

Adrian Renner

# **Does carbon-conscious behavior drive firm performance?**

An event study  
on the Global 500 companies



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An event study  
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With a foreword by Prof. Dr. Kai-Ingo Voigt



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This is dedicated to my loving mother, Hannelore Renner, and girlfriend, Carolin Ulrich, whose constant support and words of encouragement have been a cornerstone for the success of this journey.

## **Foreword**

Scientific research is still at the beginning to understand the relationship between disclosure of carbon information, carbon performance and stock price reaction. For almost any listed company the investors' pressure to disclose climate-relevant information has increased significantly over the last years. Additionally, businesses are ranked by independent parties (such as the Carbon Disclosure Project) in regards to their ability to cope with the challenges posed by climate change. Consequently corporate leaders need to decide whether their company shall take part in these kind of projects, possibly facing negative evaluations or rejecting the investors request, which might also have adverse implications. Knowing how equity holders, which ultimately determine the corporate leaders' fate, will react is crucial for their decision making.

To address these identified gaps in research and practice, Mr. Renner provides interesting insights into how investors react if businesses are moving towards a green future. The strength of this thesis is that research is grounded in appropriate and relevant theory and that sound and mature quantitative research method (event study approach) is pursued. Simultaneously, it addresses a highly relevant topic for practitioners, who are analyzing the capital markets response to carbon-conscious behavior depending on various factors e.g. region, sector, share of institutional investors, carbon intensity, etc.

Since this research project was trying to answer questions on a global scale, Mr. Renner used the Carbon Disclosure Project report on the Global 500 companies, which allowed him to synthesis results from 387 companies from 28 countries.

In conclusion, this book offers new and outstanding insights and can, thus, be highly recommended for researchers and practitioners who are engaged in this field of research.

Prof. Dr. Kai-Ingo Voigt

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Dipl.-Kfm. Adrian Renner

## TABLE OF CONTENTS

|  |              |
|--|--------------|
| <b>LIST OF ABBREVIATIONS .....</b>   | <b>XV</b>    |
| <b>TABLE OF SYMBOLS.....</b>   | <b>XIX</b>   |
| <b>INDEX OF FIGURES.....</b>   | <b>XXI</b>   |
| <b>INDEX OF TABLES.....</b>  | <b>XXIII</b> |
| <b>1 INTRODUCTION.....</b>   | <b>1</b>     |
| 1.1 PROBLEM DEFINITION .....   | 1            |
| 1.1.1 <i>Description of environmental challenges posed by climate change .....</i>       | <i>1</i>     |
| 1.1.1.1 Relationship between human behavior and increased CO <sub>2</sub> .....          | 2            |
| 1.1.1.2 Relationship between CO <sub>2</sub> increase and temperature rise .....         | 6            |
| 1.1.1.3 Relationship between increased temperature and global climate .....              | 9            |
| 1.1.1.4 Climate change and its consequences for mankind .....                            | 15           |
| 1.1.2 <i>Reaction of consumers and policy makers to environmental challenges.....</i>    | <i>23</i>    |
| 1.1.3 <i>Implications of climate change for corporate leaders and investors.....</i>     | <i>25</i>    |
| 1.2 OUTLINE OF THE STUDY .....   | 27           |
| <b>2 LITERATURE REVIEW .....</b>   | <b>30</b>    |
| 2.1 RELATIONSHIP BETWEEN ENVIRONMENTAL DISCLOSURE AND<br>ENVIRONMENTAL PERFORMANCE ..... | 30           |
| 2.1.1 <i>Theoretical perspective .....</i>   | <i>30</i>    |
| 2.1.1.1 Socio-political theories .....   | 30           |
| 2.1.1.1.1 Stakeholder theory .....   | 31           |
| 2.1.1.1.2 Legitimacy theory .....  | 38           |
| 2.1.1.2 Disclosure theory .....  | 38           |
| 2.1.2 <i>Empirical perspective.....</i>  | <i>39</i>    |
| 2.2 RELATION BETWEEN ENVIRONMENTAL AND ECONOMIC PERFORMANCE .....                        | 41           |
| 2.2.1 <i>Theoretical perspective .....</i>   | <i>41</i>    |
| 2.2.1.1 Traditionalist view .....  | 41           |
| 2.2.1.2 Revisionist view.....  | 42           |

|          |  |           |
|----------|--|-----------|
| 2.2.1.3  | Synthesis of traditionalist and revisionist views.....                       | 45        |
| 2.2.2    | <i>Empirical perspective</i> .....   | 46        |
| 2.3      | SUMMARY AND NEW APPROACH TO THEORETICAL FRAMEWORK .....                      | 51        |
| <b>3</b> | <b>DEFINITION OF TERMS .....</b>   | <b>54</b> |
| 3.1      | SUSTAINABILITY .....   | 54        |
| 3.2      | CORPORATE SOCIAL RESPONSIBILITY.....   | 56        |
| 3.3      | ENVIRONMENT.....   | 56        |
| 3.4      | GREEN MANAGEMENT AND CARBON-CONSCIOUS BEHAVIOR.....                          | 58        |
| 3.5      | CORPORATE SUCCESS.....   | 61        |
| 3.6      | EVENT STUDY .....  | 63        |
| <b>4</b> | <b>CARBON DISCLOSURE PROJECT AND ITS GLOBAL 500 REPORT .....</b>             | <b>64</b> |
| 4.1      | THE CARBON DISCLOSURE PROJECT AS AN ORGANIZATION.....                        | 64        |
| 4.2      | GLOBAL 500 REPORT .....  | 66        |
| 4.2.1    | <i>Global 500, response rates and CO<sub>2</sub> emissions covered</i> ..... | 66        |
| 4.2.2    | <i>Carbon disclosure score</i> .....   | 68        |
| 4.2.3    | <i>Carbon performance score</i> .....  | 70        |
| 4.2.4    | <i>Geographic and industry overview</i> .....                                | 72        |
| 4.3      | CRITIQUE OF THE CARBON DISCLOSURE PROJECT .....                              | 75        |
| <b>5</b> | <b>RESEARCH QUESTIONS, MODEL SETUP AND HYPOTHESIS DEVELOPMENT .....</b>      | <b>77</b> |
| 5.1      | RESEARCH QUESTIONS ON CDP ACTIVITY .....                                     | 77        |
| 5.2      | RESEARCH QUESTIONS ON SURVEY-SPECIFIC ITEMS .....                            | 79        |
| 5.3      | MODEL SETUP .....  | 79        |
| 5.4      | PREDICTED RESEARCH OUTCOME BASED ON THEORIES AND HYPOTHESIS DEVELOPMENT ..   | 83        |
| <b>6</b> | <b>RESEARCH METHODOLOGY .....</b>  | <b>87</b> |
| 6.1      | RESEARCH APPROACH.....   | 87        |
| 6.1.1    | <i>History of event studies and academic fields of application.....</i>      | 87        |
| 6.1.2    | <i>Assumptions of event study.....</i>                                       | 89        |
| 6.1.3    | <i>Event definition .....</i>  | 90        |

|           |   |            |
|-----------|---|------------|
| 6.1.4     | <i>Selection of companies</i> .....   | 90         |
| 6.1.5     | <i>Event and estimation window</i> .....  | 91         |
| 6.1.6     | <i>Correction for confounding events</i> .....  | 92         |
| 6.1.7     | <i>Estimation of abnormal returns</i> .....   | 93         |
| 6.1.8     | <i>Estimation of normal returns</i> .....   | 95         |
| 6.1.8.1   | Statistical models .....  | 95         |
| 6.1.8.1.1 | Constant mean model.....  | 95         |
| 6.1.8.1.2 | Index model.....  | 96         |
| 6.1.8.1.3 | Market model .....  | 97         |
| 6.1.8.1.4 | Other statistical models .....  | 99         |
| 6.1.8.2   | Economic models.....  | 100        |
| 6.1.9     | <i>Benchmarks</i> .....   | 101        |
| 6.1.10    | <i>Statistical testing methods</i> .....  | 102        |
| 6.1.10.1  | T-test for significance of abnormal returns .....   | 103        |
| 6.1.10.2  | T-test for equality of abnormal returns.....  | 107        |
| 6.1.10.3  | Non-parametric tests.....   | 108        |
| 6.2       | DATA COLLECTION .....   | 110        |
| 6.3       | CRITIQUE OF EVENT STUDIES .....   | 111        |
| 6.4       | SUMMARY.....  | 112        |
| <b>7</b>  | <b>DESCRIPTION OF DATA SET .....</b>  | <b>113</b> |
| 7.1       | REGIONAL AND INDUSTRIAL SEGMENTATION OF GLOBAL 500 .....                                  | 113        |
| 7.2       | BREAKDOWN OF GLOBAL 500 DATA SET INTO RELEVANT SAMPLE .....                               | 114        |
| 7.3       | REGIONAL AND INDUSTRIAL SEGMENTATION OF RELEVANT SAMPLE .....                             | 115        |
| 7.4       | FURTHER CHARACTERISTICS OF THE SAMPLE .....   | 115        |
| <b>8</b>  | <b>EMPIRICAL RESULTS AND INTERPRETATION .....</b>   | <b>120</b> |
| 8.1       | IMPACT OF CDP PARTICIPATION ON FINANCIAL PERFORMANCE.....                                 | 120        |
| 8.2       | IMPACT OF MEMBERSHIP IN CARBON DISCLOSURE LEADERSHIP INDEX ON FINANCIAL PERFORMANCE ..... | 124        |
| 8.3       | IMPACT OF CARBON PERFORMANCE AWARD ON FINANCIAL PERFORMANCE .....                         | 128        |
| 8.4       | IMPACT OF SETTING CO <sub>2</sub> REDUCTION TARGETS ON FINANCIAL PERFORMANCE .....        | 129        |

|   |            |
|---|------------|
| 8.5 IMPACT ON FINANCIAL PERFORMANCE OF HAVING A BOARD-LEVEL MEMBER<br>RESPONSIBLE FOR CLIMATE CHANGE.....       | 131        |
| 8.6 IMPACT ON FINANCIAL PERFORMANCE OF HAVING AN INCENTIVE SYSTEM TO SUPPORT<br>CLIMATE-FRIENDLY BEHAVIOR ..... | 134        |
| <b>9 SUMMARY AND CONCLUSION .....</b>   | <b>137</b> |
| 9.1 MAJOR FINDINGS .....  | 137        |
| 9.2 MANAGERIAL IMPLICATIONS .....   | 139        |
| 9.3 LIMITATIONS OF THE STUDY .....  | 140        |
| 9.4 SUGGESTIONS FOR FURTHER RESEARCH.....   | 141        |
| <b>APPENDIX.....</b>  | <b>142</b> |
| <b>REFERENCE LIST.....</b>  | <b>151</b> |

## List of abbreviations

|                 |                                    |
|-----------------|------------------------------------|
| APT             | Arbitrage Pricing Theory           |
| AR              | Abnormal return                    |
| B2B             | Business-to-Business               |
| B2C             | Business-to-Consumer               |
| BAU             | Business as usual                  |
| BRIC            | Brazil, Russia, India and China    |
| CAC 40          | Cotation Assistée en Continu 40    |
| CAPM            | Capital Asset Pricing Model        |
| CDP             | Carbon Disclosure Project          |
| CDLI            | Carbon Disclosure Leadership Index |
| CEO             | Chief Executive Officer            |
| CEP             | Center on Economic Priorities      |
| CO <sub>2</sub> | Carbon dioxide                     |
| COGS            | Cost of goods sold                 |
| CH <sub>4</sub> | Methane                            |
| CSR             | Corporate Social Responsibility    |
| DAX             | Deutscher Aktien Index             |
| EBIT            | Earnings before interest and taxes |

|      |   |
|------|---|
| EMS  | Environmental Management System             |
| EPA  | Environmental Protection Agency             |
| ET   | Eastern Time                                |
| ETF  | Exchange Traded Fund                        |
| EU   | European Union                              |
| EUR  | Euro  |
| FRDG | Franklin Research and Development Group     |
| GAAP | Generally Accepted Accounting Principles    |
| GDP  | Gross Domestic Product                      |
| GHGs | Greenhouse gases                            |
| GICS | Global Industry Classification Standard     |
| GM   | General Motors                              |
| GSCM | Green Supply Chain Management               |
| IFRS | International Financial Reporting Standards |
| IPCC | Intergovernmental Panel on Climate Change   |
| IRRC | Investor Responsibility Research Center     |
| ISO  | International Standardization Organization  |
| IT   | Information Technology                      |
| JV   | Joint Venture                               |
| M&A  | Mergers and Acquisitions                    |
| MBA  | Master of Business Administration           |
| MSCI | Morgan Stanley Capital International        |

|                 |                                      |
|-----------------|--------------------------------------|
| NO <sub>2</sub> | Nitrous dioxide                      |
| NGO             | Non-governmental organizations       |
| OEM             | Original Equipment Manufacturer      |
| OLS             | Ordinary Least Squares               |
| PPM             | Parts per million                    |
| PR              | Public relations                     |
| PWC             | PriceWaterhouseCoopers               |
| RoA             | Return on Assets                     |
| RoI             | Return on Investment                 |
| RoS             | Return on Sales                      |
| S&P 500         | Standard and Poor's 500              |
| SRES            | Special Report on Emission Scenarios |
| SUV             | Sport Utility Vehicle                |
| TCTF            | Total Company Target Fulfillment     |
| UK              | United Kingdom                       |
| US              | United States                        |
| USD             | United States Dollars                |
| UV              | Ultraviolet                          |
| W               | Watt                                 |

## Table of symbols

$\Sigma$

Summation

# Index of figures

|   |    |
|---|----|
| Figure 1: Development of carbon dioxide concentration over the last 250 years .....   | 2  |
| Figure 2: Development of carbon dioxide concentration over the last 50 years .....  | 3  |
| Figure 3: Composition of greenhouse gases by type (e.g., CO <sub>2</sub> , CH <sub>4</sub> ).....                                       | 5  |
| Figure 4: Greenhouse gas emissions by sector in 2004 .....  | 5  |
| Figure 5: Greenhouse effect.....  | 6  |
| Figure 6: Development of global temperatures since 1880 .....   | 8  |
| Figure 7: Development of global disasters .....   | 10 |
| Figure 8: Development of sea level since 1880 .....   | 11 |
| Figure 9: Effects of global average temperature change .....  | 21 |
| Figure 10: Future issues for consumers and executives .....   | 25 |
| Figure 11: Life-cycle model of environmental issues .....   | 35 |
| Figure 12: Traditional view of environmental and economic performance .....   | 42 |
| Figure 13: Revisionist view of environmental and economic performance .....   | 44 |
| Figure 14: Synthesis view of environmental and economic performance .....   | 45 |
| Figure 15: Classical theoretical framework .....  | 52 |
| Figure 16: New approach to theory .....   | 53 |
| Figure 17: Level of carbon consciousness.....   | 61 |
| Figure 18: Number of CDP respondents by year (adapted from CDP website).....  | 65 |
| Figure 19: Total reported emissions (Scopes 1, 2 and 3) in billions of tons of CO <sub>2</sub><br>(Source: CDP Global 500 Report) ..... | 67 |
| Figure 20: Proportion of Global 500 at each disclosure level - year-on-year<br>(Source: CDP Global 500 report) .....                    | 68 |
| Figure 21: Carbon High Performance Group (Source: CDP Global 500 Report) .....  | 72 |
| Figure 22: Key facts by geography (Source: CDP Global 500 Report) .....   | 73 |
| Figure 23: Splitting up of title question into three key research questions.....  | 78 |
| Figure 24: Simple model setup .....   | 81 |

|  |     |
|--|-----|
| Figure 25: Model with pathways .....   | 83  |
| Figure 26: Overview of predicted outcomes based on theory .....  | 85  |
| Figure 27: Summary t-test of abnormal returns.....   | 105 |
| Figure 28: Summary t-test of equality .....  | 108 |
| Figure 29: Comparison of tests based on normal distribution with nonparametric<br>tests for similar settings ..... | 109 |
| Figure 30: Regional and industrial segmentation of Global 500 .....  | 113 |
| Figure 31: Breakdown of basic population to relevant sample .....  | 114 |
| Figure 32: Regional and industrial segmentation of relevant sample.....  | 115 |
| Figure 33: Average sales by industry .....   | 116 |
| Figure 34: Average EBIT margin by industry .....   | 116 |
| Figure 35: Leverage by industry .....  | 117 |
| Figure 36: Share of institutional investors by industry.....   | 118 |
| Figure 37: Carbon intensity by industry .....  | 118 |
| Figure 38: Segmentation by business model .....  | 119 |
| Figure 39: First part of empirical results on research question 1.....   | 121 |
| Figure 40: Second part of empirical results on research question 1 .....   | 122 |
| Figure 41: Empirical results for research question 1A .....  | 123 |
| Figure 42: First part of empirical results on research question 2.....   | 125 |
| Figure 43: Second part of empirical results on research question 2 .....   | 126 |
| Figure 44: Regression analysis on disclosure score and abnormal return .....                                       | 127 |
| Figure 45: Empirical results for research question 3 .....   | 128 |
| Figure 46: First part of empirical results on research question 4.....   | 130 |
| Figure 47: Second part of empirical results on research question 4 .....   | 131 |
| Figure 48: First part of empirical results on research question 5.....   | 132 |
| Figure 49: Second part of empirical results on research question 5 .....   | 133 |
| Figure 50: First part of empirical results on research question 6.....   | 134 |
| Figure 51: Second part of empirical results on research question 6 .....   | 135 |

## Index of tables

|  |    |
|--|----|
| Table 1: Overview stakeholders (adapted from Meffert/Kirchgeorg 1998).....             | 32 |
| Table 2: Largest non-respondents in 2009 (Source: CDP Global 500 Report) .....         | 67 |
| Table 3: Carbon Disclosure Leadership Index 2009 (Source: CDP Global 500 report) ..... | 70 |
| Table 4: Change in level of disclosure by sector (Source: CDP Global 500 Report).....  | 74 |