Chapter 2
Carbon Markets and Investments: EcoSecurities Investment Case Analysis

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ABSTRACT

In a world where greenhouse gases (GHG) carry a price, organizations can create financial instruments that are tradable on the carbon market by investing in projects that reduce GHG emissions. The purpose of this study is to analyse critically an investment project from EcoSecurities to mitigate the emissions of methane from a coalmine located in China’s Sichuan province. This project generates carbon credits that are later sold to governments and organizations under the Kyoto Protocol. In order to evaluate this investment, we conduct an analysis centred on its net present value, and we take into consideration a set of external variables and the financial and economic situation of EcoSecurities. This study concludes that EcoSecurities’ project investment, since the project’s net present value is positive, has a relevant impact on EcoSecurities’ strategy and improves the company’s financial situation as it increases revenues and improves assets using efficiency.

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INTRODUCTION

Interest in the voluntary carbon markets and carbon offsets has accelerated dramatically with the global climate change (EIA, 2008). The Kyoto Protocol was the first international treaty to address global climate change by directly regulating human-caused greenhouse gas (GHG) emissions. Hence, the developing countries that ratified the Kyoto Protocol had to cut 5.2% of their GHG emissions (Janssen, 2000). Regulated governments and firms can fulfil emissions reduction obligations by purchasing credits generated by projects that reduce emissions in industrialized nations (Reinaud, 2004). These projects can be implemented through the Kyoto Protocol’s Clean Development Mechanism (CDM) (Janssen, 2000). Once approved by the United Nations (UN), they can earn one carbon credit called a Certified Emission Reduction (CER) for each ton of carbon dioxide (or its equivalent of another GHG) reduced (Kollmuss & Zink, 2008).

One striking result of the Kyoto Protocol is the market opportunity to source, develop, and trade carbon credits from greenhouse gas emissions reduction projects. Foreseeing this trend, EcoSecurities (ECO) was formed in the same year that the Kyoto Protocol was adopted (1997) with the purpose of facilitating the acquisition of carbon credits by firms. This was achieved by steering projects through the UN approval process and purchasing the resultant CERs from the project owners.

The purpose of this text is to analyse an investment project from ECO named Ventilation Air Methane (VAM). VAM would generate carbon credits by mitigating the emissions of methane from a coalmine located in China’s Sichuan province. Later these carbon credits would be sold to governments and organizations under the Kyoto Protocol (Perold, Reinhardt, & Hyman, 2008). This leads to the following research question: Should EcoSecurities invest in the Ventilation Air Methane project?

Projects with the objective of trading carbon credits by sequestering, storing, or preventing the release of GHG to the atmosphere will tend to increase in the near future (Ambrosi & Capoor, 2007). Despite the interest, investment analyses in the carbon market have been lacking. Therefore, our contribution is to offer some guidance to companies or institutions that want to invest in similar projects. It is expected that this study will offer a critical reasoning on how to invest in projects that create financial instruments that are tradable on the carbon market.

This study is organized in three main parts. The first part examines the financial and economic situation of ECO. The study evaluates the firm’s situation according to an economic and financial analysis, using ratios that provide information about the firm from five aspects (liquidity, profitability, debt, market, and activity ratios). These ratios will be benchmarked against the past performance of the company and against the correspondent industry ratios (the environmental services industry). The second part appraises the project investment. It focuses on profit value, incorporates risk into the decision, and performs a sensitivity and scenario analysis in order to understand the decision maturity. Finally, the study analyses the impact on ECO’s strategy and how ECO’s capital structure and financing properties affect the investment decision.

THE PROJECT ENVIRONMENT AND CONTEXT

Cheap coal improved the Chinese economy, but thousands of miners were injured or killed by coalmine explosions caused by methane accumulation. To control the methane levels, mine owners used ventilators (fresh air introduction) and drainage (collecting methane via boreholes drilled into the earth surrounding a mine) systems (Perold et al., 2008). Removing methane from coalmines is essential to miners’ safety; however, polluting
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