

Investing in Clean Development Mechanism (CDM) Projects

Roberto B. Kerr – Mackenzie

Luiz C. J. Perera - Mackenzie

Herbert Kimura - Mackenzie

Fabiano G. Lima – USP - RP



Mackenzie Presbyterian University





Investing in CDM Projects



-
- According to the Kyoto Protocol (KP, 1997), industrialized countries should reduce Greenhouse Gases (GHG) in 5,2% until 2012.
 - Companies were forced to add a new concern to their decision making processes: how to reduce GHG emission without harming the economy?
 - Developing countries have no obligation to reduce GHG emission, but they can take advantage of this new emission target through the generation of Carbon Credits (CC) by means of CDM projects.
-



Investing in CDM Projects



-
- The research question of this paper is: Can CDM projects be considered a good investment?
 - The main objective of this paper is to seek to identify, through the opinion of experts of the market, whether investments in CDM projects are profitable, adding value to the companies involved, and attracting foreign investment to the country.
-



Investing in CDM Projects



-
- ❑ The scenario for 2007 (before the subprime crises) and for the future was promising as foreign investment in Brazil is concerned.
 - ❑ Thanks to the availability of natural resources, Brazil is seen as a promising investment place.
 - ❑ Standard & Poor's raised the grade of Brazilian sovereign bonds to Investment Grade.
 - ❑ Therefore it was expected a significant direct investment entrance.
-



Investing in CDM Projects



-
- This led to the formulation of the first hypothesis of this paper.

 - **HYPOTHESES:**

 - **$H_{A,1}$: Brazil will receive large foreign investments, which could be applied in environmentally responsible projects.**
-



Investing in CDM Projects



-
- Competitiveness and Competitive Factors led to the formulation of the second hypothesis of this paper:

 - **$H_{A,2a}$: A product or service environmentally correct and responsible can be a factor of competitiveness.**

 - **$H_{A,2b}$: A sustainable development project can be considered an investment in competitive advantage.**
-



Investing in CDM Projects



-
- Strategic Competitiveness – The greenhouse effect and the consequences of global warming are already affecting consumer behavior.
 - Consumers can start to give preference to products and services that have been produced with respect to environmental criteria. This led to the 3rd hypothesis of this paper:
 - **$H_{A,3}$: Investing in products, services and green marketing is important to increase market-share.**
-



Investing in CDM Projects



-
- Strategic Competitiveness in Brazil – Olivetti (1996) states that European consumers tend to pay 5% to 15% more for products from companies that can prove the clean source of their raw material. This led to the 4th hypothesis of this paper:
 - **$H_{A,4}$: Companies that develop CDM can generate higher profit margins.**
-



Investing in CDM Projects



-
- Tachizawa (2006, p. 71) states that: “ The new era is characterized by a rigid attitude of costumers, focused on the expectation to interact with organizations that are ethical, with good corporate image, and which act in an environmentally responsible way”. This led to the 5th hypothesis of this paper.
 - **H_{A,5}: Investing in a CDM project can improve the image of a company, even if the company is just trying to achieve its goals and/or profit.**
-



Investing in CDM Projects



-
- Lomborg (2007) says that countries invest just 0,05% of their Gross National Product (GNP) on non-carbon-emitting energy technologies research. He estimates that KP will cost at least US \$ 25 billion and this money could be invested in the research of new technologies. The position of Lomborg is recognized as pragmatic. This led to the 6th hypothesis of this paper:
 - **$H_{A,6}$: CDM projects are very important in the KP, but their efficiency in reducing GHG is questioned.**
-



Investing in CDM Projects



-
- Brazil and Carbon Credit Market – it is estimated that Brazil could have a 25% stake in CDM projects (ARAUJO, 2007). This led to the 7th hypothesis of this paper:
 - **H_{A,7}: Brazil has significant potential to generate carbon credits through CDM projects.**
-



Investing in CDM Projects



-
- Bureaucratic obstacles – The average Brazilian project takes 4 months to be approved, while a Chinese project takes only 2 months. Abreu (2007) also mentions the lack of regulation as an obstacle. This led to the 8th hypothesis:
 - **H_{A,8}: The Brazilian bureaucracy and the lack of regulation of the sector may hinder the search for good projects and/or the search for funding.**
-



Investing in CDM Projects



-
- The Market and the First Carbon Auction – The project, the trading, and the interest demonstrated by the public originated the 8th hypothesis of this paper:
 - **$H_{A,9a}$: The market for carbon credits is improving. Even with the end of KP it will continue.**
 - **$H_{A,9b}$: The price achieved at the BM&F auction was higher than expected, so prices should fall in coming auctions.**
-



Investing in CDM Projects



-
- The Post-Kyoto – What is the fate of the carbon market? Mohan Munasinghe said that he is confident in the adoption of stricter targets for the Post-Kyoto. He mentions that the pressure exerted by society on the politicians is much stronger and therefore he believes the Post-Kyoto will be more successful than Kyoto. This leads to the 10th hypothesis:
 - **H_{A,10}: A new agreement will be signed, with more ambitious goals.**
-



Investing in CDM Projects



-
- Forest burning – is one aspect which has Brazil as one of the main polluters. The first paragraph of Article 12 of the KP allows for an interpretation that preventing fires is a way of preserving the environment. This led to the last two hypotheses of this paper:
 - **$H_{A,11}$: The preservation and conservation of forests can generate carbon credits.**
 - **$H_{A,12}$: Investment in nuclear energy will increase.**
-



Investing in CDM Projects



-
- **METHODOLOGY** – The research was primarily qualitative. The hypotheses were determined based on the theoretical framework and they were used in the construction of a semi-structured questionnaire.
 - **SAMPLE** – The sample was chosen by accessibility, composed of 9 executives linked to the environment issue. 3 from Banks, 5 from consulting companies, 1 from a NGO. 2 were PhD's, one had a Master's degree, the others had bachelor's degrees.
-



Investing in CDM Projects



-
- The average age of the interviewees was 42 years old. (Median of 42.5).
 - The average time in the present position was 6.5 years.
 - All the interviewees held at least a position of manager, or a higher position.

 - **INTERVIEWS** – the interviews lasted an average of 45 minutes and were recorded and faithfully transcribed.
-



Investing in CDM Projects



-
- **DATA ANALYSIS** – the data was analyzed using Content Analysis (Bardin, 1977), as follows:
 1. Identification of units of analysis according to a determined coding, i.e., the source most frequently mentioned by the respondents.
 2. Categorization of the sources cited. The sources identified were rearranged so that the answers of each interviewee were allocated according to common categories.
 3. Construction of a summary table to allow quick reading and understanding.
-



Investing in CDM Projects



-
- Note – The issues raised were in accordance with the research hypotheses. Thus it was possible to analyze the degree of importance that the respondents assigned to the detached elements.
 - Content Analysis Matrix – This table seeks to align the answers with the objectives of this research in order to make the analysis easier.
-



Data Analysis



-
- The results are presented in Table 02 which shows a summary of the hypotheses made and also shows, for each hypothesis, the conditions of acceptance/rejection of the null hypothesis.
-



Main Results



-
- ❑ It was found that CDM projects will only be implemented if they are profitable.
 - ❑ CDM projects can generate additional gains in competitiveness and image.
 - ❑ It was found that Brazil has very favorable conditions for the development of CDM projects; despite competition with India and China.
 - ❑ It was found that the bureaucratic obstacles affect the development of projects in general (PAC for instance), and also CDM projects.
-



Main Results



-
- It was found that, due to international pressure, the market for carbon credits should remain active after 2012 (Post-Kyoto).
 - It was found that the market – represented by the chosen sample – is still undecided on the more controversial issues, such as:
 - Setting more rigid goals;
 - Carbon credit for forest conservation;
 - Atomic energy.
-



Investing in CDM Projects



-
- Everyone wants a healthier planet, everyone recognizes the effects of GHG, and all are willing to cooperate, **provided** that they are not economically affected.
 - Bjorn Lomborg seems to make sense when he strongly suggests investments in research to develop technologies to produce clean energy.
-



Investing in CDM Projects



Thank you very much!



Content Analysis Matrix





Hypothesis

