Table of Contents

Call Participants 3
Presentation 4
Question and Answer 10

COPYRIGHT © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved

Call Participants

EXECUTIVES

Alan H. Shaw
President, CEO & Director

Claude E. Elkins
Executive VP & Chief Marketing Officer

Luke Nichols
Senior Director of Investor Relations

Mark R. George
Executive VP & CFO

Paul B. Duncan
Executive VP & COO

ANALYSTS

Allison Ann Marie Poliniak-Cusic
Wells Fargo Securities, LLC, Research Division

Amit Singh Mehrotra
Deutsche Bank AG, Research Division

Bascome Majors
Susquehanna Financial Group, LLLP, Research Division

Benjamin Joel Nolan
Stifel, Nicolaus & Company, Incorporated, Research Division

Brandon Robert Oglenski
Barclays Bank PLC, Research Division

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

Christian F. Wetherbee
Citigroup Inc., Research Division

David Scott Vernon
Sanford C. Bernstein & Co., LLC., Research Division

Jason H. Seidl
TD Cowen, Research Division

Jonathan B. Chappell
Evercore ISI Institutional Equities, Research Division

Jordan Robert Alliger
Goldman Sachs Group, Inc., Research Division

Justin Trennon Long
Stephens Inc., Research Division

Kenneth Scott Hoexter
BofA Securities, Research Division

Ravi Shanker
Morgan Stanley, Research Division

Scott H. Group
Wolfe Research, LLC

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Presentation

Operator

Greetings. Welcome to the Norfolk Southern Corporation's Third Quarter 2023 Earnings Call. [Operator Instructions] As a reminder, this conference is being recorded.

It is now my pleasure to introduce Luke Nichols, Senior Director of Investor Relations. Thank you, Mr. Nichols, you may now begin.

Luke Nichols
Senior Director of Investor Relations

Thank you, and good morning, everyone. Please note that during today's call, we will make certain forward-looking statements within the meaning of the safe harbor provision of the Private Securities Litigation Reform Act of 1995. These statements relate to future events or future performance of Norfolk Southern Corporation, which are subject to risks and uncertainties and may differ materially from actual results.

Please refer to our annual and quarterly reports filed with the SEC for a full disclosure of those risks and uncertainties we view as most important.

Our presentation slides are available at norfolksouthern.com in the Investors section, along with our reconciliation of any non-GAAP measures used today to the comparable GAAP measures.

Turning to Slide 3. It's now my distinct honor to introduce Norfolk Southern's President and Chief Executive Officer, Alan Shaw.

Alan H. Shaw
President, CEO & Director

Good morning, and welcome to our discussion of third quarter earnings. Here with me are Mark George, our Chief Financial Officer; Paul Duncan, our Chief Operating Officer; and Ed Elkins, our Chief Marketing Officer.

I want to begin by thanking my Norfolk Southern colleagues for working safely, serving our customers and driving our strategic plan forward. When we charted a new course in the industry, we understood unlocking the full potential of our powerful franchise would require an enhanced focus on resilience and operational excellence across every aspect of our business.

Our transformation into a more customer-centric operations-driven service organization reveals opportunities to strengthen our franchise. We saw some of that in the third quarter with 2 technology outages. The first on August 28, was caused by a defect in the vendor software. The second on September 29, involved a firmware maintenance issue. These incidents were unrelated and were not cybersecurity issues.

We are taking measures to prevent a reoccurrence and importantly, we are not stopping there. We have launched a top-to-bottom review of our technology infrastructure with the assistance of leading third-party experts. Operations driven means pursuing operational excellence in every aspect of our business and that includes IT.

Demonstrating our progress in building resiliency, our strengthened operations leadership, enhanced operating plan and greater crew capacity, enabled us to manage the technology incidents with limited disruption to our customers and grow volume through the service recovery.

Throughout the third quarter, we continue to do exactly what we said we'd do, when we announced our strategy. We are making smart investments in safe, reliable and resilient service. Although the macroeconomic environment of abnormally low volumes is an unwelcome headwind, it has not changed our approach or diminished our confidence that our strategy is a better way forward. The market will recover, and we will be poised and leveraged to capture growth with strong incremental margins. Mark will provide detail on other cost drivers in the quarter, including fuel prices and higher labor costs as a result of last year's historic wage increase for our craft colleagues.

These costs combined with investments in our strategy and the backdrop of historically low volumes in the quarter contributed to significant pressure on our operating ratio, which deteriorated year-over-year and sequentially. We are clearly not satisfied with these results. We will recover from these short-term impacts to our operating ratio.

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

As we articulated when we launched our strategy, continuous productivity improvement is a core element of our balanced approach. We are committed to achieving and maintaining industry competitive margins over the long term.

Our focus on productivity is unrelenting. Under the strong leadership of Paul and his team in Operations, we have an increasingly stable network with a high degree of plan compliance allowing us to iterate the plan for service and productivity. And as Paul will describe, we are reducing our pipeline of conductor trainees through year-end to more normal levels, among other steps, balanced against the challenges of the quarter. There were several encouraging developments that demonstrate progress on our strategy and point to growth and profit improvement in the quarters ahead.

Notably, service in the third quarter improved both year-over-year and sequentially, allowing us to onboard more business. Volume improved as well and appears to have turned a corner with each of the last 4 weeks, running above 136,000 carloads. That's a level we haven't seen consistently since the second quarter of 2022. In part, this was a function of customers awarding us new business. Our customers see the commitment we are making to deliver more consistent, reliable service, and our marketing team is creating innovative solutions to amplify the value of that service even in a weak freight environment. Ed will talk more about this later.

In addition to service and volume gains, we delivered improvements in safety as well. Our mainline train accident rate is down more than 40% year-over-year as we strengthen our safety culture and performance. In East Palestine and the surrounding communities, we continue to deliver on our commitments. Mark will provide an update on costs associated with our ongoing efforts to make things right. I visit regularly as we make significant progress cleaning the site and investing in the community's future.

I'll now turn it over to Mark.

Mark R. George
Executive VP & CFO

Thank you, Alan, and good morning, everyone. I'll start on Slide 5 with an update on our accruals related to the Eastern Ohio derailment. We are pleased to report that we will be completing soil removal from the derailment site shortly, but expect that there will be ongoing testing efforts to ensure continued safety of the air, soil and water through April of 2024. And as such, we accrued $118 million in Q3 to account for this time line extension. Additionally, we recorded another $70 million for legal and other costs incurred in the quarter. Of note, we did file our initial claim for reimbursement with our insurers during the third quarter, and we'll continue to file claims as costs accumulate. We did receive notification of our first reimbursement under our policy of $25 million and accordingly recognized this as an offset to the cost incurred in the third quarter. The cash was actually received last week.

While we are encouraged by the speed of this initial reimbursement, there are dozens of parties sharing exposure at 10 layers in the insurance tower. So we expect this cost recovery process to be protracted. Also, of the $966 million recorded as expense thus far, just more than half has been paid through September 30th. Of the remaining $450 million, I'd expect roughly half to be spent in the fourth quarter and the rest to be spent in 2024.

I will remind you that this situation remains fluid, and we will continue working through these issues for many quarters to come. We expect that there will be additional costs that have not yet been incurred related to future settlements, fines and penalties as well as legal fees, and we cannot predict the amount at this time.

Moving to Slide 6, where we illustrate the impact of these third quarter costs on our results. Our GAAP results are in the first row, while on row 2 we isolate the accounting to our Q3 financials related to the incident and our response. At the bottom of the chart, you'll note the comparisons of the adjusted financial results to the prior year. I'll be talking about our adjusted results for the remainder of the discussion.

Revenues were down 11%. Adjusted operating expense was down modestly. The adjusted operating ratio for Q3 was 69.1%, which notably includes 270 basis points of headwind from net fuel price impacts. On an adjusted basis, operating income was down 28%. Net income and EPS were down 37% and 35%, respectively. But recall last year, we enjoyed a benefit from a state income tax change of $136 million distorting the year-over-year comparison.

Let's turn to Slide 7 for an overview of our operating revenues. And it's a quick look at the drivers of the revenue change from last year in advance of Ed getting into the market details. The biggest driver in the year-over-year revenue decline is the meaningful reduction in fuel surcharge revenue. Volumes were down 2%, which equates to a $74 million revenue decline, and we are highlighting here the reduction in intermodal storage revenue of $71 million, as we are now back to more normal levels and will continue to have tough compares through Q1 of 2024.

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Ed will talk later about the traction we have on pricing as well as mix dynamics in the quarter that collectively inform the positive $27 million of rate mix and other.

On Slide 8, let's drill into the operating expenses. Adjusted operating expenses for the quarter were down $19 million or 1% on a year-over-year basis. Fuel expense was down $94 million or 25%, driven mainly by lower fuel prices. Comp and Ben was down $20 million or 3% year-over-year as higher pay rates and employee levels were offset by a favorable comparison with Q3 last year from the $85 million charge we took related to the retroactive wage accruals.

Depreciation expense was up in line with our earlier guidance. Purchased services was up due to higher costs associated with engineering activities on our network as well as technology spend. The increase in materials and other was up $42 million and driven primarily by an adverse comp on a favorable legal settlement last year as well as higher consumption of materials for locomotive repairs. Property sales were also lower this quarter.

Moving to Slide 9. While we expect costs related to the past service issues to begin unwinding in the third quarter, additional service challenges in the quarter resulted in a delay with only moderate easing. We expect the unwind to accelerate here in the fourth quarter. Now offsetting these fourth quarter savings will be an increase in incremental costs related to building resiliency in a couple of key areas that will pay dividends in the years ahead.

Firstly, there are investments in the continuation of our hiring in locomotives in order to support both future growth and faster recoveries. Second, are the investments in our craft workforce, including the quality of life enhancements like paid sick leave. These investments overall should allow for the accommodation of higher volumes that will help cover these costs, along with more productivity.

On Slide 10, let's talk to a couple of P&L items below operating income. Other income was up $42 million in the quarter, driven by favorable returns from our company-owned life insurance. The adjusted effective tax rate was 22.7%, in line with what we normally guide.

And turning to free cash flow and shareholder distributions on Slide 11, through the first 9 months, free cash flow was $1.1 billion lower than prior year, with half due to derailment-related expenditures and the remainder from a combination of lower core operating results and higher CapEx. Shareholder distributions over the same 9 months were $1.4 billion, thanks to our solid dividend and continued share repurchase activity.

I will remind that the citizen vote in Cincinnati to approve the proposed $1.6 billion purchase of the CSR asset will take place in November. So we are reserving capital capacity for that potential transaction, which would close in mid-March of 2024.

I'll now hand off to Paul to provide an update on our Operations.

Paul B. Duncan
Executive VP & COO

Thank you, Mark, and good morning, everyone. At Norfolk Southern, everything starts with safety. So let's turn to Slide 13 for an update.

In the quarter, we have made significant strides. Our injury rate is up slightly versus last year, but has improved 30% from where we were just 3 years ago. Our accident rate is trending down from where we have been in the past 2 years, and we also continue to maintain a significant reduction in our mainline accident rate through the many efforts and initiatives we have put forth, including the enhancements to our train makeup rules implemented earlier this year.

While those enhancements required a significant period of operational adjustment earlier this year, they are now paying off in terms of our mainline accident rate improvement.

We also remain very focused on reducing exposures and improving outcomes in our yard and terminal operations. We have made further investments in our people, including enhancements to our training and PPE programs as well as leadership development. On all of these fronts, the results are encouraging, but we are not satisfied and will continue to drive towards our goal of being the industry leader in safety.

Turning to Slide 14 for an update on Service. This is another area where we have made sustained progress this last quarter. Train speeds have resumed the improving trajectory they were on before our challenging second quarter. We have also pushed to reduce dwell and improved schedule rigor in our terminals, which will now improve to its best level in 2 years. We're sustaining this progress

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

in October while bringing weekly car loadings up to their highest level since Q2 2022, and while developing new service offerings that Ed will outline.

As part of our scheduled railroad model though, we will drive further progress. We have to continue to minimize car dwell, maximize velocity across the railroad, sustain safe, reliable and resilient service and drive productivity. On the next 2 slides, we will cover how we plan to accomplish this.

Turning to Slide 15. Our locomotive velocity was flat year-over-year. Now that we are seeing improvements in train velocity and terminal dwell, this is an opportunity we are focused on driving further velocity and productivity in. As our terminal discipline initiatives take further hold and its network velocity takes the next step above 21 miles per hour, we expect to see this metric improve along with fuel efficiency as we bring additional tonnage onto the network. We now have a qualified T&E workforce that is sized appropriately in aggregate, although we are still investing to get them all in the right locations. We're on track to have our conductor training pipeline below 600 by year-end as indicated last quarter. As our initiatives take hold and as GTMs increase, this measure of productivity will improve from here.

Moving to Slide 16 to discuss how we are driving service improvement aligned with our scheduled railroad model and how it will translate into additional gains in resilience, productivity and ultimately, growth. First is disciplined terminal execution. This starts with strict adherence to the operating plan to ensure trains are arriving on plan to balance terminal flows in both our merchandise yards and intermodal facilities. We're minimizing dwell by switching cars within 6 hours of arrival. At our Intermodal facilities, it's ensuring we're driving precision execution to the trip plan of containers and leveraging our high-frequency Intermodal model. It involves maximizing connection performance, getting the right cars on the right train and departing our trains on time.

The second bullet point. We are driving a culture of strict compliance to the operating plan, both at the train car and intermodal unit level and expect that this will drive further reductions in dwell and even greater consistency in our terminals. Next, we're investing in our people and modernizing our workforce to become more resilient and productive. For example, 250 conductors are receiving locomotives engineered training this year. This gives us resilience and flexibility to fill assignments whether the need is an engineer or a conductor while protecting future growth with an investment today. We are moving forward with the first phase of extra board consolidations, cross-training 260 employees at 7 key terminals across the network.

Let me explain what this is. As railroads and labor agreements evolved and merged over the decades, territorial boundaries remain to have prevented certain employees from working assignments that were within their geography. At many of these locations, we've worked collaboratively with labor to remove those boundaries, but have yet to get folks qualified to work all potential assignments. With our new focus on resilience, we're investing in our craft employees and getting them qualified to hold more assignments providing them with greater work opportunities and offering Norfolk Southern enhanced operational flexibility and efficiency.

To complement these labor modernization efforts, we are implementing predictable work scheduling. A groundbreaking work life balance initiative negotiated with our craft colleagues, which will also streamline our back-office crew management functions and drive further productivity.

Lastly, we are kicking off a system-wide initiative that will drive productivity and enhance our first-mile last-mile service. This is a substantial initiative aligned with delivering reliable service, productivity and most importantly, driving additional growth to the network.

To close, running a safe, reliable and resilient scheduled railroad using these principles is going to improve service consistency, generate greater productivity and create capacity for growth.

I'll now turn the call over to Ed.

Claude E. Elkins
Executive VP & Chief Marketing Officer

Thanks, Paul, and good morning to everybody on the call. Now before we get into the numbers, I want to call out the collaboration between our teams and Marketing and Operations as we improve service and innovate solutions to deliver value for our shareholders and for our customers. I'll talk about it more as we move along here, but I think it's important to recognize the steady progress that we're seeing deep in these organizations that's starting to pay off.

Let's start on Slide 18 and review our results for the third quarter. Norfolk Southern volumes and revenue was down 2% and 11%, respectively, year-over-year in the third quarter. Revenue declines outpaced volume due to lower fuel surcharge and intermodal storage revenue compared to the prior period. Within merchandise, weakness in several energy markets was the leading driver of a 3%

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

decline in total volume. Crude oil shipments were challenged by unfavorable fuel price differentials that discourage crude by rail to East Coast refineries that we serve. Also, low natural gas prices negatively impacted shipments of sand and NGLs. Helping to offset those declines in energy markets with strength in automotive, where volume increased 7% year-over-year in the third quarter.

Growth was driven by continued strength and demand for finished vehicles, as well as high shippable ground counts. Merchandise revenue was down 7% due to lower revenue from fuel surcharge and lower volume. However, revenue per unit, excluding fuel, set a new record as it improved 3%, showing sustained price and mix improvement. This quarter marks 33 out of the last 34 consecutive quarters where we've been able to achieve year-over-year growth in merchandise revenue per unit excluding fuel.

Moving on to Intermodal. Volume was down slightly compared with last year as growth in international Intermodal largely offset declines in domestic. On the domestic side, persistently abundant truck capacity and weak freight demand challenge volume. While on the international side, volume improved as customers continued to return freight to IPI service. Intermodal revenue was down 22% as revenue per unit, excluding fuel, declined 15%. Lower Intermodal storage fees represented more than 2/3 of this decline followed by adverse mix effects from strong international volumes and the impact of persistent competitive pressure in a loose trucking environment. We're also seeing negative mix effects within the international business.

First, shippers are returning to lower yielding short-haul lanes that shifted to the highway during the pandemic; and second, growth in lower-yielding empty shipments is also outpacing loaded shipments. Intermodal storage has returned to a normal level, and we expect to lap this headwind in the second quarter of next year.

Lastly, within coal, volume dropped 9% year-over-year with weak conditions in our utility markets, which more than offset strength in our export markets. Utility coal volume was down roughly 26% from prior year levels driven by high stockpiles and low natural gas prices and prolonged customer and producer outages.

Export volume increased year-over-year driven by strong Asian demand. Coal revenue declined 8%, primarily due to lower volume. Revenue per unit excluding fuel set a new record and revenue per unit also increased as positive mix and stronger-than-expected seaborne coal pricing and modest liquidated damages more than offset a decline in fuel surcharge revenue.

Turning to Slide 19. For the fourth quarter, we expect to see slow volume recovery amid uncertain economic conditions. September presented us with some encouraging data that the contraction in manufacturing is slowing and onshoring to the U.S. is on the rise. However, we remain cautious in our optimism as uncertainty surrounding future Fed actions, strike outcomes and geopolitical tension is very pronounced.

Although the macro environment is unclear, we are steadfast in our business development initiatives, and I'll talk about those in a few minutes. Our merchandise markets have upside potential in the automotive and metals markets. We expect growth in automotive as we continue to work through the backlog of shippable vehicles, improve our cycle times and grow our fleet size. We also still see unmet demand in our metals market, which we should realize as improving service should drive year-over-year growth. Offsetting anticipated growth in the fourth quarter will be sustained soft conditions in energy markets as the headwinds that pressured crude, NGL and sand volumes in the third quarter are expected to continue through the remainder of the year.

Automotive production is a key driver for many of our merchandise markets beyond automotive. So the duration and scope of the ongoing UAW Strike is a downside risk to our overall merchandise volumes. Our marketing and operations teams are collaborating to deliver incremental business wins across the portfolio of carload markets that we serve by identifying and solving business challenges for our customers at an accelerating pace. This innovation and collaboration will be a driver of future growth for NS.

Intermodal volume is expected to improve year-over-year in the fourth quarter from sustained service recovery and improving market conditions. We're encouraged by the momentum that we're seeing in our domestic market. Our customers are seeing improvements in bid compliance and demand, which has us trending positively in October. While we continue to see a relatively muted peak season which will temper overall volumes. International markets will benefit from strong East Coast import demand and favorable ocean rates driving demand for IPI. We expect the negative mix effects from the shift back to short-haul lanes to persist in the fourth quarter, and we continue to experiment and develop new services for our Intermodal customers, and I'll talk about that in just a minute.

Coal volumes should be stable in the fourth quarter with upside potential in export markets as new production comes online. In addition, recent trends in seaborne coal prices suggest higher prices throughout the remainder of the year due to supply constraints out of Australia as well as continued strong demand out of China and India. Domestic coal shipments should improve sequentially in the fourth quarter on improved service and fewer outages, but headwinds from low natural gas prices will continue to be a limiting factor. And while uncertainty in the economy continues to persist, we're confident in our ability to collaborate with our customers to drive incremental volume and to continue providing value in a manner that drives growth in the future.

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Now before I turn it back to Alan, I would like to expand briefly on how we're providing value in ways that drive growth in an unfavorable market.

Slide 20 features key examples of new service offerings, we developed this quarter aimed at making Norfolk Southern the preferred option for freight transportation and driving modal conversion. It's important to recognize that collaboration and teamwork invested by both marketing and operations to bring these projects to life.

In October, we partnered with CN to expand intermodal service and connect customers in Atlanta and Kansas City with markets on the CN in Canada. We also partnered with Florida East Coast Railway to expand both domestic and international intermodal services in Florida. These new services are designed to give our customers flexibility expand the reach of the NS Intermodal Network into key growth markets and give more ways for our customers to reduce their supply chain greenhouse gas emissions.

Early in September, we also announced an investment in DrayNow, a company focused on modernizing technology solutions for Intermodal. DrayNow is revolutionizing Intermodal's first and final mile journey through an app that provides customers with real-time shipment tracking and document capture of drayage shipments. Norfolk Southern is the operator of the most extensive Intermodal network in the Eastern U.S. And together with DrayNow, and our best-in-class customers, we will drive more transparency into a fragmented supply chain and increase the ability to best serve our intermodal customers.

And lastly, our persistent industrial development efforts paid off as both new and expanded industries turned on additional volume in the third quarter, including a new cement transload and ethanol terminal and a containerboard warehouse. As well as expanded rail operations at an established grain elevator. We like to make our customers for locating on our network and allowing NS to serve their market needs.

Together, these diverse projects will generate over 7,800 new carloads annually at full production. We're aggressively pursuing project-oriented growth to enhance the NS network in a fragile freight environment. We're not sitting back and waiting for carloads to come to us. But rather we are proactively making enhancements to our service portfolio to become a preferred service provider for our customers and drive sustainable and smart growth in the future.

And concluding on Slide 21, let's look at our 2023 outlook. Based on lower Q3 revenue, which included significantly the lower fuel surcharge, we're now expecting 2023 revenue to be down closer to 4% year-over-year.

With that, I'll turn it back over to Alan to bring us home.

Alan H. Shaw
President, CEO & Director

Closing on Slide 22. Although this year has presented a number of challenges, we are emerging a stronger company due to our response and our decisive action to affect necessary improvements. I'm more confident than ever that our innovative strategy is a better way forward. We are already seeing the benefits from leadership changes, plan refinements and resource investments as we drive towards our strategy. We are achieving wins with our customer base, and we are incorporating operational discipline that drives consistency and enables productivity enhancements in the quarters ahead. I am extremely optimistic about our future.
We will now open the call to questions. Operator?

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Question and Answer

Operator

[Operator Instructions]

And our first question comes from Chris Wetherbee with Citigroup.

Christian F. Wetherbee
Citigroup Inc., Research Division

I guess maybe I want to start on Slide 9. Mark, you laid out some of the temporary service costs and the incremental resiliency investments that you're making. I guess I want to make sure I understand how to think about that as we move into the fourth quarter and then also really more 2024. I guess are you able to absorb these costs and generate sequential OR improvement in the fourth quarter? And then as you look out to next year, how much of this cost kind of sticks around? How much of it actually will go away? And any thoughts around the cadence of that? So thanks for that.

Mark R. George
Executive VP & CFO

Thanks, Chris. So if you start first on the service costs, we saw a slight reduction here in the third quarter. We were hoping for a little bit more, but obviously, we had some disruptions to the network that delayed that. We do expect the reduction to continue here in the fourth quarter. And eventually, this should unwind over the next couple of quarters as fluidity on the network improves as we qualify more of our T&E in the right critical locations as well, and we start to build some solid processes around delivering service as opposed to putting the band-aids on like we are today with overtime, et cetera. So those will start to unwind here in the next couple of quarters.

The right-hand part of that slide, those are -- I think you need to think about those as structural cost increases. And those are really around developing and building resiliency, that's the whole point. A lot of this is related to the T&E ramp-up that we've seen as well as the investments in our locomotives. There are also costs related to the quality of life improvements that we've announced with our craft workforce.

And I'd say that of these costs, 75% of those will probably reside in the comp and ben line. And then after that, you'll see costs sitting in purchase services and also in some materials. But in terms of cadence as we go into Q4, like I said, service costs will start to come down, but that will be offset by another increase there in the structural resiliency costs. And then I think at that point, we should probably be moderating going forward into '24, but we'll give you more '24 guidance when we reconvene in January.

Alan H. Shaw
President, CEO & Director

And Chris, one way to look at this is, our investments in resiliency are in investments in the elimination of the service recovery costs. And it's also an investment in top-tier growth and industry competitive margins. That's our vision for the future, and that's what we said we were going to do when we laid this out in December of last year.

Mark R. George
Executive VP & CFO

Yes. Ultimately, these are going to get paid for by the elimination of those temporary service costs, but also by accommodating more volume than we typically would be able to as well as pricing and productivity. So it's exaggerated here because we're in a down cycle.

Christian F. Wetherbee
Citigroup Inc., Research Division

And does this give you the ability to improve OR in the fourth quarter still?

Mark R. George
Executive VP & CFO

Yes, I think we're at a trough. I think we're at a trough right here.

Operator

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Our next question is from the line of Amit Mehrotra with Deutsche Bank.

Amit Singh Mehrotra
Deutsche Bank AG, Research Division

Thanks, Operator. Maybe first question, can you just give us the liquidated damages in coal and where we think coal yields can trend from the high 3Q levels? And Alan, just a bigger picture question. Every rail right now has a cyclical challenge. Everybody has a fuel headwind. You guys are still reporting margins that are 600, 700 basis points worse than your direct competitor and just generally the industry. I look at that as an opportunity because, obviously, with top SPG, you've fixed the network, you're improving the service. The volumes are coming. So there's obviously progress made there, but is there an opportunity to look deeper inside the cost structure of the organization to say, listen, we're dealing with all these headwinds just like all our competitors are, but we're still -- our cost structure is still seemingly very, very high and what's the opportunity there if you're looking at it and how you're going about addressing those differences?

Alan H. Shaw
President, CEO & Director

Amit, thank you for that question. Why don't I address the second part of your one question first, and then I'll turn it over to Ed to talk about coal yields.

Look we're committed to industry competitive margins. We said that from the get-go. We've also said that returns follow the investment. We're investing over the long term. We're not going to chase short-term OR targets. We illustrated very clearly, Mark had a chart, I believe, at Investor Day that showed during an economic trough, right, our margins would get a little worse as we invest it over the long term. But as you evaluate this through an economic cycle. This is the better way forward for Norfolk Southern to invest and in long-term growth, deliver top tier growth industry competitive margins and drive long-term shareholder value.

Look, we're not happy with our cost structure right now, as we drive operational discipline into our network as we refresh our operations team as we drive a high degree of plan compliance that allows us to continue to iterate the plan for productivity and service, and that's exactly what we're doing right now.

Ed, do you want to talk about coal yields?

Claude E. Elkins
Executive VP & Chief Marketing Officer

Sure. I think you asked about LDs in the quarter. And I think I said in the prepared remarks, these are episodic. We don't expect them to continue. It's high single digits in terms of millions of dollars. And when we look out into the fourth quarter and again, restating what I said in the prepared remarks, we're forecasting prices to be sideways through the end of the quarter and of the year. And that's really predicated off the continuation of strong demand out of India and China for export.

Operator

Our next question is from the line of Ken Hoexter with Bank of America.

Kenneth Scott Hoexter
BofA Securities, Research Division

Ed, solid job on the new lanes, interesting stuff. Alan, I just want to follow-up on that question maybe a little bit more, right? So you have a lot of temporary costs and restructuring costs. Do you think you need to bring in PSR expertise to handle some of that network resiliency that seems to be the thing that PSR does, right? It allows the quick snapback at least for some of the peers that have implemented that process. And I'm a little confused on the resiliency investments. It sounded like when Mark went through some of them, is it paid sick leave? Or is there more on the resiliency expenditures? I just want to understand what's outside of agreements or costs that you've already implemented on the resiliency side.

Alan H. Shaw
President, CEO & Director

Thank you, Ken. Look, I've been CEO for 1.5 years. We've been kinetic here. We've refreshed our Operations' leadership. We've implemented a new operating plan. We've launched a brand-new strategy something that's never been done in this industry. We've revamped the marketing organization. We brought in a number of outsiders and leadership roles outsiders to the rail industry,

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

outsiders to Norfolk Southern. I believe we've got the right team going forward. We will continue to look for opportunities to improve our strategic talent base.

With respect to the resiliency costs, some of that has to do with predictable work schedules. Some of that has to do with the historic wage increase that the rental industry and labor came to agreement on last year. Some of it has to do with hiring or investing in additional resources. And as a result of that, what you're seeing is third quarter service is better year-over-year and better sequentially.

Our safety figures improved in the third quarter. And our volume growth right now, our volumes in the last 4 weeks are at levels that we haven't seen in the last, say, second quarter of last year. So we are making progress. We're doing exactly what we said we're going to do. This is a better way forward for Norfolk Southern to drive long-term shareholder value.

Mark R. George
Executive VP & CFO

And Ken, just to put a fine point on the resiliency expense, about 1/3 of that cost in the third quarter is related to the quality of life benefits, which are essentially paid sick leave, that has a cost to it. And the rest is really around the head count additions for primarily T&E, but also some mechanical staff. And then the rest is locomotive investments as well to be able to accommodate and accelerate the network.

Operator

Our next question is from the line of Scott Group with Wolfe Research.

Scott H. Group
Wolfe Research, LLC

Mark, I wasn't sure what you were trying to say on overall cost ex fuel in Q4 versus Q3. So if you have any color there?

And then, Alan, I just want to go back to that big picture question, right? You've been clear and consistent with your message. We're not going to chase short-term OR but long term, we want to have industry competitive margin. I guess my question is, what does 2024 look like in that short-term versus long-term view? Like are we committed to margin improvement next year? Are we committed to starting to narrow this margin gap next year because it is getting pretty wide right now. So I just want to know when do we start to see it get to industry competitive again.

Alan H. Shaw
President, CEO & Director

Mark, do you want to address the first one?

Mark R. George
Executive VP & CFO

Yes, sorry. Scott, look, I think the way you look at cost ex fuel, to answer your specific question, it should be largely sideways and then you sprinkle in the nice uptick we've seen in volumes. I think we're -- we've definitely probably troughed here in Q3, and we should see sequential margin improvement model out what you think that volume is going to be as we navigate through the quarter and we report our volumes. And you can pretty much assign traditional incremental margin rate to that. So I think we troughed here in Q3, and it should improve from there.

Alan H. Shaw
President, CEO & Director

And Scott, with respect to industry competitive margins, we are committed to it. We're committed to it over the long term. And what we'll see is that as service continues to improve. We'll have greater opportunity to eliminate the service recovery cost. We'll have greater opportunity to drive productivity throughout our organization as we standardize our operating practices.

We have greater opportunity to generate more volume. We'll have greater opportunity to generate more price, reflecting the value of the product that we sell. And all of those things will contribute to improvements in our margins and industry competitive margins. And I think we're going to see improvement in that next year.

Operator

Our next question is from the line of Tom Wadewitz with UBS.

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Thomas Richard Wadewitz
UBS Investment Bank, Research Division

So I think it seems fairly clear that it's not so much a cost story, but it's much more volume and a revenue story that you need to drive that margin improvement. And correct me if you think I'm wrong on that. But the question is really, what do you think is necessary to really get that revenue story improving? I think we look at the Intermodal revenue per car was pretty weak in the quarter. I know there's some mix. But how do you think about that intermodal revenue strengthening? Is that mix going to improve over a couple of quarters? Do we really need to see some tightening in the truckload market? I know you -- a lot of your business is truck competitive. So is that something that truck rates are key. Just maybe if you could offer some thoughts I guess, Intermodal on that debt revenue per car, but broader thoughts on '24, what should we be looking for to really potentially drive that revenue story stronger?

Alan H. Shaw
President, CEO & Director

Tom, to be clear, this is a balanced approach. It's not just about revenue growth. We will continue to drive productivity into our organization. I'm committed to that. Our improved service product is going to help us with productivity. Our improved service product is going to help us attract more volume. Our improved service product is going to help us price to the value of our products. So there is a lot of value in there as we continue to invest in network resiliency [indiscernible]. And why don't you talk about what you're seeing in the market itself?

Claude E. Elkins
Executive VP & Chief Marketing Officer

Sure. And it's a really important question that I appreciate you asking and we want to sort of unpeel the onion here and make sure that everybody understands. First of all, let me say, year-to-date, we are positive in our core pricing in every single market we serve, okay?

Now let's dig into Intermodal. The largest impact once we strip fuel out was a decline in our intermodal storage revenue. We knew that, that was going to happen. And as I think I said in the prepared remarks, that storage figure accounts for over 2/3 of the RPU decline that we saw in the quarter. And then we had a couple of other things that were very important for folks to understand. We had substantial negative mix in the quarter, and that comes in 2 forms.

The first is international shipments grew while domestic shipments were very anemic given the amount of pressure that's out there in the truckload market. Our domestic shipments have a higher yield than international. So this was a substantial headwind. And we also saw a negative mix in 2 different ways within our international business.

First of all, we're seeing much higher growth in short-haul lanes and those are lanes that really shifted to the highway during the pandemic and then rolled -- are now rolling back to us, 85% of the growth in the third quarter in international came from those short-haul lanes. And those are intra-state lanes. So it's very important to understand that.

Lastly, the amount of empties that we moved is frankly, much faster pace growth than the lows that we saw. That is another decremental pressure on RPUs. So a lot going on there. The truck market continues to be loose I think the cash freight index has been down for 21 straight months contract rates on the highway peaked in March of last year. There's a lot of downward pressure, but here's what I'm confident of. Number one, I'm confident that the market in general will rotate back to growth. It always does. The excess capacity that's on the highway will evacuate, it always does. And Norfolk Southern is going to be really well positioned exceptionally well positioned to take advantage of not only the volume increases, but also the opportunity to reprice.

Operator

Our next question is from the line of Brian Ossenbeck with JPMorgan.

Brian Patrick Ossenbeck
JPMorgan Chase & Co, Research Division

Maybe a 2-parter for Ed. Can you just give us an update? I think last time you mentioned that the $650 million headwind in the back half of the year for coal and access oils or Intermodal storage fees. Is that sort of still tracking in line with expectations? And then secondly, to your point about core pricing, can you just give a little more color on where that is relative to inflation. I think we have seen a decent disconnect in terms of just the core pricing realization for Norfolk in -- for some of the industry in terms of how that trended versus inflation, which was higher than expected. So when do you expect to really sort of catch up with that? Is there something structural that's been keeping it lower than what we would have anticipated? Or is this more a matter of timing with contracts, repricing and service? How do you expect that rolling forward?

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Claude E. Elkins
Executive VP & Chief Marketing Officer

Well, let me try to answer both of those. First one, I think you were asking about some of the known headwinds that we had coming in the second half and if they're intact. And I would say, yes. We've seen the storage revenue really normalize the pre-pandemic levels, and that's persisted and it's been very consistent throughout most of the year. We all know what fuel is doing.

On that storage piece, we expect to lap that probably second quarter of next year. And so that's going to be a headwind until then. Coal pricing has surprised to the upside, and we'll see where it goes from here. So that's sort of the known pieces of this.

On the core pricing side, I think it's probably worth reviewing what our strategy is. And that's, number one, we're always compelled to deliver a competitive price in the marketplace that our customers can recognize value in. But we define that by long-term contract pricing not by what's going on in the spot markets. That recipe over time, has generated above rail inflation pricing for many, many quarters now. We're confident that it will in the future, okay? It's a very unusual truck market right now. We know that. But on our merchandise business, in particular, we recognized high -- or mid-single-digit pricing in this quarter. And again, we're positive for price year-to-date across the book.

Operator

Our next question is from the line of Justin Long with Stephens.

Justin Trennon Long
Stephens Inc., Research Division

Thanks, and good morning. Last quarter, you talked about $175 million to $200 million of lost revenue from the operational disruptions associated with East Palestine. Any updated thoughts on the timing of when this revenue can be recovered? I'm curious if that's something that could be driving some of the improvement in volumes. And then on the 2 tech outages, any way you can quantify the impact you've seen from those thus far?

Alan H. Shaw
President, CEO & Director

Ed, why don't you talk about revenue outlook and the cadence?

Claude E. Elkins
Executive VP & Chief Marketing Officer

Sure. As service improves, it is improving both sequentially and year-over-year. Our customers are very encouraged by that, and they're talents that -- that improvement in service is going to bring freight back to Norfolk Southern. We know our customers are very sophisticated supply chain managers and purchasers. And when we're not on plan, they have to make other plans to keep their factories running. Some of our customers are going to see that value faster.

And as we cycle equipment faster, they're immediately going to be able to load more revenue on the Norfolk Southern. I think in markets like metals, like automotive, even though there is a strike right now, I think of that in the construction market in the aggregates market. And some of the more flexible freight markets, we have to demonstrate persistent value in the form of reliable, sustainable service over a longer period of time. But we're making sure that our customers are well aware of our progress.

Alan H. Shaw
President, CEO & Director

With respect to the tech outages, really, the revenue impact was largely inconsequential. It was more of a service issue and a cost issue associated with the slower network and the recruits. Really, what it does for us is it reaffirms the importance in investing in the resiliency of our network so we can weather anything that comes at us.

Operator

Our next question is from the line of Jonathan Chappell with Evercore ISI.

Jonathan B. Chappell
Evercore ISI Institutional Equities, Research Division

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Ed, Alan pointed out, you've had 4 weeks now of volumes that have been back to the 2Q '22 levels. But it seems like you still have a lot of red traffic lights or yellow traffic lights on the freight category that you laid out in your slides. How much can we see acceleration of some of those traffic lights turn in your favor? This run rate that you've had in the last 4 weeks seems to be kind of a catch-up and service related. But if you get a macro tailwind behind you, what can those levels go to with the service operating at the levels that they are -- that it is today?

Claude E. Elkins
Executive VP & Chief Marketing Officer

We try to be very tight with this answer. Number one, we're really glad to see a peak season happen this year, and we're encouraged by that. Our service is allowing us to deliver that. This network is built for a lot more freight than we're handling right now. And as our customers recognize and are able to deliver that value to their customers, we're going to be able to handle a lot more freight. I'm confident in that.

The fact is, and this is the last thing I'll say on it, economic uncertainty and geopolitical uncertainty are very high right now. And I think we see that in the headlines every single day. And it's just something that we have to keep in mind. That's probably why some of those lives are colored the way they are right now.

Operator

Our next question is from the line of Allison Poliniak with Wells Fargo.

Allison Ann Marie Poliniak-Cusic
Wells Fargo Securities, LLC, Research Division

Just want to go back to Intermodal and the -- I would say the share recapture there. I know you talked about service, you talked about sort of that, time to sort of regain that confidence. Is it something you're starting to see now or hear now from your customers where we could see that start to accelerate in the next few months despite what's going on in the overall macro Intermodal market? Just any thoughts there on your opportunities set for that.

Claude E. Elkins
Executive VP & Chief Marketing Officer

Well, you're right. We are seeing volume come back. And I can't say enough about the quality of the customers that we have in our portfolio. We're very lucky to have our customers. They are certainly best-in-class. They are out on the street every day converting freight from the highway to Norfolk Southern, and it's because we're able to offer value that they can demonstrate to those customers.

So yes, I think that we have the opportunity here to deliver additional value to our shareholders in the form of more volume, more revenue, particularly from the intermodal market, we have a network that's really built for that.

Operator

Our next question comes from the line of Brandon Oglenski with Barclays.

Brandon Robert Oglenski
Barclays Bank PLC, Research Division

Alan, I think in response to a question earlier, you talked about standardizing operating practices across the network as you look into next year. Maybe I'm mischaracterizing what you said. But I guess can you put that in context for us? I thought the op plan had been set, you guys had wearing the changes from the train makeup rules, but maybe there's more to come?

Alan H. Shaw
President, CEO & Director

We -- that's been an ongoing effort by Paul and his team to standardize the operating practices within our terminals. Which allows us to drive further productivity and further capacity improvements and further service improvements. And that's just part of the PSR principles.

Operator

Our next question is from the line of Jordan Alliger with Goldman Sachs.

Jordan Robert Alliger

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Goldman Sachs Group, Inc., Research Division

Just a follow-up with velocity and dwell recovering so well of late. Is there a way to assess how much of that comes from the better operations, the changes you've made there versus adding the head count to get it closer to where you need to be? And do we think about head count sort of flatlining from here on out roughly?

Alan H. Shaw
President, CEO & Director

Jordan, we've always said that service is a function of leadership plan and resources. We've refreshed our leadership within operations. We've implemented a new plan, and we're driving a high degree of clients to the plant. And we're investing in resources, whether that's additional employees, cross-training conductors to become engineers or and invested in quality of life issues. Those are all generating results for us, and you can see that with the service metrics, you can see that with the volumetrics as well.

Mark, do you want to talk about the overall headcount?

Mark R. George
Executive VP & CFO

Yes. I mean the head count certainly helps. I mean we've augmented in a lot of our critical locations, the staffing in order to improve our fluidity there. So that's a big driver. We've invested money in locomotives, so we have more locomotives available as well. And frankly, Paul, why don't you talk a little bit about the process changes that we're making in the terminals, which really are sticky and fundamental drivers for running a scheduled railroad.

Paul B. Duncan
Executive VP & COO

Well, you're spot on. I mean we are seeing results from refreshing our Operating leadership, resourcing up and executing the plan in both volume, train speed and terminal dwell. And as Alan highlighted, match to our premise of running as a scheduled railroad. It's a focus on running the plan, right car, right train, right day enforcing a high degree of compliance to the plan. Again, that is a fundamental tenant of running a scheduled railroad. It's driving that accountability. We expect to see further consistency as the year progresses. I certainly expect to see dwell continue to improve. Train's peak continue to improve. And as we have seen these metrics, quarter or velocity improve, we're going to layer on productivity initiatives as we talked, and that's going to be a focus of us in 2024, running reliable service and layering on productivity.

Mark R. George
Executive VP & CFO

Sure, you asked about where head count is going. Let me just put a fine point on that. I do think that our conductor training pipeline really starts to taper down here in the fourth quarter, and I'd expect that we'd probably end the year just under 600. We have enough qualified T&E here probably in the fourth quarter to start capturing meaningful growth that might be on the horizon. And it's really about balancing where those T&E are amongst our hiring locations. And we want to make sure that, we're not just adequately staffed, but we're at resilient levels in those critical locations.

But probably, I would say the other area of headcount, we're going to need some more supervisors now as you add a lot more T&E, so that's probably the remaining pickup you'll see in some of the resilience investments that we're making in the fourth quarter is really around the area of field supervision. But in terms of overall T&E, I think we're cresting here. And now we'll be able to handle more volume and start driving productivity to also take another step-up in volume absorption. So that's kind of the road map on T&E.

Operator

Our next question is from the line of Jason Seidl with TD Cowen.

Jason H. Seidl
TD Cowen, Research Division

Alan and team. Wanted to follow-up a little bit on the automotive side. You guys mentioned that there's a backlog of sort of finished vehicles that you can move. Can you give us a sense of sort of how many weeks do you think that backlog is for you guys, just in case the UAW Strike drags on longer than most people would want. And then you made a comment about near-shoring and how that look is looking really good for you potentially down the road. Do you have any numbers from your industrial development projects that you can compare in the prior years, that would be great.

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Claude E. Elkins
Executive VP & Chief Marketing Officer

And thanks for the question. This is Ed. On the automotive side, yes, there are -- there have been high shippable ground counts at a lot of places that we originate from. The strike duration is probably longer than I want to be right now, to be honest with you. And those shippable ground counts are going to dwindle over time, and we'll see where it goes. I really can't be more granular than that because of the nature of the strike, which tends to move from place to place.

On the industrial development side, there's over 600 projects in the pipeline right now. We've seen tremendous investment mostly in the Southeast and the Midwest, which is very beneficial for our network and for our customers. I highlighted a few of those during the prepared remarks and just to be more anecdotal about it. In September, we had 3 new lumber shippers that either originated or started receiving traffic just that month.

And that's really highlighting, number one, the strength of that, what I would call, non-res or manufacturing construction economy, which is a big higher now than it was during the entire 2000s for the U.S. Most of that is focused east of the Mystic River, and most of that is focused again in the Midwest and the Southeast. So we think we're really well teed up really well positioned for what I think Alan has referred to as a manufacturing super cycle in the coming decade.

Jason H. Seidl
TD Cowen, Research Division

Well, I certainly hope so. You mentioned 600 projects. How does that compare to say, pre-pandemic?

Claude E. Elkins
Executive VP & Chief Marketing Officer

Still elevated from pre-pandemic level. The EV supply chain is really a new frontier that's out there. And I think in one of our previous calls, I mentioned that, there been over $70 billion invested into that and about 30% of that is on our lines. Whether it's the Infrastructure Act, the Inflation Reduction Act, the CHIPS Act, there are a lot of compelling reasons along with geopolitical instability and affordable and reliable energy to make the U.S. a very compelling place to be.

Operator

Our next question is from the line of Ravi Shanker with Morgan Stanley.

Ravi Shanker
Morgan Stanley, Research Division

Just to follow-up, the comments on the customer preference for short-haul moves and the empty move is pretty interesting. Do you have a sense that this is cyclical? Or could this be structural given evolutions of supply chains? And when the up cycle comes kind of are you confident that shippers will not choose to prefer faster, shorter haul truck moves over rail moves?

Claude E. Elkins
Executive VP & Chief Marketing Officer

Thanks for the question. On the international side, we saw those lanes suffer the most during the pandemic, where steamship lines were basically moving port to port and then allowing customers to pick it up there. That naturally is the part that has reverted back the most and I would say it's naturally reverted back most strongly because of the capability that we have in some of those markets like from Savannah into the Southeast, like from Charleston into the Southeast, like from Nordic into the Midwest and even from the port of New York into the Hinterland markets. We have a really good portfolio of Intermodal services. And I'll remind you that over 100 million Americans wake up every morning within 50 miles of one of our Intermodal terminals. That is a compelling strength that we think is going to allow us to succeed both on the international and the domestic side.

Alan H. Shaw
President, CEO & Director

Yes. Look, this is a positive for us, right? This shows that we can add value into the market and even short-haul lanes where rail traditionally has not been competitive. We can do that because of our focus on productivity. We can do that because of our focus on the value of our service product. In the East, that's why we're very confident, right, that we've got a franchise that faces the fastest-growing segments of the U.S. economy.

Operator

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

The next question is from the line of Bascome Majors with Susquehanna.

Bascome Majors
Susquehanna Financial Group, LLLP, Research Division

Mark, thanks for all the detail you gave us on the Eastern Ohio spending in the plan forward. Can you talk about, without necessarily quantifying, but any -- the time line of any major charges or outflows that you have a little bit of visibility into that are still ahead of you? And is there a point where your ongoing spending tapers off, but the insurance and legal recoveries are still coming in, in your response to this incident shift from a cash flow burden to a cash flow tailwind.

Mark R. George
Executive VP & CFO

Okay, Bascome. Thank you very much for the question. We're certainly pleased that we're winding down the site remediation work, which obviously has been costly, as you've seen my chart and the impact there. But I do think we've got issues that we're going to be working through for several quarters to come. And it's really impossible right now, Bascome, to predict the amount or the timing and there could be a lot more developments that lead to additional costs and in particular, with regard to litigation matters, fines, penalties, legal fees, and these could end up being material.

But at the same time, we do have insurance recoveries that have started. We actually got our first cash recovery, that $25 million I cited, that we recorded in the quarter, we actually got the cash last week for that. So that's good. But I don't think that you should expect to see significant meaningful cash recoveries from insurance in the near term. I think these things are really going to become protracted. But -- so it's hard to even match the time line of those inflows with what potential future outflows might be. I think with regard to insurance, in general, I think just bear in mind, it would be reasonable to expect significant premium increases going forward as a result of an incident of this size. So Hopefully, that's helpful, Bascome.

Operator

The next question is from the line of Ben Nolan with Stifel.

Benjamin Joel Nolan
Stifel, Nicolaus & Company, Incorporated, Research Division

I wanted to go back to some of the development that you're seeing from some of your customers? And specifically, it's sort of a little bit of a mixed signal. It sounds like there's a lot of people moving forward, but then the lights are not all green. And I guess I was curious if you've seen any -- as a function of higher interest rates or ambiguity in the market or whether any of those projects that are -- make up that $600 on your book here. Have any of those shifted to the right? Or is there any reason to think that maybe those aren't all full steam ahead?

Claude E. Elkins
Executive VP & Chief Marketing Officer

Well, let me start by reminding everybody, those lives are just for the fourth quarter, so to speak, near-term outlook, here's what we've seen. We've seen an acceleration in projects associated with manufacturing probably seeing some tail off or deceleration in projects associated with warehousing. And I think that's a direct function of some of the pressure that's coming from interest rates out there. But you think about whether it's aggregates, whether it's lumber, whether it's structural steel, there is a lot of pent-up demand out there to move product into these building sites. You think about any energy-intensive industry around the world, if you want to be in a place that is not only ecologically responsible, but has reliable, stable, predictable, affordable energy and great infrastructure to connect you to the rest of the world. The U.S. is compelling. The Eastern U.S. is very compelling with its customer base and the Southeast is exceptionally compelling to those.

Operator

Our final question is from the line of David Vernon with Bernstein.

David Scott Vernon
Sanford C. Bernstein & Co., LLC., Research Division

So Mark, I wanted to go back to one of your earlier comments about sort of expecting average incrementals when volumes do turn. I'm just trying to figure out how I can get comfortable with that, thinking about costs being structurally higher and some of the mix headwinds that Ed is pointing to in terms of both the short-haul intermodal, bringing back more international empties into the network

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

and seasoning some of these new Intermodal services. Is that average incrementals, is that sort of the day one when volume turns? Or should we be thinking about that more as the middle part of the cycle when they think about incremental margins?

Mark R. George
Executive VP & CFO

Yes. Look, I think we've had a challenging mix environment here in the past couple of quarters that have been consuming a lot of the positive pricing -- core pricing that Ed and his team have been capturing. At some point, that mix headwind will reverse it usually does. But as we think sequentially going into Q4, we're going to have some of the structural headwinds for sure, but that should be offset by the temporary costs related to the service. So I think we're kind of neutral there.

And then we're not going to have the same type of fuel headwinds that we had in the third quarter. In fact, I don't think -- I think it could be probably flat neutral, maybe slightly, slightly positive. So really, we're talking about volume dropping through. We have seen a nice uptick sequentially in volume, and that should drop through with those normal incrementals of call it, 60% or plus. So that's the way I think about Q4. And then longer term, things should play out that way. I mean, in any given quarter, obviously, mix is playing a role. And hopefully, it's not adverse going into 2024, the way it's been here in these past couple of few quarters.

Operator

This concludes the question-and-answer session. I'll now turn the call back over to Mr. Alan Shaw for closing comments.

Alan H. Shaw
President, CEO & Director

We certainly appreciate your participation and your questions this morning. Thanks for joining.

Operator
Ladies and gentlemen, thank you for your participation. This does conclude today's teleconference. You may now disconnect your lines, and have a wonderful day.

Copyright © 2023 S&P Global Market Intelligence, a division of S&P Global Inc. All Rights reserved.

Copyright © 2023 by S&P Global Market Intelligence, a division of S&P Global Inc. All rights reserved.

These materials have been prepared solely for information purposes based upon information generally available to the public and from sources believed to be reliable. No content (including index data, ratings, credit-related analyses and data, research, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of S&P Global Market Intelligence or its affiliates (collectively, S&P Global). The Content shall not be used for any unlawful or unauthorized purposes. S&P Global and any third-party providers, (collectively S&P Global Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Global Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON "AS IS" BASIS. S&P GLOBAL PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Global Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages. S&P Global Market Intelligence's opinions, quotes and credit-related and other analyses are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Global Market Intelligence may provide index data. Direct investment in an index is not possible. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Global Market Intelligence assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P Global Market Intelligence does not act as a fiduciary or an investment advisor except where registered as such. S&P Global keeps certain activities of its divisions separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions of S&P Global may have information that is not available to other S&P Global divisions. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P Global may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Global reserves the right to disseminate its opinions and analyses. S&P Global's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P Global publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.
© 2023 S&P Global Market Intelligence.