

Internet Appendix to
Do Institutional Investors Drive Corporate Social Responsibility?
International Evidence

Alexander Dyck
University of Toronto

Karl V. Lins
University of Utah

Lukas Roth
University of Alberta

Hannes F. Wagner
Bocconi University

Journal of Financial Economics, forthcoming

The paper itself is available at papers.ssrn.com/sol3/papers.cfm?abstract_id=2708589

Corresponding author: Alexander Dyck, Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, Ontario, Canada; E-mail: adyck@rotman.utoronto.ca; Phone: (416) 946-0819. We thank Tetyana Balyuk for excellent research assistance. We also thank Bill Schwert (the editor), an anonymous referee, Andrew Ellul, Miguel Ferreira, Yelena Larkin, Pedro Matos, Denis Sosyura, and seminar participants at the Frankfurt School of Finance and Management, Hong Kong University of Science and Technology, University of Arizona, University of Fribourg, University of Geneva, University of Michigan, University of Neuchatel, York University, and participants at the Ackerman Conference on Corporate Governance, the American Finance Association Meetings, the FIRCG Conference at the University of Melbourne, the International Centre for Pension Management Forum, and the Northern Finance Association Meetings for helpful comments and suggestions. We thank MSCI for providing us with MSCI index constituent data. Hannes Wagner gratefully acknowledges financial support from the BAFFI Carefin Center for Applied Research on International Markets, Banking, Finance and Regulation.

Appendix A

Creating Environmental and Social Indicators Based on ASSET4 ESG Environmental and Social Data

We create environmental and social indicator variables based on the ASSET4 ESG environmental and social indicator values. Indicator values are the answers to Y/N questions, double Y/N questions, and numerical questions. We translate the answers to these questions into indicator variables. More specifically, for questions with a positive direction (i.e., a “yes” answer or a greater number is associated with better environmental performance), we translate the answers to Y/N questions into 0 (N) and 1 (Y); the answers to double Y/N questions into 0 (NN), 0.5 (YN or NY), and 1 (YY); and the answers to numerical questions into 0 (value is less (or equal) than zero; or value is less (or equal) than the median; see also column “Translation Numeric Values”) and 1 (value is greater than zero; or value is greater than the median; see also column “Translation Numeric Values”). For questions with a negative direction (i.e., a “no” answer or a lower number is associated with better social performance), the opposite coding applies. The data are from the ASSET4 ESG database.

Panel A: Environmental Indicator Variables

| | Description | Direction | Question Type | Translation Numeric Values |
|------------------------------|--|---|---------------|----------------------------|
| A. Emission Reduction | | | | |
| 1) | Biodiversity Controversies | Is the company under the spotlight of the media because of a controversy linked to biodiversity? | Negative | Y/N |
| 2) | Biodiversity Impact | Does the company report on initiatives to protect, restore or reduce its impact on native ecosystems and species, biodiversity, protected and sensitive areas? | Positive | Y/N |
| 3) | Cement CO2 Emissions | Total CO2 and CO2 equivalents emission in kilograms per tonne of cement produced. | Negative | Number |
| 4) | Climate Change Risks and Opportunities | Is the company aware that climate change can represent commercial risks and/or opportunities? | Positive | Y/N |
| 5) | CO2 Reduction | Does the company show an initiative to reduce, reuse, recycle, substitute, phased out or compensate CO2 equivalents in the production process? | Positive | Y/N |
| 6) | Discharge into Water System | Total weight of water pollutant emissions in tonnes divided by net sales or revenue in U.S. dollars. | Negative | Number |
| 7) | Environmental Compliance | All real or estimated penalties, fines from lost court cases, settlements or cases not yet settled regarding environmental controversies in U.S. dollars. | Negative | Number |
| 8) | Environmental Expenditures | Does the company report on its environmental expenditures or does the company report to make proactive environmental investments to reduce future risks or increase future opportunities? | Positive | Y/N |
| 9) | Environmental Management Systems | The percentage of company sites or subsidiaries that are certified with any environmental management system. | Positive | Number |
| 10) | Environmental Partnerships | Does the company report on partnerships or initiatives with specialized NGOs, industry organizations, governmental or supragovernmental organizations that focus on improving environmental issues? | Positive | Y/N |
| 11) | Environmental Restoration Initiatives | Does the company report or provide information on company-generated initiatives to restore the environment? | Positive | Y/N |
| 12) | F-Gases Emissions | Does the company report on initiatives to recycle, reduce, reuse or phase out fluorinated gases such as HFCs (hydrofluorocarbons), PFCs (perfluorocarbons) or SF6 (sulphur hexafluoride)? | Positive | Y/N |
| 13) | Greenhouse Gas Emissions | Total CO2 and CO2 equivalents emission in tonnes divided by net sales or revenue in U.S. dollars. | Negative | Number |
| 14) | Hazardous Waste | Total amount of hazardous waste produced in tonnes divided by net sales or revenue in U.S. dollars. | Negative | Number |
| 15) | Implementation | Does the company describe the implementation of its emission reduction policy through a public commitment from a senior management or board member? AND Does the company describe the implementation of its emission reduction policy through the processes in place? | Positive | Double Y/N |
| 16) | Improvements | Does the company set specific objectives to be achieved on emission reduction? | Positive | Y/N |
| 17) | Innovative Production | Does the company report on the concentration of production locations in order to limit the environmental impact during the production process? OR Does the company report on its participation in any emissions trading initiative? OR Does the company report on new production techniques to improve the global environmental impact (all emissions) during the production process? | Positive | Y/N |
| 18) | Monitoring | Does the company monitor its emission reduction performance? | Positive | Y/N |
| 19) | NOx and SOx Emissions Reduction | Does the company report on initiatives to reduce, reuse, recycle, substitute, or phase out SOx (sulphur oxides) or NOx (nitrogen oxides) emissions? | Positive | Y/N |
| 20) | Ozone-Depleting Substances Reduction | Does the company report on initiatives to reduce, substitute, or phase out ozone-depleting (CFC-11 equivalents, chlorofluorocarbon) substances? | Positive | Y/N |
| 21) | Policy | Does the company have a policy for reducing environmental emissions or its impacts on biodiversity? AND Does the company have a policy for maintaining an environmental management system? | Positive | Double Y/N |
| 22) | Spill Impact Reduction | Does the company report on initiatives to reduce, avoid or minimize the effects of spills or other polluting events (crisis management system)? | Positive | Y/N |
| 23) | Spills and Pollution Controversies | Is the company directly or indirectly (through a supplier) under the spotlight of the media because of a controversy linked to the spill of chemicals, oils and fuels, gases (flaring) or controversy relating to the overall impacts of the company on the environment? | Negative | Y/N |
| 24) | Transportation Impact Reduction | Does the company report on initiatives to reduce the environmental impact of transportation of its products or its staff? | Positive | Y/N |
| 25) | VOC Emissions Reduction | Does the company report on initiatives to reduce, substitute, or phase out volatile organic compounds (VOC) or particulate matter less than ten microns in diameter (PM10)? | Positive | Y/N |
| 26) | Waste | Total amount of waste produced in tonnes divided by net sales or revenue in U.S. dollars. | Negative | Number |

| | | | | | |
|------------------------------|---|--|----------|--------|--------|
| 27) | Waste Recycling Ratio | Total recycled and reused waste produced in tonnes divided by total waste produced in tonnes. | Positive | Number | Median |
| 28) | Waste Reduction | Does the company report on initiatives to recycle, reduce, reuse, substitute, treat or phase out total waste, hazardous waste or wastewater? | Positive | Y/N | |
| B. Product Innovation | | | | | |
| 1) | Animal Testing | Is the company endorsing guidelines on animal testing (e.g., the EU guideline on animal experiments)? OR Has the company established a programme or an initiative to reduce, phase out or substitute for animal testing? | Positive | Y/N | |
| 2) | Eco-Design Products | Does the company report on specific products which are designed for reuse, recycling or the reduction of environmental impacts? | Positive | Y/N | |
| 3) | Energy Footprint Reduction | Does the company describe initiatives in place to reduce the energy footprint of its products during their use? | Positive | Y/N | |
| 4) | Environmental Asset Management | Does the company report on assets under management which employ environmental screening criteria or environmental factors in the investment selection process? | Positive | Y/N | |
| 5) | Environmental Labels and Awards | Has the company received product awards with respect to environmental responsibility? OR Does the company use product labels (e.g., FSC, Energy Star, MSC) indicating the environmental responsibility of its products? | Positive | Y/N | |
| 6) | Environmental Products | Does the company report on at least one product line or service that is designed to have positive effects on the environment or which is environmentally labelled and marketed? | Positive | Y/N | |
| 7) | Environmental Project Financing | Is the company a signatory of the Equator Principles (commitment to manage environmental issues in project financing)? OR Does the company claim to evaluate projects on the basis of environmental or biodiversity risks as well? | Positive | Y/N | |
| 8) | Environmental R&D | Does the company invest in R&D on new environmentally friendly products or services that will limit the amount of emissions and resources needed during product use? | Positive | Y/N | |
| 9) | Environmental R&D Expenditures | Total amount of environmental R&D costs (without clean up and remediation costs) divided by net sales or revenue in U.S. dollars. | Positive | Number | Median |
| 10) | GMO Free Products | Does the company make a commitment to exclude GMO ingredients from its products or retail offerings? | Positive | Y/N | |
| 11) | Hybrid Vehicles | Is the company developing hybrid vehicles? | Positive | Y/N | |
| 12) | Implementation | Does the company describe the implementation of its environmental product innovation policy? | Positive | Y/N | |
| 13) | Improvements | Does the company set specific objectives to be achieved on environmental product innovation? | Positive | Y/N | |
| 14) | Labelled Wood Percentage | The percentage of labelled wood or forest products (e.g., Forest Stewardship Council (FSC)) from total wood or forest products. | Positive | Number | Median |
| 15) | Liquefied Natural Gas | Does the company develop new products and services linked to liquefied natural gas? | Positive | Y/N | |
| 16) | Monitoring | Does the company describe, claim to have or mention the processes it uses to accomplish environmental product innovation? | Positive | Y/N | |
| 17) | Noise Reduction | Does the company develop new products that are marketed as reducing noise emissions? | Positive | Y/N | |
| 18) | Organic Products | Does the company report or show initiatives to produce or promote organic food or other products? | Positive | Y/N | |
| 19) | Policy | Does the company have an environmental product innovation policy (eco-design, life cycle assessment, dematerialization)? | Positive | Y/N | |
| 20) | Product Impact Controversies | Is the company under the spotlight of the media because of a controversy linked to the environmental impact of its products or services? | Negative | Y/N | |
| 21) | Product Impact Minimization | Does the company reports about take-back procedures and recycling programmes to reduce the potential risks of products entering the environment? OR Does the company report about product features and applications or services that will promote responsible, efficient, cost-effective and environmentally preferable use? | Positive | Y/N | |
| 22) | Renewable Energy Supply | Total energy distributed or produced from renewable energy sources divided by the total energy distributed or produced. | Positive | Number | Median |
| 23) | Renewable/Clean Energy Products | Does the company develop products or technologies for use in the clean, renewable energy (such as wind, solar, hydro and geo-thermal and biomass power)? | Positive | Y/N | |
| 24) | Sustainable Building Products | Does the company develop products and services that improve the energy efficiency of buildings? | Positive | Y/N | |
| 25) | Water Technologies | Does the company develop products or technologies that are used for water treatment, purification or that improve water use efficiency? | Positive | Y/N | |
| C. Resource Reduction | | | | | |
| 1) | Cement Energy Use | Total energy use in gigajoules per tonne of clinker produced. | Negative | Number | Median |
| 2) | Energy Efficiency Initiatives | Does the company report on initiatives to use renewable energy sources? AND Does the company report on initiatives to increase its energy efficiency overall? | Positive | Double | Y/N |
| 3) | Energy Use | Total direct and indirect energy consumption in gigajoules divided by net sales or revenue in U.S. dollars. | Negative | Number | Median |
| 4) | Environmental Resource Impact Controversies | Is the company under the spotlight of the media because of a controversy linked to the environmental impact of its operations on natural resources or local communities? | Negative | Y/N | |
| 5) | Environmental Supply Chain Management | Does the company use environmental criteria (ISO 14000, energy consumption, etc.) in the selection process of its suppliers or sourcing partners? AND Does the company report or show to be ready to end a partnership with a sourcing partner, if environmental criteria are not met? | Positive | Double | Y/N |
| 6) | Green Buildings | Does the company have environmentally friendly or green sites or offices? | Positive | Y/N | |
| 7) | Implementation | Does the company describe the implementation of its resource efficiency policy through a public commitment from a senior management or board member? AND Does the company describe the implementation of its resource efficiency policy through the processes in place? | Positive | Double | Y/N |
| 8) | Improvements | Does the company set specific objectives to be achieved on resource efficiency? AND Does the company comment on the results of previously set objectives? | Positive | Double | Y/N |
| 9) | Land Use | Does the company report on initiatives to reduce the environmental impact on land owned, leased or managed for production activities or extractive use? | Positive | Y/N | |
| 10) | Materials | Total amount of materials used in tonnes divided by net sales or revenue in U.S. dollars. | Negative | Number | Median |

| | | | | | |
|-----|-------------------------------------|--|----------|------------|--------|
| 11) | Materials Recycled and Reused Ratio | The percentage of recycled materials of the total materials used. | Positive | Number | Median |
| 12) | Monitoring | Does the company monitor its resource efficiency performance? | Positive | Y/N | |
| 13) | Policy | Does the company have a policy for reducing the use of natural resources? AND Does the company have a policy to lessen the environmental impact of its supply chain? | Positive | Double Y/N | |
| 14) | Renewable Energy Use | Total energy generated from primary renewable energy sources divided by total energy. | Positive | Number | Median |
| 15) | Toxic Chemicals | Does the company report on initiatives to reduce, reuse, substitute or phase out toxic chemicals or substances? | Positive | Y/N | |
| 16) | Water Recycling | Does the company report on initiatives to reuse or recycle water? OR Does the company report on initiatives to reduce the amount of water used? | Positive | Y/N | |
| 17) | Water Use | Total water withdrawal in cubic meters divided by net sales or revenue in U.S. dollars. | Negative | Number | Median |

Panel B: Social Indicator Variables

| | Description | Direction | Question Type | Translation Numeric Values | |
|-------------------------------------|---|--|---------------|----------------------------|--------|
| A. Community Category | | | | | |
| 1) | Bribery, Corruption, Fraud Controversies | Is the company under the spotlight of the media because of a controversy linked to bribery and corruption, political contributions, improper lobbying, money laundering, parallel imports or any tax fraud? | Negative | Y/N | |
| 2) | Business Ethics Compliance | All real or estimated penalties, fines from lost court cases, settlements or cases not yet settled regarding controversies linked to business ethics in general, political contributions or bribery and corruption, price-fixing or anti-competitive behaviour, tax fraud, parallel imports or money laundering in U.S. dollars. | Negative | Number | Zero |
| 3) | Corporate Responsibility Awards | Has the company received an award for its social, ethical, community, or environmental activities or performance? | Positive | Y/N | |
| 4) | Crisis Management | Does the company report on crisis management systems or reputation disaster recovery plans to reduce or minimize the effects of reputation disasters? | Positive | Y/N | |
| 5) | Critical Countries, Indigenous People Controversies | Is the company under the spotlight of the media because of a controversy linked to activities in critical, undemocratic countries that do not respect fundamental human rights or to disrespecting the rights of indigenous people? | Negative | Y/N | |
| 6) | Donations in General | Does the company make cash donations? AND Does the company make in-kind donations, foster employee engagement in voluntary work or provide funding of community-related projects through a corporate foundation? | Positive | Double Y/N | |
| 7) | Implementation | Does the company describe the implementation of its community policy through a public commitment from a senior management or board member? AND Does the company describe the implementation of its community policy through the processes in place? | Positive | Double Y/N | |
| 8) | Improvements | Does the company set specific objectives to be achieved on its reputation or its relations with communities? | Positive | Y/N | |
| 9) | Income Taxes | Total amount of income taxes divided by net income. | Positive | Number | Median |
| 10) | Monitoring | Does the company monitor its reputation or its relations with communities? | Positive | Y/N | |
| 11) | Patent Infringement | All real or estimated penalties, fines from lost court cases, settlements or cases not yet settled regarding controversies linked to patents and intellectual property infringement in U.S. dollars. | Negative | Number | Zero |
| 12) | Policy | Does the company have a policy to strive to be a good corporate citizen or endorse the Global Sullivan Principles? AND Does the company have a policy to respect business ethics or has the company signed the UN Global Compact or follow the OECD guidelines? | Positive | Double Y/N | |
| 13) | Public Health Controversies | Is the company under the spotlight of the media because of a controversy linked to public health or industrial accidents harming the health & safety of third parties (non-employees and non-customers)? | Negative | Y/N | |
| 14) | Total Donations | Total amount of all donations divided by net sales or revenue. | Positive | Number | Zero |
| B. Diversity and Opportunity | | | | | |
| 1) | Diversity Compliance | All real or estimated penalties, fines from lost court cases, settlements or cases not yet settled regarding controversies linked to workforce diversity and opportunity in U.S. dollars. | Negative | Number | Zero |
| 2) | Diversity Controversies | Is the company under the spotlight of the media because of a controversy linked to workforce diversity and opportunity? | Negative | Y/N | |
| 3) | Family Friendly | Does the company claim to provide day care services for its employees? OR Does the company claim to provide generous maternity leave benefits? OR Has the company won a family friendly prize like a "Working Mother Award"? | Positive | Y/N | |
| 4) | Implementation | Does the company describe the implementation of its diversity and opportunity policy? | Positive | Y/N | |
| 5) | Improvements | Does the company set specific objectives to be achieved on diversity and equal opportunity? | Positive | Y/N | |
| 6) | Management Equal Opportunity | Does the company promote positive discrimination? OR Has the company won any prize or award relating to diversity or opportunity? | Positive | Y/N | |
| 7) | Managers Female Male Ratio | Percentage of women managers. | Positive | Number | Median |
| 8) | Monitoring | Does the company monitor the diversity and equal opportunities in its workforce? | Positive | Y/N | |
| 9) | Policy | Does the company have a work-life balance policy? AND Does the company have a diversity and equal opportunity policy? | Positive | Double Y/N | |
| 10) | Work-Life Balance | Does the company claim to provide generous vacations, career breaks or sabbaticals? OR Does the company claim to provide flexible working hours or working hours that promote a work-life balance? | Positive | Y/N | |
| C. Employment Quality | | | | | |
| 1) | Announced Lay-offs | Total number of announced lay-offs by the company divided by the total number of employees. | Negative | Number | Median |

| | | | | | |
|----------------------------------|--|--|----------|--------|--------|
| 2) | Bonus Plan | Does the company claim to provide a bonus plan to at least the middle management level? AND Is the employees' compensation based on personal or company-wide targets? | Positive | Double | Y/N |
| 3) | Employment Awards | Has the company won an award or any prize related to general employment quality or "Best Company to Work For"? | Positive | Y/N | |
| 4) | Generous Fringe Benefits | Does the company claim to provide its employees with a pension fund, health care or other insurances? | Positive | Y/N | |
| 5) | Implementation | Does the company describe the implementation of its employment quality policy? | Positive | Y/N | |
| 6) | Improvements | Does the company set specific objectives to be achieved on employment quality? | Positive | Y/N | |
| 7) | Key Management Departures | Has an important executive management team member or a key team member announced a voluntary departure (other than for retirement) or has been ousted? | Negative | Y/N | |
| 8) | Monitoring | Does the company monitor or measure its performance on employment quality? | Positive | Y/N | |
| 9) | Net Employment Creation | Employment growth over the last year. | Positive | Number | Median |
| 10) | Personnel Turnover | Percentage of employee turnover. | Negative | Number | Median |
| 11) | Policy | Does the company have a competitive employee benefits policy or ensuring good employee relations within its supply chain? AND Does the company have a policy for maintaining long term employment growth and stability? | Positive | Double | Y/N |
| 12) | Salaries | Average salaries and benefit in U.S. dollars (Salaries and Benefits (U.S. dollars)/Total Number of Employees). | Positive | Number | Median |
| 13) | Salaries Distribution | Total salaries and benefits divided by net sales or revenue. | Positive | Number | Median |
| 14) | Salary Gap | CEO's total salary (or other highest salary) divided by average wage (Highest Salary (U.S. dollars) /Average Salaries and Benefits in (U.S. dollars)). | Negative | Number | Median |
| 15) | Strikes | Has there has been a strike or an industrial dispute that led to lost working days? | Negative | Y/N | |
| 16) | Trade Union Representation | Percentage of employees represented by independent trade union organizations or covered by collective bargaining agreements. | Positive | Number | Median |
| 17) | Wages or Working Condition Controversies | Is the company under the spotlight of the media because of a controversy linked to the company's employees, contractors or suppliers due to wage, layoff disputes or working conditions? | Negative | Y/N | |
| D. Health and Safety | | | | | |
| 1) | Health & Safety Compliance | All real or estimated penalties, fines from lost court cases, settlements or cases not yet settled regarding controversies linked to workforce or contractor health and safety in U.S. dollars. | Negative | Number | Zero |
| 2) | Health & Safety Controversies | Is the company under the spotlight of the media because of a controversy linked to workforce health and safety? | Negative | Y/N | |
| 3) | HIV-AIDS Programme | Does the company report on policies or programmes on HIV/AIDS for the workplace or beyond? | Positive | Y/N | |
| 4) | Implementation | Does the company describe the implementation of its employee health & safety policy through a public commitment from a senior management or board member or the establishment of an employee health & safety team? AND Does the company describe the implementation of its employee health & safety policy through the processes in place? | Positive | Double | Y/N |
| 5) | Improvements | Does the company set specific objectives to be achieved on employee health & safety? AND Does the company comment on the results of previously set objectives? | Positive | Double | Y/N |
| 6) | Injuries | Total number of injuries and fatalities including no-lost-time injuries relative to one million hours worked. | Negative | Number | Median |
| 7) | Lost Days | Total lost days at work divided by total working days. (Refers to an employee absent from work because of incapacity of any kind, not just as the result of occupational injury or disease) | Negative | Number | Median |
| 8) | Monitoring | Does the company monitor or measure its performance on employee health & safety? | Positive | Y/N | |
| 9) | Policy | Does the company have a policy to improve employee health & safety within the company and its supply chain? | Positive | Y/N | |
| E. Human Rights | | | | | |
| 1) | Child Labour Controversies | Is the company under the direct or indirect (through suppliers) spotlight of the media because of a controversy linked to child labour? | Negative | Y/N | |
| 2) | Freedom of Association Controversies | Is the company under the direct or indirect (through suppliers) spotlight of the media because of a controversy linked to freedom of association? | Negative | Y/N | |
| 3) | Human Rights Controversies | Is the company under the direct or indirect (through suppliers) spotlight of the media because of a controversy linked to general human rights issues? | Negative | Y/N | |
| 4) | Implementation | Does the company describe the implementation of its human rights policy? | Positive | Y/N | |
| 5) | Improvements | Does the company set specific objectives to be achieved on its human rights policy? | Positive | Y/N | |
| 6) | Monitoring | Does the company monitor human rights in its or its suppliers' facilities? | Positive | Y/N | |
| 7) | Policy | Does the company have a policy to guarantee the freedom of association universally applied independent of local laws? AND Does the company have a policy for the exclusion of child, forced or compulsory labour? | Positive | Double | Y/N |
| 8) | Suppliers Social Impact | Does the company report or show to use human rights criteria in the selection or monitoring process of its suppliers or sourcing partners? AND Does the company report or show to be ready to end a partnership with a sourcing partner if human rights criteria are not met? | Positive | Double | Y/N |
| F. Product Responsibility | | | | | |
| 1) | Customer Controversies | Is the company under the spotlight of the media because of a controversy linked to its products or services quality and responsibility? | Negative | Y/N | |
| 2) | Implementation | Does the company describe the implementation of its product responsibility policy? | Positive | Y/N | |
| 3) | Improvements | Does the company set specific objectives to be achieved on its products or services quality and responsibility? | Positive | Y/N | |
| 4) | Monitoring | Does the company monitor the impact of its products or services on consumers or the community more generally? | Positive | Y/N | |
| 5) | Policy | Does the company have a policy to protect customer health & safety? AND Does the company have a products and services quality policy? | Positive | Double | Y/N |

| | | | | | |
|------------------------------------|--------------------------------|--|----------|--------|--------|
| 6) | Product Access | Does the company distribute any low-priced products or services specifically designed for lower income categories (e.g., bridging the digital divide, telecommunications, low cost cars and micro-financing services)? | Positive | Y/N | |
| 7) | Product Compliance | All real or estimated penalties, fines from lost court cases, settlements or cases not yet settled regarding controversies linked its products or services quality and responsibility in U.S. dollars. | Negative | Number | Zero |
| 8) | Quality Management | Does the company claim to apply quality management systems, such as ISO 9000, Six Sigma, Lean Manufacturing, Lean Sigma, TQM or any other similar quality principles? | Positive | Y/N | |
| 9) | Social Exclusion Controversies | Is the company under the spotlight of the media because of a controversy linked to market withdrawal (closing of branches), retreating or failing to serve specific markets or customers?O | Negative | Y/N | |
| 10) | Technology Know-How Sharing | Does the company voluntarily share licenses, patents, intellectual property or useful technology with developing countries, or allow generics under specific conditions? | Positive | Y/N | |
| G. Training and Development | | | | | |
| 1) | Implementation | Does the company describe the implementation of its training and development policy? | Positive | Y/N | |
| 2) | Improvements | Does the company set specific objectives to be achieved on the employee training and career development? | Positive | Y/N | |
| 3) | Internal Promotion | Does the company claim to favour promotion from within? | Positive | Y/N | |
| 4) | Management Training | Does the company claim to provide regular staff and business management training for its managers? | Positive | Y/N | |
| 5) | Monitoring | Does the company monitor its training and development programs? | Positive | Y/N | |
| 6) | Policy | Does the company have a policy to support the skills training or career development of its employees? | Positive | Y/N | |
| 7) | Supplier ESG Training | Does the company provide training on environmental, social or governance factors for its suppliers? | Positive | Y/N | |
| 8) | Training Costs | Training costs per employee in U.S. dollars. | Positive | Number | Median |
| 9) | Training Hours | Average hours of training per year per employee. | Positive | Number | Median |
| 10) | University Partnerships | Does the company claim to cooperate with schools or universities? | Positive | Y/N | |

Appendix B Additional Tests and Statistics

**Table B1
Additional Summary Statistics**

This table reports descriptive statistics. The sample consists of 19,849 firm-year observations and covers 3,277 firms from 41 countries during the period 2004 through 2013. Panel A shows summary statistics for our sample firms, and Panel B reports number of observations by industry (using SIC divisions industry groupings). Total Assets is in US\$ million, Log (Total Assets) is the natural logarithm of total assets, Tangibility is property, plant, and equipment to total assets, Leverage is total debt to total assets, Tobin's q is market capitalization of equity plus total debt divided by total assets, Profitability is net income plus after-tax interest expenses to total assets, Cross-list is a dummy variable equal to one if the firm is cross-listed on a major U.S. exchange, and zero otherwise, and Total IO is total institutional ownership. The data are from Factset, Worldscope, DR lists, and CRSP. We winsorize all variables at the 1st and 99th percentiles.

Panel A: Summary Statistics

| Variable | Average | Median | 25 th Percentile | 75 th Percentile | Standard Deviation |
|--------------------|---------|--------|-----------------------------|-----------------------------|--------------------|
| Total Assets | 31,313 | 4,761 | 1,714 | 15,544 | 101,622 |
| Log (Total Assets) | 8.602 | 8.468 | 7.446 | 9.651 | 1.794 |
| Tangibility | 0.317 | 0.271 | 0.091 | 0.494 | 0.259 |
| Leverage | 0.239 | 0.224 | 0.092 | 0.352 | 0.176 |
| Tobin's q | 1.644 | 1.271 | 1.037 | 1.795 | 1.064 |
| Profitability | 0.061 | 0.052 | 0.019 | 0.094 | 0.080 |
| Cross-list | 0.096 | 0.000 | 0.000 | 0.000 | 0.295 |
| Total IO | 0.224 | 0.180 | 0.100 | 0.313 | 0.168 |

Panel B: Number of Observations by Industry

| Industry | Obs | Fraction of Sample (%) |
|----------------------------------|-------|------------------------|
| Agriculture, Forestry, Fishing | 66 | 0.3 |
| Mining | 2,077 | 10.5 |
| Construction | 900 | 4.5 |
| Manufacturing | 7,095 | 35.7 |
| Transportation, Public Utilities | 2,816 | 14.2 |
| Wholesale Trade | 552 | 2.8 |
| Retail Trade | 1,138 | 5.7 |
| Finance, Insurance, Real Estate | 3,505 | 17.7 |
| Services | 1,685 | 8.5 |
| Public Administration | 15 | 0.1 |

Table B2
Institutional Investors and Firms' Social Performance: Deepwater Horizon Oil Spill

This table reports regression estimates of social scores on institutional ownership and control variables for years 2009 through 2012, which correspond to the four years surrounding the Deepwater Horizon oil spill that occurred on May 24, 2010. The dependent variables are the natural logarithm of social scores. The Post Event dummy is equal to one for the years 2011 and 2012, and zero otherwise. The two-year pre- and post-event periods are each collapsed into one observation, and Total IO is the total institutional ownership measured over the pre-event period. In Panel A, we report within-industry results for firms in extractive industries. The coefficient estimate of Total IO \times Post Event shows the differential effect of institutional ownership on social scores after the event. In Panel B, we report difference-in-differences regression results. The coefficient estimate of Total IO \times Post Event \times Treated Firm shows the differential effect of institutional ownership on the social scores for firms in extractive industries compare to the rest of the sample firms. The data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP. Appendix A describes the indicator variables used to calculate the social scores. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses.

Panel A: Within-industry Regressions

| | Overall Social Score | | | Social ASSET4 z-Score | | |
|------------------------------|---------------------------------------|---|-------------------------------|---------------------------------------|---|-------------------------------|
| | Oil and Gas Extraction (SIC 13) | Oil and Petroleum Products (FF 17) | Mining (SIC Division B) | Oil and Gas Extraction (SIC 13) | Oil and Petroleum Products (FF 17) | Mining (SIC Division B) |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Total IO | 0.106 (0.12) | 0.164 (0.01) | 0.157 (0.00) | 0.728 (0.01) | 0.805 (0.00) | 0.869 (0.00) |
| Post Event | 0.029 (0.19) | 0.048 (0.03) | 0.031 (0.07) | -0.038 (0.61) | 0.010 (0.87) | -0.001 (0.99) |
| Total IO \times Post Event | 0.005 (0.91) | -0.033 (0.44) | 0.030 (0.31) | 0.029 (0.83) | -0.069 (0.54) | 0.062 (0.64) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R^2 | 0.621 | 0.669 | 0.584 | 0.575 | 0.619 | 0.541 |
| Obs | 222 | 302 | 606 | 222 | 302 | 606 |
| # Treated Firms | 111 | 151 | 303 | 111 | 151 | 303 |

Panel B: Difference-in-differences Regressions

| | Treatment Effect (Coefficient Estimate of Total IO \times Post Event \times Treated Firm) | | |
|-----------------------|--|--|----------------------------|
| | Oil and Gas Extraction (SIC 13) | Oil and Petroleum Products (FF 17) | Mining (SIC Division B) |
| | (1) | (2) | (3) |
| Overall Social Score | -0.004 (0.92) | -0.044 (0.29) | 0.047 (0.15) |
| Social ASSET4 z-Score | -0.022 (0.86) | -0.114 (0.33) | 0.107 (0.38) |
| Obs | 5,172 | 5,172 | 5,172 |
| # Treated Firms | 111 | 151 | 303 |
| # Control Firms | 2,475 | 2,435 | 2,283 |

B3. Instrumental Variables Regressions

We use instrumental variable estimation to further address the concern of reverse causality. Aggarwal, Erel, Ferreira, and Matos (2011), Appel, Gormley, and Keim (2016), Crane, Michenaud, and Weston (2016), and Bena, Ferreira, Matos, and Pires (2017) exploit variation of institutional ownership that results from a firm's stock being added to a major stock market index. In our study, we use stock additions to the MSCI All Country World Index as an instrument for institutional ownership. The MSCI World Index is composed of all country-level MSCI indexes that are often used as a benchmark by institutional investors. Stocks are added to the MSCI country indexes until the cumulative free-float-adjusted market capitalization reaches 85% of the total free-float-adjusted market capitalization in each country. Based on the index addition rules, firms are added mechanically to the index. Thus, stocks are added to the index because of their relative free-float-adjusted market capitalization, and not because of their E&S performance levels.

For these regressions, we restrict the sample to those firms where MSCI membership changes at least once during the sample period, to ensure time series variation in the instrument. Panel A of Table B3 shows the first-stage results. Institutional investors increase their holdings by about 2.7 percentage points when a firm is added to the MSCI World Index. More importantly, the second-stage results in Panel B show that instrumented institutional ownership is positively and significantly associated with environmental and social scores, suggesting that our findings are not due to the endogenous selection of firms with high E&S scores, but rather that institutional investors drive environmental and social performance of firms.¹ The results suggest strong economic impacts. Focusing on the significant coefficients, they imply that a one standard deviation change in institutional ownership leads to a 17.3% to 26.7% change in environmental performance, and to a 10.7% change in social performance. These implied changes in E&S performance are, as expected, larger than the implied OLS impacts. This is consistent with institutional owners having a greater impact when they become owners for the first time.

¹ We also exploit the variation of institutional ownership directly around firms' MSCI World Index addition. We match firms that were added to the index (treated firms) using a propensity score matching approach to control firms within the same country and industry in the year of the index addition. We match on outcome and control variables. The results show that after the index addition, environmental and social scores of treated firms increased significantly more compared to control firms (unreported for brevity).

Table B3
Institutional Investors and Firms' E&S Performance: IV Regressions

This table reports IV regression estimates of environmental and social scores on institutional ownership and control variables. Panel A shows the first-stage regression results. Panel B, where Total IO is instrumented with MSCI Index, a dummy variable equal to one if the firm is a member of the MSCI All Country World Index, and zero otherwise, shows the second-stage regression results. The data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP, MSCI, and they are obtained for the years 2004-2013. The sample includes firms that change MSCI membership at least once during the sample period. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses.

Panel A: First Stage

| | Total IO |
|--------------------------------|------------------|
| MSCI Index | 0.027 (0.00) |
| Log (Total Assets) | -0.018 (0.00) |
| Tangibility | -0.043 (0.06) |
| Leverage | -0.018 (0.35) |
| Tobin's <i>q</i> | -0.009 (0.02) |
| Profitability | 0.097 (0.07) |
| Cross-list | 0.240 (0.00) |
| Country Fixed Effects | Yes |
| Industry Fixed Effects | Yes |
| Year Fixed Effects | Yes |
| Adjusted <i>R</i> ² | 0.594 |
| Obs | 6,557 |
| F statistic | 21.6 (0.00) |

Panel B: Second Stage, Total IO Instrumented with MSCI Index

| | Environmental Scores | | Social Scores | |
|--------------------------------|----------------------|------------------------|-----------------|------------------------|
| | Overall Score | ASSET4 <i>z</i> -Score | Overall Score | ASSET4 <i>z</i> -Score |
| | (1) | (2) | (3) | (4) |
| Total IO _{<i>t</i>-1} | 1.031 (0.07) | 1.585 (0.06) | 0.634 (0.06) | 2.376 (0.11) |
| Control Variables | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted <i>R</i> ² | 0.507 | 0.379 | 0.469 | 0.296 |
| Obs | 6,557 | 6,537 | 6,557 | 6,537 |

B4. Firm Fixed Effects Regressions

Our results could be due to unobserved firm characteristics that affect both institutional ownership and firms' E&S performance. To address, we introduce a firm fixed effect specification as suggested by Gormley and Matsa (2014) in Table B4. The results show that institutional ownership continues to have a statistically significant impact on firms' E&S performance. Compared to the findings in Table 2, Panel A, the coefficient estimates of *Total IO* are generally smaller. This is to be expected as the estimates are relying on time-series variation within firms rather than the likely larger cross-sectional variation. As an example, using the overall environmental score as the dependent variable, the coefficient on *Total IO* declines from 0.268 (Table 2, Panel A, column 1) to 0.137 (Table B4, column 1).

Table B4
Institutional Investors and Firms' E&S Performance: Firm Fixed Effects Regressions

This table reports firm fixed effects regression estimates of environmental and social scores on institutional ownership and control variables. The dependent variables are the natural logarithm of environmental and social scores. The data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP, and they are obtained for the years 2004-2013. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses.

| | Environmental Scores | | Social Scores | |
|--------------------------------|----------------------|------------------------|-----------------|------------------------|
| | Overall Score | ASSET4 <i>z</i> -Score | Overall Score | ASSET4 <i>z</i> -Score |
| | (1) | (2) | (3) | (4) |
| Total IO _{<i>t</i>-1} | 0.137 (0.00) | 0.186 (0.00) | 0.048 (0.04) | 0.200 (0.05) |
| Control Variables | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted <i>R</i> ² | 0.640 | 0.110 | 0.685 | 0.115 |
| Obs | 19,849 | 19,785 | 19,849 | 19,785 |

B5. Alternative E&S Measures

We explore whether the positive effect of institutional ownership on environmental and social performance stems from our specific definitions of E&S measures. One concern is that while ASSET4 provides detailed documentation for its ESG data, and in evaluating firms' E&S performance relies predominantly on publicly available data, we cannot verify the entire data collection process or its accuracy. A second concern is that investors have a choice among several providers of ESG data, and there is no standardized framework of capturing such data. While ASSET4 data are widely used in the industry, it is possible that a specific institutional investor in our sample will rely on a different data provider. To address both concerns, we obtain detailed ESG data from Sustainalytics and Bloomberg, and match these data with our sample. Sustainalytics and Bloomberg coverage begins in 2009 and 2005, respectively.

We use the Sustainalytics' overall environmental and social scores. To construct these scores, Sustainalytics looks at firm-level information available from annual reports, corporate sustainability reports, NGOs, and news sources, applying their own weighting across items. The correlations between the scores constructed from ASSET4 and Sustainalytics data are neither particularly low nor high, at 0.68 for the environmental performance and 0.52 for social performance.

We aggregate indicator variables provided by Bloomberg to construct Bloomberg E&S scores. For the environmental score we use indicator variables that measure whether the firm has a climate change policy, energy efficiency policy, environmental supply chain management policy, waste reduction policy, water policy, and biodiversity policy. For the social score we use indicator variables that measure whether the firm has a health and safety policy, equal opportunity policy, human rights policy, policy against child labor, employee protection/whistle blower policy, anti-bribery ethics policy, and social supply chain management policy. The correlations between the ASSET4 overall scores and Bloomberg's scores are 0.66 for environmental and 0.65 for social commitments.

We use the Sustainalytics and Bloomberg scores to re-estimate our baseline specification of Table 2, Panel A. The results are reported in Panel A of Table B5. In all specifications, the coefficient estimate on institutional ownership is positive and significant at the 5% level or better. Thus, using alternative measure from two data providers confirms that lagged institutional ownership is positively associated with environmental and social performance.

Further, in Panels B and C of Table B5 we use the Sustainalytics and Bloomberg scores to replicate the specifications of Table 6, grouping foreign institutional ownership into high and low-social-norm groups. For both alternative E&S measures we find that investors' impact on firms' E&S performance is concentrated in the high-social-norm group, confirming our Table 6 results.

Table B5
Alternative E&S Measures

This table reports regression estimates of environmental and social measures, obtained from Sustainalytics and Bloomberg, on institutional ownership and control variables. The Sustainalytics environmental and social scores are the overall scores obtained from the Sustainalytics database. The Bloomberg environmental score is equal to one plus the sum of indicator variables that measure whether the firm has a climate change policy, energy efficiency policy, environmental supply chain management policy, waste reduction policy, water policy, and biodiversity policy. The Bloomberg social score is equal to one plus the sum of indicator variables that measure whether the firm has a health and safety policy, equal opportunity policy, human rights policy, policy against child labor, employee protection / whistle blower policy, anti-bribery ethics policy, and social supply chain management policy. The dependent variables are the natural logarithm of environmental and social scores. In Panels B and C, foreign institutional ownership is sorted into high and low-social-norm groups based on the social norms concerning environmental and social issues of the foreign investors' country of domicile. We measure a country's social norms concerning environmental issues with a) the Environmental Performance Index (obtained from Yale Center for Environmental Law (Yale University) and Center for International Earth Science Information Network (Columbia University), 2004, median split); and b) the World Value E&S Index (obtained from the World Value Survey and European Value Study, 1999-2010; Welzel, 2013, median split). We measure a country's social norms concerning social issues with a) the Employment Laws Index (obtained from Botero et al., 2004, median split); and b) the World Value E&S Index. The other data are from the Sustainalytics database (starting in 2009), Bloomberg (starting in 2005), Factset, Worldscope, DR lists, and CRSP, and they are obtained for the years 2005-2013. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses.

Panel A: Baseline Regressions

| | Sustainalytics | | Bloomberg | |
|-------------------------|---------------------|-----------------|---------------------|-----------------|
| | Environmental Score | Social Score | Environmental Score | Social Score |
| | (1) | (2) | (3) | (4) |
| Total IO _{t-1} | 0.111 (0.00) | 0.068 (0.00) | 0.281 (0.05) | 0.196 (0.05) |
| Control Variables | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.427 | 0.322 | 0.441 | 0.400 |
| Obs | 7,259 | 7,259 | 13,209 | 13,254 |

Panel B: Environmental Scores

| Measure of Social Norm | Sustainalytics | | Bloomberg | |
|----------------------------|---------------------------------|-----------------------|---------------------------------|-----------------------|
| | Environmental Performance Index | World Value E&S Index | Environmental Performance Index | World Value E&S Index |
| | (1) | (2) | (3) | (4) |
| Foreign IO _{t-1} | | | | |
| High-social-norm Group | 0.394 (0.01) | 0.360 (0.01) | 0.690 (0.03) | 0.462 (0.08) |
| Low-social-norm Group | -0.026 (0.72) | -0.010 (0.88) | 0.040 (0.85) | 0.190 (0.27) |
| Domestic IO _{t-1} | 0.111 (0.01) | 0.109 (0.01) | 0.611 (0.00) | 0.609 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.428 | 0.428 | 0.437 | 0.438 |
| Obs | 7,250 | 7,251 | 13,118 | 13,129 |

Panel C: Social Scores

| Measure of Social Norm | Sustainalytics | | Bloomberg | |
|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Employment Laws Index | World Value E&S Index | Employment Laws Index | World Value E&S Index |
| | (1) | (2) | (3) | (4) |
| Foreign IO _{t-1} | | | | |
| High-social-norm Group | 0.381 (0.02) | 0.191 (0.01) | 0.981 (0.01) | 0.307 (0.25) |
| Low-social-norm Group | 0.025 (0.51) | 0.015 (0.76) | 0.122 (0.35) | 0.162 (0.37) |
| Domestic IO _{t-1} | 0.042 (0.23) | 0.049 (0.16) | 0.402 (0.00) | 0.411 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.323 | 0.322 | 0.399 | 0.400 |
| Obs | 7,235 | 7,251 | 13,075 | 13,175 |

B6. Disentangling Environmental and Social Performance from Transparency and Governance

One potential concern about our results is that unobserved heterogeneity between firms may contribute to the observed positive relation between institutions and E&S performance. We have addressed this concern with firm fixed effects, evidence from a quasi-natural experiment, and IV regressions. It is illustrative, however, to explicitly control for firm-level characteristics that might influence both institutional ownership and E&S performance at the same time. Also, fixed effects would not capture firm heterogeneity in case it is time-varying.

We consider transparency and governance quality as two firm-level measures that are plausible candidates as determinants of both institutional ownership and E&S scores across firms. We therefore perform tests that re-estimate the baseline specifications of Table 2, Panel A, but additionally control for a firm's transparency and governance. Transparency is measured by the log of a firm's transparency score, which is defined as the number of data items reported by the company out of all items tracked as part of the ASSET4 scoring system. Our governance measure is based on a firm's level of insider control. To construct this measure, we regress the percentage of closely held shares (from Worldscope) on the percentage of institutional ownership of a firm, and retain the residuals from that regression. These residuals are, by construction, orthogonal to institutional ownership, and we refer to them as *Insider Control*.²

Table B6 shows the results. Greater E&S transparency is associated with higher E&S performance, as might be expected. Importantly, the coefficient on *Total IO* remains positive and significant when controlling for transparency. *Insider Control* is negatively related to E&S scores and is significantly different from zero in some of our model specifications. The key result for our purposes is that the coefficient on *Total IO* is affected very little when we explicitly control for firm-level governance. The negative sign on insider ownership also suggests that, generally speaking, more entrenched insiders do not see investing in E&S as a private benefit.

² We prefer this cleaner measure of insider control. All of our results also obtain when we instead use the raw insider control percentages.

Table B6
Institutional Investors and Firms' E&S Performance: Controlling for Transparency and Governance

This table reports regression estimates of environmental and social scores on institutional ownership, controlling for transparency scores, governance measures, and control variables. The dependent variables are the natural logarithm of environmental and social scores. The Transparency Score is the natural logarithm of the overall transparency score calculated as the number of reported E&S items divided by the number of E&S items a firm could have reported. Insider Control is the residuals of a regression of Closely Held Shares (obtained from Worldscope) on Total IO. The data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP, and they are obtained for the years 2004-2013. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year (except for the Transparency Score). Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses.

Panel A: Environmental Scores

| | Overall Score | | | ASSET4 z-Score | | |
|---------------------------------|-----------------|------------------|------------------|-----------------|------------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Total IO _{t-1} | 0.180 (0.00) | 0.290 (0.00) | 0.198 (0.00) | 0.293 (0.00) | 0.430 (0.00) | 0.315 (0.00) |
| Transparency Score _t | 3.313 (0.00) | | 3.290 (0.00) | 4.146 (0.00) | | 4.116 (0.00) |
| Insider Control _{t-1} | | -0.099 (0.01) | -0.035 (0.26) | | -0.112 (0.03) | -0.032 (0.45) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.643 | 0.545 | 0.643 | 0.546 | 0.447 | 0.546 |
| Obs | 19,849 | 18,560 | 18,560 | 19,785 | 18,496 | 18,496 |

Panel B: Social Scores

| | Overall Score | | | ASSET4 z-Score | | |
|---------------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Total IO _{t-1} | 0.076 (0.00) | 0.125 (0.00) | 0.078 (0.01) | 0.324 (0.00) | 0.498 (0.00) | 0.334 (0.00) |
| Transparency Score _t | 3.324 (0.00) | | 3.256 (0.00) | 11.590 (0.00) | | 11.368 (0.00) |
| Insider Control _{t-1} | | -0.028 (0.05) | -0.019 (0.11) | | -0.068 (0.15) | -0.037 (0.38) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.618 | 0.526 | 0.616 | 0.501 | 0.394 | 0.497 |
| Obs | 19,849 | 18,560 | 18,560 | 19,785 | 18,496 | 18,496 |

Table B7
Granger Causality Tests

This table reports results of Granger-causality-style tests. In columns 1 through 4, the dependent variables are the natural logarithm of the environmental and social scores. In columns 5 through 8, the dependent variable is total institutional ownership. In all specifications, the one-year lagged dependent variable is included as a control. All regressions are estimated with firm fixed effects. The data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP, and they are obtained for the years 2004-2013. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses.

Panel A: Overall Scores

| | Environ- mental Score | Social Score | Environ- mental Score | Social Score | Total IO | | | |
|------------------------------------|-----------------------------|-----------------|-----------------------------|-----------------|-----------------|-----------------|-----------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Total IO _{t-1} | 0.229 (0.00) | 0.088 (0.01) | 0.058 (0.02) | 0.012 (0.27) | 0.425 (0.00) | 0.427 (0.00) | 0.422 (0.00) | 0.423 (0.00) |
| Environmental Score _{t-1} | 0.657 (0.00) | | 0.490 (0.00) | | 0.003 (0.57) | | 0.003 (0.27) | |
| Social Score _{t-1} | | 0.670 (0.00) | | 0.468 (0.00) | | 0.002 (0.87) | | -0.006 (0.39) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | No | No | Yes | Yes | No | No | Yes | Yes |
| Adjusted R ² | 0.664 | 0.678 | 0.734 | 0.750 | 0.220 | 0.220 | 0.236 | 0.236 |
| Obs | 16,538 | 16,538 | 16,538 | 16,538 | 16,538 | 16,538 | 16,538 | 16,538 |

Panel B: ASSET4 z-Scores

| | Environ- mental Score | Social Score | Environ- mental Score | Social Score | Total IO | | | |
|------------------------------------|-----------------------------|-----------------|-----------------------------|-----------------|------------------|------------------|-----------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Total IO _{t-1} | 0.158 (0.02) | 0.138 (0.05) | 0.094 (0.04) | 0.059 (0.23) | 0.429 (0.00) | 0.430 (0.00) | 0.424 (0.00) | 0.424 (0.00) |
| Environmental Score _{t-1} | 0.415 (0.00) | | 0.396 (0.00) | | -0.000 (0.99) | | 0.001 (0.55) | |
| Social Score _{t-1} | | 0.430 (0.00) | | 0.411 (0.00) | | -0.002 (0.28) | | -0.001 (0.61) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | No | No | Yes | Yes | No | No | Yes | Yes |
| Adjusted R ² | 0.259 | 0.265 | 0.278 | 0.287 | 0.247 | 0.247 | 0.258 | 0.258 |
| Obs | 16,479 | 16,479 | 16,479 | 16,479 | 16,479 | 16,479 | 16,479 | 16,479 |

Table B8
Shareholder Proposals in Canadian Firms

This table reports results for shareholder proposals with an environmental or social focus for Canadian firms in our sample. We use the SHARE.ca database, which tracks and provides detailed information on all shareholder proposals in Canada, to match environmental and/or social-issue-related shareholder proposals to Canadian firms in our sample. We conduct a case-study analysis and categorize each proposal as successful or not-successful, consulting data from SHARE.ca, the websites of the proposal maker, and various news sources. Panel A reports summary statistics. Panel B reports regression results of the effect of shareholder proposals on environmental and social scores. Shareholder Proposal is a dummy variable equal to one for the two years following the submission of a shareholder proposal, and zero otherwise. The sample comprises of all Canadian firms of our original sample. The data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, CRSP, and SHARE.ca. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. Controls are as in Table 2. Standard errors are clustered at the firm-level and *p*-values are reported in parentheses.

Panel A: Summary Statistics

| | Shareholder Proposals | | |
|---|-----------------------|---------------|-------------|
| | Environmental Issues | Social Issues | Overall |
| Proposals | 71 | 76 | 147 |
| Firms with proposals | 37 | 29 | 53 |
| Firm-years with proposals | 60 | 66 | 114 |
| Overall Sample Firm-years with proposals | 3.4% | 3.6% | 6.2% |
| Successful Proposals Overall | 45% | 21% | 33% |
| Proposals that Required a Shareholder Vote | 17 | 35 | 52 |
| Successful Proposals that Required a Shareholder Vote | 5.9% | 2.9% | 3.9% |
| Votes in Favour of Proposal: Mean / Median | 12.0% / 7.0% | 8.5% / 5.8% | 9.7% / 6.2% |

Panel B: Shareholder-proposal Engagements for Canadian Firms

| | Environmental Scores | | Social Scores | |
|------------------------|----------------------|-----------------|-----------------|-----------------|
| | Overall Score | ASSET4 z-Score | Overall Score | ASSET4 z-Score |
| | (1) | (2) | (3) | (4) |
| Shareholder Proposal | 0.155 (0.01) | 0.186 (0.03) | 0.059 (0.10) | 0.123 (0.35) |
| Total IO | 0.255 (0.03) | 0.389 (0.03) | 0.162 (0.00) | 0.597 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted R^2 | 0.514 | 0.420 | 0.498 | 0.411 |
| Obs | 1,807 | 1,787 | 1,807 | 1,787 |

Table B9
Foreign Institutional Investors' Social Norms and Firms' E&S Performance: Controlling for GDP/capita and Investor Protection

This table reports regression estimates of environmental and social scores on domestic institutional ownership, foreign institutional ownership grouped by social norms of institutional investors' home countries while controlling for GDP/capita and investor protection laws, and control variables. The dependent variables are the natural logarithm of environmental and social scores. Foreign institutional ownership is sorted into high and low-social-norm groups based on the social norms concerning environmental and social issues of the foreign investors' country of domicile. We measure a country's social norms concerning environmental issues with a) the Environmental Performance Index (obtained from Yale Center for Environmental Law (Yale University) and Center for International Earth Science Information Network (Columbia University), 2004); and b) the World Value E&S Index (obtained from the World Value Survey and European Value Study, 1999-2010; Welzel, 2013). We measure a country's social norms concerning social issues with a) the Employment Laws Index (obtained from Botero et al., 2004); and b) the World Value E&S Index. All social norm measures are orthogonal to a country's GDP/capita (as of 2004, measured in US\$) and investor protection laws (measured with Legal, calculated as the product of the Revised Anti-director Rights Index (Djankov et al., 2008) and Rule of Law (La Porta et al., 1998) as used in Doidge et al. (2007); and common law legal origin (La Porta et al., 1998). To this end, we regress each social norm measure separately on GDP/capita, legal, and common law dummy and use the residuals of these regressions to sort foreign investor ownership in high and low-social-norm groups based on median values. The other data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP, and they are obtained for the years 2004-2013. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses. The last row reports *p*-values of a test of equality of the coefficient estimates on Foreign IO, High-social-norm Group and Foreign IO, Low-social-norm Group.

Panel A: Environmental Scores

| Measure of Social Norm Orthogonal to | Overall Score | | | | | | ASSET4 <i>z</i> -Score | | | | | |
|---|---------------------------------|-----------------|------------------|-----------------------|-----------------|-----------------|---------------------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|
| | Environmental Performance Index | | | World Value E&S Index | | | Environmental Performance Index | | | World Value E&S Index | | |
| | GDP/capita | Legal | Common Law | GDP/capita | Legal | Common Law | GDP/capita | Legal | Common Law | GDP/capita | Legal | Common Law |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Foreign IO _{t-1} | | | | | | | | | | | | |
| High-social-norm Group | 0.802 (0.00) | 1.579 (0.00) | 0.839 (0.00) | 0.766 (0.00) | 1.205 (0.00) | 0.766 (0.00) | 1.074 (0.00) | 1.904 (0.00) | 1.118 (0.00) | 1.013 (0.00) | 1.397 (0.00) | 1.010 (0.00) |
| Low-social-norm Group | -0.017 (0.86) | 0.041 (0.56) | -0.004 (0.96) | 0.041 (0.68) | 0.128 (0.11) | 0.071 (0.49) | 0.030 (0.82) | 0.124 (0.18) | 0.042 (0.75) | 0.101 (0.45) | 0.234 (0.02) | 0.136 (0.32) |
| Domestic IO _{t-1} | 0.446 (0.00) | 0.416 (0.00) | 0.446 (0.00) | 0.449 (0.00) | 0.430 (0.00) | 0.447 (0.00) | 0.651 (0.00) | 0.615 (0.00) | 0.651 (0.00) | 0.654 (0.00) | 0.631 (0.00) | 0.651 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.543 | 0.542 | 0.544 | 0.543 | 0.541 | 0.544 | 0.444 | 0.441 | 0.446 | 0.445 | 0.441 | 0.446 |
| Obs | 19,648 | 19,518 | 19,667 | 19,661 | 19,520 | 19,659 | 19,585 | 19,456 | 19,604 | 19,598 | 19,458 | 19,596 |
| Average Foreign IO | | | | | | | | | | | | |
| High-social-norm Group | 0.049 | 0.030 | 0.049 | 0.050 | 0.031 | 0.050 | 0.049 | 0.030 | 0.049 | 0.050 | 0.031 | 0.050 |
| Low-social-norm Group | 0.078 | 0.099 | 0.079 | 0.084 | 0.106 | 0.087 | 0.078 | 0.099 | 0.079 | 0.084 | 0.106 | 0.087 |
| Foreign IO, High vs. Low (<i>p</i> -value) | (0.00) | (0.00) | (0.00) | (0.01) | (0.00) | (0.01) | (0.00) | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) |

Panel B: Social Scores

| Measure of Social Norm Orthogonal to | Overall Score | | | | | | ASSET4 z-Score | | | | | |
|---|-----------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|
| | Employment Laws Index | | | World Value E&S Index | | | Employment Laws Index | | | World Value E&S Index | | |
| | GDP/ capita | Legal | Common Law | GDP/ capita | Legal | Common Law | GDP/ capita | Legal | Common Law | GDP/ capita | Legal | Common Law |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Foreign IO _{t-1} | | | | | | | | | | | | |
| High-social-norm Group | 0.480 (0.00) | 0.486 (0.00) | 0.473 (0.00) | 0.233 (0.00) | 0.369 (0.00) | 0.243 (0.00) | 1.311 (0.00) | 1.334 (0.00) | 1.334 (0.00) | 0.795 (0.00) | 0.981 (0.00) | 0.827 (0.00) |
| Low-social-norm Group | 0.038 (0.12) | 0.055 (0.05) | 0.049 (0.05) | 0.031 (0.49) | 0.066 (0.03) | 0.048 (0.30) | 0.257 (0.01) | 0.313 (0.00) | 0.295 (0.00) | 0.206 (0.25) | 0.351 (0.01) | 0.270 (0.15) |
| Domestic IO _{t-1} | 0.178 (0.00) | 0.179 (0.00) | 0.179 (0.00) | 0.188 (0.00) | 0.182 (0.00) | 0.187 (0.00) | 0.712 (0.00) | 0.716 (0.00) | 0.713 (0.00) | 0.744 (0.00) | 0.727 (0.00) | 0.739 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.523 | 0.523 | 0.524 | 0.524 | 0.524 | 0.524 | 0.387 | 0.387 | 0.388 | 0.391 | 0.389 | 0.392 |
| Obs | 19,474 | 19,461 | 19,525 | 19,661 | 19,520 | 19,659 | 19,413 | 19,400 | 19,464 | 19,598 | 19,458 | 19,596 |
| Average Foreign IO | | | | | | | | | | | | |
| High-social-norm Group | 0.029 | 0.029 | 0.032 | 0.050 | 0.031 | 0.050 | 0.029 | 0.029 | 0.032 | 0.050 | 0.031 | 0.050 |
| Low-social-norm Group | 0.104 | 0.107 | 0.104 | 0.084 | 0.106 | 0.087 | 0.104 | 0.107 | 0.104 | 0.084 | 0.106 | 0.087 |
| Foreign IO, High vs. Low (<i>p</i> -value) | (0.00) | (0.00) | (0.00) | (0.07) | (0.00) | (0.09) | (0.01) | (0.01) | (0.01) | (0.14) | (0.09) | (0.19) |

Table B10
Foreign Institutional Investors' Social Norms and Firms' E&S Performance:
Excluding Foreign U.S. and U.K.-Institutional Investors

This table reports regression estimates of environmental and social scores on domestic institutional ownership, foreign institutional ownership grouped by social norms of institutional investors' home countries, and control variables. Foreign U.S. and U.K.-institutional investors are excluded. The dependent variables are the natural logarithm of environmental and social scores. Foreign institutional ownership is sorted into high and low-social-norm groups based on the social norms concerning environmental and social issues of the foreign investors' country of domicile. We measure a country's social norms concerning environmental issues with a) the Environmental Performance Index (obtained from Yale Center for Environmental Law (Yale University) and Center for International Earth Science Information Network (Columbia University), 2004, median split); and b) the World Value E&S Index (obtained from the World Value Survey and European Value Study, 1999-2010; Welzel, 2013, median split). We measure a country's social norms concerning social issues with a) the Employment Laws Index (obtained from Botero et al. (2004), median split); and b) the World Value E&S Index. The other data are from the ASSET4 ESG database, Factset, Worldscope, DR lists, and CRSP, and they are obtained for the years 2004-2013. Appendix A describes the indicator variables used to calculate the environmental and social scores. All variables are winsorized at the 1st and 99th percentiles. All right-hand side variables are lagged by one year. Controls are as in Table 2. Standard errors are clustered at the country-level and *p*-values are reported in parentheses. The last row reports *p*-values of a test of equality of the coefficient estimates on Foreign IO, High-social-norm Group and Foreign IO, Low-social-norm Group.

Panel A: Environmental Scores

| Measure of Social Norm | Overall Score | | ASSET4 <i>z</i> -Score | |
|---|---------------------------------|-----------------------|---------------------------------|-----------------------|
| | Environmental Performance Index | World Value E&S Index | Environmental Performance Index | World Value E&S Index |
| | (1) | (2) | (3) | (4) |
| Foreign IO _{t-1} | | | | |
| High-social-norm Group | 1.227 (0.00) | 1.089 (0.00) | 1.593 (0.00) | 1.383 (0.00) |
| Low-social-norm Group | 0.192 (0.41) | 0.503 (0.04) | 0.222 (0.50) | 0.624 (0.08) |
| Domestic IO _{t-1} | 0.441 (0.00) | 0.434 (0.00) | 0.657 (0.00) | 0.649 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted <i>R</i> ² | 0.543 | 0.543 | 0.446 | 0.448 |
| Obs | 19,202 | 19,215 | 19,140 | 19,153 |
| Foreign IO, Low vs. High (<i>p</i> -value) | (0.01) | (0.09) | (0.02) | (0.10) |

Panel B: Social Scores

| Measure of Social Norm | Overall Score | | ASSET4 z-Score | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| | Employment Laws Index | World Value E&S Index | Employment Laws Index | World Value E&S Index |
| | (1) | (2) | (3) | (4) |
| Foreign IO _{t-1} | | | | |
| High-social-norm Group | 0.539 (0.00) | 0.378 (0.00) | 1.641 (0.00) | 1.301 (0.00) |
| Low-social-norm Group | 0.113 (0.17) | 0.127 (0.19) | 0.492 (0.09) | 0.446 (0.17) |
| Domestic IO _{t-1} | 0.174 (0.00) | 0.177 (0.00) | 0.684 (0.00) | 0.700 (0.00) |
| Control Variables | Yes | Yes | Yes | Yes |
| Country Fixed Effects | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.523 | 0.523 | 0.388 | 0.393 |
| Obs | 19,028 | 19,215 | 18,968 | 19,153 |
| Foreign IO, Low vs. High (<i>p</i> -value) | (0.00) | (0.04) | (0.03) | (0.03) |