



Executive
Summary

Corporate Risk Appetite

How to Specify It and Apply It Consistently

**Stanford Strategic Decision and
Risk Management Certificate Program**

Webinar
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Corporate Risk Appetite: How to Specify It and Apply It Consistently

- Moderator: **Carl Spetzler**, *Chairman and CEO, Strategic Decisions Group; Program Director, Stanford Strategic Decision and Risk Management Certificate Program*
- Speakers: **John Celona**, *ERM Initiative Leader, SDG*
Paul Marca, *Deputy Director, Stanford Center for Professional Development*
Bob Stibolt, *Managing Director, Galway Group*
Hannah Winter, *Associate Program Director, Stanford Strategic Decision and Risk Management Certificate Program*

Overview

Many organizations squander their attractive, but risky, opportunities because they can't judge risks. A well-specified risk appetite can replace confusion, inconsistency, and personal risk aversion and provide a universal yardstick for adjusting value for risk.

When the stakes are large enough to have a major impact on corporate performance, applying hurdle rates is simply not enough. Risk discounting is essential. To successfully apply quantified risk appetite to decisions, organizations must strive for alignment around one corporate risk policy. Alignment is powerful because it enables the entire company to pursue opportunities that represent smart risks.

Context

The panelists defined corporate risk appetite and discussed how it can be applied for better business decision making.

Key Takeaways

Embracing business uncertainty has two aspects: characterizing uncertainty and applying a risk appetite.

Characterizing value and risk is becoming an established practice in many leading corporations worldwide. For example, it has been widely adopted by upstream oil and gas companies, as well as pharmaceutical companies. In addition, many corporate finance organizations use Monte Carlo simulations to characterize value and risk related to capital investments.

However, the use of a quantified risk appetite is still a new concept. In the financial world, return on investment makes no sense when cash flows fluctuate from negative to positive because there are multiple rates of return. The same problem exists with projects where the risk profile varies over time. A formula and a metric are needed to capture how people view risk, similar to the way discounted cash flows quantify how people view present and future dollars. A consistent approach for valuing risky opportunities significantly changes the way companies invest shareholder dollars and the results they achieve.

When it comes to quantified risk appetite, corporate behavior differs from academic finance theory.

Quantified risk appetite or QRA can be determined by assessing the point of indifference between "sure" and "risky" alternatives. QRA in most corporations is an effective approximation for investment decisions. It is similar to using a uniform discount rate

for calculating net present value. In the decision sciences, QRA is referred to as "risk tolerance."

When SDG asked institutional investors, boards, and CEOs what level of risk they would be willing to assume for an investment decision, most indicated that the maximum downside loss they would be willing to tolerate was between 10% and 25% of the company's shareholder value.

However, these results differ greatly from the theoretical finance literature. In that literature, finance professors suggest that organizations should be indifferent to risk taking if the upside has a 1% advantage over the downside. SDG believes that a good rule of thumb for a risk appetite is between one fifth and one tenth of the company's equity market capitalization.

Hurdle rates are not enough; smart business decision making also incorporates effective risk discounting.

For major business decisions, SDG recommends using probabilities to explicitly quantify major uncertainties and the resulting cash flow scenarios. It is also necessary to adjust for timing and risk appetite. Instead of using hurdle rates, organizations should apply a cost of capital to discount cash flows for time and for general capital market risk aversion.

When the stakes are large enough to have a major impact on corporate performance, risk discounting is essential. To reflect the risk exposure associated with a decision, quantified risk appetite can be used to determine the certain equivalent value. The certain equivalent is the lowest cash amount that will compensate for participating in a venture with an uncertain outcome. This value varies with the organization's attitude toward risk and is therefore a better approximation of an investment's expected value.

"Apply the quantified risk appetite to a specific decision by using the certain equivalent. It is straightforward and easily understood by decision makers."

— Carl Spetzler

Organizational alignment around risk aversion can prevent rejection of value-creating projects.

A manager's level of risk aversion is often more dependent on perceived budget constraints than on a corporate perspective of risk. This creates a value gap, because higher-risk, value-creating projects are rejected. The lack of organizational alignment around risk was confirmed by webinar participants. In an online poll, 24% of participants strongly disagreed and 39% disagreed when



asked whether their firms were aligned with a quantified risk appetite that is applied consistently throughout the enterprise.

To address the value gap problem, lower-level groups should present higher-risk opportunities to the management team for evaluation. In terms of alignment, it is also necessary to get executives talking about risk and to agree on one policy. Even members of the same leadership team exhibit vastly different risk preferences. The power of alignment is significant. It allows the whole organization to pursue opportunities that represent smart risks.

Making risk appetites explicit results in better organizational decision making and project execution.

Both SDG and the Galway Group found that when companies quantify risk and have a unified attitude toward risk, their decision making is more systematic and successful.

- *Big LNG (Liquefied Natural Gas)*. In this case, a company had broad agreement that an LNG project was an attractive opportunity, based on the net present value and return metrics. However, there was a significant risk that the LNG facility would be underutilized and some possibility that the \$500 million investment would not pay back.

While most executives agreed to pursue the project, progress was slowed by questions related to execution. Interviews with the executive team revealed a wide range of risk appetites, which drove indecision around project execution. Many members of the executive team felt that the project's certain equivalent was actually negative. After an open discussion, the group agreed that the corporate risk appetite should be higher and a strategy yielding the highest certain equivalent was pursued.

"Explicit discussions about risk appetite can result in better organizational alignment and project execution."

— Bob Stibolt

- *Monetizing intellectual property*. Through acquisitions, a medium-sized high tech company had several patents that were unrelated to its core business. It was considering either selling the patents or asserting and licensing them. The organization hired a firm to analyze the patents and match them against other companies' product lines.

Several patents were essential for large technology businesses. The potential expected net present value revenues from licensing were in the single-digit billions of dollars. On the other hand, potential revenues from patent sales were in the low tens of millions of dollars. The analysis also revealed that the counter assertion liability might reach hundreds of millions of dollars. For a company with a \$200 million market value, the liability associated with assertion and licensing could mean bankruptcy. As a result, selling the patents was the more attractive option. To really understand what this opportunity was worth, the company had to consider the associated risk.

"A patent licensing project, which originally looked like the ultimate gravy train, literally turned out to be a 'bet the company' decision once risk was taken into consideration."

— John Celona

- *Hedging*. A company's energy marketing division was managing offtake from the firm's natural gas production and power-generation assets, as well as from third-party producers. This implied the possibility of large losses due to fluctuations in commodity prices. The risk was highly concentrated in the prompt year, based on the terms of agreements with third parties and lack of near-term flexibility in the firm's capital commitments to its own assets.

Agreement about risk appetite proved to be the key to developing a more systematic and successful hedging strategy. Once risk appetite was made explicit, the tradeoff became one of market risk versus the cost of hedging. Since there was relatively greater flexibility to adapt the organizational and capital spending commitments as the term was extended, risk appetite was viewed by executive management as higher for the longer term.

Other Important Points

- **The Stanford Strategic Decision & Risk Management ERM Index and Assessment.** This survey, which measures organizations' progress toward achieving value-driven ERM, is currently being beta tested. Webinar attendees are eligible to participate. Results will provide a benchmark of how an organization compares to industry leaders on several dimensions of value-driven ERM.

About the Stanford Center for Professional Development

The Stanford Center for Professional Development offers focused educational programs for executives—including a certificate program in Strategic Decision and Risk Management (SDRM)—that provide the tools for capitalizing on the opportunities of value-driven ERM. SDRM education is delivered flexibly through programs on campus at Stanford, online learning programs, and programs delivered at a company's workplace by SDG. For more information, visit <http://strategicdecisions.stanford.edu> or call 866-234-3380.

About Strategic Decisions Group

Strategic Decisions Group is a management consulting firm renowned for its expertise in strategic decision making, risk management, and shareholder value creation. Through a collaborative, team-based approach, SDG helps its clients find innovative, creative strategies to thrive today, while also helping them build internal competencies and more effective decision-making processes to meet competitive challenges in the future. For more information, visit <http://www.sdg.com>.



Speaker Biographies

Carl Spetzler (Moderator)

Chairman and CEO, SDG; Program Director, Stanford Strategic Decision and Risk Management Certificate Program

Over the past three decades, Carl Spetzler has been a leader in strategy and innovation processes, helping corporate leaders cope with the lack of explicit strategic alternatives, deal with the complexities of uncertainty and risk over long time horizons, and achieve lasting change. In addition to serving as the chairman and CEO of SDG, Dr. Spetzler advises top management and boards of directors to improve the quality of decisions and decision-making processes. His methods stress that boards be collaboratively engaged in a few truly strategic decisions rather than simply serve in an approval role on a myriad of items.

Dr. Spetzler serves on the boards of the Illinois Institute of Technology and the Decision Education Foundation. In 2004, Dr. Spetzler received The Ramsey Medal, the highest honor awarded by the Decision Analysis Society of INFORMS for lifetime contributions to the field. In 2006, he was elected to the SRI Hall of Fame for his leadership in the growth of decision analysis at SRI and for his key role in instigating a fundamental change in the US financial service industry. In 2008, Dr. Spetzler was named by *Treasury & Risk* magazine one of the 100 most influential people in finance for his work in Enterprise Risk Management.

John Celona

ERM Initiative Leader, SDG

John Celona, a senior consultant, leads the ERM initiative at SDG. He has more than 25 years of experience developing and implementing business plans and strategies for senior executives in Fortune 500 companies in many industries.

Mr. Celona, an attorney, has also consulted extensively on litigation strategy and litigation risk analysis and management, including cases where potential liabilities were in the billions of dollars. He is co-author of *Decision Analysis for the Professional*, first published in 1987 and now in its fourth edition.

Paul Marca

Deputy Director, Stanford Center for Professional Development

In his 20+ years at Stanford, Paul Marca has developed classroom and online educational programs at the intersection of university and business. Mr. Marca assesses industry needs to identify opportunities for effective program development, while fostering new opportunities for partnerships within the Stanford Center for Professional Development. His is a strategic development and new business development role in SCPD.

Bob Stibolt

Managing Director, Galway Group

Robert D. (Bob) Stibolt's 28 years of experience in the energy industry have covered a broad range of topics ranging from economic evaluation and risk analysis for upstream oil & gas exploration and development opportunities to merchant power and LNG project development, long-dated structured energy transactions, energy trading, and risk management.

Most recently, Mr. Stibolt was senior managing director and chief risk officer of Bear Energy LP and, following the merger of the Bear Stearns Companies, Inc. into JP Morgan Chase, managing director in the JP Morgan Global Commodities Market Risk organization. Earlier in his career, Bob was senior vice president of strategy, portfolio & risk management for Suez Energy North America, Inc., a partner with Strategic Decisions Group, vice president of risk strategy for Sonat Energy Services, manager of decision analysis for Atlantic Richfield Company, and a project manager with Natomas Company.

Mr. Stibolt has published several articles on the topics of real options and risk management, and also was among the founders of the Committee of Chief Risk Officers (CCRO) as SUEZ Energy's representative.

Hannah Winter

Associate Program Director, Stanford Strategic Decision and Risk Management Certificate Program

Hannah Winter oversees SDG's relationship with the Stanford Center for Professional Development, a partnership that has developed the Strategic Decision and Risk Management certificate program for mid-career professionals.

Before assuming this role, Ms. Winter was Human Resources Officer at SDG, responsible for training and professional development of SDG's consulting staff and for managing aspects of the partner election process.

Ms. Winter has been an SDG consulting partner, developing business and marketing strategy in the automotive, consumer electronics, telecommunications, oil and gas, and utility industries. In one assignment she led a management team in developing a strategy for the Asia-Pacific region; and, in another assignment, she developed a go-to-market strategy for a global automobile manufacturer to enter the Japanese vehicle market.

Ms. Winter received an MBA from the Stanford University Graduate School of Business and an MS and a BS in electrical engineering from Stanford University.

