

STRATEGIC THOUGHT GROUP/08 WHITE PAPER

Credit crunch, credit rating and a paradigm shift

A response to Standard & Poor's announcement on May 7th, 2008 regarding ERM assessment. From 2009, Standard & Poor's will incorporate the quality of enterprise risk management as a key component of the assessment of credit ratings for all listed companies. This will act as a catalyst for a wave of change in business leadership and performance management around the world.

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Introduction

Enterprise Risk Management (ERM) is a management process used to help organizations deliver against their business objectives and plans. It is a process that seeks to identify, measure and manage the threats and opportunities of the business. It increases corporate value, increases revenues, reduces costs and manages the risk/reward opportunity that all businesses have. Strategic Thought Group is a world leader in ERM through its ERM software application platform called Active Risk Manager.

Our focus in this paper is purely on the new risk/reward paradigm firms are now facing as a result of the recent Standard & Poor's announcement on the application of Enterprise Risk Management analysis to corporate ratings, May 7h 2008.

Standard & Poor's ('S&P') has now announced that it will enhance its rating process for non-financial services companies through an Enterprise Risk Management ('ERM') review. For these companies this offers the opportunity of increasing the assessed credit rating, or preventing a downgrade, and as a result offers significant benefits of reduced funding costs and increased competitiveness.

Specifically the following statements by S&P mean that most organizations will need to change their Enterprise Risk approach, processes and systems to meet the requirements. Specifically ERM is about:

- More than compliance and disclosure requirements
- Risk/reward, rather than cost/benefit
- Attending to all risks, not just board level risks
- Assessing likely losses against tolerance (appetite)
- Intelligently selecting risks requiring management
- Communicating efforts required to manage the risk profile
- More than a collection of longstanding and disparate practices

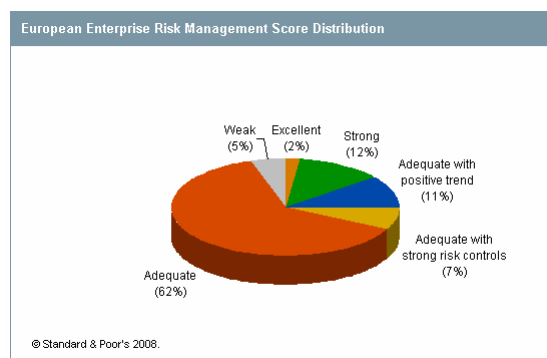
This paper discusses this opportunity, and how to achieve the benefits it offers.

Background

Standard & Poor's (S&P), one of the world's leading Credit Rating Agencies, has introduced the assessment of Enterprise Risk Management (ERM) capability into their corporate credit ratings assessment process for all rated companies. They intend to have reviewed each firm's policies on ERM by Q3 2009. This process will commence in Q3 2008 whereby S&P will start discussions with firms to initiate the benchmarking process in terms of what constitutes a good practice ERM framework for a particular sector. The key driver for this initiative is to ensure that there is a consistent approach to assessing company credit ratings across the different sectors as well as ensuring ERM becomes a core competency which can act as an indicator on the quality of management and credit worthiness of the business.

The process has already been introduced in the banking sector for the best part of a decade, and within insurance companies and US energy companies with trading operations, since April 2006. The aim is to have global coverage of all sectors, not just financial services. It is interesting to note that after two years of assessments,

aggregate findings show that ERM is becoming more important to European insurance companies and they are trying to embed it more effectively within their decision-making processes (see chart).



As an example, following Royal & Sun Alliance's rating upgrade to A in December 2007, S&P commented that: "The ratings reflect Standard & Poor's strong assessment of R&SA's enterprise risk management (ERM) which in turn provides us with greater confidence in the group's underwriting cycle management and its ability to produce consistently positive earnings". What this means is that their credit rating has been changed purely because of the effectiveness of their ERM implementation.

This should act as a motivator for companies to understand better the relationship that an effective ERM approach has to financial strength, as perceived by the outside world.

Companies that score strongly in ERM will have a better chance of improving their overall credit rating and thus reduce the cost of capital, particularly over mid-term and long-term loans. As a thought leader and provider of ERM solutions to the world's leading businesses, Strategic Thought has tried to distil this opportunity down to simple language and offers an action plan to achieve maximum ratings on this subject in a timeframe that optimizes competitive advantage.

By way of example we have estimated (using real data) that a 'BB' rated company with \$3.6b debt would save \$23m per annum on the cost of servicing this debt if they were to increase their credit rating one level. These numbers should be enough to make any CFO stop and consider how much effort they are willing to undertake to achieve such a reward.

Many companies will need to start simply by trying to understand what ERM is, however the key will be how quickly companies understand, adapt and adopt this management discipline. The important point to take away is that S&P is not simply checking off boxes on a survey, S&P will typically spend as much as a day interviewing senior managers, risk officers and heads of business units, to gather data about how a company's ERM operation works. To provide the maximum confidence that this process is deployed, firms should be ready to present and drill into their corporate risk registers using the online systems they have deployed across the business.

It is also certain that over time S&P will increase their assessment of the maturity of the risk process and therefore organizations would be advised to consider an ERM approach based on a risk maturity model and evolve towards this rather than making decisions purely on S&P's focus today.

The credit rating process

Corporate credit rating agencies (principally Standard & Poor's and Moody's) have for many years performed independent assessments of the financial strength of publicly traded companies. These assessments (issued in the form of a credit rating), are made available to subscribers to help determine the level of risk they are taking in transacting with these organizations. In addition, the financial markets also use this credit rating as a means of pricing debt instruments such as bonds and commercial paper issued to raise cash in the longer term debt markets.

The implication of having a lower credit rating is that the cost of borrowing is more expensive than organizations with higher credit ratings. This is simply as one is assessed as a more risky investment than the other.

S&P has introduced ERM as a key component of the corporate credit ratings process globally for a non-financial services company (they have already done this for financial services in 2006). ERM will sit along other key assessment components as can be seen below. It should be noted that the weighting of these different components will vary from sector to sector.



The aim is to provide a structured framework to evaluate ERM as a principle component in determining the overall business profile (the business and financial profiles are the key factors of S&P's credit rating). Companies with a superior ERM process should have less volatility in earnings and cash flow, improved business performance, will optimize the risk/return relationship, improve strategic judgment and/or avoid extraordinary losses due to lawsuits, fines, operational failures, or negligence.

In effect the principal is that the adoption of ERM will help ensure that the delivery of financial objectives is greatly enhanced, and ultimately limits the frequency and severity of losses that could potentially affect ratings.

The ultimate importance of ERM to a firm's rating will depend on the risks of the firm, the susceptibility of the firm to those risks, and the capacity of the firm to absorb losses. For firms with tight capital, limited access to funds, or those exposed to very complex risks, ERM will be a very important part of the rating evaluation. Capital and liquidity are not seen as a substitute for ERM. To achieve a high ERM score, even a well funded firm must still demonstrate the ability to maintain that position by limiting future losses.

The assessment

Initially, the process for assessing ERM capability will be performed through interviews. Unlike the assessment of Energy and Insurance industries, S&P is seeking a gentler introduction of the ERM assessment in other industries. The areas that have already been identified for examination are:

1. Risk management culture
2. Strategic risk management

The areas above were originally grouped into 4 maturity themes. Two risk maturity themes have been delayed for this first phase until suitable benchmarks are established:

3. Emerging risks
4. Risk controls

These will be covered initially under the more general PIM (Policies, Infrastructure and Methodology) approach used by S&P. Once benchmarks are established and a consistent approach can be introduced across each sector these will then be phased into the more specific ERM ratings. These areas were a key part of the ERM assessment approach in Financial Services, as can be seen in the attached questionnaire at the end of this paper.

Since S&P expect these to come back into the assessment of non-financial institutions at a later date, it is wise to consider a mature ERM process from the outset, and build towards this rather than starting with a bare minimum, box-checking, approach. Focussing on a mature process from the outset will maximise results, minimise timeframes and reduce costs of having to modify processes and systems at a later date.

Risk management culture

This assessment measures the importance of risk and risk management as part of the daily corporate information and decision making framework. The assessment will review the governance structure as it relates to risk management, and will include the review of the capabilities and accountabilities of those who execute risk management. The drivers identified in terms of culture are as follows:

- Risk-management frameworks or structures currently in use;
Defined frameworks for a clear and transparent understanding of what risk management means in the company are essential. If the enterprise is not informed, clearly, as to how it should be managing risk, then risk management will not be happening across the enterprise.
- The roles of staff responsible for risk management and reporting lines;
Likewise, if staff are unaware of their responsibilities then ERM will not happen. If escalation structures and reporting lines are not defined, then the risk communication process will break down. There is little point in identifying and beautifully analysing a risk if the manager who has the power to deal with it is blissfully unaware of its existence.
- Internal and external risk management communications;
How an organization communicates on risk is a clear indicator of the quality of risk management which being deployed. The flow of risk information around the company is important in ensuring that the right information reaches the right people at the right time. However, the business environment has changed such that each company is no longer an island. If risk

information and intelligence is not communicated effectively to partners, suppliers and clients then the complex networks which keep modern businesses at the edge of competitiveness will either not work optimally, or will break down completely.

- Broad risk management policies and metrics for successful risk management;

In a certain sense, knowledge is power. If a business is carrying out risk management this is positive, but it's not so useful if senior management cannot identify weaknesses in the process or monitor when it is going well and learn lessons from it. Having clear policies and measurable targets for risk management is vital to ensure that a successful process implementation can be continued into the future. If a company does not know what risk-intelligent success is, then how can it be sure it is being, and will continue to be, successful?

- The influence of risk management on budgeting and management compensation;

Management is 90% about motivation and reward. If a company believes that ERM is fundamental to its future success, then the way it sets and manages its budgets, coupled with the way it channels its resources around its operations to address key challenges, will become a fundamental factor to the achievement of key performance indicators and resulting leadership compensation.

The demonstration of an effective ERM culture should be performance driven as opposed to compliance driven. In other words there needs to be demonstrable evidence that the process is designed to increase business performance, or be value based. Firms that treat ERM as a means to get a tick in the box are likely to fail the assessment. This is not a "cost of doing business" nor an extension of an existing compliance approach, but an entirely different paradigm, through the development of a holistic approach that will provide the basis to exploit opportunities and achieve the correct balance between self retention and risk management.

Strategic risk management

Strategic risk management is the process a firm uses to integrate risk management with strategic and financial planning to support the corporate strategic decision-making process. The areas under the microscope here are:

- Management's view of the most consequential risks the firm faces, their likelihood, and potential effect on credit; This is to ensure that management are aware, considering and dealing with the most consequential risks. This involves two clear commitments:
 1. Transparency: Management will be aware of their most important risks. The strategy for dealing with these risks will be well thought out and understood.
 2. That these risks will be fully analysed in terms of their consequences
- The frequency and nature of updating the identification of these top risks;

This area is interesting. It is no longer, not that it has ever truly been, enough to simply have a "Top 10" which changes little from year to year. It is now important to monitor the activity in the risk process. Demonstrating that the current thinking about risk is changing with the influences of the business environment and that this change is reflected in the risk management information published by the board.

- The influence of risk sensitivity on liability management and financing decisions

Here it is vital that the relationships between risks are understood and the consequences that might arise from multiple related risks occurring are not only understood, but are key influences on the financing decisions made by the company.

- The role of risk management in strategic decision making.

The risk information that is collected needs to be shown to be influencing the way that strategic decisions are made. Or, alternatively, strategic decisions shouldn't be made without a full and proper understanding and investigation of the risks which they bring about.

One theme that is consistent here is that full analysis and risk quantification are extremely important. Fundamentally, what a business cares about for success and what will prevent it defaulting on its obligations, will revolve around what happens to its bottom line.

However without a quantified understanding of the risks, in terms of their financial and non-financial impacts, it is not possible to determine what is consequential, where the sensitivities are and how the risks should influence management investment decisions. Without a consistent quantification and comparison methodology it is not possible to meaningfully compare and prioritise risks with differing impact types. Quantification enables the perspective of foresight to be brought into the core existing management functions listed above.

The area where quantification is less important above is perhaps the most important. Unless the risk management process is delivered in real time, with regular identification, review and updates (i.e. unless the company is serious about doing it and checking that it is actually happening) it will deliver little value, create little competitive advantage and offer little protection to the company (and its creditors).

In Strategic Thought's experience these assessment criteria can be delivered only by a mature risk management process and highest commitment to achieving the full business benefits that ERM has to offer. It will take many years to achieve an embedded ERM process that delivers these functions unless the company is committed to having strong examples and solutions to underpin the process which provide the required quality and integrity to the data and information used for decision making.

What is more important is that an ERM maturity model is in place that is engineered to arrive at this point at some stage in the firm's future. Underpinning the firm's risk information systems through a silo based approach to ERM will never enable this goal to be reached. Many of the customers with whom we work today already have separate systems for financial controls, compliance, project risk, health & safety, business continuity, issue management, loss management etc. Only if all these business functions and information sources are able to be aggregated into a common form of measurement will the business be able to deliver effectively in terms of its strategic risk approach.

An Overall View

What is clearly important to S&P is the extent to which risk management practices are visible in the everyday activities of the company. They are looking for evidence of a risk-intelligent mindset that is achieved through embedding ERM. They are not looking for indicators of compliance activity.

This is markedly different from the heavily compliance-led controls-based approaches familiar to those companies which have felt the bite of the Sarbanes-Oxley legislation in the United States (or similar variants such as J-SOX or recent changes to company audit law in Switzerland). Alternatively ERM is expected to provide a competitive advantage for companies in a sector whereas compliance, the art of doing things the same as your peers, is unlikely to achieve this.

Another salient point is the attitude being taken in the assessment. There is no generic list of requirements. Each company will be judged against others in its own sector. This means that it is not important how 'compliant' you are to some standard, but how much more effective your approach is compared to that of your peers. This seeks to reward the innovators, those who were willing to invest. And ultimately understand the concepts of risk and reward.

The information that will be monitored by S&P is, without exception, the by-product of a healthy risk management process within a risk-intelligent enterprise (i.e. the things which should be in place if an organisation is using risk management techniques as an aid to decision making, ensuring that it is central to business practices across the enterprise).

Fundamentally, these aren't things that can be easily bypassed.

STG's approach to answering S&P

Ultimately the firm being assessed will need to demonstrate how ERM has been deployed within the business. Strategic Thought has been predicting this announcement for some time, through and on behalf of our customers. As a result of this experience we have developed a highly pragmatic, recommended approach based on a program that simultaneously works on process and system components of the overall solution.

The traditional approach of sequential steps from policy, through process, procedures, requirements and selection, procurement, deployment and operational readiness of a supporting system simply doesn't enable businesses to move fast enough in exploiting the opportunities that an enterprise wide deployment of risk management has to offer. As the major benefits of risk management are achieved by wide and deep deployment of the process, they are not something that can be delivered by manual procedures – they are too expensive, too prone to individual interpretation, difficult to integrate and can't be run in real-time.

By focussing on the system as well as process in a single approach, the business is able to demonstrate deployment and communication, probably the most important part of risk culture.

This parallel approach also helps ensure the business is able to achieve competitive advantage as quickly as possible. Our plan for development and deployment of an ERM process to meet S&P requirements, is designed to achieve first results within a 6 month project, providing there is sufficient management support to make this happen. The steps in achieving this are as follows:

- ERM Policy, Strategy, Plan and Process
- ERM Procedures and system to support the above
- ERM System Deployment
- Cycle one ERM process (risk identification, measurement, management)

- Management Reporting, Modification of process
- Cycle two ERM process, Management Reporting
- Continual ERM process and management monitoring
- Process Maturity Assessment

The focus on building an early ERM vision and strategy is the key to understanding risk maturity. The following model is one we would look to use as a starting point in this vision.

Risk Maturity



In our experience too many companies allow themselves to be consulted on policy and process alone, as part of a deliberately staggered engagement process. This results in elegant methods but with little to evidence value or support efficiency in achieving this to competitive advantage.

The approach we recommend in meeting the S&P ERM assessment is to overlay the process and software solution phases in a single plan, thereby delivering an evidenced based framework potentially within 120 days. We believe this timeframe is achievable for any firm in any industry.

ERM Project

We will work with you to develop a Project Definition. This will set out the project objectives, critical success factors, deliverables, scope, schedule and organization to deliver the project. The sample project schedule attached shows the timeline for the development and deployment of an ERM solution that would meet the needs of even the most critical review by S&P. The Phase 1 steps are the pilot, the subsequent phase rollout is the rollout programme which depends very much on the appetite of the business for change and the global nature of the business.

As The ERM Company, Strategic Thought has worked with many customers, deploying ERM processes and solutions. Our approach is based not just on best practice but also the pragmatic knowledge that comes from over 100 projects, over eight years. In other words while this may be new for you, and most of the market, you can have confidence in our proven and referencable advisory capability.

PROJECT OUTLINE	Month					
	1	2	3	4	5	6
Project Definition	█					
ERM Vision	█					
ERM Policy and Process		█				
ERM System Blueprint			█			
ERM System Deployment				█		
Communication program				█		
Phase 1 Training program					█	
Phase 1 Implementation						█
Phase 1 Review						█
Subsequent phase rollout						█

This approach assumes that the appropriate pan-organization sponsorship is achieved and that Active Risk Manager, the leading ERM solution is the agreed solution platform (we are unaware of any other ERM system that can achieve the full requirements of a level 5 risk maturity process).

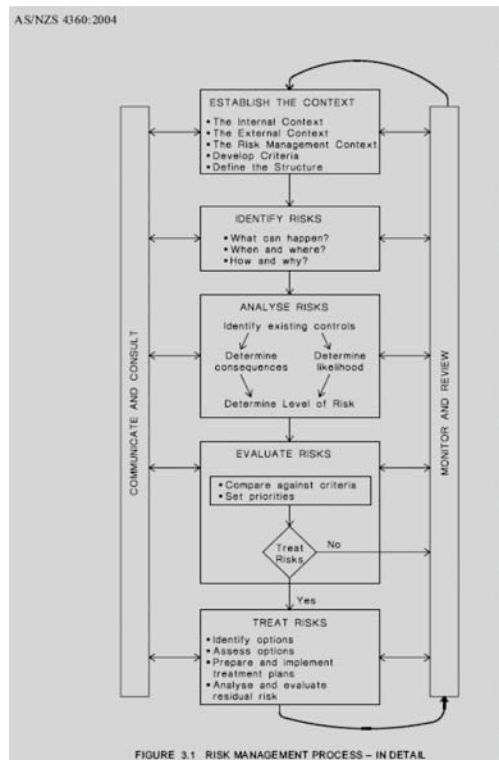
ERM process

When it comes to your ERM process, what are your options? You could build your own, however this will have less credibility with the assessors than deploying a proven process as part of your core model.

We recommend that you start with an existing proven model such as the highly acclaimed Australia/New Zealand standard AS/NZS 4360, or the COSO ERM framework. Both of these risk management frameworks help to put in place a thought through, off the shelf, reputable process to deliver the benefits of risk management.

Having worked in the most mature risk markets with some of the world's largest and most competitive companies, Strategic Thought and our partners know what processes work, in which situations and what adaption's need to be made, to them to ensure they are automated, scalable and benefit from a risk/reward based driver.

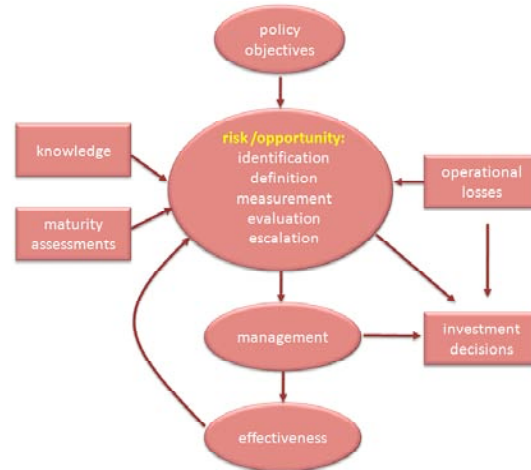
Australia/New Zealand Standard



COSO ERM



Modified STG Process



ERM software application platform

You need to support your ERM process (risk/reward approach) with a software platform that will capture and encode all risk information, help aggregate the threats to identify emerging risks, help provide a process capability model for ensuring the process is being used and good quality of data is generated both a top down and bottom up process and apply a common measurement methodology across all events to ensure they can be measured and aggregated across and up through the organization in a consistent manner.

Strategic Thought Group continues to develop the most capable and mature enterprise risk product in the market, Active Risk Manager. Its highly configurable infrastructure means that it can be modified easily to meet your process from day one and as it evolves over time becomes more mature, more quantitative, more reward focussed.

Our approach brings to the table the process and the software at the same time. This ensures a highly efficient approach and one that means the software is totally matched to the process.

The resulting ERM platform provides all the evidence you need in demonstrating the benefits of ERM, and in satisfying the credit rating agencies analysis for improved credit scoring.

The remaining sections of this white paper contain examples of responses to Standard & Poor's assessments, as well as examples of the potential benefits available to you through the implementation of thorough and widespread ERM framework.

About Strategic Thought Group plc

Founded in 1987, Strategic Thought is a technology and services company specialising in critical application integration and the provision of enterprise risk management software. Strategic Thought is the owner, developer and distributor of Active Risk Manager the world's leading web-based enterprise risk management system. Strategic Thought provides Active Risk Manager and risk management consultancy services to the world's largest organisations. Active Risk Manager facilitates the identification, assessment, management, analysis and communication of risks in order to ensure compliance with project and operational guidelines, corporate governance requirements and industry standards. Strategic Thought floated on AIM a market operated by London Stock Exchange plc in June 2005.

Example response to an S&P assessment

This section is aimed at providing an understanding of how Strategic Thought's software application platform Active Risk Manager ('ARM') can be used to support a mature response to a set of questions that S&P have previously circulated to companies (and therefore likely to base a number of their questions on).

ERM Analytical Component	Sample Question	ARM functionality in support of the stated requirement
<i>Risk Culture & Governance</i>	Does the company have a risk management program?	ARM evidences and supports that this is the case. Many of S&P's tests will not simply be "tell me the answer" but "show me". The documented program will be stored on the risk information portal. No mature ERM program can exist without a unified approach to collecting, aggregating and monitoring information.
	Is there a statement of risk appetite or risk tolerance?	This will be evidenced in the plan stored in the portal and in the training program. Risk tolerance will be defined in this statement and evidenced in the scoring schemes defined for each part of the business.
	Which staff are responsible?	Business units, risks, opportunities and mitigation strategies have owners. Management information and responsibility is therefore accountable to individuals.
	What are reporting relationships?	Reporting structures (organization, process, assets, location, projects, requirements, compliance etc) are defined in ARM. The ability to encode risk information across and up and down these structures offers the communication and aggregation required to meet the risk control requirements. From a people perspective these relationships are supported through the resource manager entity and their relationship to the business function, through to organizational and other reporting structures (including escalation structures).
	What reports go to the CEO, audit committee, and board of directors?	Risk exposure by business unit, mitigated exposure and cost of mitigation reports. Top 10 risk register.
	How does the company measure success of its risk management program?	Doing risk management is a proven method of improving success. Our Risk Maturity Process embedded within the software helps ensure the process is being followed, and the management of losses linked to risks helps ensure the business is focussed on reducing losses.
	How is risk management integrated into performance/budgeting process?	Our Risk Adjusted Corporate Performance methodology provides a risk adjustment service to any other management information stream – whether this is performance targets, budgets, sales pipeline, project schedules or cash-flows.
	How do risk management metrics affect compensation for managers?	While risk management metrics are managed in ARM, through the Risk Performance Report, for example, the decision to push this through the appraisal and compensation processes is one which would need to be made by the business.
<i>Risk Controls</i>	How does the company identify and control each major risk?	Overall management of risk information across the enterprise from a single dashboard. Ability to filter and drill down to risks and controls from the dashboard together with ability to assess both qualitatively and quantitatively provides

		the method for prioritization. With identification processes handled through the system, the company can bring together all the information to draw out the major risks and, via aggregation and filtering techniques, bring to the fore the most important risks. The ERM workflow will then demand that these are monitored, managed and controlled through one ERM system.
	What are the company's risk limits for each major risk? How are they enforced?	Through scoring schemes and target risk thresholds. Enforced through maturity assessment and review of all mitigation strategies.
	How did the company manage losses in a recent loss event scenario?	Losses are recorded and assessed in ARM. Importantly they have investigations (cases) that look to assess the underlying cause. These are linked to the risk driving the loss so improved assessments can be performed in the future. This also enables the frequency and severity of the losses to be aggregated against the original risk appetite level to enable targets to be set for risk reduction based upon an approved budget for mitigation.
	What changes were made to risk management procedures as a result of loss experience?	As losses are linked to risks, the changes to the risk assessment and mitigation strategy can be determined.
	What information about each major risk is shared with senior management and/or the board of directors?	Risk escalation, automated, data-driven risk reporting, risk alerting all ensure that senior managers are kept informed when they need to be and left to lead the company when they do not.
<i>Emerging Risks</i>	What does the company do to prepare for extreme disaster?	Fallback plans linked to "extreme disaster" threats. Evaluation of plans and tests updated to reflect effectiveness of the recovery strategy.
	What types of disasters are of active concern to the company?	Filtering on significant threats, and by mitigation strategies involving fallback plans.
	What are the company's stress testing practices?	Monte carlo simulation allows for quantitative confidence thresholds to be calculated. Maturity model assessment ensures that the data quality and risk intelligence is such as to support this.
	What contingency plans has the company developed?	Filtering on significant threats, and by mitigation strategies involving fallback plans. Use of Evaluation testing to identify ineffective plans and status of testing.
	When developing strategic plans does the company use risk/reward analysis when allocating resources (e.g., capital, talent)?	Use of Risk and Opportunity prioritization when allocating resources. ARM uses an ROI based approach that helps ensure an optimized model for risk/reward.
<i>Strategic Risk Management</i>	How does management reflect risk and reward for risk in strategic decision making, pricing, and performance measurement?	Use of scoring schemes, and impact categories. Key is the ability to equate all risk/reward information from across the business in the same terms so they can be measured equally.
	How does risk management affect the company's financial decision making?	All investment plans are supported by a risk assessment performed through the system.

Example benefit assessment

What does this mean in real terms? What difference will this make to a companies financing costs if ERM is a driver for ratings improvement?

Example 1: Expected Returns on single ratings upgrade/downgrade per \$bn long term debt

Rating (Moody / S&P)	10 yr ¹ Rates ²	30 yr Rates	10 Yr Bonds				Value of upgrade	Value of Down-grade	30 Yr Bonds	
			BP Value of upgrade	BP Value of Down-grade	Annual Saving on \$1bn of debt	10 yr PV estimate on saving (\$m)			Annual Saving on \$1bn of debt (\$m)	30 yr PV estimate on saving (\$m) ³
Aaa/AAA	33	60	0	-9	0.9	5.53	0	-6	0.6	5.66
Aa1/AA+	42	66	9	-10	1	6.14	6	-5	0.6	5.66
Aa2/AA	52	71	10	-7	1	6.14	5	-7	0.7	6.60
Aa3/AA-	59	78	7	-6	0.7	4.30	7	-7	0.7	6.60
A1/A+	65	85	6	-8	0.8	4.92	7	-5	0.7	6.60
A2/A	73	90	8	-16	1.6	9.83	5	-20	2	18.85
A3/A-	89	110	16	-15	1.6	9.83	20	-13	2	18.85
Baa1/BBB+	104	123	15	-18	1.8	11.06	13	-20	2	18.85
Baa2/BBB	122	143	18	-18	1.8	11.06	20	-30	3	28.28
Baa3/BBB-	140	173	18	-70	7	43.01	30	-62	6.2	58.45
Ba1/BB+	210	235	70	-40	7	43.01	62	-65	6.5	61.27
Ba2/BB	250	300	40	-20	4	24.58	65	-20	6.5	61.27
Ba3/BB-	270	320	20	-65	6.5	39.94	20	-40	4	37.71
B1/B+	335	360	65	-15	6.5	39.94	40	-90	9	84.84
B2/B	350	450	15	-130	13	79.88	90	-75	9	84.84
B3/B-	480	525	130	-795	79.5	488.49	75	-875	87.5	824.86
Caa/CCC	1275	1400	795		79.5	488.49	875		87.5	824.86
US Treasury Yield	4.59	4.56								

It should be noted that the benefit outlined above would only be achieved as part of a medium term re-financing plan, as much of the longer term debt might already be locked into cost streams that were negotiated at the higher interest rate level. However, over this sort of financing period (10-30 years) it is likely that most large companies would go through some form of refinancing, in which case the above numbers should be reasonable approximations.

What can be seen clearly from this example is the significance of an upgraded rating. While the impact of the ERM assessment will only be in the estimated 13-15% range, the difference between 1% and 15% contribution could be extremely significant since the required change is only a gradual one to achieve significant results. If the entire ratings scheme is broken into 17 bands, how much difference could +/-5% make?

As evidence of this when a major UK Insurer was recently evaluated for the effectiveness of their ERM process, the following statement appeared on their website:

Standard & Poor's

Rating upgraded to A in December 2007. S&P commented that: "The ratings reflect Standard & Poor's strong assessment of R&SA's enterprise risk management (ERM) which in turn provides us with greater confidence in the group's underwriting cycle management and its ability to produce consistently positive earnings".

Example 2: From the Aerospace Defence Industry

		Upgrade	Downgrade	Long term debt (\$m equivalent)		Annual benefit of higher rating (\$m)	10 yr Cost of Capital inefficiency (\$m)
BAe Systems	BBB	20	30	2197	4317	12.65	77.7
Rolls Royce	A-	20	13	1030	2024	3.95	24.3
Lockheed Martin	A-	20	13		4300	8.40	51.6
Bombardier	BB	65	20		3600	22.86	140.4
EADS	BBB+	13	20	26025	40707.26	79.52	488.6

Note: These evaluations are given as examples only based on publicly available data and are not intended to represent a current financial analysis of the companies in question.

Example 3: Extract from Annual Report of Major UK Telecoms Operator

Bond Value	Bond Maturity	Years until Maturity	Principal (£m)	Semi-Annual return (£m)	PV saving to Maturity (£m)
US dollar 9.125% (2006: 8.875%) notes 2030 (minimum 8.625%a)b	2030	22	1,398	1.75	34.3
Sterling 8.0% (2006: 7.75%) notes 2016 (minimum 7.5%a)	2016	8	712	0.89	10.2
Euro 7.375% (2006: 7.125%) notes 2011 (minimum 6.875%a)b	2011	3	768	0.96	5.0
US dollar 8.625% (2006: 8.375%) notes 2010 (minimum 8.125%a)b	2010	2	1,515	1.89	6.8
Total					56.31

The interest rate payable on these notes will be subject to adjustment from time to time if either Moody's or Standard and Poor's (S&P) reduces the rating ascribed to the group's senior unsecured debt below A3 in the case of Moody's or below A minus in the case of S&P. In this event, the interest rate payable on the notes and the spread applicable to the floating notes will be increased by 0.25% for each ratings category adjustment by each rating agency. In addition, if Moody's or S&P subsequently increase the ratings ascribed to the group's senior unsecured debt, then the interest rate then payable on notes and the spread applicable to the floating notes will be decreased by 0.25% for each rating category upgrade by each rating agency, but in no event will the interest rate be reduced below the minimum interest rate reflected in the above table.

In certain cases, companies will tie their bonds to their credit rating in the future market. This can increase the value of the bonds since this will compensate debtholders in the event of a downgrade. It also ensures that the company's cost of debt is reflective of their credit rating.

In this case, as shown in the calculations above, any movement in the credit rating which traverses the A- (A3) rating will immediately result in a 0.25% increase (downgrade from) or decrease (upgrade to) in the coupon rate of the bonds in issue. This will remain until the next time a downgrade or upgrade traverses the A- (A3) rating.

The company's current credit rating is BBB+, so a single rating upgrade would effect the change outlined above.

In present value terms, over the life of the bonds, this equates to a difference of over £50m in the payments that the company will make to its bond holders. Note that this is purely in terms of the value in these specific bonds. This does not include the value of the ratings upgrade in the refinancing of other long-term debt (totaling over £6bn in this case) or the value added to the company by the ERM process in and of itself.

Footnotes to Example 1: Expected Returns on single ratings upgrade/downgrade per \$bn long term debt

¹ Source: bondsonline.com Reuters Corporate Bond Spreads for Industrials

² Spread values represent basis points (bps) over a US Treasury security of the same maturity, or the closest matching maturity

³ Assumes a Weight Adjusted Cost of Capital (WACC) average of 10%.