Voluntary disclosure of greenhouse gas emissions, corporate governance and earnings management: *Australian evidence*

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This study examines the impact of corporate governance mechanisms on greenhouse gas emission disclosure and the extent to which the disclosure of greenhouse gas emission information is associated with earnings management and the liquidity of firms’ shares. The sample for this study is drawn from Australian publicly listed firms that voluntarily disclosed their greenhouse gas emission information through voluntary disclosure channels such as the Carbon Disclosure Project, annual reports, standalone sustainability reports, and corporate websites between 2006 and 2009. This study adopts the Carbon Disclosure Project 2010 scoring methodology to measure the quality of greenhouse gas emission disclosure. A content analysis was used to score the quality of voluntary disclosures in annual financial and sustainability reports, and the information provided on company websites.

In this thesis, two competing views: the stakeholder value maximisation view and the shareholder expense view are examined in relation to the impact of corporate governance mechanisms on greenhouse gas emission disclosures and the extent to which the disclosure of greenhouse gas emission information is associated with earnings management. The stakeholder value maximisation view predicts that firms engage in socially responsible initiatives such as greenhouse emission reduction strategies and targets associated with climate change to fulfil the legitimate interests of stakeholders. On the other hand, the shareholder expense view suggests that firms engage in socially responsible initiatives such as greenhouse gas emission reduction initiatives at the expense of shareholders.

This research contributes several new findings to the literature. Firstly, with regards to the relationship between corporate governance mechanisms and voluntary disclosure, this thesis has found that effective corporate governance mechanisms such as greater board independence, the absence of Chief Executive Officer duality, the presence of board gender diversity, decrease in directors’ share ownership, increase in institutional ownership and smaller size of the audit committee drive voluntary greenhouse gas emission disclosure. These results suggest that firms with effective corporate governance mechanisms focus on the legitimate interests of a broader group of stakeholders with regards to climate change, particularly greenhouse gas emission mitigation targets. This is consistent with the stakeholder value maximisation view of firms which is based on stakeholder theory and legitimacy theory as opposed to the shareholder expense hypothesis which is based on agency theory. These results are robust to control for self-selection using the Heckman two-stage sample selection procedure. Our results are also robust to the exclusion of financial sector firms which arguably could be affected by the Global Financial Crisis.
Secondly, this research finds a weak negative relationship between voluntary disclosure of greenhouse gas emission disclosure and earnings management. This study has found only weak support for the stakeholder value maximisation view, suggesting that stakeholder-focused firms are less likely to engage in earnings management. In addition, Australian firms are trying to maintain a balance between the quality of greenhouse gas emission disclosure and the quality of financial reporting. As a result, they have difficulty satisfying multiple objectives simultaneously. These results are robust for endogeneity controls using the two-stage least squares method.

Thirdly, this study has found that the voluntary disclosure of greenhouse gas emission information by firms has an impact on the liquidity of that firm’s shares. This suggests that firms that disclose more greenhouse gas emission information voluntarily experience improved liquidity of their shares. These results support the view of Balakrishnan et al. (2013) that managers’ decisions to disclose more voluntary information could directly affect the liquidity of their firms’ shares. Managers may shape the liquidity of their firms’ shares by providing more greenhouse gas emission information voluntarily through the Carbon Disclosure Project and their corporate reporting channels.

Finally, larger and more visible firms tend to provide more information regarding climate change related due to social pressures. Firms with higher growth opportunities tend to provide less greenhouse gas emission information. Firm leverage and age are positively associated with the quality of greenhouse gas emission disclosure; indicating that longer-established firms with more leverage may disclose more the quality of greenhouse gas emissions in order to maintain their reputation among the stakeholders.
CERTIFICATION OF DISSERTATION

I certify that the ideas, analyses, results and conclusions reported in this thesis are entirely my own effort, except where otherwise acknowledged. I also certify that this work is original and has not previously been submitted for any other award except where otherwise acknowledged.

________________________  _________________________
Signature of Candidate          Date

Endorsement

________________________  _________________________
Signature of Principal Supervisor          Date

________________________  _________________________
Signature of Associate Supervisor          Date
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# TABLE OF CONTENTS

ABSTRACT .............................................................................................................. i  
ACKNOWLEDGEMENTS ....................................................................................... iv  
TABLE OF CONTENTS ........................................................................................... v  
LIST OF FIGURES ................................................................................................... ix  
LIST OF TABLES .................................................................................................... ix  
APPENDICES ......................................................................................................... x  
ABBREVIATIONS ................................................................................................... xi  
PUBLICATIONS ..................................................................................................... xii  

1. INTRODUCTION .......................................................................................... 1  
   1.1. Background .............................................................................................. 1  
   1.2. Research question .................................................................................. 4  
   1.3. Contributions of the study ..................................................................... 6  
   1.4. Methodology ......................................................................................... 7  
   1.5. Structure of the thesis .......................................................................... 7  

2. LITERATURE REVIEW .............................................................................. 9  
   2.1. Introduction ............................................................................................ 9  
   2.2. An overview of Australian legislation on GHG reporting ............. 9  
   2.3. Voluntary GHG emission disclosure medium ................................... 12  
   2.4. Voluntary disclosures of GHG emission information .................. 14  
   2.5. GHG emission disclosure and firm value ........................................ 16  
       2.5.1. Capital market effects ..................................................................... 16  
       2.5.2. GHG emission disclosure and firm value .................................... 17  
       2.5.3. GHG emission disclosure and firm financial performance ......... 18  
   2.6. Incentives for voluntary GHG emission information .................... 19  
       2.6.1. Reduction in information asymmetry ........................................... 20  
       2.6.2. Political costs avoidance ................................................................. 21  
       2.6.3. Good corporate governance ............................................................ 21  
       2.6.4. Competitive advantage ................................................................. 22  
       2.6.5. Compensation for earnings management ..................................... 23  
       2.6.6. Stakeholders’ demands ................................................................. 23  
       2.6.7. Increases in liquidity ..................................................................... 24  
   2.7. Definitions of corporate governance ................................................. 24  
       2.7.1. Corporate governance in Australia ............................................... 25  
   2.8. Voluntary disclosure and corporate governance quality ................ 26  
       2.8.1. Corporate governance and CSR ....................................................... 27  
       2.8.2. Corporate governance and environmental disclosure ................ 28  
       2.8.3. Corporate governance and GHG emission disclosure ............... 28
2.9. Voluntary disclosure and corporate governance in Australia .......... 30
  2.9.1. Board independence ................................................................. 32
  2.9.2. CEO duality ........................................................................... 34
  2.9.3. Board gender diversity ......................................................... 35
  2.9.4. Directors’ share ownership .................................................... 36
  2.9.5. Institutional share ownership ................................................ 37
  2.9.6. Frequency of audit committee meetings .................................. 38
  2.9.7. Size of audit committee ......................................................... 39

2.10. Voluntary disclosures and earnings management ..................... 39
  2.10.1. CSR and earnings management ................................................ 40
  2.10.2. Environmental disclosure and earnings management ............... 44
  2.10.3. Voluntary disclosure, corporate governance and earnings management 49

2.11. Voluntary disclosure and liquidity ............................................ 49

2.12. Research gap in the literature .................................................. 52

3. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT ........................................... 53

3.1. Introduction .................................................................................. 53

3.2. Theoretical framework ................................................................. 53
  3.2.1. Stakeholder theory ................................................................. 53
  3.2.2. Agency theory ........................................................................ 55
  3.2.3. Legitimacy theory ................................................................. 56

3.3. Research question ......................................................................... 57

3.4. Stakeholder value maximisation vs. shareholder expense views ...... 57
  3.4.1. Stakeholder value maximisation view ....................................... 57
  3.4.2. Shareholder expense view .................................................... 59

3.5. Hypotheses development .............................................................. 60
  3.5.1. Corporate governance and GHG disclosures ............................ 60
  3.5.2. GHG disclosures and earnings management .......................... 62
  3.5.3. GHG disclosures, corporate governance and earnings management 63
  3.5.4. Liquidity and GHG disclosure .............................................. 64

3.6. Conclusion ................................................................................... 65

4. DATA AND METHODOLOGY ............................................................. 67

4.1. Introduction .................................................................................. 67

4.2. Sample selections and exclusions .................................................. 67

4.3. Data collection ............................................................................... 68

4.4. Measurement of variables ............................................................. 69
  4.4.1. Voluntary disclosure of GHG emission ..................................... 69
  4.4.2. Corporate governance variables ........................................... 71
  4.4.3. Earnings management calculations ....................................... 73
  4.4.4. Measures of stock liquidity ................................................ 75
  4.4.5. Control variables ................................................................. 78

4.5. Endogeneity and selection bias .................................................... 80
4.5.1. Lag independent variables ................................................................. 80
4.5.2. Year and industry dummy ................................................................. 80
4.5.3. Use of a variety of control variables .................................................... 80
4.5.4. Two-stage least squares method ....................................................... 81
4.5.5. Heckman two-stage estimation ......................................................... 81

4.6. Data analysis techniques ...................................................................... 81
4.6.1. Cross-sectional multiple regression model .......................................... 81

4.7. Conclusion ............................................................................................. 83

5. DESCRIPTIVE STATISTICS ................................................................ 85
5.1. Introduction ............................................................................................. 85
5.2. Sample distribution by responses ............................................................. 85
5.3. Descriptive statistics for corporate governance and GHG disclosure ..... 86
5.4. Earnings management and GHG emission disclosure ................................ 94
5.5. Voluntary disclosure of GHG emission and liquidity .............................. 95
5.6. Conclusion ............................................................................................. 98

6. DATA ANALYSIS AND RESULTS .................................................... 99
6.1. Introduction ............................................................................................. 99
6.2. The impact of corporate governance on voluntary GHG emission disclosure ................................................................. 99
6.2.1. Correlation results for H1 (a) and (b) ................................................... 99
6.2.2. Voluntary GHG emission disclosure and corporate governance variables ................................................................. 102
6.2.3. Long-term performance ................................................................. 108
6.2.4. Year-by-year regression results ........................................................... 110
6.2.5. Disclosure sub-scores and corporate governance ............................... 113
6.2.6. Robustness analysis ........................................................................... 115

6.3. Voluntary GHG emission disclosure and earnings management .......... 121
6.3.1. Correlation matrix ........................................................................... 122
6.3.2. Voluntary GHG emission disclosure and earnings management .......... 124
6.3.3. Year-by-year regression results ........................................................... 128
6.3.4. Disclosure sub-scores and corporate governance ............................... 130
6.3.5. GHG emission disclosure, corporate governance, and earnings management ................................................................. 131
6.3.6. Robustness tests .............................................................................. 134

6.4. Stock market liquidity and voluntary disclosure of GHG information ..... 138
6.4.1. Correlation results ........................................................................... 138
6.4.2. Stock liquidity and voluntary disclosure of GHG emissions ................. 141
6.4.3. Year-by-year regression results ........................................................... 143
6.4.4. Market liquidity and sub-disclosures of GHG emission information ...... 145
6.4.5. Market liquidity, GHG emission information and corporate governance ................................................................................. 146
6.4.6. Conclusion ........................................................................................ 147

7. CONCLUSIONS AND IMPLICATIONS ........................................... 149
7.1. Introduction ............................................................................................ 149
7.2. Research questions ........................................................................................................... 149

7.2.1. What are the impacts of corporate governance characteristics on voluntary GHG emission information disclosure? ............................................................ 149

7.2.2. What is the relationship between voluntary disclosures of GHG emission information and earnings management? ............................................................ 152

7.2.3. Do Australian firms with higher voluntary disclosure of GHG emission information have higher liquidity of the firms’ shares? ............................................. 153

7.3. The contributions of the study ........................................................................................... 153

7.3.1. Contributions to the literature ..................................................................................... 153

7.3.2. Contributions to the practice ....................................................................................... 154

7.4. The limitations of the study ............................................................................................. 154

7.5. Recommendations for future research ............................................................................ 155

8. LIST OF REFERENCES ........................................................................................................ 157

APPENDICES ................................................................................................................................ 179
LIST OF FIGURES

Figure 2.1 Total GHG emissions ............................................................................ 11
Figure 2.2 Quality of Corporate Responsibility Reporting .................................... 13

LIST OF TABLES

Table 2.1 Sustainability disclosure and earnings management .............................. 46
Table 4.1 Total sample firms before exclusions ..................................................... 67
Table 4.2 Summary of sample selection and exclusions ........................................ 68
Table 4.3 Definitions of variables ......................................................................... 76
Table 5.1 Sample distribution by responses and CDP reporting years ................. 86
Table 5.2 Corporate governance and GHG emission disclosure decisions .......... 87
Table 5.3 Quality of GHG information scores attained across years ................. 89
Table 5.4: Quality of GHG emission disclosure by industries ......................... 90
Table 5.5 Corporate governance and quality GHG emission information .......... 91
Table 5.6 Absolute value of discretionary accruals ............................................. 94
Table 5.7 Amihud’s illiquidity for disclosing and non-disclosing samples .......... 95
Table 5.8 Amihud’s illiquidity measure and disclosure quality .............................. 96
Table 5.9 Bid-ask spreads and disclosing and non-disclosing sample ............... 97
Table 5.10 Bid-ask spreads and disclosure quality ............................................. 98
Table 6.1 Correlation matrix (Pearson above diagonal and Spearman below diagonal) ................................................................. 101
Table 6.2 Decision to disclose GHG emission information and corporate governance ............................................................................................................. 103
Table 6.3 Quality of GHG emission information and corporate governance ...... 106
Table 6.4 Long-term performance ...................................................................... 108
Table 6.5 Decision to Disclose GHG emission information and corporate governance by years .............................................................. 110
Table 6.6 Quality of GHG disclosure and corporate governance by years .......... 112
Table 6.7 Sub-scores of disclosures and corporate governance ........................ 114
Table 6.8 Heckman two-stage sample selection model ...................................... 116
Table 6.9 GHG emission disclosure and alternative corporate governance ....... 119
Table 6.10 Regression results excluding financial sector ................................... 120
Table 6.11 Correlation between GHG disclosure and earnings management
(Pearson above diagonal and Spearman below diagonal) ............................ 123
Table 6.12 Choice of GHG disclosure and earnings management............... 125
Table 6.13 Quality of GHG information disclosure and earnings management .. 126
Table 6.14 Choice of GHG disclosure and earnings management by years ...... 128
Table 6.15 Quality of GHG emissions disclosure and earnings management by years.......................................................... 129
Table 6.16 Sub-scores of quality of GHG emissions information and earnings management................................................................. 130
Table 6.17 GHG disclosure, corporate governance and earnings management... 132
Table 6.18 Quality of GHG, corporate governance and earnings management... 133
Table 6.19 Heckman two-stage and OLS two-stage .................................. 135
Table 6.20 Analysis of an alternative measure of corporate governance........... 137
Table 6.21 Correlation between liquidity and disclosure of GHG (Pearson above diagonal and Spearman below diagonal)........................................... 139
Table 6.22 Liquidity and disclosure of GHG information ............................... 141
Table 6.23 Liquidity and disclosure of GHG information by years............... 143
Table 6.24 Liquidity and sub-scores of GHG emission information disclosure .. 145
Table 6.25 Liquidity, disclosure and corporate governance ........................... 146

APPENDICES

Appendix 1: CDP 2010 scoring methodology ........................................... 179
Appendix 2: Regression normality test ......................................................... 204
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>Listing age</td>
</tr>
<tr>
<td>AMILOG</td>
<td>Logarithm of Amihud’s illiquidity measure</td>
</tr>
<tr>
<td>AMT</td>
<td>Number of audit committee meetings</td>
</tr>
<tr>
<td>ASX</td>
<td>Australian Stock Exchange</td>
</tr>
<tr>
<td>ASXCGC</td>
<td>Australian Stock Exchange Corporate Governance Council</td>
</tr>
<tr>
<td>BHD</td>
<td>Blockholders Ownership</td>
</tr>
<tr>
<td>BIDLOG</td>
<td>Logarithm of bid-ask spread</td>
</tr>
<tr>
<td>CDP</td>
<td>Carbon Disclosure Project</td>
</tr>
<tr>
<td>CDLI</td>
<td>Carbon disclosure leadership Index</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CRL</td>
<td>Cross-listing</td>
</tr>
<tr>
<td>CSP</td>
<td>Corporate Social Performance</td>
</tr>
<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
</tr>
<tr>
<td>DCA</td>
<td>Discretionary current accruals</td>
</tr>
<tr>
<td>DISC</td>
<td>Disclosure decisions</td>
</tr>
<tr>
<td>DIV</td>
<td>Board gender diversity</td>
</tr>
<tr>
<td>DUA</td>
<td>DEO duality</td>
</tr>
<tr>
<td>ETS</td>
<td>Emission Trading Scheme</td>
</tr>
<tr>
<td>GAAP</td>
<td>Generally accepted accounting principles</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse gas</td>
</tr>
<tr>
<td>GICS</td>
<td>Global industry classification standard</td>
</tr>
<tr>
<td>IND</td>
<td>Board independence</td>
</tr>
<tr>
<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
</tr>
<tr>
<td>KPMG</td>
<td>KPMG international cooperative</td>
</tr>
<tr>
<td>LMV</td>
<td>Logarithm of market value</td>
</tr>
<tr>
<td>MAU</td>
<td>Size of audit committee</td>
</tr>
<tr>
<td>MSO</td>
<td>Directors' ownership</td>
</tr>
<tr>
<td>NDCA</td>
<td>Non-discretionary current accruals</td>
</tr>
<tr>
<td>NGER</td>
<td>The National Greenhouse Energy Reporting Act</td>
</tr>
<tr>
<td>NPI</td>
<td>National Pollution Inventory</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>QUAL</td>
<td>Disclosure quality</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on assets</td>
</tr>
<tr>
<td>SEC</td>
<td>Security Exchange Commission (US)</td>
</tr>
<tr>
<td>SWT</td>
<td>Switching from non-disclosing to disclosing, or vice versa</td>
</tr>
<tr>
<td>TBL</td>
<td>Triple Bottom Line</td>
</tr>
<tr>
<td>TCA</td>
<td>Total current accruals</td>
</tr>
<tr>
<td>TOB</td>
<td>Tobin's q</td>
</tr>
<tr>
<td>VOL</td>
<td>Volatility</td>
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LIST OF PAPERS PRESENTED AT INTERNATION CONFERENCES
