Global Risk Management Survey

Executive Summary

2019

Empower Results®

Foreword

Every organization, industry and economy around the world is confronting more risks than ever before. Considering this backdrop, it's troubling that many organizations report that they may be less prepared than they have ever been.

A key insight from Aon's 2019 Global Risk Management Survey is that organizations need to be more prepared for the broad range of risks that threaten their ability to continue growing, protecting their brand and serving clients and stakeholders.

Top-of-mind concerns include a slowing economy, damage to reputation and brand and accelerated rates of change in market factors reflecting apprehension about global trade conditions.

In a weakening economic environment, companies are more sensitive to volatility, particularly from emerging risks such as cyber-attacks, business interruption from non-physical threats and shortages of skilled workers. These risks are less well understood as there is less experience and less data available to help manage them. As a result, risk readiness has declined to its lowest level in 12 years.

Aon conducts this survey every other year to identify key risks, trends and challenges organizations are facing. Over the years, we have offered helpful insights to risk managers, C-suite executives and other business leaders in developing effective strategies to address both traditional and emerging risks.

This year's report is informed by the largest number of respondents to ever participate in the survey. Last fall, we received responses from more than 2,600 risk managers from 33 industries, representing small-, medium- and large-sized organizations operating in 60 countries.

Many organizations have yet to capitalize on new tools and approaches that could help them systematically identify and assess risks as they develop protection and mitigation strategies.

- Only 24 percent of respondents said they quantify their top 10 risks.
- Only 20 percent use risk modeling.
- 10 percent said they have no formalized process in place to identify risks.

The complexity of the situation organizations face today is substantial. These challenges are likely to grow in intensity over the next few years as new risks become even more prominent, including the implications of an aging workforce, the impact of climate change, the growing prevalence of cyber-attacks and the emergence of ever more disruptive technologies.

The most effective organizations will approach these challenges holistically, involving leaders throughout the organization to provide their unique viewpoint and expertise and then applying sector-specific data & predictive analytics to support the decisions they make. This is an opportunity for more risk managers to lead an evolution toward truly addressing risk at the enterprise level.

At Aon, we're bringing the full force of our firm to our clients by developing innovative solutions and leveraging data and analytics capabilities to prepare them for the future. We'll continue to partner with our clients, working with them side-by-side to help improve operating performance, strengthen their balance sheet and reduce volatility.

If you have any questions or comments about the survey, or wish to discuss the results, please contact your Aon account executive or visit aon.com/2019GlobalRisk

Best regards,

Greg Case
President and CEO

Executive Summary

Has a gloom descended over the global business community? Since Aon's last Global Risk Management Survey in 2017, investors seem to have had the wind knocked out of them by a series of incidents, each impacting the world economy's ability to manage volatility.

In October for example, stock markets around the world plunged drastically: the S&P 500 in the United States lost USD 1.91 trillion and the losses were spread across all industry sectors;[i] the Hong Kong's Hang Seng tumbled 10 percent; both China's Shanghai Composite and Italy's benchmark lost eight percent; and the MSCI EAFE, an index of stocks in 21 developed markets excluding the United States and Canada, dropped nine percent.[ii]

Commodities are typically seen as leading indicators for global growth as they are used for everything from homebuilding to powering cities. The October 2018 prices for oil, gasoline, copper and platinum plunged down at least 20 percent from their 52-week highs. [iii]

The market turmoil was largely driven by a wave of fears about the possible impact of Brexit, higher U.S. interest rates, slowing growth in Europe, China, Japan, and many emerging markets, the highly charged geopolitical climate, and dimming prospects for further economic expansion in the United States.

Meanwhile, the escalating trade wars between the United States and China, which officially kicked off in July 2018, prompted the International Monetary Fund to cut its economic growth forecast in October. According to IMF economists, growth in the U.S. would slow from 2.9 percent to 2.5 percent in 2019, and China's GDP would drop to 6.2 percent.[iv]

"The impacts of trade policy and uncertainty are becoming evident at the macroeconomic level, while anecdotal evidence accumulates on the resulting harm to companies," the IMF said.

A commentator at Forbes magazine, who covered the IMF report, even opined that "the next recession could happen sooner than we think."[v]

Needless to say, the global equity and commodity ailing market turbulence, and the pessimistic forecasts by IMF and other economists played a role in shaping the perceptions of respondents about the global economy in Aon's 2019 Global Risk Management Survey, which was conducted in the last quarter of 2018.

A web-based biennial research report, Aon's survey has gathered responses from 2,672 risk decision-makers from 33 industry sectors. Participant profiles encompass small, medium and large organizations in 60 countries across the world. About 66 percent represent privately-owned companies and 21 percent public organizations. The rest are primarily government or not-for-profit entities.

The robust representation of the 2019 survey has enabled Aon to provide insight into risk management practices by geography and industry, and has validated the data that are applicable to all industries.

Key Findings

In Aon's 2019 survey, **economic slowdown/slow recovery**, which was first ranked as the number one risk facing organizations at the height of the financial crisis 10 years ago, has once again grabbed the top spot. In fact, given the cyclical nature of the global economy, 14 surveyed industries correctly predicted in the previous survey that economic slowdown would be their highest-ranking risk

Meanwhile, **accelerated rates of change in market factors**, has jumped to number three in the current survey. It shows that the increasing volatility of many interconnected market factors -- erratic trade policy (EU/UK, US/China) and regulatory changes, large-scale geopolitical conflicts, frequent financial market turmoil, and rapid technology advancements -- is causing a seismic shift in demand and supply, and has substantially affected organizations across every region of the globe. Its appearance also illustrates the fast evolving and sometimes unpredictable key risk concerns facing organizations today.

Top 15 risks

As an important part of Aon's survey, respondents have been asked to identify and rank a list of key risks or challenges that their organizations are facing in today's volatile world. In previous years, we sifted through the data and only focused on the top tier for detailed discussion. We have modified our approach this year and have expanded our list to 15 for a wider view in this summary.

Based on the Pareto Principle, 80 percent of the effects arise from 20 percent of the causes. For us, the 20 percent here equates roughly to the top 15 risks. As is evident from the following list, these 15 top risks, which are interlinked, are most concerning for participants in Aon's 2019 Global Risk Management Survey.

Current Top 15 Risks	2019	2017
Economic slowdown / slow recovery	1	2
Damage to reputation / brand	2	1
Accelerated rates of change in market factors	3	38
Business interruption	4	8
Increasing competition	5	3
Cyber attacks / data breach	6	5
Commodity price risk	7	11
Cash flow / liquidity risk	8	12
Failure to innovate / meet customer needs	9	6
Regulatory / legislative changes	10	4
Failure to attract or retain top talent	11	7
Distribution or supply chain failure	12	19
Capital availability / credit risk	13	21
Disruptive technologies	14	20
Political risk / uncertainties	15	9

Top 15 risks vs. Top news headlines

Testing this list at a high level empirically, we looked at some of the major risk related incidents around the world as well as trending topics on social media during a 12-month period before Aon's survey was completed. By checking Aon's top risk items against these viral headlines, we can explore which external factors or events influence participants' risk perceptions and analyze their intrinsic connections.

Here are some of the top news stories of 2018:

- A French dairy giant recalled 12 million boxes of powdered baby milk in 83 countries over a salmonella scandal.
- The Dow plunged almost 1,600 points -- the biggest point decline in history during a trading day.
- The "Beast from the East," along with Storm Emma swept through the United Kingdom, creating severe disruptions.
- The U.S. imposed tariffs on steel and aluminum imports. China retaliated by imposing similar tariffs on 128 products.
- The U.S. Department of Justice charged 601 people, including 165 medical professionals with illegal prescriptions or distribution of opioids.
- Waymo (Google)'s fully self-driving vehicles self-drove 8 million miles on public roads without anyone in the driver's seat.
- The EU approves Theresa May's Brexit bill.
- The U.S. began collecting a 25 percent tariff on 818 imported Chinese products valued at USD 34 billion.
- The first wave of U.S. sanctions against Iran came into force.
- A European Bank CEO resigns over USD 234 billion money laundering scandal.
- Hurricane Florence and Hurricane Michael hit the U.S.
- Indonesia tsunami kills over 2,100.
- The U.S. unemployment rate reached 3.7 percent in September — the lowest level recorded since December 1969.
- A major airline suffered a data breach, affecting 380,000 transactions.
- Criminals hacked into a major hotel group website, stealing the data of 500 million customers.
- U.S. crude oil ended the third quarter down 24.9 percent at USD 45.41 a barrel.
- About 48 MPs submitted letters of no confidence in Theresa May, prompting a vote over her leadership.
- The U.S. federal government shutdown of 2018–2019 over President Trump's border wall funding lasted 35 days, the longest in history.

By comparing the risk list with major incidents, we see a clear picture of their correlations. A slew of bad economic news, such as the Dow's 1,600 point plunge, the drop in the prices of crude oil, and the tit-for-tat Sino-U.S. trade wars created uncertainties about a future **economic slowdown**, heightening organizations' concerns about **cash flow/liquidity risks**. Furthermore, headlines about the fluctuating commodity market, tariffs on steel and aluminum, and the renewed U.S. sanctions against Iran have brought the **commodity price risk** to the forefront. These two risks -- cash flow/ liquidity and commodity prices -- have re-entered the top 10 list for the first time since 2013. In fact, they are now at their second highest ranking since 2007, before the global financial crisis.

Extensive media coverage of corporate scandals, such as the product recall by a French diary giant over salmonella scares, the U.S. Justice Department's action against healthcare professionals who dealt in illegal prescription of opioids, the resignation of a European banking executive over money-laundering schemes as well as a number of massive data breaches, have made survey participants more aware of their organizations' exposure to reputational risk. **Damage to reputation/brand**, which was considered a number one threat in two of Aon's previous surveys, ranks at number two in 2019.

Among the major news headlines of 2018, nearly one fifth of them involved natural disasters and man-made situations that caused severe disruptions to businesses. They included winter storms that struck the United Kingdom, Hurricane Florence and Hurricane Michael that hit the United States, a tsunami in Indonesia, the Yellow Vest protests in France, and the U.S. government shutdown.

The frequencies and severity of these disruptive events have cast light on why **business interruption** has leaped from number eight in 2017 to number four. Geographically, this risk has experienced the highest increase in the Middle East & Africa, moving from number 13 to the number six (wars and geopolitical conflicts). It has maintained its number two ranking in Latin America (political turmoil and natural disasters).

In addition, the risk of **cyber attacks**, another trending social media topic, illustrates the connection between viral news headlines and risk perception. Due to space limitation, we have only picked two cyber-related news items for our list. However, if one types "cyber attacks in 2018" in a Google search, a lengthy list of related news stories will appear, affecting all sectors, from tech giants, international retailers and airlines to hotels, hospitals and government agencies. Survey participants now see cyber attacks/data breach as a number six risk facing their organizations today. In the next three years, it is predicted to rise from number six to number three.

Cyber attacks as a risk first entered Aon's Top 10 list (at number nine) in 2015 and its importance has steadily grown over the past four years. In North America, participants perceive it as a number one risk. A 2018 study by the World Economic Forum reached a similar conclusion. It showed that cyber attacks were considered the number one threat by businesses in the United States and Canada. This is hardly surprising.[vi] According to Symantec, a global software company, the United States was the country most affected by targeted cyber attacks between 2015 and 2017, with 303 known large-scale attacks. [vii]

Lastly, articles about Google's entry to the auto industry through driverless cars, the bubbles of the cryptocurrency market in the financial services sector and Facebook's attempt to use blockchain technology to kill fake news in the media sector piqued people's interest in **disruptive technologies**, which will be discussed in the next section.

New entries to the Top 15 List

Overall, about one third of the risks on the Top 15 List are new or re-entries to the top tier. Such significant shuffling reflects the rapid changes in the macro environment in which organizations operate today.

As we have mentioned, Aon's survey took place at a time when the world was reeling from perceived crises. Two of the world's oldest democracies were struck with national emergencies -- the month-long government shutdown in the United States, and the chaos surrounding Brexit in the United Kingdom. Meanwhile, the global equity and commodity market saw extreme volatilities because of the simmering trade tensions between the world's two largest economies, rising interest rates, and persistent geopolitical conflicts.

While the financial market slowed down, development across the entire information technology landscape roared ahead. In 2018, organizations have witnessed advancements in robotic farming technology, digital manufacturing, blockchain application, massive adoption of AI technology and of course the promulgation of new digital regulations.

The combined effects of these broad political, economic and technological changes can be summarized in what Aon terms as **"accelerated rates of change in market factors."** In Aon's 2017 survey, this risk was ranked at 38 and predicted to be at 32 in three years. However, it now emerges as a number three risk, experiencing the highest ever increase in importance.

In connection with accelerated rates of change in market factors, **commodity price** as well as **cash flow/liquidity risks** have also come to the fore, achieving their second highest ranking since 2007. In fact, they have re-entered the Top 10 for the first time since 2013. Meanwhile, **capital availability/credit risk**, another related risk, has climbed to number 14, from number 21 in 2017.

Another new entrant that deserves our attention is **disruptive technologies**. First added as new risk category in the 2017 survey, disruptive technologies has now moved from number 20 to number 14. In recent years, the wider use of disruptive innovation has dramatically transformed business thinking. As more and more organizations are adopting the Internet of Things and AI-driven tools like machine learning and automated processes to improve operational efficiency and manage their supply chains, the concept of Industry 4.0 is turning into a reality.

Supply chain failure, which has moved from number 19 in 2017 to number 12, is also worth discussing. Participants in North America rate it at number eight while Latin American participants put it at number 10. The sharp rise in rankings for supply chain failure is indicative of the **interconnectedness of the top risks**.

Economic slowdown/slow recovery and accelerated rates of changes in market factors are forcing businesses to adjust their supply chains rapidly so they can cope with both market uncertainty and competitive pressures. Technology and digitization have improved the efficiency of supply chain management, linking businesses through networks, improving processes, accessing new suppliers and enabling companies to digitally store essential data. However, interconnectivity and interdependency have also made supply chains vulnerable to cyber attacks and broader disruption.

Finally, as supply chains are becoming increasingly global, they are heavily affected by geopolitical uncertainties. The focus on inventory reduction and lean supply chains has amplified the potential for failure. For example, in Asia, which represents more than one third of the global contract logistics market (supply chains), natural and man-made catastrophes pose challenges for insurers because the lack of easy access and intense competition for resources often affect the speed of recovery.

Risk rising in importance outside the top 15

An aging workforce is becoming a growing concern across industries and geographies. In Aon's 2019 survey, participants rank aging workforce and health related issues at number 20, from number 37 in 2017. It is predicted to rise to number 13 by 2022. In addition, 13 out of 33 industries consider an aging workforce to be a Top 10 risk in 2022, while those representing government agencies see it as the number one risk.

This is hardly surprising. According to the United Nations, the global population aged 60 years or over numbered 962 million in 2017. The number is expected to double again by 2050, to nearly 2.1 billion. The process of population aging is more pronounced in Europe and in North America, where more than one person in five was aged 60 or over in 2017. Other regions are catching up as well.[viii]

The demographics of the workforce have also shifted significantly over the last decade. Many regions have registered the highest workforce median ages. For example, the Bureau of Labor Statistics in the United States estimates that by 2024, 25 percent of the U.S. workforce will be comprised of workers over the age of 55, and a third of those workers will be older than 65.[ix]

An aging population, along with low unemployment rates, aggravates talent shortages. A 2018 report on LinkedIn claims that nearly 60 percent of U.S. employers are struggling to fill job vacancies within 12 weeks. Globally, **workforce shortage** could reach 85.2 million people by 2030, which would explain why the risk has risen from rank 30 in 2017 to rank 17 in the 2019 survey. Industries like financial services, technology, telecommunications, and manufacturing will be some of the hardest hit.[x]

Apart from workforce shortages, an aging workforce poses challenges for organizations in balancing pension, health, and other benefits costs. Aon's own data analysis of more than USD 3 billion of incurred losses indicate that U.S. workers over 45 are reporting 52 percent higher average casualty claims costs and 40 percent more cases of litigation.

Overall, an aging population coupled with workforce shortages not only changes the social and economic trajectory of a country, but also creates volatility within an organization. If left unmanaged, it can dramatically increase a company's Total Cost of Risk, impeding operations and create financial constraints.

Underrated risks within the top 15

For the first time since the beginning of Aon's survey in 2007, **failure to attract and retain top talent**, a regular item on the Top 10 list, has slipped to number 11. Despite its drop in ranking, Aon believes that attracting and retaining top talent should continue to be an important concern for organizations to manage. In today's volatile and complex business environment, having the right talent proves to be more crucial than ever.

For example, when embracing new and disruptive technologies and business models, organizations require "digital-ready" talents, which are often scarce internally and highly competitive to obtain externally. Thus, for numerous Aon's survey respondents, many of which represent small and mid-sized companies, there is a disadvantage in competing with both large enterprises that offer top salaries and benefits or new start-ups with lucrative stock options and the chance to work on cutting-edge projects. As a consequence, a company that cannot change or fails to transform its workforce quickly runs the risk of being sidestepped or outmaneuvered.

Additionally, we believe that **regulatory/ legislative changes** has also been underrated in the current survey. From 2007 to 2017, regulatory/legislative changes consistently occupied a high perch on the Top 10 list. It has fallen, somewhat precipitously, to the bottom.

The drop in ranking is likely driven by the recent deregulation efforts of pro-business politicians in many parts of the world. For example, in February 2017, U.S. President Donald Trump signed Executive Order 13771, which essentially mandated that “total incremental costs of all [new] regulations should be no greater than zero”. One year later, the U.S. government claimed to have removed 57 old regulations.[xi]

Despite these global deregulatory campaigns, the compliance landscape is still clouded with uncertainty because of political turbulence and pending elections in many parts of the world. In addition, new regulations are proliferating rapidly in the area of emerging technologies. For example, in the United States and Europe, cybersecurity laws, rules, standards and guidelines are being proposed and enforced in federal agencies, local legislatures and the business world. Complex and overlapping cyber regulations run the danger of actually creating more cyber risks.

Therefore, regardless of how the regulatory landscape evolves, companies should recognize that regulation is no longer a secondary concern, but a primary consideration in their business strategies.

Another underrated category involves **political risk/uncertainties**. In 2017, respondents predicted political risk/uncertainties to be at number eight in three years, but at present, it ranks at number 15. This relatively low ranking does not prove that political risk/uncertainties has become less important. It's simply because organizations feel that other risks are more urgent and have direct impact on their operations.

Generally speaking, businesses tend to view political risk/uncertainties as being proximate causes or the outcomes of economic slowdowns, accelerated rates of change in market factors and regulatory/ legislative changes, all of which are more likely to be held with a higher regard and importance. Unless a major political event hits their region, causing direct damage to their businesses, most respondents probably do not see them as an immediate threat.

Despite its perceived neglect, we believe that political risk/uncertainties will continue to climb in importance. After all, available market capacity for credit and political risk insurance has increased across the board, and insurers are creating innovative solutions to respond to the rising demand.

Underrated risks outside the top 15

Outside the top 15 list, we see the **loss of intellectual property/data** as an underrated risk, which has surprisingly slid to number 34. Between 2011 and 2017, this risk hovered in the 20s.

Intellectual property rights or IP rights cover four main areas: trademarks, rights, copyrights, rights patents and trade secrets. In the United States, the Commission on the Theft of American Intellectual Property estimates the annual costs from the loss of intellectual property ranges from USD 225 billion to USD 600 billion.[xii]

The IP issue has garnered a lot of attention during the raging U.S. and China trade wars, highlighting some of the challenges facing global IP-intensive industries. As China is taking off as an economic power, Beijing has been dogged by accusations that it forces Western firms to transfer technology to their Chinese business partners in return for access to the country’s market. In a recent survey by the American Chamber of Commerce in China, more than half of its members reported that leakage of intellectual property was a larger concern when doing business in China than elsewhere.[xiii]

In addition to China, cyber attacks constitute a major source of IP losses. The increased connectivity and greater mobility of intellectual property have made organizations more vulnerable to hackers.

With such extensive media coverage about intellectual property litigations and cyber attacks, why is it that loss of IP is still ranked so low?

There are three possible explanations. First, IP is often overlooked because many small and medium-sized companies believe that it falls mostly within the purview of technology firms or multinational corporations.

Secondly, the value of intangible assets is still not fully understood across organizations, despite the fact that the number of cases and the amount of losses relating to intangible assets are growing and IP is the largest component, which now stands at USD 19.82 trillion in value (S&P market cap as of March 31st, 2018).

The third point we would cite is that to date, loss of IP, albeit an evolving risk, has not traditionally fallen within the domain of risk management personnel. We believe this is something that is fast changing but may account for the relative ranking given the profile of survey participants.

Also an underrated risk in Aon's survey is **climate change**, which was ranked at number 45 in 2017 but has climbed to 31. For the agriculture sector, which relies heavily on fair weather conditions, climate change is projected to be a top risk (at number three) in three years' time.

This data shows that participants around the globe are gradually beginning to grasp the reality of climate change. Aon's findings are validated by a University of Chicago and Associated Press poll in November 2018, in which 71 percent of surveyed Americans said climate change has become a serious problem. Historically, the United States had the lowest degree of concern, even though it is the world's second largest emitter of CO2. In the AP survey, nearly half of respondents said the science on climate change is more convincing than five years ago.[xiv]

The changing perception is obviously driven by an increasing media focus and the frequency of extreme weather conditions in recent years.

According to a report released by the Media and Climate Observatory at the University of Colorado, global media coverage of climate change-related topics reached its highest level in October 2018, when the UN's Intergovernmental Panel on Climate Change released a report, detailing the impact of global warming of 1.5 °C above pre-industrial levels. This grabbed international headlines.[xv]

Meanwhile, a rising number of natural disasters and extreme weather events has helped accelerate the public's acceptance of the reality of climate change. In its 2018 annual report, Aon's Impact Forecasting team documented 394 natural catastrophes. Of those, 42 were USD billion-dollar events. As a result, 2017 and 2018 became the costliest back-to-back years on record for both economic losses (USD 653 billion) solely due to weather-related events, and for insured losses across all perils (USD 237 billion).[xvi]

As climate change intensifies, the economic impact increases accordingly. Aon says total economic losses from hurricanes in 2017 were nearly five times the average of the preceding 16 years while losses from other severe storms registered 60 percent higher.

Therefore, it is important for risk managers to gain a better understanding of the impact of climate change and the dynamics of extreme weather events. In this way, they can anticipate and effectively manage their exposures.

Strategic insights

Aon's 2019 survey has attracted the largest number of participants since inception, but the **participants' risk readiness** has reached the lowest level in 12 years. With volatile global economic conditions and fast changes in today's digital and sharing economy, these top risks, many of which are either non-insurable or only partially insurable, are becoming increasingly unpredictable to prepare for and mitigate.

Among the risks less-prepared for, managing failure to innovate/meet customer needs has presented the most challenges. Its risk readiness has fallen by 11 percent between 2017 and 2019. At a time when technologies and new business models are transforming not only how new products are being created, but also how they are consumed, it is hard to keep pace with the changes, and even more so to manage the risk of getting it wrong.

In addition to organizations' low level of risk readiness, **risk quantification**, the least cited mitigation action, has emerged as another of our concerns. Only 24 percent of respondents say they quantified their top 10 risks. This could be attributed to the fact that more of the top risks are non-insurable and hard to quantify. However, as more organizations have tightened their risk management budgets in response to changing market factors, quantification is an effective way to prioritize risks, and decide what corrective actions to take.

In a related item, we have also observed that organizations are **failing in fully leveraging available data and analytics** when identifying emerging risk issues, assessing the likelihood and severity of events and determining insurance limits and deductibles. Globally, only 20 percent of respondents state that they utilize risk modelling, and 21 percent use scenario analysis. Without employing available data and analytics, organizations leave themselves open to misunderstanding exposures, underestimating volatility, as well as underinsuring or miscalculating limits, all of which could lead to losses at the expense of other business-enabling activities.

A worrisome trend in the 2019 survey is risk identification. About 10 percent of the surveyed organizations declared they have **no formalized process in place to identify risks**. While possibly understandable for smaller organizations, or for companies in emerging markets, our research indicates it is a challenge for other entities, too. About 12 percent of European and 10 percent of North American companies have no formal process for risk identification and a small percentage of companies with turnover of more than USD 10 billion indicated they manage risk without a formal process.

Considering that the top risks in this year's survey are less insurable than ever before, companies without a formal risk management process run the risk of not being up to speed on their changing risk profile and emerging risks.

The survey also highlights the growing concern corporations have regarding their portfolio of **people related risks**. In Aon's survey, nine industry sectors rate **failure to attract/retain top talent** as a top 10 risk. In fact, participants representing education and professional services sectors list it as a number three risk because they are in dire need of people with advanced degrees, special training and advanced skill sets.

In the manufacturing or service sectors (consumer goods manufacturing, health care, lumber, furniture, paper & packaging, metal milling & manufacturing, restaurant, rubber, plastics, stone & cement, non-aviation transportation services), **workforce shortage** has emerged as a key risk.

According to Linkedin, the global manufacturing industry is expected to experience a deficit of more than two million workers by 2020—and by 2030, that shortage could reach more than 7.9 million people. The resulting loss in revenue may be as high as USD 607.1 billion. This explains why in 2022, workplace shortage is projected to climb up more on the key risk list for these manufacturing and service sectors.[xvii]

On a related topic, an **aging workforce and health related issues** are also key risks for the manufacturing, service and government sectors. As mentioned in the previous section, declining birth rates, increasing average life expectancies and low unemployment rates have led to greater pressure on the working-age population. One way to help reduce this pressure would be to encourage workers to delay retirement and remain in the labor market longer if they are able and willing to do so.

Looking forward to key risks in 2022, 13 out of 33 industry sectors, most of which are related to manufacturing, service and government, project aging workforce to be a top 10 risk.

Over the years, we have pointed out that **differences in participant role priorities** have impacted risk ranking and potentially risk management strategies. These are even more pronounced in the current study.

CEOs, CFOs or Treasurers tend to rank highly those risks with concrete financial implications -- economic slowdown/slow recovery, failure to attract and retain top talent and the related workforce shortage. Risk managers have attached increased importance to more traditional (often insurable risks) such as business interruption, supply chain failure, as well as emerging risks, such as damage to reputation and brand, loss of intellectual property and indeed the much analyzed cyber exposures. There is no right or wrong approach here, but what we feel this emphasizes is that risk and associated volatility is a challenge distributed across the entire enterprise, and that taking a similar enterprise-wide approach to the management of risk will deliver increasing value in today's fast changing environment. This is also borne out by the feedback from risk management participants in organizations that are becoming multi-disciplinary. We saw an eight percent uplift in the number of respondents who say that their organizations engage in **cross-functional collaboration in risk management**.

Regional insights

From a regional perspective, there is some consistency, too, as four risks in Aon's top 10 list are cited across all geographies – economic slowdown/slow recovery, accelerated rates of change in market factors, increasing competition, and business interruption.

While cyber risk is considered a number one threat by organizations in North America, it has not made to the top 10 list in Latin America, where public awareness remains relatively low. For the first time since the beginning of this survey, we see cyber attacks/data breach to be predicted in the top 10 for Latin America by 2022.

Respondents in North America and Asia Pacific continue to see failure to attract and retain top talent as a top threat, at number six and number 10 respectively. North America has gathered talents from around the world because of its stable, innovative, and meritocratic business environment. However, with its current low unemployment rate and tightening immigration policies, the talent pool is shrinking. In Asia, where global multinationals and fast-growing regional companies are competing for experienced leaders and top new graduates, talent shortage is even more acute.

For participants in the Middle East and Africa, there are three risks that are unique to their region: exchange rate fluctuation, political risk/uncertainties and interest rate fluctuations. While political risk/uncertainties are driven by wars and political turmoil, fluctuations in U.S. dollars and the rising interest rate in the United States may crimp growth and increase borrowing cost in countries where local currencies are pegged to the U.S. dollar, and crude oil is also traded in U.S. dollars.

Projected risks for 2022

Each year we offer respondents the chance to assess their future risk landscape and project the top 5 risks that their organizations will face in three years' time.

Top 10 in 2019	Top 10 for 2022	Movement
Economic slowdown / slow recovery	Economic slowdown/slow recovery	↔
Damage to reputation / brand	Accelerated rates of change in market factors	↑
Accelerated rates of change in market factors	Cyber attacks / data breach	↑
Business interruption	Commodity price risk	↑
Increasing competition	Failure to innovate /meet customer needs	↑
Cyber attacks / data breach	Increasing competition	↓
Commodity price risk	Business interruption	↓
Cash flow / liquidity risk	Failure to attract or retain top talent	↑
Failure to innovate / meet customer needs	Cash flow / liquidity risk	↓
Regulatory / legislative changes	Damage to reputation / brand	↓

Economic slowdown/slow recovery will continue to stand at number one while accelerated rates of change in market factors rises to number two. Commodity price risk, which is ranked at number six, will be elevated to the number three spot.

The high rankings of these three interconnected risks reflect continued volatile macroeconomic and geopolitical conditions. At the time of writing, the National Association for Business Economics in the United States had just released its latest survey of member economists. Roughly half of the participants believe that the U.S. economy, which is leading the world in growth, will slip into recession by the end of 2020, and three-fourths envision such a downturn beginning by the end of 2021. In addition, more than 90 percent of surveyed economists said trade wars and increased tariffs will slow economic growth. When it comes to government policies and new legislative actions on taxes and deficit spending, the economists were divided, like the rest of the American public. With these uncertainties looming large, the projections for 2022 seem reasonable and justified.[xviii]

For 2022, there is one drop that might be considered surprising. Damage to reputation/brand, which has consistently held its high rankings in past surveys, is predicted to fall to number 10. We assume that at the time of entry, organizations may have been more concerned about risks that could directly threaten their bottom line during hard economic times, than less tangible exposures, which are harder to quantify. Our view at Aon remains that this exposure is underestimated and organizations need to proactively explore ways to sufficiently quantify and assess existing and potential reputational risks and decide on best solutions to avoid or mitigate them.

An evolving risk landscape

Findings from Aon's 2019 survey have offered strong evidence that the ongoing dynamic macro-economic environment will continue to impact business models and key risk concerns for organizations. Our research has emphasized that risk management needs to continue to evolve at the same pace as an enterprise-wide, rather than siloed, approach and function.

In parallel, risk managers of tomorrow should continue to redefine and expand their roles to ensure risk is identified, assessed and managed in an integrated way across the organization. It goes without saying that insurance markets also need to respond accordingly with products and services that meet the needs of their customers' changing risk landscape.

We live in an era of unprecedented speed of change where the past is no longer a reliable source to predict the future. To manage today's risks and anticipate tomorrow's challenges, organizations need to harness the power of data and analytics. Those who embrace what's available to create meaningful and actionable insights will be one step ahead.

At Aon, we believe that the growing availability of segment and industry sector-specific risk insights, derived from the increased use of data and analytics, are key for risk advisors, brokers and insurance executives to meet and anticipate current and future customer needs, and to develop innovative solutions that help manage volatility, reduce risk, and realize opportunity.

Global Risk Management Survey risk ranking

partially insurable   uninsurable   insurable

1 Economic slowdown/ slow recovery	2 Damage to reputation/brand	3 Accelerated rates of change in market factors	4 Business interruption	5 Increasing competition
6 Cyber attacks/ data breach	7 Commodity price risk	8 Cash flow/ liquidity risk	9 Failure to innovate/ meet customer needs	10 Regulatory/ legislative changes
11 Failure to attract or retain top talent	12 Distribution or supply chain failure	13 Capital availability/ credit risk	14 Disruptive technologies/ innovation	15 Political risk/ uncertainties
16 Exchange rate fluctuation	17 Concentration risk (product, people, geography)	18 Workforce shortage	19 Counter-party credit risk	20 Aging workforce and related health issues
21 Property damage	22 Environmental risk	23 Weather/ natural disasters	24 Third party liability (incl. E&O)	25 Technology failure/ system failure
26 Major project failure	27 Failure of disaster recovery plan/ business continuity plan	28 Injury to workers	29 Failure to implement or communicate strategy	30 Asset value volatility
31 Climate change	32 Absenteeism	33 Merger/ acquisition/ restructuring	34 Loss of intellectual property/data	35 Interest rate fluctuation
36 Geopolitical volatility*	37 Growing burden and consequences of governance/ compliance	38 Globalization/ emerging markets	39 Corporate social responsibility/ sustainability	40 Product recall
41 Impact of digital economy*	42 Impact of Brexit*	43 Lack of technology infrastructure to support business needs	44 Directors & Officers personal liability	45 Inadequate succession planning
46 Natural resource scarcity/availability of raw materials	47 Fraud	48 GDPR requirements*	49 Rising healthcare cost*	50 Unethical behaviour
51 Outsourcing	52 Theft	53 Resource allocation	54 Workforce generation gaps*	55 Terrorism/sabotage
56 Safety & Pharmacovigilance*	57 Share price volatility	58 Embezzlement	59 Impact of Artificial Intelligence (AI)*	60 Pandemic risk/ health crises
61 Harassment/ discrimination	62 Sovereign debt	63 Pension scheme funding	64 Gender pay gap*	65 Impact of Blockchain tech*
66 Kidnap & ransom	67 Extortion	68 Off Label Promotion*	69 Impact of cryptocurrencies*	

**Denotes new risks added to the Global Risk Management Survey for the first time.*

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Methodology

This web-based survey addressed both qualitative and quantitative risk issues. Responding risk managers, CROs, CFOs, treasurers and others provided feedback and insight on their insurance and risk management choices, interests and concerns.

Aon Centre of Innovation and Analytics conducted, collected and tabulated the responses. Other Aon insurance and industry specialists provided supporting analysis and helped with interpretation of the findings.

All responses for individual organizations are held confidential, with only the consolidated data being incorporated into this report. Percentages for some of the responses may not add up to 100 percent due to rounding or respondents being able to select more than one answer. All revenue amounts are shown in US dollars.

Contacts

For report inquiries

Rory Moloney
Chief Executive Officer
Global Risk Consulting
Aon
rory.moloney@aon.co.uk

Dr. Grant Foster
Managing Director, UK
Global Risk Consulting
Aon
Grant.Foster@aon.co.uk
+44.20.7086.0300

Richard Waterer
Managing Director, EMEA
Global Risk Consulting
Aon
richard.waterer@aon.co.uk
+44.20.7086.3263

George M. Zsolnay
Vice President
US Broking
Aon
george.zsolnay@aon.com
+1.312.381.3955

Tina Reschke
Director of Marketing
Global Risk Consulting
Aon
tina.reschke@aon.co.uk
+44.20.7086.0384

For media and press inquiries

Madeleine Little
Senior Director
Corporate Communications, UK & EMEA
Aon
madeleine.little@aon.co.uk
+44.20.7086.0347

About Aon's Global Risk Consulting and Aon's Centres for Innovation and Analytics

With more than 1300 risk professionals in over 50 countries worldwide the risk consulting business of Aon plc, delivers risk management solutions designed to optimize client's risk profiles. Our suite of services encompasses risk consulting; risk control and claims; and captive management. Aon's global risk consulting team helps clients to understand and improve their risk profile. We do this by identifying and quantifying the risks they face; by assisting them with the selection and implementation of the appropriate risk transfer, risk retention, and risk mitigation solutions; and by ensuring the continuity of their operations through claims consulting.

Established in 2008, the Aon Centres for Innovation and Analytics (ACIA) are the cornerstones of Aon's $350M global investment in analytics. Our teams located across Dublin, Krakow and Singapore, deliver data-driven insights that reduce the volatility our clients face and help them maximise their performance.

As the owners of one of the world's largest repositories of risk and insurance placement information, we analyse Aon's global premium flow to identify innovative new solutions and to provide impactful, fact-based market insights. Our integrated digital platform brings insights to life for our clients, insurers and colleagues. We empower results by transforming data received directly from brokers and other sources into actionable analytics, across the areas of risk, retirement and health.

Our team of over 240 ACIA colleagues around the world ranges from actuaries and data scientists to business and data analysts, developers, data architects and engineers, and more. We are a global innovation centre adopting an Aon United mind-set, bringing the best of Aon to our solutions.

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

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