

## Chapter 56

# Applying Enterprise Risk Management on a Fiber Board Manufacturing Industrial Case

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### ABSTRACT

*The study assesses the enterprise risk management (ERM) process of a fiber board manufacturing company. The objective is to practically demonstrate how a risk framework can be applied to find the key risks affecting the company. An understanding of the fiber board industry is established by reviewing the proxy disclosures of global corporations to see how they foresee the risks to the industry in general. The current state of the ERM process of the company is then evaluated by applying the COSO 2004 risk assessment framework - the company's ERM process are mapped on a maturity model scale, roles and responsibilities of the board of directors and important risk management concepts are discussed and measured in practice. A risk assessment is undertaken with the help of risk gathering techniques to create a risk profile of the major risks affecting the company which are illustrated through heat maps. Finally, benchmarked studies are used to conduct a gap analysis of the risk findings to conclude that the management has to re-address its focus towards HR -employee motivation, working capital mismanagement, sales-production planning inefficiencies and a less likely but high impacting terrorism risk for which the company is currently not prepared. Recommendations for key risk indicators are suggested along with direction for future work.*

### INTRODUCTION

#### Background

The study assesses the enterprise risk management process of a company. To map it on a maturity model scale, review roles and responsibilities at the company, provide brief history ERM and the risk assessment process and then apply it onto the company to create a risk profile using heat maps and benchmarking tools. Finally a gap analysis is conducted and recommendations for further development are given.

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The company being discussed in this paper operates multiple units of chipboard, MDF/HDF manufacturing in South East Asia. It is one of the leading manufacturers of chipboard and MDF/HDF boards in the country and enjoys the position of being a market leader. Its name is being kept confidential due to disclosure concerns from the management who provided the information for this research. The company is currently in the growth stage of its life cycle and is at a moderate level with regards to technological innovation.

The terms wood working industry, board industry, panel industry, wooden board industry and fiber board industry have been used interchangeably throughout the study. Similarly the term board might refer to either or all of the following: particle board, chipboard, medium density fiber board (MDF), high density fiber board (HDF), door skins, door panels, fiber board etc.

See General Reference's section if further information is required on the wood fiber board related terminologies and industry specific details.

For this study, the choice of choosing the wood board industry was made significant based on its size, which as per the Gale Business Insight peaked over \$26 billion in sales revenue in 2012. This expanding global MDF industry (Global MDF capacity expands, 2011) is being serviced mainly by China. Using the European (Global Trends Review, 2013) and Chinese (China Wood Products Prices, 2011) capacity estimates it is being projected that the size of MDF market may further rise up to 85 million chipboard capacity to reach 45 million in 2015.

## **History and Evolution of Risk**

Risk is a function of uncertainty and the exposure to that uncertainty. Average life of a fortune 500 company is 45 years (Funston & Wagner, 2010). 96% of species that ever lived on Earth are now extinct (Bentron, 2005). Continuous risk aversion can lead to extinction which gives requires the modern enterprise to be being risk intelligent. That is not to think of risk in silos but to think of multiple risk events happening together. In 2011, Japan was hit by an earthquake and tsunami at the same time -nobody anticipated both coming together; at the time an Information Technology (IT) firm's all seven production lines shut down (its risk planning had previously focused on a worst-case scenario of only one or two lines going down); a company experiencing cashflow and liquidity problems gets a debit block on its credit line from the bank at the same time.

Even a profitable company can go bankrupt if it doesn't have enough cash to pay for daily operations. MF Global, a 228 years old US Company got bankrupt in 8 days when it dug to deep and utilized funds of customer for its operational expenses (Till, 2012). The key thus lies in finding inter-dependencies between risks and plan for the likelihood and impact of multiple risks occurring together.

Global world events have led the development of risk management. Over the last decade in the US, there have been a series of financial crises e.g. sudden bankruptcy of Lehman brothers who had high credit ratings at that time (Hines, Kreuze & Langsam, 2011), the role of banks in masking risky collateralized debt obligations during the mortgage bubble (Dimitriou & Simos, 2013), the near default of auto industry which was rescued by the Fed (Cook, 2011). Owing to these and similar world events an increasing number of mergers and acquisitions have surfaced globally over the past few years. Credit rating agencies like S&P, Moody's International and Fitch etc. have now incorporated risk management as an essential part of their credit rating criterion.

Thus the need for today's enterprise is to be risk aware. To successful accomplishment that, the term enterprise risk management (ERM) has evolved.

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