Yardeni Research

MORNING BRIEFING
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Transports & Batteries

Check out the accompanying chart collection.

Executive Summary: As consumers continue to celebrate their freedom from Covid with vacations and other experiences, spending less on tangible things, not only retailers have felt the sting—and not only last year. Transport companies continue to report less freight to haul, as FedEx's recent earnings report illustrated. Jackie examines the S&P 500 Transportation industry's demand problem. On the bright side, fuel costs have fallen, and analysts are optimistic about improved results next year. … And: When the solid-state batteries for EVs now being developed become commercialized, the much greater driving range they offer may be just the shove the EV market needs to take off.

Transports: Inventory Weighs. It seems so 2022, but inventory levels remain elevated almost a year after retailers, like Target, first warned of the problems building in warehouses. FedEx's earnings report on Tuesday described how it struggled in this tough market environment but noted that some areas may improve over the next year as comparisons to this year's results get easier.

FedEx blamed soft demand for a 10.2% drop in revenue to $21.9 billion and a 20.6% drop in adjusted operating income to $1.8 billion in its fiscal Q4, ended May 31. The company is in the midst of a restructuring program that aims to reduce costs by $1.8 billion in the current fiscal year and $4 billion in fiscal 2025. FedEx has retired a number of aircraft, cut US headcount by about 29,000 during fiscal 2023, and is merging its ground and express operations. The company is also rolling out new technology, including a system to provide residential customers with a picture showing that their package has been delivered. The program has led to a 14% reduction in disputed delivery cases and a 17% reduction in call volume in the US, said CEO Raj Subramaniam on the company's earnings *conference call*.

Management is hopeful that some parts of its operation will improve this year, helped by easier y/y comparisons. Subramaniam also believes the "reset" in the e-commerce market has run its course, leaving the area set to grow again in fiscal 2024. But he warned that other areas are expected to continue to struggle, resulting in projected revenue growth this fiscal year of flat to up at a percentage in the low single digits. The company's cost-cutting program, however, is expected to boost adjusted operating earnings to $16.50-$18.50 a share in fiscal 2024, up from $14.96 in fiscal 2023.

Investor optimism about the company's restructuring and the glimmers of an industry recovery have sent FedEx's shares flying this year, up 33.8% ytd through Tuesday's close. That performance trounces the ytd advances of competitor UPS (2.0%) and the S&P 500 (14.3%), as well as the S&P 500 Transportation composite (5.6%) and all of its constituents: Passenger Airlines (21.9%), Air Freight & Logistics (9.4), Cargo Ground Transportation (8.2), and Rail Transportation (-2.2) (*Fig. 1*).

Let's use FedEx's earnings report as an opportunity to review some of the data emanating from the transportation industry:

(1) *Inventories remain elevated.* Consumers opting to set sail on cruises instead of redecorating home offices has led to bloated inventory levels; companies were unprepared for the post-pandemic changes in consumer behavior. While inventory levels adjusted for inflation have stopped climbing, they remain elevated, particularly at wholesalers. Real business inventories at wholesalers hit $789.8 billion in March, up from $668.4 billion in April 2021 but down slightly from the peak of $792.7 billion in December 2022 (*Fig. 2*).

Real inventory levels have climbed faster than sales. The business inventory-to-sales (I/S) ratio, adjusted for inflation, has climbed to 1.49 in March, up from 1.37 in September 2021 (*Fig. 3*). The ratio appears most elevated at manufacturers and at wholesalers; the retail I/S ratio is off its lows of 2021, but it's not elevated relative to its history (*Fig. 4*).

(2) *Trade has slumped.* With US inventories still plentiful and the Chinese economy sluggish, US trade has slowed sharply. Container traffic passing through the West Coast ports has fallen from its 13.3 million TEUs pandemic high to 10.7 million TEUs in May, a level that's more consistent with those of the last decade (*Fig. 5*). The slowdown is also evident in the value of real merchandise imports and exports, which has plateaued at a very high level (*Fig. 6*).

(3) *Truck and rail traffic growth has fallen.* Sluggish trade volumes have led to less intermodal truck and rail traffic. Railcar loadings of intermodal containers have fallen from their recent peak of 248,640 units in early September 2022 to 217,670 units in mid-June. Likewise, the ATA Truck tonnage index has fallen slightly from its September 2022 peak and remains below 2019 levels (*Fig. 7*). As business inventories have risen, truck tonnage has fallen (*Fig. 8*).

(4) *Prices are still falling.* Weakness in the transportation industry is reflected in the Producer Price Index's sharp decline this year in the cost of shipping freight by truck. Truck

shipping prices, which rose by more than 20% y/y in 2022, declined by 13.6% in May (*Fig. 9*). Ocean shipping prices may have bottomed, however. The Shanghai Export Container Freight index has been bumping along very low levels since March after falling from peak levels earlier in the year, according to a *chart* from MacroMicro.

(5) *Wages rising, gas prices falling.* Looking forward, the transportation industry faces one headwind and one tailwind: Unionized employees are pushing for higher wages and fuel prices have fallen.

Most recently, UPS's Teamsters union voted to authorize a strike if the union and the company can't agree on a new contract by July 31, when the current contract expires. They represent more than 340,000 delivery drivers and logistics workers. This follows the tentative labor contract agreement that raised West Coast unionized dockworkers' wages by 32% through 2028 and granted them a one-time bonus for working through the pandemic, a June 15 *WSJ* *article* reported.

Conversely, the cost of fuel has been declining. The price of gasoline futures has fallen 39% from its June 9, 2022 peak to $2.61 (*Fig. 10*).

(6) *Earnings set to improve.* Wall Street analysts appear to be hoping that the transportation environment will improve next year. Here are Wall Street analysts' earnings estimates for 2023 and 2024 for the members of the S&P 500 Transportation index: Air Freight & Logistics (-10.9%, 12.7%), Cargo Ground Transportation (-10.1, 14.6), Passenger Airlines (146.8, 20.6), and Rail Transportation (-0.9, 8.5).

Disruptive Technologies: Batteries' Solid Advancement. Toyota reports that it has developed a solid-state battery that allows electric vehicles (EVs) to drive more than 900 miles on one charge. That's much further than the 300 miles that many EVs on the road today, powered by liquid lithium and cobalt batteries, typically can drive on a charge.

Solid-state batteries in general offer not just longer driving range; they are also expected to be less flammable and contain fewer rare, expensive metals than today's liquid electrolyte batteries that use lithium and cobalt. Solid-state batteries could help EVs become commonplace if they assuage drivers' range anxiety, assuming that the price of solid-state batteries drops.

We've been following the evolution of solid-state batteries, most recently in the *March 16, 2023* and *October 5, 2022* *Morning Briefings*. In addition to the established auto makers attempting to decode the mysteries of solid-state batteries (e.g., Toyota, BMW, Nissan, and others), upstarts Solid Power and QuantumScape are racing to develop the ultimate battery. Let's take a look at some of the latest advancements:

(1) *Toyota makes promises.* Toyota has been slow to embrace pure EVs, instead hedging its bets by also developing plug-in hybrid electric vehicles (PHEVs), hybrid electric vehicles (HEVs), and cars using fuel cells. But that may change if new solid-state battery technology developed by the company gives it an edge in the EV market.

Earlier this month, Toyota laid out a plan to roll out more advanced lithium-ion batteries followed by solid-state batteries that can be charged in 10 minutes and drive roughly 900 miles, thanks to new technological breakthroughs that were not disclosed. If the batteries develop as hoped, they could be mass produced in 2027-28; but they will likely be more expensive than liquid, lithium-ion batteries. Toyota has been making optimistic claims about solid-state batteries since 2014 but has yet to bring one to market, observes a June 13 Electrek *article*.

(2) *Nissan developing solid batteries, too.* Nissan plans to have a pilot production plant making solid-state batteries running in 2025 and aims to start producing solid-state batteries in 2028. The extra power held in solid-state batteries will make it easier to launch electric pickup trucks and SUVs, according to a Nissan exec *interviewed* by *Autocar* in February. The automaker hopes that solid-state batteries will triple charging speeds, double the energy density, and cut production costs in half compared to current lithium-ion batteries.

Solid-state batteries and lithium-ion batteries will probably coexist for a number of years. So Nissan has continued to invest in lithium-ion batteries and plans to introduce versions that are cobalt free and up to 65% less expensive than today's lithium-ion batteries by 2028.

(3) *Little guys keep on swimming.* QuantumScape and Solid Power are small companies developing solid-state batteries. Both went public during the SPAC (Special Purpose Acquisition Corporation) merger boom a few years ago, and the share prices of both have sagged in the ensuing years.

QuantumScape has delivered solid-state battery prototypes for evaluation by EV manufacturers and consumer electronics companies. The company's testing with an auto manufacturer has yielded successful results, according to its April 26 shareholder *letter*, and now its focus is transitioning from demonstrating the technology to improving battery reliability and developing a commercial product.

QuantumScape, which has a shelf registration outstanding, ended Q1 with about $1 billion in liquidity and a "cash runway [that] is forecast to extend into the second half of 2025." The company's shares briefly spiked above $130 in December 2020 but closed at $7.43 on Tuesday.

Meanwhile, Solid Power has received a $5 million award from the US Department of Energy to continue developing nickel- and cobalt-free batteries, a January 12 *Electrek* article reported. The company is focused on developing a solid-state sulfide-based electrolyte technology that it hopes will have more energy density but roughly the same price as current lithium-ion batteries. Solid Power, which counts Ford and Hyundai as investors, has licensed its technology to BMW group. The two companies hope to test the solid-state batteries in vehicles this year, a January 25 *Autoweek* article reported.

At the end of Q1, Solid Power had $468.2 million of cash, cash equivalents, marketable securities, and long-term investments. Its shares closed at $2.32 on Tuesday.

Notable among other companies developing solid-state batteries are Factorial Energy—which has backing from Mercedes-Benz, Stellantis, and Hyundai—and ProLogium.

Calendars

US: Thurs: Leading Indicators -0.8%; Existing Home Sales 4.25mu; Initial & Continuous Jobless Claims 260k/1.782m; Kansas City Fed Manufacturing Index; Chicago National Activity Index 0.0; Crude Oil Inventories; Gasoline Production; Powell; Mester; Bowman; Waller; Barkin. **Fri:** M-PMI & NM-PMI Flash Estimates 48.3/54.0; Baker Hughes Rig Count; Bostic; Mester. (Bloomberg estimates)

Global: Thurs: Eurozone Consumer Confidence -17.0; France Business Survey 99; BoE Interest Rate Decision 4.75%; Japan Total & Core CPI 4.1%/3.1%y/y; De Guindos; Nagel; Panetta. **Fri:** Eurozone, Germany, and France C-PMI Flash Estimates 52.5/54.0/51.3; Eurozone, Germany, and France M-PMI Flash Estimates 44.5/43.5/45.3; Eurozone, Germany, and France NM-PMI Flash Estimates 54.5/56.3/52.0; Spain GDP 0.5%q/q/3.8%y/y; UK C-PMI, M-PMI, and NM-PMI Flash Estimates 53.7/46.8/54.7; UK Headline & Core Retail Sales -0.2%m/m/-2.3%y/y & -0.3%m/m/-2.1%y/y; Panetta. (Bloomberg estimates)

Strategy Indicators

Stock Market Sentiment Indicators (*link*): The *Bull-Bear Ratio* rose this week for the fifth week, to 2.72, the highest since mid-August 2021. *Bullish* sentiment climbed for the sixth week by 9.7ppts (to 54.3 from 44.6) to its highest percentage since November 2021. *Bearish* sentiment edged down this week for the fifth week to 20.0%, the fewest bears since early January 2022. The correction count moved down for the sixth week to 25.7%, a nine-week low, remaining well below its late September 2022 peak of 40.3%. Turning to the *AAII Sentiment Survey* (as of June 15), optimism remains above average for the second straight week, while bearish sentiment sank to its lowest level since July 2021. Neutral sentiment moved higher. The *percentage expecting stock prices to rise* over the next six months climbed for the fourth week by 22.3ppts (to 45.2 from 22.9), putting optimism above its historical average of 37.5% for the second straight week and posting its highest percentage since November 11, 2021 (48.0%). The *percentage expecting stocks to fall* over the next six months fell for the third week by 17.0ppts (to 22.7% from 39.7%). Bearish sentiment was last lower on July 1, 2021 (24.0%). The *percentage expecting stock prices will stay essentially unchanged* over the next six months edged up only 1.0ppt to 32.1%; this indicator of neutral sentiment is below its historical average of 31.5% for the fifth time out of the past 24 weeks.

S&P 500 Earnings, Revenues, Valuation & Margins (*link*): The S&P 500's forward profit margin was steady w/w at 12.5% during the June 15 week, up from a 24-month low of 12.3% during the March 30 week. That's down 0.9pt from its record high of 13.4% achieved intermittently in 2022 from March to June. It's now 2.2pts above its seven-year low of 10.3% during April 2020. Forward revenues edged down for a second week to less than 0.1% w/w from its record high during the June 1 week. Forward earnings dropped 0.1% w/w, but is only 3.2% below its record high during the June 16, 2022 week. Both had been steadily making new highs from the beginning of March 2021 to mid-June; prior to that, they peaked just before Covid-19 in February 2020. The consensus expectations for forward revenues growth was steady w/w at a seven-month high of 3.4% and is now up 1.1pts from its 33-month low of 2.3% during the February 23 week. That's down from a record high of 9.6% growth at the end of May 2021 and compares to 0.2% forward revenues growth during April 2020, which was the lowest reading since June 2009. Forward earnings growth ticked down 0.1pt w/w to 6.8% from an eight-month high of 6.9% and is now 3.3pts above its 31-month low of 3.5% in mid-February. That's down from its 23.9% reading at the end of April 2021, which was its highest since June 2010 and up substantially from its record low of -5.6% at the end of April 2020. Analysts expect revenues to rise 1.8% in 2023 (down 0.1ppt w/w) and

4.6% in 2024 (unchanged w/w) compared to a revenues gain of 12.2% in 2022. They expect earnings growth of 0.2% in 2023 (down 0.1ppt w/w) and an 11.4% rise in 2024 (unchanged w/w) compared to an earnings gain of 7.2% in 2022. Analysts expect the profit margin to drop 0.2ppt y/y to 12.0% in 2023 (unchanged w/w), compared to 12.2% in 2022, and to rise 0.8ppt y/y to 12.8% in 2024 (unchanged w/w). The S&P 500's weekly reading of its forward P/E rose 0.5pt w/w to a 14-month high of 19.0. That's up from a 30-month low of 15.3 in mid-October. It also compares to 23.1 in early September 2020, which was the highest level since July 2000 and up from a 77-month low of 14.0 in March 2020. The S&P 500 weekly price-to-sales ratio rose 0.05pt w/w to a 10-month high of 2.36. That's up from a 31-month low of 1.98 in mid-October and down from a four-month high of 2.38 in mid-August; it also compares to a record high of 2.88 at the end of 2021 and a 49-month low of 1.65 in March 2020.

S&P 500 Sectors & Industries Forward Profit Margin Since March 30 Bottom (*link*): The S&P 500's forward profit margin was unchanged w/w at 12.5% as of the June 15, 2023 week. It's now up 0.2ppts from a two-year low of 12.3% during the March 30 week. Nine of the 11 sectors' margins have improved since then, with the S&P 500's gain paced by five sectors. It's still down 7.2%, or 0.9ppt, from its record-high 13.4% during the June 9, 2022 week, as 10 of the 11 sectors' margins have declined since then, with the S&P 500's drop paced by just three of the 11 sectors. Here's the sector performance since the S&P 500's forward profit margin bottom on March 30: Communication Services (up 5.9% to 15.4%), Consumer Discretionary (up 4.0% to 7.6%), Industrials (up 3.6% to 10.6%), Information Technology (up 3.1% to 24.1%), Real Estate (up 2.0% to 17.0%), S&P 500 (up 1.3% to 12.5%), Materials (up 0.9% to 11.1%), Consumer Staples (up 0.5% to 6.7%), Financials (up 0.3% to 18.5%), Health Care (down 0.9% to 9.5%), Utilities (down 1.3% to 13.0%), and Energy (down 4.6% to 11.2%). These are the best performing industries since the March 30, 2023 bottom: Casinos & Gaming (up 61.2% to 6.2%), Publishing (up 24.8% to 3.0%), Multi-Sector Holdings (up 14.0% to 10.5%), Passenger Airlines (up 13.3% to 6.0%), Wireless Telecommunication Services (up 11.6% to 12.8%), Commodity Chemicals (up 10.9% to 6.5%), Gold (up 10.1% to 15.9%), Interactive Media & Services (up 9.5% to 21.9%), Home Furnishings (up 9.4% to 5.9%), and Homebuilding (up 9.0% to 11.7%).

S&P 500 Sectors Net Earnings Revisions (*link*): The S&P 500's NERI improved for a third straight month and was positive in June for the first time in 12 months; it rose to a 12-month high of 0.6% from 0.0% in May. That's up from a 30-month low of -15.6% in December. Prior to its recently ended negative NERI streak of 10 months, it had been positive for 23 months through June 2022. That positive streak, which ended in June 2022, had exceeded the prior 18-month positive streak during the cycle that ended October 2018, when NERI reached a tax-cut-induced then-record high of 22.1% in March 2018. June's 0.6% reading compares to a record-high 23.1% in July 2021 and an 11-year low of -37.4% in May 2020. Six sectors had positive NERI in June, up from five in May and a big turnround from all 11 with negative readings in March and April. Among the 11 sectors, just three weakened m/m: Consumer Staples, Financials, and Health Care. Communication Services was negative for a 20th month, Financials for a 12th month, and Materials for an 11th month. Here are the June NERIs for the S&P 500 and its sectors compared with their May readings: Industrials (9.5% in June [20-month high], up from 9.0% in May), Consumer Discretionary (6.8 [17-month high], 4.3), Consumer Staples (3.2, 4.5), Real Estate (3.1, -4.3), Health Care (3.1, 3.1), Information Technology (2.1 [13-month high], 0.7), S&P 500 (0.6, 0.0), Communication Services (-1.0 [19-month high], -1.9), Materials (-1.1, -2.8), Utilities (-2.9, -3.7), Financials (-10.7, -10.1), and Energy (-16.6, -17.2).

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