

## SOCIETY OF ACTUARIES

Article from:

## Risk Management

March 2010 – Issue 18

## Integrating Risk and Strategy to Derive Competitive Advantage

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**OFTEN RISK MANAGEMENT** and business strategy development remain segregated at most of the organizations; even though most Chief Risk Officers and senior executives recognize risk management should be an integral part of the overall business strategy. The integration of risk management within strategy development provides organizations with a broader set of options resulting in significant competitive advantage. The risks and opportunity costs in accepting status quo are too high otherwise. Organizations seeking to integrate the two functions must take deliberate steps to challenge traditional paradigms in order to overcome barriers. Typically risks are evaluated and addressed around the execution of business plans as opposed to evaluating risks associated with the business strategy in its entirety. Evaluation of risks at the execution is important, however to derive optimum impact it is important to evaluate risks at the strategy level also. The figure below illustrates, a robust risk management framework should be integrated at both the strategy development and execution stages. If implemented well, every element of the framework, i.e., risk identification, risk measurement, risk analysis, risk mitigation, risk mon-



itoring and risk reporting should be revealing key insights that would assist in driving major strategic and execution decisions. It is also important to note that the risk manage-



Azaan Jaffer is a consultant with Risk & Strategy Consulting in Toronto. He can be reached at azaanj@rogers.com. ment framework can and should be employed at all levels, ranging from transaction, product, process, business unit to enterprise–wide level in order to derive sustainable competitive advantage. In other words, risk management should be an integral component of the organization's culture at all levels.

This article focuses on risk mitigation strategies and intends to demonstrate how an organization, a financial institution in this case, realized significant positive impact on its bottom line by integrating risk management in its overall business development strategy. One of the key objectives of a risk mitigation strategy is to 'optimize' on the potential risks by deliberately designing appropriate mitigation strategies to address identified risks. Every risk presents potential opportunities if managed pro actively. There are multiple ways to mitigate risks, ranging from risk control, risk retention, risk transfer, risk financing, risk redistribution to risk 'avoidance'. For the most part risk 'avoidance' is not a viable option.

In this case study, the integration process started with a business planning session where business objectives were developed and strategies were formulated to meet these objectives. An element of the strategy was to develop, design and launch a new product. Once initial market research was completed and the results suggested the viability of the product, risk management process was invoked. Key risks inherent in the product were identified, quantified and analyzed. It was important to identify risks through the entire value chain, ranging from product development to fulfillment in order to ensure all potential risks were addressed. Other relevant internal initiatives were leveraged in the risk identification process. Two key risks were identified, quantified and analyzed for this product (Loss T1 and Loss T2). The quantification of the identified risks was based on loss experience of a similar product that was launched in the prior years and supplemented by additional industry loss experience. However, the loss experience was adjusted to reflect the attributes of the new product and the current market and regulatory environment. Based on the underlying data and qualitative insights associated with these two loss types it was determined that there was a potential correlation between these loss types, hence an opportunity to derive additional benefit from portfolio effect. As part of the quantification exercise a stress test of plausible extreme scenarios was also conducted. It is imperative to internalize that risk

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quantification is directionally sound and has to be a means to a bigger end as opposed to an end itself.

The results from the quantitative analysis are illustrated in the chart below.

	Loss T1	Loss T2	Loss Portfolio	Summation	Portfolio	
					Effect	
	(1)	(2)	(3)	(4)=(1)+(2)	(5)=(4)-(3)	PRICED IN THE
Expected	\$368,744	\$239,819	\$608,563 -			PRODUCT
50% Perc	\$210,646	\$138,674	\$438,867	\$349,320	\$(89,547)	
55% Perc	\$264,889	\$172,586	\$510,659	\$437,475	\$(73,184)	
60% Perc	\$325,056	\$208,745	\$588,114	\$533,801	\$(54,312)	
65% Perc	\$388,256	\$249,302	\$679,699	\$637,558	\$(42,141)	RISK
70% Perc	\$461,293	\$297,227	\$777,975	\$758,520	\$(19,455)	RETAINED
75% Perc	\$547,657	\$351,646	\$884,244	\$899,303	\$15,060	
80% Perc	\$645,489	\$418,336	\$1,021,314	\$1,063,825	\$42,511	
85% Perc	\$773,931	\$504,180	\$1,198,691	\$1,278,111	\$79,420	
90% Perc	\$955,857	\$618,070	\$1,474,463	\$1,573,927	\$99,464	
95% Perc	\$1,387,446	\$900,506	\$1,902,220	\$2,287,952	\$385,732	
99% Perc	\$2,147,919	\$1,447,883	\$2,935,786	\$3,595,802	\$660,016	RISK
99.865% Perc	\$3,060,328	\$2,215,524	\$4,080,463	\$5,275,851	\$1,195,389	TRANSFERRED
99.9% Perc	\$3,095,163	\$2,308,212	\$4,157,372	\$5,403,375	\$1,246,003	
Note: the correlation between Loss T1 and Loss T2 is assumed to be 0.5.						

Based on the results of the quantification exercise the following key insights were derived and formed the basis for key strategic decisions.

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KEY INSIGHTS AND DECISIONS	IMPACT
Incorporating expected and a portion of unexpected losses in the pricing of the product.	Improved profitability of the product without sacrific- ing market share. Market dynamics were considered in the final pricing. However the key outcome was implementation of risk based pricing.
Fact and analysis based decision to retain risk at 95 percent confidence level; in this case the aggre- gate annual retention was set at \$2,000,000 which was well within the organization's risk tolerance level as opposed to \$500,000 in the past.	The higher risk retention levels resulted in 25 per- cent relief in insurance premium. Also minimized the "dollars traded" with the underwriter for lower level retention. The results from the analysis were also instrumental in negotiating reinsurance premiums.
Credible and defensible capital allocation to the business units.	Capital associated with retained risk was attributed to the appropriate business unit resulting in a more reflective measure of risk adjusted return on capital.
Understanding of underlying key risk drivers asso- ciated with various products, processes and chan- nels.	Ability to meaningfully manage risks resulting in a significant decrease in loss experience resulting in reduction of expenses and capital consumption.
Development of Key Risk Indicators (KRI) as a result of the above. These KRIs became an integral component of risk monitoring and risk reporting.	Incorporated KRI in the business unit's risk dash board resulting in pro active management of risks.

Since the outcome of the quantification exercise resulted in significant positive impact on the bottom line, a similar analysis was conducted for other products resulting in additional relief in insurance premium. In some cases there was a relief of over 30 percent over a span of multiple years. The analysis also resulted in better understanding of the underlying key risk drivers for respective products. Appropriate mitigating strategies were developed and implemented resulting in additional cost and capital savings. Further analysis was conducted to identify potential correlation between loss types amongst products resulting in additional savings.

"To derive maximum value from risk management initiatives it is important for organizations to embrace risk management within their culture and not view it as a regulatory imposition." In order to derive maximum value from enterprise wide risk management initiatives, organizations must recognize and embrace that risk management has an integral role at all levels and it should be integrated in its culture. The organization should not view risk management only as a regulatory imposition. If the framework is dynamic and robust and is implemented in the context of strategy development and at the operations and execution level, then most of the regulatory requirements would be addressed. In order to have a dynamic and robust risk management framework it is imperative for organizations to also leverage other relevant internal initiatives, such as SOX, internal audits, Basel II, Solvency II, etc. to minimize redundancies and optimize on the efforts.

This case study reflects the significant value derived by the financial institution in integrating risk management upfront during strategy development which resulted in significant cost savings and a competitive advantage. One of the key success factors in this case was the fact that there was a commitment at the senior level of leadership to integrate risk management at the strategy level and also implementation of a structured methodology to implement all the elements of the risk management framework.