



Lehigh Business Supply Chain
Risk Management Index

Quarterly Report

2nd Quarter / 2026



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UNIVERSITY | Business

CENTER FOR SUPPLY CHAIN RESEARCH AT LEHIGH



Council of Supply Chain
Management Professionals

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LEHIGH BUSINESS SUPPLY CHAIN RISK MANAGEMENT INDEX

Welcome to the **Lehigh Business Supply Chain Risk Management Index Report** developed by the Center for Supply Chain Research at Lehigh University and the Council of Supply Chain Management Professionals.

We launched this index in August of 2020 to better understand the different kinds of supply chain risks businesses face. **Supply chain professionals rated the likelihood that the risk in the 2nd quarter of 2026 compared to the risk in the 1st quarter of 2026 would likely increase, remain the same or decrease for 10 different supply chain categories.**

The Lehigh Business Supply Chain Risk Management Index (LRMI) value is a number between 0 – 100, where greater than 50 suggests increased risk, equal to 50 suggests the same risk and less than 50 suggests decreased risk. **The average LRMI for the 2nd quarter is 65.74, which is a decrease from the 1st quarter, suggesting a lower level of risk in the 2nd quarter of 2026.**

The table below reflects the 10 categories of risk from highest risk to lowest risk when evaluated independently as perceived by supply chain professionals.

If you would like to have additional information about the survey or to participate in the survey, please contact Dr. Zach G. Zacharia at zacharia@lehigh.edu.



Executive Summary

The LRMI for the second quarter of 2026 indicates a broad-based decrease in overall risk, with nine of ten risk categories declining. However, many respondents completed the survey prior to the Iran conflict, and its impact may not be fully reflected in the data. Interestingly, Government Intervention Risk ranked as the single highest risk in head-to-head comparisons this quarter, and Transportation Disruption Risk was the sole category to increase, both of which may rise further as the geopolitical fallout becomes clearer. Cybersecurity and Data Risk is the highest-rated risk at 76.85, down only slightly from 77.27, reflecting the persistent and elevated threat landscape facing digital supply chains. Supplier Risk and Economic Risk tied for the second highest at 74.07, both declining from their first-quarter levels of 76.26 and 77.32, respectively, indicating some stabilization in macroeconomic conditions and supplier relationships. Transportation Disruption Risk rose sharply from 64.50 to 71.82, signaling renewed concerns about logistics bottlenecks, shipping route disruptions, and freight cost volatility. The average risk index fell from 68.78 to 65.74, reversing the upward trend observed in the first quarter.

Risk Type	1st Quarter	2nd Quarter	Trend
	2026	2026	
	Risk Index	Risk Index	
Cybersecurity and Data Risk	77.27	76.85	↓
Supplier Risk	76.26	74.07	↓
Economic Risk	77.32	74.07	↓
Transportation Disruption Risk	64.50	71.82	↑
Government Intervention Risk	76.29	71.76	↓
Customer Risk	74.24	66.67	↓
Technological or Competitive Risk	70.20	65.74	↓
Quality Risk	56.00	53.18	↓
Environmental Risk	57.73	51.85	↓
Operational Risk	58.00	51.36	↓
Average Risk Index	68.78	65.74	↓

The Risk Index is a number between 0 – 100.

The further the number is from 50 the greater the level of risk.

The arrow indicates whether the risk is increasing or decreasing in comparison to the previous quarter.

Did You Know?

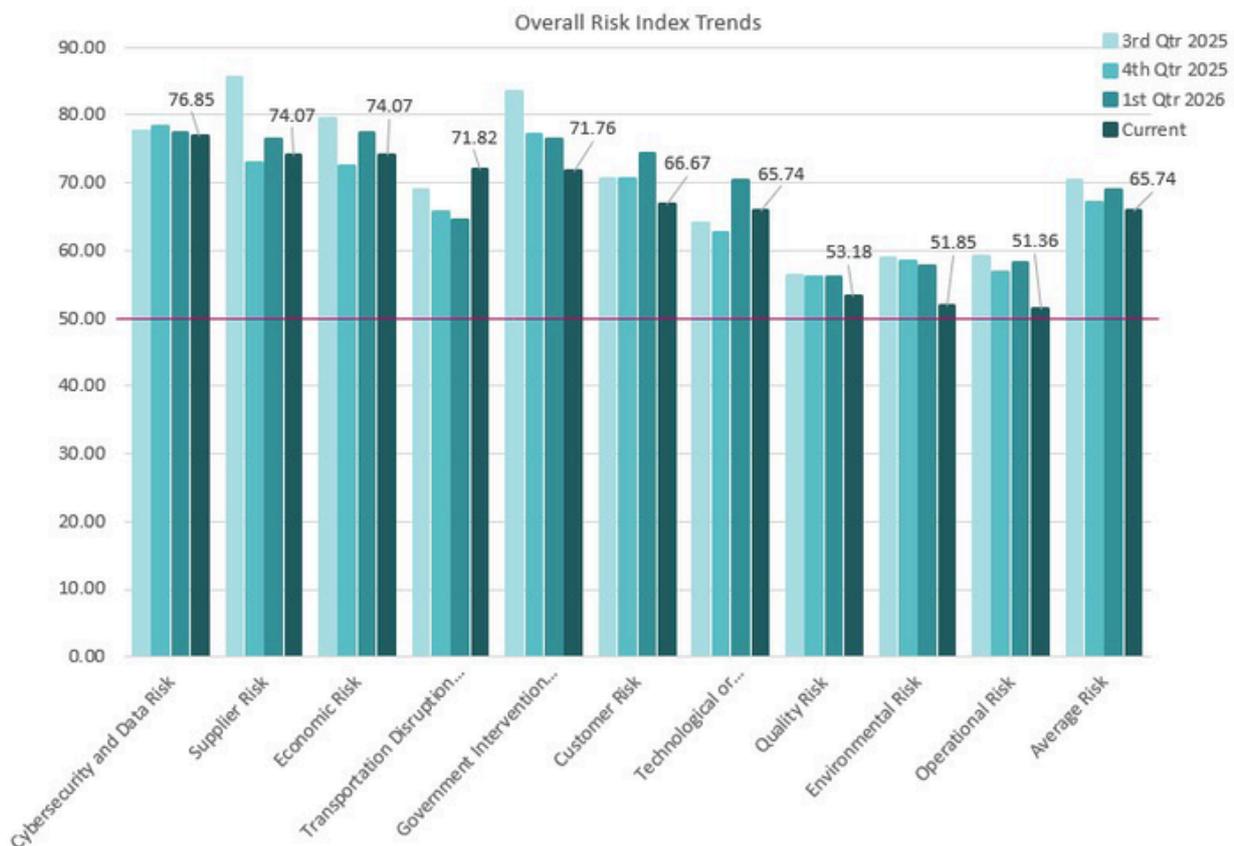
The Lehigh Business Supply Chain Risk Management Index for the 2nd Quarter in 2026 is

65.74



LRMI Risk Index Over the Last Year

One of the advantages of regularly examining supply chain risk is to consider how these risks change over time. The table below shows the changing levels of risk across the 10 different areas of the supply chain this last year. It is also insightful to see that some areas of the supply chain are consistently seen as high risk and other areas of the supply chain are seen as lower risk over the same one-year time period.



Four Biggest Risks in Head-to-Head Comparison 2nd Quarter 2026

(Respondents are asked to compare across all 10 risks simultaneously, instead of rating one risk at a time.)

1. Government Intervention Risk
2. Cybersecurity and Data Risk
3. Economic Risk
4. Supplier Risk



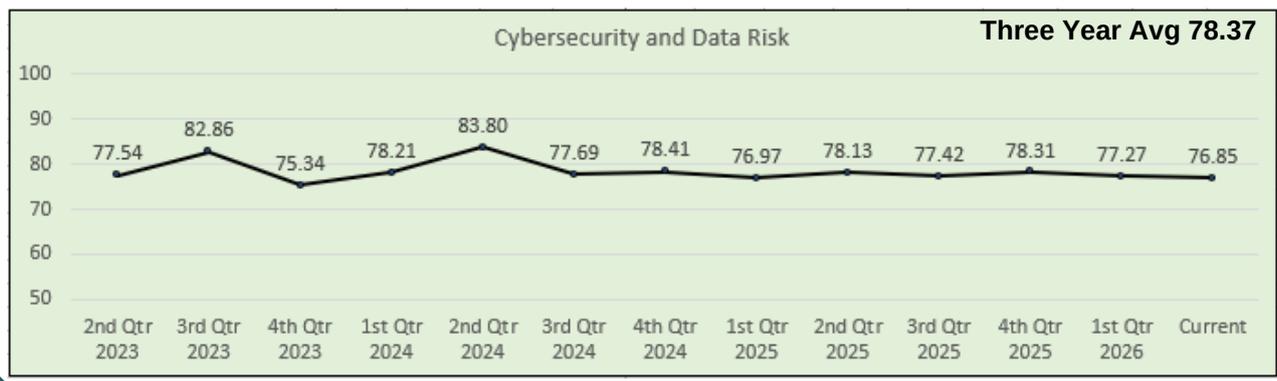


01 Cybersecurity and Data Risk

Some examples are: cyberattacks, data corruption, data theft, system viruses, hardware and software issues and security platform controls.

Selected Comments:

- The LLM's depend on good data; the sourcing of data could be compromised.
- AI automation of cyberattacks will continue to scale up significantly.
- The latest releases by Anthropic and OpenAI enable more tools for cybercriminals.
- Risks in this area continue to accelerate requiring constant diligence and continuous improvement in security systems and processes.
- We'll see higher cybersecurity risks directly tied to: 1) Russian actors as Russo-Ukraine negotiations tie to U.S., 2) Iranian or Islamic state actors increasing pressure while U.S., Israeli and Iranian policy is negotiated.
- In general, public school systems are consider valuable targets by bad actors. Bad actors like to get child data because, for the most part, their credit profiles are "perfect" and rarely checked. They can sell child data and make money with a much lower chance of being caught due to the time horizon of children needing their own credit (generally not until age 18). Additionally, we are very visible, so bad actors know we will want to settle quickly and quietly.
- We are seeing increasing sophistication of phishing attempts, including spoofing of actual email addresses and better language utilization.
- We continue to be concerned about the use of AI as tools to attack our systems. We are countering by use of defensive AI supported tools.
- We have daily attempts on our system from bad actors trying to extract data or steal money from us.
- As you see playing out in the war with Iran, currently cyberattacks are an absolute threat and expanding by the hour. There is no one sector that is safe from this threat. Any company associated with the supply chain, manufacturing, logistics, etc. will only become a higher target value to cause disruption and increased prices.



02 Supplier Risk



Some examples are: single/sole source supplier, suppliers from one geographic location, supplier quality issues and price volatility.

Selected Comments:

- Tariffs and U.S. administration policies on international trade will increase risk.
- Domestic suppliers who moved or increased operations will struggle this quarter; they will be crushed under the cost of metal prices. Customers will return to overseas operations.
- The AI boom has created a major shortage of Memory in the electronics manufacturing industry. This constraint will impact consumer goods the most (phones, laptops, video games). Manufacturers are allocating the memory supply at about 70% of required forecast. This constraint is expected to remain well into 2028.
- Counterfeit products are increasing.
- The biggest impacts here are our tech purchases and construction materials. Tariffs are making things very challenging.
- Some consolidation of supplier networks is creating supply risks.
- Sourcing disruption risk is expected to rise in the near term due to several converging factors. The ongoing uncertainty surrounding tariffs, the war in the Middle East, and the onboarding of many new suppliers - undertaken as a strategy to mitigate tariff impacts - are all contributing to a more volatile and unpredictable supply chain environment.
- The war in Iran will increase risk. Rising oil prices, geopolitical tension, and goods being used as political leverage are expected to continue.
- Tariffs have caused all prices, especially for commodity metals, to increase. Those prices are currently artificially high. We are concerned that this trend will continue.
- There are lots of volatility issues with this topic; the risk is elevated but expected to stay the same in Q2.
- More scrutiny will cause risk to increase.



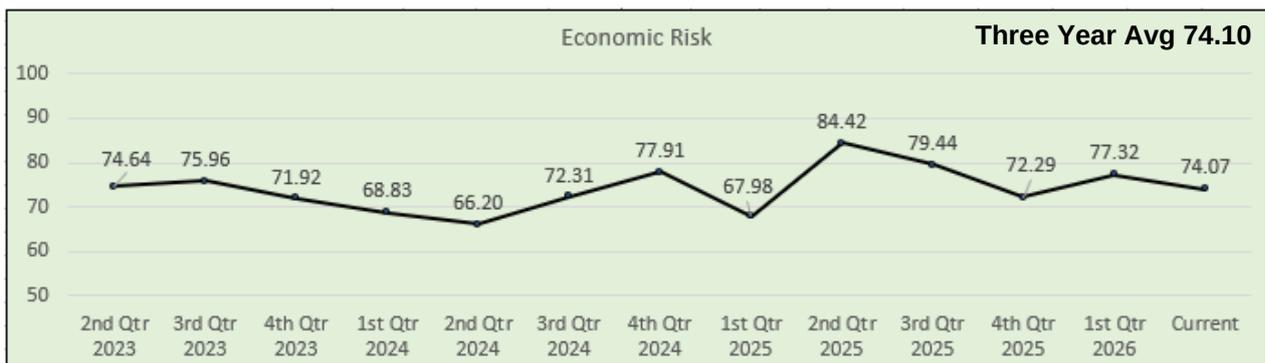
03 Economic Risk



Some examples are: increasing energy costs, commodity price volatility, labor shortages, sudden demand shocks, global energy shortages and border delays.

Selected Comments:

- Commodity price volatility remains a consistent risk (i.e., fluctuations in raw material markets).
- Steel, copper, aluminum and gold have peaked. The bubble will burst and the market will reset.
- Is the stock market over valued? International volatility will increase risk.
- Inflationary government policies will increase economic risk.
- Tariff-driven costs are likely to continue to bleed into pricing as the market slowly improves through the year.
- Labor shortages will increase as long as the benefits of staying unemployed outweigh those of being employed.
- Our electric and water bids are up this quarter; we expect to see an increase in the cost of our electricity bids in Q2.
- Labor shortages, due to fears surrounding ICE activity, are possible if our geographical regions become the next areas for the ICE surge.
- Recent global developments have led to a significant increase in overall economic risk. Key contributing factors include the ongoing war in the Middle East, heightened uncertainty within various governments, and substantial volatility in commodity pricing.
- April will see a decrease and a reset to all economic risk globally!
- We expect volatile, high oil/energy and subsequently widespread material and goods price increases in Q2 as the USA/Israel's war with Iran likely continues and high risk for oil shipments grows even worse.
- Economic risk is steady with mixed commodity prices but an increase in energy.
- Energy consumption and costs are rising.





04 Transportation Disruption Risk

Some examples are: fuel prices, driver shortage, infrastructure and demand volatility.

Selected Comments:

- In the past few days, fuel costs have jumped dramatically. This may continue for an unforeseen amount of time. A second area of concern is international freight movements, as there are a number of global issues impeding the movement of goods.
- The geopolitical environment in the Middle East plays a significant role in shaping global energy markets. Given the region's importance as a major supplier of crude oil and natural gas, any instability or uncertainty can have immediate and pronounced effects on fuel prices and the availability of supply.
- Risk is expected to decrease. There is excess capacity, shipping costs are stable, and it's a buyers market.
- A reduction in force within shipping and transportation companies is putting additional stress on drivers and scheduling teams.
- Concerns that drivers may be pulled out of the driver workforce due to language tests may create additional shortages of capacity, driving up costs.
- Upward pressure on fuel prices, possibly linked to Venezuela or OPEC push, will heighten risk. Concurrently, stricter naval screening and policing in enhanced territorial waters is having a negative impact on legal trade.
- With over 100 diesel and propane school busses on the road we are extremely exposed. While we do put in for fuel bids yearly - on average 50,000 gallons of diesel and 100,000 of propane - the fluctuation of the market at bid time and the future of these fuels at the point in time of the bid is impactful.
- Risk will decrease due to less volume in the industry and more local carrier options.
- We're expecting more readily available transportation capacity in Q2.

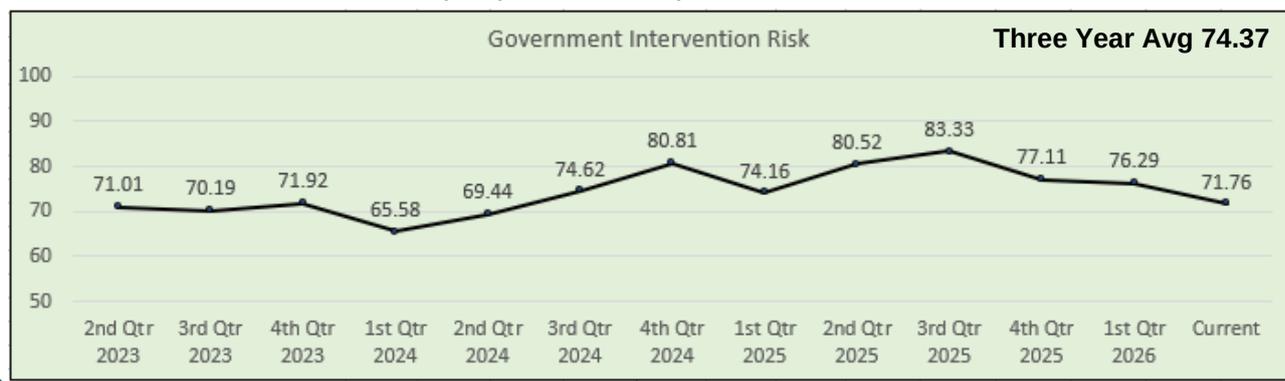


05 Government Intervention Risk

Some examples are: new regulations, tariffs/trade wars and governmental restrictions on source material, methodologies or technologies.

Selected Comments:

- Volatile policies around tariffs, along with stressed and fractured international relationships, are continued causes for concern.
- Decreasing regulations are expected to decrease risk.
- We would expect risk to increase, but this is the new world we live in and are we already used to this risk?
- Questions about the dollar, many critical issues before the Supreme Court, and deportations all add to the risks.
- We watch the news daily. The Trump administrations' targeting of the USDE is leaving many confused and concerned. Additionally, PA was the LAST state to pass it's budget and this had profound funding impacts on all PA school districts.
- We are in the midst of the greatest global power reckoning of all time. Buckle up!
- Tariffs are still causing issues; however, fewer U.S. government regulations will have a "nets out" economic effect.
- After the Supreme Court rejected Trump's authority to issue country-specific tariffs, his administration is actively issuing new tariffs and planning others (301, 232) to make up the big tariff revenue gaps. This adds major risk.
- Volatility and uncertainty will likely remain, with a mix of deregulation, trade wars, tariffs, and shifting administrative priorities.
- We have no confidence that tariffs will not throw us a curve in Q2.
- I expect government volatility to continue through the 2nd year of this administration, and the 2nd quarter will be no different.
- Tariffs and war continue to put pressure on prices.



06 Customer Risk



Some examples are: fast changing customer demand, easy to lose customer loyalty, changing customer base demographics, hard to predict customer behavior and hard to service customers.

Selected Comments:

- Price increases, particularly to the lower-income consumer, will be a problem. Inflation may be slowing, but prices are not going down.
- Customers are under threat from ongoing risk of e-commerce transformation and consumer economic constraints.
- General economic uncertainty and tariff additions have us concerned about the long term viability of our various customer bases.
- People always want to eat, and we are the best food port. Mediterranean Shipping Company (MSC) is building a new terminal in Baltimore, but I don't see that affecting us for at least another quarter.
- While consumer confidence remains low, it is now stable. Corporate customers are starting to make more spending decisions.
- Tariff induced chaos has led to significant uncertainty about sourcing decisions. This has caused a lot of "churn" in strategy and request for quotes (RFQ's), wasting time and resources.
- With the K-shaped economy, consumers are wary of spending money. Many households have retracted their purchasing. There is a growing shift from luxury buying to everyday sustainment purchases. Some of those sustainment purchases are even moving from sustainment to catastrophic repair scenarios, like in the automotive sector where people are putting off repairs and maintenance on their vehicles until they have to.
- Customers are delusional at this point and want what they want. Americans, in particular, are comfortable with their on-demand lifestyle. Customer loyalty is at an all-time low.
- Our sourcing locations are outside of the Middle East. While customer supply chains may be disrupted for Middle East suppliers, we are able to fill the voids.

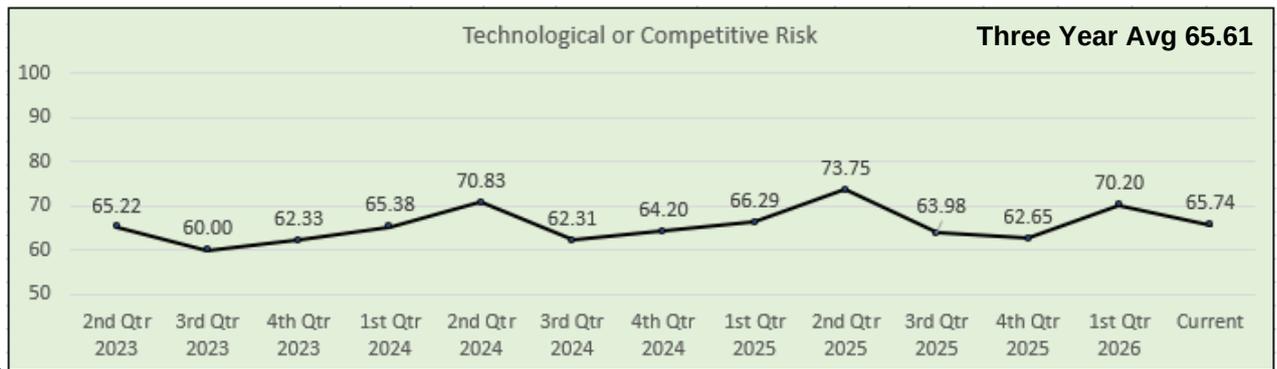


07 Technological or Competitive Risk

Some examples are: disruptive or replacement technologies, introduction of new competitor firms and ineffective or non-existent regulation for competitors.

Selected Comments:

- AI-focused tech solutions and competitors using AI to enhance their offerings will increase risk.
- Obsolescence occurs quickly in the life cycle of products / applications.
- AI use cases and deployment options continue to represent risk to our business.
- We must embrace the technology that will improve productivity, inventory accuracy, and increase customer satisfaction.
- This seems to have quieted down, with not as much innovation finding its way into products/uses. AI is still trying to find a definitive value proposition for many business purposes. Consumers are playing with it, but that is not the target market (AI is still looking to define the value equation for markets beyond what is a narrow field). AI investment looks oversaturated.
- I don't know enough to be sure, but AI could be a threat. Wilmington Port is investing, Baltimore will have the new MSC terminal, CSX has the Baltimore tunnel clearance, and the NS - UP merger could affect us. There are always new dangers.
- Cyber & Charter school impacts remain the same.
- There is an increased use of AI, both Predictive (forecasting future trends) and Conversational (chatbots/virtual assistants), but we're still lacking data to show if these are any better than previous methods. The risk is that these technologies are being used assuming a benefit, but the reality may be that there isn't a benefit or, even worse, that there's a negative impact.
- AI is the largest disruptor at the moment. New tech companies are forming daily, and valuations for these companies are overinflated, which could cause major financial issues down the road if not corrected.



08 Quality Risk

Some examples are: natural disasters, extreme weather, industrial accidents and pandemics.

Selected Comments:

- Risk will decrease as there is greater focus on production quality and supplier oversight.
- Increased use of automation without good audit processes presents a potential risk.
- Changing quality standards has the potential for increased risk.
- The ocean lines have new ships coming on, which should help quality. If tariffs have settled down, I can't see any quality issues.
- In an effort to mitigate tariffs, we onboarded many new suppliers. While these new partnerships are helping us manage costs and navigate the current landscape, it's essential that we remain vigilant and prioritize quality throughout the process - especially since our partnership is new or expanded. Ensuring that our standards are maintained will help us avoid potential pitfalls and safeguard the integrity of our operations.
- An increase in quality standards and requirements will increase risk.
- This risk is flat for us.
- Risk will be decreased by added personnel.
- New projects are, right now, already more difficult to pursue or implement due to proprietary advancements/security issues.
- Our policies and procedures will remain the same, and we provide feedback to all employees at monthly company meetings.



09

Environmental Risk



Some examples are: lack of sufficient quality testing, changing quality standards, informal quality control documentation, customer safety issues and product recalls.

Selected Comments:

- The expected increase in risk is mostly weather related.
- Risk is expected to stay the same, though increased severe weather activity is impacting athletic field maintenance.
- This risk can't get worse than it was during Q1 on the east coast. Hurricane season doesn't start until August. Similarly, on the west coast, the storms and flooding cannot get worse. All in all, things should be quieter.
- This is not an issue of the same scale for us.
- I see nothing in this area to be concerned about.
- Global warming will continue to cause extreme weather conditions.
- Global warming, causing volatile weather, continues, and the U.S. government putting our head in the sand won't help the global situation.



10 Operational Risk

Some examples are: site disasters, product counterfeiting, damage or disruption to physical assets and machine breakdown.

Selected Comments:

- Heavier scrutiny to lower expense ratios while maintaining or reducing headcount will increase risk.
- The combination of a more stable workforce and reinvestment in equipment maintenance will reduce risk overall.
- To mitigate the lack of personnel available in the local pool, many manufacturers are turning to automation and robotics. This is driving significant competition for the very few people who can manage that technology.
- While there have certainly been changes in how tariffs are being managed, it's important to recognize that this remains an ongoing risk to our operational business. As we move forward, we should continue to monitor developments closely and proactively to address any potential impacts.
- My context is a SaaS business model that has no physical product. My product will be delivered and downloaded to the user. The Ideal Customer Profile is a family, couple, or individual who owns a dog.
- There may be force majeure due to the Iran conflict. This conflict will be short and will have some risks and variables. Individual companies and countries will experience risks differently.
- The Iran war may cause limited material availability.
- Since the installation of cameras in our tractors, our drivers are less distracted and closely monitor their daily and weekly safety scores. We recently installed telematics on two of our forklifts to provide similar feedback to management and our warehouse associates.
- Aging assets continue to cause operational disruptions, but at the same rate as previously demonstrated.



Appendix A

Risk Index Summary

The Risk Index is a number between 0 – 100.

Risk Index \leq 49 suggests less risk

Risk Index = 50 indicates no change in risk

Risk Index \geq 51 suggests greater risk

The further the number is from 50 the greater the level of risk.

$$\text{LRMI} = (P1 * 1) + (P2 * 0.5) + (P3 * 0)$$

P1 = percentage of answers reporting an improvement

P2 = percentage of answers reporting no change

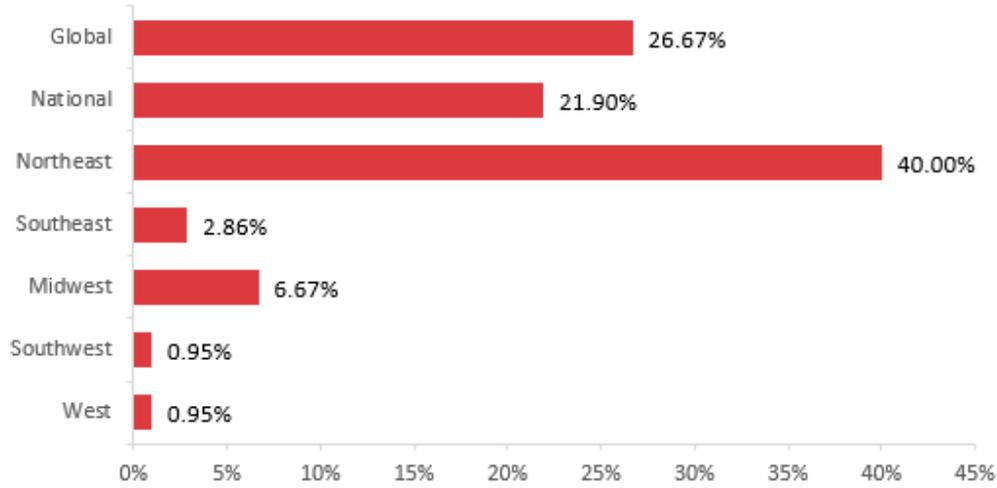
P3 = percentage of answers reporting a deterioration



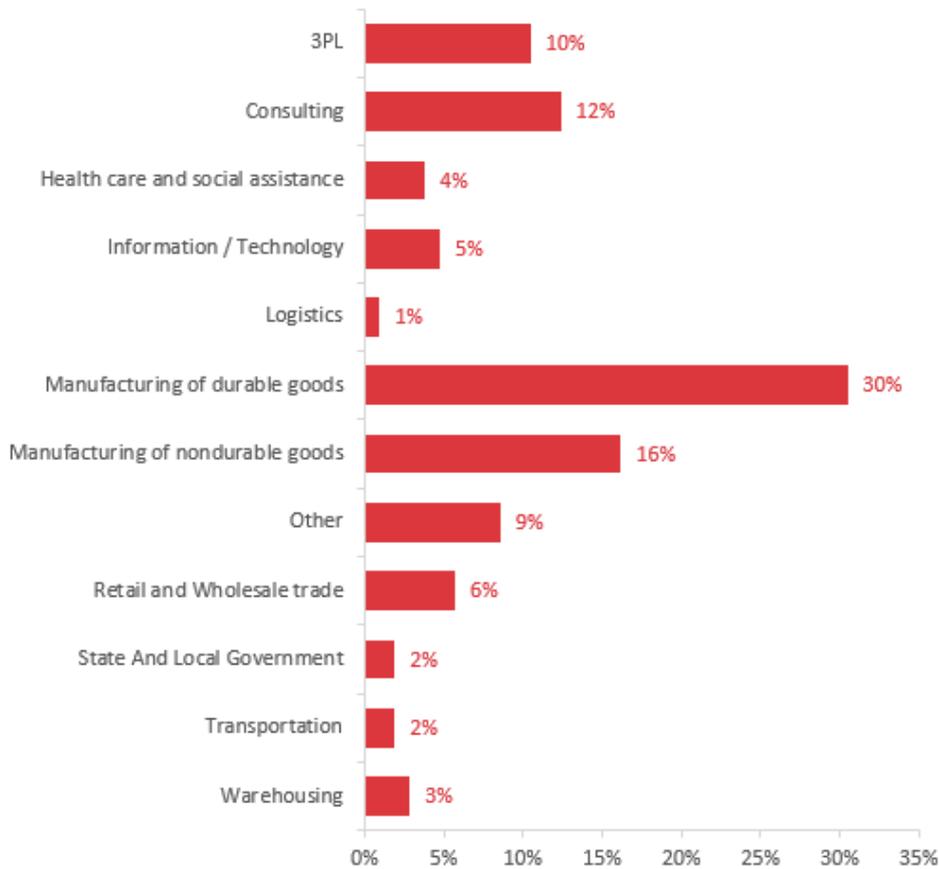
Appendix B

Survey Demographics

Region



Industry



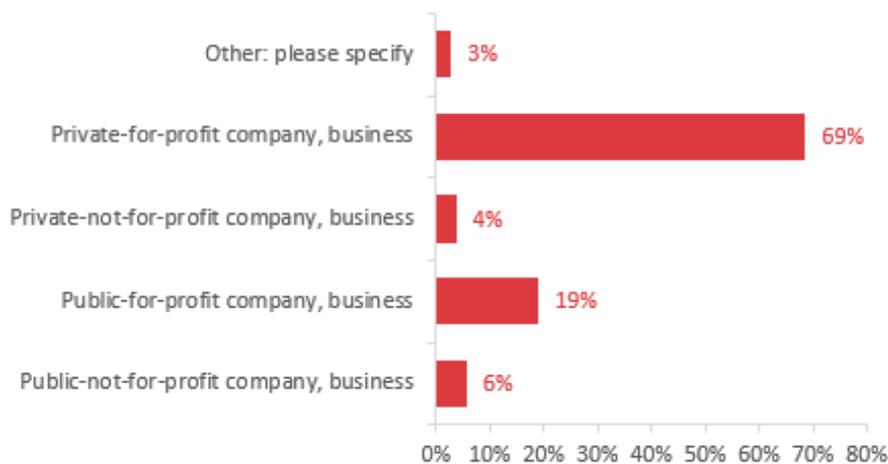
Appendix B

Demographics (continued)

Primary Role



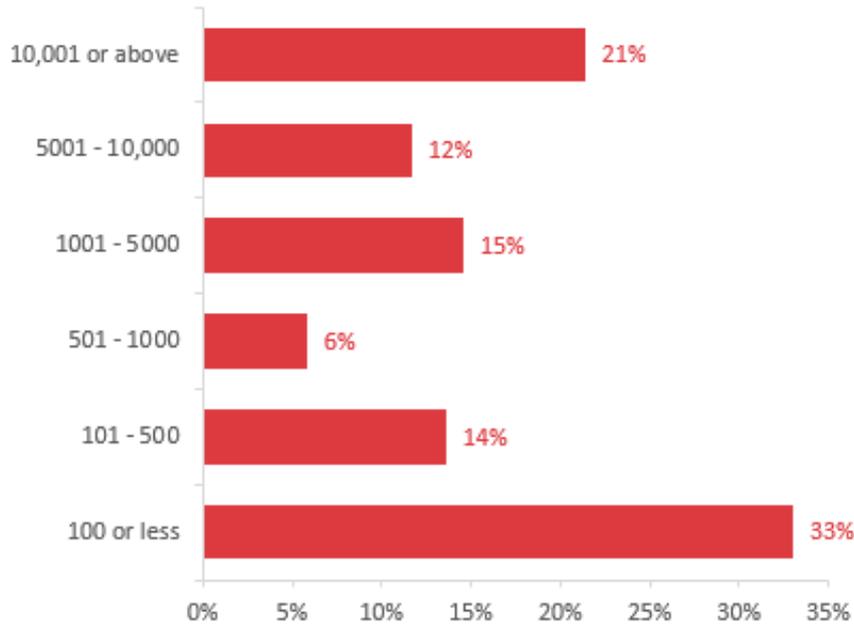
Place of Employment



Appendix B

Demographics (continued)

Company Employee Amount



Work Experience

