

Quantitative Risk Assessment:

An Outline to being Realistically Prepared

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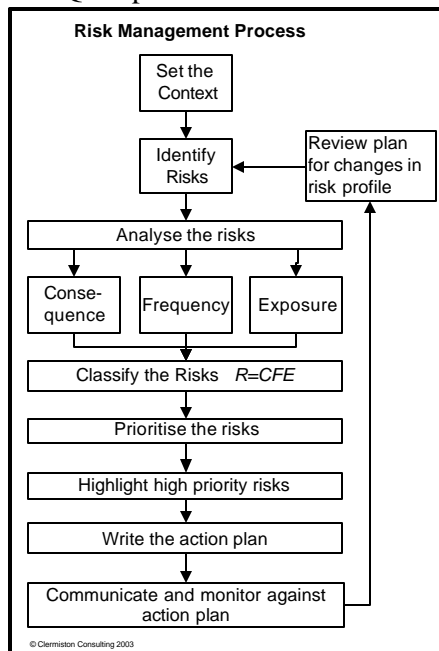
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The Corporate Governance System provides a framework to link board activities with the day-to-day running of the company. Part of this framework is the management of business in a climate of uncertainty, which is in fact the normal state. No business activity is predictable with certainty. Risk is the chance of something happening that may have an adverse impact upon a business.

The board and executive teams hence need to know that the occurrence of uncertain events and their consequences, or risk, is understood and managed. This needs to be done with a degree of importance, yet not to such an extent that it eclipses all other management activity. A system is required therefore to identify, assess and prioritise risks and to ensure the appropriate action to control the risks is taken. The system needs to provide for communication of risks and mitigation plans as appropriate, and the ongoing monitoring of changes in the risk profile.

Quantitative Risk Assessment (QRA) provides us with a number of methodologies for assessing identified risks. The objective of QRA is to be able to prioritise which risks should the company plan to prepare for urgently and which are less pressing: moving through the spectrum from urgent / important to non-urgent / non-important. A simplified but rigorous technique is proposed here. There are more complex systems (eg HAZOP, fault tree analysis, FMEA, HACCP) which can be used but these are should be reserved for the appropriate situations. We can assist with these if needed.

The QRA process follows AS 4360 and is shown in the diagram below:



In summary, the methodology is:

1. Set the Context
Define the particular business or operational area. This may have reference to a particular industry context.
Risks can be in any field, not just operational, or technical, or treasury for example. An operational risk might be the likelihood of a transport accident involving hazardous chemicals. A business risk might be a key customer changing supply to a competitor.
2. Identify the risks
Ideally done in a group environment. It is helpful to get a diverse range of ideas by mixing teams up, eg include the warehouse manager in the financial team.
3. Determine how serious the risks are.
Ask and write down what are the consequences if the identified risks take place. For example, could a fault in our operations lead to deaths ?
Could failure to manage margins send us bankrupt ?
4. Determine how likely the risks are.
Use facts and previous experience. Has it ever happened in this business ? in this industry ? How often ? What were the relevant causal factors ? Do these factors apply in our situation ?
5. Determine how likely the company is to be exposed to the risks.
Is it continuous or a once a year event which may be risky.
6. Classify the risks.
 $Risk = C \times L \times E$...consequence x likelihood x exposure
A risk ranking index is useful. A risk ranking table is written up.
7. Highlight the high priority risks.
The high priority risks are those with the **highest CLE** score **and** any identified **high consequence risk**. High consequence risks need to be mitigated no matter how low the likelihood.
8. Analyse the high priority risks.
How can they occur ? What can we do to prevent the event from happening, or if it happens how can we reduce the consequences ?
9. Write the action plan.
The action plan should have as a conceptual basis, for each risk, in order of preference:
Can it be eliminated ?
Can it be mitigated or controlled by design ? by procedure ?
If elimination, design or mitigation are not appropriate, what can be done to reduce the consequence ?
Simple yet effective format: What will be done, by whom, and by when.
How will improvements be measured ?
Note the board and executive team has a critical accountability to ensure the action items are resourced so that they can happen.
10. Write the communication plan
Who needs to know about the risk profile ?
Who needs to know about our plans to reduce risk ?
How will we keep them informed ?
11. Review the action plan
Are the risks being managed as planned ? status of improvements ?

Is there ongoing monitoring of the business to define new or previously unacknowledged risks ?

Follow up as a key agenda item in executive & board meetings.

During the presentation a number of risks will be described and quantified with audience participation, and a risk table and action plan developed.

Clermiston has appropriate presentation material and forms to facilitate the setting up of your risk plan.