.

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