Volume 3, Number 3

Editor's Note

Welcome to the March 2025 edition of *Plugged In*! In this edition, we kick off with an article from Mark Heusel on the automotive industry's most pressing issue right now – tariffs and their sweeping impact. As a wave of tariffs disrupts supply chains and drives up costs, the auto industry faces mounting uncertainty, especially in the shift to EV production. This article explores these challenges and how automakers and suppliers can adapt to an increasingly volatile trade landscape. Next, we explore insights on the industry from one of its major thought leaders, John McElroy, in the first segment of a two-part interview conducted by Bob Weiss. John provides insight into Tesla's manufacturing advantages, potential challenges, and its position in the autonomous vehicle sector alongside competitors like Waymo and Aurora. The discussion also covers GM's EV strategy, its progress toward profitability, and the broader implications of new tariffs on the automotive industry. Finally, we conclude with our regular "In Case You Missed It" column, highlighting some of the more interesting recent news articles addressing the EV space.

We also would like to take this opportunity to bid farewell to Bob Weiss, who is stepping down as Co-Chair of Dickinson Wright's EV Advisory Board. Bob has been a regular contributor to our newsletter since its inception, and his commentary, expertise, and insights will be sorely missed.

Heather Frayre | Member Partner

The Growing Threat of Tariffs: What's the Bigger Disruption to the Auto Industry?

The automotive industry is no stranger to global trade dynamics, but a series of tariffs initiated and/or threatened by President Trump—spanning from Canadian and Mexican tariffs to tariffs on Chinese goods, reciprocal tariffs, and the impact of steel and aluminum tariffs—have created a perfect storm of uncertainty for the sector. These trade measures threaten to disrupt supply chains, inflate production costs, and challenge the global interconnectedness that the auto industry relies on. With so many potential tariffs in play, the question arises: Which tariff threat will have the most significant impact on the auto industry, and how can suppliers navigate this uncertainty?

Canadian and Mexican Tariffs: The North American Trade Challenge

The auto industry is highly integrated across the United States, Canada, and Mexico, with many manufacturers relying on seamless cross-border supply chains. The renegotiation of NAFTA into the United States-Mexico-Canada Agreement (USMCA) – an updated version of NAFTA that President Trump signed into law during his first term – had already created ripples, and the recent imposition of tariffs between these countries only exacerbates the situation. In fact, it could be reasonably argued that the U.S.'s recent imposition of tariffs on these trading partners for non-commercial reasons (i.e., Fentanyl) was a violation of that trade agreement and signals tougher times ahead as the USMCA comes up for review in 2026. As we have seen over the last two weeks, even the threat of such tariffs has caused major disruptions to trade between the U.S., Canada, and Mexico and, should the next 30 days' pause in enforcement come and go, will result in increased production costs, delays, and ultimately, higher prices for consumers. While the risk of trade friction remains present, these tariffs primarily threaten companies that rely heavily on North American supply chains and manufacturing. And, while the U.S. Commerce Department reminded us last week that these tariffs were only about drug interdiction, President Trump has also signaled that his moves are also about reshoring jobs.

The reaction in the auto industry to the on again and off again Canadian and Mexican tariffs was notable. After the first announcement and pause by President Trump in February, suppliers and OEMS alike were signaling that each of them would not bear the added costs to their bottom line. While tough talk persisted, most in the industry believed that because the Administration had suggested Canada and Mexico were stepping up their efforts to prevent Fentanyl from coming into the U.S., the first 30-day pause would become permanent. But, to the surprise of many, President Trump doubled down and inexplicably determined the tariffs were back on, only to be paused 24 hours later after U.S. automakers lobbied for another delay. In pausing the tariffs

once again, the Administration suggested that the automakers and parts makers could adjust their supply lines over the next 30-day pause – a suggestion that may play well in political circles but is simply undoable for a variety of reasons.

Chinese Tariffs: The Global Supply Chain Shake-Up

Tariffs on Chinese goods, particularly parts and raw materials used in car manufacturing, represent another significant risk to the auto industry. China is not only a major supplier of critical auto components like electronics and semiconductors but also a key player in the global supply chain for raw materials such as lithium and rare earth metals. Higher tariffs on Chinese goods could lead to price increases for these essential parts and materials, which would subsequently inflate production costs and delays in manufacturing. In a highly competitive market, this could hurt automakers' profit margins and disrupt the delivery of new vehicles to the consumer market. As with the Canadian and Mexican tariffs, the legal basis for these tariffs was initially Fentanyl, but quickly and again without much factual basis, the Administration increased these tariffs from 10% to 20%. And, with the already 25% tariffs placed on Chinese goods under President Trump's first term, many Chinese goods are now no less than a combined 45% and could go higher with President Trump's tariffs on steel and aluminum articles and derivatives that went into effect on March 12.

Reciprocal Tariffs: The Escalation of Trade Wars on April 2

Reciprocal tariffs, where countries respond to trade measures by imposing tariffs of their own to match the other countries' tariffs, add another layer of unpredictability for the auto industry. These tariffs can set off a chain reaction of retaliatory measures, increasing tensions between trading partners and further complicating the global flow of goods. The automotive supply chain, which relies on just-in-time production and the movement of goods across borders, would face even greater strain as tariffs rise. Automotive manufacturers will likely encounter disruptions in sourcing key materials or parts, potentially leading to production slowdowns and inventory shortages. This escalation could be particularly damaging to automakers that operate on a global scale, relying on the efficient movement of parts and completed vehicles across multiple borders. During President Trump's first term, after imposing Section 301 tariffs on many Chinese goods, including almost all automotive parts, many companies attempted to transition manufacturing outside of China, to places like Mexico, Southeast Asia, and Eastern Europe. With the threat of reciprocal tariffs coming in April, those companies that may have transitioned to places like India, Thailand, and Vietnam may have guessed wrong. President Trump has already signaled that many of these countries, regardless of their geographically strategic importance to U.S. interests may feel the brunt of the Administrations American First Trade policy. Even tried and true allies such as Japan and South Korea may feel the impact of these reciprocal tariffs.

These tariffs could have a profound impact on the U.S. – OEM's reliance on battery related products, for example. For years, both the Trump and Biden Administrations were increasingly putting pressure on Chinese battery and component suppliers with tariffs and other trade restrictions – with the hope that domestic suppliers could fill the market space (at least that was the goal of the Biden Administration). And, while domestic battery suppliers struggled, Korean battery makers filled the gap. Given Korea's free trade status with the U.S. and Korean suppliers' ability to qualify for the IRA, Korean battery makers had a distinct economic advantage. But, it can't be lost on some that Korea's days for free trade may be numbered, and with Chinese battery makers almost blocked from importing into the U.S. with 45% tariffs, the goal of making affordable EVs in the U.S. seems even farther away.

Steel and Aluminum Tariffs: The Cost of Materials

Steel and aluminum are two of the most critical materials in car manufacturing, and tariffs on these metals have already had a significant effect on the industry. Steel, used in everything from vehicle frames to engine parts, and aluminum, vital for lightweight designs and fuel efficiency, have seen increased costs due to tariffs imposed by the U.S. government. This has already inflated production costs for automakers, who must either absorb these costs or pass them on to consumers. Furthermore, with the auto industry pushing toward electric vehicles (EVs), there's a growing demand for additional metals like lithium, cobalt, and nickel—each of which could be subject to its own tariff threats, further compounding material cost challenges.

U.S. Automakers Transitioning to Electric Vehicles: Additional Disruptions

As U.S. automotive manufacturers increasingly pivot toward electric vehicles (EVs), the potential impact of tariffs adds another layer of complexity to their transition. The shift toward EVs is heavily dependent on a variety of specialized materials, many of which are sourced from abroad, especially from China and other key global suppliers. These materials include lithium, cobalt, nickel, and graphite—critical for battery production and essential for the performance and longevity of EVs. If tariffs are imposed on these raw materials, U.S. manufacturers could face even steeper costs in the production of electric vehicles. The price of electric cars could rise, which may hinder their widespread adoption and slow down the shift from internal combustion engines to electric drivetrains.

Moreover, key components such as electric motors and advanced batteries are often sourced from countries with lower labor and production costs, including China. The imposition of tariffs on these parts can significantly inflate the cost of EVs, making it difficult for automakers to keep EVs competitively priced against traditional gasoline-powered vehicles. For manufacturers aiming to meet ambitious production goals set by both governments and investors, these

increased costs could slow the pace of EV adoption, especially for mass-market vehicles that consumers are more likely to purchase.

Additionally, U.S. manufacturers are under pressure to create localized supply chains for EV production to meet regulatory requirements. However, the tariffs could complicate these efforts by increasing the cost of sourcing critical materials domestically or from alternative countries. And, while both Democrats and Republicans have rung the bell on domestic manufacturing, with historically low unemployment, the costs of manufacturing in the U.S. being much higher than other parts of the world, and an economy driven by what Wall Street thinks, the challenges for actually reshoring substantial segments of the automotive industry in the U.S. is much more complex than either Party is willing to acknowledge, especially at the supplier level.

Risks and Reactions: Navigating Uncertainty

For the auto industry, these tariffs represent more than just rising costs—they present a major risk to the stability and flexibility of global supply chains. Tariff-related uncertainties make it harder for suppliers to forecast demand, pricing, and production schedules. Supply chain disruptions could lead to delays, and automakers may find themselves scrambling to source materials or parts that were previously accessible at a lower cost.

As these risks continue to mount, suppliers must adapt by diversifying their supply chains. One way to mitigate the impact of tariffs is to identify alternative suppliers in countries less affected by tariffs or to invest in reshoring some manufacturing processes. But, given President Trump's unpredictable tariff agenda and ever changing focus on country-specific tariffs, gaming which countries to transition to is dangerous and certainly will not be done until the dust settles and the winners and losers in this tariff war are decided. Additionally, automakers may need to explore long-term contracts with suppliers to lock in prices and avoid unexpected hikes due to tariff changes. Collaboration across the supply chain, with clear communication on pricing strategies and risk-sharing, will be crucial in weathering the storm. The days of sticking it to just the supplier, or the OEM picking up the cost are gone. New ways of collaborating and cost sharing will be critical if the North American automotive industry is to survive.

Conclusion: The Road Ahead

As tariffs continue to evolve and reshape the global trade landscape, the auto industry must prepare for a period of profound disruption. Whether it's through higher costs on essential components, strain on cross-border supply chains, or retaliatory tariff measures, the impact on manufacturers, suppliers, and consumers will be significant. For U.S. automakers focused on transitioning to electric vehicles, the tariffs on key materials and components add a layer of

uncertainty that could slow their efforts to lead in the EV market. Moving forward, the key for suppliers and manufacturers will be to remain agile, diversify supply chains, and plan for the unexpected. But, importantly, suppliers and OEMs alike must work together if they are to survive these new market conditions. In an era of trade tensions, flexibility, and foresight may be the most valuable tools in ensuring long-term success for the auto industry.

Mark Heusel | Member Partner | East Asia Practice Group Chair -
China, Taiwan, Japan, Korea, ASEAN Region

Interview with John McElroy – Part I
January 30, 2025

Bob: John, welcome back to *Plugged In*! It has been about a year since we last spoke and I know our readers are eager to hear your updated thoughts regarding some of the key issues/challenges facing the EV and autonomous driving space. Let's begin with Tesla, which reported 4th quarter results that were generally below analysts' expectations. Yet, contrary to the normal investor reaction, the price of the stock increased, rather than declined. In the analysts call, Musk is talking about Tesla's unsupervised FSD (Full Self-Driving), saying it will be rolling it out first in Austin, and then throughout the United States during 2025, and then the rest of the world by the end of 2026. And it's interesting, he starts off by saying, I know that "I cried wolf before" and then, arguably, he goes ahead and does exactly the same thing. I am skeptical (to say the least), and I am confident many others are as well, that Tesla will be operating self-driving vehicles throughout the United States during 2025 and throughout the world in 2026? Mr. Musk was quoted recently as saying: "I'm not saying it's an easy path, but I see a path to Tesla being the most valuable company in the world by far....there is a path where Tesla is worth more than the next top five companies combined." What is your take on Tesla's results and its prospects?

John: Although Tesla has its share of challenges, as do all EV manufacturers, it still has a very unique and efficient manufacturing process and cost advantage over its competition, with the notable exception of the Chinese OEMs. Look, apparently millions of investors in Tesla stock believe it, because, you know, as you referenced, the company reported what I would call legacy automaker kind of results and the stock goes up. So you have to distinguish between Tesla's recent financial performance as a vehicle manufacturer and what Tesla's investor-base believes regarding the totality of Tesla's business operations, not just the EV segment. The fact is that they're wowed by this Optimus humanoid robot. They're wowed by this talk of robotaxis and its energy storage business and all the cash that these businesses can potentially generate. For example, the energy storage business

is up like 67% and did something like $10 billion dollars in revenue. Their services, which include insurance and financing, was up like 27%, $10.5 billion dollars in revenue.

Bob: So the bottom line is, from what you're saying, is that the investor-base and analysts aren't focused that much on Tesla sales of vehicles. They're looking at the potential, which is becoming evident in other business segments, which are, in a sense totally unrelated to the sale of a model Y, or other model.

John: Yes. As you know, stock prices are based on future earning potential. Not what's going on right now, unless it's a disaster. Then everybody starts selling. But you know they're looking to FSD; they're looking to robots. They're looking to artificial intelligence. Elon's running around now saying Tesla is actually the greatest AI company in the world. So that's what they're investing in. They think that those four things: the robots. FSD, energy storage and AI justify a trillion dollar valuation for the company.

Bob: Separating the vehicle manufacturing and sales business from the rest, just looking at it as a car manufacturer. What's your perspective of its future?

John: Look, they're a hell of a good company. Make no mistake about it. I'm not talking the styling. I'm talking the design and engineering of their cars is par excellence. I mean, it's better than any of the legacies. They've really done a bang up job of designing for manufacturing, so their manufacturing process is far better than the legacies. Tesla was also the first one to do a software defined vehicle, which is what every other car company is struggling to develop right now. Tesla was the first to do what they called centralized, zonal computing. Everyone is struggling to try to do all that right now. So, in sum, Tesla has some significant advantages over the competition; but has some challenges as well.

Bob: Where, in your opinion, has Tesla fallen short of expectations?

John: My criticism of their cars has been, and they're just starting to address this, is that they all look the same, and they haven't changed in years. Well, they just did a mild refresh of the Model 3. They did a more significant refresh of the Model Y. Say what you will about the Cybertruck, I think they sold, I don't know 40,000 of them last year. Something like that. I mean, it's nothing compared to an F-150; but it's the first year in the market. What I've said all along is that the auto industry is a fashion industry. A lot of people don't want to admit that, but it is. And when people buy a new car they want everybody to know they bought a new car. They don't want them to think. Oh, is that a 10 year old, Tesla? Or is that a new Tesla? And especially when you go out to the West Coast, I mean, the place is crawling with Teslas. Everybody's driving a Tesla. I think, especially this year, as people come off their 3 year Tesla lease, those Tesla lessees will be looking to potentially upgrade and will think: Wow! Those BMW electrics look terrific. That Cadillac Lyric! Oh, my gosh,

that is fabulous! And I think, especially in California, where "you are what you drive," you are going to see a lot of people looking to upgrade their ride to one of the so-called luxury brands. California, you know, the Liberal Bastion, who dislike that #%!% Musk, will want to try something else. 2025 is going to be the litmus test, I think for Tesla in the U.S. market, especially in those regions where EVs sell well. To the extent that there is a significant migration of these expiring leases to other brands, it will represent a significant loss to Tesla, both from an economic and prestige standpoint.

Bob: Interesting. Okay, let's stay with the subject of Tesla; but focus on its autonomous driving business. So effectively, Tesla now is entering into the same business as Waymo, Zoox and to a certain extent Uber and Lyft. Is there enough potential business out there for all those companies to succeed?

John: So is there room for the companies you mentioned? Absolutely. In fact, I'd throw another one in there, Aurora, which is looking at the heavy truck market class, for long haul, which may be the best market spot to be in, long haul trucking. I mean, you just go and go and go across I-80 across the United States. Very little cross traffic. In other words, technically, it's a whole lot easier to do. And what's the number one problem that the trucking industry faces? It can't get enough drivers. The turnover is horrific. So I would throw Aurora into the mix. And that's just in the United States, you know. There's another handful of Chinese companies that are all over this, called Pony AI and Baidu and BYD is into it. Great Wall Motor is into it.

In my opinion, autonomous technology is the game changer for the automotive industry, not electric cars. All electric does is change how you drive power to the wheels. Once you go to autonomy, you open up mobility to every single segment of society. The elderly, whose children are taking their keys away from them because they don't think it's safe for them to drive. The disabled. People who are blind. The very young, I'm talking about little kids now. Your little kids want to go visit their friends? Here, take the car keys. Go visit them. I can go on and on about this. But it is a huge game changer. So is there room enough for all those companies? You bet. Now, Uber and Lyft looked into this technology early on, and, in fact, Uber was an early investor. Takes a lot of money to do this. A lot of money. You need to have deep, deep pockets and or have an investment community, you know, private equity that's willing to dump literally billions into it. GM had to give up. GM invested $10 billion dollars into its autonomous Cruise program, and now they're walking away. I mean, they surrendered. They couldn't keep on spending like that. Lyft never had the money to do it. Uber got into it and then backed out and said, we're out of this and sold off their technology.

But what Uber and Lyft will do is run to the Waymo's of the world and say, we'll buy your technology, or they'll wait for legacy automakers to buy that technology and make vehicles using that technology and then buy those vehicles for their fleet.

Bob: So, assuming there will be ample supply of autonomous driving options throughout the U.S. and beyond, do you think there will be comparable consumer acceptance/demand?

John: The public is still quite skeptical of autonomous driving. In large part, it is out of concern for what is referred to as "edge cases," circumstances that an autonomous vehicle has not previously encountered. Examples of edge cases may be a car that is spinning on icy roads in front of you, or a construction site that just went up and it blocking the road. Before AI, AV development was coming up with large quantities of algorithms that could account for any kind of driving situations that a driver might encounter; but obviously this approach has its limitations, which resulted in accidents and other incidents that undermined consumer confidence. However, over the last two years there has been a major switch to utilizing AI. So instead of trying to come up with algorithms that anticipate every driving scenario, the approach now is to use AI to teach a car to drive and adapt to unusual conditions. And how did we learn how to drive? We got in a car and we drove. We saw how others drove even before we started to get our driver's license. And that's exactly what they're doing with autonomous vehicles now, teaching them how to drive, so if they encounter a situation they never encountered before, they pretty much can figure out on their own what they've got to do. And it's so revolutionary. AI is writing the code. It's not coders writing the code. Now, you still have to have people to tell the AI what it should be doing, but the AI is writing the code.

Bob: Let's pivot and discuss how one legacy manufacturer is doing in the EV space, GM. It's been reported that in 2024, GM's EV sales surged by 50% to 114,000 units and that GM is focusing with some success in creating a domestic supply chain for a lower cost and more secure battery production. What are thoughts about its EV strategy and how it is progressing?

John: I have been a fan of GM’s strategy for some time. While sales haven’t lined up to expectations, I think they’re on to something. They have built a solid foundation on their Ultium platform. GM's strategy is that all its EVs would be built using one platform, the Ultium platform. GM can just drop different top hats on top of it. For example, it can lengthen the wheel base or widen the track, use different battery pack sizes and configurations using one platform.

Bob: And all their EV models are based on that universal platform, which allows for significant economies of scale.

John: Precisely! The scalability of components is key. Once they hit the right manufacturing yield, things will look promising. High manufacturing yield is essential for profitability in battery production. All OEMs, to a greater or lesser degree, are struggling with this issue. GM is making progress in terms of achieving profitability on its EVs. GM claims that it hit a variable profit for its EV business as of Q4. The goal is by the end of the year to be very close to a true net profit. Once GM turns a profit on its EVs, it will be a big win in combination with its significantly profitable Internal Combustion vehicle business.

Bob: Do you see the trend to EV profitability continuing?

John: Yes, though there are significant potential obstacles, such as general economic uncertainties, termination of tax credits and other economic benefits of the Inflation Reduction Act, aggressive competition worldwide for the imposition of significant tariffs on Mexico, Canada and China, with the resultant retaliations.

Bob: Do you think that the recent imposition by the Trump administration of 25% tariffs on imports from Canada and Mexico are sustainable?

John: The 25% tariffs are probably not sustainable, in my opinion. They are going to drive up the cost of all vehicles. The Anderson Economic Group estimates that car prices will go up by $4,000 and that full-size pickups and SUVs will go up $10,000. That will immediately push tens of thousands of buyers out of the market. Many will not be able to afford that, and those with low credit scores will not be able to get a loan or a lease. So, prices go up, sales go down, and then you start to see workers getting laid off. I think the political pain will be too great to keep them in place. Adjustments will be made.

John McElroy | President, Blue Sky Productions
Robert Weiss | Of Counsel | Co-Chair, EV Initiative

In Case You Missed It

(1) Industry moves forward on technical advancements for EVs despite regulatory uncertainty

- Apple plans to roll out a new Apple maps feature for Ford drivers that will allow them to use Apple Maps EV routing via CarPlay to include charging stations on their trip. The stations that will be included on Apple maps routes are Tesla Superchargers and other charging stations that use the North American Charging Standard connector. The driver will not only have access to charging locations on

their route, but also an estimated battery level upon arrival at a given charging station – possibly providing a solution to "range anxiety" on longer trips in an EV.

- Additionally, Toyota and EV go have collaborated to expand the charging infrastructure for Toyota EV owners in California. This partnership will bring with it the first co-branded fast charging stations in California, and will enhance the charging experience for Toyota customers.

These types of technology improvements send a message that the industry is still heavily invested in EVs and in improving the experience of potential EV owners in the future.

(2) Potential for unprecedented brand partnerships to compete with competitive global EV market.

- GM and Ford have expressed openness to a partnership between one another in order to compete with competitive Chinese EV manufacturers. This strategic shift highlights the intensifying demand for EVs in the global market, and the significant ground that needs to be covered to catch up with the Chinese market.

(3) EV Industry Turmoil and Investment: Fisker and Northvolt Face Bankruptcy, While Sunwoda Seals $1B Deal in Thailand

2024 has been a turbulent year for the electric vehicle industry, as major players face financial struggles. Fisker Inc., the American EV company, filed for Chapter 11 bankruptcy in June 2024, burdened by loan defaults and delisting from the New York Stock Exchange. By October, the company reached an agreement to liquidate its assets. Similarly, Swedish battery manufacturer Northvolt filed for Chapter 11 bankruptcy protection in November 2024, reporting debts of $5.8 billion and meager cash reserves, which led to the resignation of its CEO.

Despite these setbacks, the EV sector is also seeing significant investments. Thailand has approved a $1 billion investment from China's Sunwoda, a leading battery manufacturer, to establish a new EV battery plant. This move highlights the ongoing global interest in EV infrastructure despite financial challenges faced by some companies in the industry.

(4) Will the EV industry be affected by Trump tariffs?

Starting in 2025, President Trump's tariffs on China, Canada, and Mexico, the three major U.S. trade partners could significantly increase automobile prices, including electric vehicles for American consumers and reduce car sales. Additionally, battery manufacturers are at risk, as the processing of essential minerals for EV batteries is largely concentrated in China, which will also be subject to a 20% tariff on top of existing duties

(301 tariffs) on Chinese imports. Moreover, the expansion of Section 232 steel and aluminum tariffs means automakers will face higher costs for these critical raw materials, which the industry relies on heavily.

Last month, Ford CEO Jim Farley cautioned that imposing 25% tariffs on Mexico and Canada would have severe consequences for the U.S. auto industry. "What we're seeing is a lot of cost, a lot of chaos," he remarked.

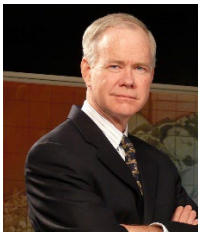
Robert Weiss | Of Counsel | Co-Chair, EV Initiative

To learn more about our EV practice, visit our website at https://www.dickinson-wright.com/practice-areas/electric-vehicles?tab=0.

All views presented in this newsletter are those of the authors and do not necessarily reflect the views of Dickinson Wright.

Issue Authors:

Mark Heusel | *Member Partner | East Asia Practice Group Chair - China, Taiwan, Japan, Korea, ASEAN Region | Ann Arbor, MI*
MHeusel@dickinsonwright.com
Tel.: 734-623-1908



John McElroy | *President, Blue Sky Productions*
jmcelroy@autoline.tv
Tel.: 734-542-7000

Robert Weiss | *Of Counsel | Ft. Lauderdale*
RWeiss@dickinsonwright.com
Tel.: 954-991-5455

Editor: ***Heather Frayre*** | *Member Partner | El Paso, TX*
HFrayre@dickinsonwright.com
Tel.: 915-541-9370