Risk Factors Comparison 2024-02-14 to 2023-02-16 Form: 10-K

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The following is a cautionary discussion of risks, uncertainties and assumptions that we believe are material to our business. In addition to the factors discussed elsewhere in this Annual Report on Form 10- K, the following are the material factors that, individually or in the aggregate, we believe could make our actual results differ materially from those described in any forward-looking statements. Risks Related to Our Business and Operations We participate in markets that are competitive, and our competitors' actions could have a material adverse effect on our business, results of operations and financial condition. Our business operates in competitive markets. We compete against other existing or new global manufacturers of transmissions and propulsion solutions for commercial vehicles on the basis of product performance, quality, price, distribution capability, service and fuel efficiency in addition to other factors. In addition, we compete with manufacturers developing alternative technologies, including fully electric propulsion solutions, that may or may not require a transmission. A focus on climate change and environmental sustainability, including through regulations enacted and subsidies offered by governmental entities, continues to drive the development and adoption of various alternative technologies, including electric propulsion solutions, in the commercial vehicle industry. If the pace of adoption of electric vehicles proceeds faster than we are anticipating, we may not be in a position to meet customer demand or our competitors may be better positioned to meet customer demand, which may result in a decline in our market share or negatively impact our ability to execute our growth initiatives. Actions by our competitors or accelerated adoption of electric vehicles, in particular if our competitors are able to develop, validate and release new technologies more quickly than we do, could also lead to downward pressure on prices and / or a decline in our market share, either or both of which could adversely affect our results. In addition, some of our customers or future customers are OEMs that manufacture or could in the future manufacture transmissions, propulsion solutions or alternate technologies, including electric propulsion solutions, for their own products. Despite their manufacturing capabilities, our existing OEM customers have chosen to purchase certain transmissions and propulsion solutions from us due to end user demand. However, we cannot be certain these customers will continue to purchase our products in the future. Increased levels of production insourcing by these customers could result from a number of factors, such as shifts in our customers' business strategies, acquisition by a customer of another transmission or propulsion solution manufacturer, the inability of third- party suppliers to meet specifications and the emergence of low- cost production opportunities in foreign countries. As a result, these OEMs may use products produced internally or by another manufacturer and no longer choose to purchase products from us. A significant reduction in the level of external sourcing by our OEM customers could significantly impact our net sales and cash flows and, accordingly, have a material adverse effect on our business, results of operations and financial condition. Increases in cost, disruption of supply or shortage of raw materials or components used in our products could harm our business and profitability. Our products contain various raw materials, including corrosion- resistant steel, non- ferrous metals such as aluminum and nickel, and precious metals such as platinum and palladium. We use raw materials directly in manufacturing and in components that we purchase from our suppliers. We generally purchase components with significant raw material content on the open market. The prices for and availability of these raw materials fluctuate depending on market conditions. Volatility in the prices of raw materials such as steel, aluminum and nickel could increase the cost of manufacturing our products. Additionally, our suppliers are also subject to fluctuations in the prices of raw materials and may attempt to pass all or a portion of such increases on to us. In the event they are successful in doing so, our margins would decline. ~~Industry- wide shortages of raw materials have continued to occur in 2022, which led to increased raw material price volatility and cost increases, which we expect to continue in 2023.~~ We may not be able to pass on these costs to our customers, and this could have a material adverse effect on our business, results of operations and financial condition. Even in the event that increased costs can be passed through to customers, our gross margin percentages would decline as the recovery of these costs from customers generally lags six to twelve months. In ~~2022~~ **2023**, approximately 75 % of our total spending on components was sourced from approximately 40 suppliers, many of which are the single source for such components. All of the suppliers from which we purchase materials and components used in our business are fully validated suppliers, meaning the suppliers' manufacturing processes and inputs have been validated under a production part approval process (" PPAP "). Furthermore, there are only a limited number of suppliers for certain of the materials used in our business, such as corrosion- resistant steel. As a result, our business is subject to the risk of additional price fluctuations and periodic delays in the delivery of our materials or components if supplies from a validated supplier are interrupted and a new supplier, if one is available, must be validated or materials and components must be purchased from a supplier without a completed PPAP, which could increase our risk of purchasing non- conforming components. Any such price fluctuations or delays, if significant, could harm our profitability or operations. In addition, the loss of a supplier could result in significant material cost increases or reduce our production capacity. We have experienced, and expect to continue to experience, delays in the availability and receipt of raw materials and component parts as a result of global economic uncertainty ~~,~~ **and** the ~~war~~ **wars** in Ukraine and the **Middle East** ~~COVID- 19 pandemic~~, some of which have materially impacted, and may continue to materially impact, our ability to meet customer demand. We also cannot guarantee we will be able to maintain favorable arrangements and relationships with these suppliers. An increase in the cost or a sustained interruption in the supply or shortage of some of these raw materials or components that may be caused by a deterioration of our relationships with suppliers ~~or by~~ **, adverse geopolitical events such as the crisis in the Red Sea,** events such as natural disasters and extreme weather events which may increase in frequency and intensity as a result of climate change, power outages, labor strikes and public health crisis such as pandemics and epidemics or the like could negatively impact our business, results of operations and financial condition.

Although we have agreements with many of our customers that we will pass such price increases through to them, such contracts may be canceled by our customers and / or we may not be able to recoup the costs of such price increases. Additionally, if we are unable to continue to purchase our required quantities of raw materials on commercially reasonable terms, or at all, if we are unable to maintain or enter into purchasing contracts for commodities, or if delivery of materials or component parts from suppliers is delayed or non- conforming, our operations could be disrupted, we may not be able to meet customer demand, and our profitability and our financial results may be materially impacted. **While we may experience the supply chain constraints mentioned above across all our products lines, the impacts to our customers are likely to be more pronounced in our lower volume product lines, including those supplied to the Defense and Off- Highway end markets.** Labor cost inflation ~~,~~ **and** employee attraction and retention **could have an adverse effect on** ~~or~~ **our business, results of operations and financial condition. Our success depends on our ability to identify, recruit and retain highly skilled, qualified personnel, and there is currently increased competition for talent. We have experienced** labor ~~Our success depends on our ability to identify,recruit and retain highly skilled,qualified personnel,and there is currently increased competition for talent.We have experienced labor~~ shortages and wage inflation amid low levels of unemployment and workforce availability.As a result,we may not be able to attract and retain qualified personnel,which may impact our ability to manufacture,design and develop our propulsion solutions **,satisfy customer demand in a timeframe that meets their desired production schedules** and ~~to~~ compete effectively.In addition,we may continue to experience increased labor costs, **including the anticipated significant labor cost increases under our new collective bargaining agreement with the UAW,** which may impact our results of operations **.Our business would be adversely affected if we fail to retain key executives,or to adequately plan for the succession of members of our executive management team.While we have succession plans in place for members of our executive management team,and continue to review and update those plans,and certain key executive officers are party to or participants in severance and change in control arrangements,these arrangements do not guarantee that the services of our executive officers will continue to be available to us or that we will be able to find suitable management personnel to replace departing executives on a timely basis** .Prolonged inflation could result in higher costs and decreased margins and earnings.Recent inflationary pressures have resulted in increased raw material,labor,energy,freight and logistics expenses and other costs,which ~~impacted our margins in 2022 and~~ may ~~continue to~~ adversely affect our results of operations.If our costs are subject to continuing significant inflationary pressures,we may not be able to fully offset such higher costs through price increases.Our inability to do so could harm our results of ~~operation~~ **operations** .Geopolitical risks,including the ~~war~~ **wars** in Ukraine **and the Middle East** ,may have an adverse effect on our results of operations and financial conditions,including on the availability of raw materials for our products or component parts,our supply chain,our customers and our long- term sales opportunities.Political,economic and other conditions in foreign countries and regions,including geopolitical risks such as escalating tensions between China and western countries and the current **wars in** ~~conflict between Russia and~~ Ukraine **and the Middle East** ,may have an adverse effect on our results of operations and financial condition. **The duration** ~~As a result~~ of ~~Russia' s invasion of Ukraine~~ **any such conflict,its impact on the applicable regional** and **global economy,and the breadth,severity and duration of any applicable** ~~actions~~ **sanctions imposed** by the U.S.and other governments **is uncertain.Extended or expanded conflicts could impact our ability or those of our suppliers or customers** to **obtain** ~~implement sanctions against Russia,as well as~~ certain ~~businesses,individuals~~ **raw materials or component parts** and ~~banks in Russia~~ **could limit the availability and cost of energy throughout Europe** , **which could increase our costs,impact our ability to deliver our products or reduce customer demand.In addition,while** we have suspended indefinitely all sales and exports of our products to customers in Russia and Belarus and Russian ~~-~~ and Belarusian ~~- affiliated~~ - **affiliate** ~~,~~ owned or controlled entities ~~.These actions did not~~ **,certain of our competitors** have ~~a material impact on our net sales in 2022 and are not expected to have a material impact on our net sales in 2023.However,the duration of the war in Ukraine,its impact on the regional and global economy,and the breadth,severity and duration of sanctions imposed by the U.S.and other governments is uncertain.An extended war could impact our ability or those of our suppliers or customers to obtain certain raw materials or component parts and could limit the availability and cost of energy throughout Europe,which could increase our costs,impact our ability to deliver our products or reduce customer demand.In addition,certain of our competitors may continue~~ **continued** to sell products in Russia during this time,which may have a negative impact on our long- term sales opportunities in Russia ~~.Since the beginning of the war in Ukraine,we have also experienced,and may continue to experience,an increase in cybersecurity attacks,which,if successful,may harm our business~~ .Volatility in and disruption to the global economic environment,including the impact of an economic recession,and changes in the regulatory and business environments in which we operate may have a material adverse effect on our business,results of operations and financial condition. ~~Increasing inflation,geopolitical~~ **Geopolitical** risks ~~and~~ **,** supply chain,labor and energy constraints **and inflation** have caused and may continue to cause volatility in and disruption to the global economic environment.Historically,the commercial vehicle industry as a whole has been more adversely affected by volatile economic conditions,such as a recession,than many other industries,as the purchase or replacement of commercial vehicles,which are durable items,can be deferred for many reasons,including reduced spending by end users.Future changes in the regulatory and business environments in which we operate,including increased geopolitical risks,trade protectionism and tariffs,may adversely affect our ability to sell our products or source materials needed to manufacture our products.Furthermore,financial instability or bankruptcy at any of our suppliers or customers could disrupt our ability to manufacture our products and impair our ability to collect receivables,any or all of which may have a material adverse effect on our business,results of operations and financial condition.In addition,some of our customers and suppliers may experience serious cash flow problems and,thus,may find it difficult to obtain financing,if financing is available at all.As a result,our customers' need for and ability to purchase our products or services may decrease,and our suppliers may increase their prices,reduce their output or change their terms of sale.Any inability of customers to pay us for our products and services,or any demands by suppliers for different payment terms,may materially and adversely affect our results of operations and financial condition.Furthermore,our suppliers may not be successful in generating sufficient sales or securing alternate financing arrangements,and therefore may no longer be able to supply goods and services to us.In that event,we would need to find alternate sources for these goods and services,and there is no assurance we would be able to find such alternate sources on favorable terms,if at all.Any such disruption in our supply chain could adversely affect our ability to manufacture and deliver our products on a timely basis,and thereby affect our results of operations. **Labor** unrest could have an adverse effect on our business, results of operations and financial condition. As of December 31, ~~2022~~ **2023** , approximately ~~46~~ **48** % of our U. S. employees, representing approximately ~~41~~ **43** % of our total employees, were represented by the UAW and are subject to a collective bargaining agreement. Our current collective bargaining agreement with UAW Local 933 is effective through November ~~2023~~ **2027** . Any new collective bargaining agreement we negotiate with the UAW to replace the existing collective bargaining agreement upon its expiration may result in increased costs to us, in particular labor costs, which could have an adverse effect on our results of operations. In addition to our unionized work force, many of our direct and indirect customers and vendors have unionized work forces. Strikes, work stoppages or slowdowns experienced by these customers or vendors or their other suppliers could result in slowdowns or closings of assembly plants that use our products or supply materials for use in the production of our products. Organizations responsible for shipping our products may also be impacted by strikes. Any interruption in the delivery of our products could reduce demand for our products and could have a material adverse effect on us. In general, we consider our labor relations with all of our employees to be good. However, in the future we may be subject to labor unrest. If strikes, work stoppages or lock- outs at our facilities or at the facilities of our vendors or customers occur or continue for a long period of time, our business, results of operations and financial condition may be materially adversely affected. Our success depends on our ability to......, financial condition and cash flows. Certain of our end users operate in highly cyclical industries, which can result in uncertainty and significantly impact the demand for our products, which could have a material adverse effect on our business, results of operations and financial condition. Some of the markets in which we operate, including energy, mining, construction, distribution and motorhomes, exhibit a high degree of cyclicality. Decisions to purchase our products are largely a result of the performance of these and other industries we serve. If demand for output in these industries decreases, the demand for our products will likely decrease. Demand in these industries is impacted by numerous factors, including prices of commodities, rates of infrastructure spending, housing starts, real estate equity values, interest rates, consumer spending, fuel costs, energy demands, municipal spending, commercial construction and global pandemics, among others. Increases or decreases in these variables globally may significantly impact the demand for our products, which could have a material adverse effect on our business, results of operations and financial condition. If we are unable to accurately predict demand, we may be unable to meet our customers' needs, resulting in the loss of potential sales, or we may manufacture excess products, resulting in increased inventories and overcapacity in our production facilities, increasing our unit production cost and decreasing our operating margins. Our sales are concentrated among our top five OEM customers and the loss or consolidation of any one of these customers or the discontinuation of particular vehicle models for which we are a significant supplier could reduce our net sales and have a material adverse effect on our results of operations and financial condition. We have in the past and may in the future derive a significant portion of our net sales from a relatively limited number of OEM customers. For the years ended December 31, **2023,** 2022 ~~,~~ **and** 2021 ~~and 2020~~ , our top five OEM customers accounted for approximately **52 %,** 51 % ~~,~~ **and** 52 ~~% and 53~~ % of our net sales, respectively. Our top three customers, Daimler AG, Traton SE and PACCAR Inc., accounted for approximately ~~20~~ **18** %, ~~10~~ **11** % and ~~9~~ **11** %, respectively, of our net sales during ~~2022~~ **2023** . The loss of, or consolidation of, any one of these customers, or a significant decrease in business from, one or more of these customers could harm our business. In addition, the discontinuation of particular vehicle models for which we are a significant supplier could reduce our net sales and have a material adverse effect on our results of operations. We are subject to cybersecurity risks to operational systems, security systems, or infrastructure owned by Allison or third- party vendors or suppliers. We are at risk for interruptions, outages, and ~~breaches~~ **compromises to the confidentiality, integrity or availability** of: (i) operational systems, including **information technology,** business, financial, accounting, product development, data processing, or manufacturing processes, owned by us or our third- party vendors or suppliers; (ii) facility security systems, owned by us or our third- party vendors **, customers** or suppliers; and / or (iii) vehicle propulsion control modules or other in- product technology, owned by us **, our customers** or our third- party vendors or suppliers. Such cyber incidents could materially disrupt operational systems **(for example, through the deployment of ransomware)** ; result in loss of intellectual property, trade secrets or other proprietary or competitively sensitive information; compromise personally identifiable information of employees, customers, suppliers, or others; jeopardize the security of our facilities; and / or affect the performance of vehicle propulsion control modules or other in- product technology. A cyber incident could be caused by malicious **insiders or by** third parties using sophisticated, targeted methods to circumvent firewalls, encryption, and other security defenses, including hacking, fraud, trickery, or other forms of deception **, such as social engineering and phishing, or due to human or technological error, such as misconfigurations, " bugs, " or vulnerabilities in software or hardware used by us or others** . The techniques used by ~~third parties~~ **threat actors** change frequently and may be difficult to detect for long periods of time **. Cyberattacks are expected to accelerate on a global basis in frequency and magnitude as threat actors are increasingly using tools – including artificial intelligence – to evade detection and even remove forensic evidence. As a result, we may be unable to detect, investigate, remediate or recover from future cyberattacks or other incidents, or to avoid a materially adverse impact to our systems, information or business. In addition, remote or hybrid working arrangements at our Company, our customers and many third- party providers increase cybersecurity risks due to the challenges associated with managing remote computing assets and the nature of security vulnerabilities that are present in many non- corporate and home networks. We and certain of our customers and third- party providers have experienced cyberattacks and other incidents in the past and will continue to experience varying degrees of cyberattacks and incidents in the future. While to date no cybersecurity incidents have had a material impact on our**

operations or financial results, we cannot guarantee that material incidents will not occur in the future. In addition, as a provider of defense products and services to the U. S. government and foreign governments, we are subject to a heightened risk of cyberattacks, including by foreign governments, violent extremist organizations, and transnational criminal organizations . A significant cyber incident could impact **our** production capability, harm our reputation and ~~/~~ **business relationships, impact** ~~or~~ **our competitive position (including compromising our intellectual property assets), and** subject us to regulatory actions or litigation **and fines and / or penalties** , including **pursuant to evolving** ~~those as result of~~ global privacy and security regulations **and laws** , ~~any~~ **as well as significant investigative, restoration or remediation costs and / or increased compliance costs. Any** of ~~which~~ **the foregoing** could materially affect our business, results of operations and financial condition. ~~While we utilize a number of~~ **There is no guarantee that our** measures to prevent, detect and mitigate these threats, including employee **and key third- party partner** education, monitoring of networks and systems, and maintenance of backup and protective systems, ~~there is no guarantee such efforts~~ will be successful in preventing **or mitigating** a cyber incident. ~~Our sales to the Defense end market~~ **In addition, in many jurisdictions, we** are **subject** to **privacy** ~~government entities~~ and ~~contractors for~~ **data protection laws and regulations. These laws and regulations are changing rapidly and becoming increasingly complex. The interpretation and application of data protection laws in** the U. S. ~~and foreign governments~~ , **Europe** ~~and the loss of a significant number of our contracts~~ , ~~or budgetary declines or future reductions or changes in spending by the U. S. or foreign governments could have a material adverse effect on our results of operations~~ and **elsewhere** ~~financial condition. Our net sales to the Defense end market~~ are **uncertain** ~~derived from contracts (revenue arrangements) with agencies of~~ , **evolving** and ~~prime system contractors for, the U. S. government and foreign governments. If a significant number of our Defense contracts and subcontracts are simultaneously delayed or cancelled for budgetary, performance or other reasons, it would have a material adverse effect on our results of operations and financial condition. Approximately 5 %, or $ 146 million, of our net sales for the year ended December 31, 2022 were from our Defense end market. Our future financial results~~ may be **inconsistent across jurisdictions** ~~adversely affected by: • declines in, or uncertainty regarding, U~~ . **Our failure to comply with** ~~S. or foreign government defense budgets; • curtailment of the~~ **these laws** ~~U. S. government' s use of technology or other services~~ and ~~product providers, including curtailment due to government budget reductions~~ **regulations could result in legal liability** , **significant** ~~future government shutdowns and related fiscal matters; • geopolitical developments, including economic sanctions, that affect demand for our products and services; • technological developments that impact purchasing decisions or our competitive position; and • increased regulatory~~ - **regulator** ~~requirements~~ **penalties and fines,** ~~for~~ - **or** ~~defense contractors~~ **impair our reputation in the marketplace** . Our brand and reputation are dependent on the continued participation and level of service of our numerous independent distributors and dealers. We work with a network of approximately 1, 600 independent distributors and dealers that provide post- sale service, service parts and support equipment. Because we depend on the pull- through demand generated by end users for our products, any actions by the independent distributors or dealers, which are not in our control, may harm our reputation and damage the brand loyalty among our customer base. In the event that we are not able to maintain our brand reputation because of the actions of our independent distributors and dealers, we may face difficulty in maintaining our pricing positions with respect to some of our products or have reduced demand for our products, which could negatively impact our business, results of operations and financial condition. In addition, if a significant number of independent dealers were to terminate their contracts, it could adversely impact our business, results of operations and financial condition. In the event of a catastrophic loss of **one of** our key manufacturing ~~facility~~ **facilities** , our business would be adversely affected. While we manufacture our products in several facilities and maintain insurance covering our facilities, including business interruption insurance, a catastrophic loss of the use of all or a portion of one of our manufacturing facilities due to accident, labor issues, weather conditions, acts of war, political unrest, terrorist activity, natural disaster or extreme weather events, which may increase in frequency and intensity as a result of climate change, public health crises, such as pandemics and epidemics or otherwise, whether short- or long- term, would have a material adverse effect on our business, results of operations and financial condition. Our most significant concentration of manufacturing is around our corporate headquarters in Indianapolis, Indiana, where we produce approximately 90 % of our transmissions. In addition to our Indianapolis manufacturing facilities, we currently operate manufacturing facilities for our fully electric propulsion solutions in Auburn Hills, Michigan, for our transmissions in both Szentgotthard, Hungary and Chennai, India and for our aluminum die cast components in Lewisburg, Tennessee. In the event of a disruption at the Indianapolis facilities, our other facilities may not be adequately equipped to operate at a level sufficient to compensate for the volume of production at the Indianapolis facility due to their size and the fact that they have not yet been tested for such significant increases in production volume. Strategic Risks Our success depends on research and development efforts, and we may not be successful in developing or introducing new products and technologies, including electric propulsion solutions, and responding to customer needs. Our success depends on our ability to develop or introduce new products and technologies and improve the efficiency and performance of our current products, and we invest significant resources in research and development in order to do so. We currently have enhancements to our existing products and technologies and new products and technologies under development, including electric hybrid and fully electric propulsion solutions, for planned introduction into certain end markets. The development of new products and technologies is difficult, time- consuming and costly and the timetable for commercial release is uncertain. Not all of our new product launches have been successful, and we may not be successful in the future in introducing other new products and responding to customer needs. In addition, it often takes significant time, in some cases multiple fleet buy cycles, before customers gain experience with new products and technologies and those new products and technologies become widely- accepted by the market, if at all. Given the early stages of development of some of these new products and technologies, there can be no guarantee of future market acceptance and investment returns with respect to these products. In addition, the increased adoption of electric propulsion solutions could result in lower demand for our fully automatic transmissions and, over time, the demand for related service parts and support equipment, which would impact our margins. If we do not adequately anticipate the changing needs of our customers by keeping pace with improvements and changes in vehicle propulsion technology and developing and introducing new and effective products and technologies on a timely basis, or if the products and technologies we develop do not become market- leading, our competitive position and prospects could be harmed. If our competitors are able to respond to changing market demands and adopt new technologies more quickly than we do, demand for our products could decline, our competitive position could be harmed, our future research and development activities may be constrained due to intellectual property rights of others, licenses for technologies that would enable us to keep pace with our competitors may not be available on commercially reasonable terms if at all and we may not be able to recoup a return on our development investments. Moreover, changing customer demands as well as evolving regulatory, safety and environmental standards could require us to adapt our products and technologies to address such changes. As a result, in the future we may experience delays in the introduction of some or all of our new products or modifications or enhancements of existing products. Furthermore, there may be production delays due to unanticipated technological setbacks, which may, in turn, delay the release of new products to our end users. If the rate of adoption of new technologies, including electric vehicles for the medium- and heavy- duty commercial market, occurs at a pace that is faster than we are anticipating, we may not have products available to meet that accelerated timeframe. If we experience significant delays or increased costs in the production, launch or acceptance of our products and technologies, our net sales and results of operations may be materially adversely affected. Our long- term growth prospects and results of operations may be impaired if the rate of adoption of fully automatic transmissions in commercial vehicles outside North America does not increase. Our long- term growth strategy depends in part on an increased rate of automaticity outside North America. As part of that strategy, we have established manufacturing facilities in India and Hungary. We have also dedicated significant human resources to serve markets where we anticipate increased adoption of automaticity. However, manual transmissions remain the market leader outside North America, and there can be no assurance that adoption of automatic transmissions will increase. Factors potentially impacting adoption of automatic transmissions outside of North America include the large existing installed base of manual transmissions, customer preferences for manual transmissions, commercial vehicle OEM vertical integration into manual transmission and AMT manufacturing, increased competition from AMTs, electric propulsion solutions, and other alternative transmission and propulsion solution technologies and failure to further develop the Allison brand. If the rate of adoption of **our propulsion solutions, including** fully automatic transmissions **,** does not increase as we have anticipated, our long- term growth prospects and results of operations may be impaired. Our international operations, in particular our emerging markets, are subject to various risks which could have a material adverse effect on our business, results of operations and financial condition. Our business is subject to certain risks associated with doing business internationally, particularly in emerging markets. Outside- North America net sales represented approximately ~~26~~ **25** % of our net sales for ~~2022~~ **2023** . Most of our operations are in the U. S., but we also have manufacturing and customization facilities in India and Hungary with a services agreement with Stellantis NV and customization capability in Brazil, the Netherlands, China and Japan. Further, we intend to continue to pursue growth opportunities for our business in a variety of business environments outside the U. S., which could exacerbate the risks set forth below. Our international operations are subject to, without limitation, the following risks: • the burden of complying with multiple and possibly conflicting laws and any unexpected changes in regulatory requirements; • foreign currency exchange controls, sanctions, import and export restrictions and tariffs, including restrictions promulgated by the Office of Foreign Assets Control of the U. S. Department of the Treasury, and other trade protection regulations and measures; • political risks, including increased trade protectionism and risks of loss due to civil disturbances, acts of terrorism, acts of war, guerilla activities and insurrection; • unstable economic, financial and market conditions and increased expenses as a result of inflation, higher energy costs or higher interest rates; • difficulties in enforcement of third- party contractual obligations and intellectual property rights and collecting receivables through foreign legal systems; • difficulty in staffing and managing international operations and the application of foreign labor regulations; • differing local product preferences and product requirements; • fluctuations in currency exchange rates to the extent that our assets or liabilities are denominated in a currency other than the functional currency of the country where we operate; • potentially adverse tax consequences from changes in tax laws, requirements relating to withholding taxes on remittances and other payments by subsidiaries and restrictions on our ability to repatriate dividends from our subsidiaries; and • exposure to liabilities under anti- corruption and anti- money laundering laws, including the U. S. Foreign Corrupt Practices Act (" FCPA ") and similar laws and regulations in other jurisdictions. Any one of these factors could materially adversely affect our sales of products or services to international customers or harm our reputation, which could have a material adverse effect on our business, results of operations and financial condition. We may not be able to identify or consummate acquisitions or partnerships or achieve expected benefits from or effectively integrate acquisitions or partnerships, which could harm our growth. From time to time, we evaluate selective acquisitions, partnerships and strategic investments. Potential and completed acquisitions and partnerships involve many risks that could have an adverse effect on our business, financial condition or results of operations, including: • our ability to identify suitable acquisition or partnership candidates, prevail against competing potential acquirers or partners and negotiate and consummate acquisitions or partnerships on terms attractive to us; • difficulties in integrating personnel and sales forces, operations, manufacturing, logistics, research and development, information technology, communications, purchasing, accounting, marketing, administration and other systems and processes and otherwise assimilating the operations of the acquired company; • the diversion of resources, including diverting management' s attention from our current operations; • risks of entering new geographic or product markets in which we have limited or no direct prior experience; • the potential loss of key customers, employees or suppliers of the acquired company or adverse effects on our existing business relationships with our suppliers and customers; • the potential incurrence of indebtedness to fund the acquisition or partnerships; • the acquired business or partnership not achieving anticipated revenues, earnings, cash flow or market share; • excess capacity; • failure to achieve the expected synergies or cost savings; • the need for additional investments post- investment or post- acquisition that could be greater than anticipated; • the impact of U. S. and foreign competition laws and regulations on our ability to make certain acquisitions, to enter into certain partnerships or to make certain strategic investments; • inaccurate assessment of undisclosed, contingent or other liabilities or problems and unanticipated costs associated with the acquisition or partnership; • incorrect estimates made in accounting for acquisitions, incurrence of non- recurring charges and write- off of significant amounts of goodwill that could adversely affect our financial results; and • dilution of earnings. We may also face liability with respect to acquired businesses for violations of environmental or other laws occurring prior to the date of our acquisition, and some or all of these liabilities may not be covered by environmental or other insurance secured to mitigate the risk or by indemnification from the sellers from which we acquired these businesses. We could also incur significant costs, including, but not limited to, remediation costs, natural resources damages, civil or criminal fines and sanctions and third- party claims, as a result of past or future violations of, or liabilities associated with, environmental or other laws. We cannot offer any assurance that we will be able to consummate any future acquisitions, strategic investments, partnerships or other business combinations. If we are unable to identify suitable acquisition candidates or to consummate and successfully integrate ~~our recent and~~ any future acquisitions, our business and results of operations may be adversely affected as a result. Legal and Regulatory Risks Any events that impact our brand name, including if the products we manufacture or distribute are found to be defective, could have an adverse effect on our reputation, cause us to incur significant costs and negatively impact our business, results of operations and financial condition. We face exposure to product liability claims in the event that the use of our products has, or is alleged to have, resulted in injury, death or other adverse effects. We currently maintain product liability insurance coverage, but we cannot **guarantee** ~~be assured~~ that we will be able to obtain such insurance on acceptable terms in the future, if at all, or that any such insurance will provide adequate coverage against potential claims. Product liability claims can be expensive to defend and can divert the attention of management and other personnel for long periods of time, regardless of the ultimate outcome. An unsuccessful product liability defense could have a material adverse effect on our business, results of ~~operation~~ **operations** , financial condition or prospects. If one of our products is determined to be defective, we may face substantial warranty costs and may be responsible for significant costs associated with a product recall or a redesign. We have had defect and warranty issues associated with certain of our products in the past, and similar product defects may occur in the future. See" Note 10. Product Warranty Liabilities " of Notes to Consolidated Financial Statements included in Part II, Item 8. **,** of this Annual Report on Form 10- K for additional details regarding these warranty issues. Furthermore, our business depends on the strong brand reputation we believe we have developed. In addition to the risk of defective products, we also face significant risks in our efforts to penetrate new markets, where we have limited brand recognition. We also rely on our reputation with end users of our products to specify our products when purchasing new vehicles from our OEM customers. In the event we are not able to maintain or enhance our brand in these new markets or our reputation is damaged in our existing markets as a result of product defects or recalls, we may face difficulty in maintaining our pricing positions with respect to some of our products or experience reduced demand for our products, which could negatively impact our business, results of operations and financial condition. Additionally, we license the " Allison Transmission " name and certain related trademarks to third parties. If any third party uses the trade name " Allison Transmission " in ways that adversely affect such trade name or trademark, our reputation could suffer damage, which in turn could have a material adverse effect on our business, results of operations and financial condition. Many of the key patents and unpatented technology we use in our business are licensed to us, not owned by us, and our ability to use and enforce such patents and technology is restricted by the terms of the license. Protecting our intellectual property rights is critical to our ability to compete and succeed as a company. General Motors Company (" GM ") has granted us an irrevocable, perpetual, royalty- free, worldwide license under a large number of U. S. and foreign patents and patent applications, as well as certain unpatented technology and know- how, to design, develop, manufacture, use and sell fully automatic transmissions and electric hybrid propulsion solutions for use in certain vocational vehicles, defense vehicles and off- road products. For the bulk of the intellectual property licensed to us, our license is exclusive with respect to the design, development, manufacture, use and sale of fully automatic transmissions and electric hybrid propulsion solutions in vocational vehicles above certain weight rating thresholds, certain defense vehicles and certain off- road products. It is non- exclusive with respect to certain other products that are within the scope of the licensed patents or to which the licensed technology can be applied. GM continues to own such patents and technology, and GM has the right, in the first instance, to control the maintenance, enforcement and defense of such patents and the prosecution of the licensed patent applications. In addition, our ability to sublicense our rights is limited. We rely on unpatented technology, which exposes us to certain risks. We currently do, and may continue in the future to, rely on unpatented proprietary technology. In such regard, we cannot be assured that any of our applications for protection of our intellectual property rights will be approved or that others will not infringe or challenge our intellectual property rights. It is possible our competitors will independently develop the same or similar technology or otherwise obtain access to our unpatented technology. Although we believe the loss or expiration of any single patent would not have a material effect on our business, results of operations or financial position, there can be no assurance that any one, or more, of the patents or any other intellectual property owned by or licensed to us will not be challenged, invalidated or circumvented by third parties. In fact, a number of the patents licensed to us are set to expire in the next few years. When a patent expires, the inventions it discloses can be used freely by others. Thus, the competitive advantage that we gain from the patents licensed to us will decrease over time, and a greater burden will be placed on our own research and development and licensing efforts to develop and otherwise acquire technologies to keep pace with improvements of transmission- related technology in the marketplace. We enter into confidentiality and invention assignment agreements with employees, and into non- disclosure agreements with suppliers and appropriate customers so as to limit access to and disclosure of our proprietary information. We cannot be assured that these measures will provide meaningful protection for our trade secrets, know- how or other proprietary information in the event of any unauthorized use, misappropriation or disclosure. If we are unable to maintain the proprietary nature of our technologies, our ability to sustain margins on some or all of our products may be affected, which could reduce our sales and profitability. Moreover, the protection provided for our intellectual property by the laws and courts of foreign nations may not be as advantageous to us as the protection available under U. S. law. Environmental, health and safety laws and regulations may impose significant compliance costs and liabilities on us. Our manufacturing operations are subject to many environmental, health and safety laws and regulations governing emissions to air, discharges to water, the generation, handling and disposal of waste and the cleanup of contaminated properties. Compliance with these laws and regulations is costly. We have incurred and expect to continue to incur significant costs to maintain or achieve compliance with applicable environmental, health and safety laws and regulations. Moreover, regulatory bodies are increasingly adopting regulations that target limiting greenhouse gases and ~~combatting~~ **combating** climate change, which may impact our ability to sell our current products or require us to develop new products or technologies. If these environmental, health and safety laws and regulations that impact our operations or products become more stringent or expand to include a larger portion of our products or our ~~customer~~ **customers** ' ~~s~~ products in the future, we could incur additional costs in order to ensure that our business and products comply with such regulations. In addition, we may not be successful in developing products or technologies that comply with, or the vehicle or customer OEMs to which we sell our products may choose not to comply with, such laws and regulations, which could impact our ability to sell our products in certain locations, negatively impact our business and result in a loss of market share. Furthermore, if our products that are already placed in service are found to be non- compliant with certain laws, regulations and certifications, we may incur additional costs and fines. We cannot assure that we are in full compliance with all environmental, health and safety laws and regulations. Our failure to comply with applicable environmental, health and safety laws and regulations and permit requirements could result in civil or criminal fines, penalties or enforcement actions, third- party claims for property damage and personal injury, requirements to clean up property or to pay for the costs of cleanup or regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures, including the installation of pollution control equipment or remedial actions. Our failure to comply could also result in our failure to secure adequate insurance for our business, resulting in significant exposure, diminished ability to hedge our risks and material modifications of our business operations **. Concern over climate change continues to result in new legal and regulatory requirements designed to mitigate the effects of climate change on the environment, such as actions taken by the U. S. Environmental Protection Agency and several states to address greenhouse gas emissions, the European Union' s CSRD, California' s Climate Corporate Data Accountability Act and Climate- Related Financial Risk Act, and proposed climate disclosure rules that remain under consideration by the SEC. We are experiencing increased compliance burdens and costs in addressing our obligations under these new legal and regulatory obligations, and these new legal and regulatory obligations may adversely affect raw material sourcing, manufacturing operations and the distribution of our products** . We may be subject to liability as a potentially responsible party under the Comprehensive Environmental Response, Compensation and Liability Act and similar state or foreign laws for contaminated properties that we currently own, lease or operate or that we or our predecessors have previously owned, leased or operated, and sites to which we or our predecessors sent hazardous substances. Such liability may be joint and several so that we may be liable for more than our share of any contamination, and any such liability may be determined without regard to causation or knowledge of contamination. We or our predecessors have been named potentially responsible parties at contaminated sites from time to time. There can be no assurances that future environmental remediation obligations will not have a material adverse effect on our results of operations and financial condition. In addition, we occasionally evaluate alternatives with respect to our facilities, including possible dispositions or closings. Investigations undertaken in connection with these activities may lead to discoveries of contamination that must be remediated, and closings of facilities may trigger remediation requirements that are not applicable to operating facilities. We may also face lawsuits brought by third parties that either allege property damage or personal injury as a result of, or seek reimbursement for costs associated with, such contamination. Our business and financial results may be adversely affected by U. S. government contracting risks. We are subject to various laws and regulations applicable to parties doing business with the U. S. government, including laws and regulations governing performance of U. S. government contracts, the use and treatment of U. S. government furnished property and the nature of materials used in our products. We may be unilaterally suspended or barred from conducting business with the U. S. government, or become subject to fines or other sanctions if we are found to have violated such laws or regulations. As a result of the need to comply with these laws and regulations, we are subject to increased risks of governmental investigations, civil fraud actions, criminal prosecutions, whistleblower lawsuits and other enforcement actions. The laws and regulations to which we are subject include, but are not limited to, Export Administration Regulations, the Federal Acquisition Regulation, International Traffic in Arms Regulations and regulations from the Bureau of Alcohol, Tobacco, Firearms and Explosives and the FCPA. U. S. government contracts are subject to modification, curtailment or termination by the U. S. government without prior written notice, either for convenience or for default as a result of our failure to perform under the applicable contract. If terminated by the U. S. government as a result of our default, we could be liable for additional costs the U. S. government incurs in acquiring undelivered goods or services from another source and any other damages it suffers. Additionally, we cannot assign prime U. S. government contracts without the prior consent of the U. S. government contracting officer, and we are required to register with the Central Contractor Registration Database. Furthermore, the U. S. government periodically audits our governmental contract costs, which could result in fines, penalties or adjustment of costs and prices under the contracts. The result of, or expiration of the statute of limitations for, such audits could have an impact on reported liabilities, net income and cash flow from operations. Provisions of our amended and restated certificate of incorporation and amended and restated bylaws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, as a result, depress the trading price of our common stock. Our amended and restated certificate of incorporation and amended and restated bylaws and certain provisions of the Delaware General Corporation Law contain provisions that could discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions: • authorize the issuance of blank check preferred stock that our Board of Directors could issue to increase the number of outstanding shares and to discourage a takeover attempt; • prohibit our stockholders from calling a special meeting of stockholders; • prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders; • provide that the Board of Directors is expressly authorized to adopt, or to alter or repeal, our bylaws; • establish advance notice requirements for nominations for election to our Board of Directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and • require the approval of holders of at least two- thirds of the outstanding shares of common stock to amend the bylaws and certain provisions of the certificate of incorporation. These anti- takeover defenses could discourage, delay or prevent a transaction involving a change in control of our company that our stockholders may believe to be in their best interests. These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors of their choosing and cause us to take corporate actions other than those they desire. Risks Related to Our Indebtedness and Financial Risks Our indebtedness could adversely affect our financial health, restrict our activities and affect our ability to meet our obligations. As of December 31, ~~2022~~ **2023**, we had total indebtedness of $ 2, ~~525~~ **518** million, and we would have been able to borrow an additional $ ~~644~~ **645** million, net of $ ~~6~~ **5** million of outstanding letters of credit, under Allison Transmission Inc.' s (" ATI "), our wholly- owned subsidiary, revolving credit facility with commitments in the amount of $ 650 million due September 2025 (" Revolving Credit Facility "). As of December 31, ~~2022~~ **2023**, we had no outstanding borrowings against the Revolving Credit Facility. At December 31, ~~2022~~ **2023**, $ ~~625~~ **618** million of our total indebtedness was associated with ATI' s term loan facility due March 2026 (" Term Loan ", and together with the Revolving Credit Facility, the " Senior Secured Credit Facility "), $ 400 million of our total indebtedness was associated with ATI' s 4. 75 % Senior Notes due October 2027 (" 4. 75 % Senior Notes "), $ 500 million of our total indebtedness was associated with ATI' s 5. 875 % Senior Notes due June 2029 (" 5. 875 % Senior Notes ") and $ 1, 000 million of our total indebtedness was associated with ATI' s 3. 75 % Senior Notes due January 2031 (" 3. 75 % Senior Notes ", and together with the 4. 75 % Senior Notes and 5. 875 % Senior Notes, the " Senior Notes "). For a complete description of the terms of the Senior Secured Credit Facility and the Senior Notes, please see" Note 8. Debt " in Part II, Item 8., of this Annual Report on Form 10- K. Our indebtedness could have important consequences. For example, it could: • make it more difficult for us to satisfy our obligations under our indebtedness; • require us to further dedicate a substantial portion of our cash flow from operations to payments of principal and interest on our indebtedness, thereby reducing the availability of our cash flow to fund acquisitions, working capital, capital expenditures, research and development efforts and other general corporate purposes; • increase our vulnerability to and limit our flexibility in planning for, or reacting to, downturns or changes in our business and the industry in which we operate; • restrict us from making strategic acquisitions or cause us to make non- strategic divestitures; • expose us to the risk of increased interest rates as borrowings under the Senior Secured Credit Facility are subject to variable rates of interest; • place us at a competitive disadvantage compared to our competitors that have less debt; and • limit our ability to borrow additional funds. In addition, the Revolving Credit Facility contains a maximum total senior secured leverage ratio. The Senior Secured Credit Facility and the indentures governing the Senior Notes also contain other negative and affirmative covenants that will limit our ability to engage in activities that may be in our long- term best interests. Our failure to comply with any of the covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our indebtedness. To service our indebtedness, we will require a significant amount of cash, and our ability to generate cash depends on many factors beyond our control. Our ability to make cash payments on our indebtedness and to fund planned capital expenditures will depend on our ability to generate significant operating cash flow in the future. This, to a significant extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. We cannot ensure that our business will generate sufficient cash flow from operations or that future borrowings will be available to us under the Revolving Credit Facility in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs. In such circumstances, we may need to refinance all or a portion of our indebtedness on or before maturity. We cannot ensure that we will be able to refinance any of our indebtedness on commercially reasonable terms or at all. If we cannot service our indebtedness, we may have to take actions such as selling assets, seeking additional equity or reducing or delaying capital expenditures, strategic acquisitions, investments and alliances. We cannot ensure that any such actions, if necessary, could be effected on commercially reasonable terms or at all. Despite current indebtedness levels, we and our subsidiaries may still be able to incur additional indebtedness, which could further exacerbate the risks associated with our substantial financial leverage. We and our subsidiaries may be able to incur additional indebtedness in the future because the terms of our indebtedness do not fully prohibit us or our subsidiaries from doing so. Subject to covenant compliance and certain conditions, our indebtedness permits additional borrowing, including total borrowing up to $ ~~644~~ **645** million under the Revolving Credit Facility, net of $ ~~6~~ **5** million in letters of credit. If new debt is added to our current debt levels and our subsidiaries' current debt levels, the related risks that we and they now face could intensify. Our pension and other post- retirement benefits funding obligations could increase as a result of a variety of factors. Our earnings may be positively or negatively impacted by the amount of income or expense recorded for our defined benefit pension plans and other post- retirement benefits (" OPEB "). Accounting principles generally accepted in the United States of America (" GAAP ") require that income or expense for defined benefit pension plans be calculated at the annual measurement date, or more frequently if certain events occur, using actuarial assumptions and calculations. These calculations reflect certain assumptions, the most significant of which relate to the capital markets, interest rates, health care inflation rates and other economic conditions. Changes in key economic indicators can change these assumptions. These assumptions, along with the actual value of assets at the measurement date, will impact the calculation of pension expense for the year. Although GAAP pension expense and pension contributions are not directly related, the key economic indicators that affect GAAP pension expense also affect the amount of cash that we would contribute to our defined benefit pension plans. Because the values of these defined benefit pension plans' assets have fluctuated and will fluctuate in response to changing market conditions, the amount of gains or losses that will be recognized in subsequent periods, the impact on the funded status of the defined benefit pension plans and the future minimum required contributions, if any, could have a material adverse effect on our business, results of operations and financial condition. The magnitude of such impact cannot be determined with certainty at this time. However, the effect of a one percentage point decrease in the assumed discount rate would result in an increase in the December 31, ~~2022~~ **2023** defined benefit pension plans obligation of approximately $ 17 million. Likewise, a one percentage point decrease in the effective interest rate for determining defined benefit pension plans contributions would result in an increase in the minimum required contributions for ~~2023~~ **2024** of approximately $ 2 million. Similarly, a one percentage point decrease in the assumed discount rate would result in an increase in the December 31, ~~2022~~ **2023** OPEB obligation of approximately $ ~~8~~ **7** million. As of December 31, ~~2022~~ **2023** , the unfunded status of our defined benefit pension plans was $ ~~3~~ **5** million and the unfunded status of our OPEB plan was $ ~~73~~ **64** million. An impairment in the carrying value of goodwill, other intangible assets or long- lived assets could negatively affect our consolidated results of operations and net worth. Pursuant to GAAP, we are required to assess our goodwill and indefinite- lived intangible assets to determine if they are impaired on an annual basis, or more often if events or changes in circumstances indicate that impairment may have occurred. Intangible assets with finite lives are amortized over the useful life and are reviewed for impairment on triggering events such as events or changes in circumstances indicating that an impairment may have occurred. If the testing performed indicates that impairment has occurred, we are required to record a non- cash impairment charge for the difference between the carrying value of the goodwill and the implied fair value of the goodwill or the carrying value of the intangible assets and the fair value of the intangible assets in the period the determination is made. Disruptions to our business, end market conditions, protracted economic weakness, **the** unsuccessful development of **a** product and unexpected significant declines in operating results may result in charges for goodwill and other asset impairments. See" Note 2. Summary of Significant Accounting Policies " and" Note 6. Goodwill and Other Intangible Assets " of Notes to Consolidated Financial Statements included in Part II, Item 8. **,** of this Annual Report on Form 10- K for additional details. The carrying value of long- lived assets is evaluated whenever events or circumstances indicate that the carrying value of a long- lived asset may not be recoverable. Events or circumstances that would result in an impairment review primarily include a significant change in the use of an asset, a significant change in the projected future cash flows generated by an asset or the planned sale or disposal of an asset. The asset would be considered impaired when there is no future use planned for the asset or the future net undiscounted cash flows generated by the asset or asset group are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value exceeds fair value and could have a material adverse effect on the results of our operations. See" Note 2. Summary of Significant Accounting Policies " and" Note 5. Property, Plant and Equipment " of Notes to Consolidated Financial Statements included in Part II, Item 8. **,** of this Annual Report on Form 10- K for additional details.