



Aon Risk Maturity Index

Insight Report, November 2015

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Introduction

“How well is my organization's risk management framework prepared to address the severity and complexity of the risks and opportunities in today's dynamic economic environment?”

“How does adopting sophisticated risk management practices help my organization better manage capital allocation and firm volatility?”

Developed by Aon plc and the Wharton School of the University of Pennsylvania, the Aon Risk Maturity Index was designed to help senior finance and risk leaders respond to questions like those posed here. The “Index” is an innovative platform that assists organizations in strengthening their operating performance and/or reducing volatility by empowering them with insights and guidance on best practices, tools and techniques to enhance their risk governance and risk management practices.

Over the past four years, analysts from the Aon Risk Maturity Index team and the Wharton School have aggregated and analyzed Risk Maturity Index participant data and have developed annual Aon Risk Maturity Insight Reports which present findings on the interplay of organizational risk management and the relative maturity of their enterprise risk management approaches. The 2015 Aon Risk Maturity Index Insight Report is a new installment that endeavors to drive marketplace insights on the importance of advanced risk management practices with the proper tools and techniques to empower results.

Respectfully submitted,

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The Increasing Interconnectivity of Risk

In today's dynamic economic and geopolitical landscape, risks continue to grow and become more complex. In conjunction with the growth in both variety and scope of risk, Aon has witnessed an increasing interconnectivity of these risks. In response, we feel organizations must take steps to increase their understanding of risk and adapt to the changing circumstances by evolving their risk frameworks. Globalization offers tremendous growth opportunities in the form of international partnership, technological innovation, and business expansion for organizations; however, global corporations also face diverse challenges and risks. Foreign currency fluctuations, stagnating growth in China and other key emerging markets, as well as increased supply chain complexity have varying degrees of impact on organizations. Damage to brand and reputation has emerged as a top concern for organizations while cyber risk has also risen as a key concern as evidenced by Aon's 2015 Global Risk Management Survey.

The interconnected nature of these risks has been felt by many organizations, as witnessed by the multitude of data breaches over the past two years, which has in some cases eroded consumer trust in organizations. The ability of organizations to understand and manage the increasingly interconnected nature of risks and develop the organizational governance and processes that encourage improved risk-based decision making is imperative to their financial and operational well-being. The substantial volatility experienced in major equity and commodities markets in the second half of 2015, stagnating growth in emerging markets, and changing nature and complexity of risk reinforces that advanced risk management practices not only provide protection to organizational performance during significant risk events but also provide the ability to recognize and take action on opportunities.

In this edition of the Aon Risk Maturity Index Insight Report, we present our latest insights and guidance to enable organizations to drive operational improvements from enhanced risk management practices.

We re-examine the relationship between Risk Maturity and Financial Performance:

- We confirm past analysis from the Aon Centre of Innovation and Analytics (ACIA) on the relationship between a higher Risk Maturity Rating and superior stock price performance.
- We confirm prior analysis on the inverse relationship between a higher Risk Maturity Rating and stock price volatility
- We introduce new and expanded findings on the relationship between a higher Risk Maturity Rating and the relative resilience of an organization's stock price in volatile equity, currency, and commodity market scenarios

We look at the importance of building a cross-functional understanding of risk, discuss a case study example to illustrate this in practice, and explore the following three key factors that distinguish high and low risk maturity:

- Communication of risk management strategies, objectives, and practices
- Collaboration in executing risk based practices across risk-based functions
- Consensus on strategy for cross-functional risks

Lastly we examine the integration of sophisticated quantification methods to assess risk and a corresponding case study to illustrate successful execution

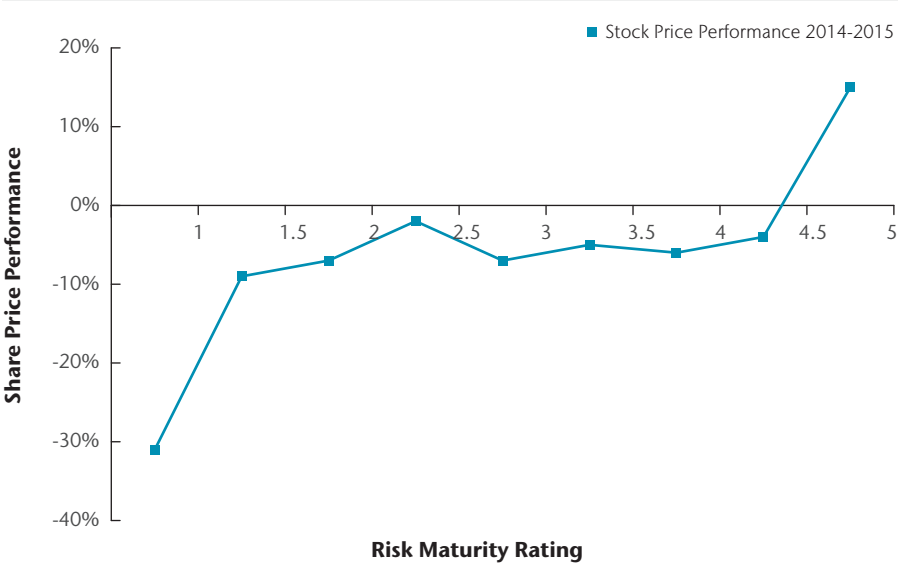
Accentuating the Upside, Smoothing the Downside

Consistent with previous reporting, researchers from Aon and Wharton observed direct correlations between enhanced risk management practices and improved performance in the financial markets. Working with annual financial results from more than 300 publicly traded companies around the world, our research has found continued correlation between higher risk maturity and improved market performance, profitability, and organizational resiliency. These findings continue to emphasize the importance of a robust, integrated, and holistic risk management program.

The Relationship between Risk Management and Stock Price Performance and Volatility

For two out of the past three years our research found significant correlations between risk maturity and superior stock price performance for publically traded organizations. In the most recent prior research period, June 2013 – June 2014, for the first time our researchers noticed an absence of the stock price correlation. At the time we hypothesized that the optimistic sentiment of a bull equity market during this particular period could have more of an equalizing effect on stock prices.

Graph One: Share Price Performance 2015



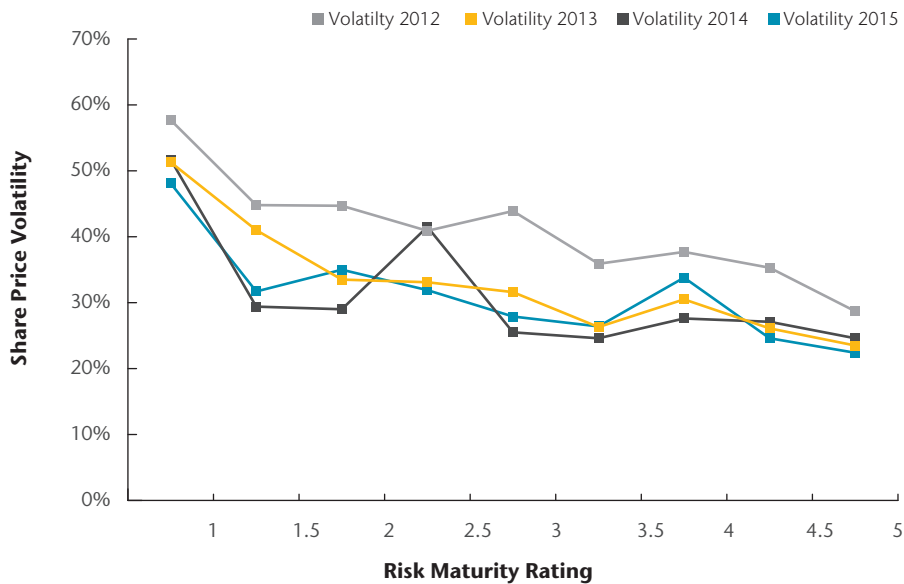
During the period June 2014 – June 2015, our researchers once again found significant correlations between risk maturity and stock price performance. Why are we seeing this correlation again in 2015? It is most likely a result of the general transition away from the bull equity market environment of 2014 and the heightened market volatility, those organizations with advanced risk management practices are better able to demonstrate advanced risk management capabilities and have them reflected in the market’s perception of those organizations.

* The Risk Maturity Index is scored on a scale of 1 – 5, with a rating of 1 defined as Initial and a rating of 5 defined as Advanced.

Stock Price Volatility

Consistent with all analysis and findings of previous years, researchers have continued to find a strong statistical correlation between risk maturity and reduced stock price volatility. This further validates the findings that advanced risk management practices are one of the factors that smooth out volatility in an organization's stock price. During the period June 2014 – June 2015, researchers found a stronger correlation between the two factors than during the period June 2013 – June 2014, demonstrating that during periods of plunging equity sentiment, robust risk management practices are essential to an organization's performance.

Graph Two: Share Price Volatility 2015



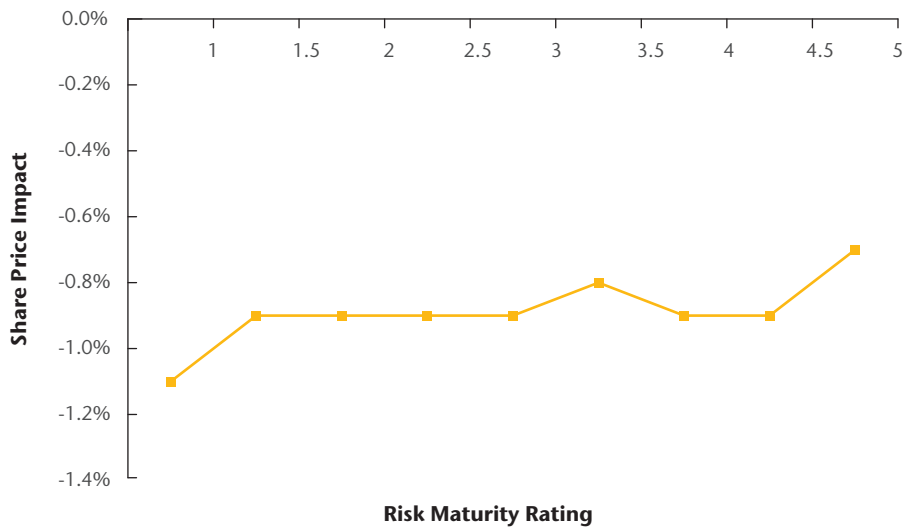
Risk Management, Market Volatility and Organizational Resiliency

Examining the relationship between elevated risk maturity levels and significant market events, researchers from Aon subjected the data to a new series of stress tests based on the Bloomberg Scenario Function to determine the effect of market volatility on the sample set of securities. It is important to note that these scenarios simulate how securities would respond to the historical shocks if the same factors were to arise today. For 2015, our researchers analyzed a new set of market events examining equity market volatility (as measured by the VIX – Chicago Board Options Exchange

Volatility Index), commodity market volatility (as measured by a scenario where all commodity prices drop by 20%) and currency volatility (as measured by a scenario around the Greek Financial Crisis in 2015). For all tested market events, our research confirms earlier findings that indicate a direct relationship between Risk Maturity and organizational resiliency as judged by the relative resilience of an organization’s stock price in the immediate aftermath of the simulated market event. Graphs 3, 4 and 5 illustrate these exciting new scenarios.

Our research continues to support the conclusion that advanced risk management practices are most beneficial when facing an actual or expected threat... strong risk management contributes to higher returns, even during significant market events.

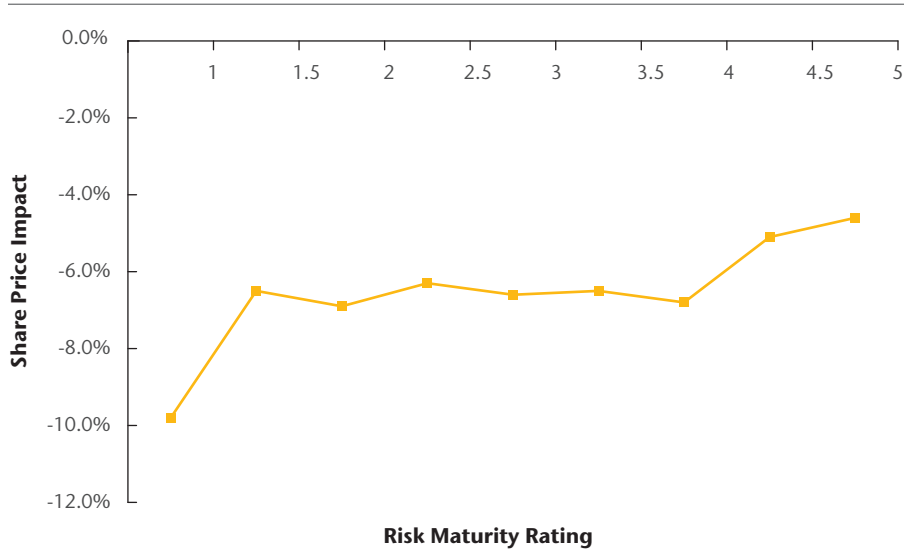
Graph Three: VIX Index up 20%



Source: Bloomberg

The Volatility Index (VIX) represents one measure of the overall implied volatility of the stock market. For this scenario, the VIX index is shocked with a 20% increase with extension to its effect on other Bloomberg Factors.

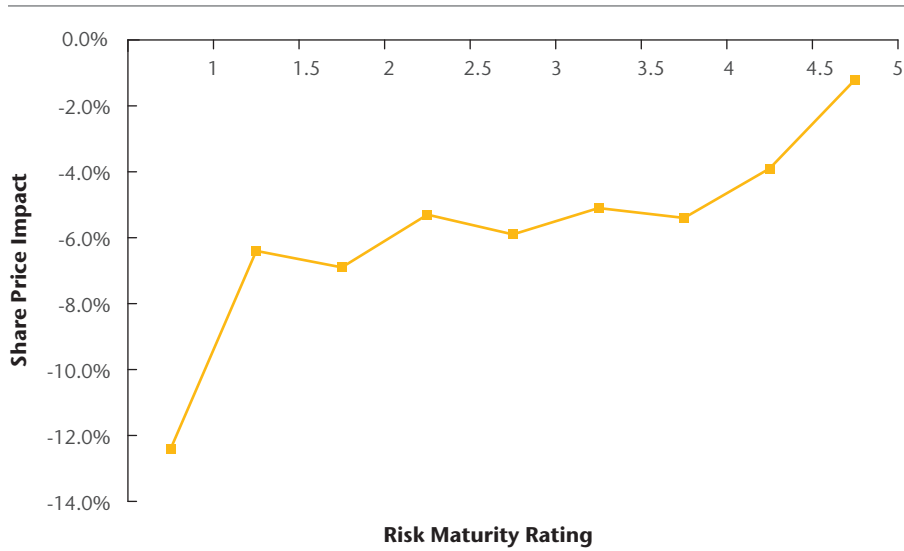
Graph Four: Base Metals down 20%



Source: Bloomberg

For this scenario, all base metals are shocked with a 20% decrease with extension to its effect on other Bloomberg Factors.

Graph Five: Greek Financial Crisis 2015



Source: Bloomberg

Athens' resistance via referendum, and ultimately the agreement to rush through long-resisted economic reforms imposed by its creditors in a bid to stay in the Eurozone. Historical risk factor returns from 06/22/2015-07/08/2015.

Our research continues to support the conclusion that advanced risk management practices are most beneficial when facing an actual or expected threat; in this case, that strong risk management contributes to higher returns, even during significant market events.

A Cross-Functional Understanding of Risk: Collaboration | Communication | Consistency

Organizations are incredibly complex; many operate with multiple subsidiaries with locations and offices scattered in far-flung locations around the world, across numerous business functions, with thousands of colleagues and myriad processes. From a risk standpoint, such organizations have multiple risk owners spread across corporate functions and operating divisions. With such complexities embedded throughout the organization, it becomes very difficult for an organization to understand, much less respond to, the integrated risk profile.

Risks arise and evolve within organizational silos. Standalone departments, business functions or units in distinct and disparate geographies respond to risks in siloed fashion, which drives a precise but narrow approach, ultimately introducing inaccuracy that may be at odds, or even confounding to the organization's broader risk management approach. The response is not quite right.

The financial crisis of 2007 – 2008 is one example of how even the most sophisticated organizations are subject to operating in silos, making strong individual decisions with refined techniques, but resulting in an unreliable solution. In 2007, at the onset of the financial crisis, there were a total of eight companies assigned a Triple A (AAA) rating by the three major rating agencies but over fifty-thousand financial instruments with the same AAA rating. These AAA ratings represent the highest grade investment products available to the market. Despite the utilization of complex quantitative models, the credit ratings assigned by the rating agencies were ultimately inaccurate for the financial markets. The investment market was subsequently flooded with toxic and overvalued financial instruments, which contributed to the meltdown of the global financial system.

The Aon Risk Maturity Index has afforded Aon and Wharton researchers the opportunity to capture data on the characteristics of organizations that effectively united organizational siloes and implemented an integrated approach to understanding risk. At Aon we are frequently engaged by senior risk leadership on specific strategies that the more sophisticated organizations are implementing to distinguish their risk management practices. Analysis of over nine hundred organizations that have participated in Aon's Risk Maturity Index has enabled Aon and Wharton researchers to identify key factors to successfully understanding and managing risk:

Three factors differentiate high- and low- risk maturity operations:

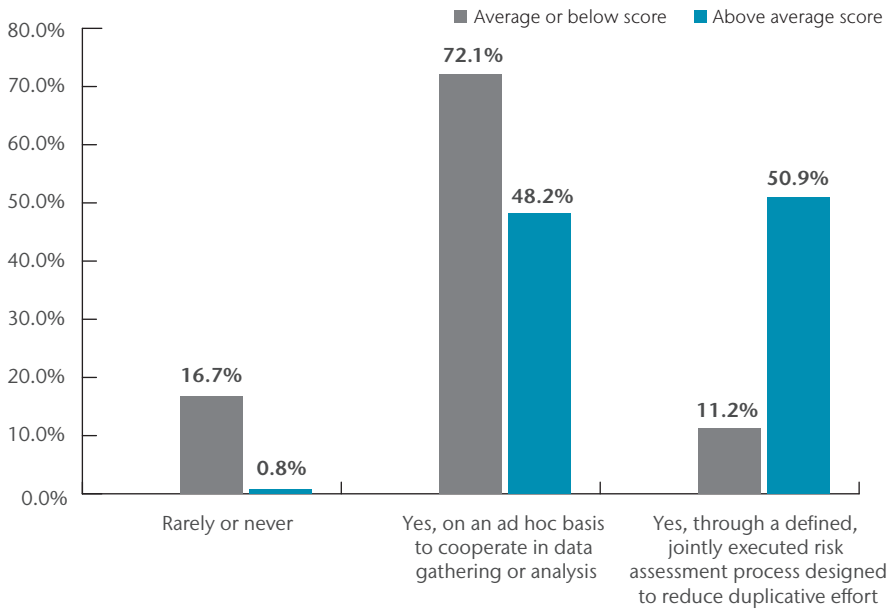
- *Cross-functional collaboration*
- *Communication of risk management strategies, objectives, and practices*
- *Consensus and Consistency on risks and risk management*

Having different functions and levels involved and integrated into an organization's risk maturity assessment process provides the foundation for determining an organization's current status along these dimensions and provides the basis for identifying ongoing improvement activities.

Collaboration

A breakdown of the data between the two groups suggests that organizations with more advanced risk practices are more likely to have various and dedicated risk functions collaborate in executing risk-based processes through a defined, jointly executed risk assessment process. Graph 6 illustrates that 50.9% of organizations that score above average collaborate across risk functions while only 11.2% of firms scoring below average do. In contrast, we find that 72.1% of organizations that score below average only collaborate on an ad-hoc basis during data gathering or analysis activities.

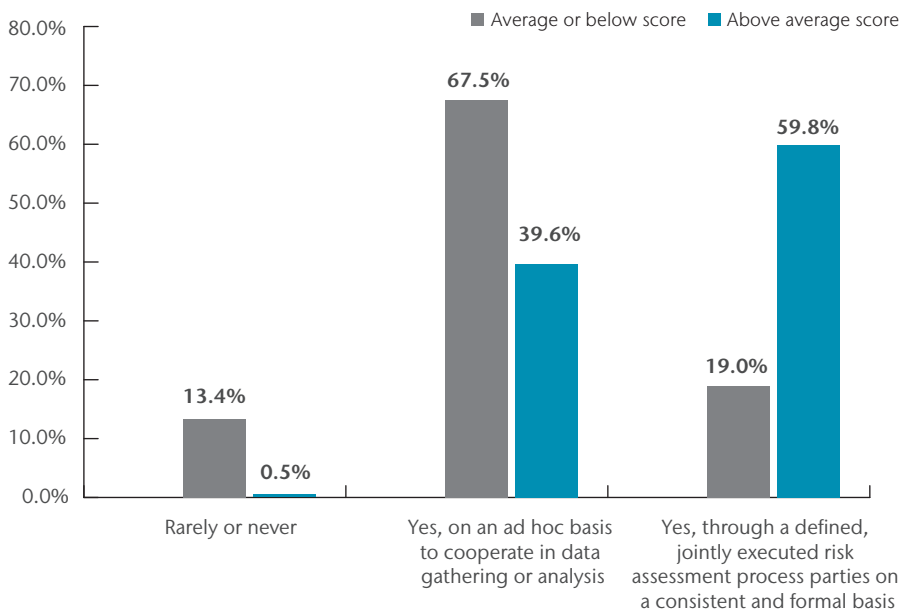
Graph Six: Different risk functions collaborate in executing risk-based processes



Communication

With respect to the communication of risk, we find that organizations exhibiting the greatest understanding of risk consistently and formally share the results of risk assessment activities across the organization. Graph 7 shows that 59.8% of organizations with above average risk maturity ratings exhibit this characteristic while only 19.0% of organizations with below average risk maturity ratings do so. Organizations with below average risk maturity ratings are more likely to communicate these risk assessment results only on an ad-hoc basis, 67.5% of below average respondents versus 39.6% of respondents scoring above average.

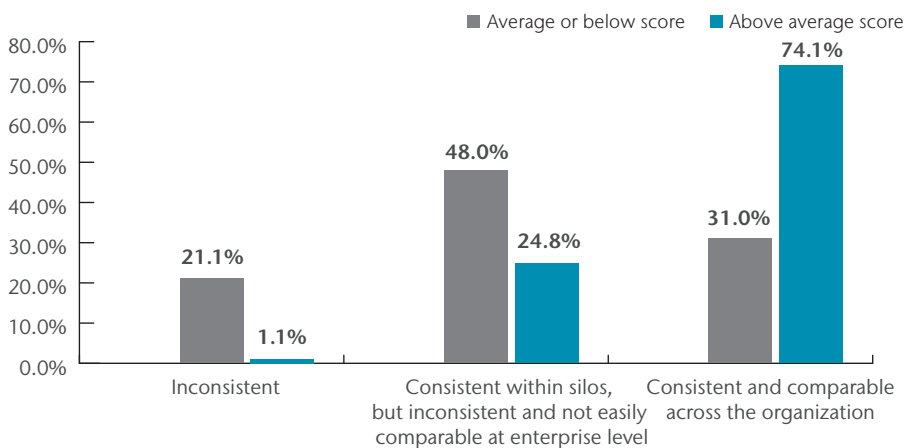
Graph Seven: Results of risk assessment activities are communicated between risk-based processes / areas of the organization



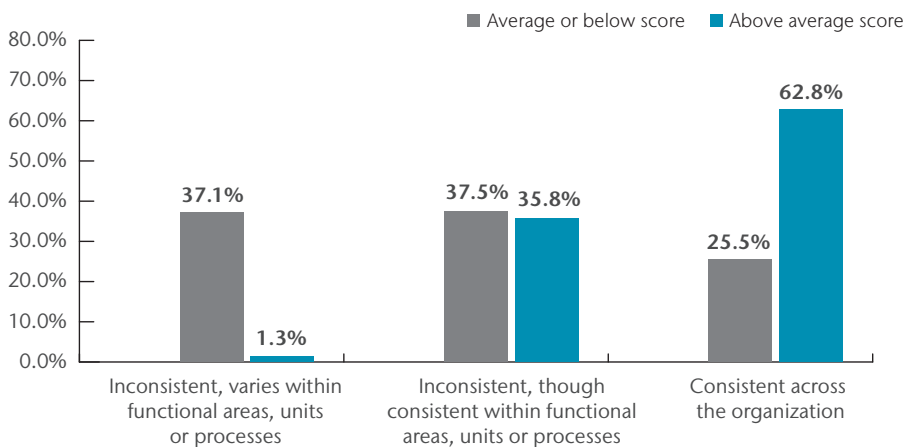
Consistency

A final characteristic that we observed in our Aon Risk Maturity Index research is the consistency of risk information and terminology provided across the organization. Our research shows that organizations with above average risk maturity ratings are more likely to not only provide consistent content and information but also utilize consistent terminology within those communications. Graph 8 illustrates that our researchers found that approximately 74% of organizations scoring above average on the Risk Maturity Index consistently deliver content on performance and strategy with 63% of above average organizations doing so with consistent risk terminology. In contrast, organizations with below average risk maturity ratings are more likely to communicate within silos and use inconsistent terminology across the organizations. The graphs below show that 69% of organizations scoring below average do not deliver consistent content, with 75% of below average organizations not utilizing consistent risk terminology.

Graph Eight: Content of management information communication (i.e., performance / results, strategic direction) is ...



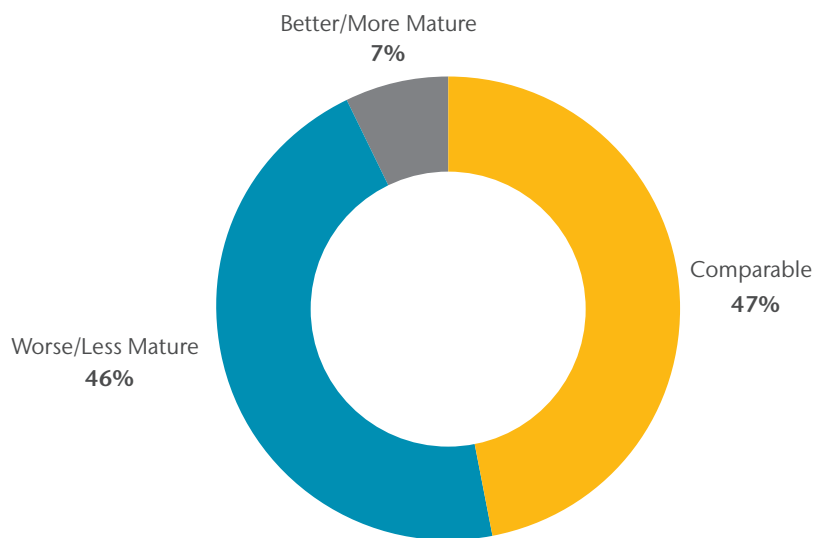
Graph Nine: Risk terminology across the organization is ...



Perception versus Reality

Additional analysis from researchers at Wharton found a particularly interesting insight regarding an organization’s actual risk maturity versus an organization’s perception of risk maturity level. Research shows that for organizations scoring 2.5 or below on the Index, 47% of these organizations perceived themselves to be comparable to their industry peers relative to their risk management approaches and capabilities. This means that almost half of organizations scoring below average on the Index believe they have a stronger ability to manage risk than what is exhibited in their scores. This can have dangerous implications.

Graph Ten: Perceived risk management approaches and capabilities relative to industry peers—organizations with RMI scores below 2.5



What lies at the heart of these differences between perception and reality for risk management capabilities?

We suggest the following key areas may help explain these differences;

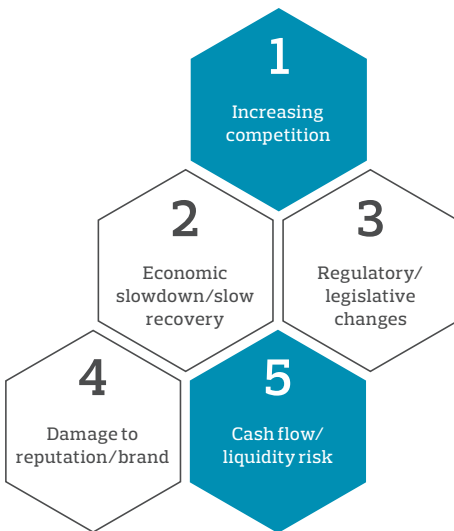
- Real differences in risk management maturity across functions, business units, and locations
- Differences in risk focus and functional biases

An analysis's of Aon's 2015 Global Risk Management Survey has enabled our researchers to explore differences in risk perception across corporate functions.

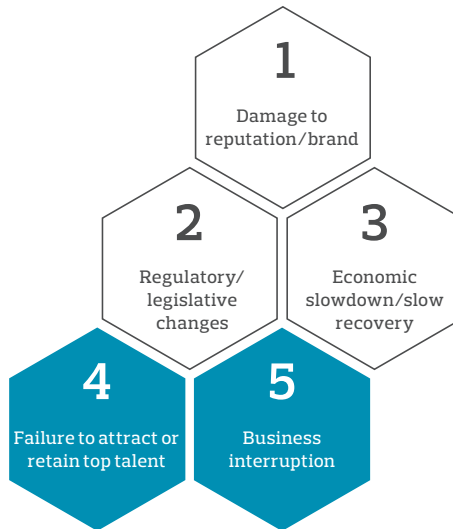
The schematic below illustrates the different priorities, areas of focus and concern on the minds of C-Suite level executives and corporate risk managers.

Graph Eleven: Top Risks as Identified by C-Suite and Risk Managers

C-Suite



Risk Managers



Case Study:

Global Industrials

A leading global industrials company, with over 60 subsidiaries, operating across five continents, engaged Aon to evaluate their risk management capabilities and develop a strategic path forward to align risk and business practices. To accomplish this Aon sought to gather different risk perspectives and to understand key divergences of opinions within the organization. By having different risk-based functions, including executive management, finance, and business unit leaders complete the Aon Risk Maturity Index, Aon was able to diagnose key differences driving irregularities between risk and decision-making processes. These irregularities centered on the three key concepts noted above; collaboration, communication, and consistency. In order to align risk with the broader business, Aon conducted a workshop with the executive leadership team and determined four key recommendations to address irregularities and to better align risk and business practices:

1

Risk Dashboards

Mechanism to integrate risks and provide visibility across the organization, as well as reporting to the Board

2

Formalized Risk Team

Formalized team to identify, assess, and monitor risk issues across the organization as well as define consistent terminology

3

Formalized Post Mortems

Leveraging Risk Post-Mortems to analyze events to drive awareness, agreement, and opportunities for improvement

4

Risk Mapping

A formalized risk identification and assessment process to capture current and emerging risks from across the business

Risk-Based Decision Making: Aligning Risk Quantification

In addition to a cross-functional understanding of risk, the use of sophisticated quantification methods is another key characteristic exhibited by organizations with advanced risk maturity. Analysis from Risk Maturity Index respondents illustrate key differences between organizations that score above and below average on the Index. These key differences are not only evident with organizational practices but also with corresponding performance.

The use of advanced risk quantification techniques and the utilization of those outputs in the decision-making process can provide increased precision to an organization's forecasts and provide management with greater transparency into the organization's risk exposure. The October 2014 Risk Maturity Index Insight Report analyzed the effects of risk-based forecasting and planning (RBFP) on firm volatility as well as on an organization's earnings forecast accuracy. Characteristics of organizations with advanced RBFP capabilities include the extent to which formal, quantitative risk assessments and evaluations are conducted; the identification of risk drivers and risk interdependencies and the integration of this information into decision-making; and the incorporation of risk considerations in budgeting, project and capital investment decisions and strategy development.

Researchers from Wharton found strong correlations between sophisticated risk-based forecasting and planning practices and reduced firm volatility as reflected in cash flow, earnings, sales, and stock price. In addition, researchers also found strong correlation between RBFP practices and the accuracy of an organization's earnings forecast. This year, researchers from Aon and Wharton take a step further in identifying best practices around quantitative risk management, specifically through the analysis of risk appetite and the integration of quantification methods into the decision-making process. But before delving into the specific findings from the Risk Maturity Index, we'll quickly examine one company that has successfully made the transition to integrating risk into its decision making processes.

Case Study: Consumer Goods

A leading Consumer Goods Company's advanced analytics journey began with a desire to quantify its exposure to insurable risk and evaluate the efficiency of its insurance programs. A key constraint in the process was the organization's appetite for risk. First, each individual risk was quantified to determine its contribution to the portfolio and interdependencies were identified. The analysis identified that different risks drove every day expenses when compared to catastrophic costs. The Consumer Goods Company was able to redesign its program to ensure that each individual risk and the portfolio were within its appetite for risk. Both premium and retained risk savings were achieved with the new portfolio.

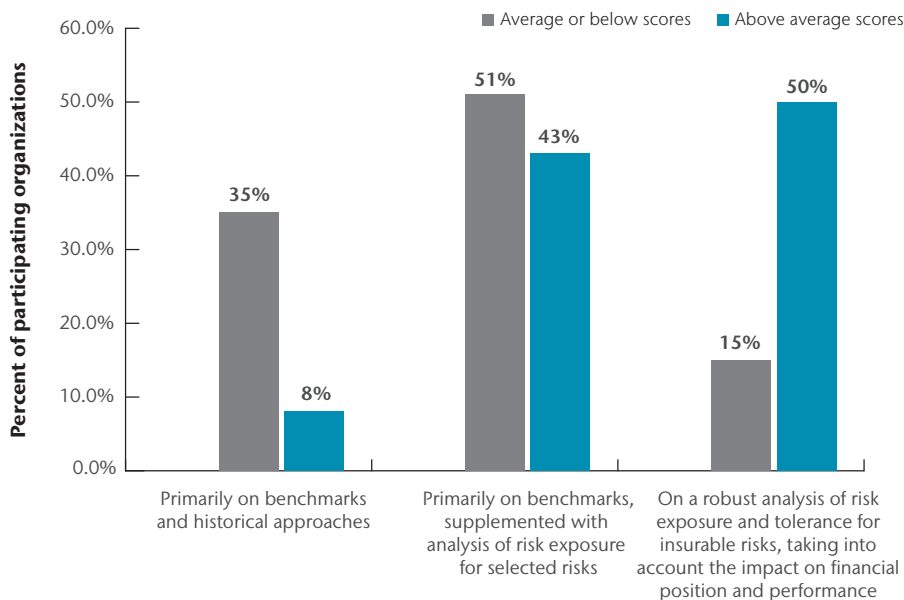


Risk Appetite / Tolerance

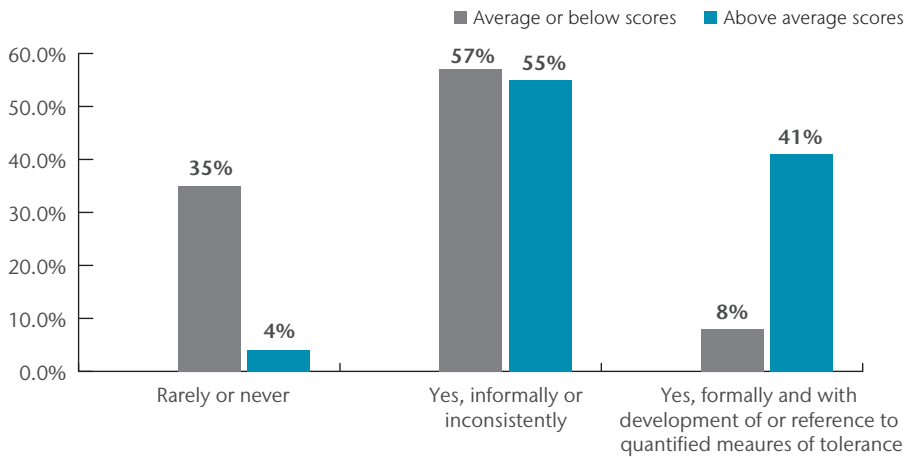
A risk quantification component that researchers observe as a key difference between organizations scoring above average and below average on the Risk Maturity Index is centered on the concept of risk appetite and risk tolerance. The case study above highlights an industry-leading company utilizing risk appetite and tolerance to lower their total cost of risk and optimize their insurable risk portfolio.

Analyzing results from over 900 organizations responding to the Risk Maturity Index, researchers found that over 50% of organization’s scoring above average make risk transfer and insurance decisions based on a robust analysis of their risk exposure and tolerance for insurable risks; taking into account the impact on financial position and performance whereas only 15% of organizations scoring below average on the Index made their risk transfer and insurance decisions utilizing robust analysis on their risk exposure and tolerance. This is further evidenced by data showing that 41% of organizations scoring above average on the Index make risk management decisions with formalized quantified measures of risk tolerance versus only 8% of organizations scoring below average. A final observation that researchers noticed was around optimization of an organization’s total cost of risk. 74% of organizations scoring above average on the Risk Maturity Index utilize risk tolerance and robust risk analysis techniques to drive decisions on the optimal total cost of risk. Graphs 12, 13 and 14 illustrate the analysis from Aon and Wharton.

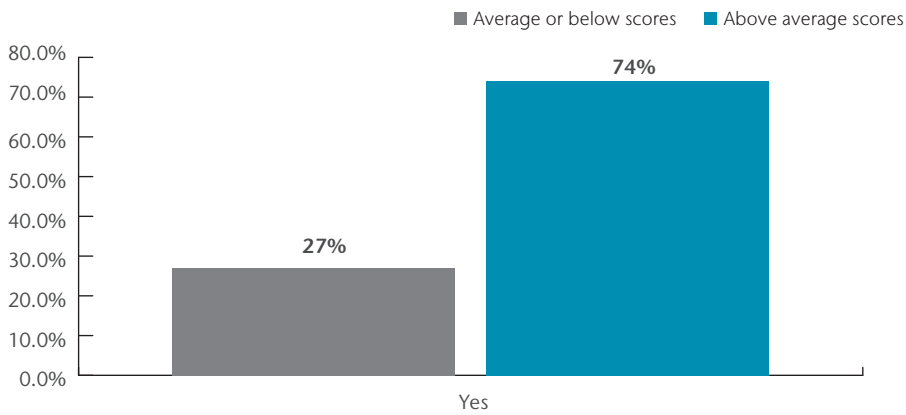
Graph Twelve: How traditional risk management decisions (e.g., risk transfer/insurance) are based



Graph Thirteen: Are traditional risk management decisions for insurable risks supported by analysis that incorporates risk tolerances?

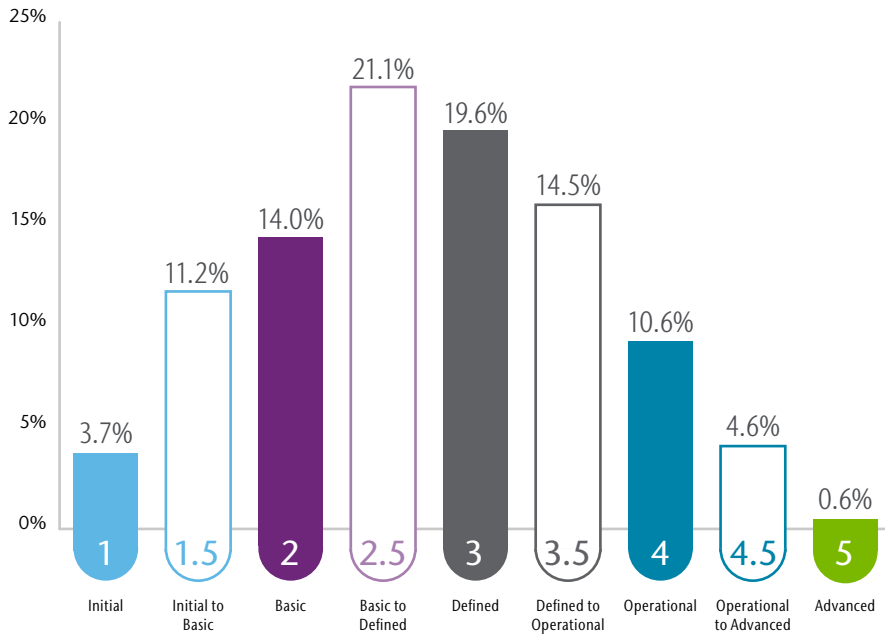


Graph Fourteen: Risk tolerance and the results of robust analysis of insurable risks combine to drive decisions on the optimal total cost of risk

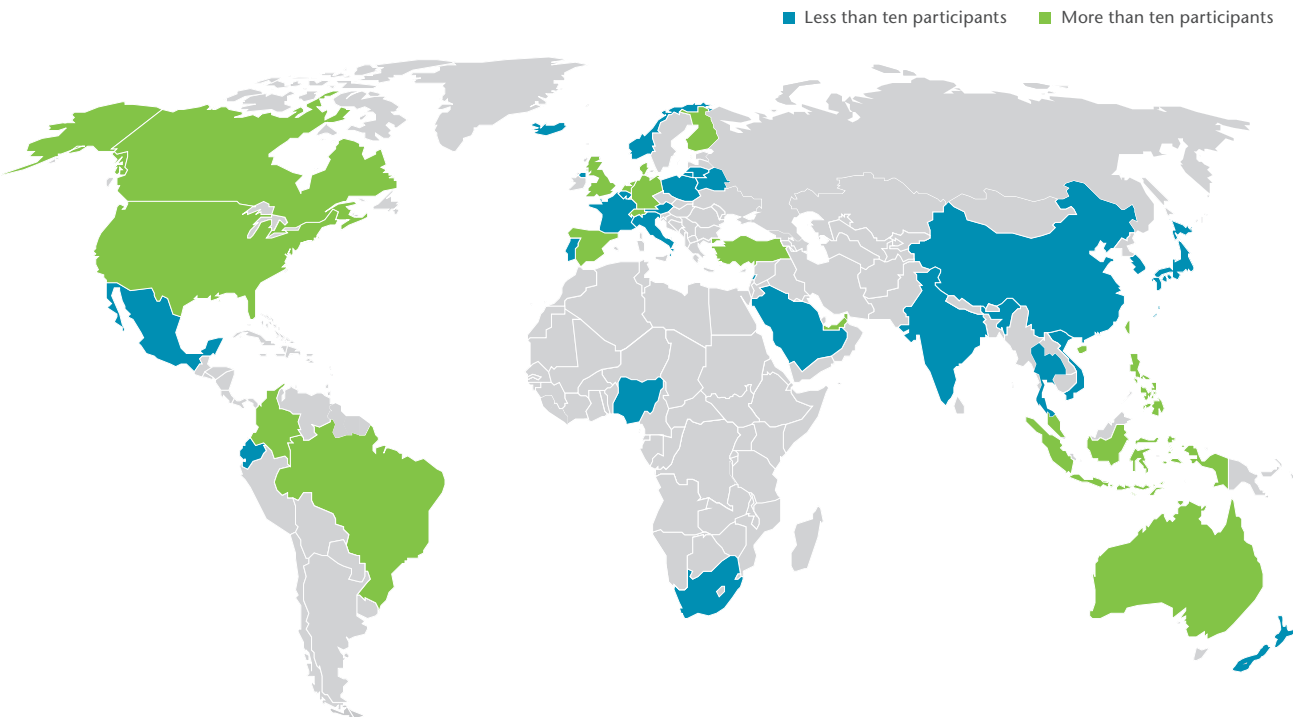


Global Average is "3" – Defined

Aon Risk Maturity Index: Distribution of Risk Maturity Ratings (October 2015)



Reach & Participation is Global



Concluding Remarks

How should your organization align itself around risk? What strategies should your organization implement to integrate risk and strategy? The growth and evolution of the Aon Risk Maturity Index has led it to become an industry-leading tool that helps organizations answer these questions. Analysis of Risk Maturity Index results continue to provide valuable and practical risk management insights in support of sustainable, stable financial results.

Aon will continue its research with The Wharton School to identify key risk management practices and processes that contribute to improved financial performance as well as a deeper understanding of industry-specific best practices in regards to risk management.



▶ The Aon Risk Maturity Index is a free, confidential and online tool. For more information or to participate, please visit aon.com/rmi or email risk.maturity.index@aon.com.

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About Aon Global Risk Consulting

In today's challenging global environment, business risks are no longer isolated by industry, geography or country. Economic slowdown, regulatory changes, cyber crime, terrorism, increased competition, damage to reputation, and other critical risks are complex, inter-related and global in consequence. Aon Global Risk Consulting is the world's leading risk consulting organization. With nearly 1,700 risk professionals in 50 countries worldwide, AGRC consultants have the expertise and experience to recognize and address the unique challenges and opportunities that face our clients.

In close partnership with Aon's broking team, AGRC provides comprehensive and tailored solutions through a consistent global approach backed by a panel of industry experts. Our risk control, claims and engineering team consists of 600 professionals who support clients globally in the property and casualty risk control arena.

Our Risk Consulting business unit includes leading disciplines that include actuarial, business continuity management (BCM), enterprise risk management (ERM), risk management outsource and risk feasibility. Our Actuarial & Analytics (A&A) practice consists of more than 100 consultants including 47 actuaries having Property & Casualty (P&C) credentials.

Aon's Captive & Insurance Management practice is widely recognized as the leading captive manager, managing nearly 1,200 captives globally with local capabilities in over 30 countries.

About Aon

Aon plc (NYSE:AON) is a leading global provider of risk management, insurance brokerage and reinsurance brokerage, and human resources solutions and outsourcing services. Through its more than 69,000 colleagues worldwide, Aon unites to empower results for clients in over 120 countries via innovative risk and people solutions. For further information on our capabilities and to learn how we empower results for clients, please visit: <http://aon.mediaroom.com>.

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