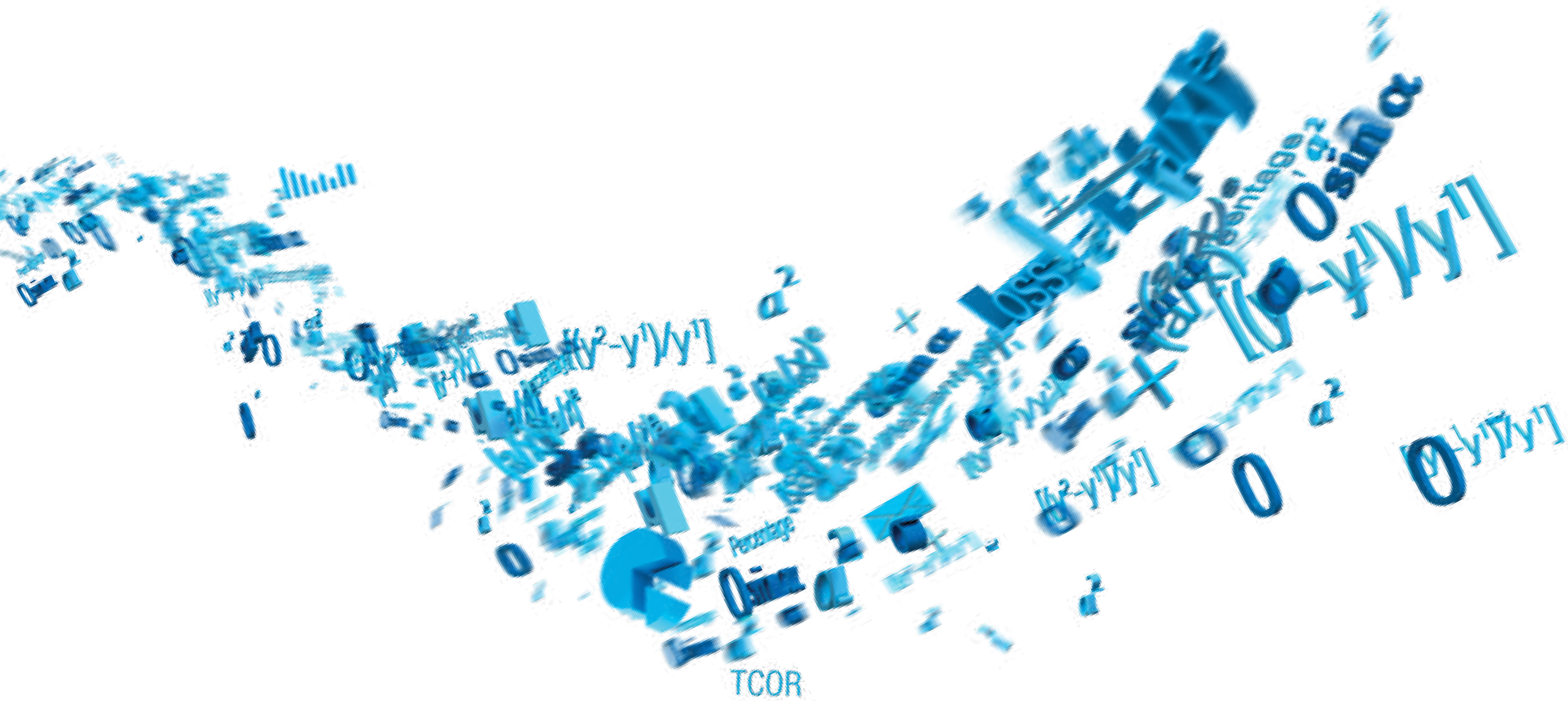
Aon Risk Solutions

Aon Risk Maturity Index

Insight Report, October 2014



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Executive Summary

The Aon Risk Maturity Index was designed to enable senior financial and risk leaders to assess, benchmark and track the development of their organizations' risk framework and risk processes. Over time, the aggregated data and findings have provided researchers from Aon plc and The Wharton School of the University of Pennsylvania with the ability to provide more complex and sophisticated insights around risk governance and predictive operational risk practices directly linked to the financial performance of an organization.

In today's ever-changing environment, the ability to anticipate opportunities and effectively understand and respond to risks is critical to the operational and financial well-being of organizations. This is increasingly important given that internal and external factors influencing organizational risk management practices continue to evolve.

Despite bull equity markets across most major stock indices in 2013 and 2014, findings from the Aon Risk Maturity Index have led key advisers from Aon to emphasize the importance of organizational risk management practices in a dynamic economic environment. Changes in geopolitical overtones, monetary policies of central banks and unexpected economic conditions have the ability to quickly reshape the financial landscape. Researchers from Aon and Wharton have uncovered new insights to help organizations better understand their organizational risk approach and framework, as well as risk management practices that will enable them to respond to an inevitable changing risk landscape.

The Aon Risk Maturity Index Insight Report, October 2014, has been developed by Aon, in close collaboration with The Wharton School of the University of Pennsylvania, as a means of driving marketplace insights on the relationship between the maturity of organizations' risk management practices and factors that drive organizational performance. In this edition of the Aon Risk Maturity Index Insight Report, we present new findings and analysis on the relationship between risk maturity, financial performance and risk governance.

1. We confirm past analysis from the Aon Centre for Innovation and Analytics (ACIA) on the inverse relationship between a higher Risk Maturity Rating and lower stock price volatility and the direct relationship between a higher Risk Maturity Rating and superior operational financial performance as continued evidence on the need for organizations to invest and enhance their risk management practices.
2. We also confirm previous findings that indicate a relationship between higher Risk Maturity Rating and the relative resilience of an organization's stock price in the immediate aftermath of significant risk events to the financial markets.
3. We introduce new findings on the relationship between Board Risk Oversight practices and risk maturity. Researchers find a correlation between increased Board involvement with regards to risk and risk management to stronger organizational risk practices.
4. We highlight ground-breaking findings from Wharton showing a direct relationship between risk-based forecasting and planning (RBFP) to firm volatility and earnings predictability.
5. Lastly, we introduce a cross-over analysis between the Aon Risk Maturity Index and the Aon Global Risk Management Survey, which demonstrates remarkable consistency in which risks are foremost in the minds of an organization's senior risk and financial leaders.

Accentuating the Upside, Smoothing the Downside

Prior research from Aon and Wharton observed that a direct correlation between higher risk maturity and improved stock price performance coincided with lower stock price volatility. Working with annual financial results from close to 300 publicly traded companies around the world; our research has found a continued correlation between higher risk maturity and improved operational financial performance, profitability and organizational resiliency. These important findings empirically confirm the importance of a robust, holistic risk management approach in predicting stronger and more consistent financial results over time.

The Relationship between Risk Management and Stock Price Performance and Volatility

A deviation from recent findings, Aon and Wharton researchers found no significant correlation between risk maturity and superior stock price performance (reference Graph 1 on page 3). Two key factors may help explain this deviation.

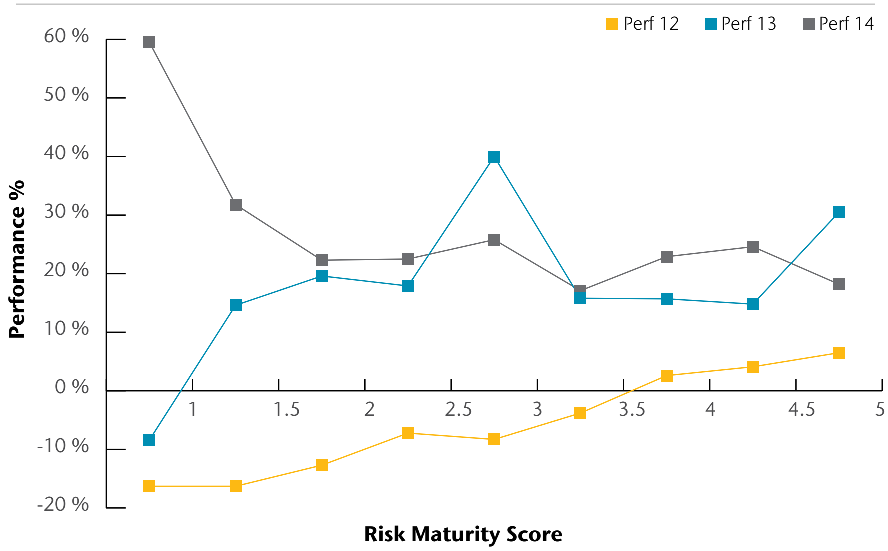
1. 2013/2014 Bull Equity Market Environment

Overall market sentiment is one of a multitude of factors that affects an organization's stock price. In a bull equity market environment, optimistic market sentiment has more of an equalizing effect on an organization's stock price than in a bear market environment.

2. Have markets already rewarded those organizations with more sophisticated risk management practices?

Building on past analysis that illustrated a statistical link between higher risk maturity and superior stock price performance it is possible any previous reward or premium that markets applied to organizations with enhanced risk management frameworks and practices has already been priced in to the organization's stock price, absent new discoveries regarding risk management practices within the organization.

Graph One: Stock Price Performance by Risk Maturity Rating



Return on Stock Price: Yearly return as of June

All references to Bloomberg as a source relate to market data only. All Risk Maturity data are presented by Aon plc.

During the period June 2013 – June 2014, researchers found no observable correlation between risk maturity and stock price performance despite earlier findings from 2011-2013 that indicated a statistical correlation

The continued statistical correlation between higher risk maturity and reduced stock price volatility helps validate the assumption by Aon and Wharton researchers that evidence of sophisticated risk management practices is one of many factors that help smooth out volatility in an organization's stock price. Differing from stock price performance, stock price volatility is a proxy to measure the underlying risk of shifts in an organization's stock price. Our research therefore emphasizes the importance of robust risk management practices even during a strong equity market cycle. Graph 2 highlights the finding on stock price volatility.

Graph Two: Stock Price Volatility by Risk Maturity Rating

Volatility: A measure of the risk of price moves for a security calculated from the standard deviation of the day to day logarithmic historical price changes. The 260-day price volatility equals the annualized standard deviation of the relative price change for the 260 most recent trading days closing price, expressed as a percentage.

All references to Bloomberg as a source relate to market data only. All Risk Maturity data are presented by Aon plc.

During the period June 2013 – June 2014, organizations with the highest Risk Maturity of 5.0 (Advanced) as a group exhibited a stock price volatility 34% lower than the group of organizations with the lowest Risk Maturity Rating of 1.0 (Initial). This is consistent with findings from 2011-2013.

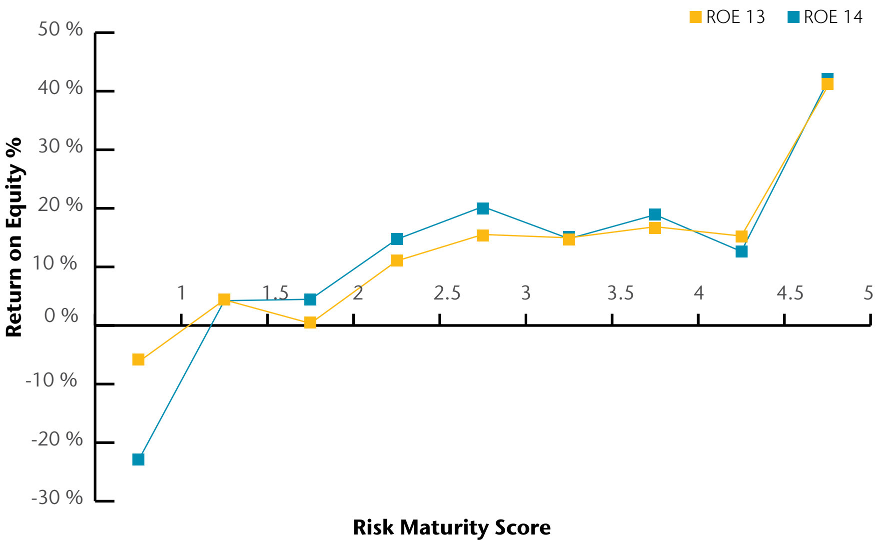
Although organizations that are not publicly listed cannot measure their performance via stock price volatility, the overall finding that risk management supports and stabilizes financial performance is significant for these firms as well, to the extent that they operate under similar performance expectations as publicly-traded companies.

Enhanced Risk Management and Superior Financial Performance

Financial Performance ratios such as return on assets and return on equity are one of many key determinants of organizational performance. We confirm previous analysis which indicates a statistical link between higher risk maturity and superior return on equity (reference Graph 3). Organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a 42% return on equity performance while organizations with the lowest Risk Maturity Rating of 1.0 (Initial) as a group exhibited negative return on equity performance of -23%. Expanding on this analysis, researchers from Aon and Wharton have established new findings indicating a statistical link between higher levels of risk maturity and superior Return on Assets (reference Graph 4).

This apparent relationship between enhanced risk management practices and superior financial performance is significant as market evaluation of such ratios contributes to an organization's ability to raise capital in the financial markets given these ratios are vital indicators of how effectively an organization allocates investment capital or how efficiently an organization creates value.

Graph Three: Return on Equity by Risk Maturity Rating

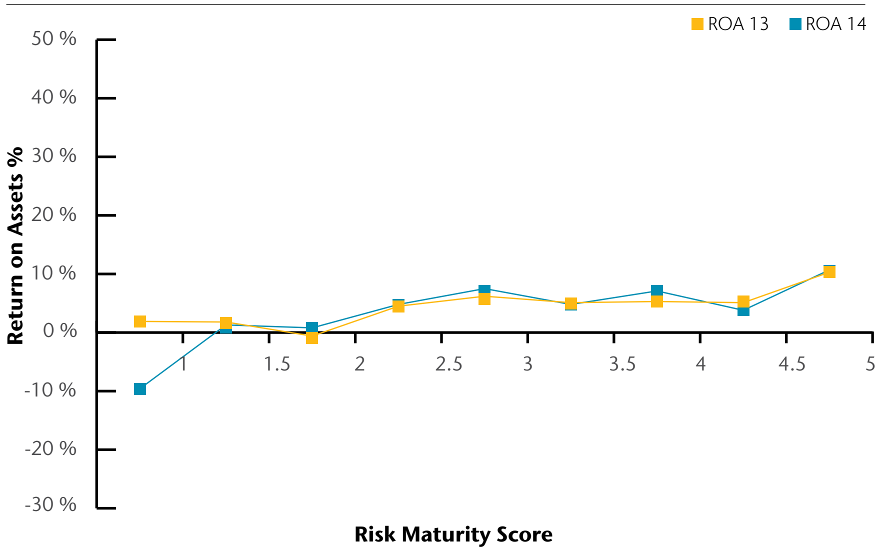


Return on Equity: Yearly return as of March

All references to Bloomberg as a source relate to market data only. All Risk Maturity data are presented by Aon plc.

During the period March 2013 – March 2014, organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a return on equity performance of +42% while organizations with the lowest Risk Maturity Rating of 1.0 (Initial) as a group exhibited a negative return on equity performance -23%. This is consistent with findings from the March 2012-March 2013 period.

Graph Four: Return on Assets by Risk Maturity Rating



Return on Assets: Yearly return as of March

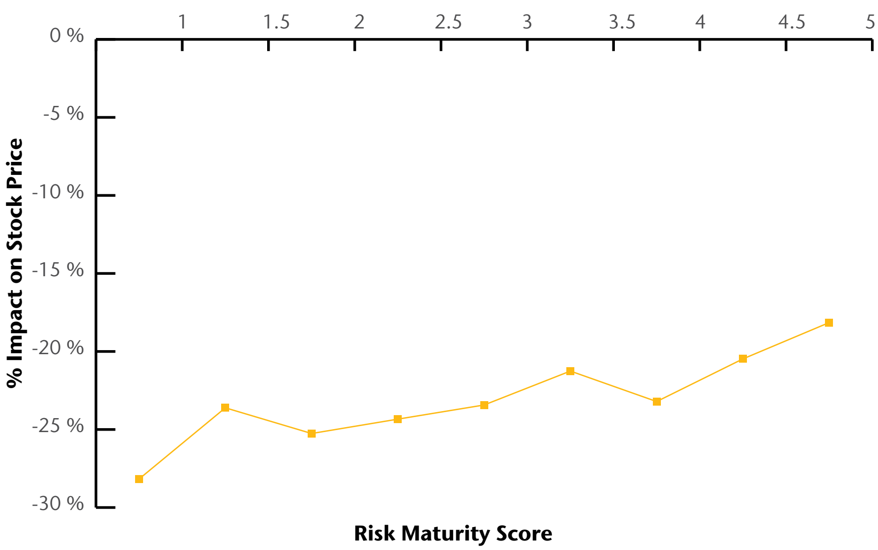
All references to Bloomberg as a source relate to market data only. All Risk Maturity data are presented by Aon plc.

During the period March 2013 – March 2014, organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a return on assets performance of +11% while organizations with the lowest Risk Maturity Rating of 1.0 (Initial) as a group exhibited a negative return on assets performance -10%. This is consistent with findings from the March 2012-March 2013 period.

Risk Management and Organizational Resiliency

Looking at the relationship between higher levels of Risk Maturity and organization resilience, researchers from Aon subjected the data to a new series of stress tests based on the Bloomberg Scenario Function to determine the effect of significant risk events on the sample set of securities. These scenarios simulate how securities would respond to a list of historical shocks if the same factors were to arise today. 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 immediate aftermath to significant risk events such as the 2008 Lehman Brothers default, the 2010 Greek Fiscal Crisis and the 2011 Japanese Earthquake. Graphs 5, 6, and 7 present these confirmed organizational resiliency findings.

Graph Five: Lehman Default



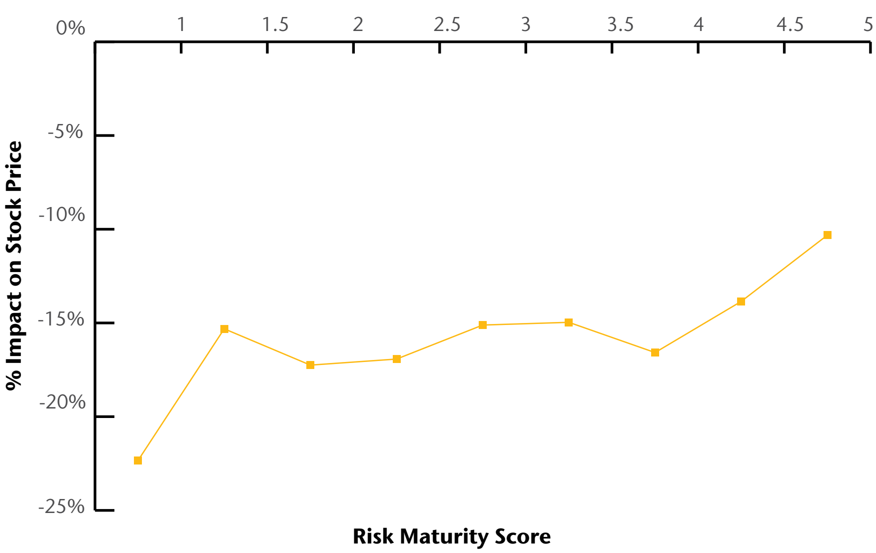
Source: Bloomberg

Returns on stock price over the month immediately following default of Lehman Brothers in 2008

Model
All Model Factors are implicitly shocked based on historical factor returns from 9/15/2008 to 10/14/2008

Findings
Organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a stock price performance of -18%. This represents a +36% enhanced stock price performance compared to organizations with the lowest Risk Maturity Rating of 1.0 (Initial) that as a group exhibited a negative stock price performance of -28%

Graph Six: Greek Crisis



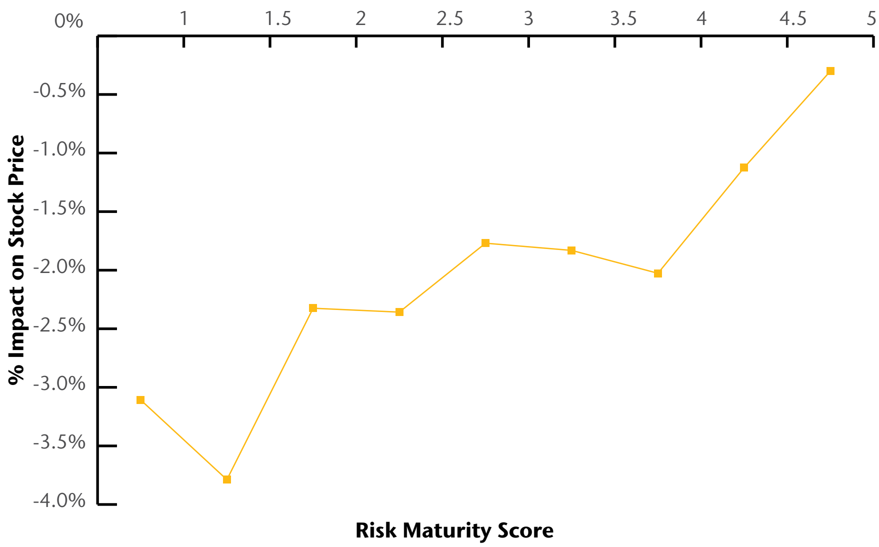
Source: Bloomberg

Greece was one of the fastest growing economies in the euro zone from 2000-2007. The cost of financing this growth however re in alarming high government deficits and debt levels relative to GDP. On April 27th 2010 the Greek debt rating was downgraded BBB+ to BB+. Returns on stock price over the period immediately following the 2010 Greek Fiscal Crisis.

Model
All Model Factors are implicitly shocked based on historical factor returns from 4/26/2010 to 6/8/2010

Findings
Organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a stock price performance of -10%. This represents a +54% enhanced stock price performance compared to organizations with the lowest Risk Maturity Rating of 1.0 (Initial) that as a group exhibited a negative stock price performance of -22%

Graph Seven: Japanese Earthquake



Source: Bloomberg

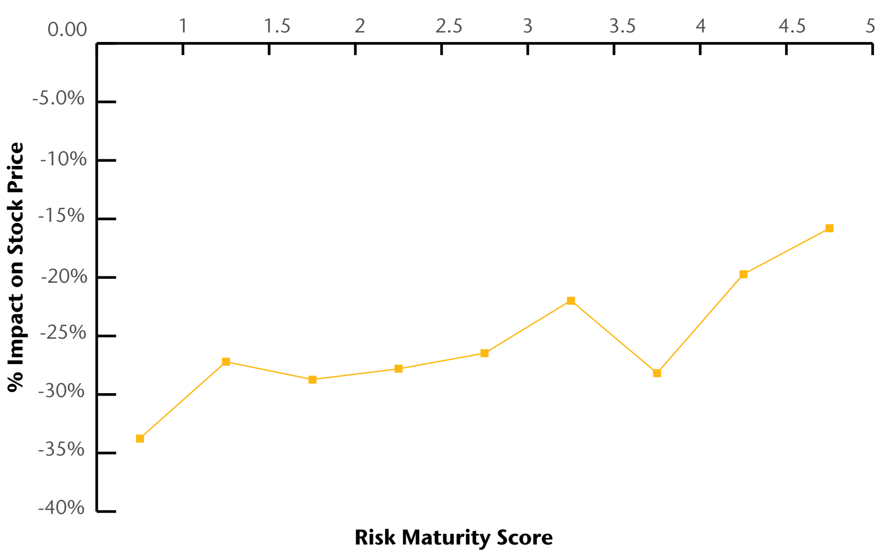
On March 11th a 9.0 magnitude earthquake occurred off the coast of Japan which also triggered a major tsunami, catastrophic loss of life and a meltdown at the Fukushima Daiichi Nuclear Power Plant. Returns on stock price over the period immediately following the 2012 Japanese Earthquake.

Model
All Model Factors are implicitly shocked based on historical factor returns from 3/10/2011 to 3/15/2011

Findings
Organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a stock price performance of -0.3%. This represents a +90% enhanced stock price performance compared to organizations with the lowest Risk Maturity Rating of 1.0 (Initial) that as a group exhibited a negative stock price performance of -3.1%

New for 2014, as a proxy for the recent 2014 Russian/Ukraine crisis, our researchers looked back and subjected the data to stress test for the 2008 Russian/Georgia Crisis event. The analysis once again confirmed a direct relationship between Risk Maturity and organizational resiliency as judged by the relative resilience of an organization's stock price in immediate aftermath of this event. Graph 8 below presents these findings.

Graph Eight: 2008 Russian/Georgia Crisis



Source: All references to Bloomberg as a source relate to market data only. All Risk Maturity data are presented by Aon plc.
War with Georgia and rapidly declining oil prices raise fears of an economic recessiotn within the region.

Model
All Model Factors are implicitly shocked based on historical factor returns from 8/7/2008 to 10/06/2008

Findings
Organizations with the highest Risk Maturity Rating of 5.0 (Advanced) as a group exhibited a stock price performance of -16%. This represents a +53% enhanced stock price performance compared to organizations with the lowest Risk Maturity Rating of 1.0 (Initial) that as a group exhibited a negative stock price performance of -34%

This research supports the conclusion that risk management policies 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.

Wharton analyzed responses from close to

700

organizations from around the world.

Finding the overall sophistication of board oversight practices has a significant positive impact on the organization's risk maturity.

Driving Results: Board Roles and Responsibilities, Financial and Risk Management Practices

What level of board involvement, financial analysis methods and risk management practices contribute to advanced risk maturity and more stable financial performance? What makes a robust organizational risk management framework?

Confirming the link between strong risk management practices and superior financial performance highlights the need for a better understanding of practical measures that an organization can take to effectively implement and support a sustainable risk management framework. Analyzing responses from the Aon Risk Maturity Index, researchers from Aon and Wharton have identified statistically relevant high-value practices related to governance, decision making and risk management to help organizations focus their resources more strategically as they develop that framework.

Board Risk Oversight Practices and Improved Risk Management

A variety of external events, including numerous inquiries into the causes of the financial crisis, changes in regulations and listing requirements, more stringent interpretations of directors' fiduciary responsibilities and the issuance of "best practice" governance standards by investors, rating agencies and shareholder advisory groups, have fostered rising expectations for Boards of Directors to exert greater oversight of organizational risk management practices. Utilizing responses from close to 700 distinct public, private and non-profit organizations from around the world, researchers from Wharton took a close look inside the black box of board risk oversight and assessed the association between ownership structure and legal origin to the sophistication of board oversight practices.

Researchers found that the assignment of board roles and responsibilities are a major determinant of board risk oversight practices. When the assignment of risk responsibilities is delegated to the board as a whole rather than solely to committees and when directors' risk management roles and responsibilities are included in their performance evaluations, the board tends to have more consistent understanding of the organizations top risks, existing risk management activities, quantified risk appetite and emerging risk profile, more extensive and frequent risk reporting, and greater consensus and communication between the board and the management team regarding risk management strategies. Ownership structure (public, private, non-profit) and country-level governance variables (code vs. common law legal origin and creditor and shareholder protections) are significantly associated with the assignment of board roles and responsibilities but have very little effect on specific board risk management practices.

When researchers examined the effects of board practices and risk governance on an organization's overall risk maturity, they found that the overall sophistication of board oversight practices has a significant positive impact on the organization's risk maturity, but solely the assignment of board roles and responsibilities does not. These results suggest that any impact of board responsibility or performance evaluation on organizational risk management practices occurs on the use of more sophisticated board risk practices.

Advisers from Aon have long emphasized the importance of board risk oversight practices given a board's mandate and ability to drive top-down organizational initiatives. From these research findings, it can be gleaned that the board should not only take an interest in risk management but also assign itself specific risk responsibilities and oversee risk management practices in order to drive and ingrain proper risk management practices into an organization's culture.

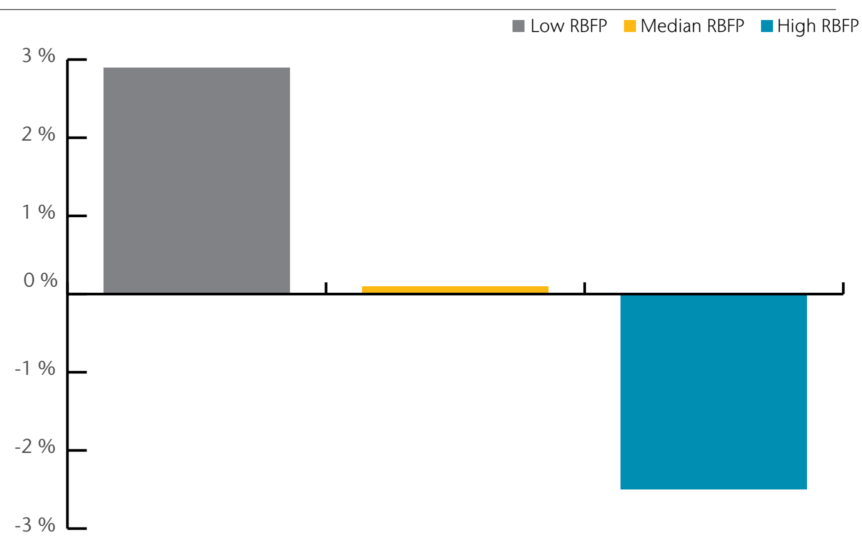
Risk-Based Forecasting and Planning (RBFP) and Organizational Volatility and Enhanced Earnings Forecast Accuracy

An organization's earnings forecast plays an important role in budgeting and cash management, capital justification, strategic planning as well as providing the foundation for investor communications. However, increasingly volatile environments have made it increasingly difficult for organizations to forecast earnings. Risk-based forecasting and planning (RBFP) provides one potential mechanism for organizations to improve the incorporation of risk considerations into integrated forecasting and planning.

Researchers from Wharton examined the extent to which risk-based forecasting and planning practices were associated with organizational volatility and earnings forecasts from close to 50 publicly-traded companies in the United States that disclose quarterly earnings forecasts. An RBFP score was formed for each organization based on their unique RMI responses regarding 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 found a strong correlation between sophisticated risk-based forecasting and planning practices and firm volatility as reflected in cash flows, earnings, sales and stock price. Lower firm volatility, in turn, is associated with greater management forecast accuracy and smaller forecast ranges. Researchers also found that more sophisticated RBFP practices have a direct association with more accurate earnings forecasts and smaller forecast ranges, even after controlling for volatility. These associations suggest that RBFP improves forecasting ability not only by facilitating the reduction of volatility in the organization's operations but also by improving the information used in the process itself. Risk management literature further suggests that the informational role of risk-based forecasting and planning is likely to be most important in firms where volatility is greatest. Consistent with these claims, researchers at Wharton found the association between RBFP and forecasting performance to be strongest in settings where the organization faces the greatest firm volatility. Graphs 9, 10, and 11 highlight the groundbreaking findings on risk-based forecasting and planning.

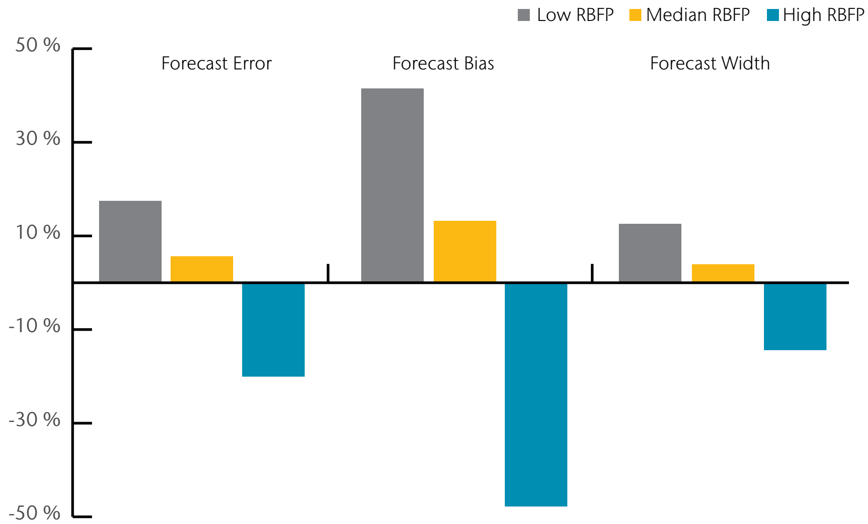
Graph Nine: Estimated Change in Volatility Ranking



Analysis is based on work by Christopher Ittner and Jeremy Michaels of The Wharton School
Firm volatility as reflected in cash flows, earnings, sales and stock price

Analyzing quarterly earnings forecasts from close to 50 publicly-traded companies in the United States, researchers find that organizations with strong RBFP practices exhibit a 2.5% reduction in firm volatility while organizations with weak RBFP practices exhibit a 2.9% increase in firm volatility

Graph Ten: Estimated Percentage Difference From Average Earnings Forecast

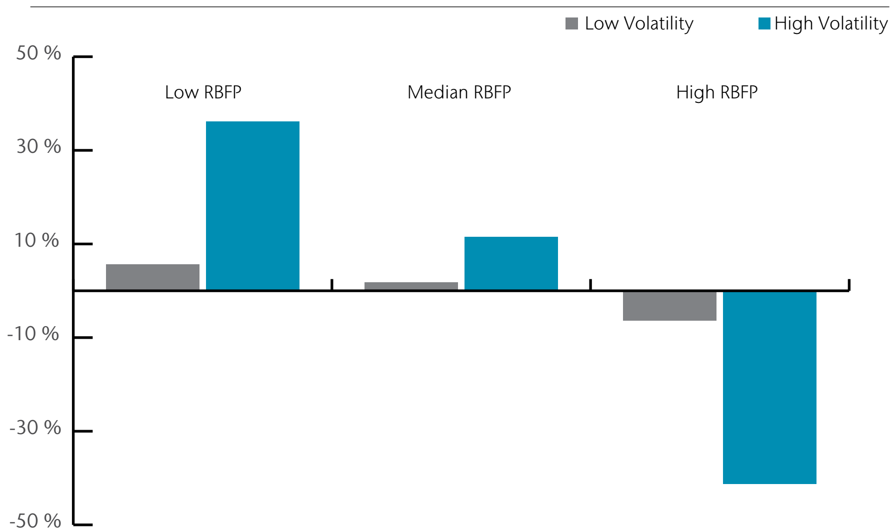


Analysis is based on work by Christopher Ittner and Jeremy Michaels of The Wharton School

Forecast Error: *absolute value of actual earnings per share less management's forecast, as a percentage of price at the beginning*
Forecast Bias: *similarly defined as error, except we do not take the absolute value of the forecast error*
Forecast Width: *the upper bound of the forecast range minus the lower bound, as a percentage of beginning of period price*

Analyzing quarterly earnings forecasts from close to 50 publicly-traded companies in the United States, researchers find that organizations with strong RBFP practices exhibit a 20% reduction in forecast error, 47.7% reduction in forecast bias and a 14.3% reduction in forecast width while organizations with weak RBFP practices exhibit a 17.5% increase in forecast error, 41.5% increase in forecast bias and 12.5% increase in forecast width

Graph 11: Estimated Percentage Difference from Average Earnings Forecast Error



Analysis is based on work by Christopher Ittner and Jeremy Michaels of The Wharton School
Firm volatility as reflected in cash flows, earnings, sales and stock price

Analyzing quarterly earnings forecasts from close to 50 publicly-traded companies in the United States, researchers find that for organizations with high firm volatility, weak RBFP practices increase average earnings forecast error by 36.1% while strong RBFP reduce average earnings forecast error by 41.2% in organizations with high firm volatility.

Crossover between Aon Risk Maturity Index and Aon Global Risk Management Survey Responses

Along with insights from the Aon Risk Maturity Index, Aon also releases bi-annual findings from its Global Risk Management Survey (GRMS). Leveraging data from seventy (70) risk or financial leaders who participated in both surveys, researchers at the Aon Centre for Innovation & Analytics (ACIA) have examined and identified differences in risk priorities between organizations with below average risk maturity and organizations with above average risk maturity.

Top Five Risks Identified by Below Average RMI Scores

1. Damage to Reputation/Brand
2. Regulatory/ Legislative Changes
3. Failure to Attract/ Retain Top Talent
4. Business Interruption
5. Political Risks/ Uncertainties

Top Five Risks Identified by Above Average RMI Scores

1. Economic Slowdown
2. Regulatory/ Legislative Changes
3. Damage to Reputation/Brand
4. Business Interruption
5. Failure to Attract/ Retain Top Talent

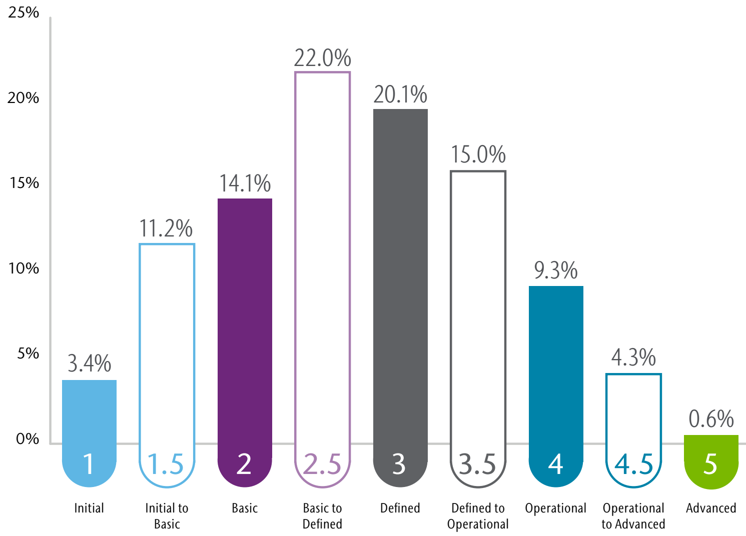
With one exception for each sample set, the cross-sectional responses demonstrate a remarkable consistency in which risks are foremost in the minds of an organization's senior risk and financial leaders.

As discussed at the beginning of this report, in today's ever-changing environment, an organization's ability to anticipate opportunities and effectively understand and respond to risks is critical. While organizations appear to identify similar opportunities and risks, this research from Aon suggests that an organization's level of planning, preparedness and response to these risks in distinctly different.

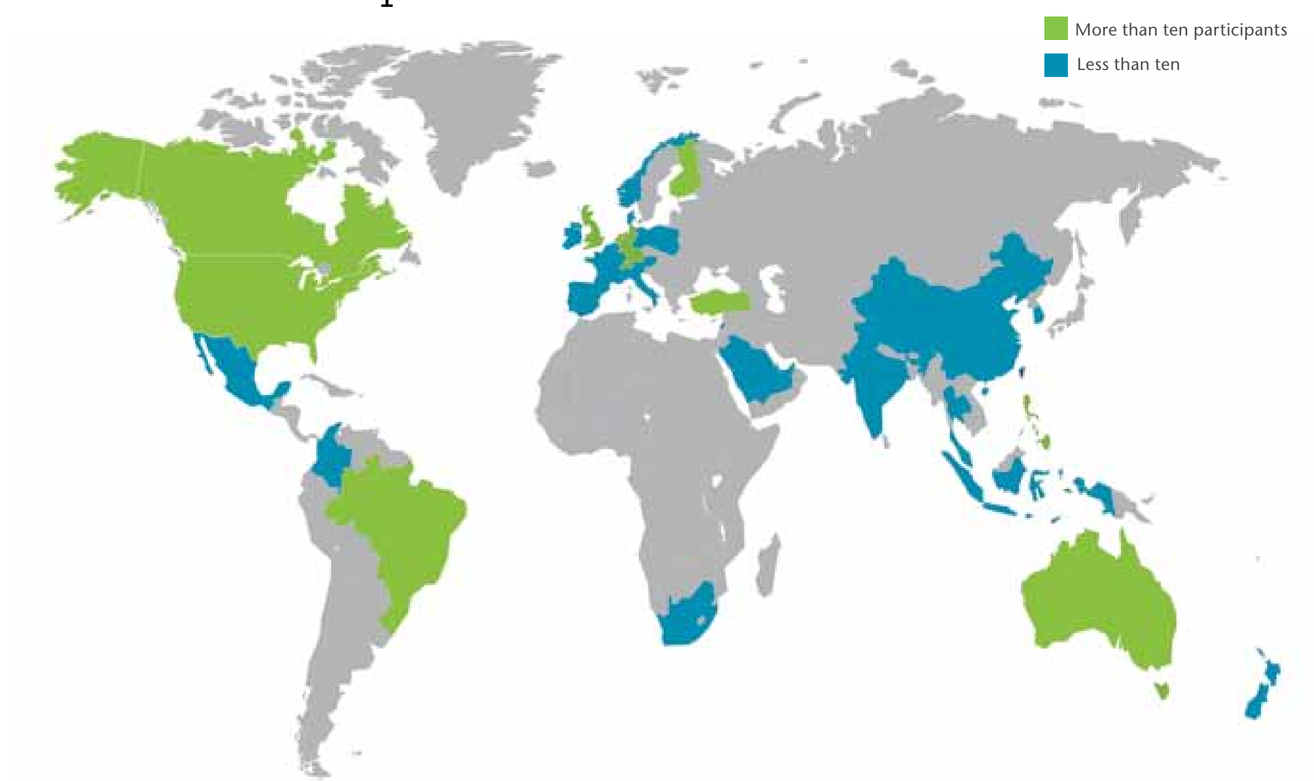
The latest findings in this report regarding risk maturity and firm volatility, financial performance, organizational resilience, board practices and enhanced earnings forecast accuracy further reinforce the inference that organizations with above average risk maturity are better situated for significant changes in the economic landscape.

Global Average is "3" – Defined

Aon Risk Maturity Index: Distribution of Risk Maturity Ratings (September 2014)



Reach & Participation is Global



25+ Industries

5 Continents

10 Languages

The Ten Characteristics of Risk Maturity

The Aon Risk Maturity Index examines specific practices and structures related to ten characteristics of Risk Maturity. These ten characteristics are further broken down into 40 specific components that are scored on a 1 (Basic) to 5 (Advanced) scale similar to the overall Index.

1. **Board-level understanding of and commitment to risk management as a critical factor for decision making and for driving value**

2. **A senior-level executive who drives and facilitates key risk management processes and development**

3. **Transparency of risk communication**

4. **A risk culture that encourages full engagement and accountability at all levels of the organization**

5. **Identification of existing and emerging risks using internal and external data and information**

6. **Participation of key stakeholders in risk management strategy development and policy setting**

7. **Formal collection and incorporation of operational and financial risk information into decision making and governance processes**

8. **Integration of risk management insights into human capital processes to drive sustainable business performance**

9. **Use of sophisticated quantification methods to understand risk and demonstrate added value through risk management**

10. **A move from focusing on risk avoidance and mitigation to leveraging risk and risk management options that extract value**

Concluding Remarks

The growth and evolution of the Aon Risk Maturity Index has enabled the tool to become an industry-leading, global database on risk management practices. Results from the Index have yielded valuable findings around the correlation of advanced risk management practices and financial performance, as well as practical insights to assist in the development of a mature risk management framework 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 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 1,800 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 the leading global provider of risk management, insurance and reinsurance brokerage, and human resources solutions and outsourcing services. Through its more than 66,000 colleagues worldwide, Aon unites to empower results for clients in over 120 countries via innovative and effective risk and people solutions and through industry-leading global resources and technical expertise. Aon has been named repeatedly as the world's best broker, best insurance intermediary, best reinsurance intermediary, best captives manager, and best employee benefits consulting firm by multiple industry sources. Visit aon.com for more information on Aon and aon.com/manchesterunited to learn about Aon's global partnership with Manchester United.